CIEG 467/667 TIMBER AND MASONRY DESIGN
SPRING 2004
CLASS PROJECT FOR GRADUATE STUDENTS

Possible Topics:

1. Post-tensioned and/or prestressed masonry.

2. Mechanically stabilized earth walls (masonry only). Segmental block retaining walls.

3. Composite material reinforcement of masonry walls for both flexural upgrades and shear wall strengthening.

4. Timber bridges- beams, deck, guardrail, etc.

5. Composite material reinforcement of glu-lam beams.

6. Concrete formwork- wood, steel, aluminum systems. Types of form ties.

7. Lateral capacity of wood shear walls with supplemental energy dissipation/damping.

8. Documentation of large masonry project. This includes entire construction sequence, bidding and design phases.

9. Detailing of wood and steel to masonry connections. Includes design basics and AutoCAD sketches of proper construction details.

10. Retrofit and or repair of timber or masonry structures.

Project to include:
1. Basic engineering theory used to design the product or system.
2. Design example with sample calculations.
3. A complete review of what is commercially available.

Grading of the project:
1. Grades will be based on a 20 minute oral presentation and question period given at the end of the semester.
2. A written copy of the presented material will be submitted.