



NC Capital Area **Metropolitan Planning Organization**

CAPITAL AREA MPO

Executive Board Meeting

September 19, 2018

4:00 PM

1. Welcome and Introductions
2. Adjustments to the Agenda
3. Ethics Statement:

In accordance with the State Government Ethics Act, it is the duty of every Executive Board member to avoid conflicts of interest.

Does any Executive Board member have any known conflict of interest with respect to matters coming before the Executive Board today? If so, please identify the conflict and refrain from any participation in the particular matter involved.

4. Public Comments

This is an opportunity for comments by those in attendance related to items *not* on the agenda.

Please limit comments to three minutes for each speaker.

5. Minutes

5.1 Meeting Minutes -- August 15, 2018

Requested Action:

Consider approval of the August 15, 2018 Minutes.

6. Consent Agenda

6.1 Transit Asset Management Performance Measures & Targets for State of Good Repair

Recommended Action:

Consider approval of recommended performance measures and targets for TAM and State of Good Repair.

6.2 Wake Transit Work Plan Amendment Policy Update

Recommended Action: Consider approval of the Wake Transit Work Plan Amendment Policy

END OF CONSENT AGENDA

7. Public Hearing

- None

8. Regular Agenda

8.1 NC 98 Corridor Study

8.1 NC 98 Corridor Study



NC 98 CORRIDOR STUDY REPORT

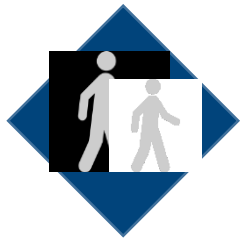
www.nc98corridor.com

WHERE & WHAT

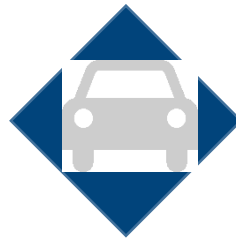
Project Study Area:

- 27-miles from U.S. 70 in Durham Co. through Wake Co. to U.S. 401 in Franklin Co. (approximately a quarter mile (1/4) on either side of N.C. 98)

This study will evaluate:



Safety & Mobility



Planned & Existing
Roads



Transit



Bicycle/ Pedestrian
Facilities

N.C. 98 STUDY SCHEDULE

Project
Kick-Off



DEC 16 | JAN 17 | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN 18 | FEB | MAR | APR | MAY | JUN | JUL

REVIEW EXISTING INVENTORY &
PLANS

TRANSPORTATION ANALYSIS

CONCEPTUAL DESIGN

IMPLEMENTATION PLAN



Visioning Public Events
Public Meetings
Pop-up Events

PUBLIC INVOLVEMENT



**Conceptual Design
Preference Public Events**
Public Meetings
Pop-up Events



**Informational Session on
Recommendations**
Public Meetings



**Study Oversight
Team (SOT)**

Meeting

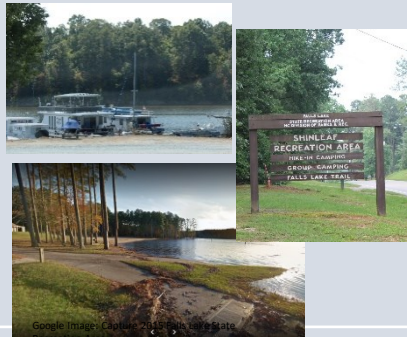


**CORRIDOR
STUDY**

NC CAMPO • DCHC MPO • NCDOT

EXISTING CONDITIONS

Environmentally Sensitive Areas



- Falls Lake, Little River, & Neuse River Watersheds
- Shinleaf Recreation Area
- Parks
- Trails

Several Types of Land Uses



- Transportation
- Recreational
- Agricultural
- Residential
- Educational
- Institutions
- Natural Environment
- Commercial

Traffic Generating Facilities



- Schools
- Churches
- Shopping centers
- Activities

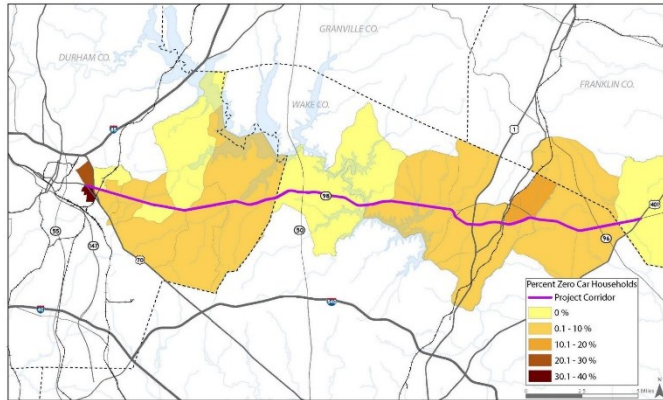
Recreation



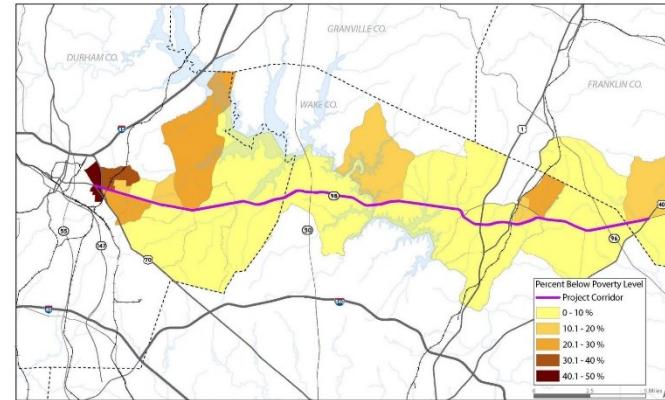
- Cycling
- Boating
- Camping
- Parks & Trails
- Golf

Demographics

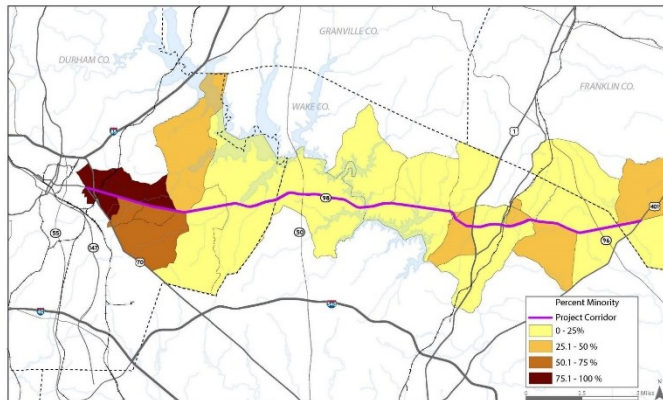
Percent Zero Car Households



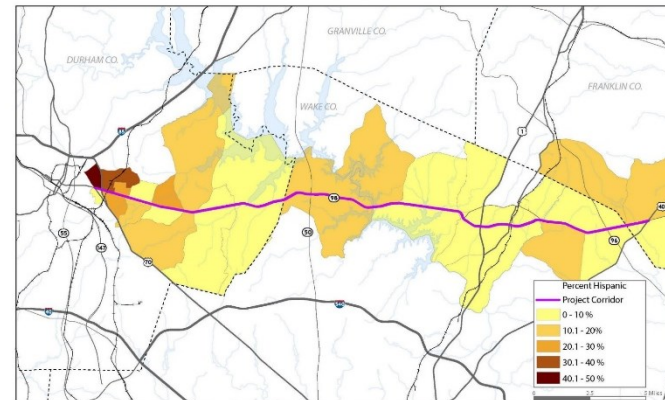
Percent Below Poverty Level



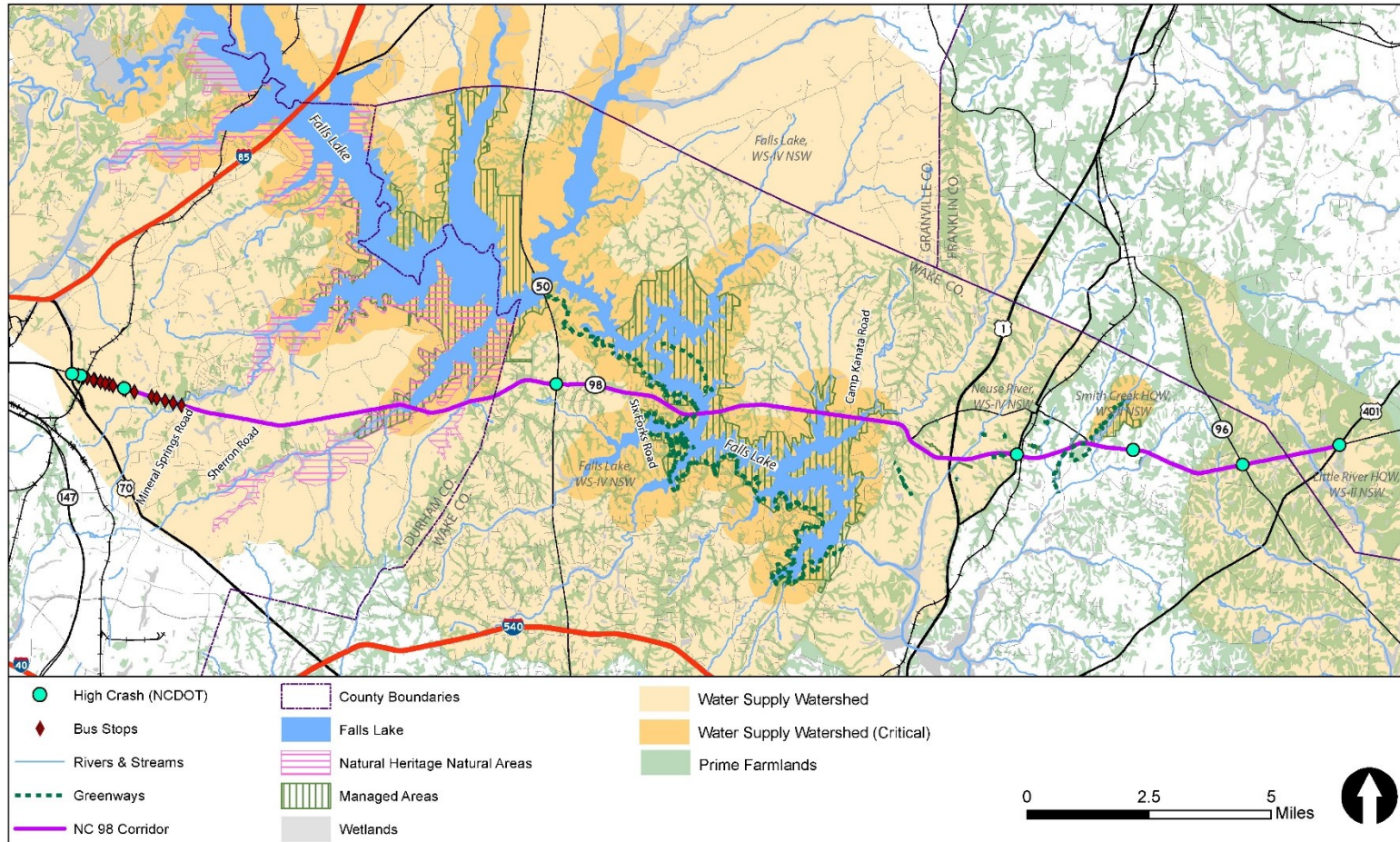
Percent Minority



Percent Hispanic



Environmental Constraints






CRASH DATA



CRASH DATA



LEGEND

-  STUDY INTERSECTION
-  HIGH CRASH INTERSECTION
-  FATALITY LOCATION

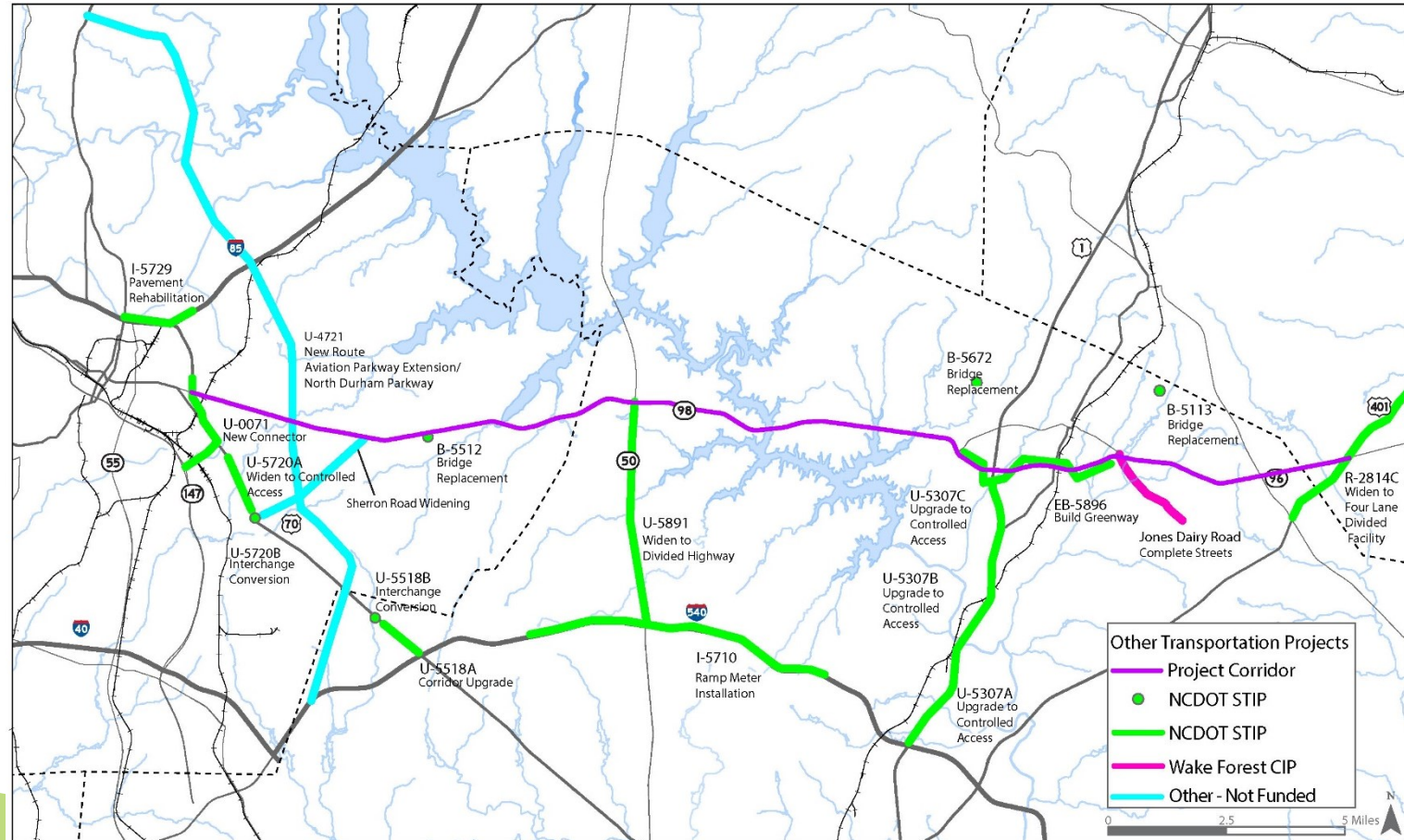
CRASH DATA



CRASH DATA



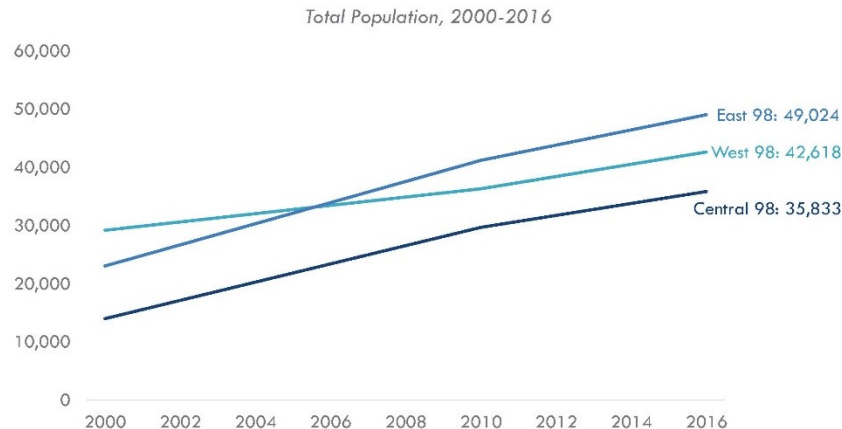
AREA PROJECTS ALONG NC 98



ECONOMIC ANALYSIS

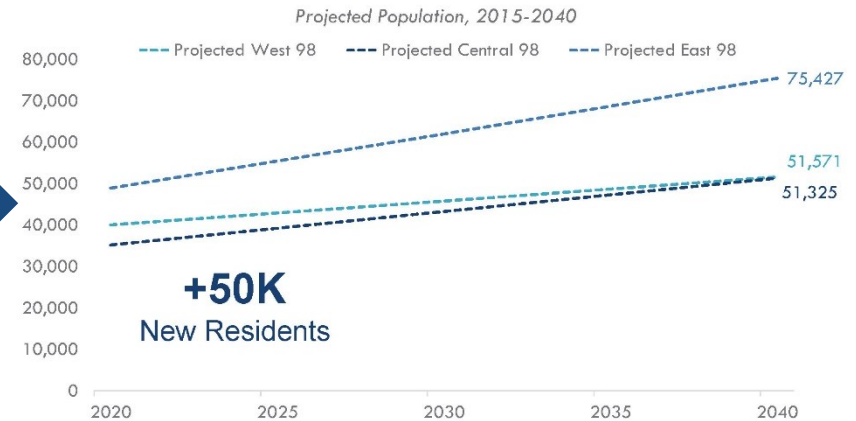
POPULATION GROWTH

The NC 98 Corridor has seen significant growth since 2000, most notably in the Central and East sections.



Source: ESRI Business Analyst

Based on CAMPO projections, the corridor is expected to add over 50,000 people by 2040.

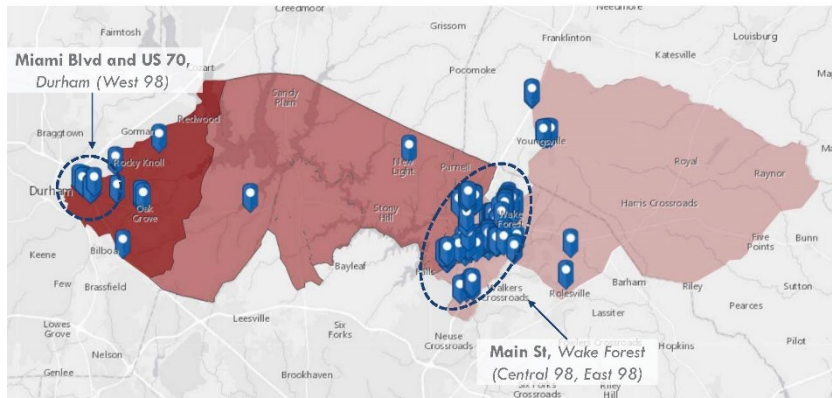


Source: ESRI Business Analyst, CAMPO, DCHC

ECONOMIC ANALYSIS

COMMERCIAL GROWTH

Existing commercial office buildings have clustered along Miami Boulevard in Durham and Main Street in Wake Forest.



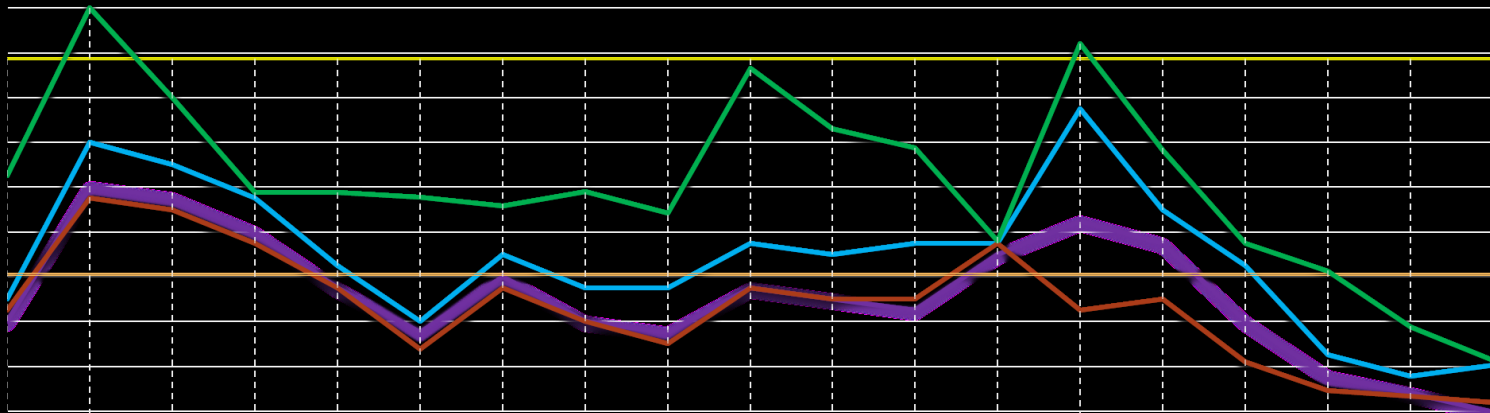
Sources: CoStar, ESRI

The Study Area could add an additional 1 million SF in commercial office space by 2040, primarily owing to growth in East 98.



Sources: CoStar, CAMPO

TRAFFIC ANALYSIS



Annual Average Daily Traffic (AADT) Volumes Along NC 98 Corridor at Major Intersections by Years

* Road Diet capacity is 20,000



CORRIDOR
STUDY

NC CAMPO • DCHC MPO • NCDOT

PUBLIC PARTICIPATION



5 pop-up events



558 crowdsourcing comments



6 public meetings



168 comment forms/online surveys



221 attendees



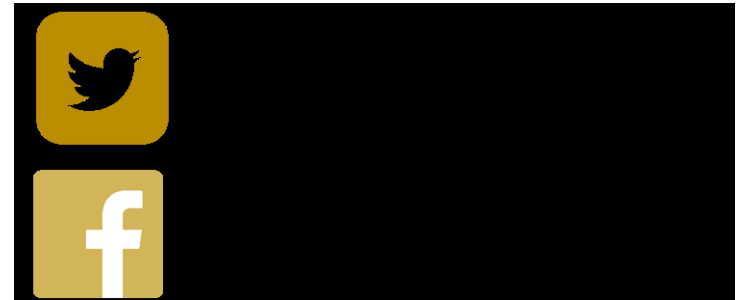
121 online comment submissions/web sign-ups



Corridor Outreach

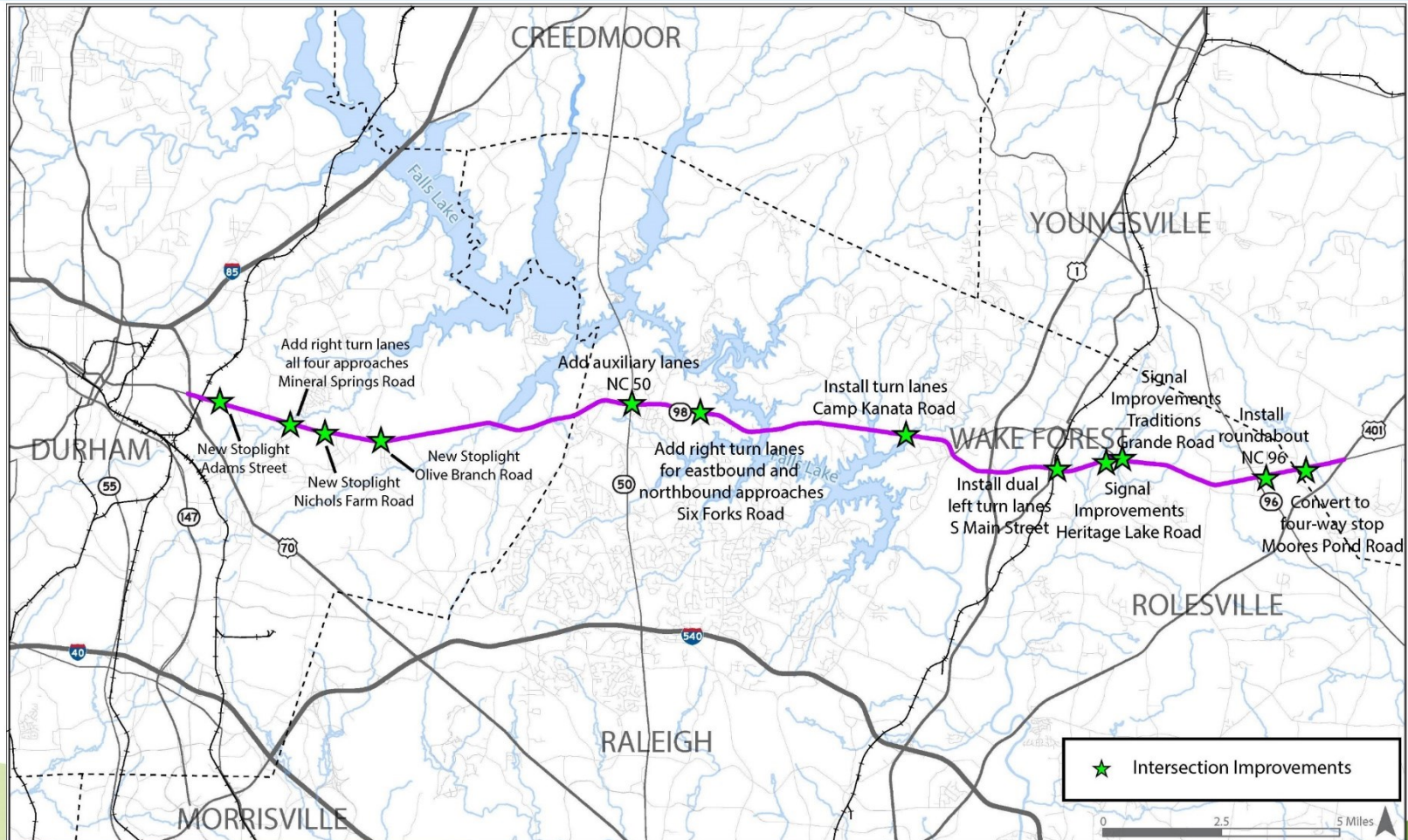
(Durham Southern High School Football Game, Businesses and Churches along the corridor)

PUBLIC PARTICIPATION

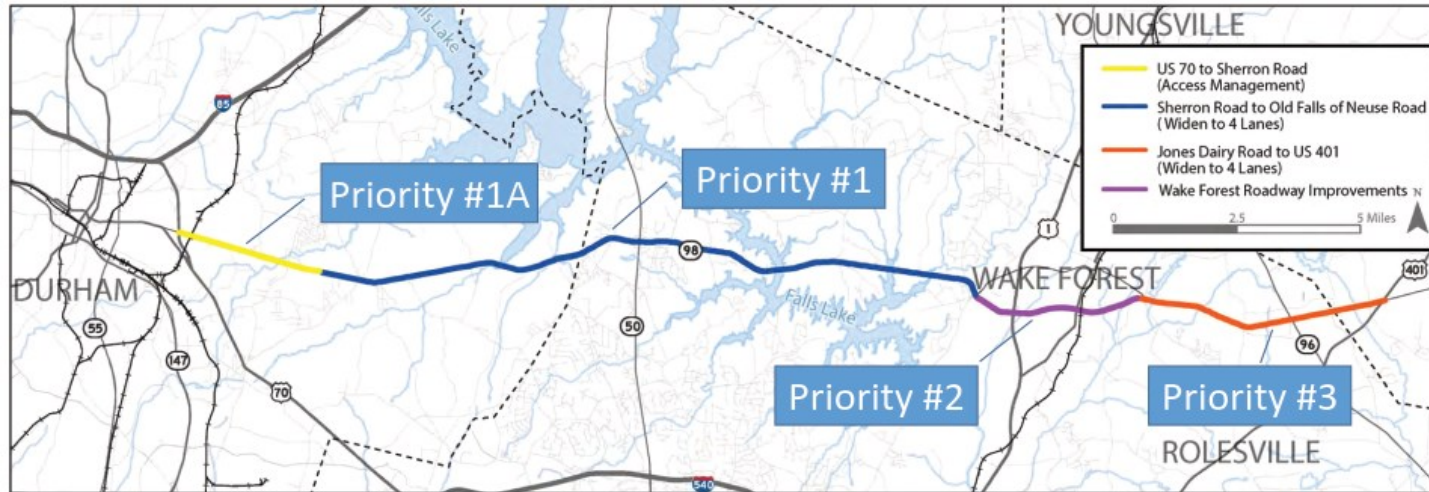


NC98Corridor.com

SHORT-TERM IMPROVEMENTS



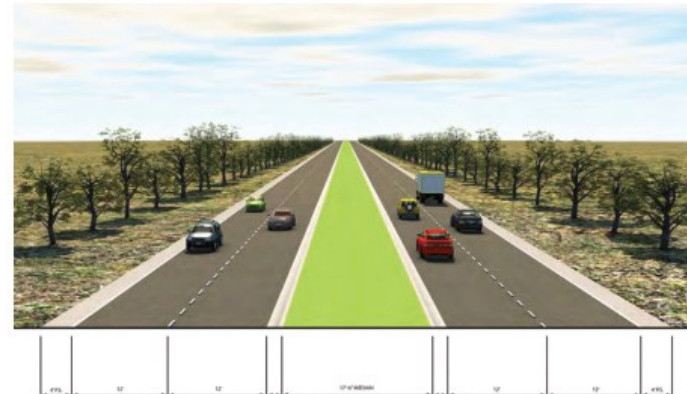
LONG-TERM IMPROVEMENTS



Junction to Sherron – Access Management

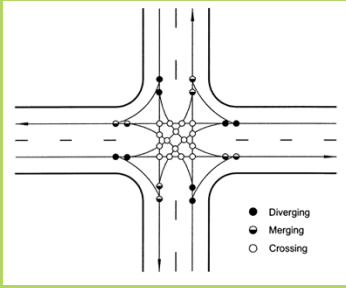
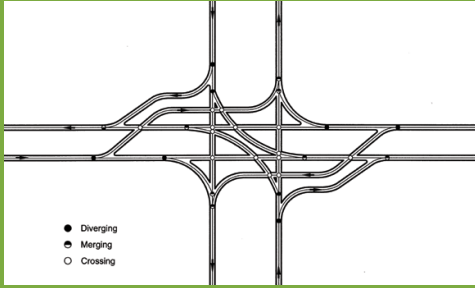
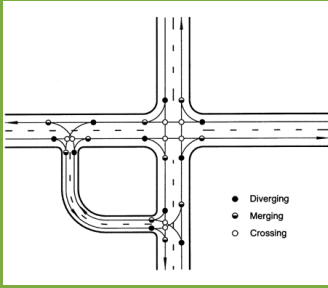
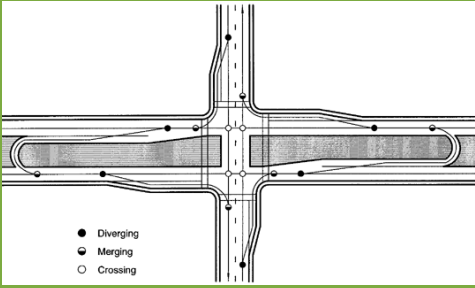


4 Lane Widening – Potential Cross Section



INTERSECTION TREATMENTS

INTERSECTION CONFLICT POINTS

				
	Traditional Intersection	Continuous Flow Intersection	Quadrant Intersection	Median U-turn
Total Conflict Points	32	30	28	16

Indirect Left-Turn Treatments:

- Remove the left-turning vehicles from the flow of traffic without causing them to stop in a through-traffic lane (as a traditional intersection may)
- Improve safety by reducing the number of conflict points as shown above
- Reduce the number of signal phases to provide more green time for traffic
- Increase capacity

PEDESTRIAN & BICYCLE

POTENTIAL BICYCLE AND PEDESTRIAN FACILITIES

Facility Type



Description

- A shared-use path is defined as a trail permitting more than one type of user. Paths serve as part of a transportation circulation system and support multiple recreation opportunities, such as walking, bicycling, and inline skating. A shared-use path is physically separated from motor vehicular traffic with an open space or barrier.

Facility Type



Description

- A median refuge or island provides in-street refuge along the route of a pedestrian crossing.
- The refuge width is ideally 7' to fit bicycles.
- The approach to vehicle travel lanes must be ADA-compliant.



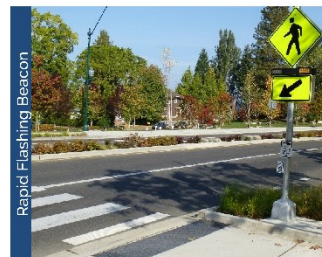
- Bike lanes designate an exclusive space for bicyclists through the use of pavement markings, striping, and signage. The bike lane is located adjacent to motor vehicle travel lanes and flows in the same direction as motor vehicle traffic. Bike lanes are typically on the right side of the street. Benefits include providing obvious space on the road for cyclists and sending a message to other road users to expect cyclists.



- High visibility striping should be used at crossing areas.
- A 4' minimum width should be used for ADA-accessible curb ramps.
- A push button with audible status should be present at the crossing.
- A pedestrian countdown signal should be present.



- A buffered bicycle lane is a bike lane with additional striping or hatching (buffer) adjacent to it.
- The buffer may separate the bicycle lane from motor vehicle travel, parking, or both.
- The buffer width is typically 2'-3'.



- Rapid flashing beacons are used to increase visibility of pedestrians as they cross the roadway at uncontrolled crosswalks.
- This beacon is pedestrian-activated (i.e., the signal will only flash if a pedestrian has pushed a button, indicating that they need to cross the street).

PEDESTRIAN CROSSING

PEDESTRIAN CROSSING

SHEET 35

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

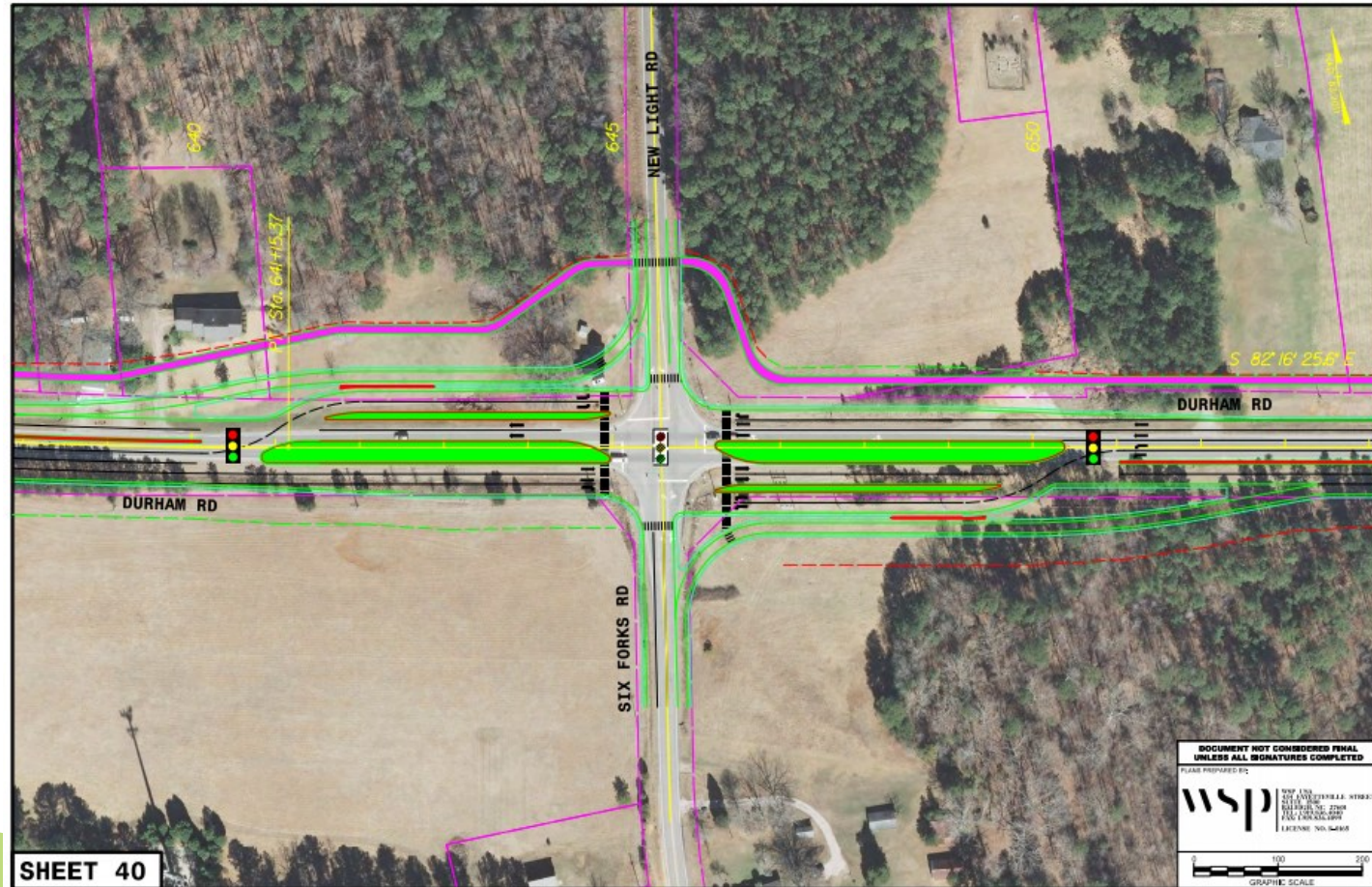
PLANS PREPARED BY:

wsp

WSP LLC
100 ANNEVILLE HYDRO
RALEIGH, NC 27601
TEL: 919.286.7700
FAX: 919.286.7700
LICENSE NO. 54005

GRAPHIC SCALE

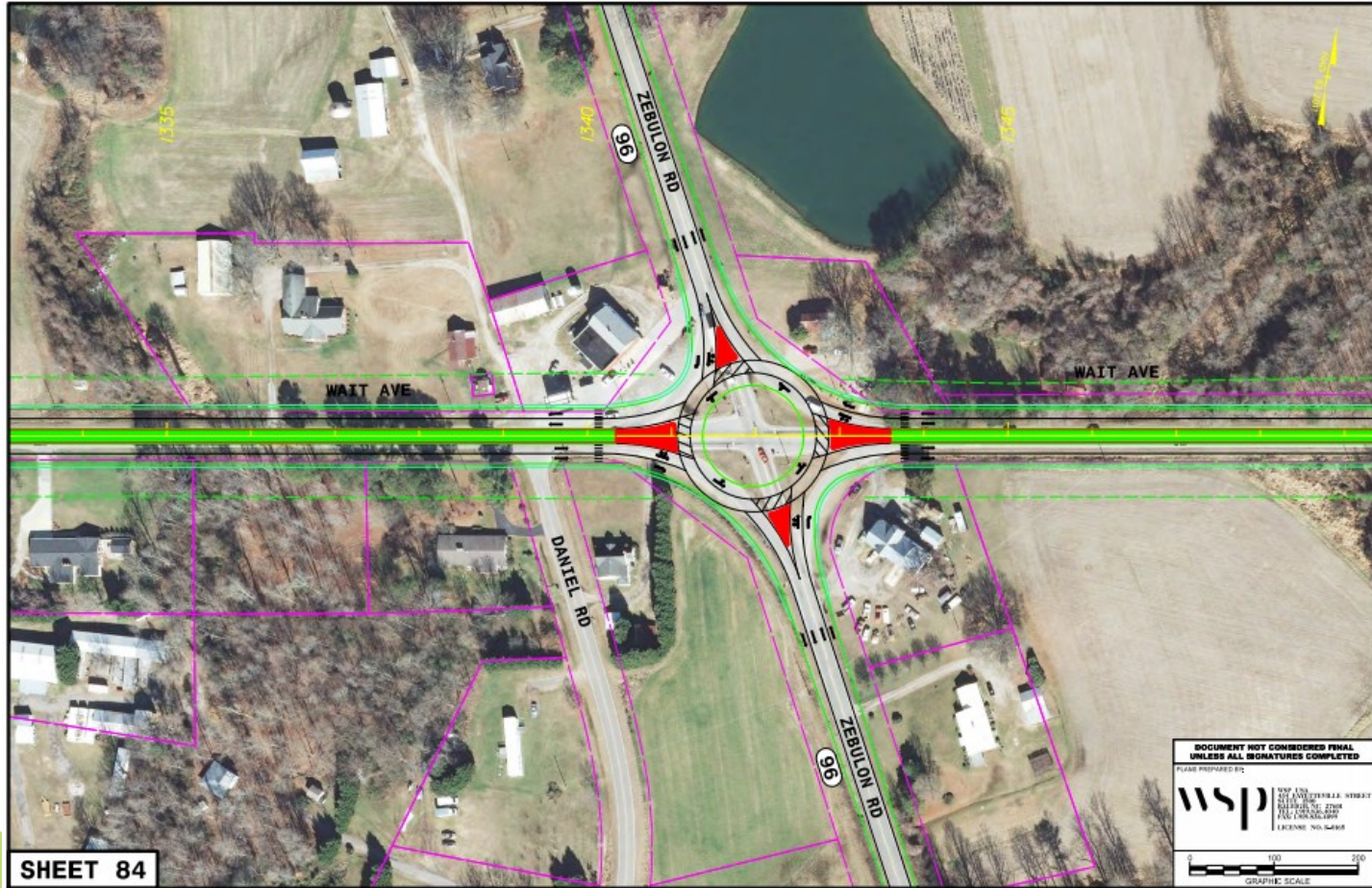
Conceptual Designs



**CORRIDOR
STUDY**

NC CAMPO • DCHC MPO • NCDOT

Conceptual Designs



POTENTIAL FUNDING SOURCES

NCDOT Transportation Improvement Program	Other NCDOT Funds	MPO Local Project Funds	Municipal Funds	Grants	Developer
<ul style="list-style-type: none"> • Sherron Road to Old Falls of Neuse • Widening Old Falls of Neuse Road to Jones Dairy Road Intersection Upgrades • Jones Dairy Road to US 401 • Widening Sherron Road • Widening NC 98 to US 70 (needed for road diet) • Northern Durham Parkway NC 98 to US 70 (needed for road diet) 	<ul style="list-style-type: none"> • Left turn lanes at Camp Kanata • Left turn lanes at Six Forks Road • Turn lanes at Mineral Springs Road • Traffic signal at Adams Street • Auxiliary Lanes on NC 98 at NC 50 	<ul style="list-style-type: none"> • Sidewalk improvements from US 70 to Sherron Road • Sherron Road to Neal Middle School Multi-use Path Intersection improvements at S. Main Street • Intersection improvements at Jones Dairy Road and Traditions Grande • Intersection improvements at Old Falls of Neuse Road • Turn lanes at Six Forks Road 	<ul style="list-style-type: none"> • US 70 to Sherron Road road diet option • Signal improvements at Heritage Lake Road and Traditions Grande • Pedestrian bridge over NC 98 • Oak Grove Elementary School • Sidewalk Gap • Transit stop improvements 	<ul style="list-style-type: none"> • Pedestrian bridge over NC 98 • Sidewalk improvements from US 70 to Sherron Road • Transit stop improvements 	<ul style="list-style-type: none"> • Quadrant Roadway at Sherron Road • Turn lanes at Camp Kanata Road • Intersection improvements from Old Falls of Neuse Road to Jones Dairy Road • Friendship Chapel Road extension

Questions

Will.Letchworth@WSP.com

www.NC98corridor.com

#NC98study

8.1 NC 98 Corridor Study

Requested Action:

Endorsement of NC 98 Corridor Study recommendations for consideration in development of Metropolitan Transportation Plan (MTP).

8.2 Rolesville Main Street Study



CAMPO TCC

SEPTEMBER 6, 2018



AGENDA



- Public Process
- Final Recommendations
- Phasing & Implementation



What We Heard

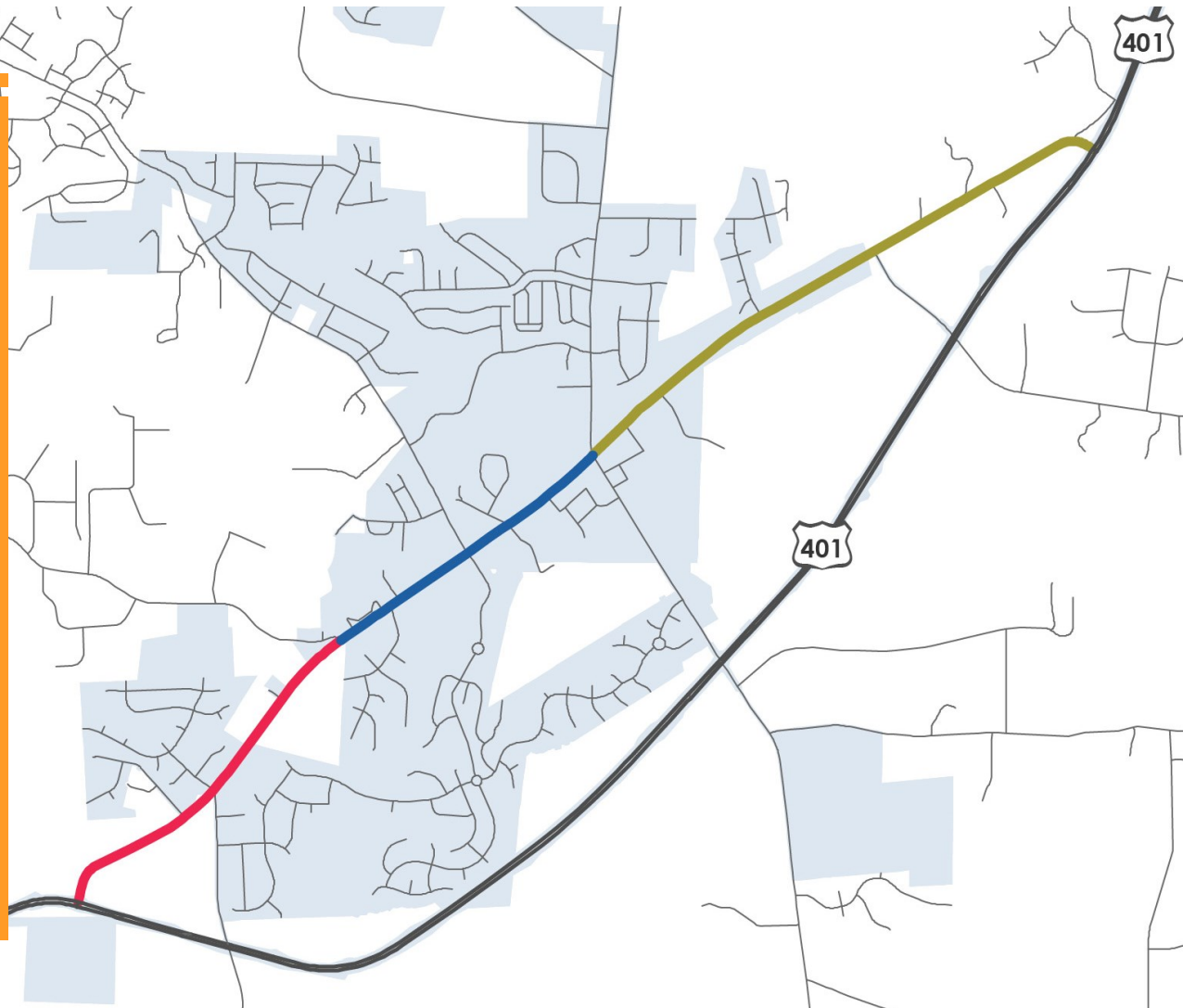
GUIDING PRINCIPLES

- **Principle #1:** Modal Choices must be a priority
- **Principle #2:** The Safety of All Users is Critical
- **Principle #3:** Focus on Best Design Practices for Access Management & Enhanced Connectivity
- **Principle #4:** The corridor has to Support Surrounding Uses through Attractive Design
- **Principle #5:** Supporting Quality Development/Redevelopment

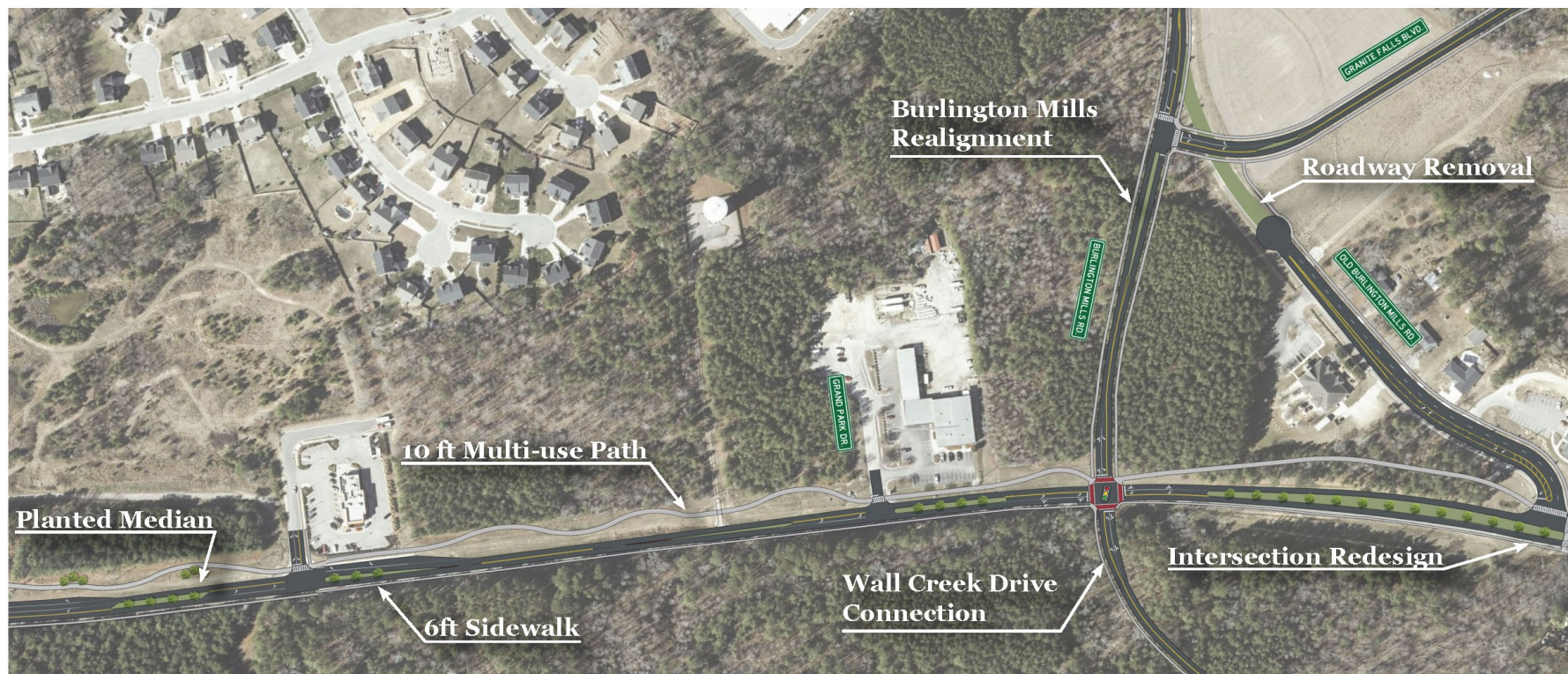


FINAL RECOMMENDATIONS

MAIN STREET VISION

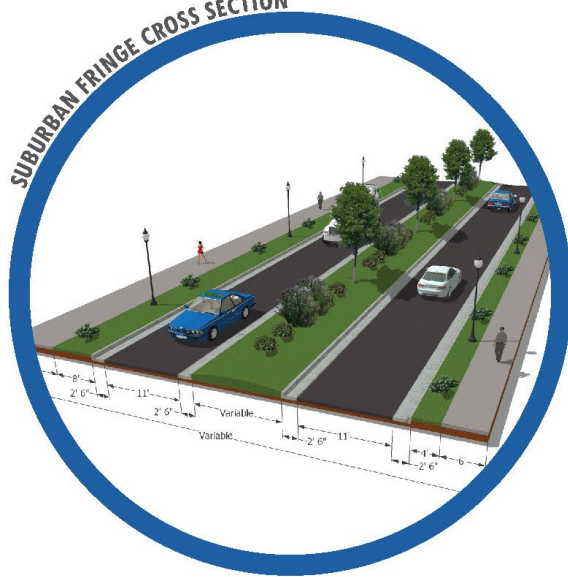


SUBURBAN FRINGE – US 401 TO BURLINGTON MILLS RD

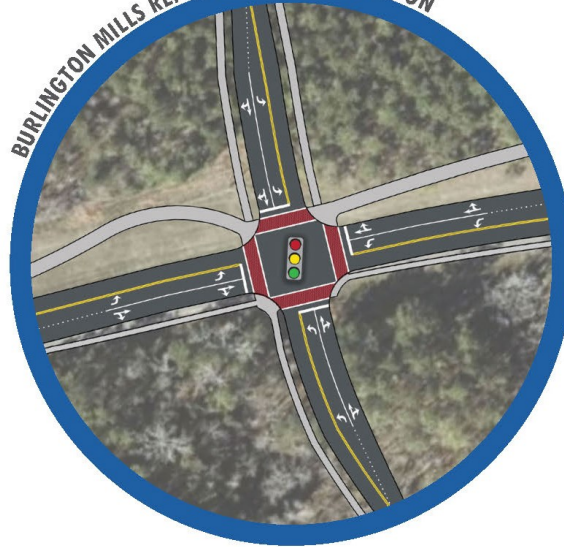


SUBURBAN FRINGE – US 401 TO JONESVILLE RD

SUBURBAN FRINGE CROSS SECTION



BURLINGTON MILLS REALIGNMENT INTERSECTION



BURLINGTON MILLS INTERSECTION REDESIGN









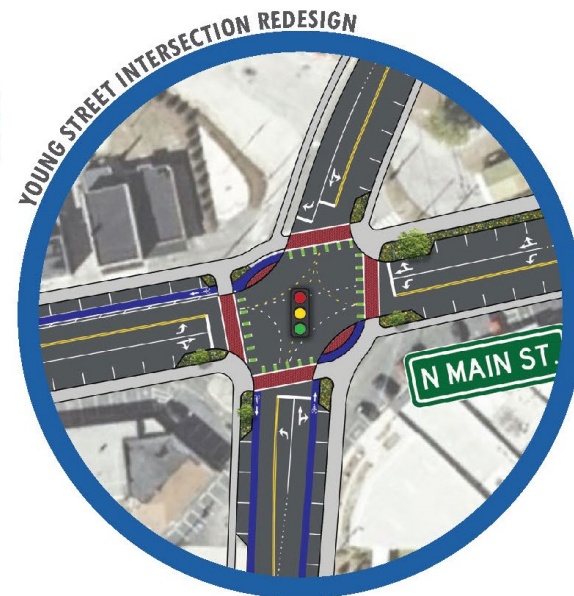
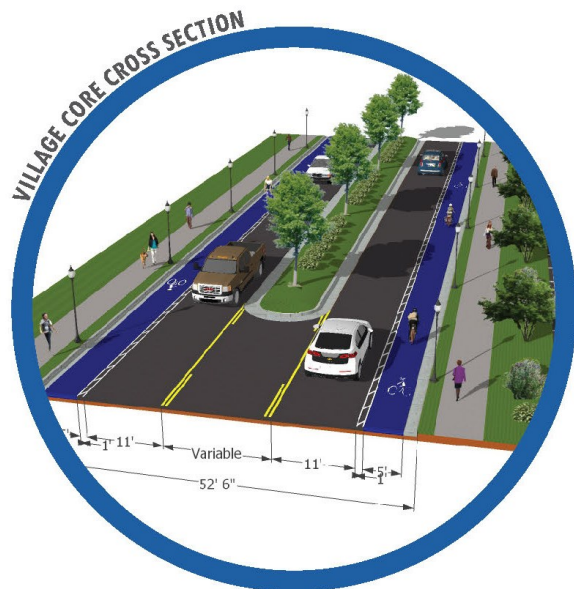




VILLAGE CORE – BURLINGTON MILLS ROAD TO YOUNG STREET



VILLAGE CORE – BURLINGTON MILLS ROAD TO YOUNG STREET





RURAL TRANSITION – YOUNG STREET TO US 401 (N)



RURAL TRANSITION – WATERSTONE LANE TO US 401

PULLEY TOWN ROAD PEDESTRIAN CROSSING



PULLEY TOWN ROAD INTERSECTION REDESIGN



MAIN AND US 401 PEDESTRIAN UNDERPASS CONNECTION









FINAL RECOMMENDATIONS

CATALYST SITES



MARKET ANALYSIS

North – Young St. Intersection

Theme: Downtown

- Celebrate the heart of Rolesville;
- Small scale shops, boutiques and dining; connected to housing, civic spaces, parks and greenways
- Streetscape improvements.

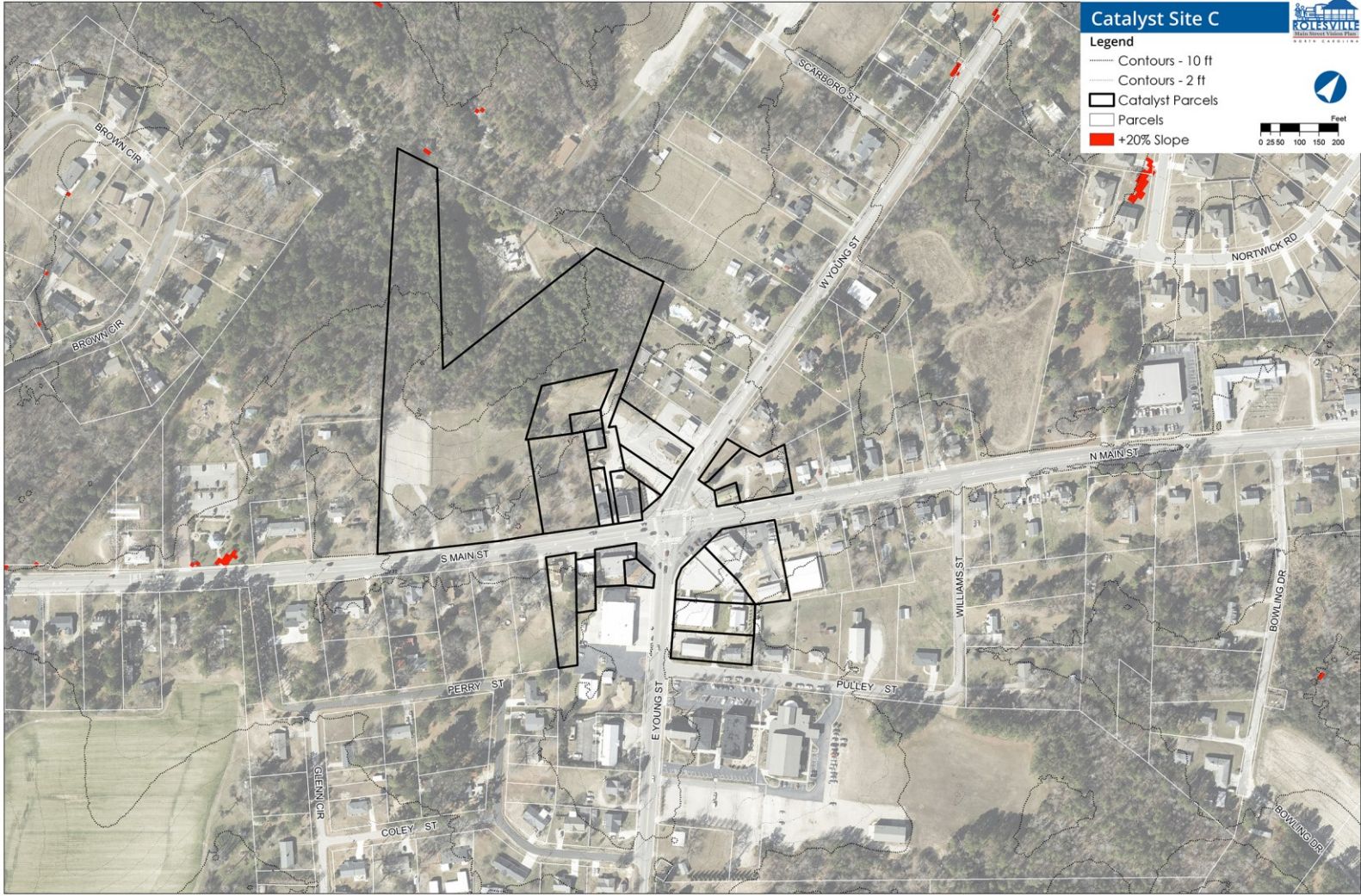


Central – Burlington Mills Rd.

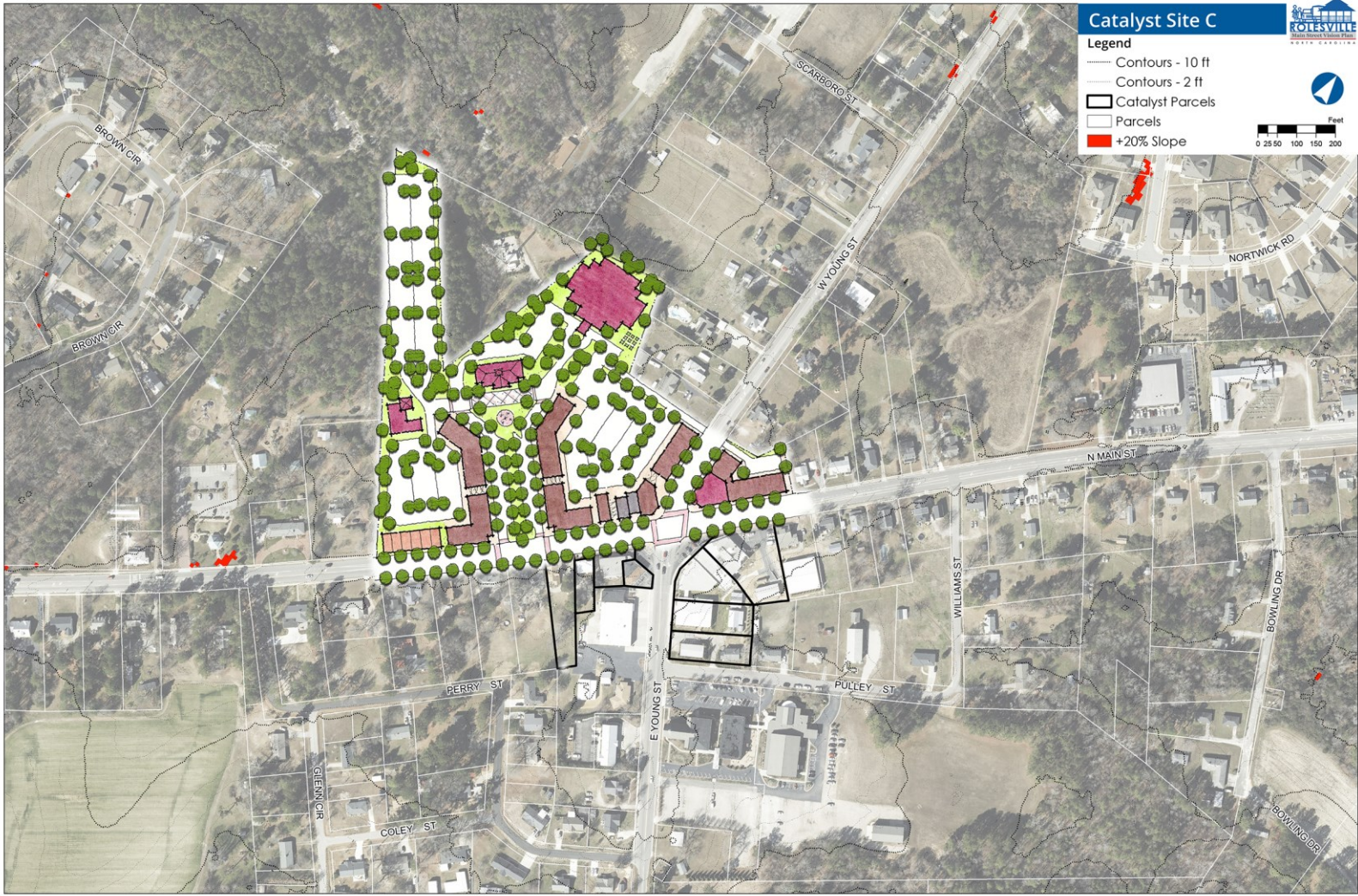
Theme: Residential Village

- Expanded housing options with higher density to support retail;
- Townhomes, apartments and senior housing;

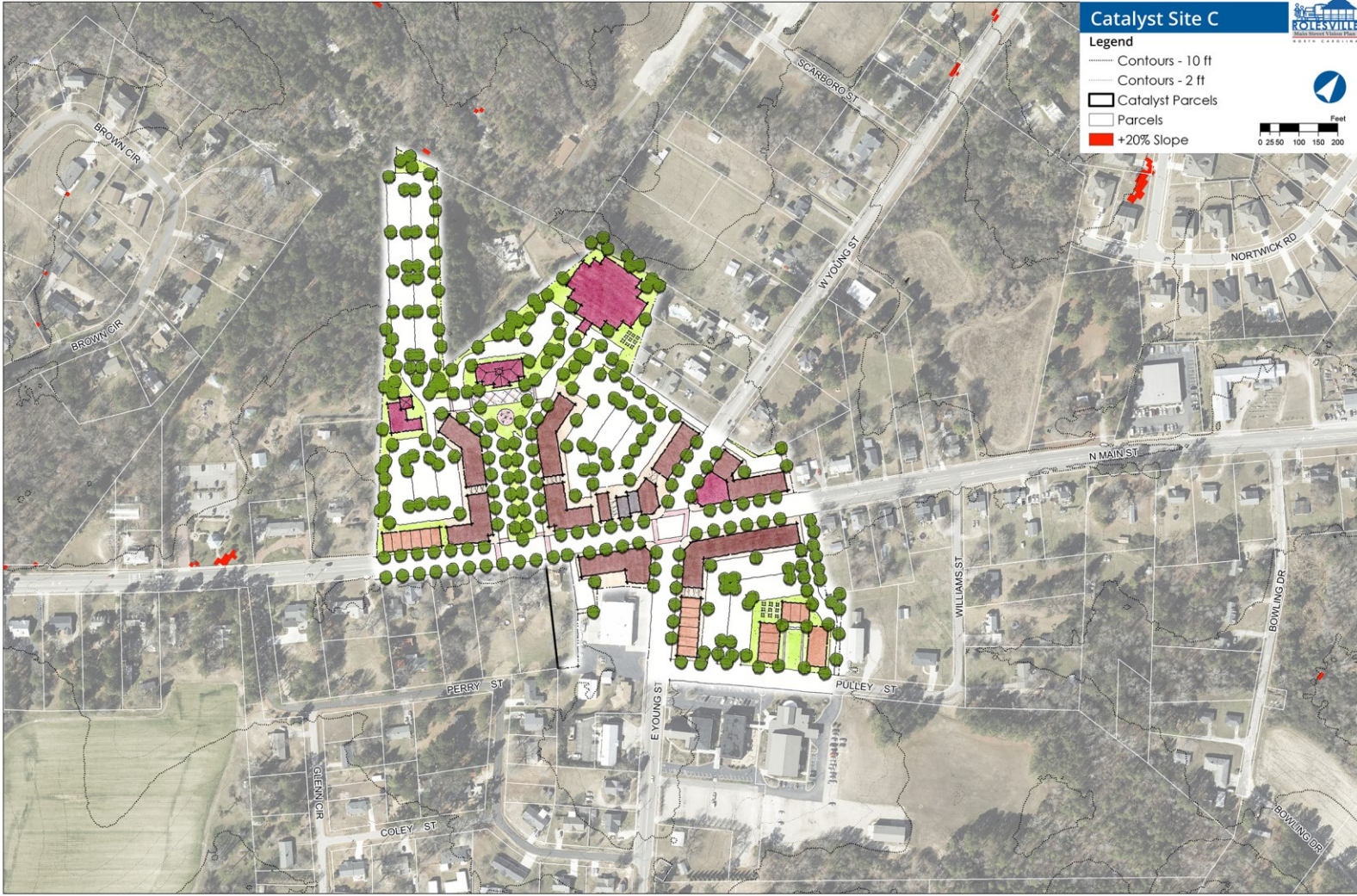
EXISTING CONDITIONS | DOWNTOWN



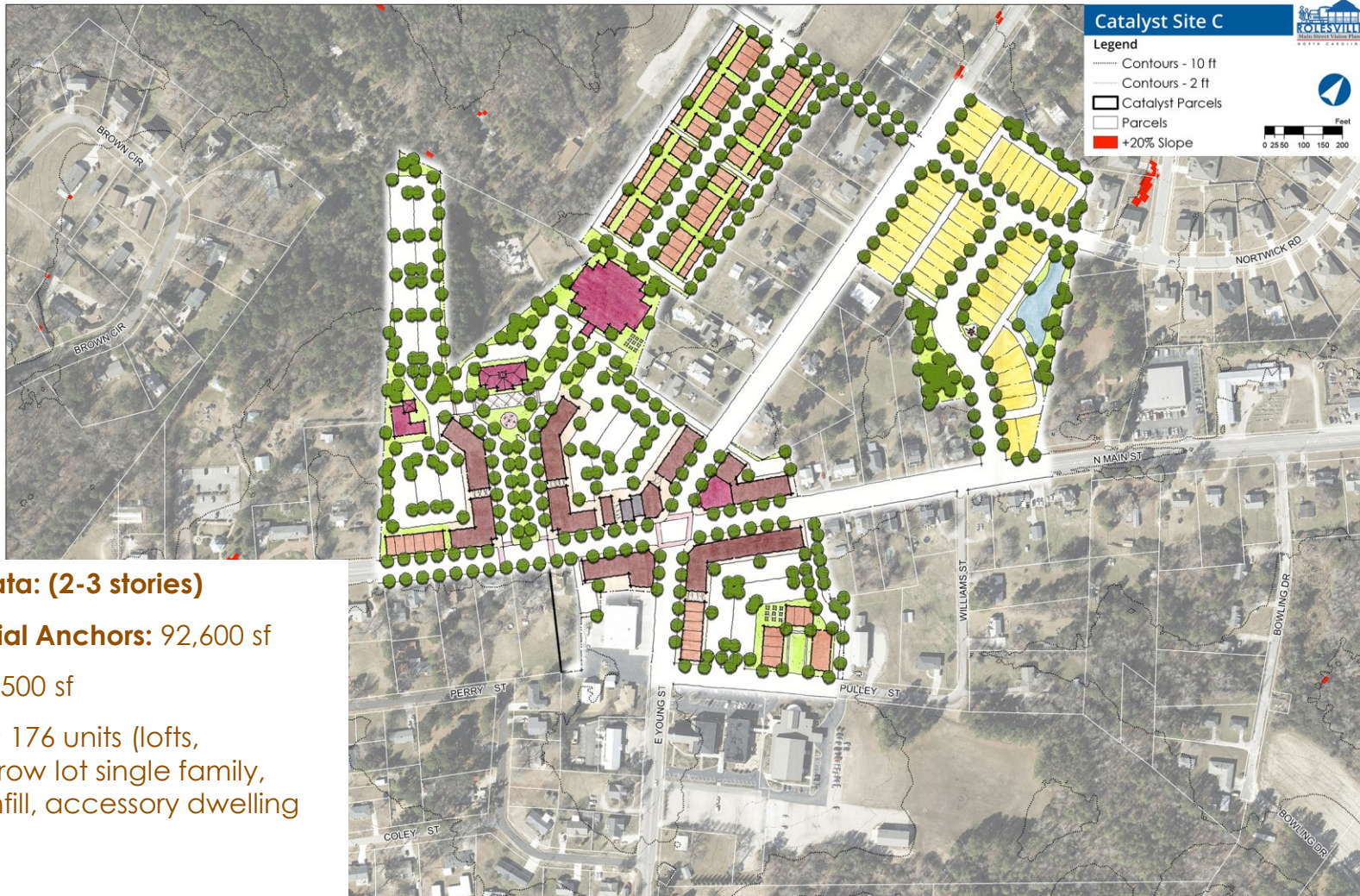
PHASE I | DOWNTOWN



PHASE 2 | DOWNTOWN



DOWNTOWN OPTION A



Development Data: (2-3 stories)

Civic/Commercial Anchors: 92,600 sf

Retail/Office: 94,500 sf

Residential Units: 176 units (lofts, townhomes, narrow lot single family, neighborhood infill, accessory dwelling units)

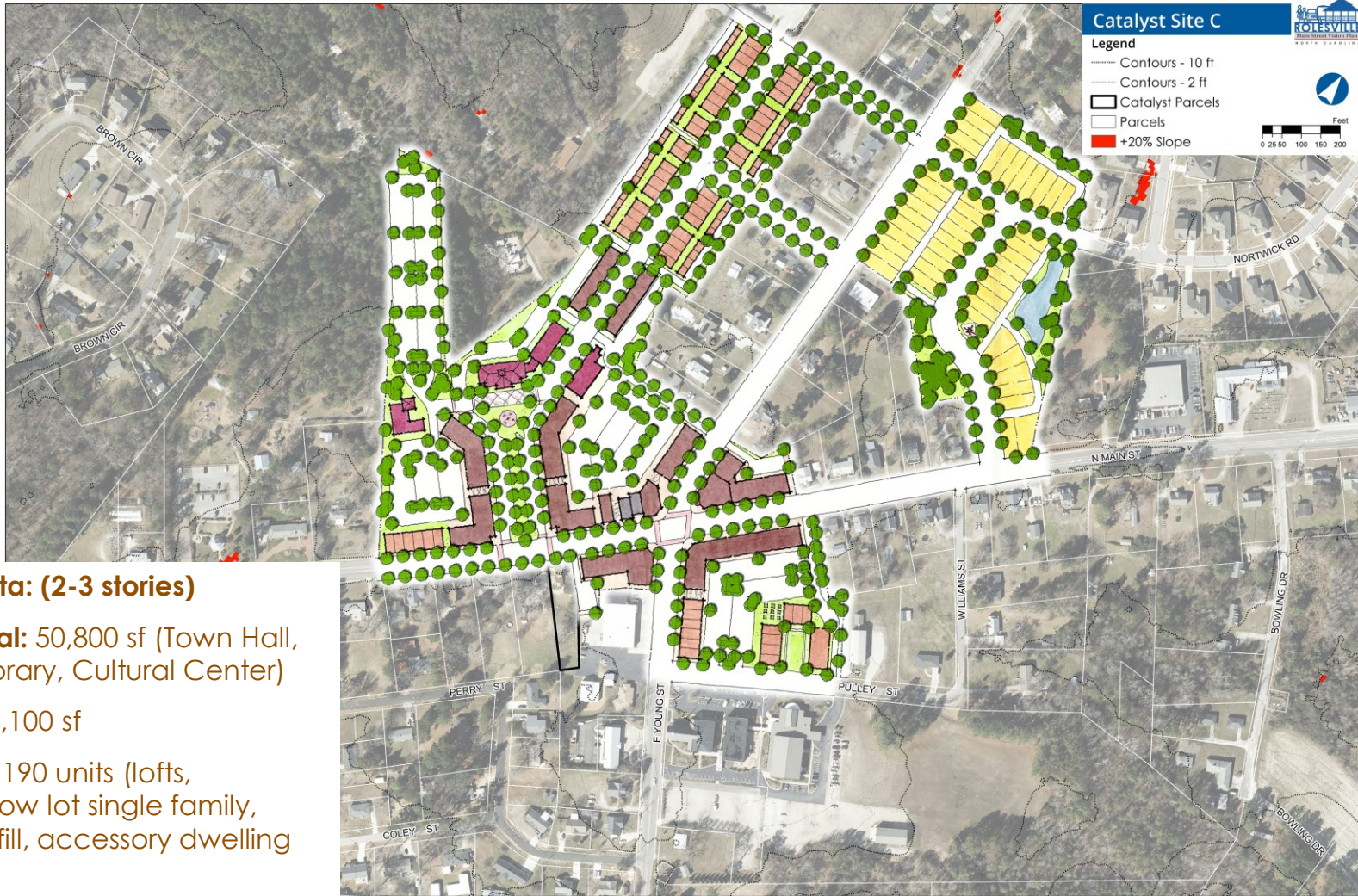
DOWNTOWN OPTION B

Development Data: (2-3 stories)

Civic/Commercial: 50,800 sf (Town Hall, Police Station, Library, Cultural Center)

Retail/Office: 114,100 sf

Residential Units: 190 units (lofts, townhomes, narrow lot single family, neighborhood infill, accessory dwelling units)





DOWN

Development Data: (2-3 stories)

Civic/Commercial: 50,800 sf (Town Hall, Police Station, Library, Cultural Center)

Retail/Office: 114,100 sf

Residential Units: 190 units (lofts, townhomes, narrow lot single family, neighborhood infill, accessory dwelling units)



PRECEDENT IMAGERY



EXISTING CONDITIONS









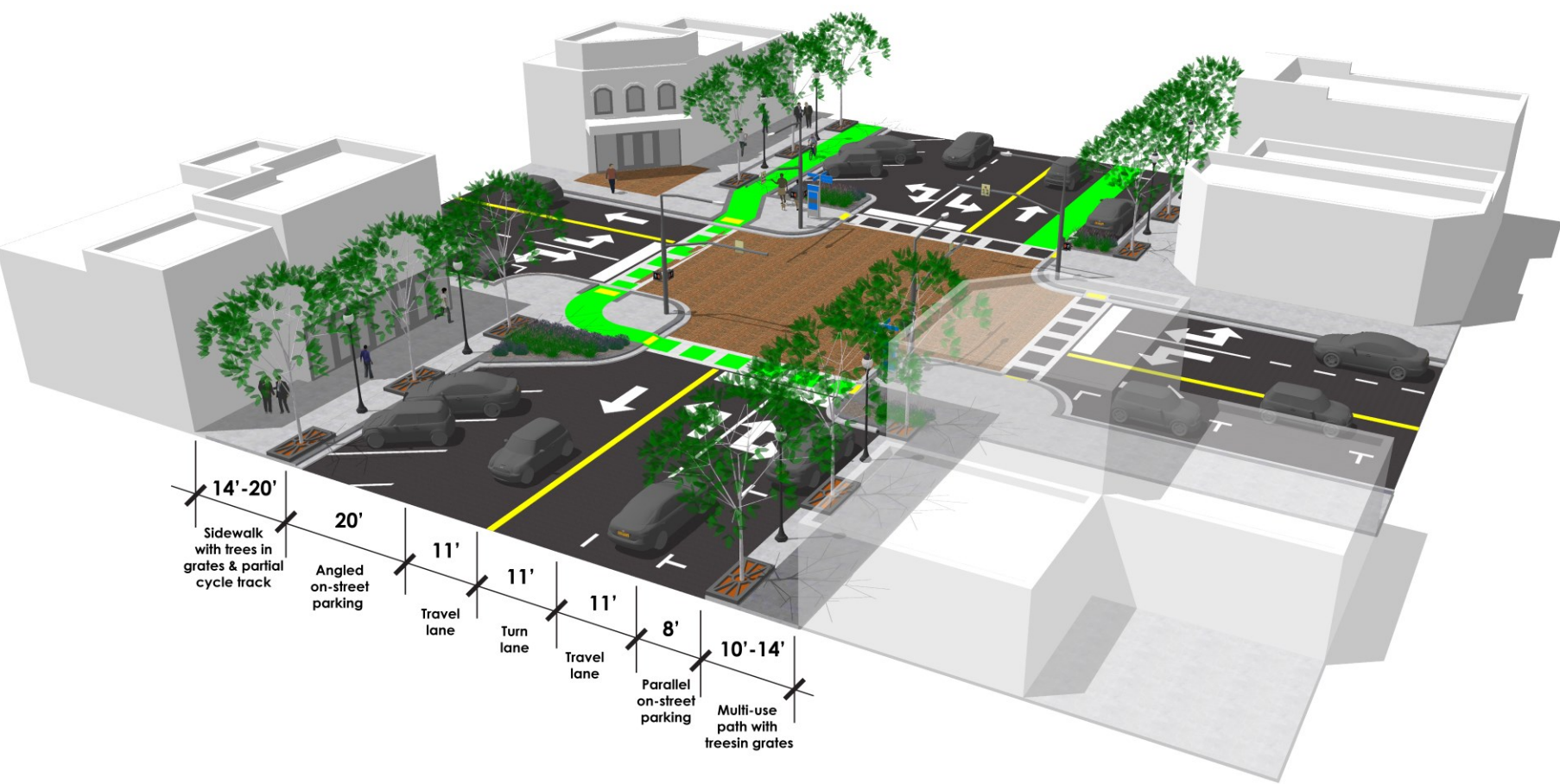




EXISTING CONDITIONS



PROPOSED IMPROVEMENTS



14'-20'

Sidewalk
with trees in
grates & partial
cycle track

20'

Angled
on-street
parking

11'

Travel
lane

11'

Turn
lane

11'

Travel
lane

8'

Parallel
on-street
parking

10'-14'

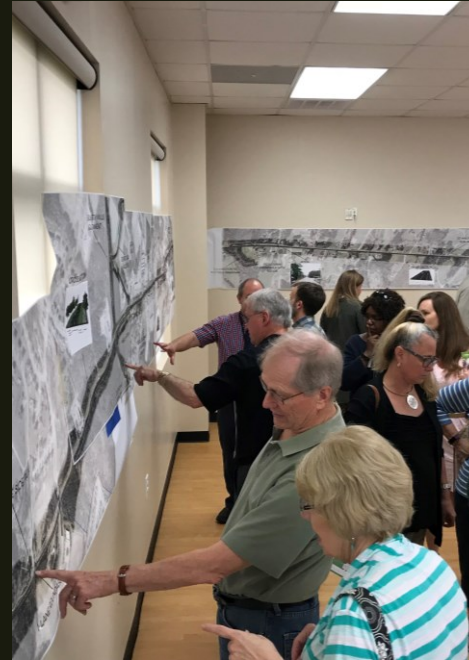
Multi-use
path with
trees in grates



PHASING & IMPLEMENTATION

BIG MOVES





WHAT WE HEARD – OPEN HOUSE

Main Street Corridor Sections

Which corridor section would you like to see improved the most?



Main Street Intersections

Which intersection would you like to see improved the most?

○ \$815k



○ \$3.2M



○ \$90k



○ \$660k



ACTION PLAN MATRIX

Corridor Projects	Construction Costs	Funding Source	Time Frame
Suburban Fringe: South Bypass to Burlington Mills	\$3,100,000	State & Town	6-10 years
Village Core: Burlington Mills to Young Street	\$1,900,000	State, Town, CAMPO & Grant	1-5 years
Rural Transition: Young Street to North Bypass	\$3,600,000	State & Town	10+ years

Intersection Projects	Construction Costs	Funding Source	Time Frame
Lonnie Drive Roundabout	\$815,000	State, Town, Private, CAMPO & Grant	1-5 years
Burlington Mills Road Realignment	\$3,200,000	State & Private	6-10 years
Rogers and Main Street Intersection	\$90,000	Town, CAMPO & Grant	1-5 years
Young and Main Street Intersection	\$660,000	State, Town, Private, CAMPO & Grant	1-5 years

ESTIMATED TOTAL COSTS FOR IMPROVEMENTS \$13,365,000

Let's keep pushing
towards
Implementation!



8.2 Rolesville Main Street Study - Final Report

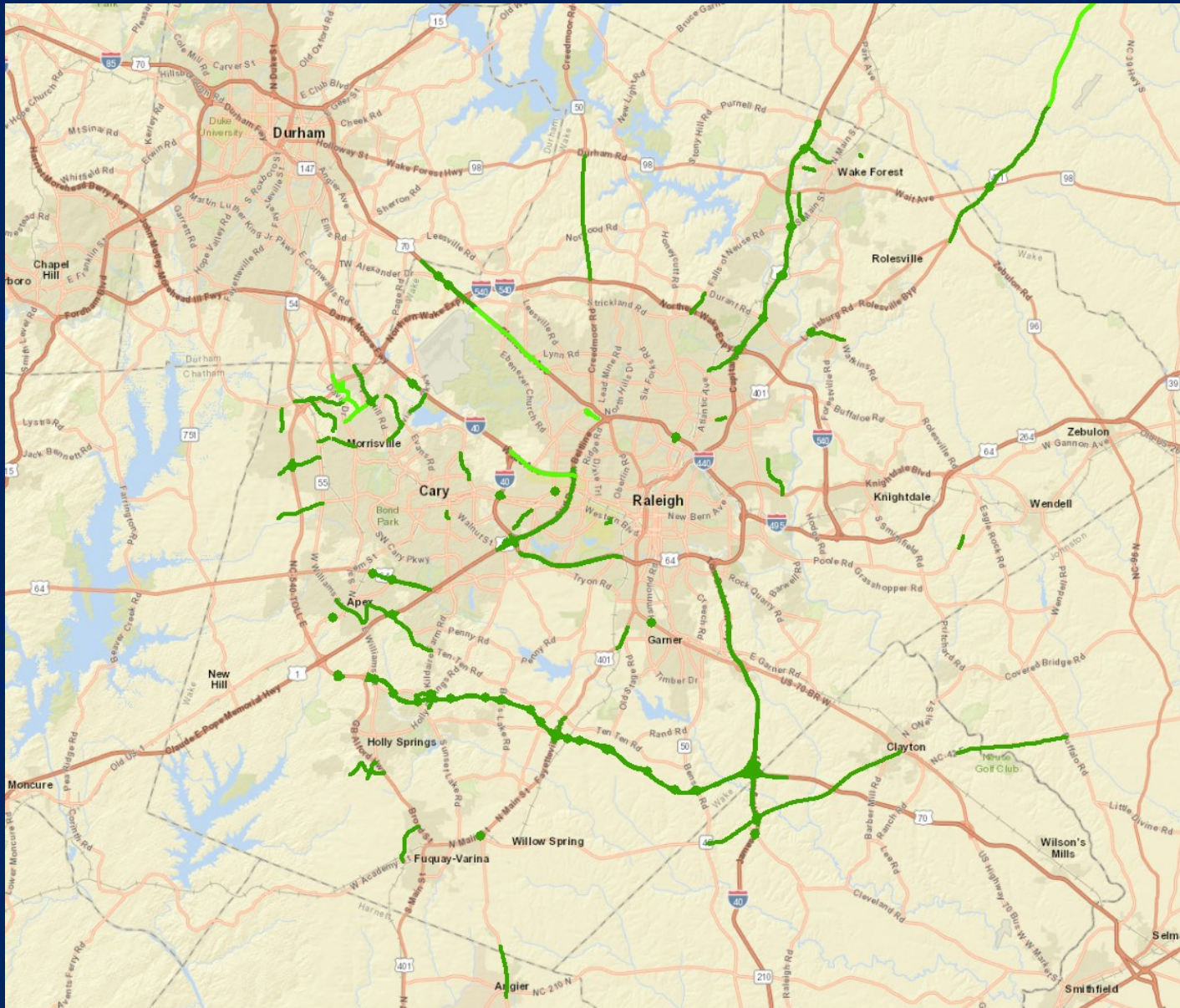
Requested Action:

Endorsement of Rolesville Main Street Study recommendations for consideration in development of Metropolitan Transportation Plan (MTP).

8.3 Prioritization (SPOT) 5.0 – Division Needs Local Input Point Assignment

- NCDOT has released the DRAFT Regional Impact projects
- CAMPO will present a recommendation for the Division Needs point assignment based on the adopted methodology
- TIP/SPOT Subcommittee Meeting: Sept. ~~13th~~ 27th 10:00 AM
- Public Review & Comment Period will run through October 16, 2018 with Executive Board public hearing on October 17, 2018

8.3 Prioritization (SPOT) 5.0 Committed Projects



8.3 Prioritization (SPOT) 5.0

DRAFT Statewide Mobility

YEARS 1-5
2020 - 2024
\$58,300,000

- US 1 (US 64 to NC 55) Widen to 6 lanes

YEARS 6-10
2025 – 2029
\$561,287,000

- NC 540 (I-40 to I-87/US 64/264) **TOLL**
- I-87 (Wendell Blvd to 64/264) Widen to 6 lanes
- I-87 (Smithfield Rd) DDI
- I-40 (NC 54 to Wade) Managed Motorways
- I-40, I-440, I-87, US 1 Managed Motorways
- NCRR / Trinity Rd Grade Separation
- NCRR – Beryl Rd extension & at-grade closure
- CSX / Millbrook Rd Grade Separation
- NCRR / Vandora Springs Grade Separation
- CSX / SW Maynard Grade Separation

8.3 Prioritization (SPOT) 5.0

DRAFT Regional Impact

YRS 1-5

2020 -2024

\$92,405,000

- Clayton Citywide Signal System
- US 1 (NC 98 to Harris Road)

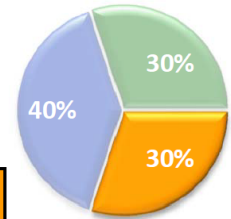
YRS 6-10

2025 – 2029

\$206,222,000

- US 401 / Ten Ten Rd Interchange
- US 64 / NC 751 Interchange
- US 401 6 lane Superstreet (Simpkins to Mechanical)
- Apex Citywide Signal System
- Raleigh Citywide Signal System
- US 70 Bus Superstreet (Greenfield Pkwy to NC 42)
- Shotwell Road Rail Grade Separation

Prioritization 5.0 – Division Needs Funding Availability (2020-2029)



Division	Total Allocation	Amount Programmed	Amount Available for P5.0 Projects*
Division 1	\$502M	\$344M	\$158M
Division 2	\$502M	\$363M	\$139M
Division 3	\$502M	\$359M	\$143M
Division 4	\$502M	\$285M	\$217M
Division 5	\$502M	\$416M	\$86M
Division 6	\$502M	\$295M	\$207M
Division 7	\$502M	\$369M	\$133M
Division 8	\$502M	\$250M	\$252M
Division 9	\$502M	\$284M	\$218M
Division 10	\$502M	\$346M	\$156M
Division 11	\$502M	\$232M	\$270M
Division 12	\$502M	\$416M	\$86M
Division 13	\$502M	\$448M	\$54M
Division 14	\$502M	\$381M	\$121M
Total	\$7,028M	\$4,788M	\$2,240M

*As of August 23, 2018 – does not account for additional Build NC Bond revenues

8.3 Prioritization (SPOT) 5.0 – Division Needs Local Input Point Assignment

Requested Action:

Receive as information.

10. Informational Items: Budget

10.1 Operating Budget - FY 18

10.2 Member Shares - FY 18

Requested Action:

Receive as information.

11.1 Informational Item: Project Updates

- Hot Spot Program
- Wake Transit Planning Studies & Tasks
- Regional Freight Plan Study
- (SRTS) John Rex Endowment Grant Award Update
- NC 98 Corridor Study
- Rolesville Main Street Study
- Southwest Area Study – Update
- Triangle Regional ITS Update
- Triangle Tolling Study Update

Requested Action:
Receive as information.

11.2 Informational Item: LAPP Available Funding Report

Requested Action:

Receive as information.

12. Informational Item: Staff Reports

- MPO Executive Director
- TCC Chair
- NCDOT Transportation Planning Division
- NCDOT Division 4
- NCDOT Division 5
- NCDOT Division 6
- NCDOT Rail Division
- NC Turnpike Authority
- Executive Board Members

Requested Action:
Receive as information.

Upcoming Events

Date	Event
Oct. 4, 2018 10:00 a.m.	TCC One City Plaza 421 Fayetteville Street, Suite 203 Raleigh, NC 27601
Oct. 17, 2018 4:00 p.m.	Executive Board One City Plaza 421 Fayetteville Street, Suite 203 Raleigh, NC 27601
Oct. 19-20, 2018	NC BikeWalk Summit Raleigh Convention Center
Oct. 31, 2018 9:00 a.m.	CAMPO / DCHC Joint Executive Board RTP Headquarters 12 Davis Drive, RTP

ADJOURN