Construction Best Management Practices for Site Design

2018 NCTCOG Public Works Roundup

MAY 23, 2018
Construction Best Management Practices for Site Design

• Topics for Discussion
  • Rowlett Background
  • The Basics from the Past
  • New Trends and Associated Disruptions
  • BMP’s for Site Design
  • Consequences to New Trends and Paradigm Shift
Rowlett Background
- Located 20 miles NE Dallas
- Population
  - 62,000 currently
  - 92,000 buildout
- Public Works Department
  - Streets
  - Drainage
  - Water distribution
  - Wastewater collection
  - Facilities
  - Fleet
  - CIP Engineering
  - Asset Management
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• **Rowlett Background**
  • Adopted Form Based Code as part of 2020 Comprehensive Plan (March 2016)
    • Maintain and enhance the value of existing neighborhoods.
    • Increase the City’s economy through diversification of jobs and business opportunities.
    • Make Rowlett a community that is attractive to people at all stages of their lives.
    • Invest in places to achieve lasting value and distinctive character.
    • Maximize the benefits of major public infrastructure investments (existing and planned).
    • Use Lake Ray Hubbard and Rowlett’s natural assets to create a distinctive identity and quality of life desired by the community.
    • Diversify mobility options within the City.
    • Create centers with a mix of activities at key locations in Rowlett.
    • Balance growth through efficient development patterns.
    • Support quality educational resources to meet the needs of Rowlett residents throughout their lives.
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• Form Based Code Examples
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• The Basic BMP’s from the Past

• Water and Sewer behind the curb
• Storm drain down the middle of street
• 31’ wide residential street
• 25’ curb radius for residential streets
• All lots have street frontage
• Adequate stopping sight distance at intersections
• No landscaping in the ROW
• Sidewalks located 1-foot from property line
• Adequate fall zones for multi-storied structures
• Utilities along side yards discouraged
• Wide utility easements based on line size and depth
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• New Trends & Associated Disruptions

• Water and Sewer under pavement
• Storm drain down the middle of street
• 27’ wide residential streets
• 22’ curb radius for residential streets
• All lots don’t have street frontage – mews lots with alley access
• Landscaping allowed/required in the ROW
• Adequate stopping sight distance isn’t obtained due to on-street parking and landscaping in ROW
• Sidewalks located behind curb
• Multi-storied structures are 7-10’ from ROW line
• Utilities along side yards cannot be avoided
• Easement widths are less than desired
• ADA ramps more difficult to install due to smaller curb return
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• BMP’s for Site Design (what not to do)
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• BMP’s for Site Design (what not to do)
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- BMP’s for Site Design
  - Design with maintenance in mind
  - Additional quality control for trench testing
  - Ensure development is serviceable by solid waste collection vehicles & fire apparatus
  - Evaluate and enforce stopping sight distance at intersections
  - Make sure sewer manholes and water valves are not within parking spaces
  - Sufficient offset from structures
  - Evaluate downstream drainage, sewer, and water capacity
  - Require Silva cells and/or root barriers for street trees and landscaping in ROW
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- Consequence to New Trends & Paradigm Shift

- New equipment to access utilities in tight spaces for maintenance
- Higher repair costs impacting operations budget
- Utilities could be in alley or easements outside of street ROW in common spaces
- Construction standards revisions
- Updates to Master Plans resulting in increased capacity requirements
- Development costs higher so requests from developers to vary from standards increases
- Maintenance crews must learn new utility locations
- Must have an open mind or get passed by – seek to understand and adapt!
- COMMUNICATE – educate policy makers about consequences since you are left to maintain it!
QUESTIONS