Design the following elements of the two-story building shown below:
1. bond-beam on tension side of diaphragm
2. plywood roof diaphragm
3. anchor bolts from ledger supporting diaphragm into top of block wall at west wall
4. west wall (check axial, out-of-plane bending, in-plane-bending, in-plane shear) 1st floor
5. west wall ground floor

Material Properties:
8” CMU, unit weight of block = 110 pcf
Type M Masonry Cement Mortar, running bond
$f'm = 1500$ psi
Grade 60 reinforcement

Loads:
DL due to roof = 16 psf
LL on roof = 20 psf
LL on 1st Floor = 60 psf
Wind Load = 28 psf

Deliverables: All hand calculations, computer output (must be verified by hand calculation), sketch of west wall elevation showing location of grouted cells and reinforcement.