

## SECTION 300 -- STRUCTURAL

## A. GENERAL

1. Every Specification Section is required to include in Part 2 (as the first item), “SUBSTITUTIONS: Materials shall be as specified...” (refer to “SECTION 100 -- GENERAL” for the entire statement).
2. Make sure all specification sections are coordinated with the Bureau’s General Conditions, Document 000708.

## B. CONCRETE

1. Refer to “SECTION 400 -- ARCHITECTURAL,” “CONCRETE” article.
2. Include requirement in the Specifications that the Contractor is responsible to meet moisture content requirements in concrete slabs for finish flooring. Refer to *Design Guidelines* “Section 400 -- Architectural,” article “Finishes,” paragraph pertaining to concrete slab moisture content for finish flooring and required moisture testing.
3. Provide “flat” wire-mesh reinforcing (where used) and not “rolled.”
4. Concrete testing to include (and is not limited to) testing for slump, compressive strength, temperature, and air content.
5. Mock-up panels for concrete and masonry or other exterior walls may be combined as one unit and are to remain on-site for the duration of the work.
6. Provide supports for wire mesh in concrete slabs consisting of chairs, bolsters, and/or masonry. Allow no concrete placement without proper supports in place. Red brick supports are not permitted.
7. A concrete slab vapor barrier is required, consistent with good design practice, design guidelines and building codes where applicable.
8. Engineer of record shall determine appropriate design criteria. Include the following items in the contract documents.
  - a. Concrete plant inspections - NHDOT inspection and approval required.
  - b. Concrete truck inspections - NHDOT inspection and approval required.
  - c. Concrete mixers: Contract administrator reserves the right to reject the continued use of concrete mixers and concrete delivered with the mixers. Refer to *Standard Specifications for Road and Bridge Construction, State of New Hampshire, Department of Transportation* (SSRBC), Section 520-3.4.2.3.
9. Include the following in the contract documents. Additional tests consisting of nondestructive testing and drilled core testing resulting from low strength test results may be permitted by the Contract Administrator. Notwithstanding ASTM C42 and ACI 318, Section 5.6.5 references to core tests equaling 85% of compressive strength being “considered structurally adequate,” the Contract Administrator shall determine acceptability of the concrete based on core tests equaling 100% of design strength.

10. Structural testing requirements are determined by the structural engineer and are to be noted in the Specifications.

#### C. MASONRY

1. Refer to "SECTION 400 -- ARCHITECTURAL," "MASONRY" article.
2. Retempering of mortar is not permitted after two hours of original mixture – include in Specifications.
3. Avoid the use of concrete block as an exposed exterior wall surface unless used with a fully warranted waterproofing system.
4. Structural testing requirements are determined by the structural engineer and are to be noted in the Specifications.

#### D. METALS

1. Refer to "SECTION 400 -- ARCHITECTURAL," "METALS" article.
2. Structural testing requirements are determined by the structural engineer and are to be noted in the Specifications.
3. Specify hot dip galvanized products where applicable, incorporating thickness requirements.
4. Incorporate design solutions for dissimilar metals where applicable.

#### E. WOOD

1. Refer to "SECTION 400 -- ARCHITECTURAL," "WOOD, PLASTICS, AND COMPOSITES" article.
2. Protect plywood roof and wall sheathing from rain and snow.
3. Power actuated nailing of roof and wall sheathing is permitted. Staples are not permitted.
4. Structural testing requirements are determined by the structural engineer and are to be noted in the Specifications.