FACILITIES & OPERATIONS
ARCHITECTURE, ENGINEERING AND CONSTRUCTION
UNIVERSITY OF MICHIGAN

Design Guideline 310000
Site Requirements

General

In general, follow the guidelines below when designing and specifying sitework. Unless specifically indicated otherwise, these guidelines are not intended to restrict or replace professional judgment.

Related Sections

U-M Design Guidelines

6.0 DG013639 Tree Preservation
6.0 DG312500 Soil Erosion and Sedimentation Control
6.0 DG321000 Walks, Roads and Parking Paving
6.0 DG328400 Irrigation
5.3 Loading Docks

Related Documents

Campus Planning Site Furnishings Standards Manual
University of Michigan Soil Erosion & Sedimentation Control Procedures
University of Michigan Storm Water Management Procedure

Design Requirements

All work within City of Ann Arbor street right-of ways shall be in accordance with the City of Ann Arbor's standards and requirements. Permanent construction within City of Ann Arbor right-of-ways requires licensing by the City. Permanent construction on land not owned by the University may require an easement. Early in design, notify the University Design Manager of any such construction so that discussions with the City and/or other affected property owners can be initiated. Coordinate communications with the City through the University Design Manager.

All water main and sewer connections to City of Ann Arbor facilities shall be in accordance with the City of Ann Arbor's Standards and Requirements. Coordinate communication with the City Engineer regarding interpretation of these Standards and Requirements through the University Design Manager.

All materials, equipment and construction for bituminous and concrete pavements shall be in accordance with the latest version of the Michigan Department of Transportation Standard Specifications for Construction.

Granular materials shall be a minimum of MDOT Class II, compacted to 98% of an ASTM 1557 value.

All concrete shall be 4,000 pounds per square inch minimum compressive strength at 28 days, and consist of air entrained Portland cement with a total air content of not less than 4 percent, but not more than 7 percent. Cement content shall be a minimum of 6 sacks per cubic yard. The slump shall be not more than 4 inches, nor less than l-l/2 inches as determined by the slump cone test, ASTM C-l43. All flatwork concrete shall be reinforced with polypropylene fibrillated fibers at a volume of 1.5 pounds per cubic yard.

Backfill for all utility trenches that run under, or within 3 feet of, existing and proposed concrete or asphalt surfaces shall be granular material as specified in (4) above.

All regular sidewalks should be 8 feet wide, and all steps and stairs eliminated if at all possible to facilitate barrier free access, cleaning and snow removal.

Paved areas at building entrances should be adequate to accommodate refuse containers.

The potential for installing an automatic lawn irrigation system should be discussed with U-M Grounds Services, coordinated through the University Design Manager, early in the project, so that plumbing for the meter, back-flow equipment and a supply line to the outside of the building can be included in Mechanical work. See Design Guideline 328400 Irrigation for additional information.

Wall hydrants to receive a 1-inch hose should be included in the Mechanical work even if an automatic lawn irrigation system is planned for the project.

Storm water management strategies should be included early in the design process. The A/E should consult with the University Design Manager and Campus Planning to determine the appropriate measures to reduce the amount of runoff. All projects are encouraged to do as much as possible to minimize impacts from storm water runoff. At a minimum, all projects with earth disturbance >1 acre are required to meet the storm water management post-construction requirements. Refer to the storm water management procedure for complete information.

Site Elements

The A/E shall identify on the existing conditions site plan and on the demolition plan all site elements that will be impacted by construction, to include but not limited to:

- Free-standing building ID signs
- Plaques on the grounds or on the building
- Public art works and artifacts
- Kiosks used for posting flyers
- SORC posting boards (triangular boards used for posters)
- Memorial benches
- Memorial trees

The A/E and the University Design Manager will work with Campus Planning to determine the appropriate

disposition of these site elements. It will be the responsibility of the project to relocate, replace, or restore the elements per the instructions of Campus Planning. The A/E will stipulate in the design documents the approved disposition/relocation/restoration of all relevant site elements. Refer to Campus Planning Site Furnishings Standards Manual for more information.

Refuse Removal

The A/E shall stipulate in the Design Documents that the Contractor shall remove all building materials and debris from the job site, and sub-grade the landscape areas to 4 inches below finish grade. Refuse removal during the construction phase shall be as frequent as necessary to prevent windblown debris. Unsightly pileup is also prohibited.

The construction site and valuable landscape plants shall be fenced to control Contractor parking and material storage.

Existing trees and other landscape plant materials within and outside the contract limits must be protected from soil compaction and breakage. See Design Guideline 013639 Tree Preservation .

Landscape plants and materials to be removed must be approved by the University Design Manager.