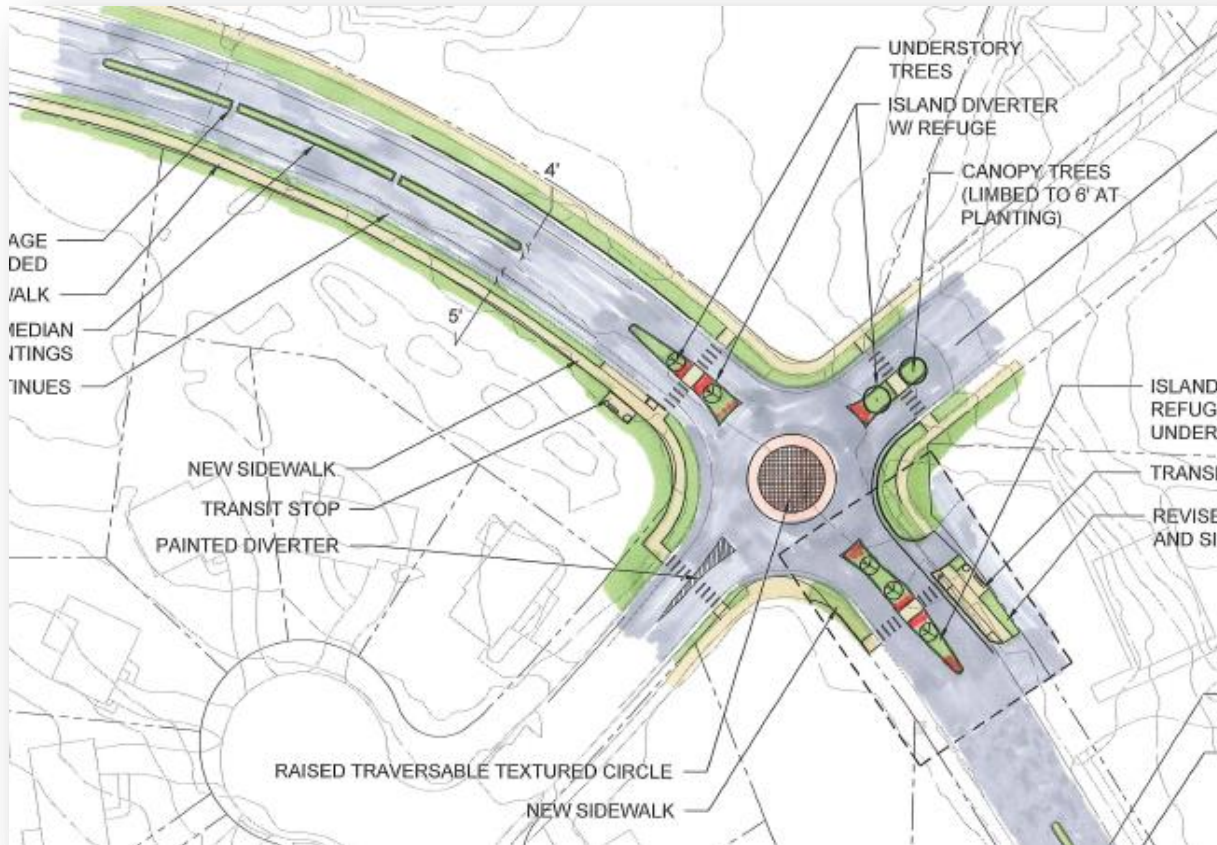


Cross Link Road – South Neighborhood Streetscape

Neighborhood Traffic Management Program



*City Council
Public Works
Committee*

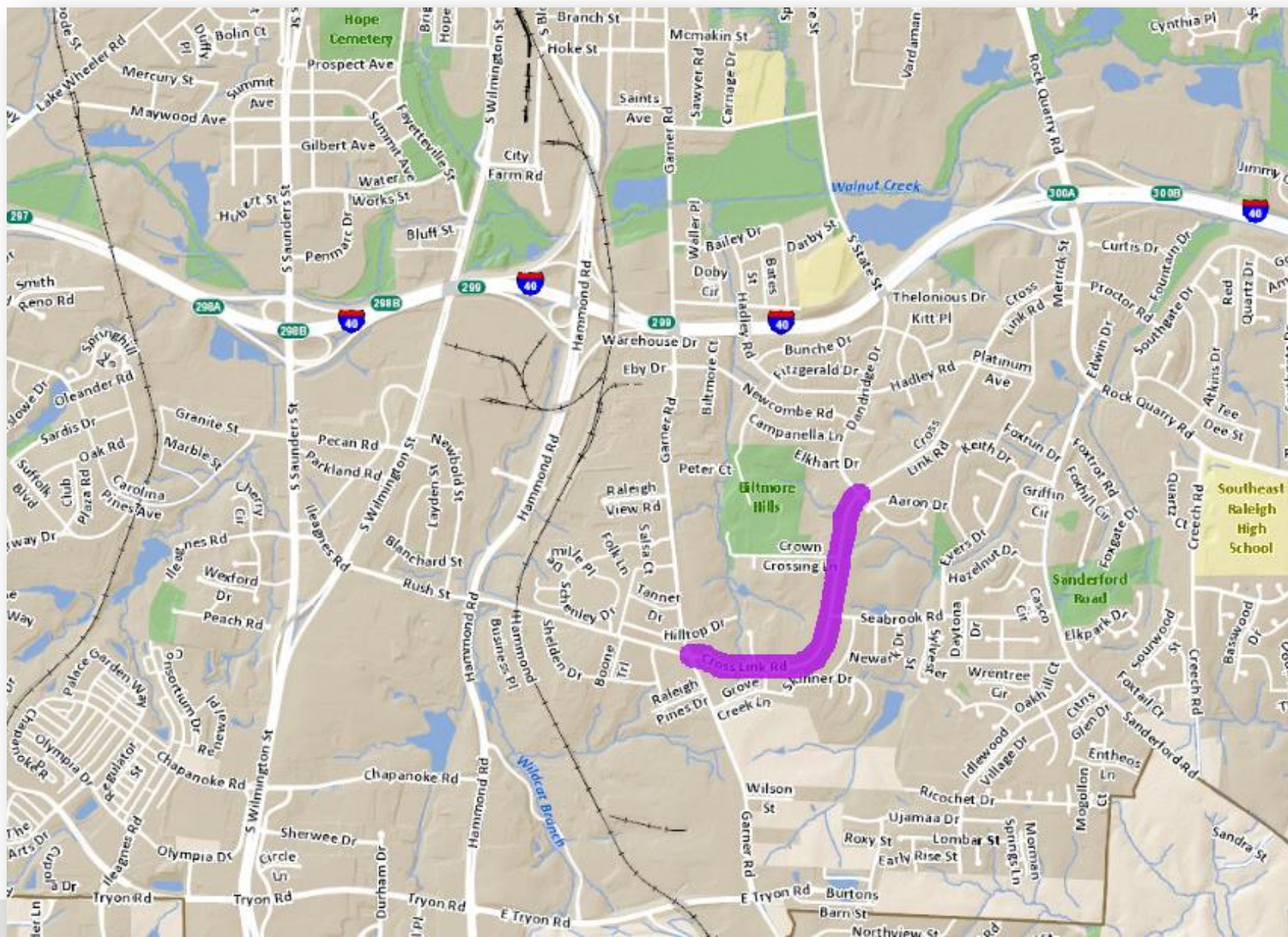
Item 13-26

September 22, 2015

Presentation Overview

- Brief Project Background and Timeline
- Conceptual Design Overview
- Detailed Focus on Intersection of Cross Link and Dandridge
- Other Slides Available for Discussion
 - WCPSS Feedback
 - Workshop Summary
 - Details of Other Treatment

Project Location



Overall Project Timeline

- September 18, 2012 – #2 on priority list adopted by Council
 - December 19, 2012 – Successful petition submitted (77% support)
 - February 11, 2014 – Information session (7 attendees)
 - June 5, 2014 – Neighborhood design workshop (14 attendees)
 - September 29, 2014 – Neighborhood design review (8 attendees)
 - February 6 & 12, 2015 – Treatments pre-marked
- March 3, 2015 – City Council public design review
 - April 13, 2015 – Presentation at South CAC
 - August 11, 2015 – Neighborhood open house (16 attendees)
 - Future – Construction Documents by Public Works

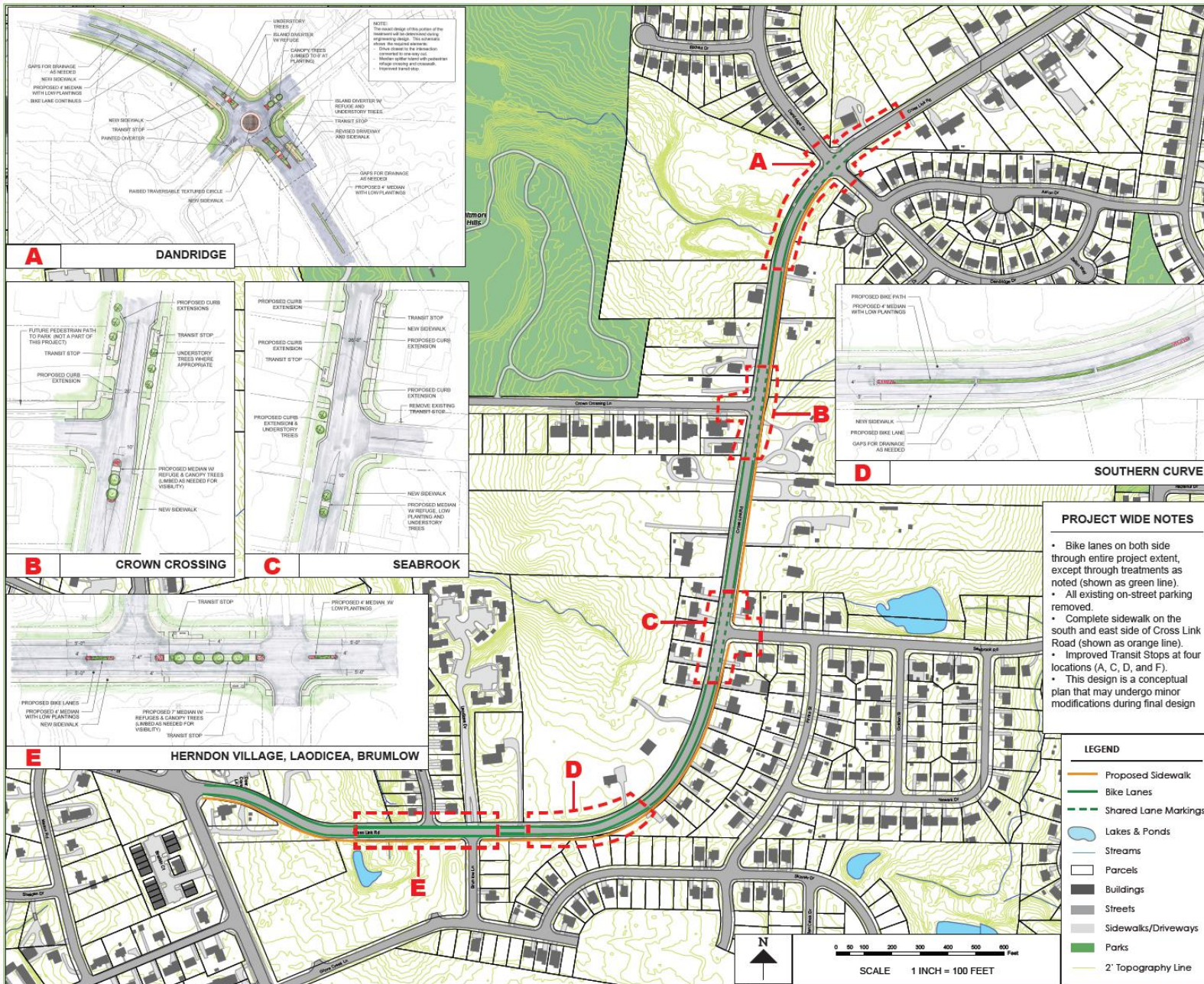
Progress since March 3

- April 13: Presentation to South CAC
 - Regular CAC meeting, additional notifications by email and mail
 - Desire for additional details and a second look at a four-way stop
- One-on-one meeting
- Multi-way stop evaluation
 - New (2015) data including delay study
 - Does not meet warrants
- Slight revision to concept at Dandridge Drive
- August 11: Open house
 - Notifications by email, mail, and via CAC
 - 16 people signed in
- Outreach to Wake County Public Schools
 - In person and over phone
 - Comments in writing (included in backup)
- September 14: Update to South CAC
- September 15: Referred to Public Works Committee

Cross Link Road – South

CONCEPTUAL DESIGN

Design Overview



Location A: Dandridge



(Facing Northeast)

Location A: Dandridge



Location A: Dandridge

Downtown

NOTE:

The exact design of this portion of the treatment will be determined during engineering design. This schematic shows the required elements:

- Drive closest to the intersection converted to one-way out.
- Median splitter island with pedestrian refuge crossing and crosswalk.
- Improved transit stop.

GAPS FOR DRAINAGE
AS NEEDED

NEW SIDEWALK

PROPOSED 4' MEDIAN
WITH LOW PLANTINGS

BIKE LANE CONTINUES

NEW SIDEWALK

TRANSIT STOP

PAINTED DIVERTER

RAISED TRAVERSABLE TEXTURED CIRCLE

NEW SIDEWALK

UNDERSTORY
TREES

ISLAND DIVERTER
W/ REFUGE

CANOPY TREES
(LIMBED TO 6' AT
PLANTING)

ISLAND DIVERTER W/
REFUGE AND
UNDERSTORY TREES

TRANSIT STOP

REVISED DRIVEWAY
AND SIDEWALK

GAPS FOR DRAINAGE
AS NEEDED

PROPOSED 4' MEDIAN
WITH LOW PLANTINGS

Cross Link
Trace
Neighborhood

Cross Link
Mart

Median
Added to
Concept

North

Example Mini Roundabout



Image from Google Street View in Shakopee, MN (July 2014)

Multi-Way Stop

EVALUATION

Results

- Not enough delay on Dandridge to consider.
- Multi-way stops works best where volumes on intersecting streets is roughly equal.
- Cross Link carries roughly 3.5 times as many vehicles as Dandridge.
- Detailed reports (2012 and 2015) provided to public and in backup materials
- Issues are speed-related and can be corrected through other means.

| Primary Criteria/Warrants | | Warrant Met? |
|---|--|--------------|
| A. Future Location of Signal | Does not meet warrants | NO |
| B. Five Correctable Crashes in a 12-month period | <u>3</u> total, <u>1</u> correctable | NO |
| C. Minimum Volumes for any 8 hours of an average day (1 and 2) <input checked="" type="checkbox"/> qualifies for reduced criteria: 85th Speed: <u>46.3</u> mph > 40mph | | NO |
| 1. At least 300 vph on major street (210 reduced) | <u>604</u> vph over 8 hours | Yes |
| 2. At least 200 vph on minor street (140 reduced), AND 30+ sec delay during highest hour | 160 vph over 8 hours 7.9 (NB)/9.5 (SB) sec av. delay | Yes No |
| Other Criteria | | |
| A. Need to control left-turn conflicts? | No excessive left turn delay or volume | No |
| B. Need to control vehicle/pedestrian conflicts where there are high pedestrian volumes? | Low pedestrian volumes | No |
| C. Sight distance inadequate? | Meets or exceeds the required minimum at this intersection. | No |
| D. Intersection of two residential neighborhood collector streets of similar design and operating characteristics? | Cross link carries 3.7 times the volume of traffic that Dandridge carries. | No |

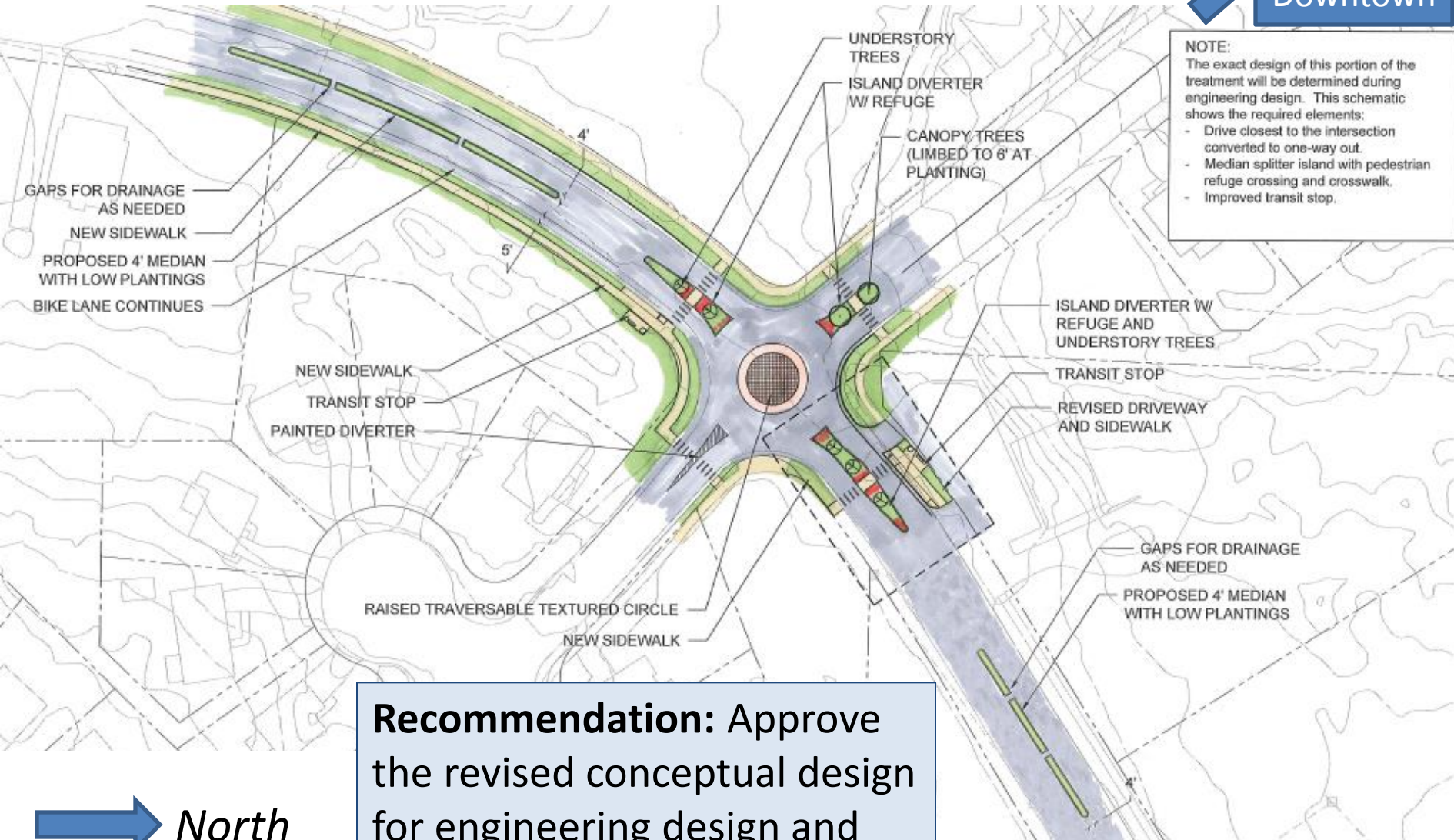
Estimated Approach Delays

| Approach | Existing Two-Way Stop | | All-Way Stop | | Proposed Mini-Roundabout | |
|---------------|-----------------------|----------------------|--------------|----------------------|--------------------------|----------------------|
| | LOS | Avg. Delay (sec/veh) | LOS | Avg. Delay (sec/veh) | LOS | Avg. Delay (sec/veh) |
| Cross Link NE | | 0 | B | 13.6 | A | 7.1 |
| Cross Link SW | | 0 | B | 14.5 | A | 7.8 |
| Dandridge NW | C | 17.2 | B | 10.7 | A | 6.8 |
| Dandridge SE | C | 17.4 | A | 9.8 | A | 6.0 |

Afternoon Peak. Results from Synchro model using May 2015 volumes.

Location A: Dandridge

Downtown



Recommendation: Approve the revised conceptual design for engineering design and construction.