

2.1 INTRODUCTION TO SUSTAINABLE SITE DESIGN

The aim of sustainable site design is to reduce the environmental “footprint” of the site while retaining and enhancing the owner/developer’s purpose and vision for the site. Many of the sustainable site design concepts employ non-structural on-site treatment that can reduce the cost of infrastructure while maintaining or even increasing the value of the property relative to conventional designed developments. Non-structural treatment is the treatment of stormwater by maintaining a focus on preserving open space, protecting natural systems, and incorporating existing landscape features such as wetlands and stream corridors into a site plan to manage stormwater at its source. In other words, it is the treatment of stormwater without a structure.

The goals of sustainable site design include:

- Prevent stormwater impacts rather than having to mitigate for them;
- Manage stormwater (quantity and quality) as close to the source as possible and minimize the use of large or regional collection and conveyance;
- Preserve natural areas, native vegetation and reduce the impact on watershed hydrology;
- Use natural drainage pathways as a framework for site design;
- Reduce soil compaction during construction to maintain infiltration capacities of the soil;
- Minimize the amount of disturbance to existing, mature stands of vegetation;
- Utilize simple, non-structural methods for stormwater management that are lower cost and lower maintenance than structural controls; and
- Create a multifunctional landscape.

The first series of stormwater site design practices and techniques can be grouped into Preservation of Natural Features and Conservation Design. Discussion of non-structural techniques on site and lot, such as reductions in impervious surface and disconnection, will follow.