Title: Determine and describe construction methods for medium and large buildings

Level: 6 Credits: 25

Purpose: People credited with this unit standard are able to: describe the site; determine and describe the foundations and sub-structure; develop and describe the passive fire protection system; determine and describe the structure of a building of specific design; design and describe the envelope of a building; and determine and describe the methods used to construct the interior of a building.

Classification: Construction > Construction Technology

Available grade: Achieved

Guidance Information:

1. Evidence should include sketching whenever possible.
2. It is expected that the candidate will demonstrate an understanding of the concept of buildability.
3. Definition
   buildability refers to ease of construction, availability of plant, equipment and materials, site access, construction sequence.
4. Assessment of this unit standard can be by simulation and/or observation.
5. All aspects of this unit standard have to comply with the Health and Safety in Employment Act 1992, the Resource Management Act 1991, the Building Act 1991, and their subsequent amendments.
6. Codes covered by this unit standard may include but are not limited to - New Zealand Building Code 1992; sections C2, C3, and C4.
7. Construction methods for medium and large buildings are similar and therefore previous distinctions between medium and large buildings is not required. Medium and large buildings can include domestic and commercial buildings that are not covered by the definition of small buildings. Small buildings are small scale, lightweight buildings, generally of non-specific design, and of domestic scale with lightweight framing and/or concrete or concrete masonry construction.
Outcomes and performance criteria

Outcome 1
Describe the site.

Performance criteria

1.1 Site is described in terms of legal title.
1.2 Site is described in topographical and survey terms.
1.3 Site is described in terms of physical features.
   Range may include but is not limited to – existing vegetation, water, structures, services, adjacent sites, geotechnical.
1.4 Site is described in terms of Territorial Authority requirements.
1.5 Siteworks are described in terms of roading, site services, landscaping, and access.

Outcome 2
Determine and describe the foundations and sub-structure.

Range specific, non-specific.

Performance criteria

2.1 Description addresses geotechnical factors.
2.2 Description is in accord with building use and regulatory requirements.
2.3 Materials required are in accord with building use and regulatory requirements.
   Range characteristics of materials may include but are not limited to – general cost implications, durability, maintenance requirements, practicality for intended use, weathertightness.
2.4 Determination of foundation system matches its requirements to resist vertical and horizontal loads.
   Range foundation system to include pre-consolidation.
Outcome 3

Develop and describe the passive fire protection system.


Performance criteria

3.1 The passive fire protection system is developed and described in accordance with design brief.

Range passive fire protection characteristics include but are not limited to – general cost implications, durability, maintenance requirements, practicality for intended use, weathertightness.

3.2 The selection of passive fire protection and materials meets the requirements of the structure and the relevant codes of practice.

Range may include but is not limited to – fire rated partitions, fire doors, encased steel; codes – New Zealand Building Code 1992, Sections C2, C3, and C4.

3.3 Description includes provision for later services, materials, cladding, and finishes.

3.4 Construction process is explained in terms of site constraints, materials, and time and general cost implications.

Outcome 4

Determine and describe the structure of a building of specific design.

Performance criteria

4.1 Description of structure is in accordance with design brief.

4.2 Construction process is explained in terms of site constraints, materials, and time and general cost implication.

Range may include but is not limited to materials – timber, structural steel, precast concrete, concrete masonry blockwork, tilt slab, laminated timber, concrete floor slabs.

4.3 Description includes provision for later services, materials, cladding, and finishes.
Outcome 5
Design and describe the envelope of a building.

Performance criteria

5.1 Envelope is designed and described in accordance with the design brief.

Range characteristics include but are not limited to – general cost implications, durability, appearance, maintenance requirements, practicality for intended use, weathertightness.

5.2 Selection and design of wall and roof claddings and openings match the characteristics of the required structure.

Range at least four of the following materials— timber, rendering, metal, metal sheet, cellulose cement, masonry, concrete, glass, plastic.

5.3 Design is aligned to relevant codes, and matches or exceeds the requirements that apply to the approved solutions.

5.4 Description includes provision for later services, materials, and finishes.

5.5 Design principles of typical cladding jointing systems are described in terms of sealants, flashings, and compatibility and jointing between systems.

5.6 Construction process is explained in terms of site constraints, required materials and finishes, time and cost requirements, and quality standards.

Outcome 6
Determine and describe the methods used to construct the interior of a building.

Range lining, finishes, joinery, fitments.

Performance criteria

6.1 Selection of interior matches the characteristics of the required structure.

6.2 Description is aligned to relevant codes, and matches or exceeds the requirements that apply to the approved solutions.

Replacement information
This unit standard was replaced by unit standard 27158.

This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.
## Status information and last date for assessment for superseded versions

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### Consent and Moderation Requirements (CMR) reference

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