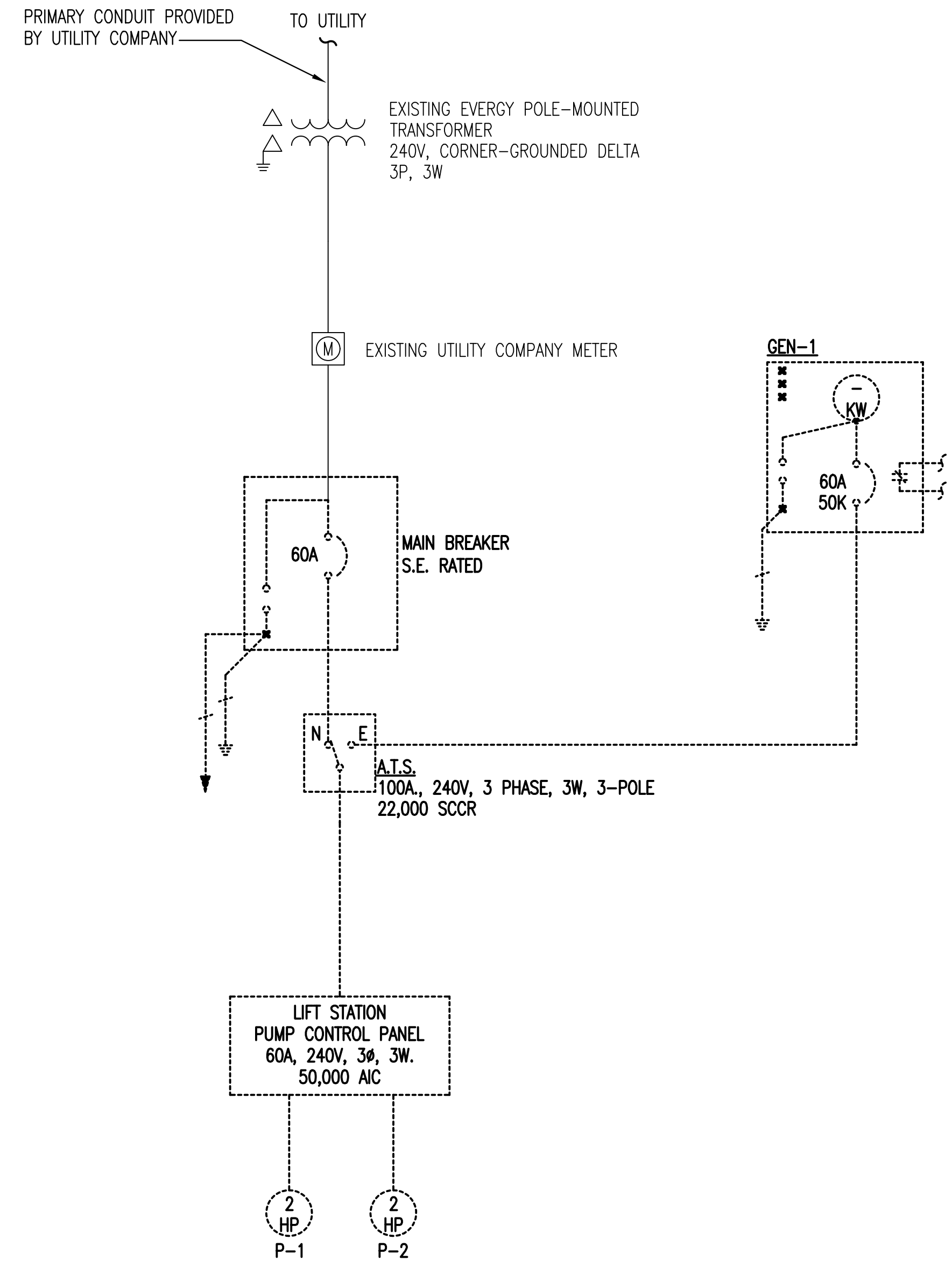


SAVED: 3/9/2022 1:47:02 PM BY BEN.CHAPLIN  
 PLOTTED: 3/9/2022 1:55:12 PM BY BEN.CHAPLIN  
 U:\WICHITA-CIVIL\2021\217043\08\ELECTRICAL ONE-LINE DIAGRAM.DWG

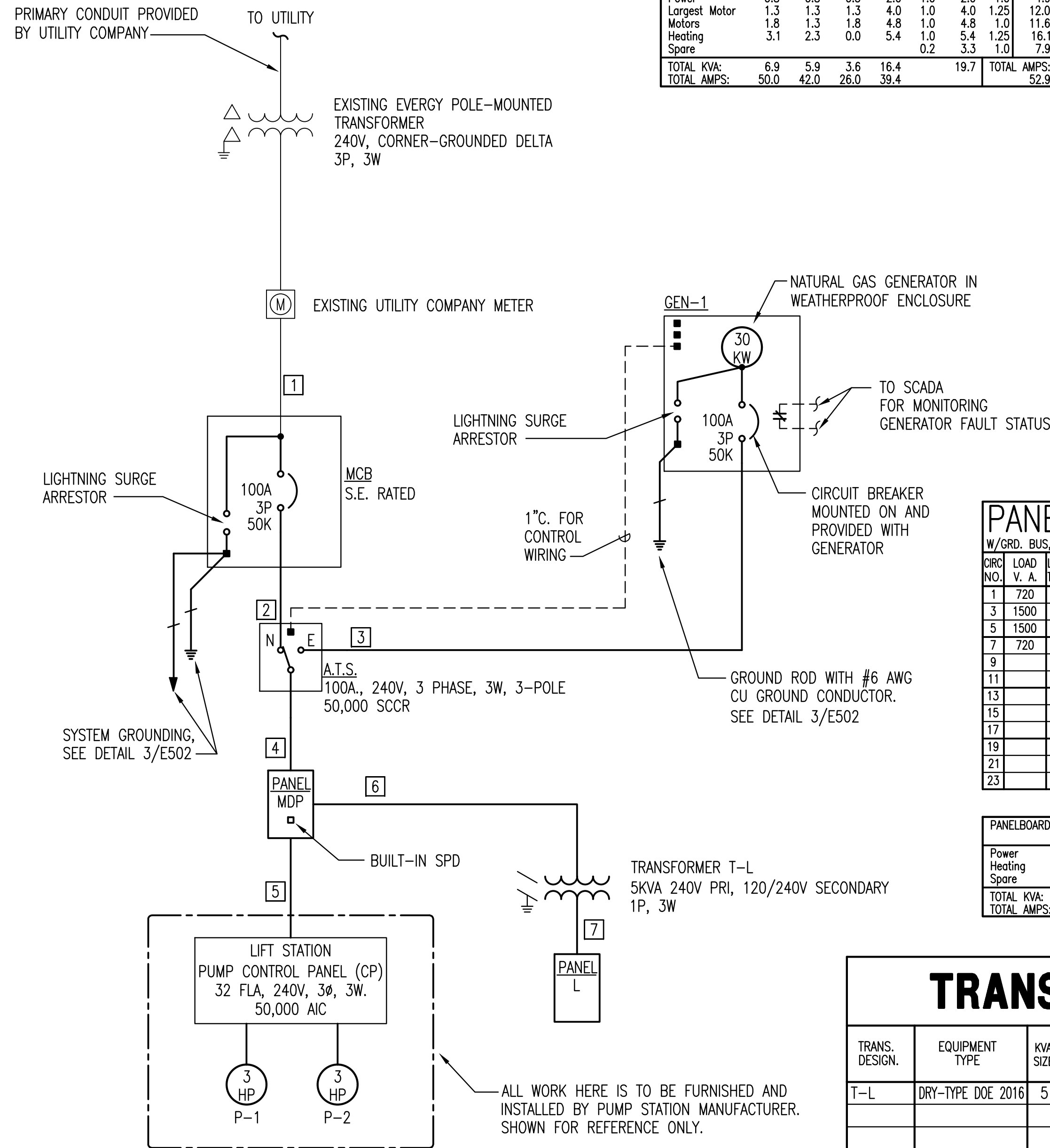
**GENERAL ONE-LINE DIAGRAM NOTES:**

- UNLESS OTHERWISE NOTED, ALL CIRCUIT BREAKERS AND/OR SWITCHES ARE THREE POLE.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A LIGHT LINE, IS EXISTING TO REMAIN.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK LINE, IS NEW WORK UNDER THIS CONTRACT.
- ALL ELECTRICAL EQUIPMENT AND WIRING SHOWN IN A DARK DASHED LINE, IS TO BE REMOVED UNDER THIS CONTRACT.



**1 EXISTING ONE-LINE DIAGRAM**

DESIG.	EQUIPMENT SERVED	CONDUCTORS			GROUND SIZE PER SET	ISOLATED GROUND SIZE	CONDUIT SIZE PER SET	SPARE CONDUIT
		SETS	NO.	SIZE				
1	CIRCUIT BREAKER: MCB	1	3	#1 AWG CU	#8	---	1-1/2" C.	---
2	ATS MAIN FEEDER	1	3	#1 AWG CU	#8	---	1-1/2" C.	---
3	ATS GENERATOR FEEDER	1	3	#1 AWG CU	#8	---	1-1/2" C.	---
4	PANELBOARD:MDP	1	3	#1 AWG CU	#8	---	1-1/2" C.	---
5	PUMP CONTROL PANEL:CP	1	3	#4 AWG CU	#10	---	1-1/4" C.	---
6	TRANSFORMER:T-L	1	2	#10 AWG CU	#10	---	1/2" C.	---
7	PANELBOARD:L	1	3	#10 AWG CU	#10	---	3/4" C.	---



**2 PROPOSED ONE-LINE DIAGRAM**

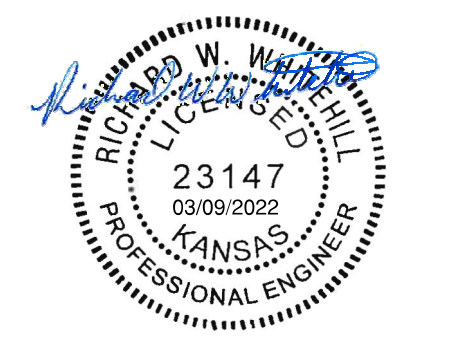
PANELBOARD: MDP											
240 VOLTS, 3 PHASE, 3 WIRE 100 AMP MLO, SURFACE MTD. 65000 AIC LABELED											
CIRC. NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P.	AMP SIZE	USE	AMP SIZE	P.	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.
1	11728		PANELBOARD: CP	3	50	A	20	1	SPARE	SPW	
3						B	20	1	SPARE	SPW	
5						C	20	1	SPARE	SPW	
7			TRANSFORMER: T-L	2	30	A	20	1	SPARE	SPW	
9						B	20	1	SPARE	SPW	
11		SPW	SPARE	1	20	C	20	1	SPARE	SPW	
13		SPW	SPARE	1	20	A	20	1	SPARE	SPW	
15		SPW	SPARE	1	20	B	20	1	SPARE	SPW	
17		SPW	SPARE	1	20	C	20	1	SPARE	SPW	
19		SPW	SPARE	1	20	A	20	1	SPARE	SPW	
21		SPW	SPARE	1	20	B	20	1	SPARE	SPW	
23		SPW	SPARE	1	20	C	20	1	SPARE	SPW	

PANELBOARD: MDP	CONNECTED KVA:			TOTAL	DEMAND FACTOR			CONT. FACT	SIZING AMPS:		
	PH-A	PH-B	PH-C		PH-A	PH-B	PH-C		PH-A	PH-B	PH-C
Receptacles	0.0	0.2	0.0	0.2	1.0	0.2	1.0	0.4	0.0	1.3	0.0
Power	0.8	0.8	0.5	2.0	1.0	2.0	1.0	4.9	5.5	5.5	3.6
Largest Motor	1.3	1.3	1.3	4.0	1.0	4.0	1.25	12.0	12.0	12.0	12.0
Motors	1.8	1.3	1.8	4.8	1.0	4.8	1.0	11.6	12.6	9.6	12.6
Heating	3.1	2.3	0.0	5.4	1.0	5.4	1.25	16.1	27.7	20.6	0.0
Spare								0.2	3.3	1.0	7.9
TOTAL KVA:	6.9	5.9	3.6	16.4			19.7				
TOTAL AMPS:	50.0	42.0	26.0	39.4				52.9	65.7	56.9	36.1

PANELBOARD: L											
120/208 VOLTS, 1 PHASE, 3 WIRE 30 AMP MAIN BKR, SURFACE MTD. 50000 AIC LABELED											
CIRC. NO.	LOAD V. A.	LOAD TYPE	LOAD DESCRIPTION	P.	AMP SIZE	USE	AMP SIZE	P.	LOAD DESCRIPTION	LOAD TYPE	LOAD V. A.
1	720	RM	GEN BATT CHG	1	20	A	20	1	SPARE	SPW	
3	1500	HE	GEN COOLANT HTR	1	20	B	20	1	SPARE	SPW	
5	1500	HE	ATS HEATER	1	20	A	20	1	SPARE	SPW	
7	720	RM	SCADA PANEL	1	20	B	20	1	SPARE	SPW	
9			SPACE			A			SPACE		
11			SPACE			B			SPACE		
13			SPACE			A			SPACE		
15			SPACE			B			SPACE		
17			SPACE			A			SPACE		
19			SPACE			B			SPACE		
21			SPACE			A			SPACE		
23			SPACE			B			SPACE		

PANELBOARD: L	CONNECTED KVA:			TOTAL	DEMAND FACTOR			CONT. FACT	SIZING AMPS:		
	PH-A	PH-B	PH-C		PH-A	PH-B	PH-C		PH-A	PH-B	PH-C
Power	0.7	0.7	0.0	1.4	1.0	1.4	1.0	6.9	6.9	6.9	0.0
Heating	1.5	1.5	0.0	3.0	1.0	3.0	1.25	18.0	18.0	18.0	0.0
Spare								0.2	0.9	1.0	4.3
TOTAL KVA:	2.2	2.2	0.0	4.4			5.3				
TOTAL AMPS:	21.0	21.0	0.0	21.3				29.2	29.2	29.2	0.0

TRANSFORMER SCHEDULE						
TRANS. DESIGN.	EQUIPMENT TYPE	KVA	PRIMARY VOLTAGE	SECONDARY VOLTAGE	GRNDING ELECTR. COND.	NOTES
T-L	DRY-TYPE DOE 2016	5	240/1Ph/2W	240/120/1Ph/3W	#8 CU	AIR COOLED/EXTERIOR - NEMA 3R



SANITARY SEWER IMPROVEMENTS  
**LIFT STATION NO. 23**  
 AT  
**W. 37TH STREET N AND PORTER AVE.**  
 GARY JANZEN, P.E. - CITY ENGINEER  
 CITY OF WICHITA PROJECT NO. 468-2020-019218 S0015

Issue:	

JOB NO.	217043-008
DATE	MARCH 2022
PM	RWW
DESIGNED BY	DCG
DRAWN BY	BAC
CHECKED BY	RWW

ELECTRICAL ONE-LINE DIAGRAM

**E601**