

DESIGN CRITERIA

1. Related Sections: See Division 03 Sections Cast-In-Place Concrete and Tilt-Up Concrete and Division 04 Section Unit Masonry for precast concrete trim units.
2. This Section specifies architectural precast, conventionally reinforced normal-weight concrete units with conventional form-liner and abrasive-blast exposed-aggregate finishes.
 - A. This Section does not specify structural precast concrete, pretensioned or post-tensioned architectural precast, prestressed concrete units, insulated or sandwich wall panels, cast stone, autoclaved aerated concrete, glass-fiber-reinforced concrete, panels with applied brick or stone facings, or site-cast tilt-up concrete.
3. Codes and Standards:
 - A. ACI 318 is adopted by IBC and establishes minimum requirements for acceptance of design and construction of precast concrete.
 - B. PCI MNL 120, "PCI Design Handbook--Precast and Prestressed Concrete."
 - C. PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."
 - D. ASTM standards are referenced throughout to establish appropriate requirements for specifications, test methods, practices, classifications, and terminology.
 - E. Testing and Inspection: Although the IBC requires special inspections be performed by special inspectors who are engaged by the owner or the design professional, this Section specifies the Contractor shall engage the special inspectors.
4. Design Considerations:
 - A. Consult with local architectural precast concrete fabricators. Frequently, such factors as the weight and transport of units, handling and erection stresses, and standard fabrication techniques govern the design of architectural precast concrete units.
 - B. The precast concrete fabricator is specified in this Section to assume engineering responsibility of the architectural precast concrete units to comply with Project performance requirements.
 - C. Be sensitive to the environmental factors causing out of plane panel bow during panel to panel connection design.

END OF SECTION