



Green Infrastructure & Stormwater Management CASE STUDY

Derby - Commerce City Intersection/Plaza

Location: Derby, Commerce City, CO

Client: Commerce City

Design Firm(s): Land By Design

Landscape architect/Project contact: Nigel Staton and Karen Kalavity, ASLA

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ASLA Chapter: Colorado

Project Specifications

Project Description: An existing, rather blighted commercial area in old downtown Derby is being re-vitalized. Part of the goal is to use green technology. The downtown area lacked a common square or event center, so the intersection of Monaco and 70th has become that event center.

By using pervious pavers with a distinct 50's pattern, the area functions for driving and, when it is closed off from traffic, also serves as a grand plaza for events. The intersection also was designed to accommodate landscaping along the perimeter and seating areas. The intersection, therefore, becomes the water filtration surface for stormwater runoff.

Project Type:

Mixed use

Part of a redevelopment project

Design features: Bioswale and porous pavers.

This project was designed to meet the following specific requirements or mandates:

Local ordinance, developer/client preference

Impervious area managed: 5,000 sq/ft to 1 acre

Amount of existing green space/open space conserved or preserved for managing stormwater on site: less than 5,000 sq/ft

The regulatory environment and regulator was indifferent to the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? As landscape architects, we were the ones pushing for all these factors - not the client.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: \$500,000-\$1,000,000 (Public funding: State)

Was a green vs. grey cost analysis performed? No.

Cost impact of conserving green/open space to the overall costs of the site

design/development project: Unfortunately, the overall idea was to retain existing mature trees along the perimeter of the project. A very sad effect, while dealing with civil engineers with a 1970's mentality, the trees were demolished to make the development cheaper and easier to build - thus negating the effect of 20-30 year tree shade, etc. The mentality of demolishing before building is a very hard hurdle to jump, and it seems to be impossible to explain to some people - even those who think they are going "green".

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly increased.

Number of jobs created: Not available

Job hours devoted to project:

Planning and Design: 1 year, 2 Landscape architects, 1 civil engineer

Construction: 3 months approx. 7 laborers

Annual Maintenance: 4 times a year anticipated beyond existing maintenance

Performance Measures

Community & economic benefits that have resulted from the project: Along with actual cash incentives, construction of the plaza has resulted in renovation of one adjoining property and an addition to an existing property half a block away. During construction, two marginal businesses closed down. That was probably the result of both the economy and the construction.