North Decatur Road
Springdale, Oxford & Oakdale Roads

Public Works- Transportation
June 21, 2018
24 Hour Traffic Counts, vehicles per day (vpd)
Distance between Intersections
North Decatur Road at Springdale Road
Existing Conditions

• Side street stop on Springdale Rd
• Crosswalks on all approaches
• Overhead Flasher (Red facing Springdale, Yellow facing N. Decatur)
• Springdale Rd has 30 ft of pavement, 50 ft of right of way
• North Decatur Road has 30 ft of pavement, 40 feet of right of way
Crash Analysis: 2015-2017  
North Decatur Road at Springdale Road

2015  
2016  
2017
Measuring Required Sight Distance

Regulations for Driveway & Encroachment Control Manual

Georgia Department of Transportation
Sight Obstructions
North Decatur Road at Springdale Road

Southbound, Looking Right

Northbound, Looking Left
North Decatur Road at Oxford Road
Existing Conditions

• Signalized intersection

• Crosswalks on all approaches, Missing pedestrian signals on the eastern and southern legs.

• Oxford Rd has 40 ft of pavement, 50 ft of right of way

• North Decatur Road has 30 ft of pavement, 40 feet of right of way
Crash Analysis: 2015-2017
North Decatur Road at Oxford Road

2015

2016

2017
Sight Line Obstructions
North Decatur Road at Oxford Road

Southbound, Looking Right

Southbound, Looking Left
Sight Line Obstructions North Decatur Road at Oxford Road

Northbound, Looking Right

Northbound, Looking Left
North Decatur Road at Oakdale Rd
Existing Conditions

- Side street stop on Oakdale Rd
- Crosswalks on all approaches
- Oakdale Rd has 30 ft of pavement, 50 ft of right of way
- North Decatur Road has 30 ft of pavement, 40 feet of right of way
Crash Analysis: 2015-2017
North Decatur Road at Oakdale Road

2015

2016

2017
Sight Line Obstructions
North Decatur Road at Oakdale Road

Southbound, Looking Right

Northbound, Looking Left
Traffic Study by Kimley-Horn & Associates

Report Dated: May 17, 2018  (Counts Taken October 17, 2017)

• Alternative: Roundabouts

• Alternative 1: All Way Stops at Springdale Rd and Oakdale Rd, leaving signal at Oxford Rd

• Alternative 2: Signalize Oakdale Rd, leaving signal at Oxford Rd

• Alternative 3: Signalize Oakdale Rd and move signal at Oxford Rd to Springdale Rd.
Findings of KHA Traffic Study, Dated 5/17/18

• Alternative: Roundabouts, Not Analyzed
  • County removed from consideration due to concerns about right of way acquisition from stakeholders group and the county’s concerns about utilities.

• Alternative 1: All Way Stops, Not recommended
  • Imbalance on North Decatur Rd would lead to compliance issues.
  • Long queues eliminate any progression on North Decatur Rd and potential diversion to other streets.
  • Close proximity to signalized intersection at Oxford Rd.
  • Increased Rear End Crashes

• Alternative 2: Signalize Oakdale
  • Challenges within queuing and coordination due to signal spacing.

• Alternative 3: Signalize Oakdale, Relocate Oxford signal to Springdale, Recommended.
  • Challenges with queuing and coordination due to signal spacing.

Recommendations
All Way Stop Request: All Intersections

- All Way Stop Analysis dated June 12, 2018 based on request from the Stakeholder Committee.

<table>
<thead>
<tr>
<th>Intersection</th>
<th>Approach/Control</th>
<th>Existing 2017 Traffic Volumes</th>
<th>Level-of-Service (delay in seconds)</th>
<th>Queue Length (95th Percentile, in feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>AM Peak Hour</td>
<td>PM Peak Hour</td>
<td>Level-of-Service</td>
</tr>
<tr>
<td>1. North Decatur Road at Springdale Road</td>
<td>All-Way Stop-Control</td>
<td>E (36.2)</td>
<td>E (42.4)</td>
<td>E</td>
</tr>
<tr>
<td>2. North Decatur Road at Oxford Road</td>
<td>All-Way Stop-Control</td>
<td>D (33.9)</td>
<td>F (58.6)</td>
<td>D</td>
</tr>
<tr>
<td>3. North Decatur Road at Oakdale Road</td>
<td>All-Way Stop-Control</td>
<td>E (41.7)</td>
<td>D (29.5)</td>
<td>E</td>
</tr>
</tbody>
</table>

*Queue length extends past upstream intersection
Volumes on North Decatur Road

![Graph showing daily volume on North Decatur Rd. The graph indicates the flow of traffic at different times of the day, with peaks and troughs. The x-axis represents the time of day, from 6:00am to 6:00pm, and the y-axis represents the volume of traffic. The graph includes lines for Springdale Rd NE, Oxford Rd NE, and Danale Rd NE.]
Possibilities

• Roundabouts
• Traffic Signals
• All Way Stops
• Lane Narrowing
• Median Islands
• Raised intersections
• Lateral Shifts
• Mini-Roundabout/Small Modern Roundabout
Possibilities – Lane Narrowing/Road Diet

- Idea: Reallocated existing pavement to narrow lanes to 10 foot travel lanes with remaining pavement used for bike lanes or center lane with medianettes.

- Key Points:
  - Generally acceptable for emergency vehicles.
  - Reduction in through lanes tends to reduce speeds.
  - Can improve pedestrian safety by shortening crossing distances.
  - Bicycles share travel lane with vehicles in medianette design. Bike safety/access can be improved with dedicated bike lanes.
  - Good for all roadway classifications.
  - Appropriate for bus routes.
  - Must consider striping transition at Briarcliff Road (if bike lanes included).
  - Requires tree trimming for sight triangles
  - Little impact on traffic volume diversion.

ITE/FHWA Traffic Calming EPrimer: https://safety fhwa dot gov/speedmgt/traffic_calm cfm
Possibilities – Median Islands

- Idea: Raised island along the street centerline that narrows the travel lanes at that location.
- Key Points:
  - Appropriate for emergency vehicles.
  - Reduction in through lanes tends to reduce speeds.
  - Can improve pedestrian safety by shortening crossing distances.
  - Bicycles must share the travel lane.
  - Not good for truck routes.
  - No significant impact on speed reduction on vehicle speeds beyond the island.
  - Appropriate for bus routes.
  - Requires tree trimming for sight triangles
  - Little impact on traffic volume diversion.
  - Improves safety without substantially increasing delay.

Possibilities – Raised Intersections

- **Idea**: Flat raised areas covering entire intersections with ramps on all approaches.

- **Key Points**:
  - Slows emergency vehicles, but appropriate for primary emergency routes and streets with access to a hospital.
  - Used on collector, local and residential streets.
  - Typically installed at all way stop locations and traffic signals with high pedestrian demand.
  - Storm drain/underground utility modifications are likely necessary outside the pavement area.
  - Reduction in through movement speeds likely. Mid-block speed reduction less than 10 percent.
  - Can make entire intersection pedestrian friendly.
  - Requires tree trimming for sight triangles
  - No data available on traffic diversion.

Possibilities – Lateral Shifts

- **Idea:** Realignment of an otherwise straight street that causes travel lanes to shift in at least one direction

- **Key Points:**
  - Appropriate for emergency vehicles.
  - Can improve pedestrian safety by shortening crossing distances.
  - Good for all roadway classifications.
  - Appropriate for bus routes.
  - May require drainage relocation, but typically does not require utility relocation.
  - Without islands, motorists could cross the centerline to drive the straightest path possible.
  - Requires tree trimming for sight triangles.
  - Limited data available on impacts on speed, volume diversions, and crash risk.
Possibilities – Mini Roundabout or Small Modern Roundabout

- Idea: Raised islands placed in unsignalized intersections around which traffic circulates. Center island is fully traversable for mini roundabout, whereas it is not for the small modern roundabout.

- Key Points:
  - Slows emergency vehicles. Constrained turning radii typically necessitates a left turn in front of the circle for large vehicles.
  - Used on collector and local streets.
  - Not typically used on streets with high volumes of trucks and buses turning left. Small modern roundabouts have a truck apron for large vehicles such as school buses.
  - Small modern roundabout usually have landscape in their center islands.
  - Can be applied to roads with or without bike lane facilities. Bike lane not striped in circle. Bikes and vehicles share lane at intersections.
  - Care must be taken to avoid routing vehicles through unmarked crosswalks on side streets.
  - Requires tree trimming for sight triangles
  - Slight speed reduction. Little traffic diversion.
Discussion

My idea is....