03000D - CONCRETE - GENERAL PROVISIONS

A. Parking garages shall be designed to have a minimum of 7'-0” clear height throughout; no exception. Signage, piping, ductwork and other objects shall not be below 7'-0” above floor.

B. Parking spaces in garages shall be 8’-6” wide for stalls at 90°. Parking spaces designated for handicapped shall comply with ADA guidelines.

SECTION 03300D - CAST-IN-PLACE CONCRETE

A. On-Site Construction Administration: The Associate shall have a representative visit the site at appropriate intervals to observe the Work. The Associate shall visit the site to determine in general if the Work will be accordance with the Contract Documents. The Associate shall keep the Owner informed and will endeavor to guard against defective work.

B. Test Reports: Concrete test reports shall be furnished to the Associate and to the University Project Manager.

C. Specify only non-staining types of curing, sealing, and hardening products, which are compatible with flooring material. Take necessary precautions to prevent odors from entering adjacent occupied buildings.

D. Miscellaneous Requirements:

1. Strengths: Provide a minimum compressive strength of 3,000 psi at 28 days for general use. For slabs on grade and paving use 4,000 psi minimum. See microsilica requirements for parking structures.

2. Air Entrained Concrete: An air-entraining admixture shall be used for all flatwork concrete exposed to weather to achieve 5-1/2% ± 1-1/2%.

3. Treads of concrete steps shall be provided with non-slip surface. Do not use reinforcing bars near nosings (concern for premature cracking).

4. Non-Slip Surfacing: Ramps, treads, and platforms of stairs shall have a non-metallic, non-slip surface when not covered with finish flooring materials.

5. Structural slabs for parking garages and other concrete to be subjected to deicing salts shall include microsilica, WR Grace’s DCI corrosion inhibitor and epoxy coated reinforcing steel.

6. Microsilica concrete shall be formulated with cooperation between the ready-mix supplier and the admixture supplier. Performance of mix design shall be determined by a laboratory. Microsilica shall contain 85 percent amorphous
silicon dioxide. Mix design shall be based on 6,000 psi compressive strength, 580 pounds of cement per cubic yard, 0.40 water/cement ratio, and 5-1/2%±1-1/2% air entrainment. Broom finish concrete in vehicular traffic areas. Microsilicon concrete shall be moisture cured.

7. Post-tension cables and end conditions shall be totally encapsulated.

8. Do not use metallic shake hardeners.

SECTION 03330D - ARCHITECTURAL CONCRETE

A. A vertical sample panel shall be placed at the site when cast-in-place architectural concrete is used. Panel shall be reviewed and approved and left in place such that other concrete placed will match the color and texture. Approval shall be through the University Project Manager.

SECTION 03410D - STRUCTURAL PRECAST CONCRETE

A. Structural precast concrete frames are prohibited for parking garage structures.

SECTION 03450D - ARCHITECTURAL PRECAST CONCRETE

A. A vertical sample panel shall be placed at the site when precast concrete is used. Panel shall be reviewed and approved and left in place such that other concrete placed will match the color and texture. Approval shall be through the University Project Manager.

B. Fabricator Qualifications: Engage a firm experienced in producing architectural precast concrete units similar to those indicated for the Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units without delaying the Work.

1. Fabricator must participate in the Precast/Prestressed Concrete Institute's (PCI) Plant Certification Program and be designated a PCI certified Plant for Group A1 - Architectural Concrete at the time project is bid.

END