Project for Apartment Service Calculation
From Handbook

An eight unit, non-electric heated, row housing complex is to be built. The complex will have 3000w of roadway and ornamental lighting in the house panel. Each unit is two storeys with outside dimensions of 12m x 10m with full basement. Each unit has a 4000w dryer and 11000w range, and 4000w AC unit. Voltage is 120/240 single-phase.

Calculate:
1. Basic demand watts for each unit.
2. Total demand watts for each unit.
3. Minimum allowable ampacity for the service conductors to each unit.
4. Size of service for each unit.
5. Minimum allowable ampacity for the main service conductors.
6. Size of main service.
7. Conduit size for main service.
8. Grounding conductor size for main service.