46th AVE. AND MURPHY ROAD ROUNDABOUT AND STREETSCAPE

NASHVILLE, TN

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Presentation Outline

Initial Planning Process
  ◦ Gathering input from local business owners and neighbors

Design Process
  ◦ Challenges associated with compact urban roundabout design

Construction Process
  ◦ Construction in a historic area

Finished Product and the Local’s Reaction
Initial Planning Process

Intersection Project Location

46th Avenue & Murphy Road
Roundabout & Streetscape
Project Location
Sylvan Park Neighborhood Characteristics

- Median home sales price (2015) - $524,000.00
- 47.2% increase compared to the previous year
- Well established urban neighborhood – described as “a haven for families and urbanites that prefer their city with a bit more greenery than chrome and glass”
- The core of the neighborhood has restaurants, shops, golf course, greenway connection, community center and many more on the way
Initial Planning Process

Existing Condition – Signalized Intersection

- Community Center
- McCabe Pub
- Golf Course
- Star Bagel
- Park Cafe
- Trucks would block lanes
Initial Planning Process

Sylvan Park Neighborhood Input

- More sidewalks, more pedestrian connections
- More parking for businesses
- Neighborhood motto of “Sylvan Park Simple”
- Some realized they need to give a little to get a lot.
Initial Planning Process

Options, options, options...

- In total, approximately 4 options were explored with sub-options.
Initial Planning Process

Option 2
Initial Planning Process

Option 3
Initial Planning Process

This Plan accomplishes many objectives:

**Economically**

A) Calms Traffic: Economically compared to an expensive Roundabout and makes it more pedestrian friendly.
B) creates additional parking for the area (if desired)
C) Allows businesses to maintain their pull in parking.
D) Places curbed sidewalks in strategically placed spots.
E) Maintains Bike Lanes

Of course, signs would be moved or replaced with speed bumps.
Crosswalks would be similar to what you see at an intersection (in front of Bridge Ave, or in the Belle Meade Shopping Center). There are many other modifications that could be done as well.
Initial Planning Process

After numerous business owner and neighborhood meetings, a final concept was agreed upon.
Design Process

A little background on roundabouts in Nashville

235 ft Diameter

195 ft Diameter

Naked Roundabout
Design Process

Modern Single Lane Urban Roundabout – Design Needs

- Working with the existing constraints
  - Walls, ROW, Existing Utility Poles, driveways, etc...
- Incorporating guidelines from Report 672 (2010)
- Working with the unusual intersection skew
- Incorporating pedestrians and bicyclists.
Design Process

Design Principals
- Inscribed circle diameter
- Fastest path movements
- Accommodating design vehicle
- Vertical alignment of Westlawn
- Drainage and utility constraints
Design Process

Nearing the end of design

- Worked with the local elementary school for art work to be incorporated into the project
Construction Process

Accommodating all businesses during construction

- All businesses and restaurants must stay open, must maintain parking

- An adjoining sidewalk project, a waterline and sewer line replacement project and parking lot project were all combined

- Unexpected items discovered in the field
Construction Process

Nearing the end of construction

- Provided businesses and neighbors a “How to Drive Roundabout” brochure
Nearing the end of construction

- Ribbon Cutting

“This neighborhood is going to become even more vibrant because this roundabout makes it easier to move around,” Mayor Dean said. “New sidewalks, additional on-street parking, decorative elements and landscaping adds to this commercial district to make it an even more attractive hub in this community.”
Final Product

Before

After
Final Product

Before

After
Final Product

More sidewalks and crosswalks
Final Product

Accommodates all road users
Final Product

As if the neighborhood wasn’t growing rapidly before.

Gas station is re-branding as a market/general store
IMPROVING AN OUTDATED URBAN INTERSECTION

46th Ave and Murphy Road Roundabout and Streetscape

Metro Nashville Public Works