

# CITY OF SPARKS

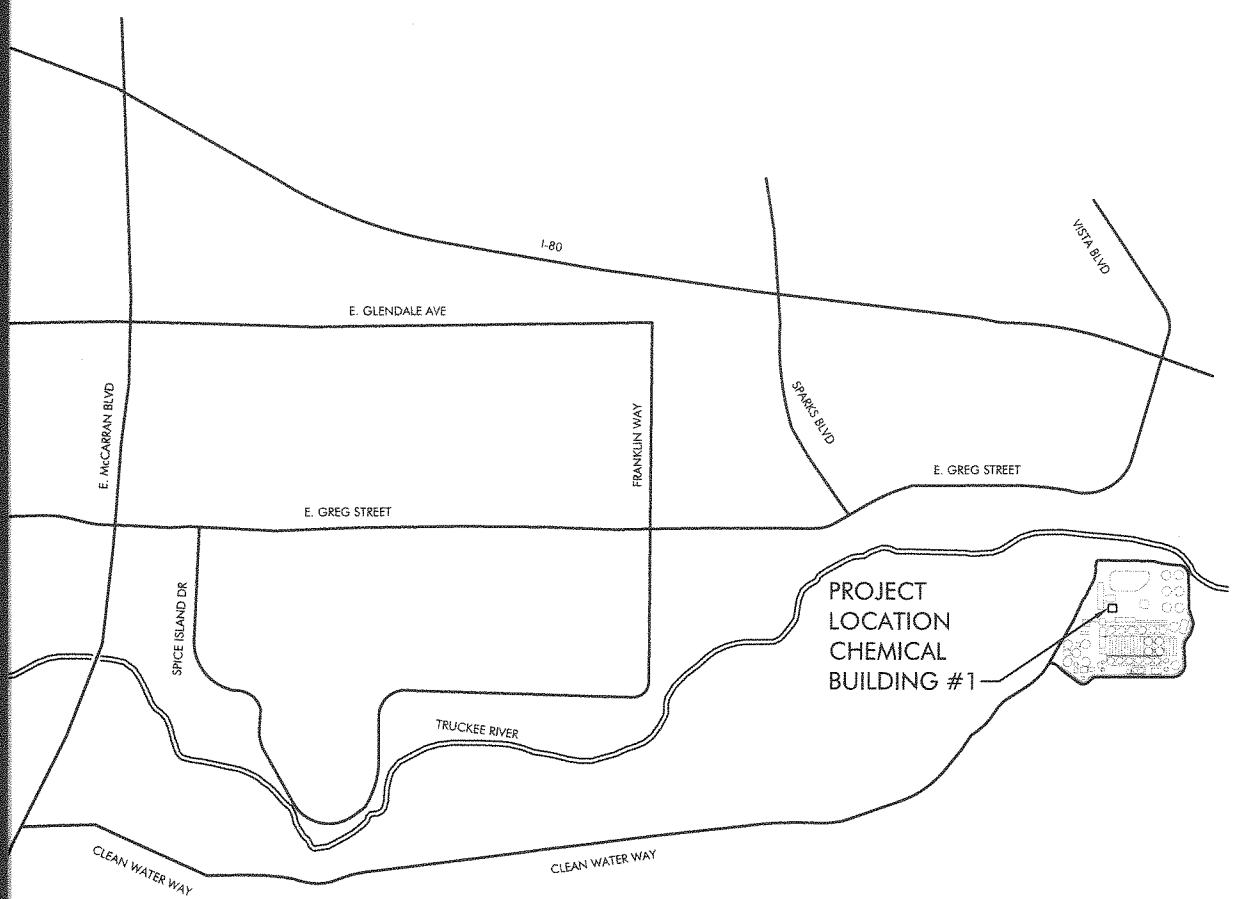
# AIR COMPRESSOR REPLACEMENT PHASE II

# TRUCKEE MEADOWS WATER RECLAMATION FACILITY

PO# 100015680

8500 CLEAN WATER WAY  
RENO, NV 89502

### LOCATION MAP



### GENERAL NOTES

1. THE PROJECT SPECIFICATIONS AND DRAWINGS ARE A DOCUMENT SET AND SHOULD NOT BE SEPARATED. INFORMATION AND REFERENCES ARE CONTAINED IN ALL SPECIFICATIONS AND DRAWINGS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FULLY UNDERSTAND THE COMPLETE SET OF SPECIFICATIONS AND THE DRAWINGS FOR THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL OF THE INFORMATION CONTAINED IN THE SPECIFICATIONS AND DRAWINGS, INCLUDING ALL OTHER DISCIPLINES (ARCHITECTURAL, ELECTRICAL, STRUCTURAL, ETC.) PRIOR TO BID AND CONSTRUCTION.
3. THE CONTRACTOR SHALL INSTALL THE NEW EQUIPMENT, DUCTWORK, AND PIPING AROUND ALL EXISTING OBSTACLES INCLUDING: ELECTRICAL CONDUIT, DOMESTIC WATER PIPING, WASTE AND VENT PIPING, CHILLED AND HEATING WATER PIPING, AND FIRE SPRINKLER PIPING. PROVIDE OFFSETS TO AVOID RELOCATION OF OTHER UTILITIES. RELOCATE UTILITIES IF THEY ARE IN CONFLICT WITH THE MECHANICAL SYSTEM INSTALLATION, CAUSE DEVIATIONS IN THE DESIGN INTENT, UNSATISFACTORY OPERATION, NOISY CONDITIONS, OR INTERFERE WITH MAINTENANCE. IT IS THE MECHANICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE ANY UTILITY RELOCATION WITH THE APPROPRIATE SUBCONTRACTOR.
4. THE INFORMATION INDICATED ON THESE DRAWINGS AS EXISTING IS BASED UPON INFORMATION TAKEN FROM AS-BUILT DRAWINGS, FIELD INVESTIGATION, AND INFORMATION OBTAINED FROM SUBMITTAL DATA, ETC. THE PLANS DO NOT GUARANTEE ACCURACY BUT ARE ONLY AN INDICATION OF EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXACT CONDITIONS SUCH AS EQUIPMENT PLACEMENT, DUCTWORK (SIZE, ROUTING, AND ELEVATION), PIPING (SIZE, ROUTING, AND ELEVATION), ETC. THE DRAWINGS ARE INTENDED TO PROVIDE THE CONTRACTOR AN INDICATION OF THE SYSTEM INSTALLED IN THE FACILITY TO DATE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAKE ADJUSTMENTS TO THE DRAWING INFORMATION AS REQUIRED TO MATCH EXISTING FIELD CONDITIONS.

### DIRECTORY

<p><b>OWNER</b> CITY OF SPARKS TRUCKEE MEADOWS WATER RECLAMATION FACILITY 8500 CLEAN WATER WAY RENO, NV 89502</p> <p>CONTACT: KIM LABER TMWRF MAINTENANCE MANAGER (775) 861-4125</p>	<p><b>MECHANICAL CONSULTANT</b></p> <p>5434 LONGLEY LANE RENO, NEVADA 89511 PHONE: (775) 826-1919 FAX: (775) 826-1918 WEB: CR-ENG.COM</p> <p>CONTACT: CAITLIN BURKE</p>	<p><b>ELECTRICAL CONSULTANT</b></p> <p>Electrical Engineers 9655 Gateway Drive Reno, Nevada 89521-2968 Ph. (775) 852-2288 Fax (775) 852-3388 email: jeneng@rvbell.net web: www.jeneng.com</p> <p>CONTACT: GERALD JENSEN, P.E.</p>
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### SHEET LIST

<p><b>GENERAL</b></p> <p>T0.1 TITLE SHEET</p> <p><b>MECHANICAL</b></p> <p>M0.1 MECHANICAL ABBREVIATIONS, LEGEND, AND SCHEDULES M1.1 MECHANICAL DEMOLITION FLOOR PLAN M2.1 MECHANICAL FLOOR PLAN M4.1 MECHANICAL PIPING DIAGRAMS M5.1 MECHANICAL CONTROL DIAGRAM</p>	<p><b>ELECTRICAL</b></p> <p>E0.1 ELECTRICAL SYMBOLS AND MECHANICAL EQUIPMENT CONNECTION SCHEDULE E1.1 ELECTRICAL PARTIAL DEMOLITION FLOOR PLAN E2.1 ELECTRICAL PARTIAL FLOOR PLAN E3.1 ELECTRICAL PARTIAL FLOOR PLAN E3.2 ELECTRICAL PARTIAL FLOOR PLAN E4.1 ELECTRICAL PARTIAL FLOOR PLAN</p>	<p><b>BUILDING CODES</b></p> <p>2018 INTERNATIONAL BUILDING CODE 2018 INTERNATIONAL FIRE CODE 2018 INTERNATIONAL ENERGY CONSERVATION CODE 2018 UNIFORM MECHANICAL CODE 2018 UNIFORM PLUMBING CODE 2017 NATIONAL ELECTRICAL CODE</p>
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### APPROVED BY:

JOHN A. MARTINI, P.E.  
ASSISTANT CITY MANAGER  
CITY OF SPARKS

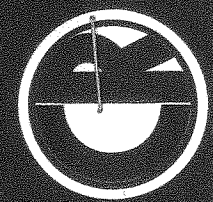
DATE: 4-24-19

### SUBMITTED BY:

CHRISTOPHER L. ROUNDS, P.E.  
PROJECT MANAGER  
CR ENGINEERING

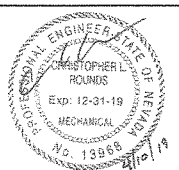
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ENGINEERING

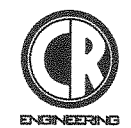


x17 SHEET IS HALF SCALE

BID DOCUMENTS									
REV	DATE	BY	DESCRIPTION	APVD	DATE				



DESIGNED CRB
DRAWN FMP
CHECKED CLR
DATE 4/12/2019



5434 LONGLEY LANE  
RENO, NEVADA 89511  
PHONE: (775) 826-1919  
FAX: (775) 826-1918  
PROJECT NO: 127919



TRUCKEE MEADOWS  
WATER RECLAMATION FACILITY

CITY OF SPARKS	VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING
TMWRF AIR COMPRESSOR REPLACEMENT PHASE II	JOB NO. 127919
TITLE SHEET	DRAWING NO. T0.1
	SHEET NO. 1 OF 12

## HEAT EXCHANGER SCHEDULE

EQUIPMENT ID	SERVICE	MANUFACTURER	MODEL	MAXIMUM DESIGN PRESS (PSI)	MAXIMUM DESIGN TEMPERATURE (°F)	SURFACE AREA (SF)	# OF PLATES	MINIMUM CAPACITY AT DESIGN CONDITION (MBH)	HOT SIDE - AIR COMPRESSOR				COLD SIDE - #2 WATER				OPERATING WEIGHT (LBS)	OPTIONS
									EWT (°F)	LWT (°F)	WATER FLOW (GPM)	MAXIMUM WPD (FT WC)	EWT (°F)	LWT (°F)	WATER FLOW (GPM)	MAXIMUM WPD (FT WC)		
HEX83241	WATER-COOLED AIR COMPRESSOR	SONDEX	SL32-BR-60-TL	135	150	21	60	300	127	100	20	5	85	112	20	5	30	N/A
HEX83242	WATER-COOLED AIR COMPRESSOR	SONDEX	SL32-BR-60-TL	135	150	21	60	300	127	100	20	5	85	112	20	5	30	N/A

GENERAL NOTES:

- ALL CAPACITIES ARE LISTED AT 4,400 FEET ELEVATION.
- DESCRIPTION: BRAZED PLATE HEAT EXCHANGER.
- CONSTRUCTION RATING: HEAT EXCHANGER SHALL BE DESIGNED AND FABRICATED IN ACCORDANCE TO ASME SECTION VIII, "PRESSURE VESSELS".

STANDARD FEATURES:

A. STAINLESS STEEL PLATES BRAZED WITH COPPER

## AIR COMPRESSOR SCHEDULE

EQUIPMENT ID	UNIT DATA			PERFORMANCE DATA				ELECTRICAL DATA			COOLING DATA			OPTIONS
	MANUFACTURER	MODEL	OPERATING WEIGHT (LBS)	DISCHARGE PRESSURE (PSIG)	MINIMUM CAPACITY (CFM)	MAXIMUM CAPACITY (CFM)	COOLING WATER ΔP (FT)	MOTOR (HP)	ELECTRICAL (VOLTS/Ø/Hz)	SPEED (RPM)	WATER FLOW (GPM)	EWT (°F)	LWT (°F)	
CMP83206	ATLAS COPCO	ZR-75-VSD	6,000	105	155	419	5	100	460/3/60	3,600	20	100	127	A,B,C

GENERAL NOTES:

- ALL CAPACITIES ARE LISTED AT 4,400 FEET ELEVATION
- ALL ELECTRICAL COMPONENTS SHALL BE UL OR ETL LISTED
- WATER-COOLED AIR COMPRESSOR

STANDARD FEATURES:

- INTEGRATED VARIABLE SPEED DRIVE
- 100% OIL-FREE ROTARY SCREW COMPRESSOR
- PNEUMATICALLY ACTUATED INLET THROTTLE VALVE FOR FULL LOAD/NO LOAD REGULATION
- PREMIUM EFFICIENCY TEFC COMPRESSOR MOTOR

OPTIONS:

- ANCHOR PADS
- IO2 EXPANSION MODULE TO PROVIDE ELECTRICAL POWER TO EXTERNAL EQUIPMENT
- GATEWAY MODULE FOR MODBUS COMMUNICATION WITH DCS

## EQUIPMENT SCHEDULE

<b>PMP83243</b>	CIRCULATION PUMP - TACO 2400 SERIES CIRCULATING PUMP WITH STAINLESS STEEL CASING AND STAINLESS STEEL SHAFT. PUMP CAPACITY SHALL BE 20 GPM AND TOTAL HEAD PRESSURE OF 15 FT. ELECTRICAL: 120V/1Ø/60Hz, 1/6 HP OPERATING WEIGHT: 10 LBS
<b>TNK83188</b>	CHEMICAL FEED TANK - NU-CALGON MODEL 100L FLAT BOTTOM, MILD STEEL, 10-GALLON MICROMET CHEMICAL FEEDER WITH 3/2" QUARTER TURN CAP AND TWO 3/4" NPT PORTS. SEE PIPING DIAGRAM FOR CONFIGURATION.
<b>EXT83189</b>	EXPANSION TANK - AMTROL THERM-X-TROL MODEL EX-15 PRE-CHARGED THERMAL EXPANSION TANK. 2.0 GALLON TANK WITH MAXIMUM ACCEPTANCE FACTOR OF 0.5. TANK SHALL HAVE A 100 PSI MAXIMUM WORKING PRESSURE, 240°F MAXIMUM WORKING TEMPERATURE, AND 12 PSI FACTORY PRESET PRESSURE
<b>MOV83190</b>	CONTROL VALVE - BELIMO MODEL G240(S) ON-OFF, TWO-WAY, THREADED WITH STAINLESS STEEL TRIM AND A STAINLESS STEEL PLUG. 1 1/2" NPT CONNECTIONS. SPRING-RETURN WITH NORMAL OPEN. ELECTRICAL: 24 VAC/60Hz

## MECHANICAL ABBREVIATIONS

ACFM	ACTUAL CUBIC FEET PER MINUTE
AFF/AFG	ABOVE FINISHED FLOOR/GRADE
A	AMPERE
APD	AIR PRESSURE DROP
BFF/BFG	BELOW FINISHED FLOOR/GRADE
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMPRESSED AIR
CFM	CUBIC FEET PER MINUTE
COP	COEFFICIENT OF PERFORMANCE
(D)	DEMOLISH
DIA	DIAMETER
DP	DIFFERENTIAL PRESSURE
EFF	EFFICIENCY
EER	ENERGY EFFICIENCY RATIO
(E)	EXISTING
ESP	EXTERNAL STATIC PRESSURE
FLA	FULL LOAD AMPERES
PPM	FEET PER MINUTE
FT	FOOT
FT <sup>2</sup>	SQUARE FOOT
FT <sup>3</sup>	CUBIC FOOT
GA	GAUGE
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HZ	HERTZ
IN	INCH
IN <sup>2</sup>	SQUARE INCH
IN <sup>3</sup>	CUBIC INCH
KW	KILOWATT
LBS	POUNDS
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MERV	MINIMUM EFFICIENCY REPORTING VALUE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
(N)	NEW
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RPM	REVOLUTIONS PER MINUTE
SEER	SEASONAL ENERGY EFFICIENCY RATIO
TYP	TYPICAL
V	VOLTS
W	WATT
WC/WG	WATER COLUMN/GAUGE

## MECHANICAL SYMBOL LEGEND

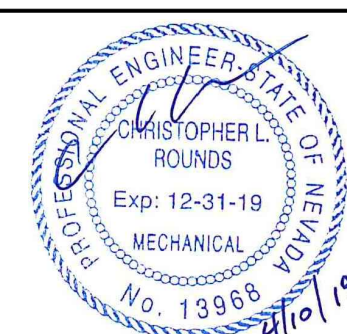
	MOTORIZED ACTUATOR
	TSTAT THERMOSTAT OR TEMPERATURE SENSOR @ 48" AFF
	BV BALL VALVE
	BFV BUTTERFLY VALVE
	CV CHECK VALVE
	FCV FLOW CONTROL (BALANCE) VALVE
	PRV PRESSURE REDUCING VALVE
	PTRV PRESSURE AND TEMPERATURE RELIEF VALVE
	TCV TEMPERATURE CONTROL VALVE (2-WAY OR 3-WAY)
	TDV TRIPLE DUTY VALVE
	STR STRAINER
	UNION
	PIPE BREAK
	PIPE CAP OR PLUG
	ELL PIPE ELBOW
	PIPE ELBOW DOWN
	PIPE ELBOW UP
	PIPE TEE
	PIPE RISER
	PIPE DROP
	PIPE BRANCH, TOP CONNECTION
	PIPE BRANCH, BOTTOM CONNECTION
	FLEX FLEXIBLE PIPE CONNECTOR
	WATER METER
	PRESSURE SENSOR, TEMPERATURE SENSOR WITH WELL
	PRESSURE GAUGE, TEMPERATURE GAUGE
	P PUMP
	D EQUIPMENT OR CONDENSATE DRAIN PIPING
	POC POINT OF CONNECTION
	POINT OF DISCONNECT
	CCW COMPRESSOR COOLING WATER
	#2 W #2 EFFLUENT PLANT WATER

DRAWING ON 11x17 SHEET IS HALF SCALE

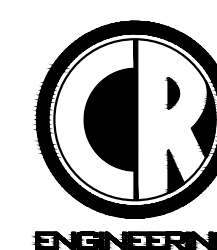
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REV	DATE	BY	DESCRIPTION	APVD	DATE



DESIGNED CRB  
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DATE 4/12/2019



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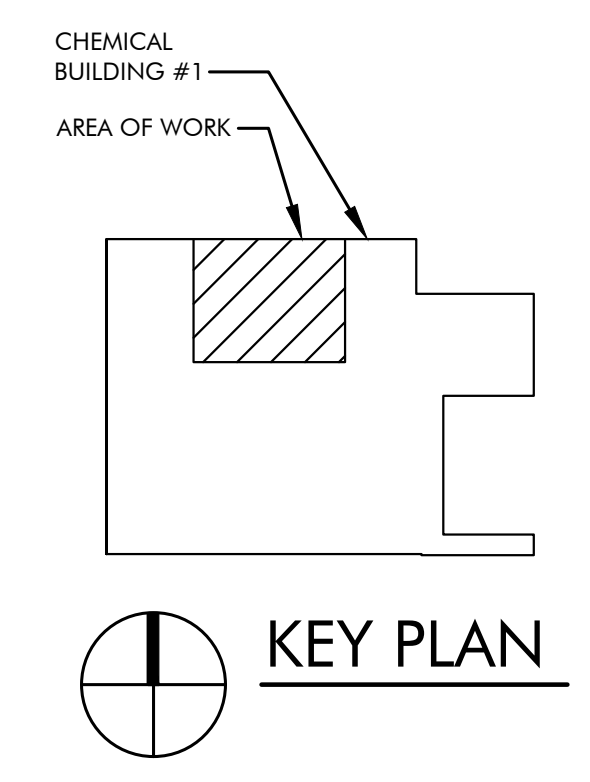
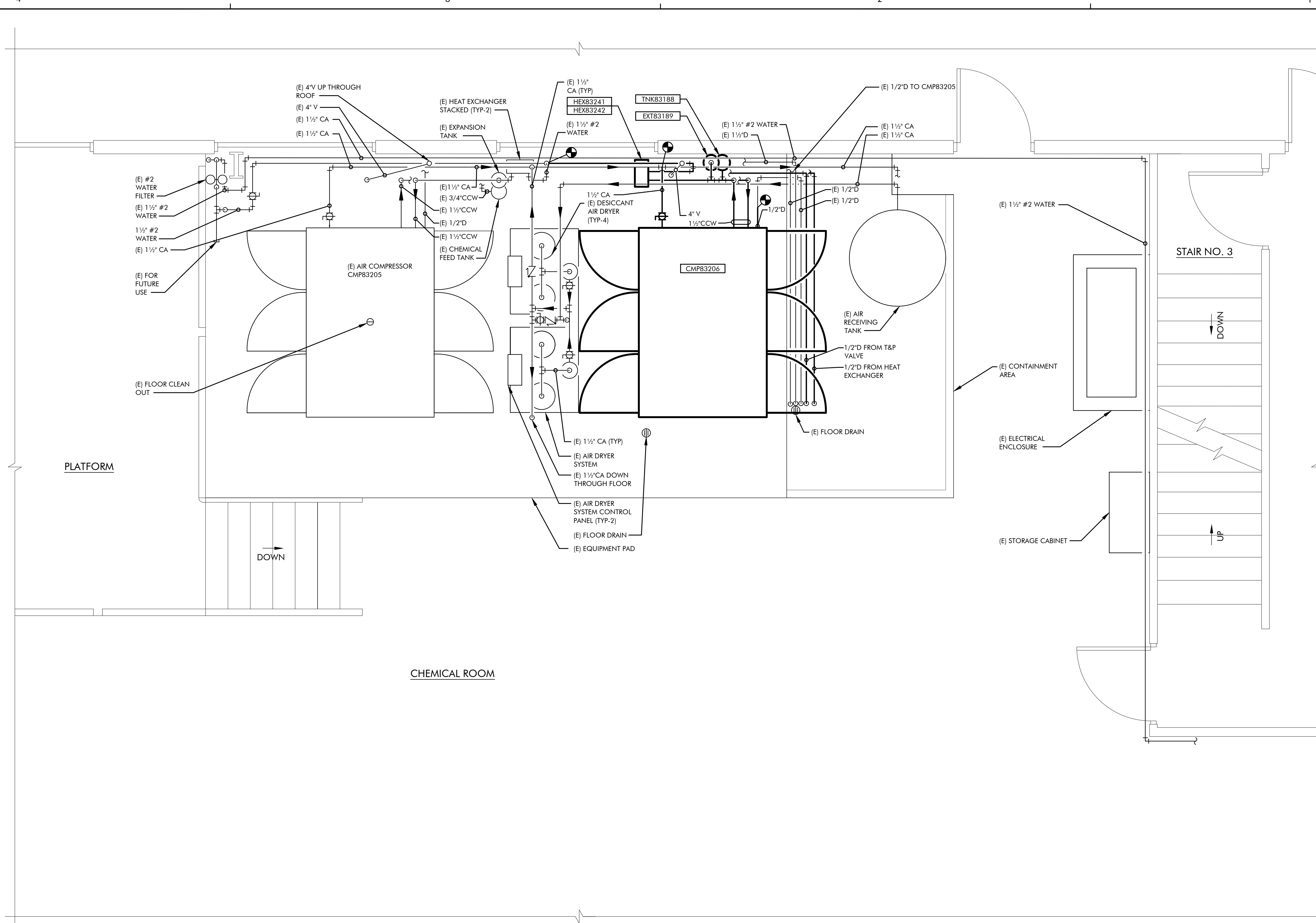


CITY OF SPARKS  
TMWRF AIR COMPRESSOR REPLACEMENT PHASE II  
MECHANICAL ABBREVIATIONS, LEGENDS, AND SCHEDULES

VERIFY SCALES  
BAR IS ONE INCH ON ORIGINAL DRAWING  
0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO. 127919  
DRAWING NO. MO.1  
SHEET NO. 2 OF 12

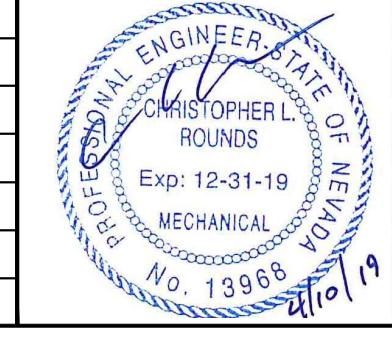




**MECHANICAL PARTIAL FLOOR PLAN**  
SCALE: 1/2" = 1'-0"

DRAWING ON 11x17 SHEET IS HALF SCALE

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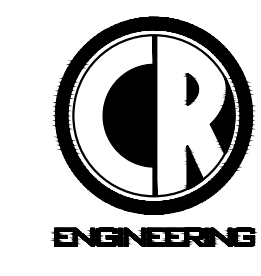


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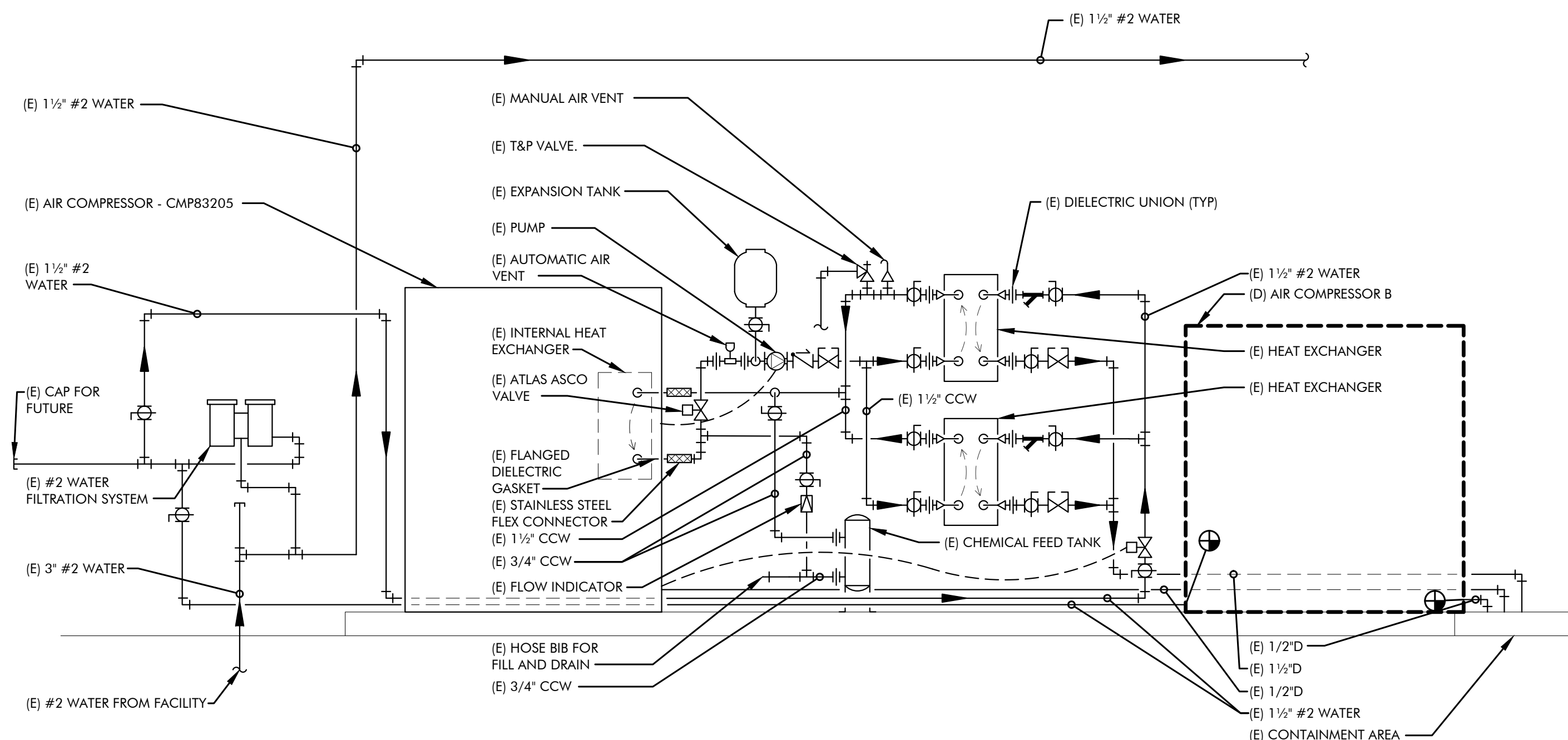
CITY OF SPARKS  
TMWRF AIR COMPRESSOR REPLACEMENT PHASE II  
MECHANICAL FLOOR PLAN

VERIFY SCALES  
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JOB NO.  
127919

DRAWING NO.  
M2.1

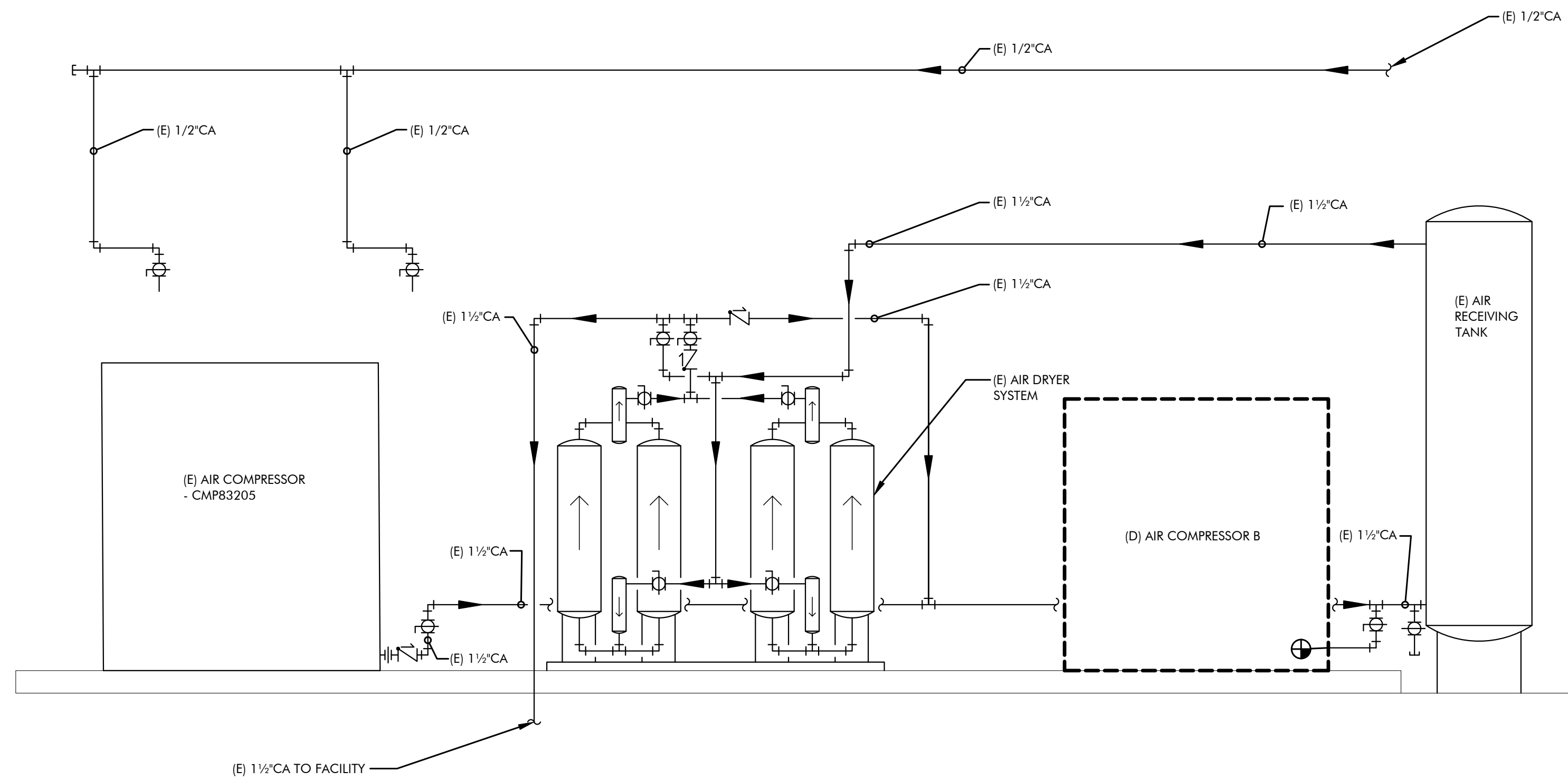
SHEET NO.  
4 OF 12



**MECHANICAL DEMOLITION #2 WATER PIPING DIAGRAM**

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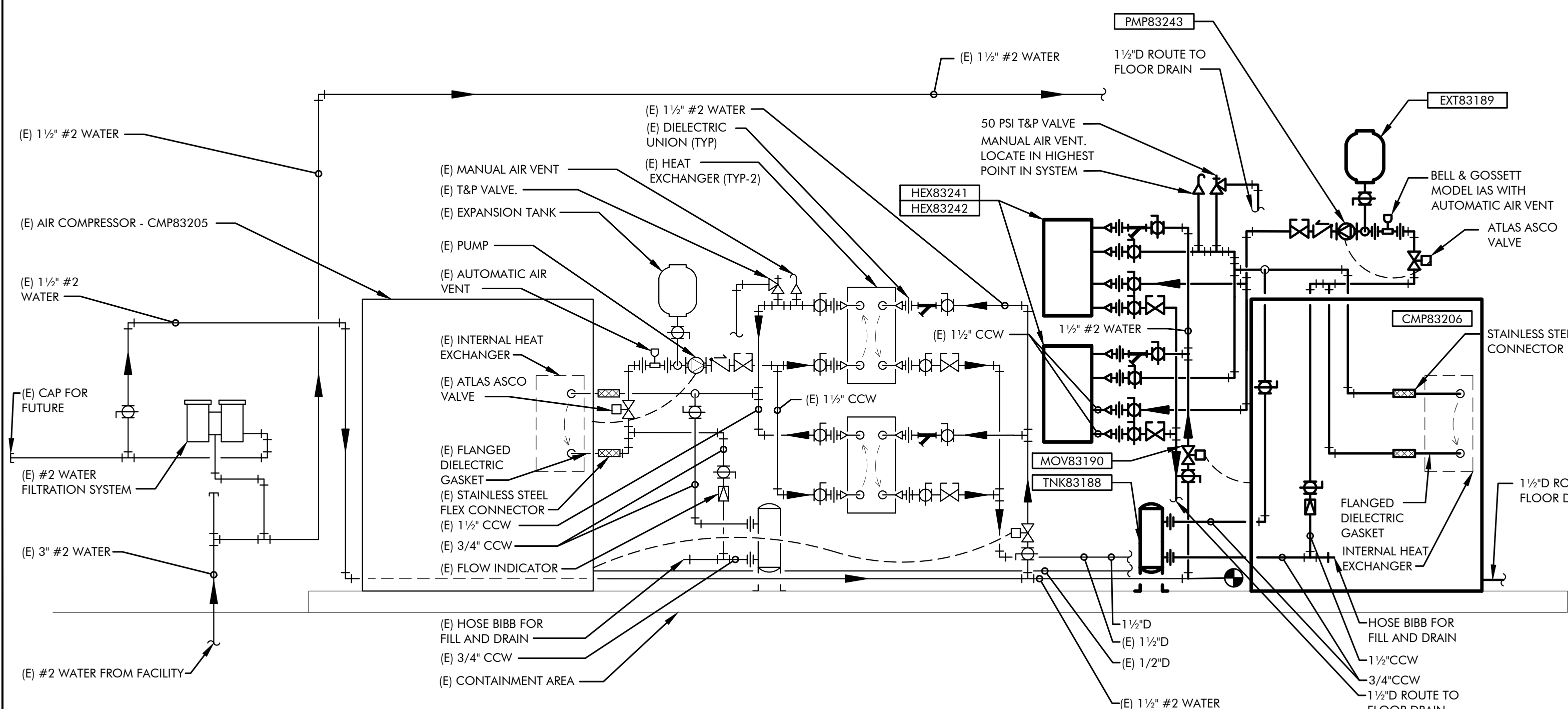
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M4.1



**MECHANICAL DEMOLITION COMPRESSED AIR PIPING DIAGRAM**

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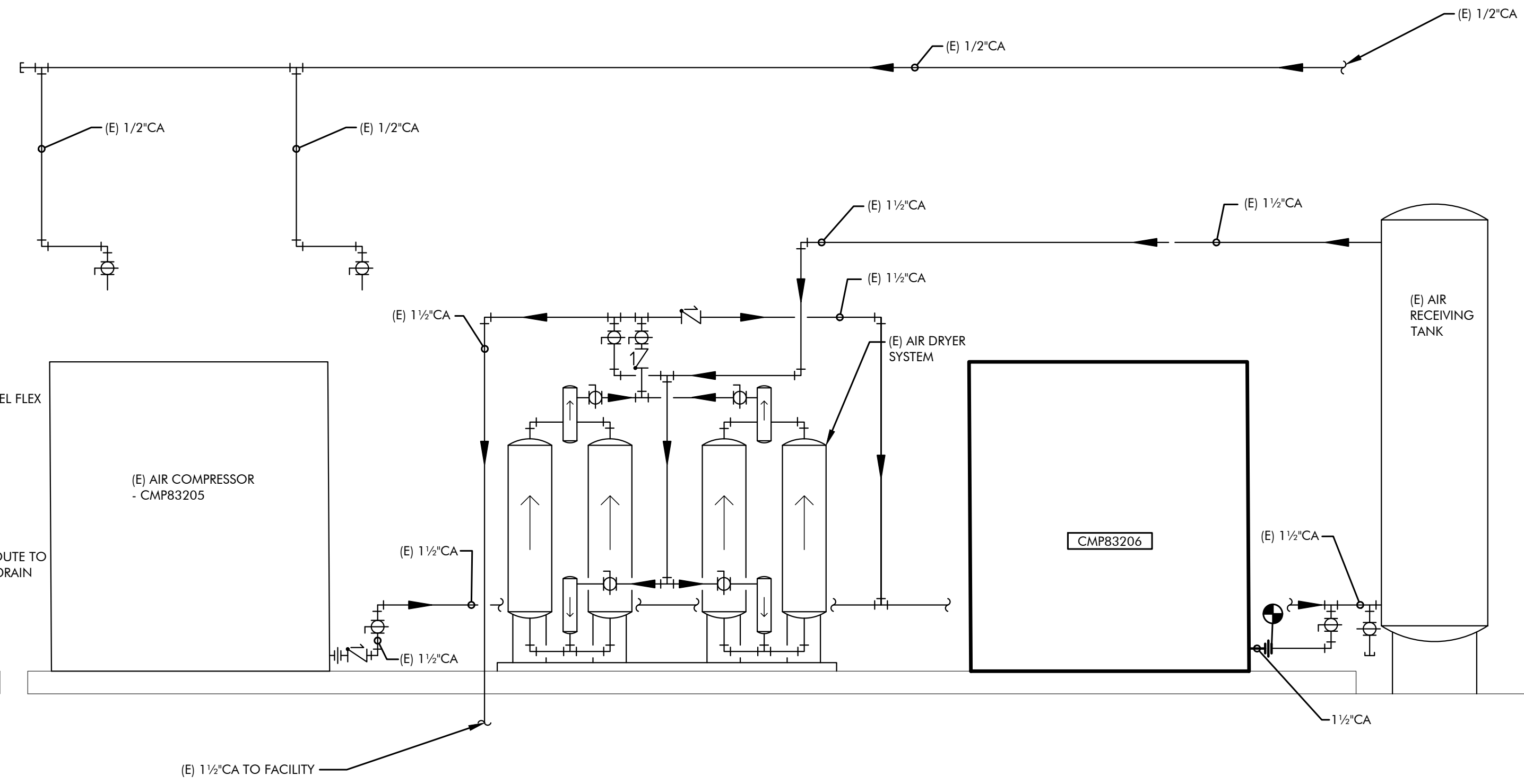
2  
M4.1



**MECHANICAL #2 WATER PIPING DIAGRAM**

SCALE: NONE

3  
M4.1



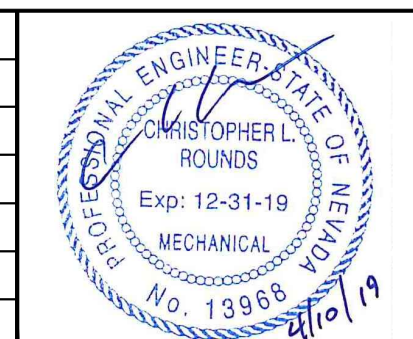
**MECHANICAL COMPRESSED AIR PIPING DIAGRAM**

SCALE: NONE

4  
M4.1

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BID DOCUMENTS	REV	DATE	BY	DESCRIPTION	APVD	DATE

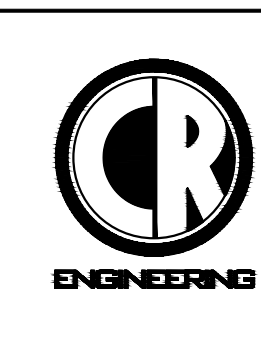


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RENO, NEVADA 89511  
PHONE: (775) 826-1919  
FAX: (775) 826-1918  
PROJECT NO: 127919



CITY OF SPARKS

TMWRP AIR COMPRESSOR REPLACEMENT PHASE II

MECHANICAL PIPING DIAGRAMS

VERIFY SCALES  
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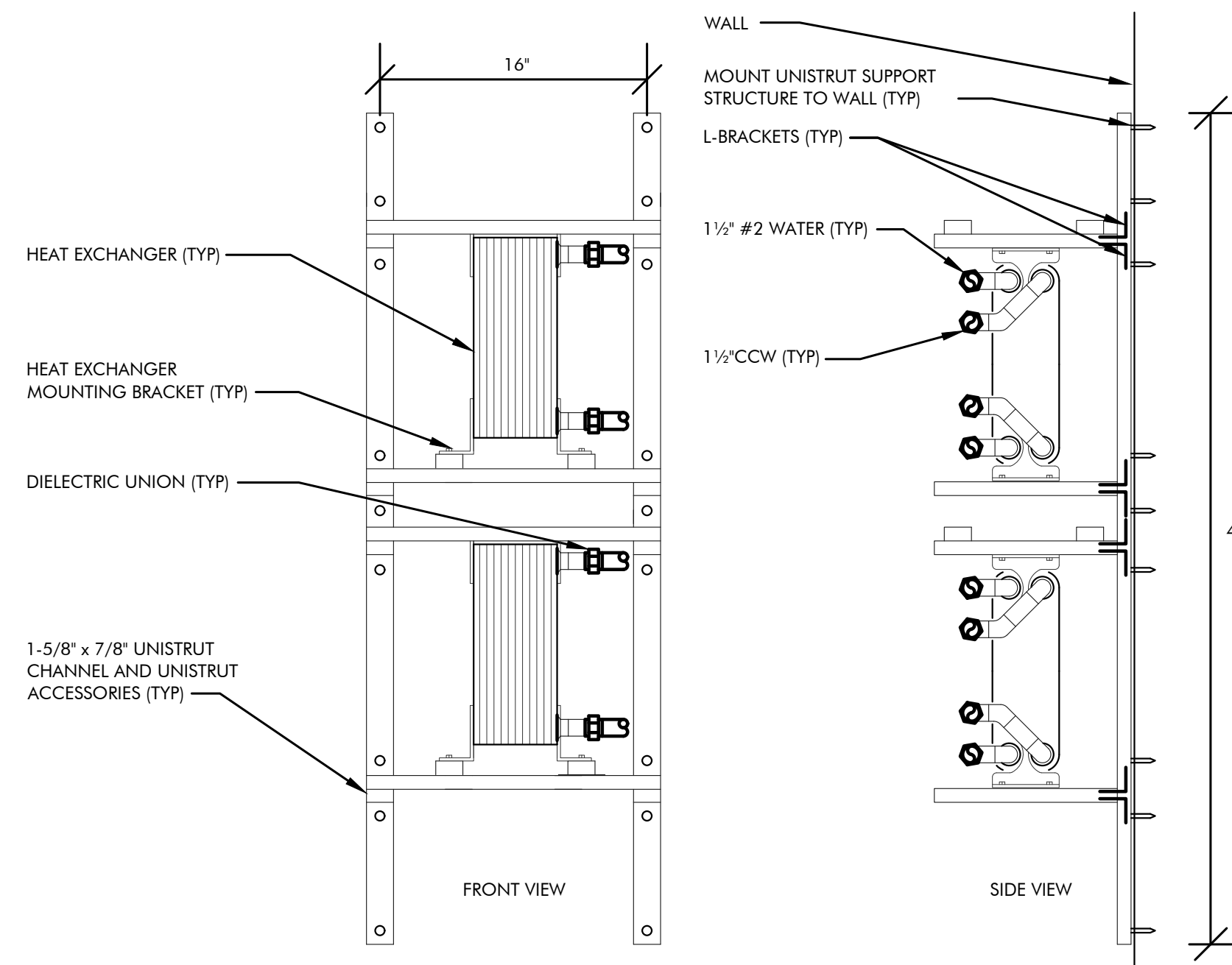
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JOB NO.  
127919

DRAWING NO.  
M4.1

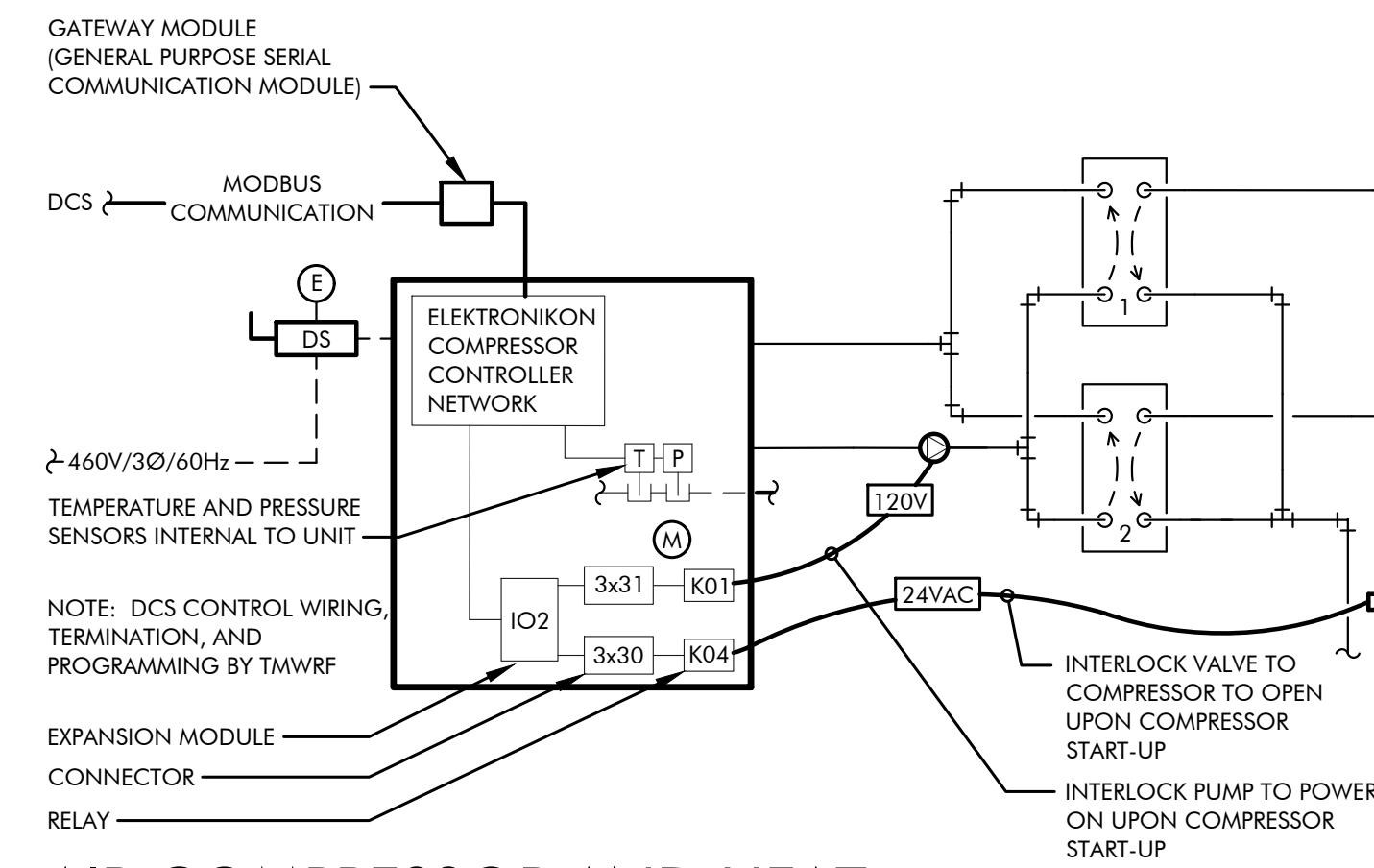
SHEET NO.  
5 OF 12



**HEAT EXCHANGER MOUNTING DETAIL**

SCALE: NONE

1  
M5.1



**AIR COMPRESSOR AND HEAT EXCHANGER CONTROL DIAGRAM**

SCALE: NONE

2  
M5.1

**CONTROLS SYMBOL LEGEND**

SYMBOL	DESCRIPTION
CS	CURRENT SENSOR
	2-WAY CONTROL VALVE
DS	DISCONNECT SWITCH
VFD	VARIABLE FREQUENCY DRIVE
	PUMP
	EQUIPMENT FURNISHED AND INSTALLED BY MECHANICAL CONTRACTOR
	EQUIPMENT FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR
---	CONDUIT AND POWER WIRE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR
---	CONDUIT AND CONTROL WIRE FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR

**AIR COMPRESSOR SEQUENCE OF OPERATION**

- AUTOMATIC OPERATION:**
- THE AIR COMPRESSOR WILL BE ENABLED WHEN PRESSURE DROPS BELOW THE SETPOINT. THE SETPOINT IS 100 PSI WITH A ±5 PSI DEADBAND (ADJUSTABLE).
  - WHEN THE COMPRESSOR IS POWERED-ON:
    - #2 WATER CONTROL VALVE SHALL OPEN. 24VAC WILL BE SUPPLIED FROM EXPANSION MODULE (IO2) THROUGH RELAY (K04) TO VALVE (MOV83190).
    - THE PUMP WILL POWER ON. 120V WILL BE SUPPLIED FROM EXPANSION MODULE (IO2) THROUGH RELAY (K01) TO PUMP (PMP83243).
  - ONCE THE PLANTS COMPRESSED AIR SYSTEM PRESSURE REQUIREMENTS HAVE BEEN MET THE COMPRESSOR WILL SHUT-DOWN, PUMP WILL SHUT OFF, AND #2 WATER CONTROL VALVE WILL SHUT OFF.
- HEAT EXCHANGERS:**
- HEAT EXCHANGERS ARE TO BE 100% REDUNDANT. ONCE HEAT EXCHANGER (1)\* HAS FOULED UP, IT WILL BE COMPLETELY VALVED OFF AND HEAT EXCHANGER (2)\* WILL BE VALVED ON. ONCE HEAT EXCHANGER (2)\* IS WORKING, HEAT EXCHANGER (1)\* IS TO BE REMOVED AND REPLACED.
- \* HEAT EXCHANGER (1): HEX83241, HEAT EXCHANGER (2): HEX83242

DRAWING ON 11x17 SHEET IS HALF SCALE

BID DOCUMENTS	REV	DATE	BY	DESCRIPTION	APVD	DATE		DESIGNED CRB		5434 LONGLEY LANE RENO, NEVADA 89511 PHONE: (775) 826-1919 FAX: (775) 826-1918 PROJECT NO: 127919		CITY OF SPARKS		VERIFY SCALES	JOB NO.
	TMWRF AIR COMPRESSOR REPLACEMENT PHASE II											BAR IS ONE INCH ON ORIGINAL DRAWING	127919		
MECHANICAL CONTROL DIAGRAM											0  1"	DRAWING NO.			
FILENAME: W:\2019\127919\dwgs\127919 M5.1 MECHANICAL DETAILS.dwg											IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY	SHEET NO.			
											6	OF 12			

ELECTRICAL SYMBOLS AND NOMENCLATURE

	SINGLE-OUTLET RECEPTACLE		SINGLE-PHASE, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (2) - #10 CU, UNLESS OTHERWISE NOTED) BELOW FLOOR
	DOUBLE-OUTLET 'DUPLEX' RECEPTACLE		SINGLE-PHASE, 2-POLE CIRCUIT PATH (1/2" CONDUIT, (3) - #10 CU, UNLESS OTHERWISE NOTED) BELOW FLOOR
	THREE-PHASE (3W) RECEPTACLE (CONFIGURATION AS NOTED)		THREE-PHASE, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (4) - #10 CU, UNLESS OTHERWISE NOTED) BELOW FLOOR
	QUADRIPOLE-OUTLET 'QUAD' RECEPTACLE		RETURN CIRCUIT TO PANEL 'HOMERUN' (CIRCUIT AS NOTED) ABOVE FLOOR
	SPECIAL RECEPTACLE (VOLTAGE/CONFIGURATION AS NOTED)		CIRCUIT BREAKER (AMPS/POLES AS NOTED)
	JUNCTION BOX		FUSE (AMPS/POLES AS NOTED)
	FLOOR MOUNT RECEPTACLE		SHEET NOTE INDICATOR
	THERMOSTAT		EQUIPMENT NOTE INDICATOR
	SAFETY DISCONNECT SWITCH (SIZE/VOLTAGE/CONFIGURATION AS NOTED)		REVISION 'DELTA' NOTE INDICATOR
	COMBINATION SAFETY SWITCH/MAGNETIC STARTER		FEEDER NOTE INDICATOR
	TELEPHONE/DATA JUNCTION BACKBOX		48" 48" MOUNTING HEIGHT AFF. (ACTUAL HEIGHT AS NOTED)
	SINGLE-POLE TOGGLE SWITCH (VOLTAGE AS REQUIRED)		AFF. ABOVE FINISHED FLOOR
	PANELBOARD (NAME/AMP/PHASE/VOLTAGE/CONFIGURATION AS NOTED)		A.F.G. ABOVE FINISHED GRADE
	TRANSFORMER (NAME/KVA RATING/PHASE/VOLTAGE AS NOTED)		A.T.S. AUTOMATIC TRANSFER SWITCH
	INDICATES MECHANICAL EQUIPMENT		C CONDUIT
	PHOTO ELECTRIC CELL		CB CIRCUIT BREAKER
	TIME CLOCK		CLG CEILING
	CONTACTOR (CONFIGURATION AS NOTED)		(E) EXISTING
	DUCT DETECTOR FIRE ALARM SYSTEM COMPONENT		FACP FIRE ALARM CONTROL PANEL
	SINGLE-PHASE, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (2) - #10 CU, UNLESS OTHERWISE NOTED) ABOVE FLOOR		F.B.O. FURNISHED BY OTHERS
	SINGLE-PHASE, 2-POLE CIRCUIT PATH (1/2" CONDUIT, (3) - #10 CU, UNLESS OTHERWISE NOTED) ABOVE FLOOR		GFI GROUND FAULT INTERRUPTING TYPE
	THREE-PHASE, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (4) - #10 CU, UNLESS OTHERWISE NOTED) ABOVE FLOOR		HID HIGH INTENSITY DISCHARGE
	RETURN CIRCUIT TO PANEL 'HOMERUN' (CIRCUIT AS NOTED) ABOVE FLOOR		L.T.G. LIGHTING
	MOTOR (HORSEPOWER AS NOTED)		N.T.S. NOT TO SCALE
	TYPICAL		M.C.B. MAIN CIRCUIT BREAKER
	UNDER GROUND		M.S.B. MAIN SWITCH BOARD
	UNLESS OTHERWISE NOTED		(N) NEW
	WEATHER PROOF		N.L. NIGHT LIGHT
	TRANSFORMER		O.A.A. OR APPROVED ALTERNATE

MECHANICAL EQUIPMENT CONNECTION SCHEDULE:

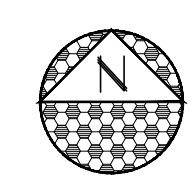
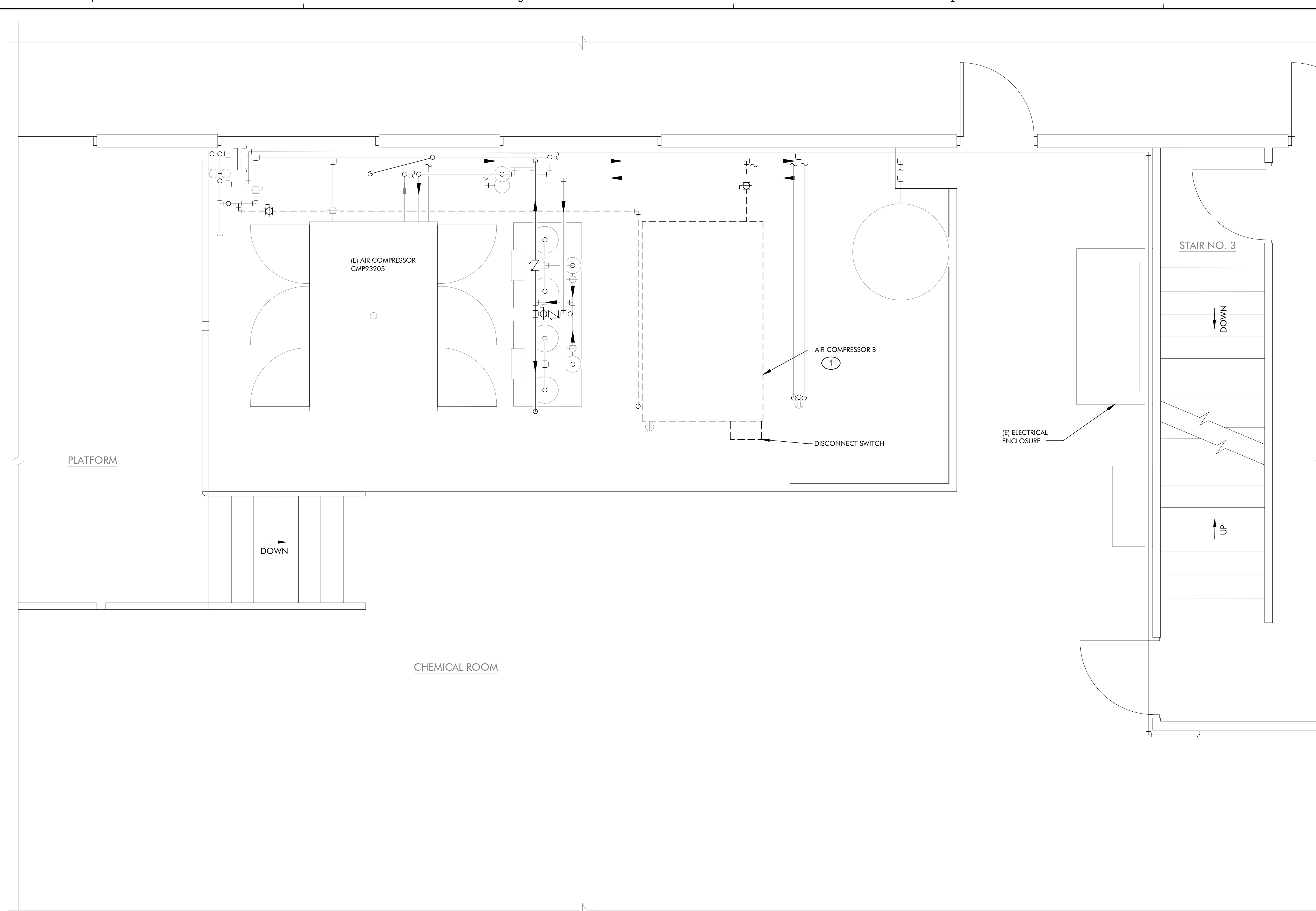
MEQ #	DISCONNECTING MEANS	STARTER	VOLTS / PH	FED FROM	CONDUIT & WIRE	LOAD KVA	NOTES
PMP83243	20A MOTOR RATED SWITCH IN F.S. BOX	--	120 / 1	NOTE #4	1/2" C., (2) - #12 Cu & (1) - #12 Cu GND	0.53	1/6 HP
CMP83206	200A/175F/3P 600V, N12 DISC. SAFETY SWITCH	INCLUDED	480 / 3	MCC-22 POS# 2C	2" C., (3) - #2/0 Cu & (1) - #6 Cu GND	103.09	100 HP

MECHANICAL EQUIPMENT CONNECTION SCHEDULE NOTES:

- ELECTRICAL CONTRACTOR SHALL VERIFY ALL ELECTRICAL, TEMPERATURE CONTROLS AND DUCT DETECTOR CONNECTIONS AS REQUIRED BY THE MECHANICAL DRAWINGS AND DETAILS PRIOR TO SUBMITTING A BID.
- SEE MECHANICAL PLANS FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT.
- CONTRACTOR'S BID SHALL INCLUDE NEW (OVERHEAD) CONDUITS AND PATHWAYS AS REQUIRED FOR ALL EQUIPMENT CONNECTIONS. NEVERTHELESS, CONTRACTOR MAY REUSE ANY EXISTING CONDUITS, BACK BOXES, AND PATHWAYS THAT ARE MADE AVAILABLE DURING THE DEMOLITION PHASE OF WORK.
- THE CIRCULATION PUMP (PMP83243) IS TO BE FED FROM AND CONTROLLED BY THE AIR COMPRESSOR (CMP83206) BUILT-IN CONTROL BOARD.

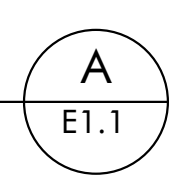
DRAWING ON 11x17 SHEET IS HALF SCALE

<p><b>JENSEN ENGINEERING INC.</b> Electrical Engineers 9655 Gateway Drive Reno, Nevada 89521-2968 Ph. (775) 852-2288 Fax (775) 852-3388 email: jenen@nvcbell.com web: www.jeneng.com</p> <p><b>BID DOCUMENTS</b></p>	REV	DATE	BY	DESCRIPTION	APVD	DATE		DESIGNED KPJ/GGJ  DRAWN KPJ  CHECKED GGJ  DATE 04/12/2019	<p>5434 LONGLEY LANE RENO, NEVADA 89511 PHONE: (775) 826-1919 FAX: (775) 826-1918 PROJECT NO: 105717</p>		CITY OF SPARKS TMWRF AIR COMPRESSOR REPLACEMENT PHASE II ELECTRICAL SYMBOLS AND MECHANICAL EQUIPMENT CONNECTION SCHEDULE		VERIFY SCALES BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"	JOB NO. A72JK DRAWING NO. E0.1 SHEET NO. 7 OF 12
	IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY													



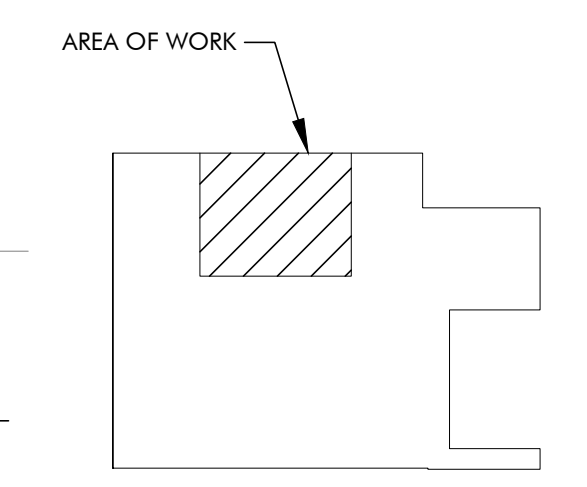
**ELECTRICAL PARTIAL DEMOLITION FLOOR PLAN**

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



**SHEET NOTES: (THIS SHEET ONLY)**

- ① REMOVE AND RETIRE (E) CONDUIT AND CONDUCTORS TO (E) AIR COMPRESSOR

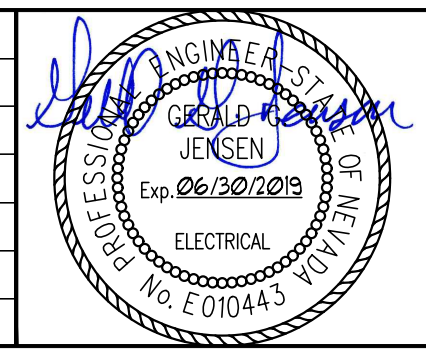


**KEY PLAN**

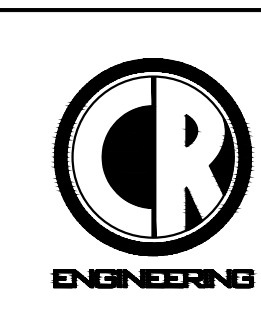
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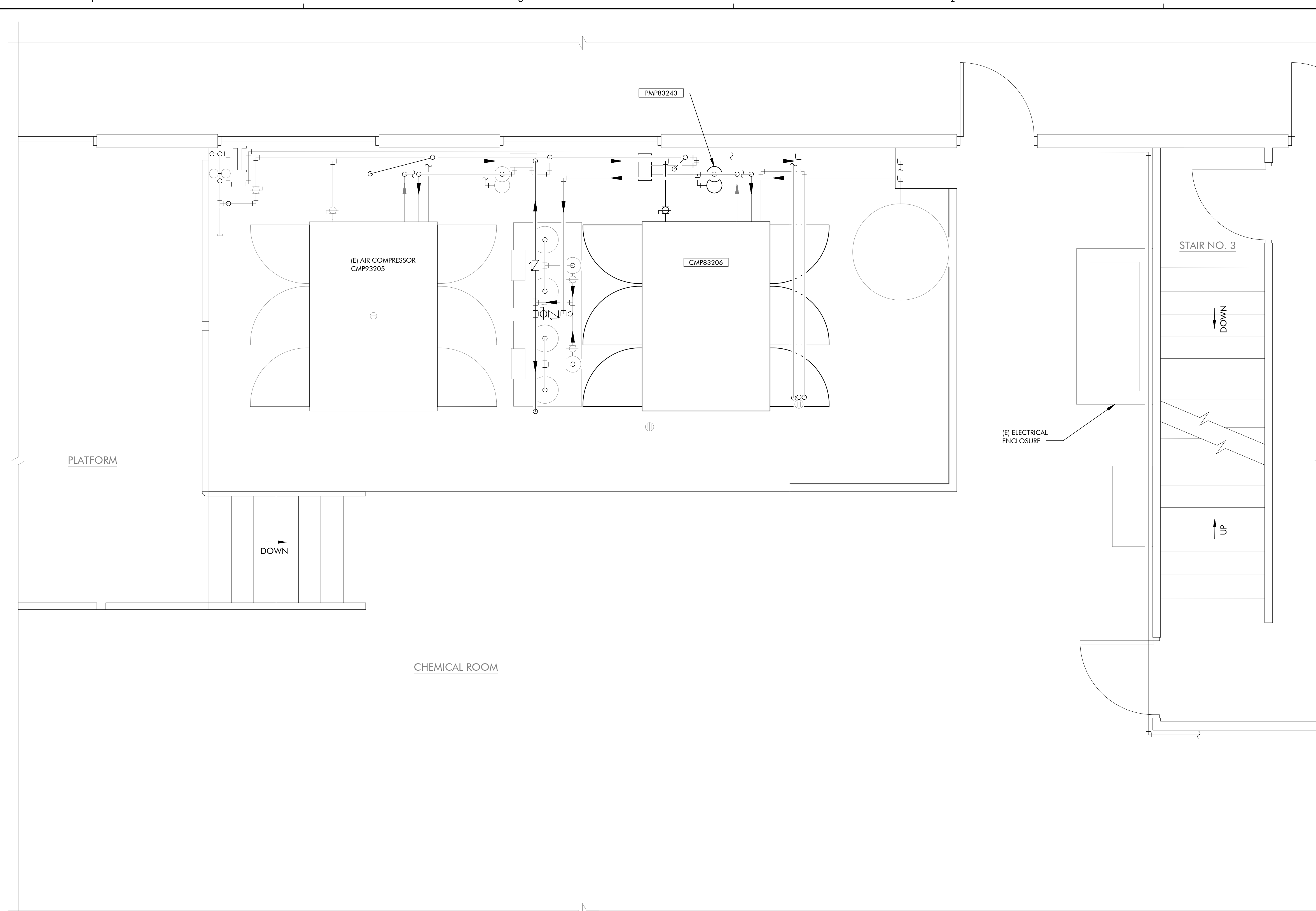


**CITY OF SPARKS**  
**TMWRF AIR COMPRESSOR REPLACEMENT PHASE II**  
**ELECTRICAL PARTIAL DEMOLITION FLOOR PLAN**

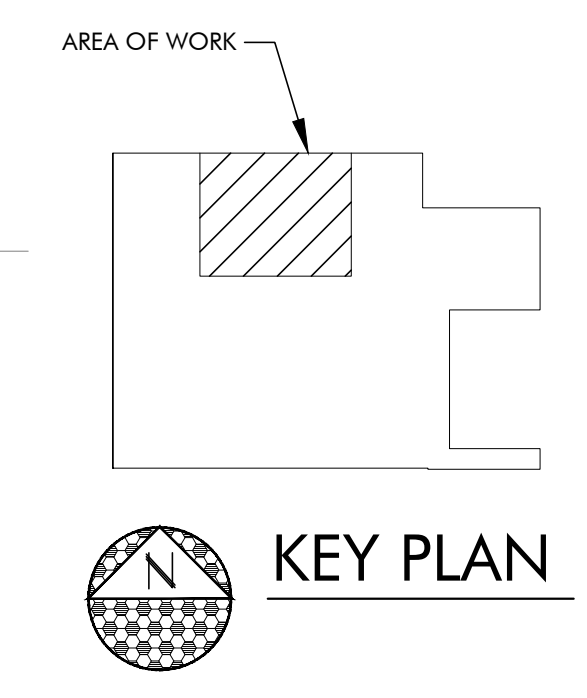
VERIFY SCALES  
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JOB NO. A72JK  
 DRAWING NO. E1.1  
 SHEET NO. 8 OF 12





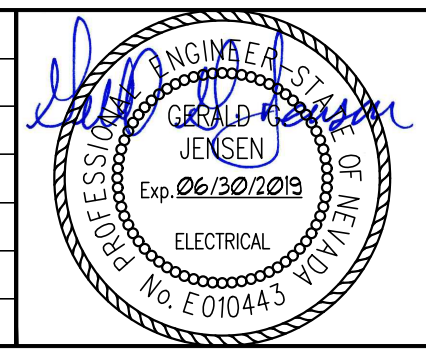
**ELECTRICAL PARTIAL FLOOR PLAN**  
 SCALE: 1/2" = 1'-0"  
 A  
 E2.1



DRAWING ON 11x17 SHEET IS HALF SCALE

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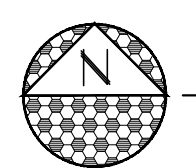
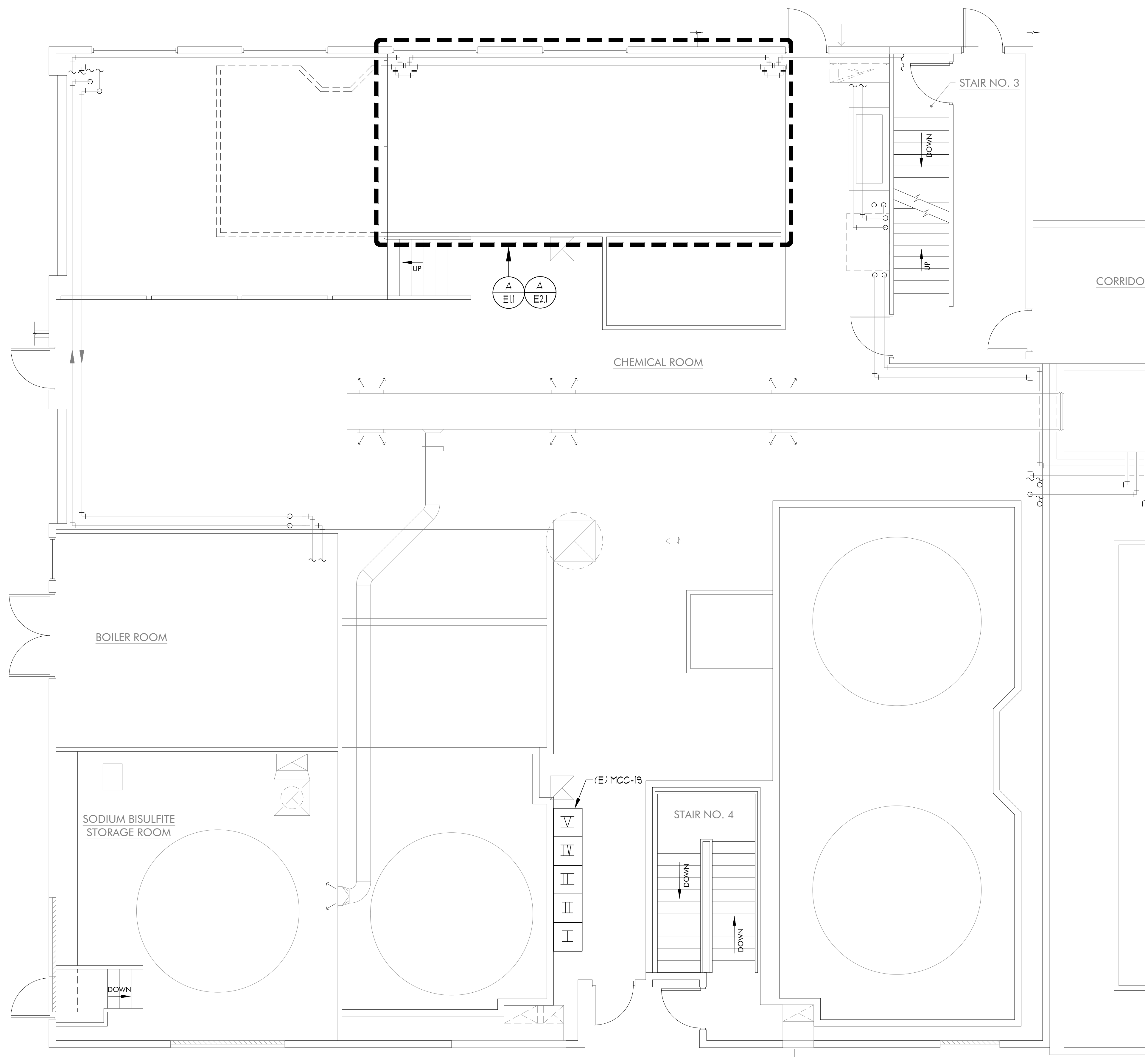
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CITY OF SPARKS  
 TMWRF AIR COMPRESSOR REPLACEMENT PHASE II  
**ELECTRICAL PARTIAL FLOOR PLAN**

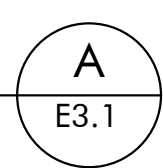
VERIFY SCALES  
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JOB NO. A72JK  
 DRAWING NO. E2.1  
 SHEET NO. 9 OF 12



**ELECTRICAL PARTIAL FLOOR PLAN**

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

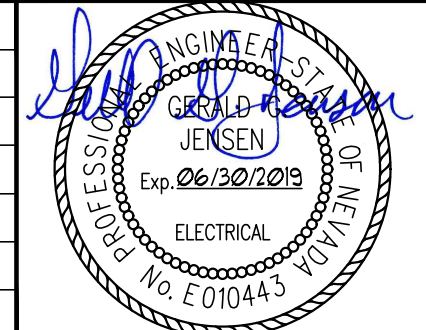


DRAWING ON 11x17 SHEET IS HALF SCALE

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CITY OF SPARKS

TMWRF AIR COMPRESSOR REPLACEMENT PHASE II

**ELECTRICAL PARTIAL FLOOR PLAN**

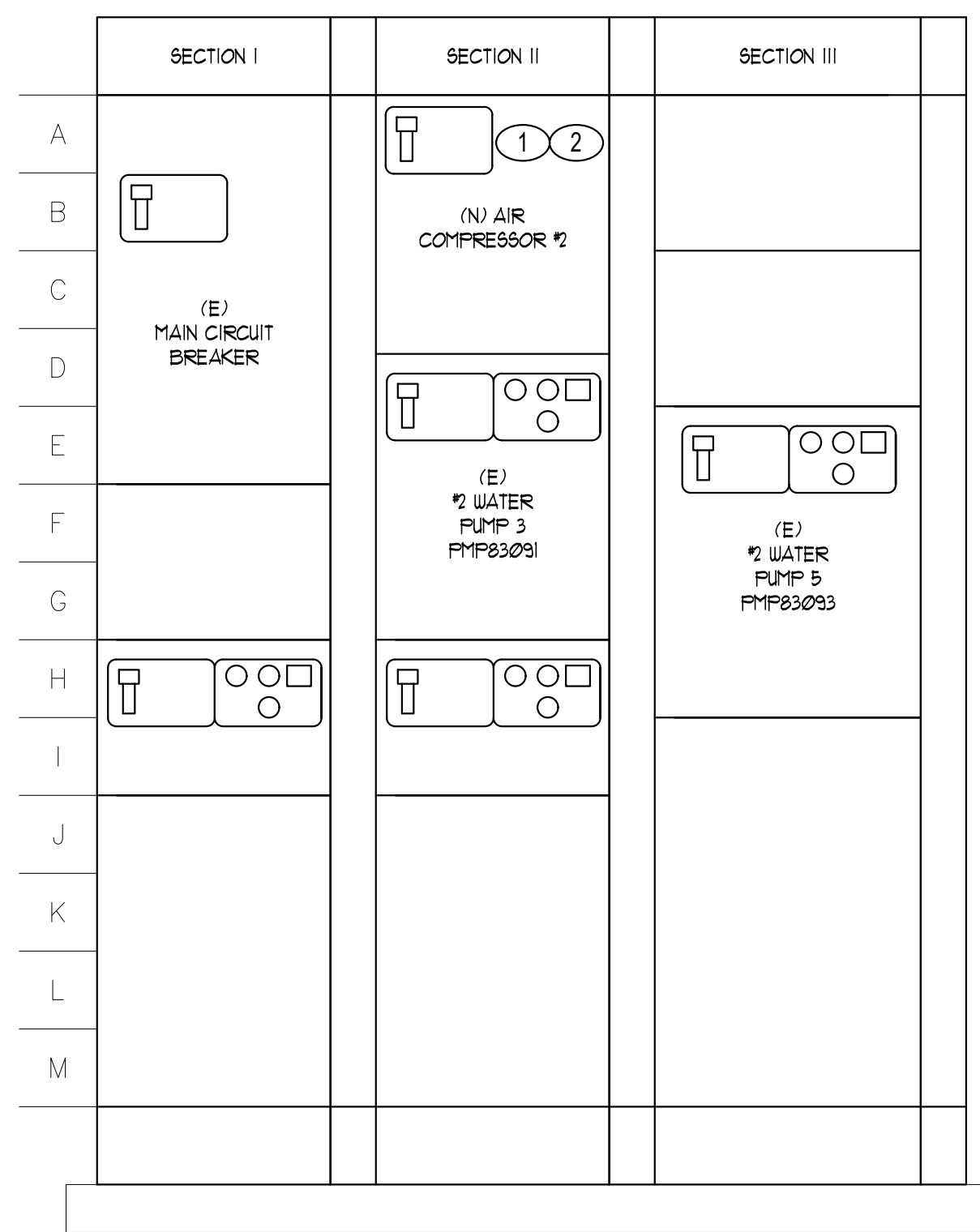
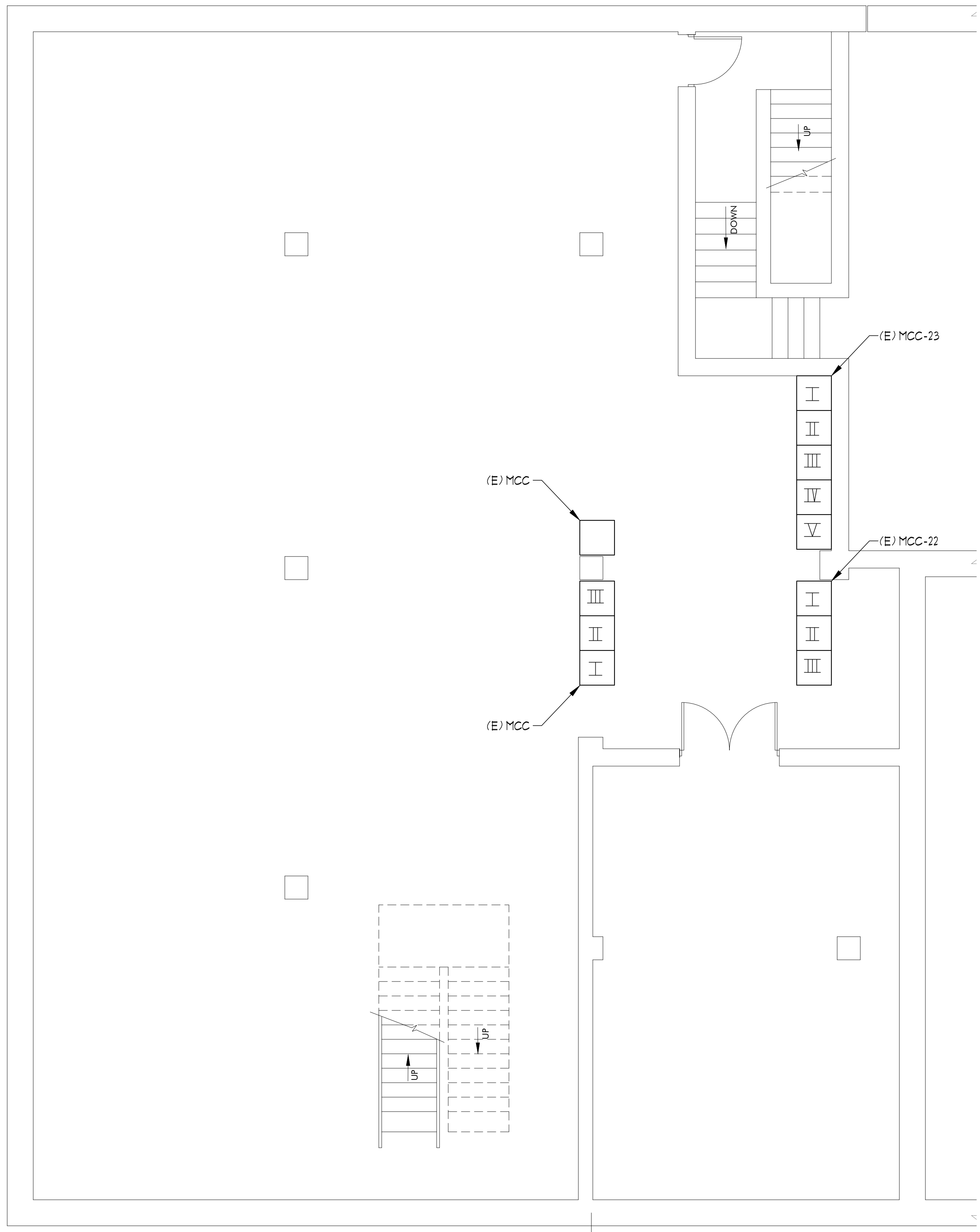
VERIFY SCALES  
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0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
A72JK

DRAWING NO.  
**E3.1**

SHEET NO.  
10 OF 12



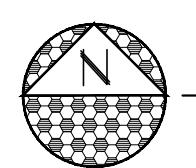
**MCC-22 ELEVATION**

SCALE: 1" = 1'-0"

**B**  
E3.2

**SHEET NOTES: (THIS SHEET ONLY)**

- ① REMOVE AND RETIRE (E) 150A BREAKER IN MCC-22 AT POSITION #2C FEEDING (E) AIR COMPRESSOR #2.
- ② PROVIDE AND INSTALL (N) 175A BREAKER IN MCC-22 AT POSITION #2C TO FEED (N) AIR COMPRESSOR #2.



**ELECTRICAL PARTIAL BASEMENT PLAN**

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

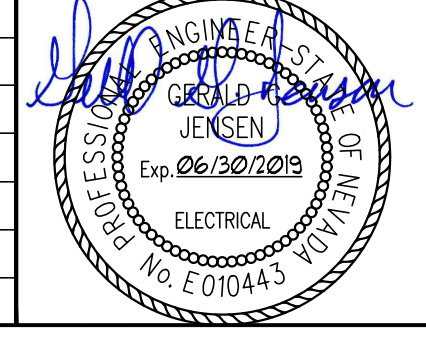
**A**  
E3.2

DRAWING ON 11x17 SHEET IS HALF SCALE

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CITY OF SPARKS  
TMWRF AIR COMPRESSOR REPLACEMENT PHASE II

**ELECTRICAL PARTIAL FLOOR PLAN**

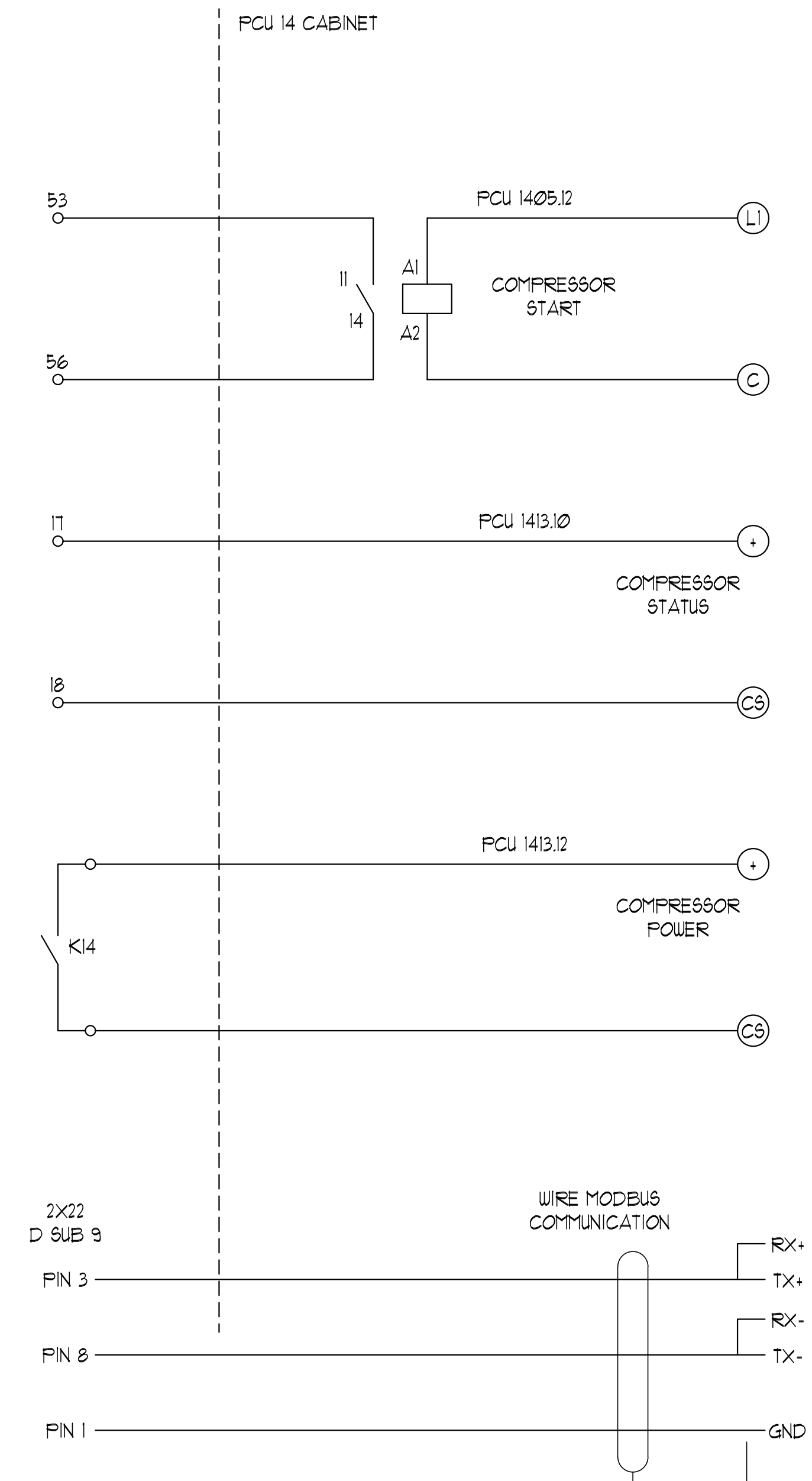
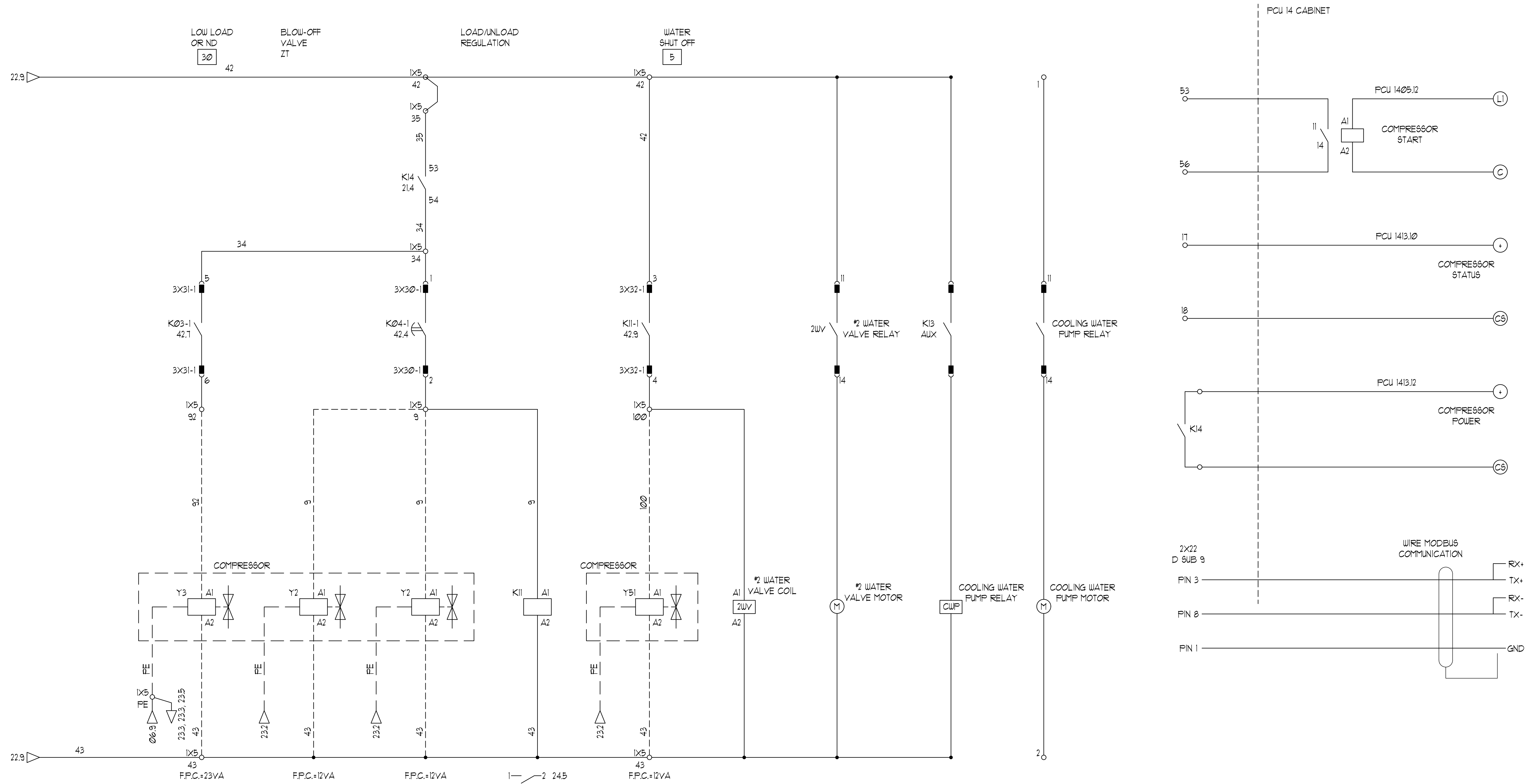
VERIFY SCALES  
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0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

JOB NO.  
A72JK

DRAWING NO.  
**E3.2**

SHEET NO.  
11 OF 12



**AIR COMPRESSOR SCHEMATIC**  
 NOT TO SCALE

DRAWING ON 11x17 SHEET IS HALF SCALE

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CITY OF SPARKS  
 TMWRP AIR COMPRESSOR REPLACEMENT PHASE II  
 ELECTRICAL PARTIAL FLOOR PLAN

VERIFY SCALES  
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 0 1" 1"  
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JOB NO. A72JK  
 DRAWING NO. E4.1  
 SHEET NO. 12 OF 12