

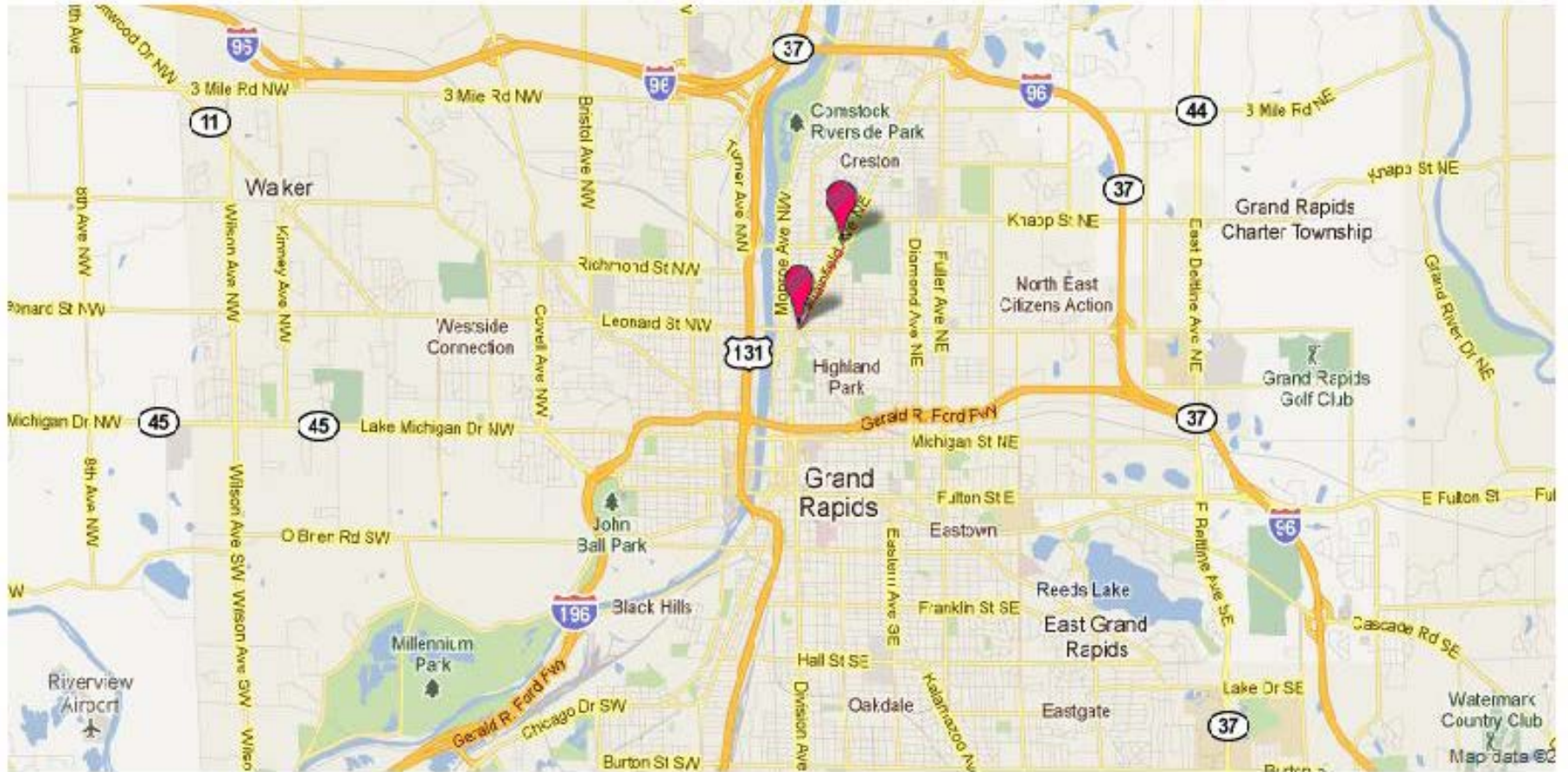


Grand Rapids Plainfield Avenue Bio-retention Basins



City of Grand Rapids, MI

Plainfield Avenue Bio-retention Basins



PROJECT LOCATION
PLAINFIELD AVE FROM LEONARD ST TO ANN ST



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- The city received STP funding through their MPO to resurface Plainfield Avenue
- Through the Context Sensitive Solutions process, the city met with the Creston Neighborhood Association and Creston Business Association
- They reviewed the neighborhood's master plan





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- Design Conditions:
 - 0.9 mile principal arterial
 - Average daily traffic 16,000/day
 - Posted speed – 30 mph
 - Typically 2 lanes of traffic with parking
 - Narrow sidewalks
 - Limited tree canopy 3-11%
 - Urban business district
 - HMA resurfacing project





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- Results of the Context Sensitive Solutions Process:
 - Maintain parking
 - Narrow the through lanes
 - Introduce a left turn lane and islands
 - Add bike lanes where parking is absent or limited
 - Introduce islands to calm traffic and provide aesthetics and placemaking



- Bio-retention Island Design



Water Quality Islands

How they work

This graphic illustrates the secret to how Water Quality Islands, like those installed on Plainfield Avenue NE, function to improve water quality in the Grand River



Benefits of the Plainfield Islands

Economic

- Beautifies and revitalizes the neighborhood
- Triggers additional investments
- Increases property values

Social

- Enhances pedestrian safety through traffic calming and increases driver awareness
- Heightens community pride
- Provides inspiration to other areas

Environment

- Filters out pollutants and keeps them from the Grand River
- Reduces the volume of water going to the river and decreases flooding
- Saves the volume of water flowing to the river and minimizes erosion





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- MDOT determined this was an excellent TE Investment:
 - Water quality improvements to the Grand River
 - Calming effect and aesthetic value of plantings
 - Safety improvements with addition of left turn lane and bike lanes
 - Increased exposure for local businesses by narrowing through lanes to slow traffic
 - High level of local support
- MDOT identified the venture as a pilot project:
 - The City would provide data and lessons learned to MDOT after project was operational





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- Matching funds/Local Support:
 - \$70,000 from Local Private Foundations
 - \$84,220 from Private Individuals and Businesses
 - \$10,000 and up 2
 - \$5000 to \$10,000 2
 - \$1000 to \$5000 18
 - \$100 to \$1000 4
 - Less than \$100 40
 - Funds were raised in 2 months.
 - 35% participated in 10 year payback.
 - All accounts are paid in full through year 1
 - \$30,000 from City of Grand Rapids
- TE Funds: \$146,667





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http://youtu.be/kLYX6tp_6zg





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- Conclusions and lessons learned:
 - Planning and sound policy creates a foundation
 - Effective project development and implementation requires:
 - Stakeholder involvement
 - Sound engineering
 - Funding mechanisms
 - Public/Private Partnerships are key
 - Context Sensitive Solutions process leads to placemaking
 - Right Project in the Right Place
 - Pilot projects lead to best practices

