North Texas
Low Impact
Development
DESIGN
Competition

Using the *integrated* Stormwater Management (iSWM™) Design Approach

LAND/WATER SUSTAINABILITY FORUM

Urban Redevelopment Design Challenge

Cedars West, Alford Refrigeration Site

Program

An approximately 60 acre site will be transformed from vacant land to a mixed-use urban neighborhood. The neighborhood is south and west of downtown Dallas and is situated between the Cedars neighborhood and the Trinity River. This large piece of property is to be repositioned to complement future Trinity River Project and align with the vision for the Trinity River Corridor. The challenge is to design a new 'green' mixed-use development and interior roadway system that incorporates Low Impact Development techniques, reduces impervious cover, promotes infiltration, reduces stormwater pollution through bio-filtration or other means, and reduces long term maintenance costs.

- Project limits are the approximately 60 acres generally bounded by Cadiz to the north, Corinth to the south, railroad to the east, with included property on both sides of Riverfront Boulevard.
- Planned Land Use includes residential, retail/restaurant, open space and parking. Other uses may be proposed. Density should reflect urban neighborhood while be cognizant of market conditions.

Criteria

All project submittals should be designed in accordance with the following guidelines.

General

- The site previously housed Alford Refrigeration Plant – the site caught fire in 2007 during demolition and is now completely demolished (remnant foundation may exist)
- The old river alignment, known as the Meanders, runs through the site and acts as water detention for the Able Pump Station
- Able Pump Station is anticipated to be replaced to meet 100-year flood protection level – assume existing condition, where fill must be at least 399 elevation and all finished floor elevations must equal or exceed 400
- Design in accordance with the City's development regulations (Chapter 51A) except for Storm Water Quality, Detention, and LID/iSWM criteria
- The PDD for this site should be referenced but changes can be made if so noted in submittal
- Submissions should define proposed maintenance requirements and identify techniques utilized to ultimately reduce maintenance costs

- Interior street network should assume minimum concrete pavement in accordance set forth in City of Dallas Paving Design Manual
- The City of Dallas is in the process of drafting Complete Street guidance – complete street initiatives should be incorporated as appropriate
- A non-vehicular bridge known as Belleview Connector is contemplated for connection between this site and Cedars West

Stormwater Management Design

- Projects must utilize LID features and practices as the predominant stormwater infrastructure system.
- Planning, analysis and design of the stormwater management system / LID features and practices shall be in accordance with applicable sections of the *integrated* Stormwater Management (iSWM™) Technical Manual, which may be accessed at http://iswm.nctcog.org/. LID practices from other manuals may be used if adapted for North Central Texas conditions (include references in project submittals and presentations).
- The post-development stormwater runoff characteristics (flow, volume, and velocity) must be below the pre-development characteristics for the 1-yr, 25-yr, and 100-yr storm events. The pre-development hydrograph and associated assumptions are included in the project specific details.
- Use iSWM *integrated* Site Design Practices to the greatest extent practicable to preserve environmentally sensitive areas and riparian buffers, reduce imperviousness, and maintain infiltrative capacity of soils.
- Use iSWM Stormwater Controls to provide at least 80% TSS removal for the first 1.5" of stormwater runoff volume (iSWM Water Quality Protection Volume).
- The following iSWM Stormwater Controls are considered to be LID practices:
  - Bioretention Areas
  - Enhanced Swales
  - Grass Channels
  - Filter Strips
  - Planter Boxes
  - Downspout Drywell
  - Infiltration Trenches
  - Soakage Trenches
  - Green Roofs
  - Modular Porous Pavement
  - Porous Concrete
  - Rain Barrels

  Other iSWM Stormwater Controls not listed (i.e. Wet Ponds, Stormwater Wetlands, etc.) may be used as supplemental controls if necessary.
- Submissions and presentations must include a discussion of the Hydrologic Model used and reasons for selecting.
- Discuss maintainability, marketability, and acceptance by the public of the design submitted.
- Present an economic evaluation comparing the project's LID-focused design versus a conventional design for this development.

Supporting Documents

- Alford Geotech
- Boundary and Elevation
- City of Dallas Zoning
- Land Use Plan
- Middle Contours
- North Contours
- South Contours
- Water Information
- NCTCOG iSWM Technical Manual and City of Dallas Draft iSWM Criteria Manual
- Planned Development District 800 (zoning)
- City of Dallas Bike Plan
- Trinity River Balance Vision Plan
- Trinity River Comprehensive Land Use Plan
- Trinity River Comprehensive Land Use Plan-Clup Section
- City of Dallas
- Paving Design Manual
- Belleview Connector Conceptual Renderings
- Location Map
- Bid Tabulation - Cedars West