

CMGT 235 – Electrical and Mechanical Systems

Department of Construction Management ☼ California State University, Chico

Homework #21 – Electrical Fundamentals

Points: 20

Due: 11/3/2022

Name: Answers

Complete Table 1 – Meter Base and Main Disconnect Switch, Table 2 – Panelboards, and Table 3 – Transformers

Project: Broward Northside Climate Controlled Storage

Drawings: E-03 and E-04

- List all TRIP/POLES as largest to smallest
- List FEEDERS (conductors) as smallest to largest

See the in-class example - Waste Management Hauling Facility

Table 1 – Meter Base and Main Disconnect Switch

EQUIPMENT	AMPS	VOLTAGE	Ø WIRES	NEMA	FEEDERS-QTY
Meter Base	POWER COMPANY REVENUE METER AND C.T. CABINET				#350-16
Main Disconnect Switch	600A	277/480V	3Ø 4W	N3R	#1 – 1 #350-16

Table 2 - Panelboards

Panel	AMPS	VOLTAGE	Ø WIRES	MLO/MCB	CKTS	TRIP/POLES -QTY	FEEDERS-QTY
PNL H1	600A	277/480V	3Ø 4W	MLO	60	200/3 – 1 150/5 – 2 100/3 – 1 70/3 – 1 15/3 – 5 20/1 – 14	#10 – 1 #1 – 1 #4 – 3 #350 – 8
PNL HM	200A	277/480V	3Ø 4W	MLO	42	20/3 – 10	#6 – 1 #3/0 – 4
PNL HA	100A	277/480V	3Ø 4W	MLO	18	15/3 – 5	#8 – 1 #1 – 4
PNL L1 (1 OF 2)	125A	120/208V	3Ø 4W	MCB	30	20/1 – 30	#8 – 1 #1 – 4
PNL L1 (2 OF 2)	125A	120/208V	3Ø 4W	MLO	30	25/2 – 2 20/2 – 1 20/1 – 12	#8 – 1 #1 – 4

Table 3 - Transformers

EQUIPMENT	SPECIFICATIONS	FEEDERS-QTY
Transformer (XFMR)	45 KVA 480 – 120/208 3Ø 4W	#10 – 1 #8 – 1 #4 – 3 #1 – 4