

Homework 4:

Fire Wall

Program

This problem is based on the Structures III and Designing Details academic work

- 1 The problem statement indicates a property line running on the south side of the building (the 62-foot-long wall)
- 2 Design a fire wall, as defined by 780 CMR 7, for that property line running through the building
- 3 The exterior finish of the fire wall will be the marazzi ventilated wall system.

Research:

Become familiar with impact of building regulations on detail design:

- Study 780 CMR 7.00 - found on the web at <http://www.mass.gov/Eeops/docs/dps/inf/780CMR-1/780007.pdf>

Questions to Answer:

- 1 List the general and specific requirements for construction details for a fire wall for the hypothetical building.

Drawing Work

Propose a set of details

Test your proposal with architectural details added to the structural ones already designed

Draw the following using 11" x 17" paper

- 1 Two fire wall section details [where wall meets the foundation and the roof] for the property line - 3/4" = 1'-0"
- 2 A plan detail at the northeast corner of the first floor - 3/4" = 1'-0"
- 3 Highlight and label fire-resistant building components in your details to explain how the proposed design meets the requirements of 780 CMR 7
- 4 include all relevant building systems in the details, such as structure and enclosure elements.

Criteria for marking this homework

General Criteria

This Homework counts as 12% of your marking for the course

Homework will be marked from '4' to '0.'

Answers to questions count as 1/3 of the mark for the homework

Drawings designed count as 2/3 of the mark for the homework

Criteria for Answers to question

General: The response to this question is written, criteria are based on recommendations from

'Understanding by Design,' page 175

Requirements for a mark of '4' - "A clear, well developed [explanation] that deals in a sophisticated fashion with [key] components of the question.

Requirements for a mark of '3' - "Clear, developed [explanation] that deals with [key [components of the question]]."

Requirements for a mark of '2' - General [explanation] responding to all components superficially."

Requirements for a mark of '0' - "Little or no analysis."

Criteria for quality of drawings

General:

Drawings are evaluated in terms of completeness, accuracy, and legibility

Requirements for a mark of '4' -

Work product capable of being incorporated into a project using building information management.

Requirements for a mark of '3' -

Work product could be submitted to a plans examiner. Criteria are as described by Liebling (Wiley, publisher) - BAC library reference: <http://library.the-bac.edu/vwebv/holdingsInfo?bibId=5814> and in material provided in class web site.

Requirements for a mark of '2' -

Work product could be used to present an idea to a job captain

Requirements for a mark of '0' - Minimal drawing