

### University of North Dakota

# LANDSCAPE DESIGN, PLANTING AND IRRIGATION SYSTEMS

**Landscape and Site Design**: All site and planting plans shall be reviewed and approved by the Campus Landscape Architect. AE shall review the landscape narratives: Tree Preservation and Mitigation, Campus Strategic Design for Campus Security and Site Furnishings when developing design solutions. Site and planting design shall also conform to the UND Architectural and Landscape Guidelines found in the General Section of the Guidelines under the Conformance to Campus Master Plan sub-section.

**Landscape Materials**: It is the intent of UND to receive high quality materials and workmanship both above and below ground level as well as achieve consistency with existing landscape and irrigation systems. Specifications are provided in the UND design specifications for turf, plantings and irrigation.

### <u>Turf</u>

**Sodding/Seeding**: Sodding and seeding are both acceptable methods of lawn establishment or restoration; however, seeding is preferred.

**Schedule:** Sodding and seeding work should only be accomplished between April 15 and May 15 or between August 15 and October 15.

**Methods**: Sod handling, seeding, seedbed preparation, mulching, fertilizing, watering and ongoing lawn maintenance should be accomplished as directed in the Design Specifications for Turf and Grasses.

### <u>Plants</u>

**Approved Plants**: All plant material shall be reviewed and accepted by the Campus Landscape Architect and should conform to the requirements of the American Standard for Nursery Stock, published by the American Association of Nurserymen, Inc. as well as the requirements of the Design Specifications for Plant Materials.

**Planting Beds**: Soil quality and planting bed preparation should be accomplished as directed in the Design Specifications for Plant Materials.

**Methods:** Planting of trees and/or shrubs should be accomplished as directed in the Design Specifications for Plant Materials. Guying, staking, wrapping, pruning, mulching, fertilizing, watering and other ongoing maintenance of trees and shrubs should be accomplished as directed in the Design Specifications for Plant Materials.

**Documentation and Submittals**: The AE shall review the Design Deliverables Checklist and Design Specifications for Plant Materials.

#### **Irrigation Systems**

**Central Control**: UND operates a central control system for all underground sprinkler systems installed. Ethernet connection is required at the control and specific equipment shall be utilized on all UND systems as specified in Design Specifications for Underground Sprinkler Systems provided in the design specifications.

**Backflow Prevention**: An appropriate backflow prevention device should be provided as required by the City of Grand Forks.

**Distribution System**: Irrigation distribution systems shall be constructed of Class 200 PVC piping with solvent cement fittings. They should be generously sized to yield a relatively uniform water pressure at all irrigation heads throughout the system. They should incorporate a valve system drain at each low point to facilitate draining / blowing out of the entire system for freeze protection.



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**Zoning**: Each irrigation system should be zoned to consider both the installed cost of the system and the time required to irrigate the entire area served by the system.

**Irrigation Installation**: Installation of irrigation systems should be accomplished as directed in the Design Specifications for Underground Sprinkler Systems.

**Documentation and Submittals:** The AE shall review the Design Deliverables Checklist and Design Specifications for Underground Sprinkler Systems.