

SECTION 03 11 00

CONCRETE FORM WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. All concrete and related items required to complete the building, provide off-sets, bulkheads, recesses, openings, chases, etc., and install any inserts, sleeves, etc., required by other trades.

1.2 RELATED WORK SPECIFIED ELSEWHERE:

- A. Concrete: Section 03 30 00
- B. Concrete Reinforcement: Section 03 21 00

1.3 WORK INSTALLED BUT FURNISHED BY OTHER SECTIONS:

- A. Built-in anchors, inserts and bolts for connection of other materials.
- B. Built-in sleeves, thimbles, dovetail slots, and water-stops.

1.4 DEFINITIONS:

- A. Architectural Concrete Surfaces: Formed surfaces where appearance is of major importance.
- B. Non-Architectural Concrete Surfaces: Formed surfaces where appearance is not of major importance.

1.5 QUALITY ASSURANCE:

- A. Design Criteria:
 - 1. General: Conform to ACI 347-Current Edition Chapter 1, Design.
 - 2. Plywood: Conform to tables for form design in APA Form V 345- Current Edition, including strength.
- B. Requirements of Regulatory Agencies: Erect forms to meet the requirements of the Local Building Code.
- C. Allowable Tolerances:
 - 1. Non-Architectural Concrete: Conform to ACI 347- Current Edition.
- D. Contractor shall assume full responsibility for earthwork, or an existing structure used as a form and such form work must meet all requirements of this section.

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1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING:

- A. On delivery to the job site, place materials in area protected from weather.
- B. Store materials above ground on framework or blocking and cover with protective waterproof covering providing for adequate air circulation or ventilation.
- C. Handle materials to prevent damage.

PART 2 PRODUCTS

2.1 MATERIALS:

- A. Conform to ACI 347- Current Edition, Chapter 3, Materials and Form Work.

2.2 LUMBER:

- A. Softwood framing lumber: Kiln dried, PS 20-70.
- B. Boards less than 1 1/2" thick, used for basic forms and form liners: Kiln dried.
- C. Grade marked by grading rules agency approved by American Lumber Standards Committee.
- D. Light framing or studs for plywood forms, 2 in. to 4 inches in width and thickness, construction grade.

2.3 PLYWOOD:

- A. Exterior type softwood plywood, PS 1-66.
- B. Each panel stamped or branded indicating veneer grades, species, type and identification.
- C. Wood faced plywood for architectural concrete surfaces. Panel veneer grades: A-C. Mill-oiled sides and mill-sealed edges of panels.

2.4 CORNER FORMERS:

- A. Profile type: chamfered face.
- B. Material: Wood

2.5 TIES:

- A. Material: Carbon Steel
- B. Type: Snap ties

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- C. Depth of break back: 1 inch
- D. Maximum diameter: 1/4 inch

2.6 FORM COATINGS:

- A. Plywood and wood forms shall be sealed against absorption of moisture from the concrete with an approved non-staining form oil or sealer.
- B. Form sealer, lacquer or any form of release agents containing wax, oil, or other materials that would interfere with adhesion shall not be used on form work for concrete which is to receive exposed aggregate coatings.
- C. Provide dissipating polymerized solution for form release agent containing no oils, waxes, paraffin, or silicones for cast-in-place concrete scheduled to receive exterior finishes.

PART 3 EXECUTION:

3.1 GENERAL

- A. The design, engineering, bracing and construction of form work shall be the responsibility of the Contractor.
- B. Form work shall conform to shapes, lines and dimensions of members as shown on contract plans and shall be sufficient to prevent mortar leakage and to maintain position and shape during and after placing of concrete. Form work for exposed surfaces shall be constructed of undamaged materials that will result in an unblemished, flush surface when removed.
- C. Shoring and bracing of form work shall be adequate to resist all construction loads, wet concrete, stored and lateral loads due to earthwork.
- D. Preparation of forms. Edges of exposed concrete work, exterior and interior shall be pointed up to present a good square appearance.
- E. Provide temporary openings in a framework for concrete placement.
- F. Removal of forms is subject to weather conditions after concrete is poured. Remove formwork in manner to ensure complete safety of structure. Do not place building materials on slabs until they are strong enough to carry the imposed load. The contractor shall decide when to remove and accept full responsibility for their removal.

- G. Do not run reinforcement, corner protection angles, or related fixed metal items, embedded in or bonded into concrete through expansion joints. Provide filler strips for expansion joints between slabs on grade and all joints between slabs on grade and vertical surfaces. Construct joints ½ inch wide and full depth of slab unless noted otherwise.

END OF SECTION

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