Mississippi Drive | Corridor Revitalization

A Destination Transportation Project...

MUSCATINE

Muscatine Power and Water
Your reliable neighbor

BOLTON & MENK
Engineers & Surveyors

HDR

CANADIAN PACIFIC

BLUE ZONES PROJECT by HEALTHWAYS
Sponsored by Wellmark

Welcome!

Tonight's Agenda:

- Review progress to date
- Discuss developed concepts and design recommendations
- Discuss project budget and coordination items
- Collect feedback on preferred design alternatives

Overview | Corridor Revitalization

Project Process: *Where are we?*

- Visioning
- Info Gathering and Outreach
- Preliminary Design November-June
- Final Design June-September 2016
- Bid Document Preparation September-December 2016
- Bid Letting February 2017
- Construction Spring 2017

Your Project Team

Overview | Scope of Work

What are the project elements?...recap

- Financial Partnership between the City, Canadian Pacific Railroad and MPW
- The elevation of the railroad along Miss. Dr. has been raised already and will be leveled
- The final product will be designed to handle the existing and future traffic demands, **including large trucks**
- The design will be sensitive to our climate, be cost conscious and consider long-term maintenance

The Big Picture | Project Goals

Project Goals:

- Modernize Mississippi Drive
- Incorporate Complete Streets Design Principles
- Provide a Safe and Attractive Environment for All Users
- Improve Connectivity to the Riverfront
- Enhance Overall Aesthetic of the Corridor
- Effectively Engage the Public Throughout the Process
- **Implement a Community Supported and Technically Sound Project**

The Big Picture | Dissecting the Corridor

Critical Points:

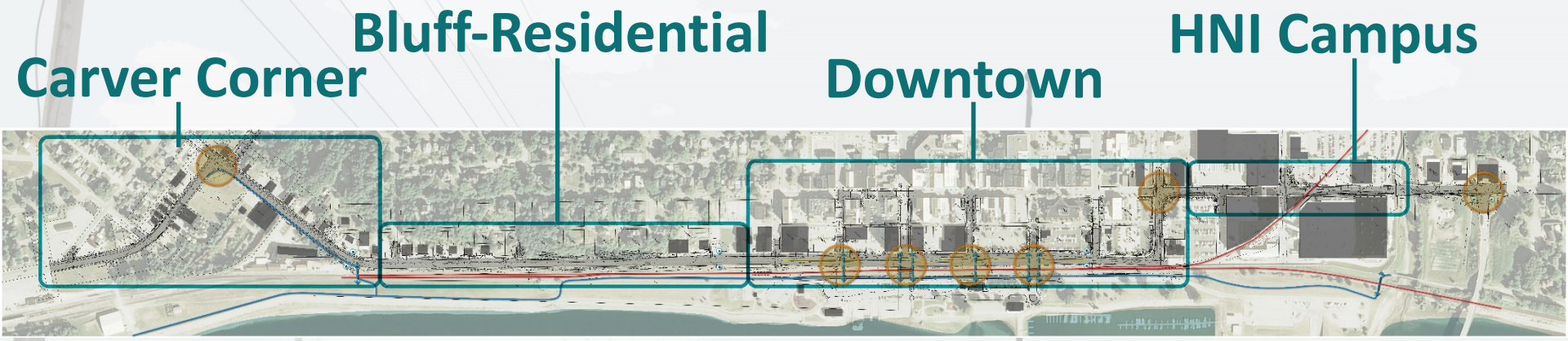
- Diverse Corridor
- Poorly Connected
- Changing Right-Of-Way Widths
- **Huge Asset to the Community…..And it's time for an update.**

Progress Recap | What's been Happening?

In-Progress work:

- Finalizing corridor vertical roadway alignment
- Determining finish grade of roadway surface
- Coordinating the utility design with Muscatine Power and Water
- Coordinating Railroad design with Canadian Pacific
- Developing concept design for streetscape elements
- Developing a staging plan to minimize construction impacts

Roadway Alignment | Typical 3 Lane Section

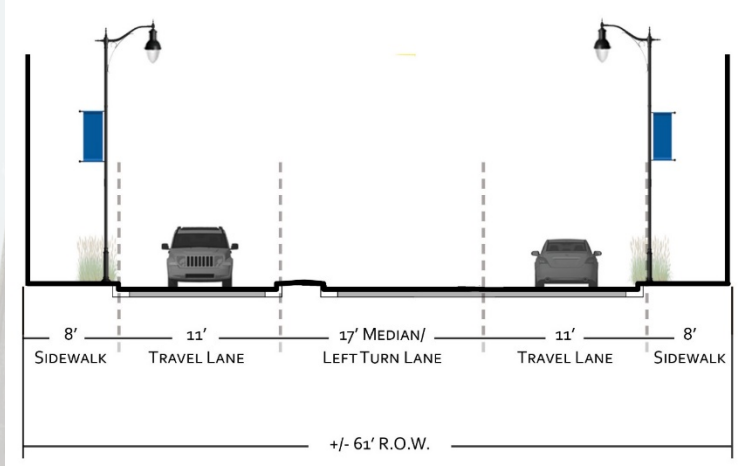


Corridor Design:

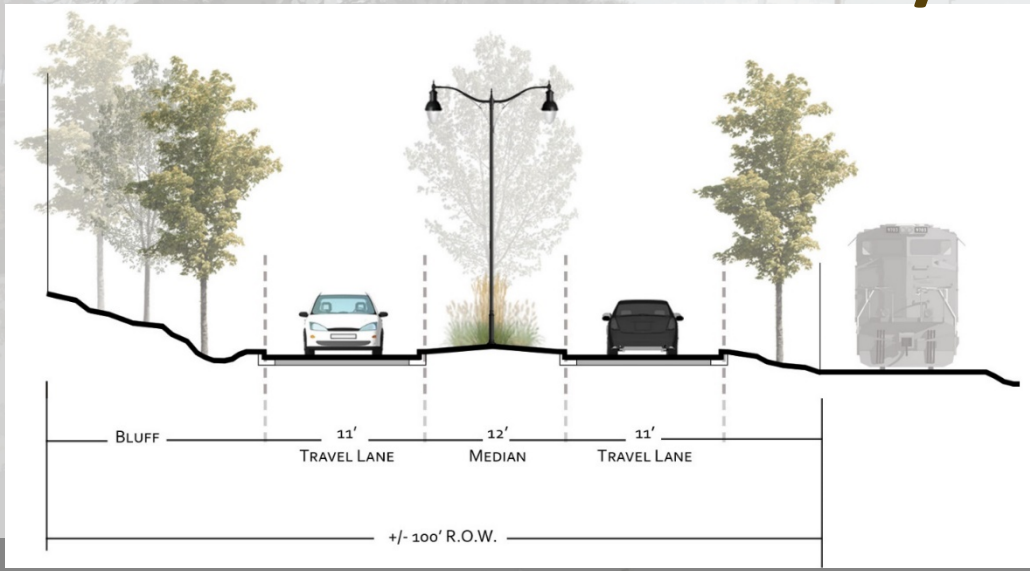
- 25 MPH posted speed limit
- One travel lane each direction w/ center left-turn lane where applicable
- Variable median widths based on district and ROW width
- Surmountable curbs and mow strips – EMS Access
- Back-in angled parking north side of road only

Dissecting the Corridor | By District

Carver Corner: 3 Lane w/ Median/Left Turn

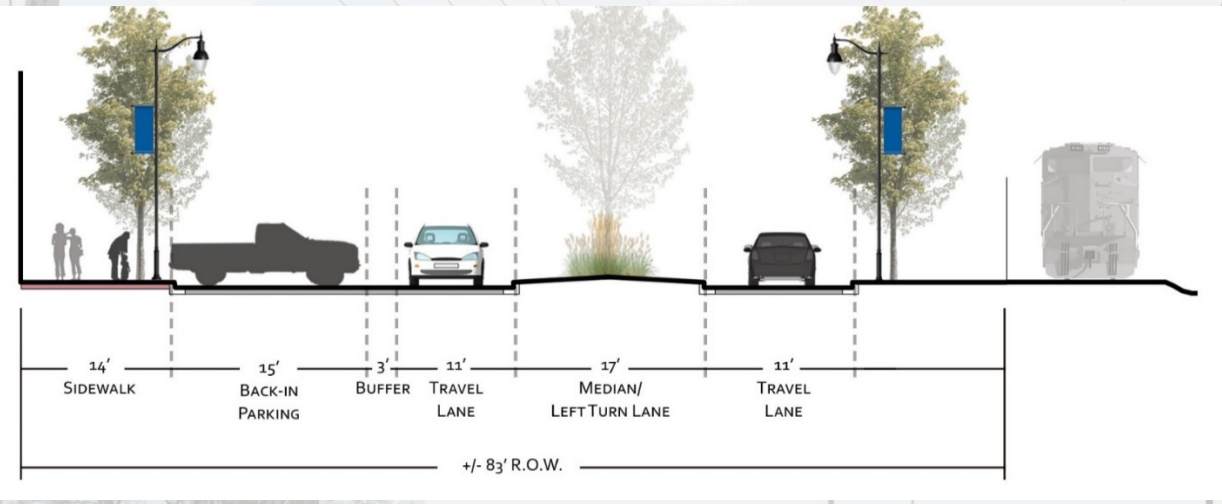


Bluff District: 2 Lane w/ Median

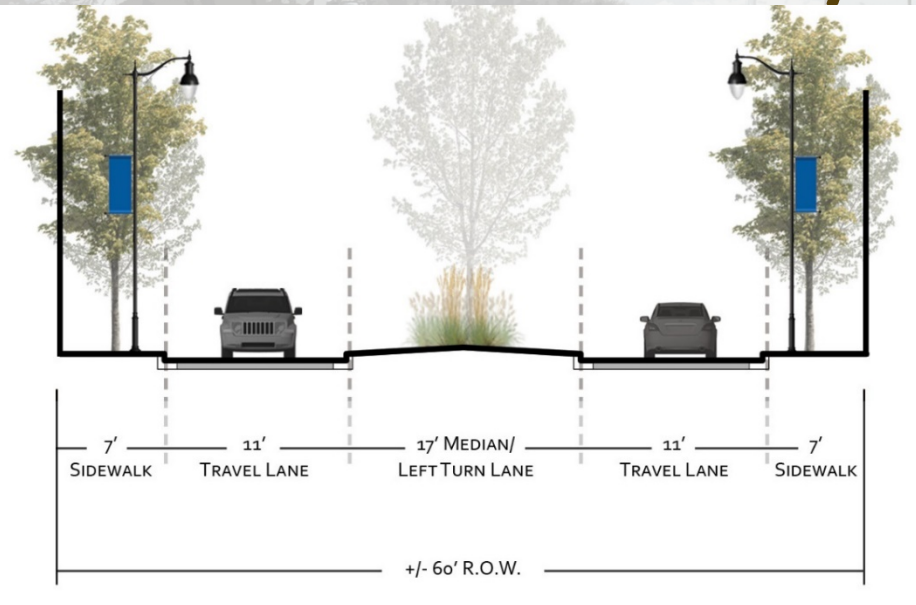


Dissecting the Corridor | By District

Downtown District: 3 Lane w/ Median/Left Turn

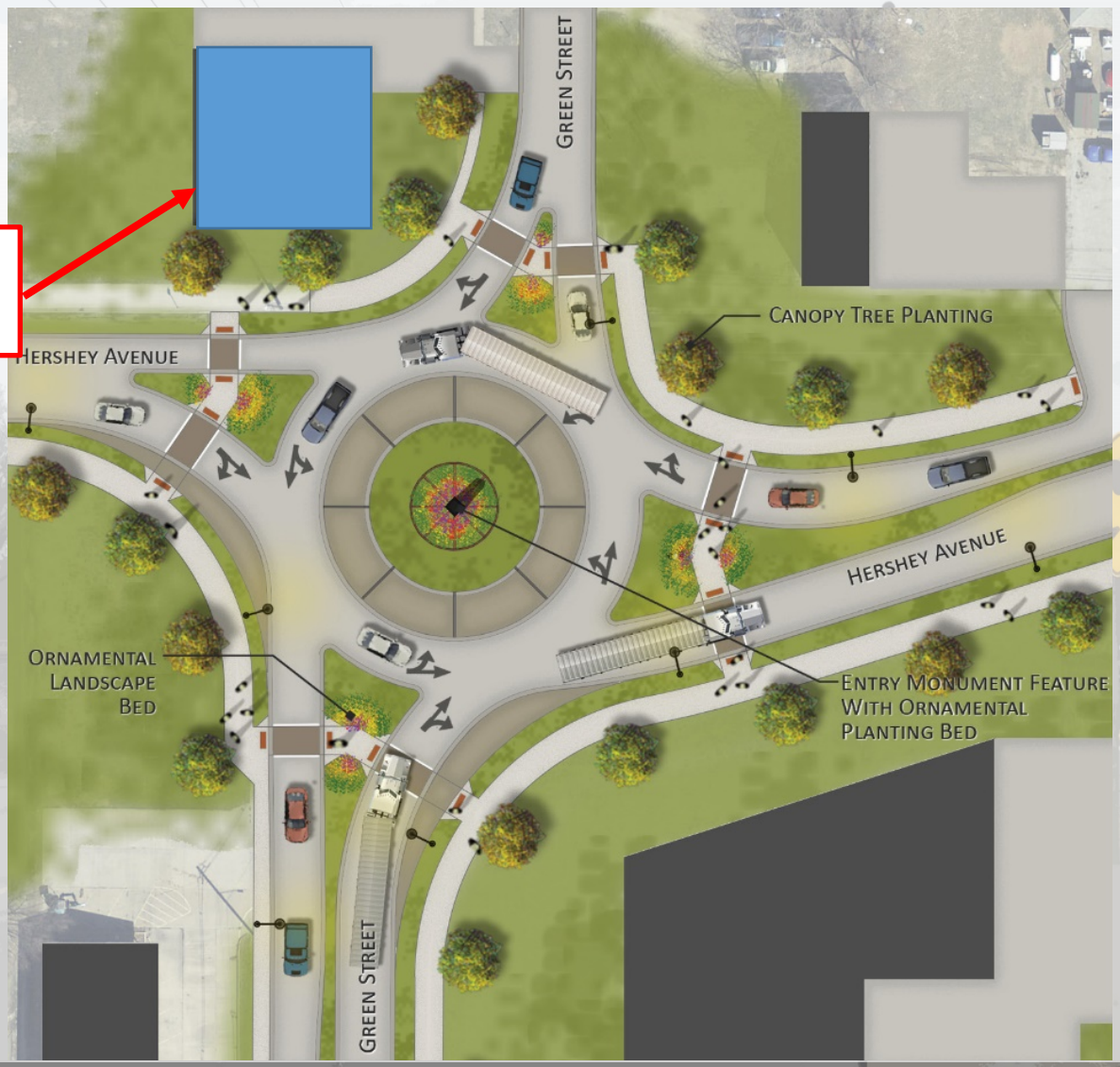


HNI District: 3 Lane w/ Median/Left Turn



Intersection Design | Carver Corner

Roundabout Alternative:



Intersection Design | Carver Corner

Roundabout Alternative:

Pros:

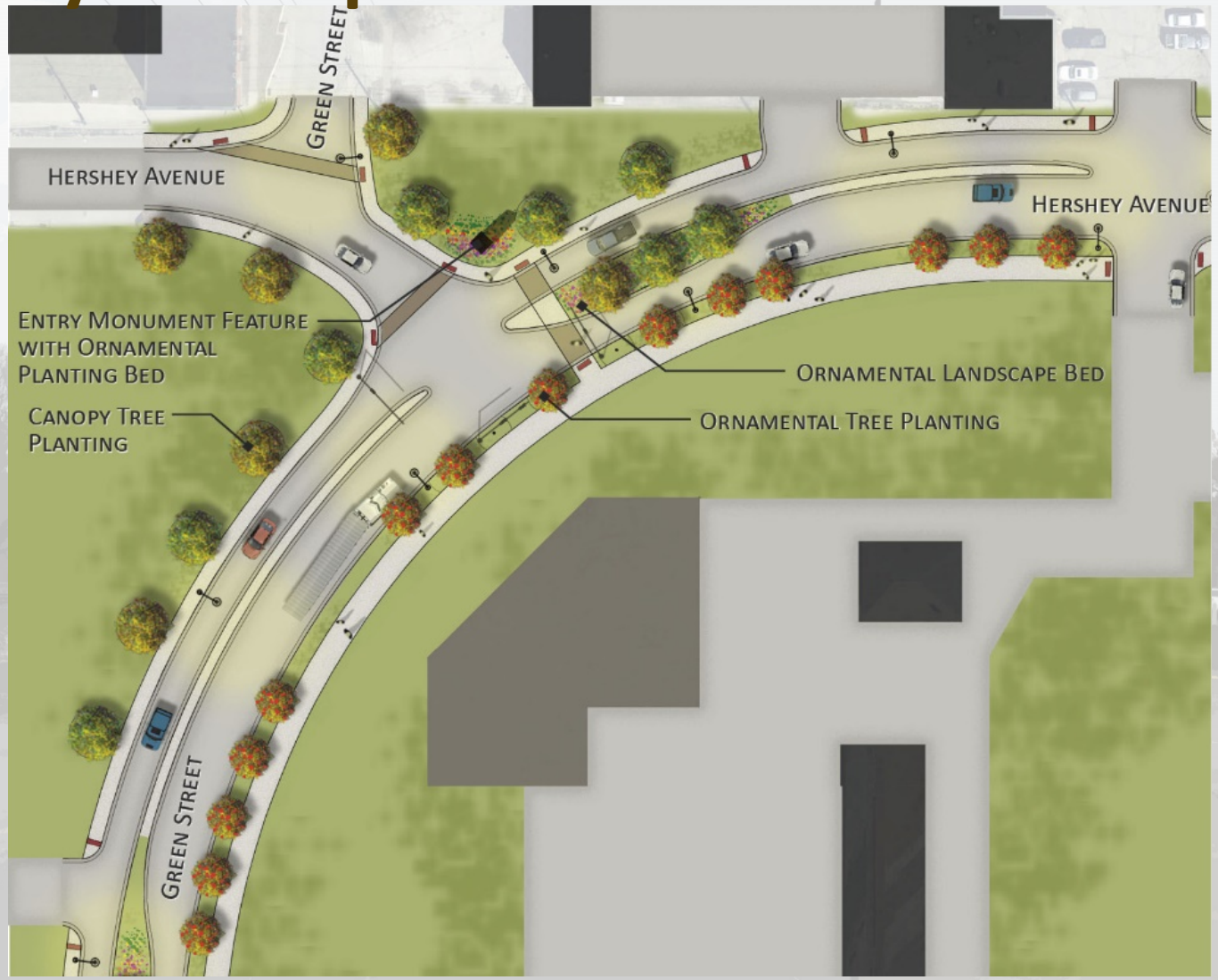
- Lower costs than signalized intersection
- Free flowing traffic
- Gateway to downtown

Cons:

- Different traffic flow than before
- Impacts different properties than originally planned

Intersection Design | Carver Corner

Roadway "Sweep" Alternative:



Intersection Design | Carver Corner

Roadway "Sweep" Alternative

Pros:

- Traditional Design
- Free flowing traffic on Miss./Grandview
- Impacts same property initially planned

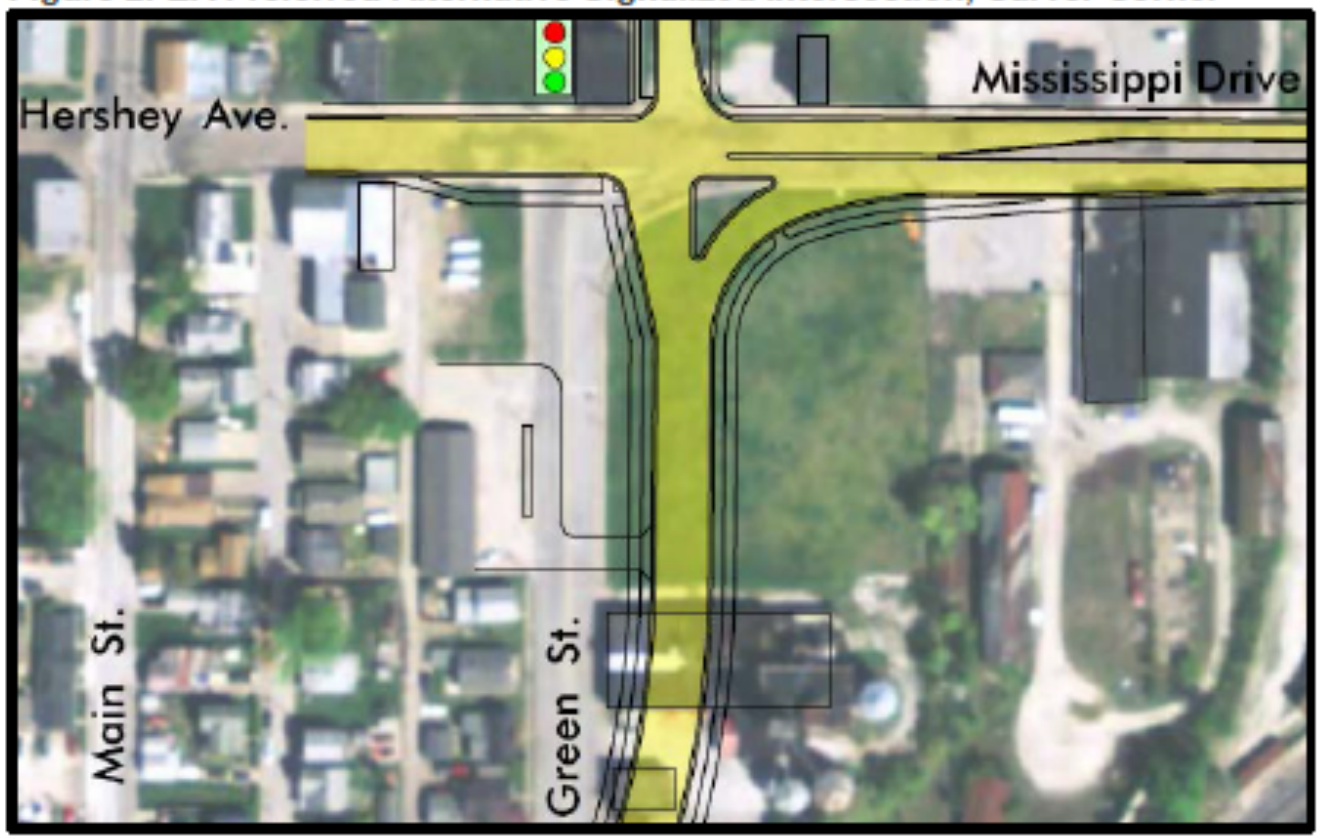
Cons:

- Higher Costs than roundabout
- Minimal space for a "gateway entrance"

Intersection Design | Carver Corner

EA "Preferred" Alternative:

Figure 2: EA Preferred Alternative Signalized Intersection, Carver Corner



Intersection Design | Carver Corner

EA 'Preferred' Alternative

Pros:

- Traditional Design
- Geometrically Algins north and south legs of Green

Cons:

- Highest Costs
- Most ROW needs
- No free flowing traffic on Miss. Dr./Green St.

Intersection Design | Carver Corner

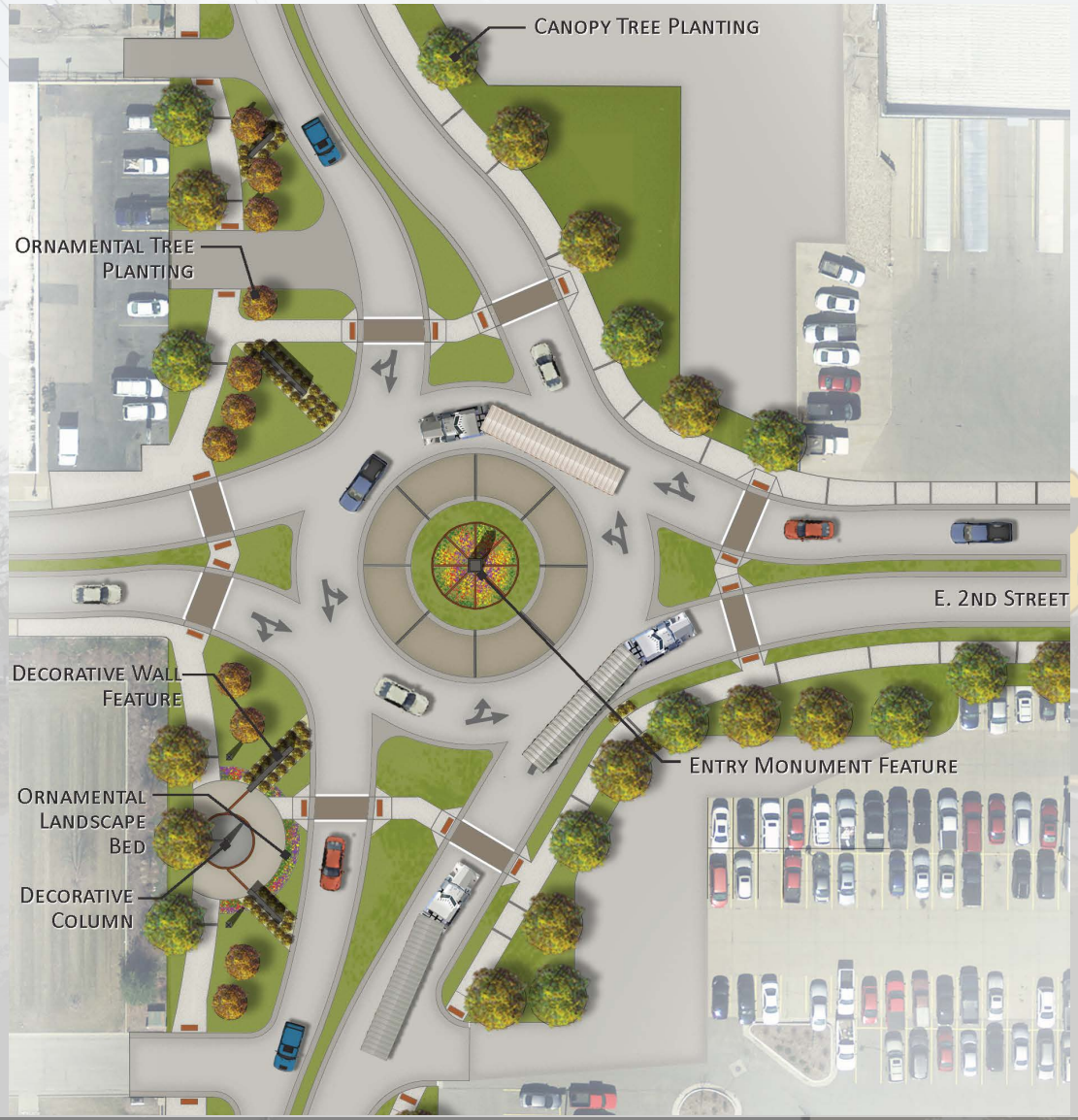
Cost Range for Alternatives:

Roundabout	$1 Million
Sweep:	$1.1 Million
EA preferred:	$1.7 Million

*includes ROW and signalization costs

Intersection Design | 2nd & Mulberry

Roundabout Alternative:



Intersection Design | 2nd & Mulberry

Roundabout Alternative:

Pros:

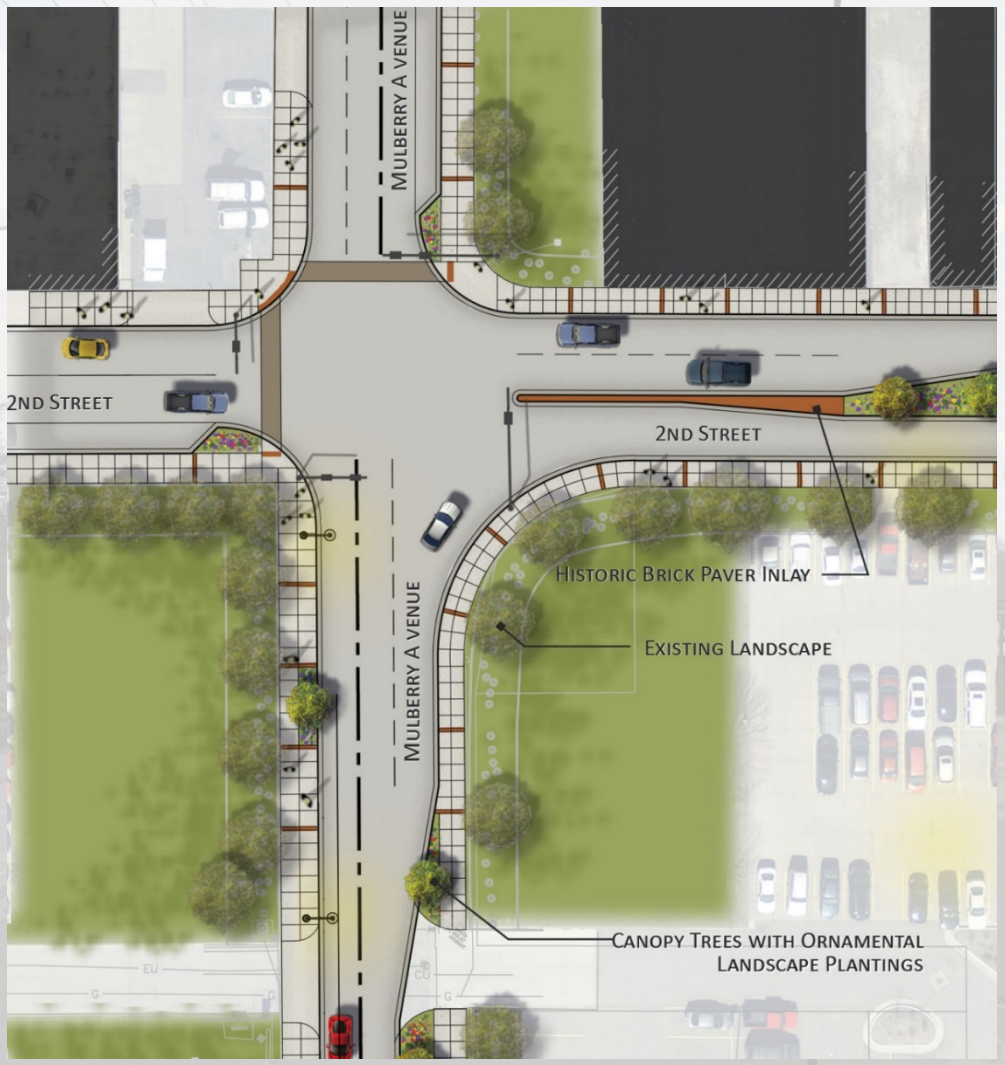
- Lower costs
- Free flowing traffic, especially during events
- Gateway to downtown
- Better truck traffic flows

Cons:

- Different traffic flow than before
- Bigger footprint
- Impacts different properties than originally planned

Intersection Design | 2nd & Mulberry

Traditional Signalized Intersection:



Intersection Design | 2nd & Mulberry

EA "Preferred" Alternative:

Figure 1: EA Preferred Alternative Signalized Intersection, Mulberry Ave. and E. 2nd St.

Intersection Design | 2nd & Mulberry

Traditional Signalized Intersection:

Pros:

- Traditional design
- Less footprint
- Impacts same properties that were initially planned

Cons:

- Higher costs
- Less area for downtown gateway
- More traffic congestion during events
- Less truck movement opportunities

Intersection Design | 2nd and Mulberry

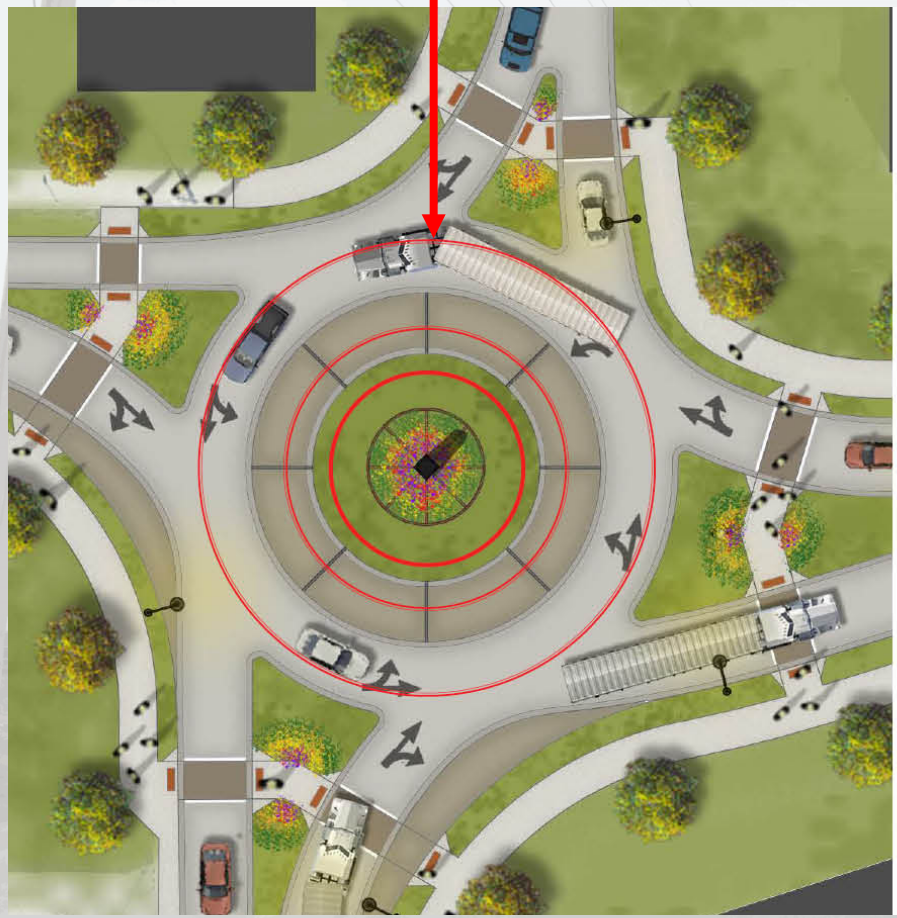
Cost Range for Alternatives:

Roundabout	$700,000
4 way intersection:	$850,000

*includes ROW and signalization costs

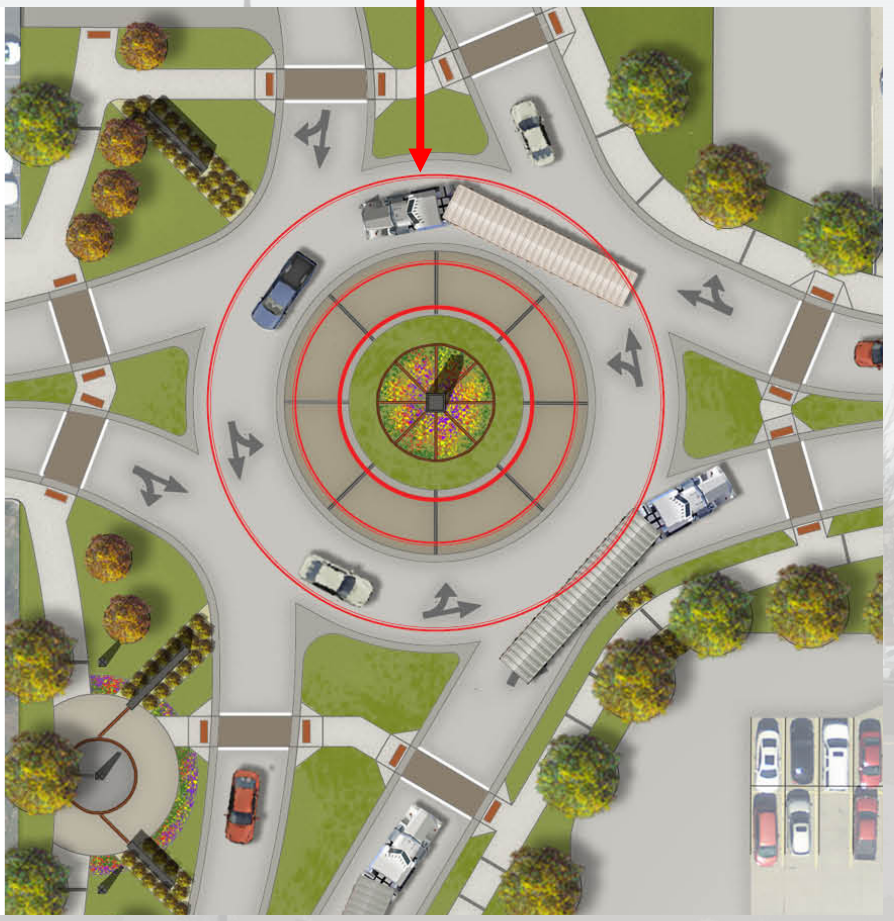
Roundabout Comparison | Cedar St. Overlay

Cedar Street Roundabout



Carver Corner Roundabout Concept

Cedar Street Roundabout



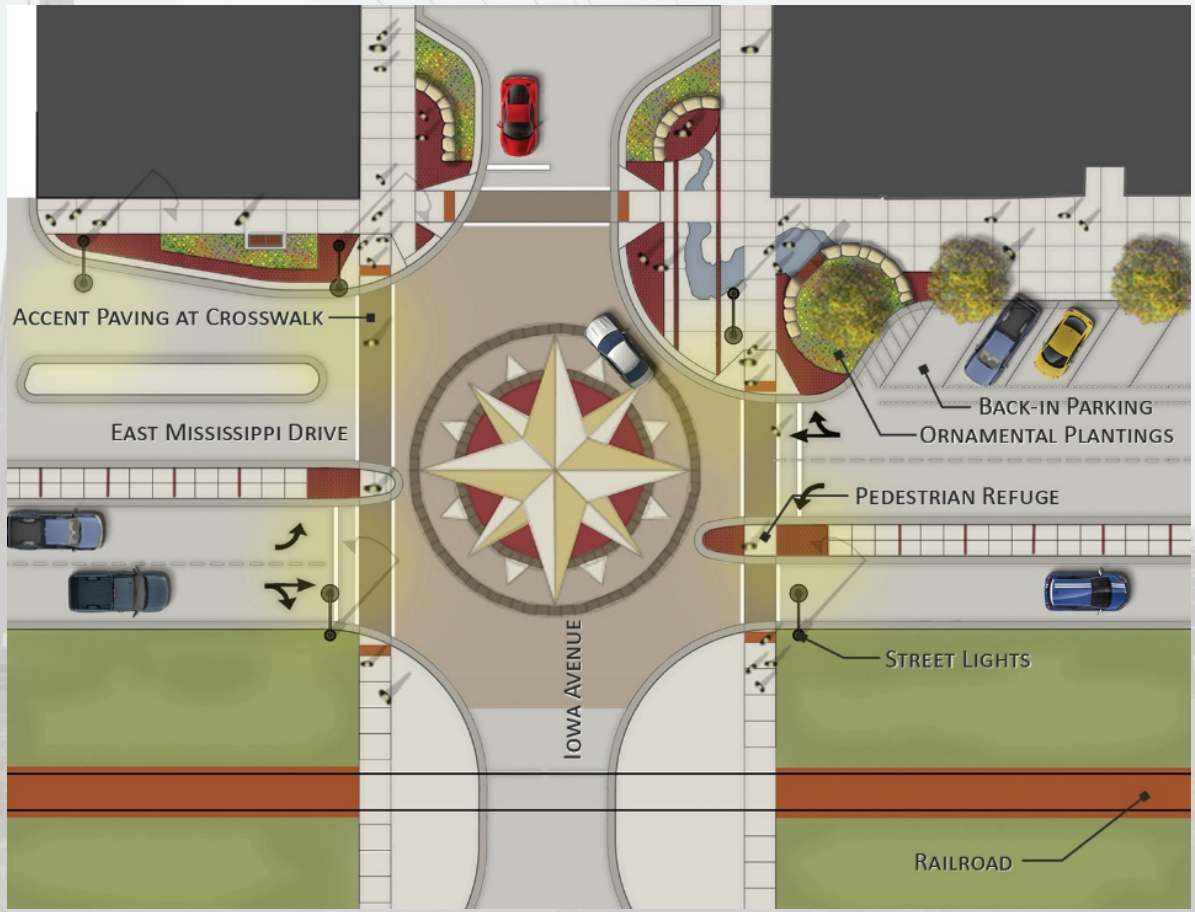
2nd & Mulberry Roundabout Concept

Progress Recap | Community Feedback

Cumulative Polling Results:

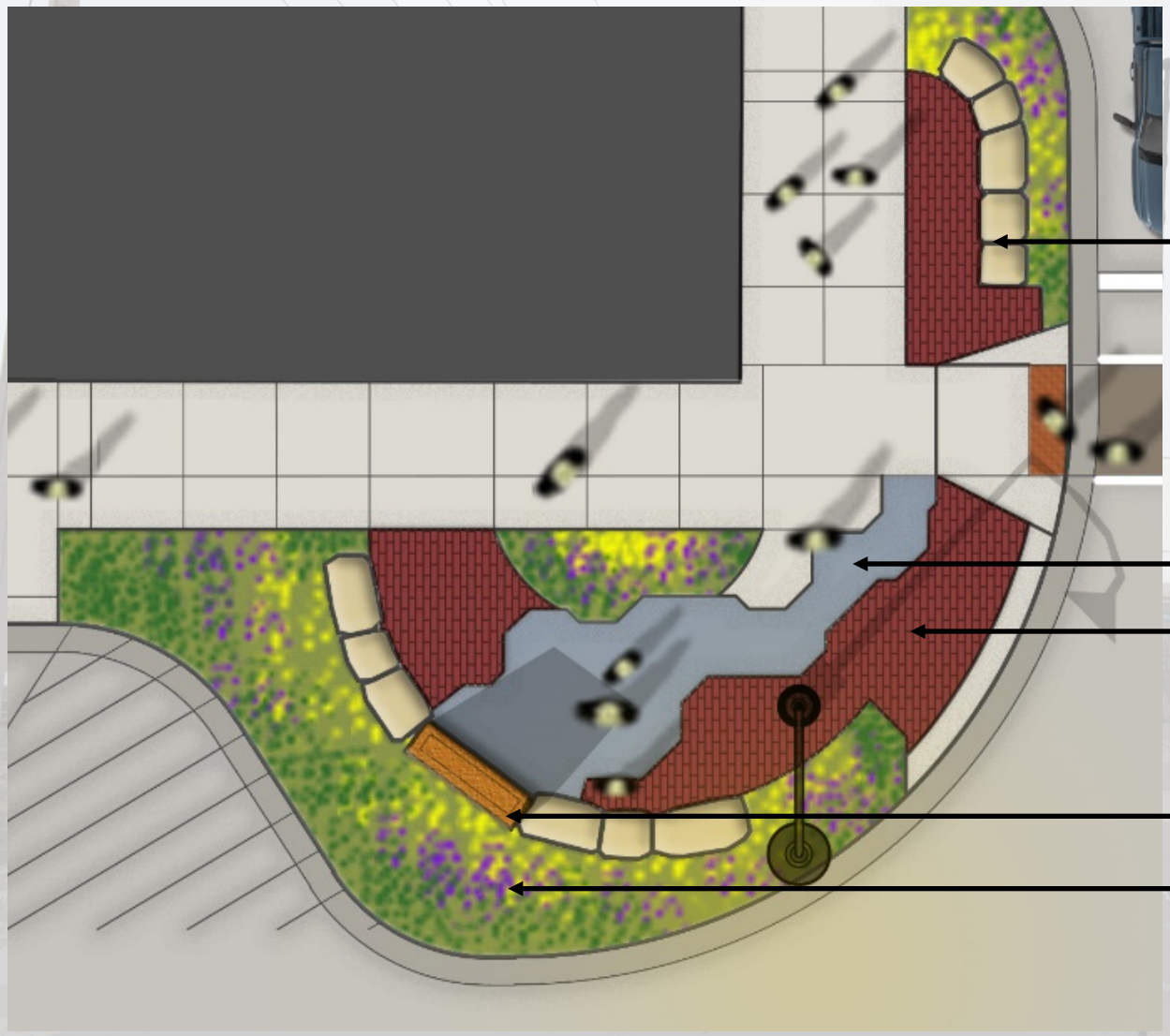
- Presented broad picture concepts
- Asked for feedback to guide the design process
- **Polling Results:**
  - **63% favored changing 2nd St. to a 2-Way**
  - **70% favored a roundabout at Carver Corner**
  - **67% said we should consider back-in angled parking**
  - **76% favored a combination of hardscape, ornamental plantings, and trees in the medians**
  - **79% favored a roundabout at 2nd & Mulberry**

Intersection Design | Iowa Ave.

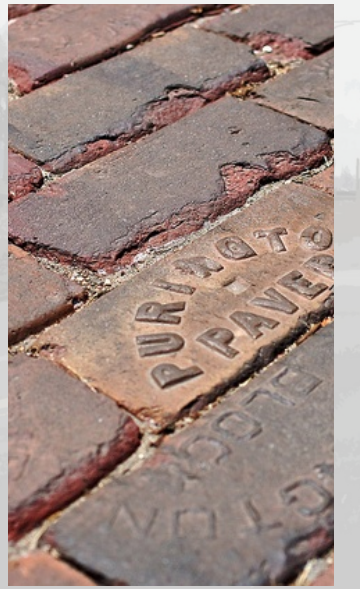


Intersection Design | Sycamore St.

Intersection Design | Detailed Design

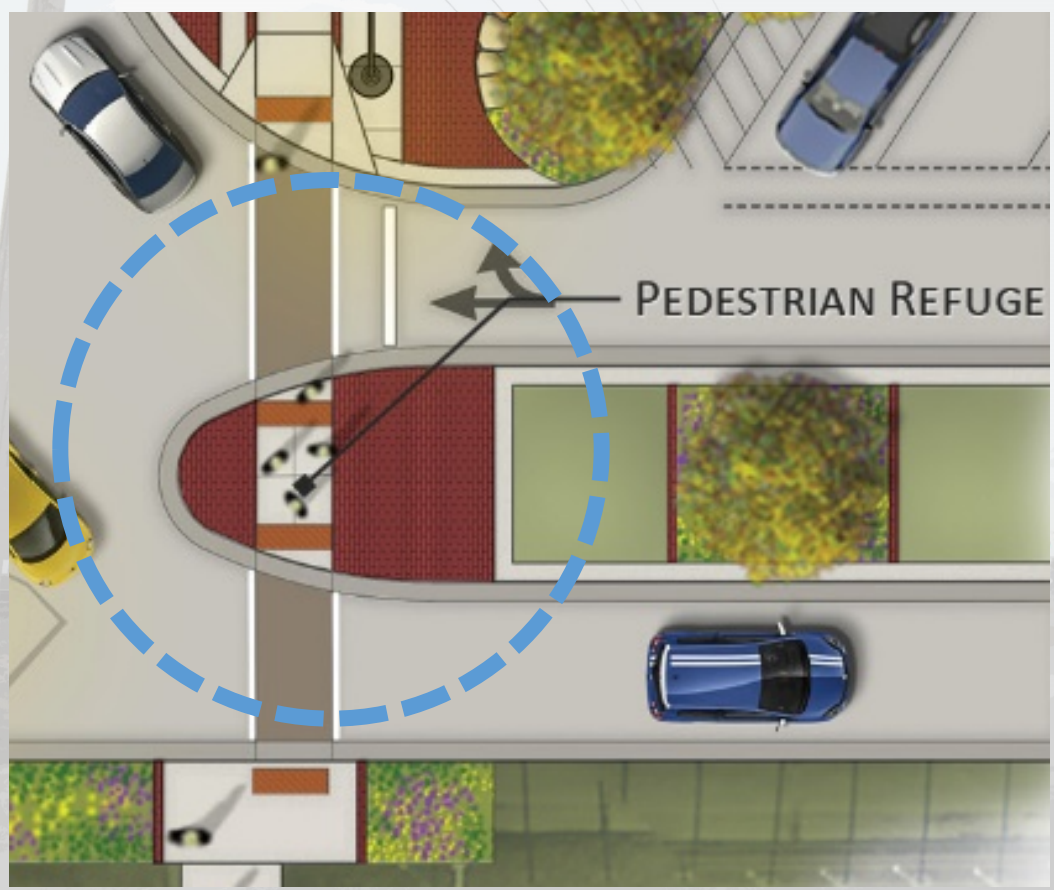


Intersection Design | Detailed Design



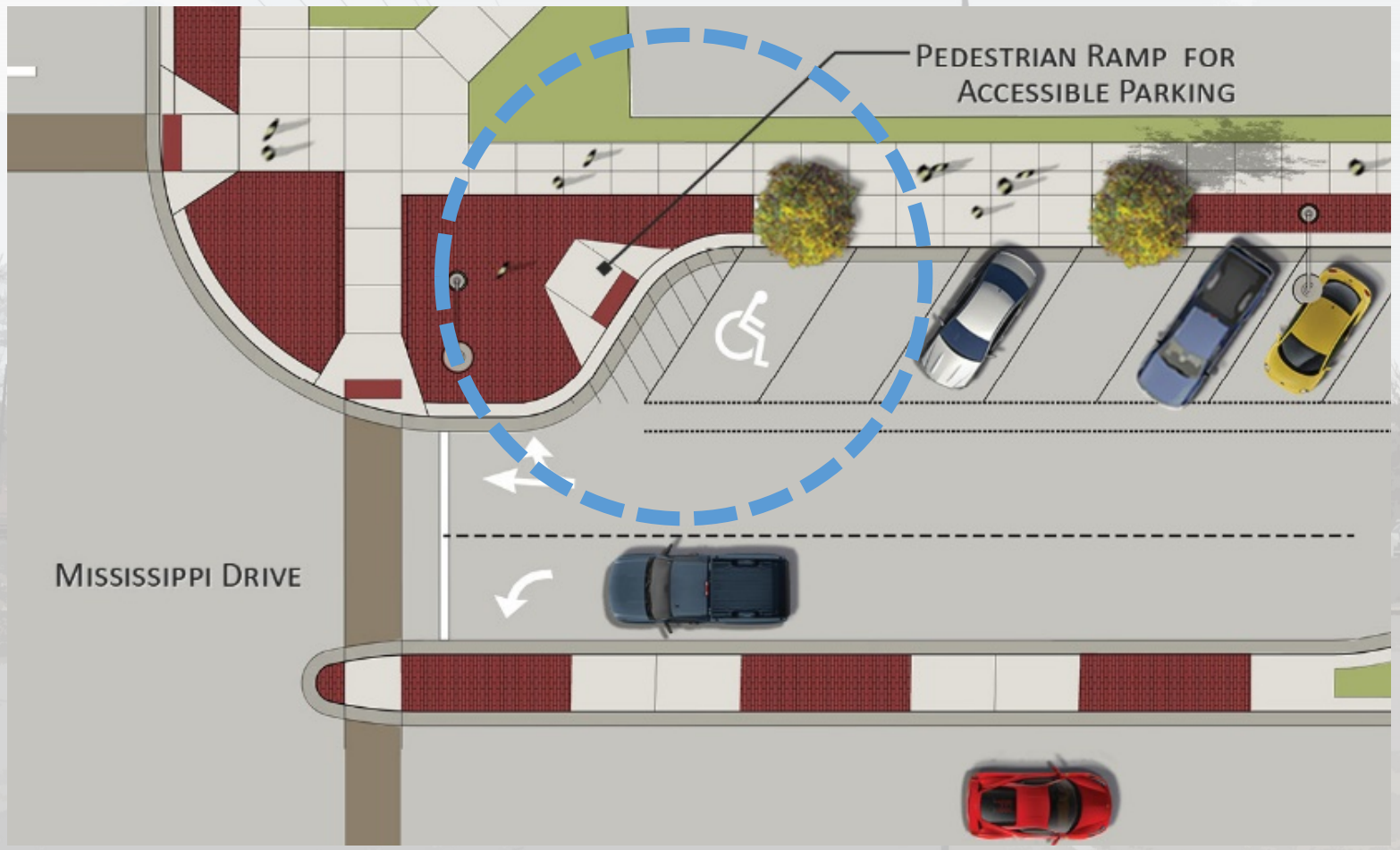
Intersection Design | Detailed Design

Pedestrian Refuge:



Intersection Design | Detailed Design

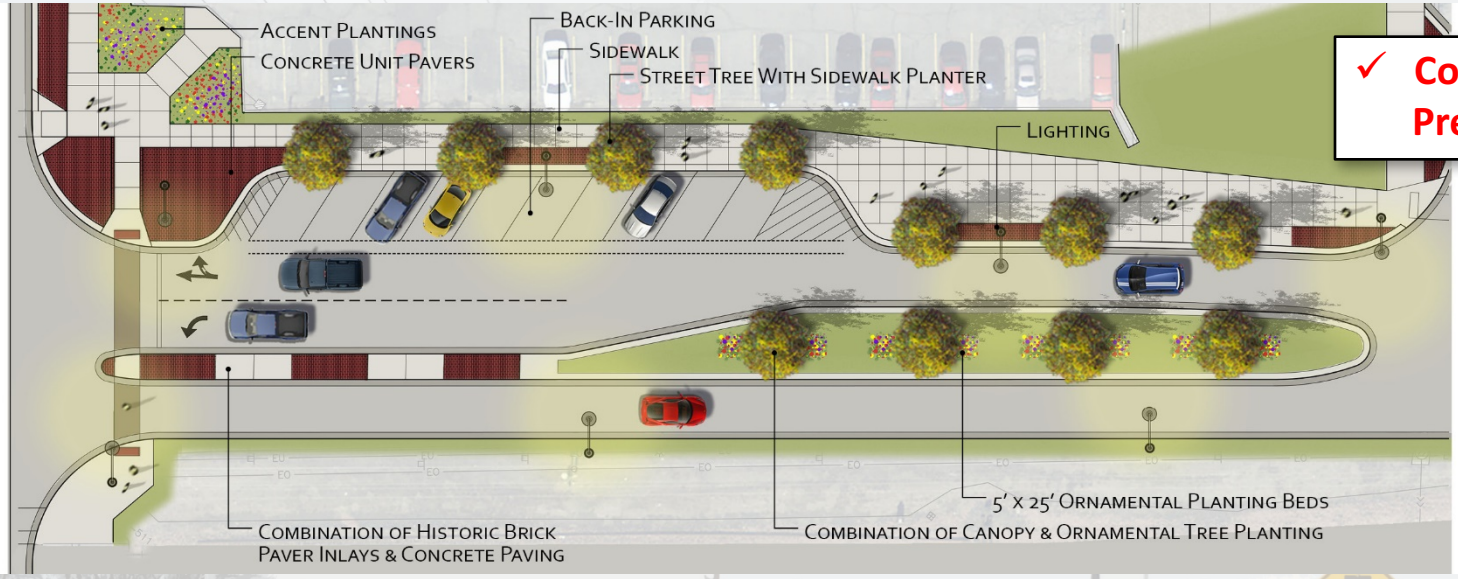
Accessible On-Street Parking:



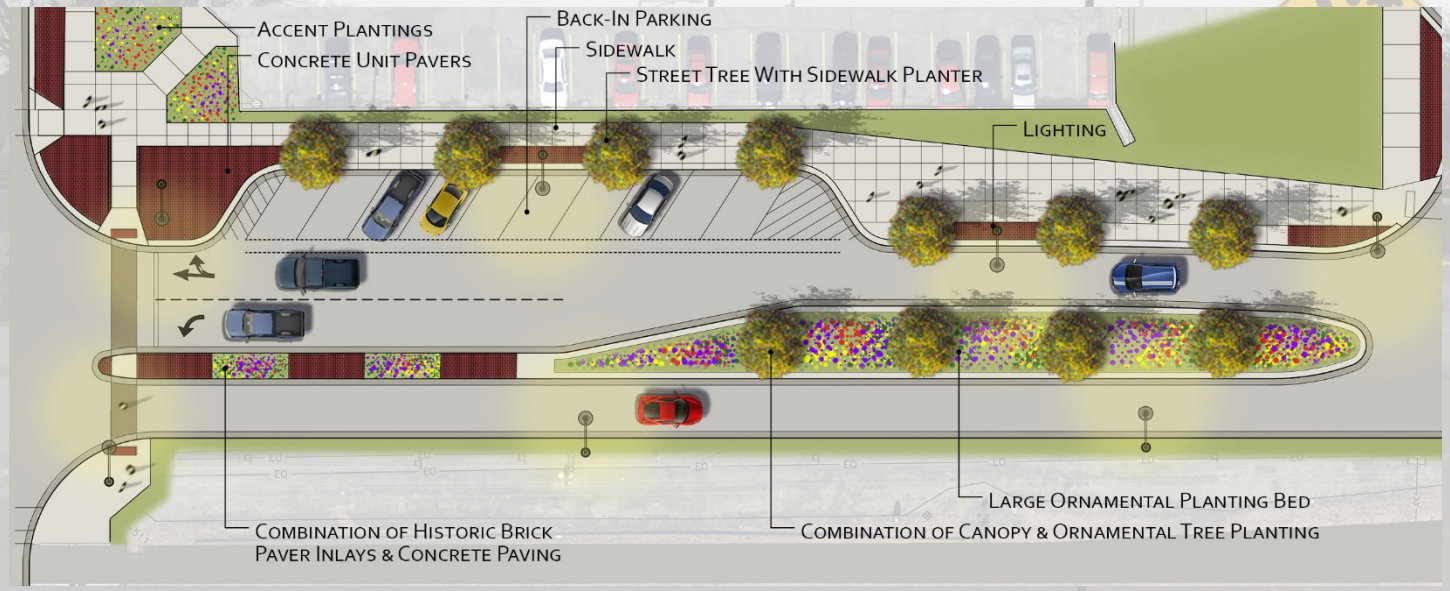
Streetscape Character | Materials/Finishes

Median Design | The Right Amount of Planting

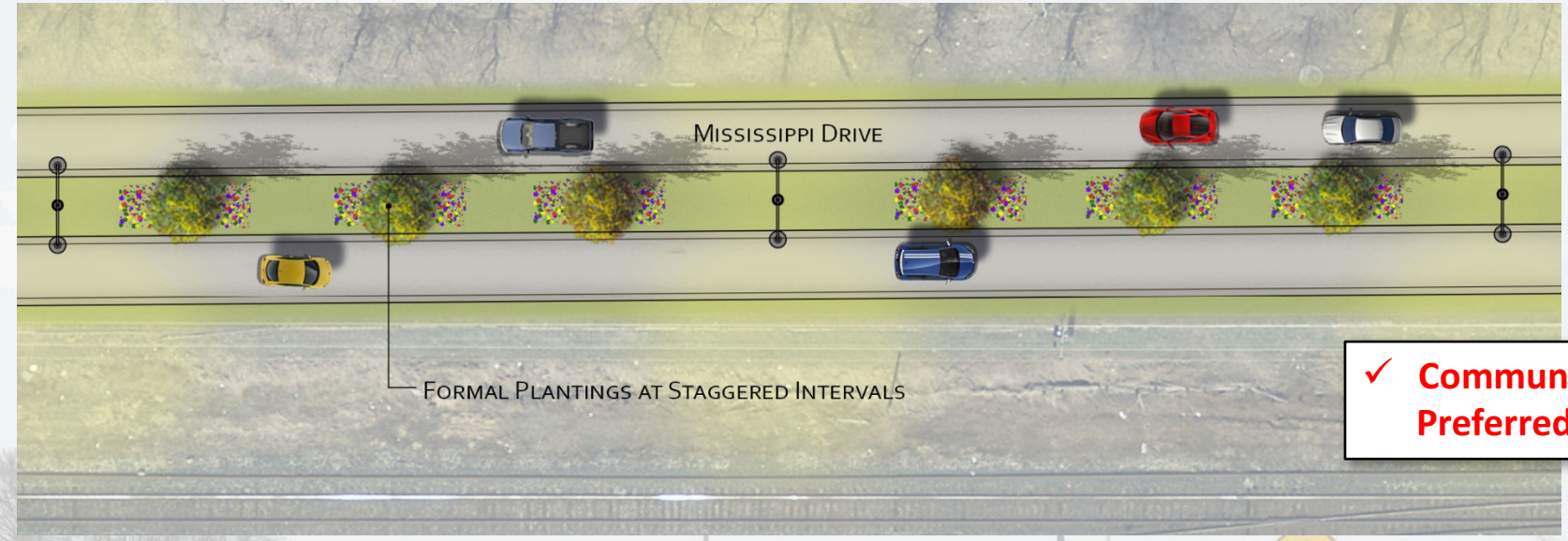
Median Design | Levels of Landscaping



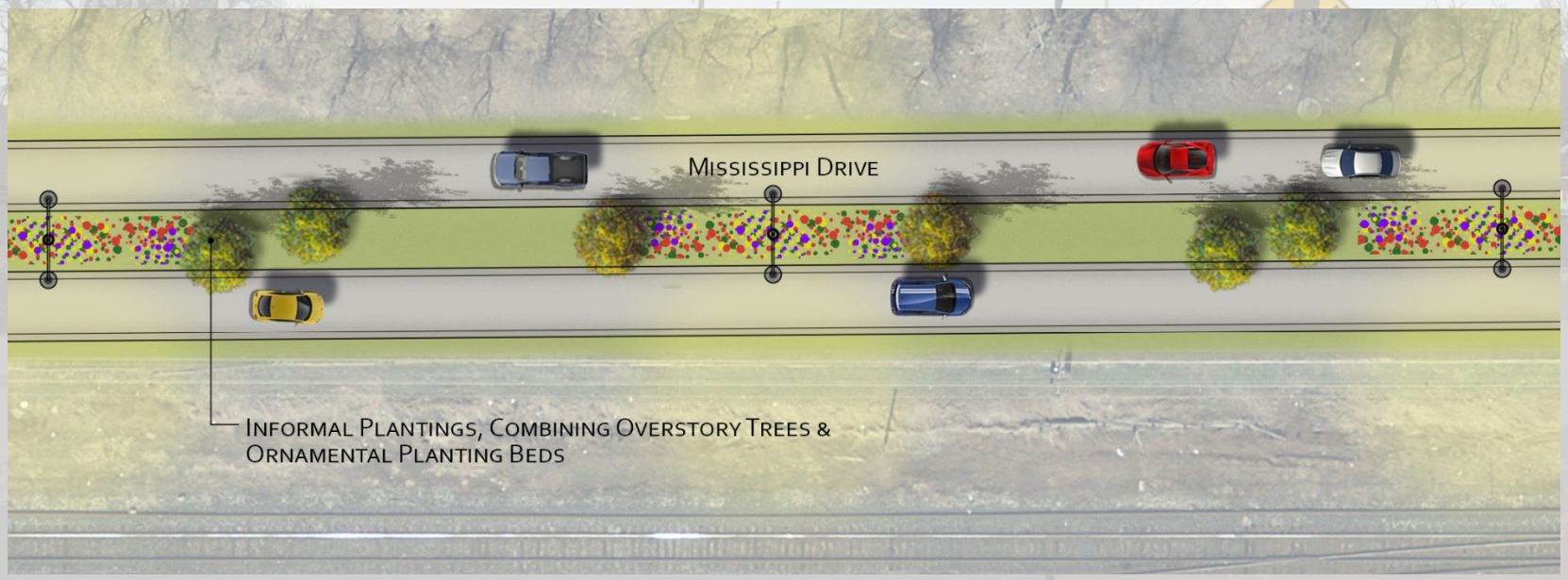
✓ Community Preferred



Median Design | The Right Amount of Planting

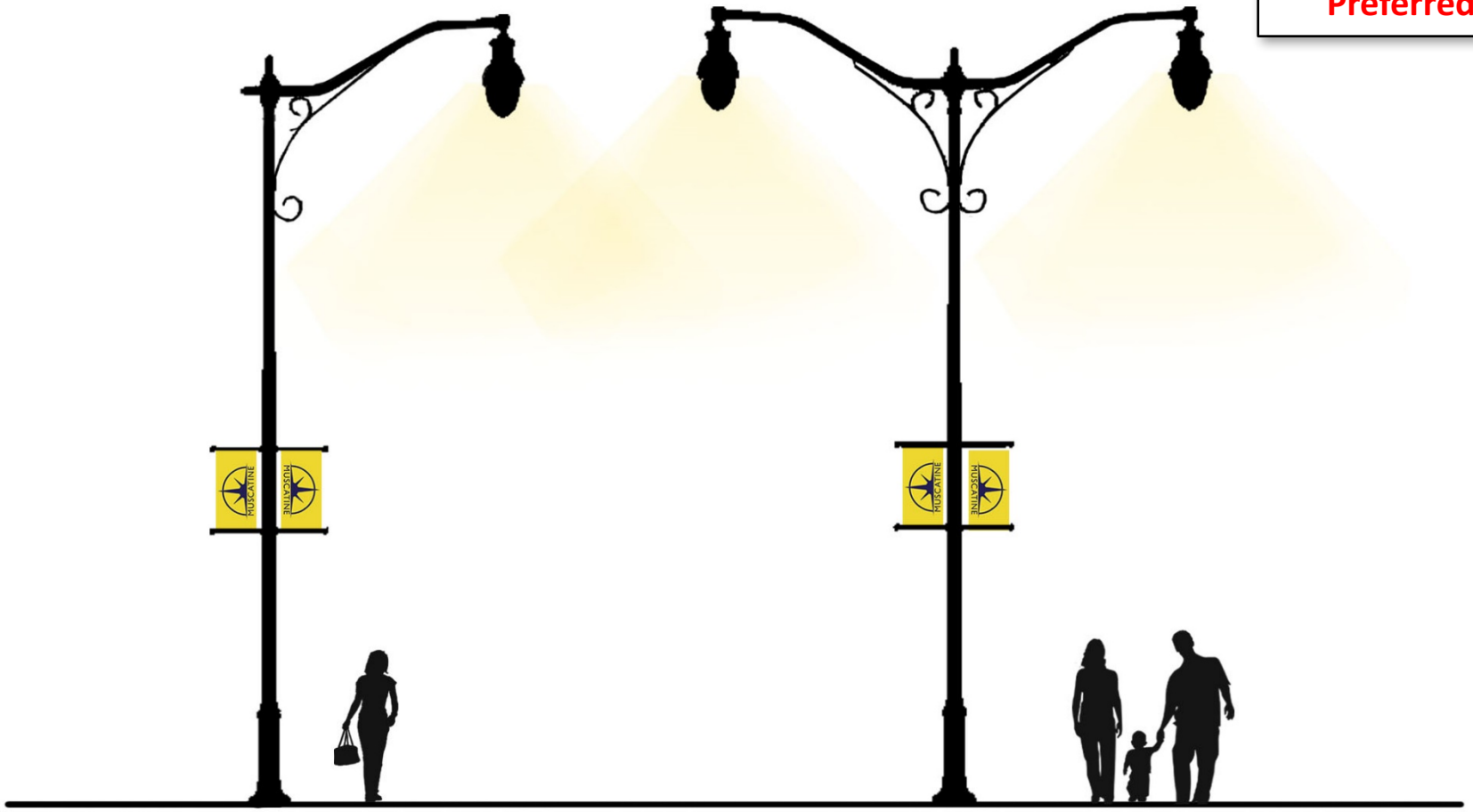


✓ Community Preferred



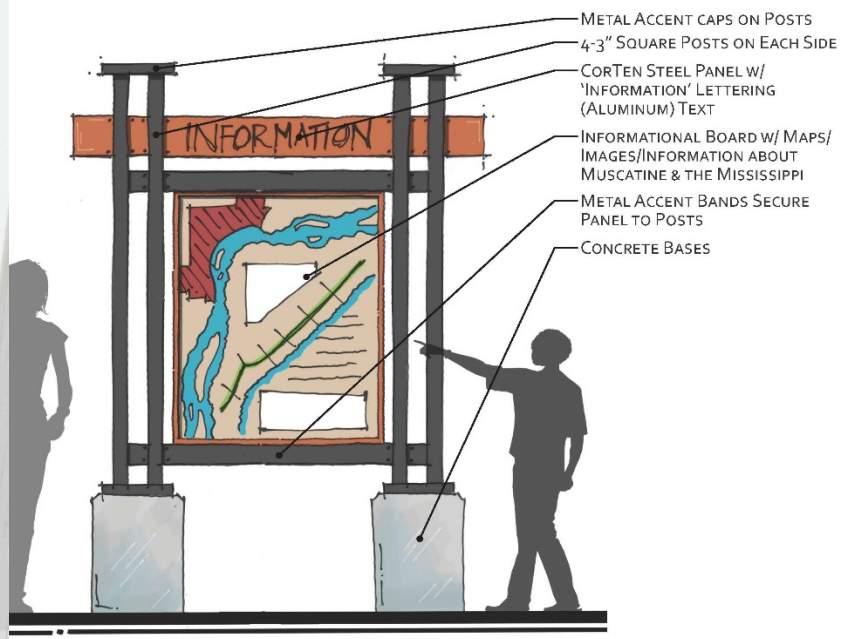
Streetscape Character | Lighting

✓ **Community Preferred**

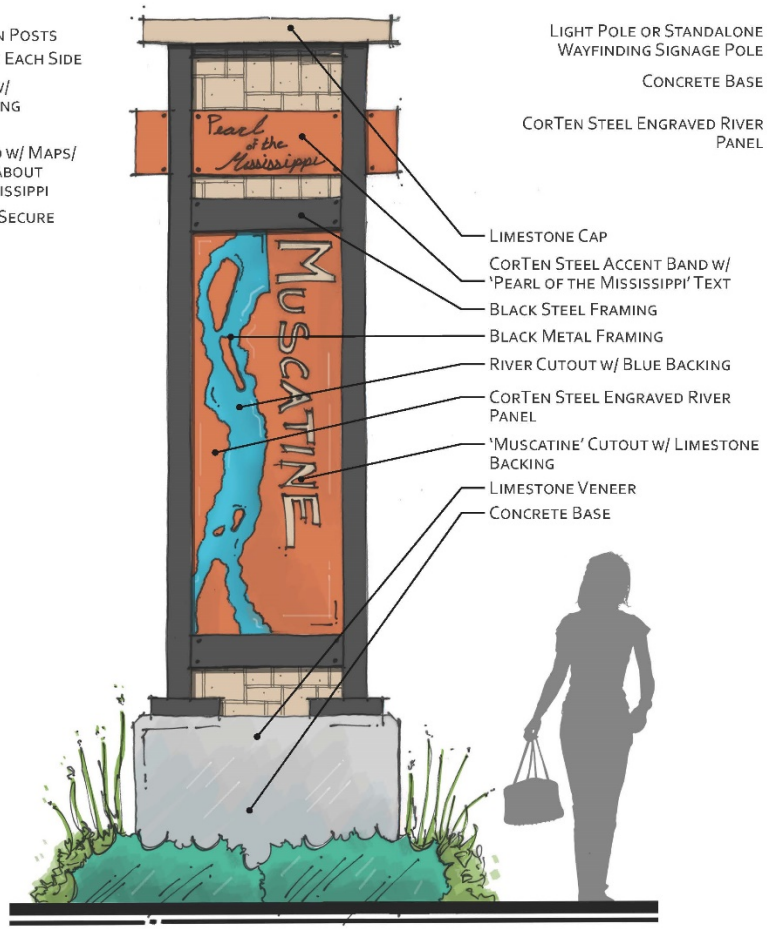


‘Historic’

Streetscape Character | Signage/Monumentation



Informational Kiosk (Front View)



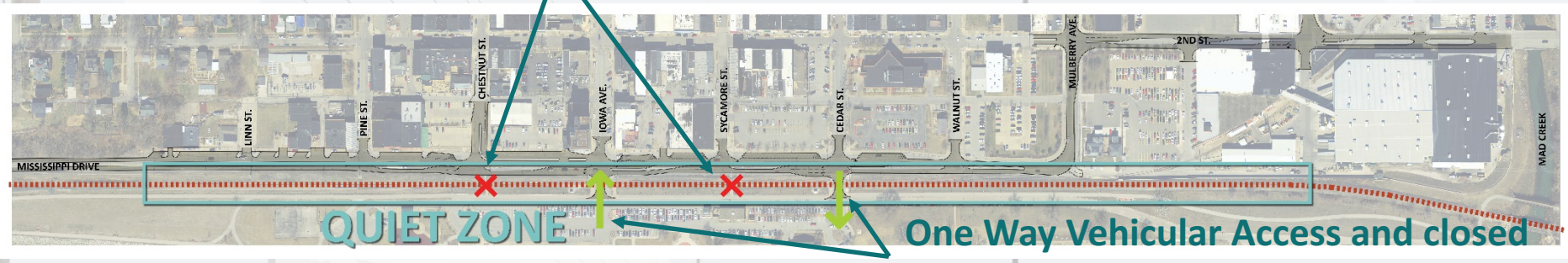
Monument Column (Front View)

Wayfinding/Light Pole Base

Quiet Zones | Short vs Long-Term Solutions

Short –Term Solution – As Per Merrill Hotel

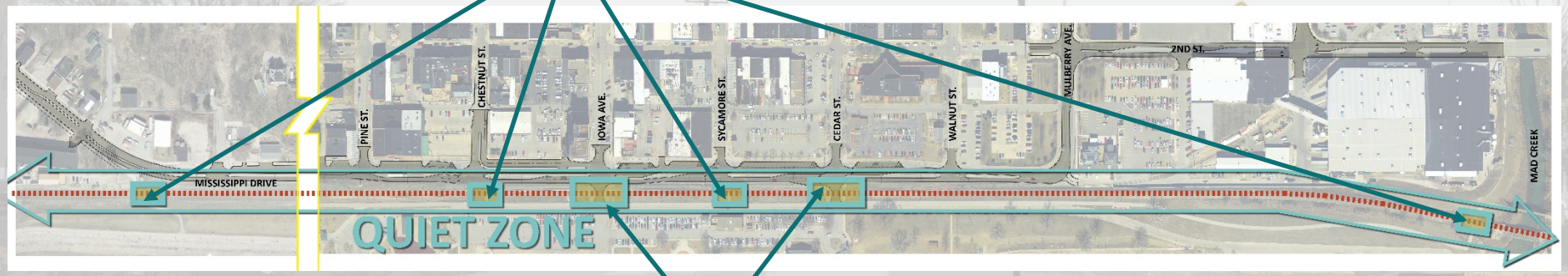
Temp. closure of pedestrian crossings



One Way Vehicular Access and closed pedestrian crossings

Gated pedestrian crossings

Long –Term Solution



Quiet Zones compliant vehic./ped. crossing

Summary | Environmental Assessment

Environmental Assessment Stipulations:

- ROW stipulations for the project
- Vibration Monitoring
- Archeological Investigation
- Historic Architecture review

Summary | Environmental Assessment

Environmental Assessment Options:

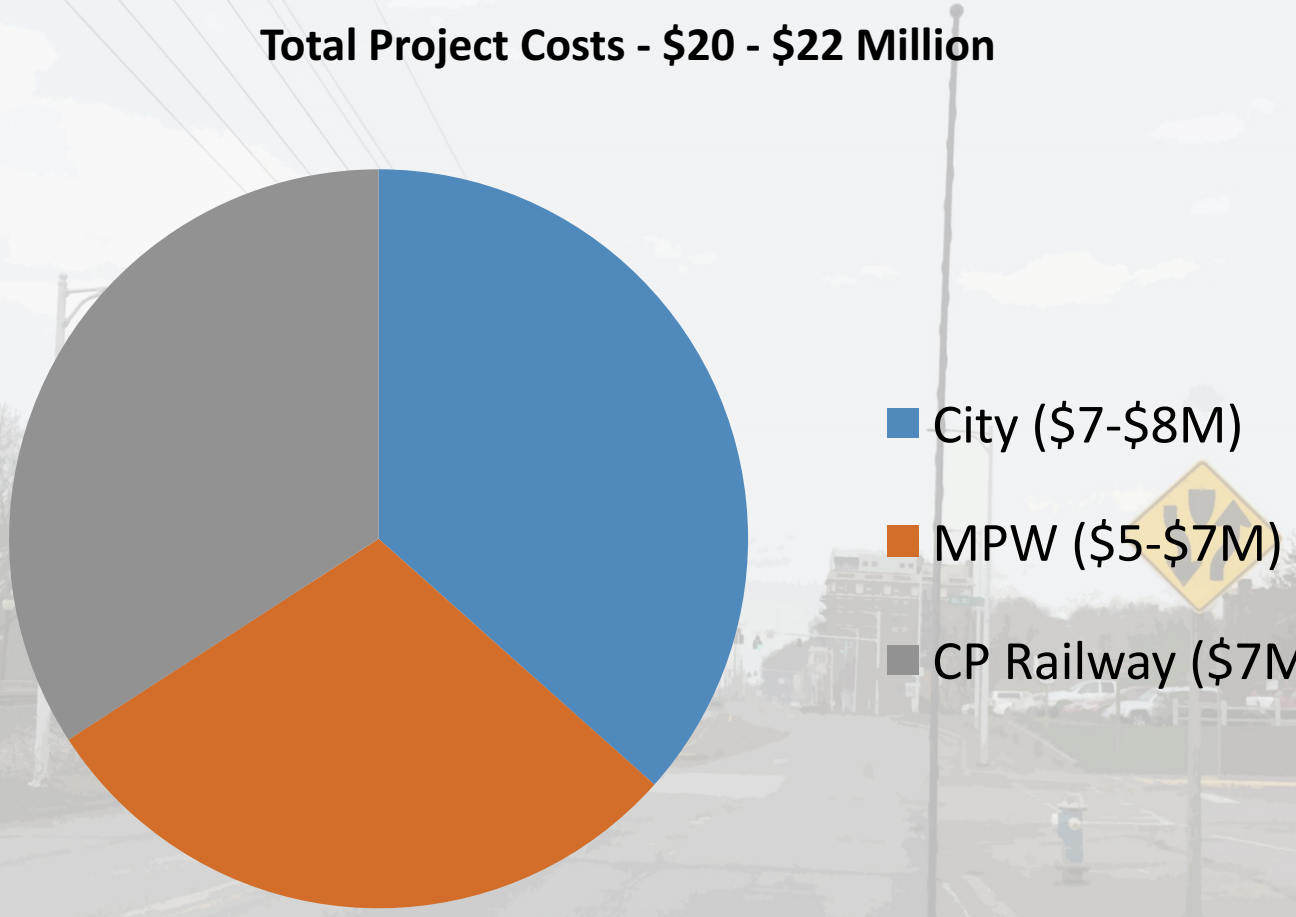
- Build within NEPA-cleared footprint defined in EA
- Defederalize project by giving back federal EA grant money (but still fall under state historic and archeological requirements)
- Prepare a reevaluation memo focusing on roundabout intersections under the auspices of the current EA

Summary | Design Recommendations

Community Driven Design Recommendations:

- 3 Lane Typical Cross Section
- Back-In Angled Parking (north side only)
- Roundabouts at Carver Corner and 2nd & Mulberry
  - *Roundabouts bid as separate project to allow for EA resolution*
- Two-Way Traffic on 2nd St.
- 'Historic' Lighting
- Mix of hardscape and light landscaping

Summary | Budget Estimates



*Does not include QZ costs

…What's Next?

To Do List:

- Finalize Preliminary Engineering Report
- Coordinate with other agencies, MPW, and CP Railway
- Develop Final Plans and Specifications
- Bidding and Construction

Questions?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