

CMGT 235 – Electrical and Mechanical Systems

Homework #29 – Residential Service Entrance Calculation

Due: 12/1/2022

Points: 20

Name: _____

1. What is the demand load for a 1 hp 120 VAC food waste disposal, ½ hp trash compactor, 1800-watt 120 VAC dishwasher, and a 15A 120 VAC Whirlpool Bathtub?

2. What size grounding electrode conductor is required for a 15,000 sq. ft. commercial building that has installed 400 copper ungrounded service-entrance conductors? Where in the NEC do you find the answer?

3. What size Over Current Protection Device (OCPD) is recommended for a 6500 W, 208V 3 phase sauna?

4. Given a single-family residence with a general lighting load of 24,500 watts. What is the demand lighting load for the residence?