DCHC
Metropolitan Planning Organization
Planning Tomorrow Today
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DCHC MPO Board

Meeting Agenda

Wednesday, November 14, 2018

9:00 AM

Committee Room 2nd Floor

Durham City Hall 101 City Hall Plaza

Durham, NC 27701

1. Roll Call

2. Ethics Reminder

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

3. Adjustments to the Agenda

4. Public Comments

5. Directives to Staff

18-100

Attachments: 2018-10-10 (18-100) MPO Board Directives to Staff.pdf

CONSENT AGENDA

6. October 10, 2018 Board Meeting Minutes

18-196

A copy of the October 10, 2018 Board meeting minutes is enclosed.

Board Action: Approve the minutes of the October 10, 2018 Board meeting.

Attachments: 2018-11-14 (18-196) MPO Board Meeting Minutes 10.10.18_LPA2.pdf

7. October 31, 2018 Joint DCHC MPO-CAMPO Board Meeting Minutes

18-201

A copy of the October 31, 2018 Joint DCHC-CAMPO Board meeting minutes in enclosed.

Board Action: Approve the minutes of the October 31, 2018 Joint DCHC-CAMPO Board meeting.

Attachments: 2018-11-14 (18-201) Joint MPO Meeting Notes 31 October 2018.pdf

8. Resolution to Request Transfer of FHWA Funds to FTA

18-186

Meg Scully, LPA Staff

On behalf of GoDurham, the Lead Planning Agency is requesting the transfer of Federal Highway Administration (FHWA) funds to the Federal Transit Administration (FTA) for use on transit projects. This resolution supports the transfer for the Durham-Chapel Hill-Carrboro urban area.

TC Action: Recommended the Board approve and sign the resolution to transfer funds.

Board Action: Approve and sign the resolution to transfer funds.

Attachments: 2018-11-14 (18-186) Resolution to transfer FHWA funds to FTA.pdf

ACTION ITEMS

9. Discussion of Items from Joint DCHC-CAMPO Board Meeting (15 minutes) 18-198

Aaron Cain, LPA Staff
John Hodges-Copple, TJCOG

A joint meeting of the DCHC and CAMPO boards was held on October 31, 2018. Attached are the presentations that were given at that meeting on the following topics:

- Transportation Priorities and Policy Templates
- Triangle Regional Travel Markets
- Triangle Tolling Study
- Triangle ITS
- SPOT 5 Update

This item is an opportunity for the Board to discuss these items and provide feedback to staff.

Board Action: No action is required for this item, it is for informational and discussion purposes only.

Attachments:
2018-11-14 (18-198) Transportation Priorities and Policy Templates.pdf
2018-11-14 (18-198) Triangle Regional Travel Markets Presentation.pdf
2018-11-14 (18-198) Triangle Tolling Study Presentation.pdf
2018-11-14 (18-198) Triangle ITS Presentation.pdf
2018-11-14 (18-198) SPOT 5 Update from Joint Board Meeting.pdf

10. NC 54 West Corridor Study (20 minutes) 18-179

Aaron Cain, LPA Staff

The NC 54 Corridor Study is an in-depth review of the 20+ mile stretch of NC 54 between Old Fayetteville Road in Carrboro and I-85 in Graham. This roadway currently supports about 6,000 to 15,000 vehicles per day, and is expected to see increases in the future due to residential growth in Alamance County and the major employment centers in the Chapel Hill/Carrboro area. DCHC MPO, along with its local goverment partners and BGMPO and TARPO have undertaken this study to develop opportunities and strategies to improve the roadway and support the communities alongside it.

The goal of this study is to develop a long-term vision for this corridor. This vision is comprehensive, as it addresses preservation of the area's character, economic opportunity and vitality, environmental sensitivity, and transportation improvements for all users (drivers, freight, pedestrians, bicyclists, etc.).

The draft study is complete and has been out for public review since October 15, 2018. A copy of the study and supporting materials is available at **www.nc54west.com.** A list of comments and responses as of November 6, 2018, is attached. The MPO Board is scheduled to hold a public hearing today, the last day of the public comment period.

The project team will review all comments and will provide a final version of the study for the Board's consideration at its December 12, 2018 meeting.

Board Action: Hold a public hearing on the draft NC 54 West Corridor Study and provide input to staff on the Study.

Attachments: 2018-11-14 (18-179) NC 54 West Corridor Study Public Comments 11-6-18.pdf

11. US 15-501 Corridor Study (20 minutes) 18-192

Leta Huntsinger, WSP
Mike Bruff, LPA Staff

The Durham Chapel Hill Carrboro Metropolitan Planning Organization (DCHC MPO) and the North Carolina Department of Transportation (NCDOT) are conducting a multimodal transportation study of the US 15-501 corridor from Ephesus Church Road/Fordham Boulevard, in Chapel Hill to University Drive, in Durham. The study will update the 1994 corridor-wide master plan that has been used to guide development and transportation improvements since it was adopted in the mid-1990's. The study will develop an updated multimodal transportation master plan for the corridor that integrates the latest land-use and multimodal transportation vision for the corridor. The study includes both the primary route of US 15-501 and the business route of US 15-501 in Durham ("Durham-Chapel Hill Boulevard") which serve very different roles in the transportation system. The study will identify short and long-term multimodal mobility transportation solutions for current and anticipated travel demand in the corridor.

As part of the visioning for the study, and to facilitate discussion between stakeholders about the existing conditions along US 15-501, a bus tour was conducted with agency staff, key stakeholders, and elected officials on April 18, 2018. The purpose of the tour was to lay the foundation for the development of the corridor vision and goals, and to provide an opportunity for the project team to listen to the people who live, work and play along the corridor.

Two public workshops have been conducted to date. The first workshop, held on June 26, shared findings from the community and travel profile for the corridor and engaged citizens in a visioning exercise to further clarify the corridor vision and goals. The second workshop, held on October 22, presented citizens with various proposed concepts for addressing future transportation challenges within the corridor, all within the context of the plan vision, goals, and objectives. Participants were encouraged to comment on their preferred concepts, to guide the study team in the selection of a more narrowed list of concepts to be studied in detail to develop final recommendations for the corridor.

Project materials are available at: http://www.reimagining15501.com/.

Today's presentation will provide a brief overview of the study, and will present to the Board the same array of concepts presented to the public on October 22 with the goal of receiving Board input on preferred concepts.

Board Action: Provide comment on the US 15-501 Corridor Study, preferably by November 21, 2018.

Attachments: 2018-11-14 (18-192) US 15-501 Presentation.pdf
2018-11-14 (18-192) US 15-501 Presentation Boards.pdf
2018-11-14 (18-192) US 15-501 Comment Form.pdf

12. 2045 Metropolitan Transportation Plan (MTP) -- Amendment #1 (10 minutes) 18-172

Andy Henry, LPA Staff

The MPO Board released Amendment #1 to the 2045 MTP in September and conducted a public hearing in October. Amendment #1 corrects detailed project information to ensure that there are not any inconsistencies between the 2045 MTP and the FY2018-2027 State Transportation Improvement Program (STIP). These changes do not change the project lists, cross-sections, financial plan, modeling network, or other substantive components of the 2045 MTP. The attached table shows the proposed changes in Amendment #1.

The schedule was to have the MPO Board adopt Amendment #1 at their November meeting. However, after discussions with oversight agencies such as the Federal Highway Administration (FHWA), staff recommends that instead of adopting Amendment #1, the MPO re-release and re-adopt the 2045 MTP. The re-adoption will ensure that the 2045 MTP, Triangle Regional Model (TRM) and related socioeconomic data, and Air Quality Conformity Determination Report (AQ CDR) are officially adopted on the same date and are based on the exact same modeling, socioeconomic data and other important assumptions. Staff expects the updated Plan to have minor changes to model-related information such as performance measures. There would not be any DCHC MPO changes to the substantive portions of the Plan such as project lists and the financial plan. The attached *table of contents* from the 2045 MTP report identifies those sections of the 2045 MTP report that will have changes.

The MPO, the NCDOT (North Carolina Department of Transportation) and the NCDEQ (North Carolina Department of Environmental Quality) continue their work to update the regional travel demand and emissions models that are needed for the 2045 MTP and Air Quality reports. Staff expect those models to be complete and ready by mid-November. In order to keep the review process moving forward in a timely fashion, staff requests that the MPO Board authorize staff to release the updated 2045 MTP report as soon as it is ready (i.e., when the updated model data are incorporated into the report). Note that the Board has already authorized staff at their September 2018 meeting to release the AQ CDR when it is ready.

In terms of schedule, there are a few points to keep in mind. First, the AQ CDR needs to be adopted by February 16, 2019 to continue federal transportation actions in our area. Next, the minimum public comment period is 30 days for the AQ CDR and 42 days for the MTP. Given these factors, the review schedule will be:

* By November 28, 2018 -- Staff release updated 2045 MTP and AQ CDR
* January 9, 2019 -- MPO Board conduct public hearing, and adopt 2045 MTP, TRM version 6, and AQ CDR by resolutions

Two resolutions are attached to adopt: 1) 2045 MTP and TRM version 6 (which includes the socioeconomic data); and, 2) the AQ CDR.

TC Action: Recommend that the Board authorize the MPO staff to release the updated

2045 MTP report for public review when the report is ready.

Board Action: Authorize the MPO staff to release the updated 2045 MTP report for public review when the report is ready.

Attachments: 2018-11-14 (18-172) 2045MTP-Report Changes.pdf
2018-11-14 (18-172) 2045MTP-Amendment1 Project Table.pdf
2018-11-14 (18-172) 2045MTP-Resolution.pdf
2018-11-14 (18-172) AQ CDR-Resolution.pdf

13. Commuter Rail Transit Update (10 minutes) 18-200

Patrick McDonough, GoTriangle

GoTriangle staff will provide an update on the status of future Commuter Rail Transit (CRT) planning between Durham and Wake counties, with eventual service to Orange and Johnston counties, including progress on the Major Investment Study (MIS).

Board Action: This item is for informational purposes only, no action is necessary.

14. Allocation of Local Input Points for Division Needs Projects (10 minutes) 18-153

Aaron Cain, LPA Staff

On August 8, 2018, the DCHC MPO Board approved the release of the Initial Allocation of Local Input Points for Division Needs Projects for SPOT 5, based on the adopted Methodology. The public input process began on August 22, 2018; a public hearing hearing was held by the MPO Board on September 12, 2018. No public comment was received.

Draft local input points for Division Needs projects have been reviewed twice previously by this Board and the TC. The TC made its final recommendation on October 24, 2018. That recommended allocation is attached.

Local input points from the Divisions have not yet been finalized. DCHC MPO staff recommends that the motion to approve include language allowing staff, with the concurrence of the Chair and Vice Chair of the DCHC MPO Board, to make adjustments to the MPO's local input points in order to maximize effectiveness and coordination with the Divisions. The MPO Board approved such language for the Regional Impact input points this summer.

TC Action: Recommended approval of local input points for Division Needs projects for SPOT 5.

Board Action: Approve allocation of local input points for Division Needs projects for SPOT 5.

Attachments: 2018-11-14 (18-153) Final Draft Allocation of Division Needs Local Input Points

15. Amendment #7 to the FY2018-2027 TIP (5 minutes) 18-185

Aaron Cain, LPA Staff

Amendment #7 to the FY2018-2027 TIP includes three bike/ped projects, each of which are proposed to receive additional funding to address cost increases:

- C-5179, North Estes Drive
- EB-4707A, Old Durham Road
- EB-4707B, Old Chapel Hill Road

C-5179 is receiving additional CMAQ funding, EB-4707A is receiving a combination of TAP-DA and STBGDA funding from the regional bike/ped set aside, and EB-4707B is receiving CMAQ funding as well as STBGDA funds from the regional bike/ped set aside. This amendment to the TIP programs the entirety of the regional bike/ped set aside for FY18 and FY19.

All three projects are proposed to receive over $1M through this amendment. Per the DCHC MPO Public Involvement Policy, a 21-day public comment period was held for these projects from October 23, 2018 to November 13, 2018. No comments were received.

In addition to the above projects, there are two additional projects requesting additional CMAQ funds: C-5605E, Durham Bike Lanes, and C-5605H, Downtown Durham Wayfinding. This completes the reprogramming of CMAQ funds to avoid rescission in September 2019. There is also one project to be modified at the request of NCDOT: U-5937, Durham Freeway Operational Improvements.

The summary sheet, full report, and resolution are attached for your review.

TC Action: Recommended that the Board approve Amendment #7 to the FY2018-2027 TIP.

Board Action: Approve Amendment #7 to the FY2018-2027 TIP.

Attachments: 2018-11-14 (18-185) TIP Amendment #7 Summary Sheet.pdf
2018-11-14 (18-185) TIP Amendment #7 Full Report.pdf
2018-11-14 (18-185) TIP Amendment #7 Resolution.pdf

16. Transit Asset Management - Targets (10 minutes) 18-193

Andy Henry, LPA Staff

The next three agenda items are federal Transportation Performance Measures (TPM). The three sets of TPMs will be discussed and approved separately, however, the presentation attached to this agenda item will guide the discussion for each of the TPM agenda items.

Federal regulations require the DCHC MPO to develop performance measures and targets for the Transit Asset Management (TAM) program. The MPO first approved the TAM targets in June 2017. The table on the attached resolution shows updated targets that each of the MPO's urban transit systems (i.e., GoDurham, GoTriangle, and Chapel Hill Transit) have developed for their system. In addition to the targets, these transit systems must provide to the MPO a Transit Asset Management (TAM) Plan and a checklist to show that the system is in compliance with the TAM final rule. The Plan for each of the transit systems are attached.

The MPO's rural transit systems such as Orange Public Transit (OPT), Durham County Access and Chatham Transit Network are required to fulfill these same requirements but these rural systems have chosen to participate in the NCDOT group TAM plan.

TC Action: Review and discuss the TAM targets, plans and checklist, and recommend that the DCHC MPO Board receive the TAM Plan and checklists, and adopt the TAM resolution and targets.

Board Action: Receive and discuss the TAM Plan, checklists, and transit system performance measures and targets, and adopt the resolution to support the measures and targets.

Attachments:

2018-11-14 (18-193) TPM Presentation.pdf

2018-11-14 (18-193) TAM Plan - GoTriangle.pdf

2018-11-14 (18-193) TAM Plan - GoDurham.pdf

2018-11-14 (18-193) TAM Plan - CHT.pdf

2018-11-14 (18-193) Resolution - TAM Targets.pdf

17. Pavement, Bridges and Travel Time Performance Measures and Targets (10 minutes) 18-194

Andy Henry, LPA Staff

Federal regulations require the DCHC MPO to develop performance measures and targets for pavement, bridges and travel time on National Highway System (NHS) roads. The North Carolina Department of Transportation (NCDOT) established the performance measures and targets shown in the table on the attached resolution. The DCHC MPO will support the NCDOT measures and targets because the MPO must rely on NCDOT data and methodologies to calculate the values for the measures. This will be the first time the MPO has adopted these federal measures and targets.

TC Action: Review and discuss the pavement, bridge and travel time performance measures and targets, provide comments, and recommend that the MPO Board adopt the resolution.

Board Action: Review and discuss the pavement, bridge and travel time performance measures and targets, provide comments, and adopt the resolution to support the performance measures and targets.

Attachments: 2018-11-14 (18-194) Resolution - Pavement, Bridges, TTR.pdf

18. Safety Performance Measures and Targets (10 minutes) 18-195

Andy Henry, LPA Staff

Federal regulations require the DCHC MPO to develop safety performance measures and targets and to update the targets each year. The DCHC MPO first approved a set of safety measures and targets in February 2018 but now must update them for the year 2019. The North Carolina Department of Transportation (NCDOT) established the safety measures and targets shown in the table on the attached resolution. The DCHC MPO will adopt the NCDOT measures and targets because the MPO must rely on NCDOT data and methodologies to calculate the values for the measures.

TC Action: Review and discuss the safety performance measures and targets, provide comments, and recommend that the MPO Board adopt the resolution.

Board Action: Review and discuss the safety performance measures and targets, provide comments, and adopt the resolution to support the measures and targets.

Attachments: 2018-11-14 (18-195) Resolution - Safety.pdf

19. Election of Officers for the DCHC MPO Board (5 minutes) 18-199

Damon Seils, Chair, DCHC MPO Board
Aaron Cain, LPA Staff

Per the DCHC MPO Board's by-laws, the Board is to hold an election for the offices of Chair and Vice Chair at its last regularly scheduled meeting of the calendar year. Following the procedure used last year, the Board will form a nominating committee for officers and report back to the Board at its December meeting.

The current officers, Chair Damon Seils of Carrboro and Vice Chair Wendy Jacobs of Durham County, are both completing their first year in their respective roles. The by-laws state that they may each serve one additional year.

Board Action: Form a nominating committee for officers for the 2019 term.

REPORTS:

20. Report from the Board Chair 18-101

Damon Seils, Board Chair

Board Action: Receive the report from the Board Chair

21. Report from the Technical Committee Chair 18-102

Ellen Beckmann,TC Chair

Board Action: Receive the report from the TC Chair.

22. Report from LPA Staff 18-103

Felix Nwoko, LPA Manager

Board Action: Receive the report from LPA Staff.

Attachments: 2018-11-14 (18-103) LPA staff report.pdf

23. NCDOT Report 18-104

Joey Hopkins (David Keilson/Richard Hancock), Division 5 - NCDOT
Mike Mills (Pat Wilson/Ed Lewis), Division 7 - NCDOT
Brandon Jones (Bryan Kluchar, Jen Britt), Division 8 - NCDOT
Julie Bogle, Transportation Planning Division - NCDOT
John Grant, Traffic Operations - NCDOT

Board Action: Receive the reports from NCDOT.

Attachments: 2018-11-14 (18-104) NCDOT Progress Report.pdf

INFORMATIONAL ITEMS

24. Recent News Articles and Updates 18-105

Attachments: 2018-11-14 (18-105) news_articles.pdf

Adjourn

Next meeting: December 12, 9 a.m., Committee Room

Dates of Upcoming Transportation-Related Meetings: None

MPO Board Directives to Staff

12/01/15 – Present (Completed/Pending/In Progress)

Meeting Date	Directive	Status
12/9/2015	Quarterly updates on D-O LRT project.	On-going: GoTriangle will provide quarterly updates to MPO Board.
2/15/2016	Draft Letter of Support for D-O LRT project to advance to Engineering Phase for MPO Board Chair signature	Completed: 2/18/2016.
4/13/2016	Research and consider renaming DCHC MPO an acronym that would be easier remember and simple to say.	Completed. 6/8/2016. DCHC MPO staff and the Technical Committee researched and provided a recommendation to the MPO Board.
4/13/2016	Provide the MPO Board with a breakdown of funding for highway program and non-highway program in the MPO TIP.	Completed. DCHC MPO staff created a summary report and distributed it during May 11, 2016 Board meeting.
5/11/2016	Schedule presentation from NCDOT Division and City Public Works regarding flooding on Trenton Road.	Completed. DCHC MPO staff arranged to have an update at the June 8, 2016 Board meeting.
5/11/2016	Prepare a presentation on the breakdown of funding for highway program and non-highway program in the MPO TIP.	Completed. DCHC MPO staff presented the summary report at the June 8, 2016 Board meeting.
6/8/2016	Update the DCHC MPO's tagline on the MPO website to provide information to the public that explains the MPO does regional transportation planning for the western Triangle area.	Underway. DCHC MPO staff is still working on updating the tagline on the MPO website.
6/8/2016	Conduct background study on toll roads and how they are used and affect municipalities like DCHC MPO.	Underway. Consultant will present update at joint MPO Board meeting on October 31, 2018
12/14/2016	Draft letter to NCDOT regarding citizen request for "Bicycles May Use Full Lane" signs on Old NC 86 north of Carrboro, and to reiterate interest in providing bike lanes or wider shoulders to accommodate bicyclists.	Completed. DCHC MPO staff sent letter to NCDOT on January 30, 2017; response received March 15, 2017.
1/11/2017	Draft letter to NCDOT requesting that issues of equity for low-income users be incorporated into planning for managed lanes on I-40 and NC-147.	Completed. Draft completed January 29, 2017.

Meeting Date	Directive	Status
4-28-17	Determine the number of distance signs on freeways within the MPO's jurisdiction. Investigate the options for increasing the number of signs with NCDOT, particularly on and around the East End Connector at its completion.	Completed. MPO staff has found seven distance signs on freeways within the MPO's jurisdiction: four on I-85, one on NC-147, one on US 15-501, and one on I-85/40 in western Orange County. MPO staff has followed up with NCDOT about the opportunity for additional signs along I-40 in Durham and/or Orange counties.
4-28-17	Work with Division 7 to amend the signage plan for the East End Connector to include signs warning motorists about construction before the I-85/40 split.	Completed. MPO staff has contacted Division 7 regarding this request. Once project is completed, signage plan will be finalized.
5-10-17	Have someone from NCDOT present to the MPO Board on synchronized/super streets.	Completed. Jim Dunlop of NCDOT's Congestion Management Division presented at the August 2017 MPO Board meeting.
9-13-17	Request for staff to give a presentation on the STI framework, focusing on what provisions are directly by federal legislation, by state legislation, and those that are department policy. Invite new Deputy Secretary Julie White to meet and discuss NCDOT policy regarding prioritization with the Board.	Completed. LPA staff presented at the November 8, 2017 Board meeting. Deputy Secretary Julie White presented at the March 14, 2018 Board meeting.
2-14-18	Work with local governments and partner agencies to identify additional funding streams for transit projects not being submitted through the SPOT 5.0 process. Report back on progress.	Underway. LPA staff is coordinating efforts with local transit providers and staff. Staff expects to present progress in November.
4-11-18	Request for staff to arrange a presentation on Managed Motorways to inform new Board members of the concept and provide an update on efforts to incorporate these projects in the Triangle region.	Complete. Will Letchworth from WSP made a presentation on Managed Motorways at the May 9, 2018 MPO Board meeting.
8-12-18	Request for staff to develop a strategy to ensure that CMAQ and TAP-DA funds are assigned to projects that can obligate the funds before the federal rescission deadline of September 30, 2019.	Underway. Staff will bring a proposal for reprogramming of CMAQ and TAP-DA funds to the MPO Board at its October meeting.

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION BOARD

10 October 2018

MINUTES OF MEETING

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Board met on October 10, 2018, at 9:00 a.m. in the City Council Committee Room, located on the second floor of Durham City Hall. The following people were in attendance:

Damon Seils (MPO Board Chair)	Town of Carrboro
Wendy Jacobs (MPO Board Vice Chair)	Durham County
Pam Hemminger (Member)	Town of Chapel Hill
Karen Howard (Member)	Chatham County
Renee Price (Member)	Orange County
Vernetta Alston (Member)	City of Durham
Charlie Reece (Member)	City of Durham
Ellen Reckhow (Member)	GoTriangle
Jenn Weaver (Member)	Town of Hillsborough
Lydia Lavelle (Alternate)	Town of Chapel Hill
Michael Parker (Alternate)	Town of Chapel Hill
Mark Marcoplos (Alternate)	Orange County
Heidi Carter (Alternate)	Durham County
David Keilson	NCDOT, Division 5
Richard Hancock	NCDOT, Division 5
Patrick Wilson	NCDOT, Division 7
Bryan Kluchar	NCDOT, Division 8
Kathryn Vollert	NCDOT, Division 8
Julie Bogle	NCDOT, TPD
Zach Hallock	Town of Carrboro
Bergen Watterson	Town of Chapel Hill
Geoff Green	GoTriangle
John Tallmadge	GoTriangle
Evan Tenenbaum	Durham County
Nishith Trivedi	Orange County
Felix Nwoko	DCHC MPO
Andy Henry	DCHC MPO
Meg Scully	DCHC MPO
Aaron Cain	DCHC MPO
Mike Bruff	DCHC MPO
Robert Jahn	DCHC MPO
Bryan Poole	City of Durham Transportation
Eddie Dancausse	FHWA
Don Bryson	VHB

Quorum Count: 9 of 10 Voting Members

Chair Damon Seils called the meeting to order at 9:00 a.m. A roll call was performed. The Voting Members and Alternate Voting Members of the DCHC MPO Board were identified and are indicated above. Chair Damon Seils reminded everyone to sign-in using the sign-in sheet that was being circulated.

Pam Hemminger made a motion to excuse Nina Szlosberg-Landis from attendance of the MPO Board Meeting. Charlie Reece seconded the motion. The motion passed unanimously.

PRELIMINARIES:

2. Ethics Reminder

Chair Damon Seils read the Ethics Reminder and asked if there were any known conflicts of interest with respect to matters coming before the MPO Board and requested that if there were any identified during the meeting for them to be announced. There were no known conflicts identified by the MPO Board members.

3. Adjustments to the Agenda

There were no adjustments to the Agenda.

4. Public Comments

There were no public comments.

5. Directives to Staff

The Directives to Staff were included in the Agenda packet for review.

CONSENT AGENDA:

6. Approval of September 12, 2018, Meeting Minutes

Chair Damon Seils made a request for staff to review page 7 of the Meeting Minutes to verify that accuracy regarding the participation of Tina Moon and make the appropriate correction. Renee

Price requested that the Minutes reflect that she informed staff she would be unable to attend the meeting on September 12.

Vernetta Alston made a motion to approve the October 10, 2018, Meeting Minutes with correction, when necessary. Jenn Weaver seconded the motion. The motion passed unanimously.

ACTION ITEMS:

7. NC 98 Corridor Study
Andy Henry, MPO Staff

Andy Henry stated that the Durham Board of County Commissioners (BOCC) approved a resolution in support of a multiuse path along NC 98. Andy Henry added that section 4.1 has two options: the original recommendation to have bicycle lanes and sidewalks (bike/ped lanes); and the other option of a multiuse path on each side of the roadway instead of the bicycle lanes and sidewalks. Ellen Reckhow discussed how a multiuse path would protect bicyclists from vehicular collisions. Michael Parker discussed the importance of protecting the safety of pedestrians from bicyclist traffic, possibly by using separated paths – one for pedestrians and one for bicyclists. Vice Chair Wendy Jacobs discussed that the Durham BOCC's resolution was contingent on building a well-designed multiuse path that is safe for both pedestrians and bicyclists. There was also discussion about partnering with North Carolina Department of Transportation (NCDOT) to help with funding for the multiuse path.

Ellen Reckhow made a motion to review and approve the NC 98 Corridor Study. Pam Hemminger seconded the motion. The motion passed unanimously.

8. NC 54 West Corridor Study
Don Bryson, VHB
Aaron Cain, MPO Staff

Don Bryson stated that the NC 54 Corridor Study is an in-depth review of the 20+ mile NC 54 corridor between Old Fayetteville Road in Carrboro and I-85 in Graham. Don Bryson stated that NC 54 extends through the Burlington-Graham (BG) MPO, Triangle Area Regional Planning Office (TARPO), and the DCHC MPO. Don Bryson stated that there is a current project to install operational

improvements in the Orange County portion of the corridor, which includes the intersection at Old Fayetteville Road and NC 54 in Carrboro.

Don Bryson stated that there was extensive stakeholder outreach. Don Bryson stated that there was a website, www.NC54West.com, which residents could access to provide updates and comments. Don Bryson stated that vehicle traffic and safety issues were the most common subjects of input. Don Bryson added that other comments included difficulty making left turns, lack of bike/ped facilities, need to preserve the agricultural and natural environments, additional park and ride with transit service, better lighting, better wayfinding, etc.

Don Bryson identified seven key nodes, or intersections, that would split the NC 54 corridor into more manageable sections. Don Bryson also identified three key commercial nodes, one of which was in Carrboro. Don Bryson also identified heritage or recreation nodes. Don Bryson stated the service level of the Orange County section was an E or F, and the pedestrian and bicycle facilities were rated as a D. Don Bryson also identified issues of queuing and pedestrian crossing as issues on NC 54.

Don Bryson stated that traffic volumes are greater at the ends of NC 54, including Carrboro, where most of the growth is occurring, which will require more immediate needs as well as long-term solutions. Don Bryson stated that two-lane roads at the ends of the corridor have already exceeded capacity. Don Bryson continued that the traffic coming into Carrboro is unidirectional in the morning and evening, into Carrboro in the morning, outbound in the evening, which accounts for about 70% of traffic.

Don Bryson stated the possible solutions include conventional widening, median U-turns, super streets, quadrants, and/or roundabouts. Don Bryson added that the speed limit along the NC 54 corridor would mostly be 55MPH, and some sections the speed limit would be 45MPH where curb and gutters would be installed.

Don Bryson stated a multiuse path is recommended for this project on mostly the north side of the corridor, instead of bike/ped lanes. Don Bryson added that the preferred cross-section fits into a 150 foot right-of-way, which includes a 23-foot median. Don Bryson also added that most areas would not have curb and gutter. Don Bryson and Chair Damon Seils discussed that this would be the preferred cross section for most, but not all, of the corridor. Renee Price asked if the right-of-way already exists, Don Bryson that much of the corridor already has the necessary right-of-way, though there will be areas where it will need to be acquired. Don Bryson responded that there might be grading due to wells and septic fields.

Don Bryson stated that maximizing capacity, as well as safety, can be addressed in relation to the location of driveways and intersections along NC 54. Don Bryson stated that there are issues of vehicles being unable to pass along the corridor where there are only two lanes. Don Bryson stated that this issue could not be solved by dedicated passing lanes due to the abundance of driveways in specific areas. Michael Parker asked about autonomous vehicles. Don Bryson stated that emerging technology, like autonomous vehicles are difficult to predict, and they will first come to more urbanized areas before being integrated to more rural areas, like much of NC 54.

Don Bryson stated that the NC 54 Corridor Study recommended traditional solutions to existing issues of capacity and safety. Don Bryson noted that the recommendation would be for median U-turn lanes in order to turn left. Don Bryson also stated that the recommendation would also be to add roundabouts to some areas. Don Bryson stated that four lanes throughout this corridor was recommended. Don Bryson stated that none of the proposed changes are on the Metropolitan Transportation Plan (MTP) or the Transportation Improvement Program (TIP). Don Bryson also discussed how some sections could become signalized.

Don Bryson stated that the implementation should be separated into four phases and that the costs reflect current prices and does not include right-of-way. Don Bryson stated the first phase would

be scheduled to begin between 2020 and 2030 and that would include lane widening to from Fayetteville Road to Dodsons Crossroads and would cost approximately $43M. Don Bryson stated that the total cost is approximately $180M, of which $100M would occur in Orange County and $44M within DCHC MPO. Ellen Reckhow and Don Bryson discussed how these figures do not account for inflation. Ellen Reckhow recommended adding further language to emphasize this point in the NC 54 Corridor Study.

Chair Damon Seils asked if the capacity analysis took into account the recent improvements to the corridor. Don Bryson stated that the recent improvements were included, but the scheduled improvements were not included in the analysis. Don Bryson added that the function of this corridor could resemble more of an arterial than a real highway should the signalization of enough intersections occur. Chair Damon Seils asked if origin and destination analysis was included in this study, but Don Bryson replied that it was not. Chair Damon Seils and Don Bryson discussed how different regional models were used in the land use and policy decisions around transit. Mark Marcoplos asked about potential park and ride locations. Don Bryson responded that one likely location was near Saxapahaw or Mebane, but there was not a final determination.

Ellen Reckhow asked Don Bryson to create and add a justification for adding a multiuse path instead of adding bike/ped facilities, thereby allowing the DCHC MPO to better communicate that need to NCDOT. Chair Damon Seils added that bicycle lanes on a 55MPH roadway would not be comfortable for bicyclists. There was discussion about creating a resolution about the need for flexibility in bicycle facilities. Aaron Cain stated that he will discuss this with Ellen Beckmann, Technical Committee (TC) Chair.

Renee Price asked when the MPO Board can expect to hear the comments from TARPO and BG MPO NC 54 Corridor Study presentation. Aaron Cain replied that he will bring all relevant information discussed at those two meetings at the MPO Board meeting on November 14. Chair Damon Seils and

Aaron Cain discussed that the only public hearing will be held by the DCHC MPO because it commissioned the study and because the other planning organizations decided to follow a different process.

Aaron Cain stated that a 30-day public comment period is scheduled before the next MPO Board meeting on November 14.

Renee Price made a motion to release the NC 54 West Corridor Study for a 30-day public comment period. Pam Hemminger seconded the motion. The motion passed unanimously.

9. <u>Triangle Regional Freight Plan</u>
Andy Henry, LPA Staff

Andy Henry stated that the MPO Board released the Triangle Regional Freight Plan for a minimum 30-day public comment period at their meeting on September 12. Andy Henry continued that MPO Board members had posed several questions that staff has now answered in an attached document to the Agenda. Chair Damon Seils opened and closed the public hearing with there being no comments. Vice Chair Wendy Jacobs asked if the Freight Plan included the topic of resiliency. Andy Henry responded that the Freight Plan addressed topics identified by focus groups, stakeholders, industry insiders, but resiliency was not part of the Freight Plan.

Chair Damon Seils raised the issue of the Freight Plans lack of guidance on shared corridor use. Chair Damon Seils also requested that the plan address the burden that freight can place on communities, such as downtown Durham. Andy Henry responded that the plan mentions that freight supports light rail and commuter rail. Chair Damon Seils stated that the report lacks discussion on the operationalization of the freight corridors. Andy Henry stated that the next step is to return to the MPO Board at the meeting on November 14 for approval, but Chair Damon Seils stated that including the requested information into the report might not be possible at this stage.

There was no further action required by the MPO Board.

10. <u>2045 Metropolitan Transportation Plan (MTP) – Amendment #1</u>

Andy Henry, LPA Staff

Andy Henry stated that Amendment #1 corrects detailed project information to ensure that there are not any inconsistencies between the 2045 MTP and the FY2018-2027 State Transportation Improvement Program (STIP), and subsequently allows the Air Quality Conformity Determination process to proceed without interruption. Andy Henry added that these changes do not change the cross-section, costs, construction year, or other design considerations that would impact the project capacity, financial plan, or Triangle Regional Model (TRM). Andy Henry stated that, in January 2019, the Board would re-adopt the 2045 MTP and the TRM, and adopt the Air Quality Conformity Determination Report (AQ CDR). Andy Henry stated that the adoption and re-adoption of this process would help to avoid confusion of having different documents with different dates. Andy Henry also stated that there would not be any changes to the substantive portions of the MTP such as project lists and the financial plan. Andy Henry stated that if MPO staff decides to readopt in January, Amendment #1 would not be necessary and the MPO Board would not need to approve the amendment.

There was no further action required by the MPO Board.

11. <u>Quarterly Update on the Durham – Orange Light Rail (D-O LRT) Transit Project</u>
John Tallmadge, GoTriangle

John Tallmadge stated that GoTriangle is trying to communicate across Wake, Durham, and Orange counties that the investments in transit are being made to improve public transportation across the Triangle. John Tallmadge stated that the improvements in public transportation include; bus rapid transit projects, bus service improvements, amenity improvements, light rail project, and the commuter rail project. John Tallmadge also stated that ourtransitfuture.org is a website where residents can learn information about Triangle public transit and provide feedback.

John Tallmadge stated that Youth GoPass is for those aged thirteen to eighteen years old. John Tallmadge stated that Youth GoPass are issued at public libraries in Durham and Wake Counties as well as through the Parks and Recreation Departments and transit hubs. There was discussion about the

Youth GoPass being available at Orange County Public Library, and John Tallmadge stated that he will connect with staff there.

John Tallmadge stated that the revenue for the Transit Plan coming from local sales tax, registration fees, and the vehicle rental tax collectively performed greater than projected. Ellen Reckhow discussed issues for tax revenue at the County level due to issues surrounding statewide distribution of sales tax revenue. Pam Hemminger also noted that sales tax revenues can be returned to nonprofit organizations. Michael Parker noted that there was still an unresolved question regarding vehicle tax revenues underperforming. John Tallmadge stated that the economy also performed well in 2017, but there might be years when the economy is underperforming and the sales taxes will reflect that trend. Chair Damon Seils mentioned that it would be beneficial to communicate to residents the successes of the sales tax thus far. John Tallmadge also stated that the transit tax revenues are also funding short-range transit plans that would benefit GoTriangle, GoDurham, Chapel Hill Transit, and other transit. Chair Damon Seils and John Tallmadge discussed that the public comment period is officially closed, but GoTriangle may still consider any comments provided.

John Tallmadge stated that GoTriangle is progressing toward an application to the Full Funding Grant Agreement (FFGA) for $1.25B, which is half of the total project cost of the D-O LRT project. John Tallmadge also stated that Durham County Commission unanimously approved sending a letter of commitment for the additional $57.6M of the dedicated transit taxes in order to account for the funding gap that was caused by recent North Carolina legislation. John Tallmadge stated that MPO staff, NCDOT engineers, and GoTriangle staff have worked together to program the first year of funding for 2024 State funds, therefore, it does not need to be rescored until the next version of the Strategic Planning Office of Transportation (SPOT). John Tallmadge further elaborated on cost sharing efforts, including approximately $15M worth of property donations from UNC Chapel Hill and North Carolina Central University (NCCU).

John Tallmadge stated that there is a Federal Transit Agency (FTA) risk assessment workshop on October 10, and currently there is a 20% contingency scheduled in the budget. John Tallmadge also stated that GoTriangle is working toward completing the 11 critical cooperative agreements by December 31.

John Tallmadge discusses the need for the Supplemental Environmental Assessment (SEA) because there have been changes to the D-O LRT design since the Environmental Impact Statement (EIS) was created in 2016. John Tallmadge stated that the SEA will tentatively be released for public review on October 24 and there will be public meetings in both Durham and Chapel Hill. John Tallmadge stated that one design change would be platforms designed for three-car length platform instead of two-car length platform due to value engineering. John Tallmadge also stated that pocket tracks will be added to the east and west ends of the rail line due to the projected increased demand. John Tallmadge also stated that there a single track bridge is designed to span New Hope Creek, instead of two tracks. John Tallmadge stated that sections of Erwin Road will be elevated because of utility line and emergency access issues at Duke Hospital. John Tallmadge stated that along Pettigrew Street at the intersections at Mangum Street, Dillard Street and Grant Street, the light trail tracks are planned to be raised. John Tallmadge stated that the intersection cannot be raised at Blackwell Street, therefore, that crossing will be closed to pedestrians and vehicle traffic. John Tallmadge also stated that Dillard Street would become a one-way southbound roadway. John Tallmadge also stated that the Ramseur Street loop would be two-way street from Chapel Hill Street to Dillard Street. John Tallmadge stated that the Alston Avenue Station at NCCU will be relocated closer to property owned by the Durham Housing Authority, and the rail line will be center running to afford better pedestrian conditions on either side of Alston Avenue.

John Tallmadge described that the plans for rezoning and the reannexation of the proposed Rail Operations and Maintenance Facility (ROMF) were voted out by a four-four split at the Durham City

Council, and they will be discussing the situation again at the Durham City Council meeting in December 2018. John Tallmadge stated that the 90% design review is scheduled to be completed by summer 2019 and the construction-ready drawings are scheduled for completion in November 2019. John Tallmadge stated that GoTriangle is working toward including more Disadvantaged Business Enterprises (DBE), which is currently at 11%. John Tallmadge also stated that GoTriangle is working with local organizations and agencies to further workforce development in the area. Michael Parker and John Tallmadge discussed if GoTriangle has the authority to require that contractors pay workers a living wage. John Tallmadge stated that he is working with City of Durham staff and Durham Housing Authority as well as Chapel Hill and Orange County staff on setting targets for Affordable Housing located around light rail stations. Jenn Weaver stated that it would be helpful to add projected extensions of the D-O LRT, such as the station in Hillsborough, on all maps and plans. Vice Chair Wendy Jacobs and John Tallmadge discussed the plans for public meetings will include renderings and the flyover video to reflect the changes. Vice Chair Wendy Jacobs stated that there is an opportunity to encourage supply chain development and to grow the DBE program. Vice Chair Wendy Jacobs also stated Durham County's support of the Affordable Housing opportunities in proximity to the light rail stations. Chair Damon Seils requested that the MPO Board be given a copy of the Quarterly Update presentation slides.

There was no further action required by the MPO Board.

12. <u>Allocation of Local Input Points for Division Needs Projects</u>
Aaron Cain, LPA Staff

Aaron Cain stated that the DCHC MPO Board approved the release of the Initial Allocation of Local Input Points for Division Needs Projects for SPOT 5 based on the adopted Methodology. Aaron Cain added that a TC subcommittee met to develop recommendations for local input points for Division Needs projects. Aaron Cain continued that the only change from the subcommittee recommendation to the version that was brought to the MPO Board at its September meeting is the removal of points from the Finley Golf Course Road bike/ped project and placement of points on the

Northern Durham Parkway. Aaron Cain added that the deadline for submission of local allocation points for Division Needs projects has been delayed to November 29 due to effects from Hurricane Florence, therefore, LPA staff is delaying the vote on the allocation until the MPO Board meeting on November 14.

There was no further action required by the MPO Board.

13. <u>Surface Transportation Block Grant -Direct Attributable (STBG-DA) and Transportation Alternative Program (TAP) Funding Distribution for FY2020</u>
Meg Scully, LPA Staff

Meg Scully stated that, in 2015, the MPO Board approved the formula and policy to distribute STBG-DA and TAP funds to sub-recipients for FY2017-2025. Meg Scully continued that prior to development of the next year's UPWP, the actual STBG-DA and TAP allocation to the DCHC MPO would be entered into the formula as would the most recent certified National Transit Database (NTD) data. Meg Scully stated that this formula would then be used in calculating the distribution to agencies. Meg Scully added that the approval of this allocation will commence the FY20 UPWP development as agencies may choose to use the allocation for planning purposes, and thus must program funds in the FY20 UPWP. Chair Damon Seils and Meg Scully discussed that the formula used is standard, which was the same distribution that was used in previous years.

Pam Hemminger made a motion to approve the FY20 distribution of STBG-DA and TAP funds. Ellen Reckhow seconded the motion. The motion passed unanimously.

14. <u>Reprogramming of CMAQ Funds</u>
Aaron Cain, LPA Intern

Aaron Cain stated that the Fixing American's Surface Transportation (FAST) Act dictates that any unobligated CMAQ or TAP-DA funds that are not obligated by September 30, 2019, will be subject to rescission. Aaron Cain added that LPA staff reviewed the current state of CMAQ and TAP-DA funds for DCHC projects and determined that several projects are not likely to be able to obligate CMAQ funds by

the rescission deadline. Aaron Cain continued that staff and local stakeholders have developed a plan to reprogram CMAQ dollars to projects that can obligate the funds by September 30, 2019.

Projects that would have CMAQ funds reprogrammed to other projects will have future CMAQ funding set aside for them at a time that is more in line with their delivery schedule. Aaron Cain stated that the Durham Bike Share (C-5605 F) and Downtown Durham Loop Bicycle Lane (C-5605 G) would be cancelled as part of this reprogramming, however, those projects would likely be cancelled, regardless, due to external factors. Aaron Cain stated that four projects would be reprogramed: Morreene Road bike/ped (C-4928), Jones Creek Greenway (C-5181), Downtown Multi-Use Path (C-5605 A), and South Greensboro Street Sidewalks (C-5650). Aaron Cain added that none of these projects will have construction delays. Aaron Cain stated that there are projects that would receive the reprogrammed CMAQ funds; Old Chapel Hill Road/Old Durham Road (EB-4707B&A), Hillsborough Riverwalk Phase III (C-5184), North Estes Drive (C-5179), GoDurham Electric Buses (TA-6696), and other project costs associated with cost overruns. Aaron Cain noted that the Old Durham Road/Old Chapel Hill Road and Estes Drive projects were already under construction.

There was discussion about transit agency representatives being aware of the changes and present during the TC Meeting on September 26, and Aaron Cain replied that they were present at the meeting. Charlie Reece asked what will be the effect for the Morreene Road bike/ped project. Aaron Cain responded the funding would be for FY20 and another application to NCDOT or vote would not be necessary. Ellen Reckhow stated concern over the Morreene Road project because of its lasting incomplete status. Aaron Cain responded that the Morreene Road project is a priority, but other projects must be obligated in order to avoid rescission.

Ellen Reckhow stated concern about the appearance of the roundabouts being built, specifically at Mount Moriah and Erwin Road, due to aesthetic issues of insufficient landscaping and lack of reflective paint. Aaron Cain stated that he will contact the Division to resolve this issue, but CMAQ

funding cannot be used to improve these roundabouts. This issue was later discussed during the NCDOT Report.

Pam Hemminger made a motion to adopt the resolution approving the reprogramming of CMAQ funds. Renee Price seconded the motion. The motion passed unanimously.

15. <u>Programming of FY2018-19 Regional Bicycle and Pedestrian</u>
Aaron Cain, LPA Staff

Aaron Cain stated that, per MPO policy and the adopted FY18 and FY19 UPWPs, the full amount of the MPO's TAP-DA funds are combined with a portion of the MPO's STBG-DA funds to create a pool of funds for regional bike/ped projects, which amounts to just over $1M annually. Aaron Cain added that, since adoption of the current policy, a significant portion of these funds have gone to Old Durham Road/Old Chapel Hill Road for construction of bicycle lanes and sidewalks from Garrett Road in Durham to Fordham Boulevard in Chapel Hill (EB-4707 A&B). Aaron Cain stated that LPA staff, in consultation with local government staff, recommended programming the entirety of the Regional Bicycle and Pedestrian fund, $2.073M, to this project. This funding, in conjunction with additional CMAQ dollars, will expedite completion of the project, and will also allow for the MPO's TAP-DA appropriation to be obligated before the federal rescission deadline of September 30, 2019. Aaron Cain stated that the Old Chapel Hill Road portion of this project in Durham is already under construction, and the Old Durham Road portion in Chapel Hill is ready for construction bid by winter 2019. Aaron Cain added that the standard TAP-DA application process is not required to program the funds because the TAP-DA funds will be applied to Old Durham Road in Chapel Hill (EB-4707 A), which was previously approved for TAP-DA funds.

Chair Damon Seils asked if STBG-DA or TAP-DA were previous committed to other projects. Aaron Cain responded that they were not committed to other projects and there were limited choices to apply these funds due to bike/ped criteria.

Vice Chair Wendy Jacobs made a motion to approve recommended that the Board authorize the programming of Regional Bicycle and Pedestrian Funds for FY2018 and FY2019 to Old Chapel Hill Road / Old Durham Road (EB-4707 B&A).

16. <u>Amendment #6 to the FY2018-2027 TIP</u>
Aaron Cain, LPA Staff

Aaron Cain stated that Amendment #6 to the FY2018-2027 TIP is comprised of three components: reprogramming of Congestion Mitigation/Air Quality (CMAQ) funds in order to ensure their obligation before September 30, 2019; moving of funds from FY18 to FY19 for those projects that have not obligated their funds in FY18; and several modifications and additions to the STIP as requested by NCDOT. Aaron Cain added that, because North Estes Drive (C-5179) and Old Chapel Hill/Old Durham Road (EB-4707B&A) projects were over $1M each, they are required by the public involvement policy to be released for a 21-day release and will be discussed in Amendment #7.

Ellen Reckhow made a motion to approve Amendment #6 to the FY2018-2027 TIP. Charlie Reece seconded the motion. The motion passed unanimously.

17. <u>Amendment #7 to the FY2018-2027 TIP</u>
Aaron Cain, LPA Staff

Aaron Cain stated that Amendment #7 to the FY2018-2017 TIP would authorize the release of Estes Road and Old Chapel Hill Road/Old Durham Road bike/ped projects for a 21-day public comment period.

Ellen Reckhow made a motion to release Amendment #7 to the FY2018-2027 TIP for a 21-day public comment period. Renee Price seconded the motion. The motion passed unanimously.

<u>REPORTS:</u>

18. <u>Report from the Board Chair</u>
Damon Seils, Board Chair

Chair Damon Seils stated that that the next Joint MPO Board meeting with Capitol Area Metropolitan Planning Office (CAMPO) will be on October 31 from 9-11a.m. at RTP Headquarters and encouraged everyone to attend the action-oriented meeting.

19. <u>Report from the Technical Committee Chair</u>
Ellen Beckmann, TC Chair

There was no report from the TC Chair.

20. <u>Report from LPA Staff</u>
Felix Nwoko, LPA Manager

Geoff Green clarified that, for the D-O LRT project, the alignment along Alston Avenue has always been center-riding, and a multiuse path continues to be used there.

Aaron Cain stated that Margaret Hauth resigned as the Vice Chair of the TC, and there will be an election for a new Vice Chair at the next TC meeting on October 24. Aaron Cain stated that the MPO Board Meeting on December 12 will include officer elections. Aaron Cain added that Chair Damon Seils and Vice Chair Wendy Jacobs are eligible for an additional one-year term. Aaron Cain added that the Agenda will include an item for nominations for the MPO Board meeting on November 14.

21. <u>NCDOT Report</u>

Richard Hancock, NCDOT Division 5, stated that Old Durham Road (EB-4704 A) is scheduled to let in December 2018, but it could be as late as January 2019, whereas Old Chapel Hill Road (EB-4704 B) is scheduled to have final surfacing completed by November 2018. Richard Hancock also stated that the Alston Avenue (U-3308) widening project is continuing as planned. Richard Hancock stated that the East End Connector project (U-0071) is scheduled to have the concrete paving finished by December 2018. Richard Hancock stated that the Hope Valley Road / University Drive roundabout (U-5745) is close to completion. Richard Hancock stated that a quadrant design was planned for Latta Road / Infinity Road intersection improvement (U-5516). Richard Hancock stated that the Garrett Road and

15-501 Interchange (U-5717) is scheduled for let in early 2020. Richard Hancock also stated that there will be a public meeting for the Durham side of US-70 on October 31.

Ellen Reckhow discussed how landscaping and additional reflective paint is needed for recently constructed roundabouts. Richard Hancock stated that it would helpful to have funding for landscaping as part of construction. Richard Hancock also stated that Division 5 would be willing to partner with the DCHC MPO to find funding for landscaping. Charlie Reece stated that he has raised the issue about landscaping maintenance with the City of Durham Public Works and General Services, and they are currently in discussions about how to resolve the issue. Aaron Cain asked if a letter to Division 5 concerning landscaping maintenance at roundabouts would still be necessary in light of recent discussion. Chair Damon Seils deferred to Ellen Reckhow and Charlie Reece who both decided to delay the letter until the Durham City Departments could further discuss this issue.

Vice Chair Wendy Jacobs asked if there were any plans on Cole Mill Road to add a bicycle lane after the repaving efforts are completed. Bryan Poole stated that the City of Durham Department of Transportation reviewed plans to add a bicycle lane for Cole Mill Roads, however, they decided against it due to lack of connectivity and decided to instead focus on other areas.

Patrick Wilson, NCDOT Division 7, stated that he will answer any questions regarding Division 7 updates. Pam Hemminger asked when the construction plans for Merritt Mill Road, Franklin Road and Main Street will be available. Pat Wilson responded that the plans will be available by the Chapel Hill City Council meeting on November 7. Pat Wilson added that the project is scheduled to start in May 2019.

There were questions regarding other recent projects. Pat Wilson responded that the project at Bennett Circle is still under contract. The Essence Road roundabout has been rebid twice, and staff will review the project before it is rebid for a third time.

Bryan Kluchar, Division 8, stated that there was no additional comment for the report. Karen Howard discussed the flooding in northeastern Chatham County at Jeremiah Drive. Karen Howard stated that she would like to further address issues of flooding with NCDOT.

Julie Bogle, NCDOT Transportation Planning Division (TPD), stated the Statewide Plan is being updated. Julie Bogle added that NC Moves 2050 is a plan that will meet the needs of a dynamic state, characterized by deferring regional priorities while maintaining focus on broader statewide benefits. Julie Bogle stated that there will be a stakeholder meeting in Raleigh on October 29, and in addition there will be several opportunities for public input, including a survey. Julie Bogle also stated that more information can be found at www.ncdot.gov/ncmoves.

There was no report from NCDOT Traffic Operations.

INFORMATIONAL ITEMS:

22. Recent News, Articles, and Updates

No informational items were discussed.

ADJOURNMENT:

There being no further business before the DCHC MPO Board, the meeting was adjourned at 11:34 a.m.

Joint DCHC MPO and CAMPO Meeting

Research Triangle Park Headquarters

31 October 2018

1. Welcome and Introductions

Wendy Jacobs welcomed the group to the Joint MPO Meeting at 9:05AM.

Sig Hutchinson stated that this meeting is significant because it means that Durham-Chapel Hill-Carrboro (DCHC) Metropolitan Planning Organization (MPO) and Capital Area Metropolitan Planning Organization (CAMPO) are working together collectively in order to solve regional transportation problems.

Attendees introduced themselves to the group:

Attendees: Aaron Cain DCHC MPO staff; Wendy Jacobs Vice Chair DCHC MPO; Sig Hutchinson, Chris Lukasina (CAMPO); Jeff Man, GoTriangle; Heidi Carter, DCHC MPO Alternate; Ellen Beckmann DCHC TC Board Chair; Ed Howell; Meg Scully, DCHC MPO Staff; Michael Parker, DCHC MPO Board Alternate; Vernetta Alston, DCHC MPO Board Member; Lydia Lavelle, DCHC MPO Board Alternate; Will Allen VC Board of Trustees; Vivian Jones, Wake Forest Mayor; Jenn Weaver, DCHC MPO Board Member; TJ Cawley, Mayor of Morrisville; Renee Price, DCHC MPO Board Member; Ellen Reckhow, DCHC MPO Board Member; Charlie Reece, DCHC MPO Board Member; Nina Szlosberg-Landis, DCHC MPO Board Member; Hanna Cockburn, NCDOT; John Hodges-Copple, TJCOG; Alex Rickard, CAMPO; Shelby Powell. (Pam Hemminger, DCHC MPO Board Member; and Mark Marcoplos, DCHC MPO Board Alternate, arrived following the introductions).

2. Host Welcome

Tim Brock, Research Triangle Foundation, welcomed attendees.

3. Comments from the Public

There were no comments from the public.

4. **Travel Markets** by John Hodges-Copple

John Hodges-Copple introduced a slide showing I-40 in 1972 and 2017, which he used to illustrate how MPO influences economic development. John Hodges-Copple stated that travel markets in different locations are not always alike and that the central commute flow for the Triangle is between Wake County and Durham and Orange counties. John Hodges-Copple stated that travel markets are not static because they change in size. John Hodges-Copple continued that planning for future regional

growth is important for the future because in 1992 there were approximately 1M people in the region, and by 2045 the population is estimated to reach 3M people. John Hodges-Copple stated that behavior is changing within the Triangle. He continued that the average household in 2005 has nine daily trips on average, whereas in 2016 there were 10 daily trips. John Hodges-Copple added that smaller households lead to fewer trips. John Hodges-Copple stated that travel markets investments relate to commuter rail.

Ellen Reckhow gave an example of how the population growth in Seattle has impacted traffic, and spoke about the effects on future generations.

Wendy Jacobs noted that the Triangle region is in competition with other cities within the United States to attract businesses and workers. Sig Hutchinson added that the two MPOs must work together.

5. Regional Policy Priorities by Chris Lukasina:

Chris Lukasina discussed the Transportation Policy Priority Sheets.

Hanna Cockburn discussed the importance of and need for planning. Hanna Cockburn referenced *Make NC a Leader in Active Transportation Investments: A Triangle Metro Region Transportation Priority*.

There was discussion about the importance of a Complete Street policy. Hanna Cockburn noted that NCDOT is currently updating their transportation policy and is discussing implementation. Hanna Cockburn noted that NCDOT is targeting completion in Spring 2019. Hanna Cockburn added that the policy focuses on creating networks across regions and across the state.

Hanna Cockburn stated that Active Routes to School is no longer receiving 100% funding. Hanna Cockburn added that NCDOT is developing new policy and criteria, which is scheduled for release in spring 2019.

Ellen Reckhow asked if NCDOT expenditures for pedestrian sidewalks, bicycle paths and multiuse paths have increased. Hanna Cockburn stated that the funding is stable and NCDOT is working within caps set by state law. Ellen Reckhow asked if there are targets for different modes of transportation. Hanna Cockburn replied that NCDOT is relying on data that is collected once every ten years. Hanna Cockburn added that outcomes are difficult to predict when current data points are difficult to locate.

Sig Hutchinson stated that the Triangle Bike Path has conceptual maps. Hanna Cockburn noted that the Triangle Bike Path is a great example of network connections that the NCDOT Secretary is interested in developing.

Jenn Weaver stated that there are challenges that face small communities, such as Hillsborough, and that she would like to see them included in the Regional Policy Priority document.

Wendy Jacobs announced that the Durham County Board of County Commissioners (BOCC) has implemented a resolution regarding preference of multiuse path instead of separated bike/ped lanes where appropriate. Wendy Jacobson stated that it would be necessary to change further policy from using separated bike/ped lanes to the preferred multiuse path. Hanna Cockburn replied that the update to Complete Street policy would reflect a change a preference in bike/ped lanes to multimodal path preference. Hanna Cockburn added that best practices have advanced in the last decade, and later referenced the AASHTO Green Book.

Ellen Reckhow stated that the multiuse path meets the requirement to have all ages of residents be able to use them. Chris Lukasina referenced *Strengthen Support for Demand Management & Technology: A Triangle Metro Region Transportation Priority*.

Will Allen asked if any elements were related to Intelligent Transportation System (ITS). Chris Lukasina responded that technology elements, which were strong that previous years, were related to ITS. Chris Lukasina also stated that Active Freeway Management is the new term for Managed Motorways.

Wendy Jacobs stated that, in order to activate the Regional Policy Priorities, the DCHC MPO Board will provide comment to their staffat their next meeting on November 14, 2018.

6. Key Regional Efforts: Status and Engagement by Aaron Cain and Alex Rickard

Aaron Cain introduced the three speakers for the next two presentations: Lynn Purnell and David Ungaman for Regional Tolling and Jody Lewis for Regional ITS. Aaron Cain added that there were forms for attendees to complete and return following the meeting.

6a. Regional Tolling by Lynn Purnell (WSP) and David Ungaman

There was discussion about express lanes and toll roads. There was discussion about how express tolls are market driven. Ellen Reckhow asked if express tolls affect behavior.

Nina Szlosberg-Landis asked about new technologies. There was discussion about how newer technologies guide the future at both national level and research level.

Ellen Reckhow asked about how revenue is spent.

Nina Szlosberg-Landis asked about the actuals of revenue in other cities. There was discussion about how the answer can be varied depending on the city.

Nina Szlosberg-Landis asked how express lanes compare with toll roads. There was discussion about express lanes and toll roads being different entities and difficult to compare.

6b. Regional Intelligent Transportation System (ITS) Plan Update by Jodi Lewis (VHB)

Jody Lewis stated that ITS is the advancement of transportation safety and mobility. Jody Lewis stated that examples of ITS include; Closed Circuit Television (CCTV), speed sensors, preemption receivers and emitters, etc.

Jody Lewis stated that the last Regional ITS Plan Update was in 2010. Jody Lewis stated that components of the plan would include; assessing existing conditions and identifying gaps, evaluating of new ITS strategies, updating the Triangle ITS architecture, developing regional architecture and use and maintenance plan, developing methodology to prioritize ITS, etc.

Jody Lewis stated that his early findings were that the Triangle region is actively implementing ITS infrastructure with success. Jody Lewis stated that the next step would be to conduct stakeholder meetings and interviews.

Will Allen asked how success is measured. Jody Lewis responded that success is measured by reduced traffic and commute times.

Michael Parker asked if ITS serves bicycle and pedestrian traffic as well as vehicle traffic. Jody Lewis responded that ITS aids technology such as cross walk lights, but ITS is not focused on bike/ped traffic.

Renee Price requested that the DCHC MPO Board be updated with expenditures for ITS.

Wendy Jacobs asked about funding strategies for the ITS. Jody Lewis responded that CAMPO and DOT would aid in funding strategies.

Alex Rickard asked how ITS could influence the Strategic Planning Office of Transportation (SPOT) process and SPOT scores. Jody Lewis replied that the study will be starting point. Jody Lewis added that it is helpful for ITS to be incorporated in plans at the beginning of project development.

6c. Regional Passenger Rail by Jeff Mann, GoTriangle

Jeff Mann stated that the light rail design is progressing well and $102M is needed to fill the budget gap. Jeff Mann stated that an engineering challenge is designing downtown Durham near Pettigrew Street. Jeff Mann stated that GoTriangle is preparing for the Risk Review at end of November 2018. Jeff Mann added the Risk Review includes assessing risk to project based on schedule and budget. Jeff Mann stated that 20% contingency is included in the budget, however, inflation and workforce costs means the budget could increase.

Jeff Mann stated that the commuter rail is in the preplanning and project development phase. Jeff Man stated that the Energy Assessment is being planned. Jeff Mann stated that project development is scheduled for December 2019. Jeff Mann stated that the engineering plan is scheduled for 2021.

6d. SPOT 5 Update

Aaron Cain stated that the DCHC MPO is nearing the completion of the SPOT 5 process. Aaron Cain added that the draft STIP is scheduled to be released in January 2018, and it is planned to be finalized in June 2018. Aaron Cain added that many SPOT 5 projects are accelerated. Aaron Cain mentioned Division Needs projects of particular interest to the region as a whole.

Alex Rickard presented on the amount of funding available for Division Needs projects overall and for Divisions 4, 5, 6, 7, & 8. Alex Rickard emphasized that there is a very limited amount of funding available for Division Needs projects.

7. MPO Strategic Partners from Joe Milazzo, Regional Transit Authority and Joey Hopkins, NCDOT

Joe Milazzo stated that by 2028, there will be five Bus Rapid Transit (BRT) services, one commuter rail line, and one light rail line. Joe Milazzo stated that the RTA annual meeting is going to be January at Embassy Suites in Cary, NC. Joe Milazzo added that the *Make 40 Better* task force will be discussed.

Joey Hopkins stated that I-40 East of Raleigh will be updated and it was already awarded.

8. Other Business

There was no other business that was discussed.

9. Adjournment

Wendy Jacobson and Sig Hutchinson thanked everyone for attending. The meeting adjourned at 11:15AM.

RESOLUTION TO REQUEST THE TRANSFER OF FUNDS FROM FEDERAL HIGHWAY ADMINISTRATIN (FHWA) TO FEDERAL TRANASIT ADMINISTRATION (FTA) FOR THE DURHAM-CHAPEL HILL-CARRBORO URBAN AREA

November 14, 2018

A motion was made by Board Member _____ and seconded by Board Member _____ for the adoption of the following resolution, and upon being put to a vote, was duly adopted.

WHEREAS, Congestion Mitigation Air Quality (CMAQ) funds are provided to DCHC MPO for projects to reduce congestion and improve air quality; and

WHEREAS, the DCHC MPO approved FFY19 CMAQ funds for TIP # TA-6696 on October 10, 2018; and

WHEREAS, the Federal Transit Administration (FTA) administers most transit projects through the FTA's Urbanized Area Formula Grant Program; and

WHEREAS, in order for local governments to receive CMAQ funds for transit projects, the Federal Highway Administration (FHWA) must transfer the funds to the FTA; then

BE IT THEREFORE RESOLVED that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Board hereby requests that the Federal Highway Administration transfer the CMAQ funds to the Federal Transit Administration for projects described on the attached table as soon as it is authorized to do so provided here on this, the 14th day of November, 2018.

_____
Damon Seils, MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: November 14, 2018

_____
Notary Public
My commission expires:

Table: Funds to be transferred from FHWA to FTA

TIP #	Subrecipient	Project Description	Federal Funds	Funding Source	FTA Project #
TA-6696	GoDurham	Purchase Electric Buses	$400,000	FFY19 CMAQ FHWA to 5307 FTA	1060-2018-2

Transportation Policy Priorities
FOR THE TRIANGLE METRO REGION

KEYS TO A MOBILE FUTURE

Transportation is big. But it is always part of something bigger: economic development opportunities or healthy, active neighborhoods or greater access to jobs and education. The Triangle Metro Region – urban, suburban and rural -- was home to 37% of the state's growth from 2010-17, and is expected to add another million people over the next generation. A transportation policy that enables North Carolina to continue to compete effectively must focus on 3 key areas:

- Economic Development & the Attraction of Diverse Talent
- Healthy, Complete Communities Accessible to All Residents
- Safety for All Travelers, From Youth to Seniors

REGIONAL POLICY PRIORITIES

Seven key priorities can result in fast-growing regions staying ahead of the growth curve, rural areas and small towns taking advantage of economic opportunities and every community providing complete streets and safe solutions tailored to local conditions.

INVEST FOR SUCCESS

- Enable critical transportation infrastructure across all modes to be addressed sooner with a statewide transportation bond.
- Create a new funding source for multi-modal mobility investments tied to economic development projects in small towns, rural areas, and along major corridors in metro regions.

The BuildNC bond is a good start, but it needs to support major multi-modal investments, not just highways. While the bond would let us invest faster, it does not increase total investment; it lets us spend tomorrow's revenue today.The state needs an economic development-focused revenue source for investments that are not well suited to the long and constrained process of the Strategic Transportation Investments (STI) program.

- Minnesota's Transportation Economic Development Program could be a model for a nimble, economic-based effort -

MAKE INVESTMENTS RELIABLE AND PREDICTABLE

- Remove caps and constraints on rail transit funding

The STI program distributes state and federal transportation dollars in a reasonable way with one exception: the caps and constraints on rail transit. Rail transit should be held to the same standards as other investments. Caps on state allocations and handcuffs on receiving state funding should be removed so that projects can compete on a level playing field and be funded on their merits. Businesses tell us that risks, uncertainties and changing rules stifle success - transportation investment is a key business for the state and its communities.

- $1 million invested in transit generates 4,200 job-hours; $1 million in roadway investment generates 2,400 job-hours -

ENABLE CRITICAL CORRIDOR INVESTMENTS TO BE MORE COST EFFECTIVE

Relax the cap on statewide tier funding within a corridor.

While the reasoning behind a cap is sound, its application can lead to inefficient, piece-meal spending which costs more in the long run and affects travelers throughout the state.The cap can also prevent investments on parallel reliever roadways that could be cost-effective and complimentary investments.

- 31% of vehicles on the Triangle's busiest stretch of I-40 - which is hampered by the corridor cap - are from areas outside Wake and Durham counties -

REMOVE FUNDING BARRIERS FOR SMALL TOWNS AND RURAL AREAS IN DIVISIONS WITH LARGE MPOS

Exempt Surface Transportation Block Grant-Direct Allocation Funding from the STI Allocation.

These funds are allocated from the federal government to MPOs to address additional mobility challenges of congested urban areas. Exempting these funds from the STI formula at the Division Tier would allow funding to be more evenly distributed and let small towns and rural counties better compete for funds.

- STI already exempts 8 other categories of transportation revenues -

MAKE NC A LEADER IN ACTIVE TRANSPORTATION INVESTMENTS

Reinstate funds for economically beneficial and safety-focused bicycle and pedestrian projects.

Whether its a critical link to attract tourism on the East Coast Greenway, an important sidewalk connection to make travel to school safer, or a Main Street bike and pedestrian project to serve businesses, state funding provides crucial leverage for federal funds and local contributions.

- 16% of crash fatalities are pedestrian or cyclists; the state is a necessary partner in solutions -

STRENGTHEN SUPPORT FOR DEMAND-MANAGEMENT AND TECHNOLOGY

Grow the state's investment in Transportation Demand Management (TDM) and technology applications such as ramp-metering and managed motorways.

The most cost-effective dollar spent is on efficiently managing the demand for the supply of roads we already have. Working with employers on ways to offer workers alternatives to peak-hour, drive-alone commuting and deploying technologies to maximize the roadway supply are key elements of the smart city movement.

- The Triangle TDM program has reduced vehicle miles traveled by nearly 280 million miles over the past 5 years -

RECOGNIZE STATEWIDE PROJECTS IN OTHER MODES, NOT SOLELY ROADWAYS AND FREIGHT RAIL

Establish standards and scoring criteria for designated statewide passenger rail and trail investments.

Just as major highways serve statewide interests, so do other modes. Passenger rail from Charlotte to Raleigh serves 5 NCDOT divisions and 3 NCDOT regions. Great trails also traverse the state - the East Coast Greenway stretches from VA to SC and the Mountains-to-Sea Trail runs 1,175 miles from the Great Smokey Mountains to the Outer Banks.

- Passenger rail between Charlotte and Raleigh contributes $60 million to business output and $30 million to GSP annually-

This policy document was produced by Triangle J Council of Governments.
Visit www.tjcog.org/transportpriorities.aspx for additional information.

DCHC Metropolitan Planning Organization
Planning Tomorrow Today

CAMPO Capital Area Metropolitan Planning Organization

Make NC a Leader in Active Transportation Investments

A Triangle Metro Region Transportation Priority

Reinstate funds for economically beneficial and safety-focused bicycle and pedestrian projects and programs.

Whether its a critical link to attract tourism on the East Coast Greenway, an important sidewalk connection to make travel to school safer, or a Main Street bike and pedestrian project to serve businesses, state funding provides crucial leverage for federal funds and local contributions.

- 16% of crash fatalities are pedestrian or cyclists; the state is a necessary partner in solutions -

North Carolina and the Triangle Metro Region should prioritize active transportation investments that support healthy and safe communities. Two initial focus areas can be:

- Improved implementation of **Complete Streets** projects and
- **Active Routes to School** approaches that have demonstrated health and academic performance benefits.

Complete Streets

What success looks like: NCDOT, the Metropolitan Planning Organizations, and local communities engage in continual collaboration to improve the NCDOT Complete Streets Policy and its application to specific projects.The type of facility provided - accompanied by consistent funding and a seamless approach to maintenance - should be based on the characteristics of the corridor and the mobility needs of the users, rather than the type of facility and the municipality or county jurisdiction it is within.

Regional Example: The NC 98 CORRIDOR STUDY

This joint planning effort between NCDOT, and the Durham-Chapel Hill-Carrboro and Capital Area Metropolitan Planning Organizations looked at the future of the NC 98 corridor from Franklin County to the City of Durham. The study identified a great need for safe bicycle and pedestrian connections as part of a solution to increasing traffic in the corridor. Incorporating bicycle and pedestrian accommodations into the corridor was one of the top themes from public engagement. The study recommended a side path throughout the corridor with grade-separated crossing, and high traffic and major conflict points along with a 4-lane median divided roadway to serve future needs.The result would be the northern multi-modal backbone of the transportation network in the Research Triangle region.

Active Routes to School

What success looks like: School systems and local communities – with support from the MPOs and NCDOT – continue to expand the reach of the Active Routes to School (AR2S) program, both at existing schools and in the earliest stages of planning for new schools.

The Regional Setting

What began as the Safe Routes to School (SR2S) program and became the Active Routes to School (AR2S) program has been a success story in NC. Overall physical activity has a positive impact on learning and health. North Carolina schools that participate in the AR2S program see improvement in attendance, reductions in tardiness, and improvements in academic performance as well as classroom behavior. Directly mandated funding for SR2S/AR2S has been replaced with more flexible funding sources but decisions about how those funding sources get used still includes AR2S.

Next Steps for the Metropolitan Planning Organizations

- Track the progress of complete streets implementation on state and municipal road projects, including cost and design details.
- Work with NCDOT to propose modified procedures and standards that can make the design, funding, and maintenance of complete street elements easier to accomplish.
- Prioritize implementation of active transportation projects through existing programs, and focus recommendations for these projects when developing plans and studies.
- ....

{Final list to be based on discussions and feedback at Joint MPO Policy Boards meeting, and follow-up with MPO technical committees.}

How to Support Active Transportation Investment in Your Community

- Municipal staff work with local school principals and PTAs on "walking school bus" efforts.
- Work with the School System to ensure school siting and design include features that make walking and cycling to campuses safe and inviting.
- ...

{Final list to be based on discussions and feedback at Joint MPO Policy Boards meeting, and follow-up with MPO technical committees.}

Strengthen Support for Demand Management & Technology

A Triangle Metro Region Transportation Priority

Grow state investment in Transportation Demand Management (TDM) and technology applications such as ramp-metering and managed motorways.

The most cost-effective dollar spent is on efficiently managing the demand for the supply of roads we already have. Working with employers on ways to offer workers alternatives to peak-hour, drive-alone commuting and deploying technologies to maximize the roadway supply are key elements of the smart city movement.

- The Triangle TDM program has reduced vehicle miles traveled by nearly 280 million miles over the past 5 years -

The Triangle Metro Region can be a leader for the state in deploying emerging technologies and demand management solutions that optimize roadway and transit capital projects. Two initial focus areas can be

- Taking the already successful **Regional Transportation Demand Management Partnership** to the next level and
- A three-pronged approach to **Technology Infusion** that optimizes how we travel and paves the way for automated, connected vehicles.

Regional Transportation Demand Management Partnership

What success looks like: NCDOT, the Triangle Metro's MPOs and other regions collaborate to recruit, recognize and reward employers and communities that implement Transportation Demand Management practices.

Regional-Scale Program, Regional-Scale Results

By combining resources and using a joint oversight committee to select service providers through a competitive annual process, the NCDOT and the two MPOs provide guidance and support to a dozen service providers who work with communities, employers and commuters to reduce the amount of single-occupant vehicles commuting during rush hours throughout the region. The effort resulted in 5.7 million vehicle trips avoided, 63 million commute miles reduced and 2.6 million gallons of gas saved between July 2017 and June 2018.

Technology Infusion

What success looks like: A future-directed approach that doesn't let uncertainty keep us from taking evidence-based actions to better manage freeways, local streets and activity center travel.

Active Freeway Management (AFM)

A solution that melds communications systems, control systems, and optimization strategies that can significantly reduce delay and increase reliability, AFM systems provide as much as an additional lane of freeway capacity more cost effectively than traditional road projects. AFM can be used in conjunction with managed lanes and toll facilities.

Community Traffic Signal Systems

The full benefit of traffic signals is achieved by an integrated network within a community, linked to a traffic management center. Successful applications offer more efficient congestion management and faster response to and clearance of incidents. Systems can be a key element of future automated and connected vehicle enabling infrastructure.

Activity Center Mobility

Much of our travel is linked to major activity centers (e.g. town centers, anchor institutions). A smart combination of information technology, pricing policies and travel choices can keep campuses, town centers and other activity centers people-friendly rather than vehicle-oriented. The recent Bloomberg Mayors Challenge grant to Durham can be an early demonstration about how to proceed.

Next Steps for the Metropolitan Planning Organizations

- Work with NCDOT to utilize unspent federal Congestion Mitigation and Air Quality (CMAQ) funding on eligible TDM and technology projects.
- Work with NCDOT and other MPOs to create a tiered "best in class" statewide recognition program for employers and communities that institute TDM programs.
- Strengthen relationships with non-traditional partners involved in technology development and deployment that can benefit the region.
- Work with state officials to reinstate the ability of local communities to adopt TDM ordinances in places where criteria for travel alternatives can be met.

{Final list to be based on discussions and feedback at Joint MPO Policy Boards meeting, and follow-up with MPO technical committees}

How to Support TDM and Technology in Your Community

- Engage large employers, including local government, on the merits of implementing a TDM program.
- Seek opportunities to establish or participate in pilot or demonstration programs for emerging technologies.
- Work with NCDOT and the MPO on signal system and active freeway management opportunities.

{Final list to be based on discussions and feedback at Joint MPO Policy Boards meeting, and follow-up with MPO technical committees}

This policy document was produced by Triangle J Council of Governments. Visit www.tjcog.org/transportpriorities.aspx for additional information.

Twelve Slides on Travel Markets

(including this one!)

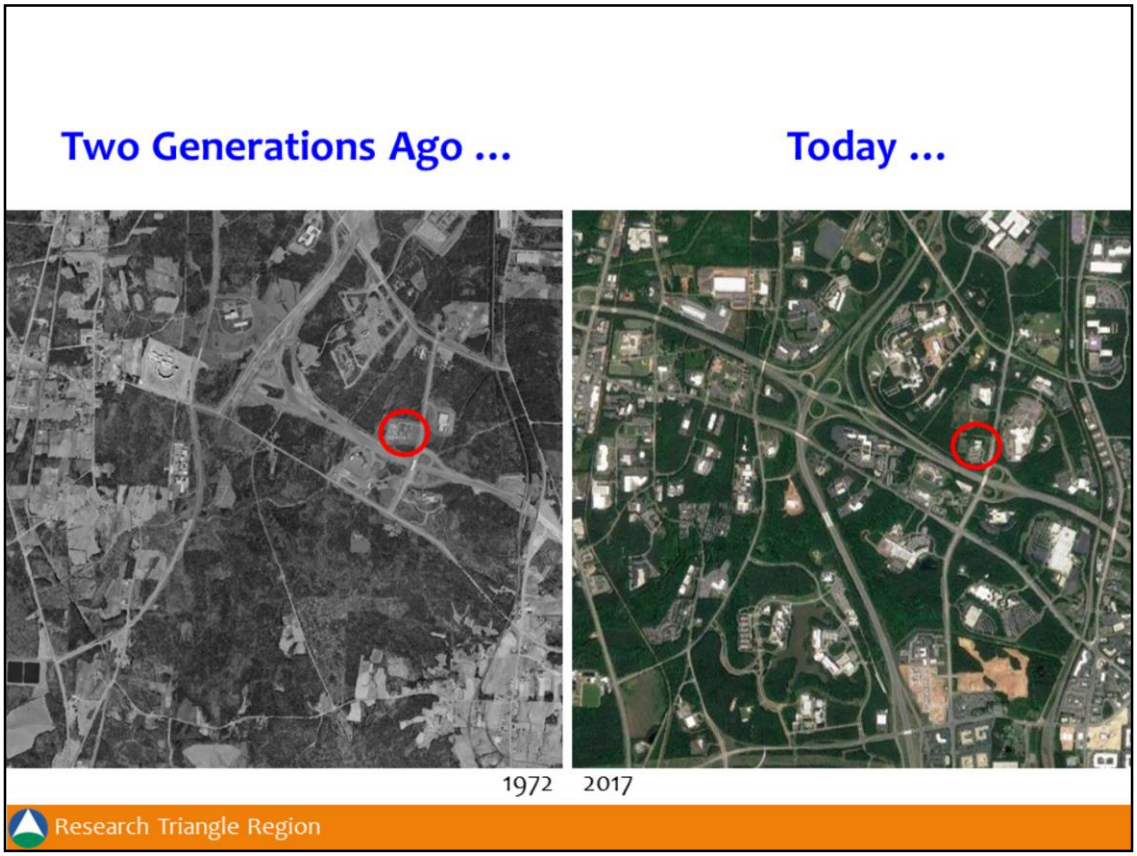
John Hodges-Copple
October 31, 2018

TRIANGLE J COUNCIL OF GOVERNMENTS

Research Triangle Region

Good morning. At your last meeting in May, we started you off with a quick set of maps of planned major transit investments in the region, so that each MPO could see not only its own investments, but how they fit into a long range regional network.

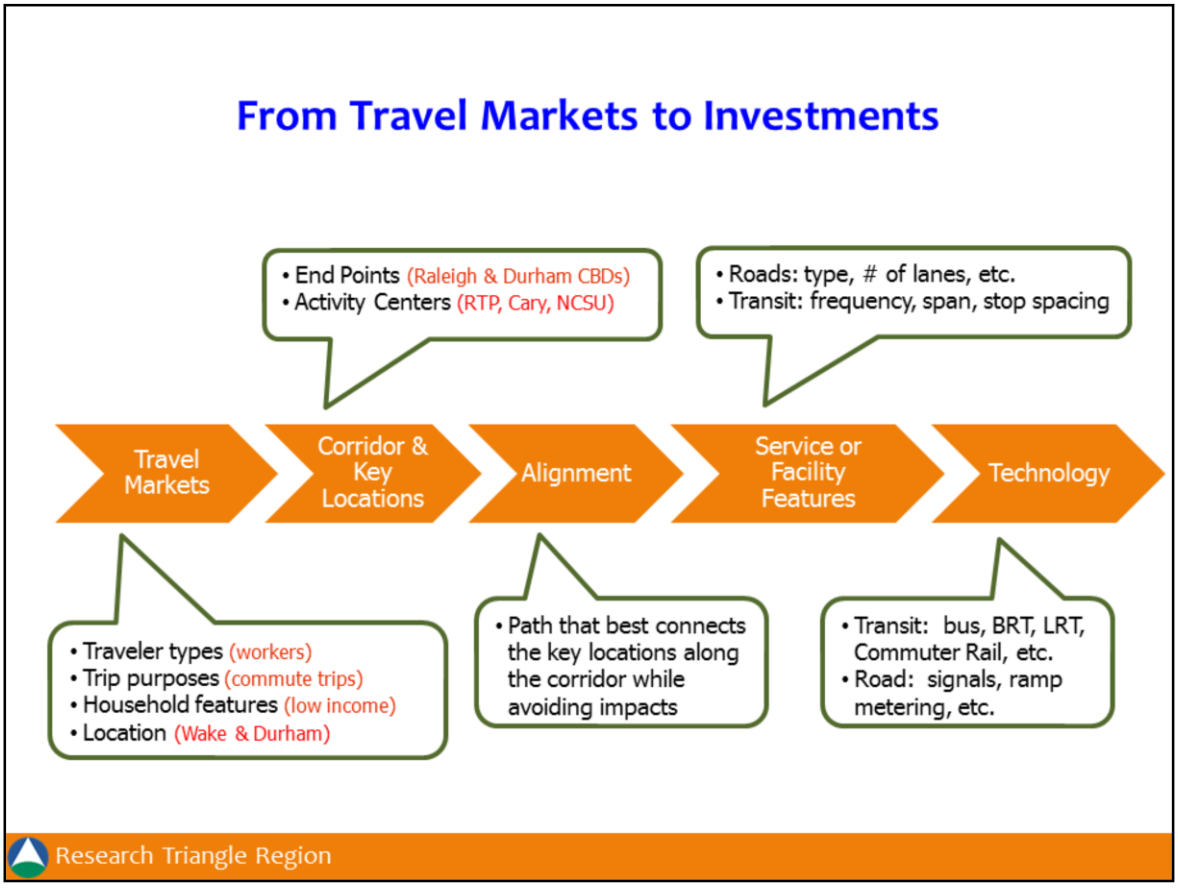
We're going to do a similar brief introduction at this meeting, but this time focusing on the concept of "travel markets," the other end of the spectrum from the specific investment decisions you are typically asked to make.



On the left is the RTP in 1972. On the right is the same scene today. This little red circle is where we are sitting, at the intersection of Davis Drive and I-40, which if you squint real hard at the image on the left, is under construction but not yet open.

I-40 was a seminal investment made by leaders two generations ago which has shaped and influenced what the Triangle has become, both physically and economically. Note where I-40 took this sharp turn towards the Durham Freeway – it didn't extend towards Chapel Hill – and wouldn't until 20 years later, but they have bought the land and designed the project to ensure that it would be easy to do so.

I use this as an illustration that <u>the decisions we are making today will set the stage for what will come, just as the decision made by our predecessors to invest in this highway – and to make initial investments that set the course for future ones -- enabled the development which followed</u>. Just as they had to think about the travel markets of a far-off future, so do we.



At its most simple, travel markets can be thought of as the flows of people and goods that travel within and across our region.

The investment decisions we then make:

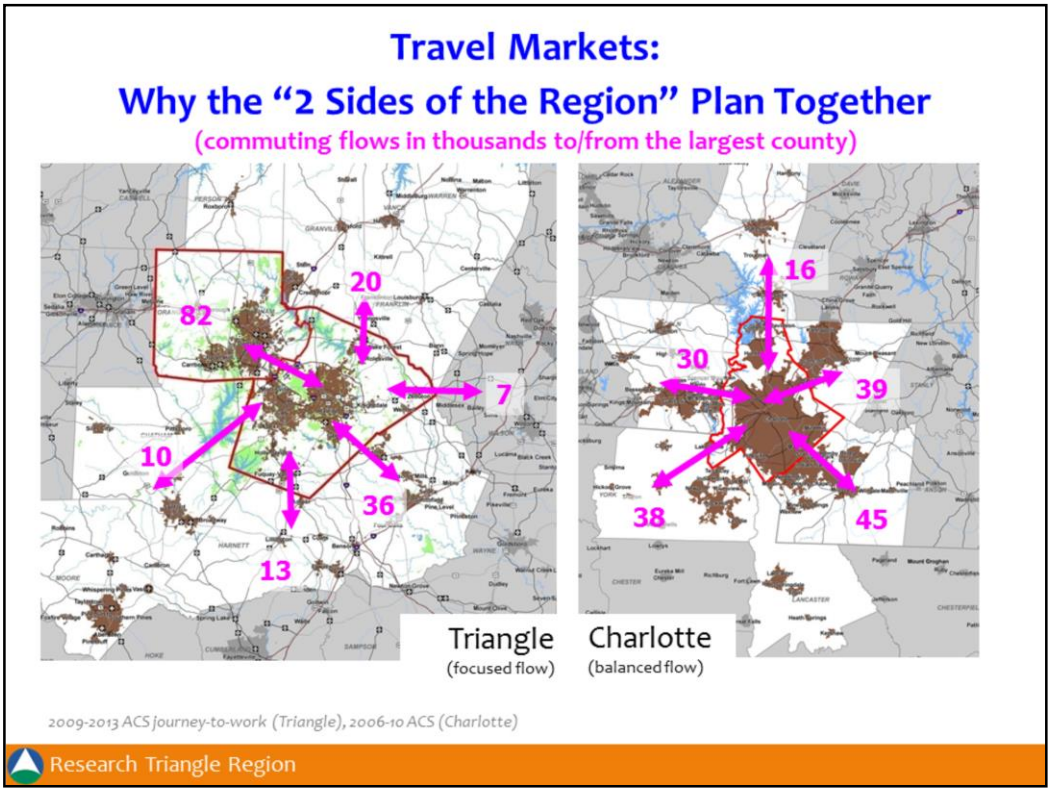
… on corridors,

… on alignments within corridors,

… on the services and facilities that use those alignments, and

… on the technologies that provide those facilities and services all benefit from being examined through the lens of the markets they serve.

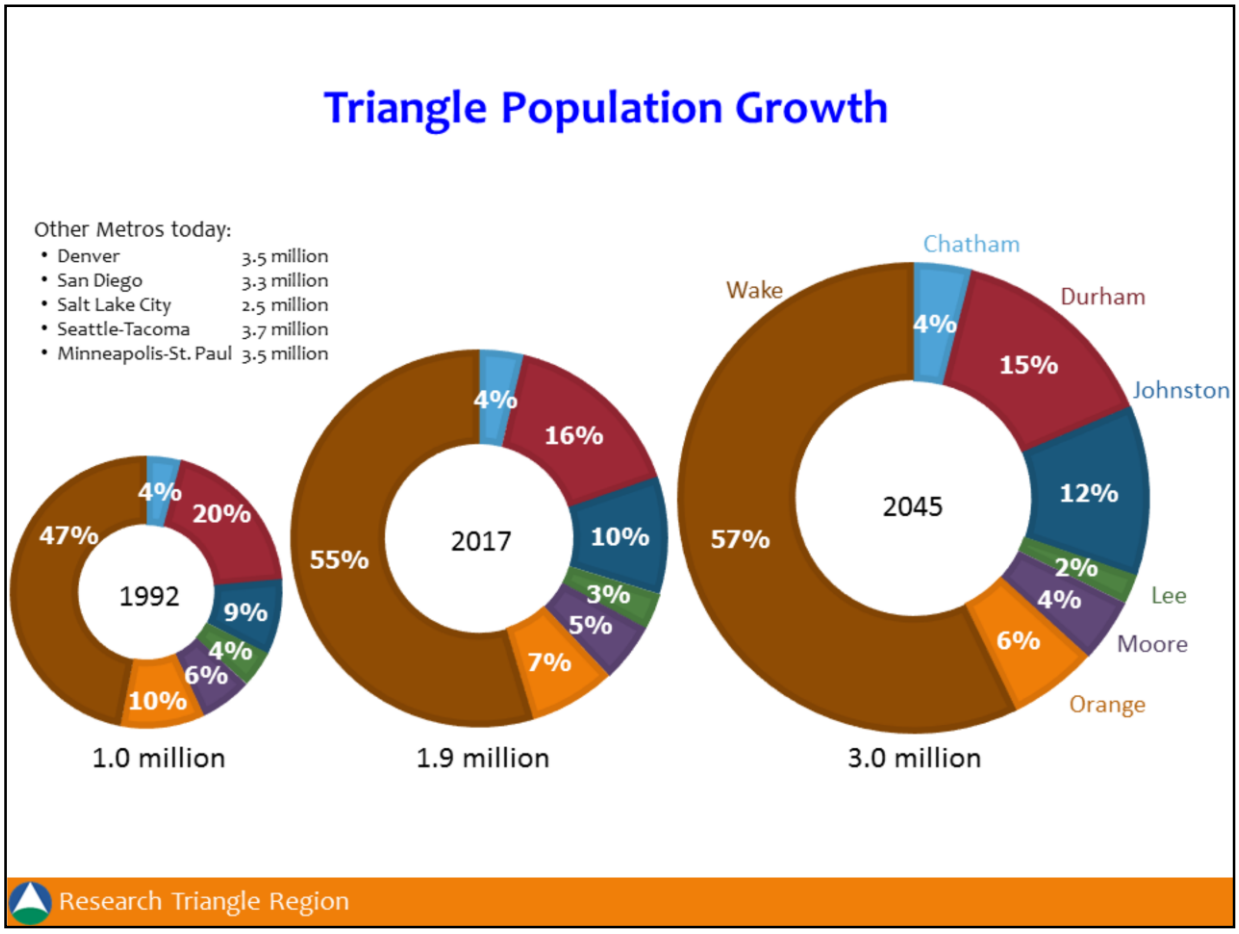
Looking at different segments of travel markets can help inform subsequent steps along our decision-making path…



So understanding these "**travel markets**:" these flows of people and how they might change over time, is an important basis for the decisions you are asked to make about services and facilities and technologies on the downstream end.

Mis-aligning investments with travel markets is probably the easiest way to either waste money or miss opportunities. The Triangle truly is different than most other places: region's like Charlotte, with a dominant central city that imports commuters from all points of the compass each morning and exports them each afternoon.

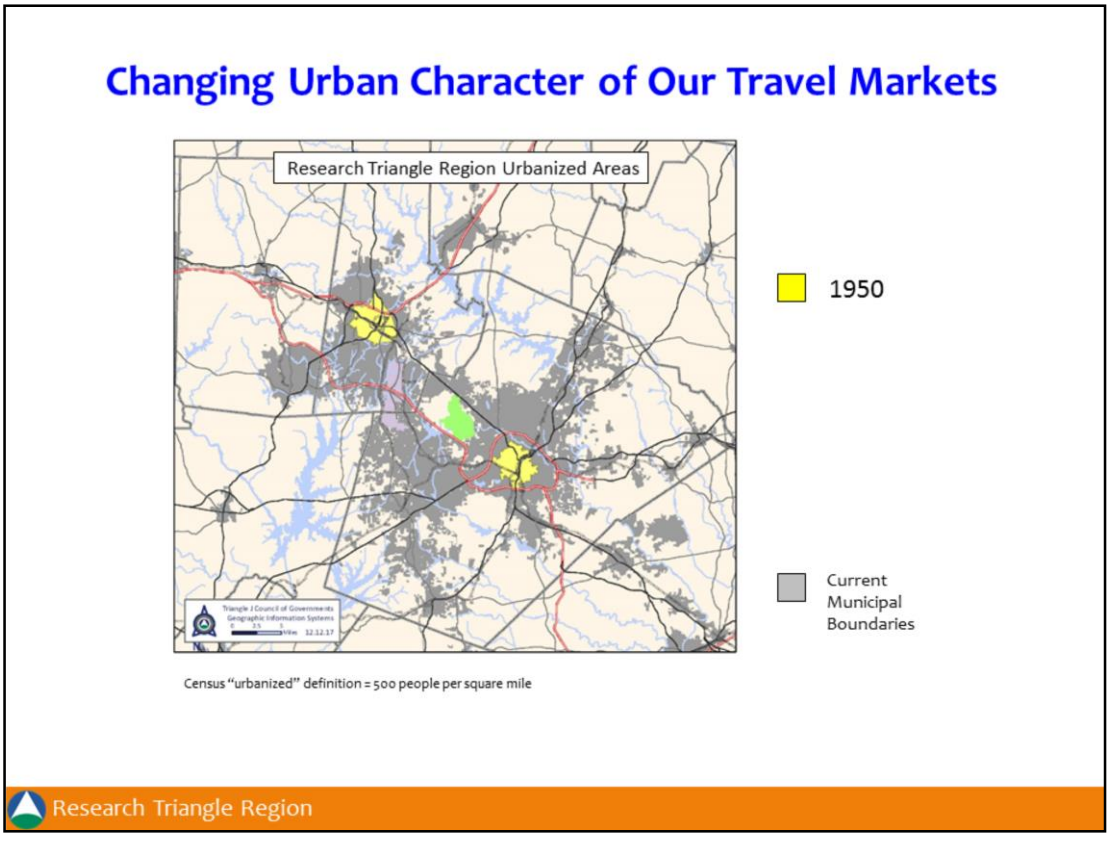
In the Triangle, only Johnston County matches that typical pattern at a major scale today. Travel between Wake County and Durham & Orange Counties dwarfs all the other flows, and is heavy in both directions during peak periods. And that is one reason it is so important for the two MPOs to work together.



Travel Markets aren't static. They change, for example, in both size and behavior, and sometimes in unanticipated ways. In our region, we can be pretty confident that many components of our travel markets will grow, because our development markets are projected to grow, probably quite rapidly.

The state demographer released the 2017 population estimates last month. Sometime in 2019, the Triangle J Region will welcome its 2 millionth resident. Almost 100 people are added to our population each day.

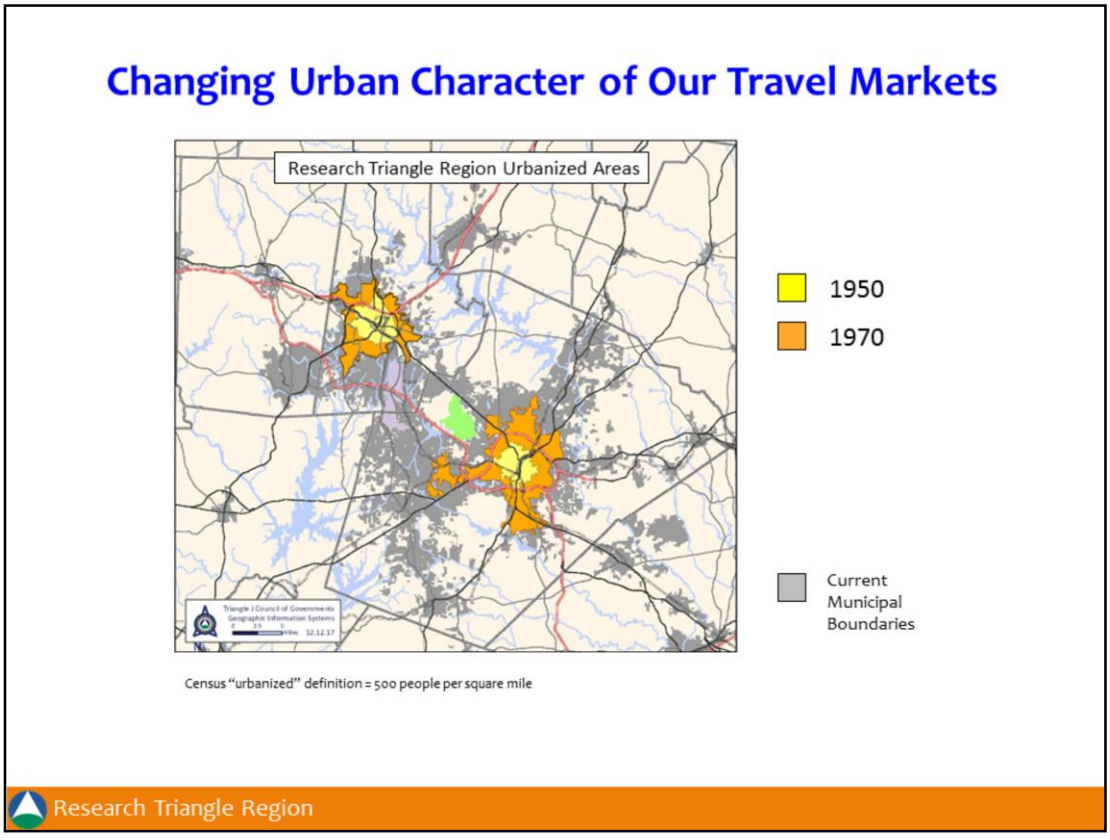
We reached 1 million people a generation ago around 1992 and are projected to get to 3 million a generation from now. I think most people would say it was wise for us to prepare for the region we are today back in the early 1990s; and it makes sense that we ought to be preparing today for the 3 million-person region we will become – especially about long-term investment decisions such as transportation – when we will be the size that the other regions shown on the slide are today.



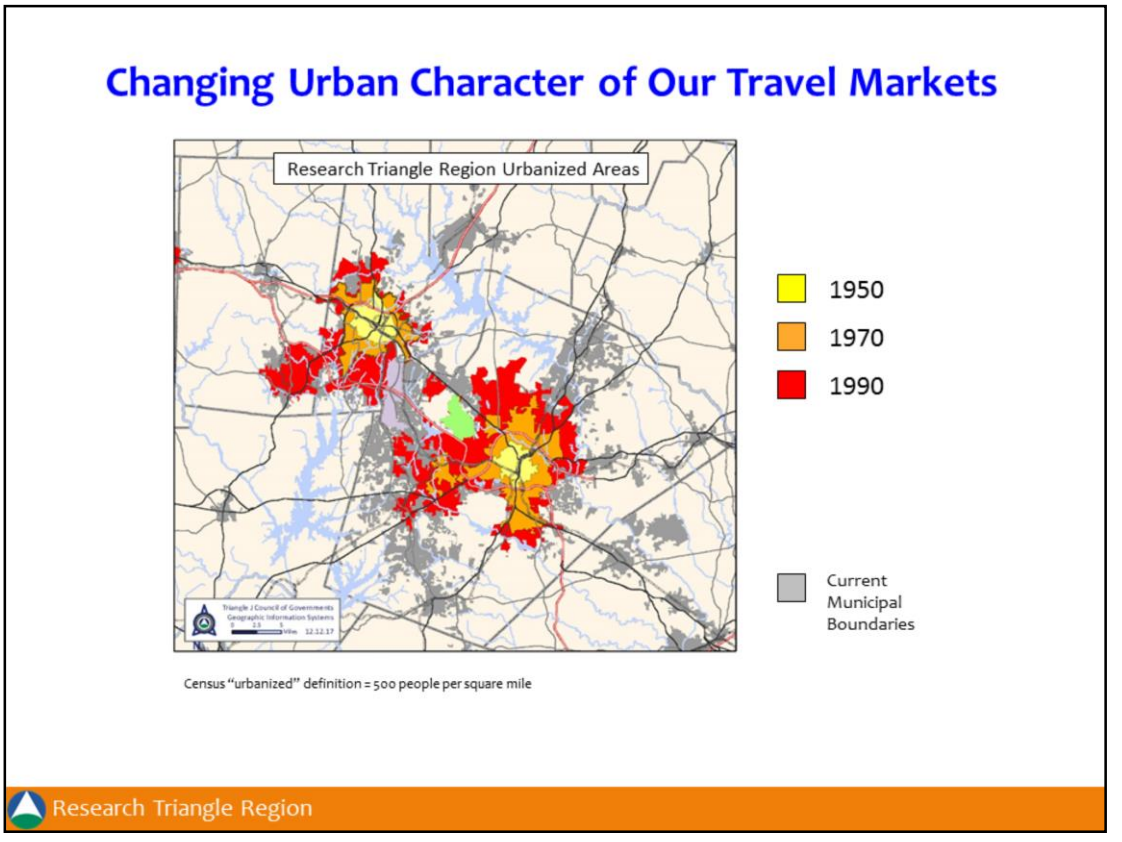
Travel markets not only grow, but change. When the RTP was being dreamed up in the 1950s, here's how the leaders of that time would have understood the region and its travel needs.

To orient you, you can see I-40 and I-85 in red and Falls, Jordan and Harris Lakes in blue, but of course, none of those existed at that time. And the gray is today's municipal boundaries, with the light purple showing the RTP.

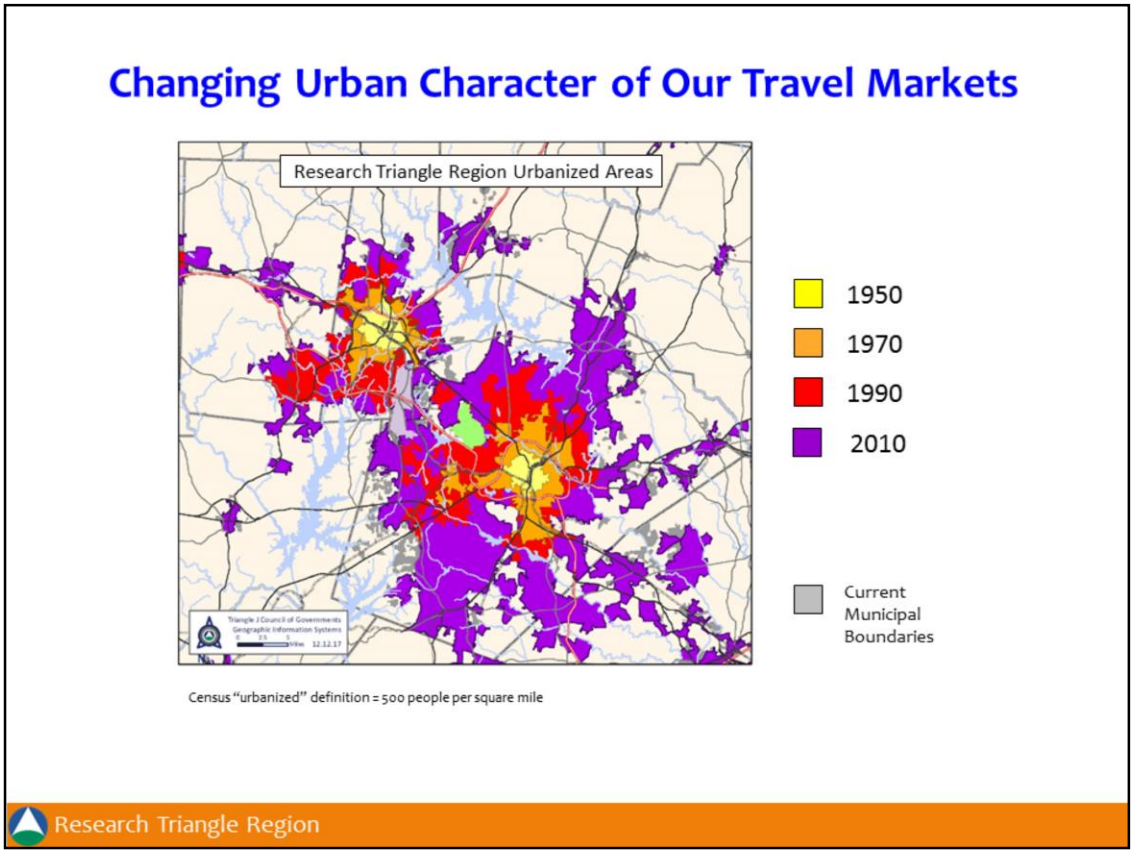
We had 2 sides to the region – the Raleigh urban area to the east and the Durham urban area to the west.



Twenty years later, about the time of that RTP aerial I showed earlier, Raleigh and Durham were still pretty much separate places – so, although we appropriately brand ourselves as The Triangle, until relatively recently, we functionally have had "2 sides of the region."



One generation ago, in 1990, we looked like this – suburbanization spreading into North Raleigh, West Raleigh and Cary, and southern Durham; and with Chapel Hill getting big enough to qualify as part of Durham's "urban" area.

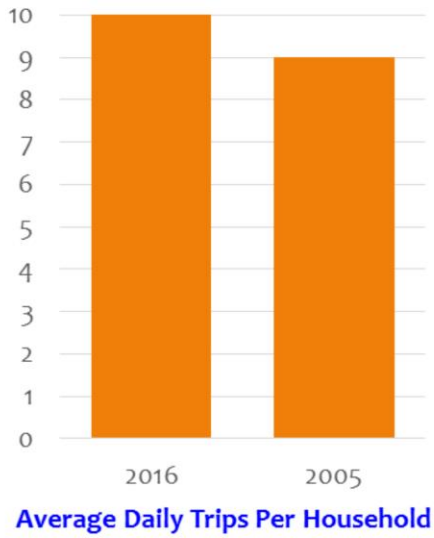


And most recently, urbanization starting to extend into Johnston, Franklin and Chatham Counties.

So in little more than 2 generations from those little spots of yellow to the extensive region of today.

The travel markets we are planning for today are for the 2030's and 2040's, when we might anticipate that those cross-county commuting numbers we saw earlier will continue to increase.

Changing Travel Behavior in the Triangle



Smaller household sizes …
fewer households with children …
more households with retirees …
all lead to fewer trips

3-Person household …	Trips per Day
… with retiree and no children	9.2
… with no retiree nor children	9.7
… with children and no retiree	10.9

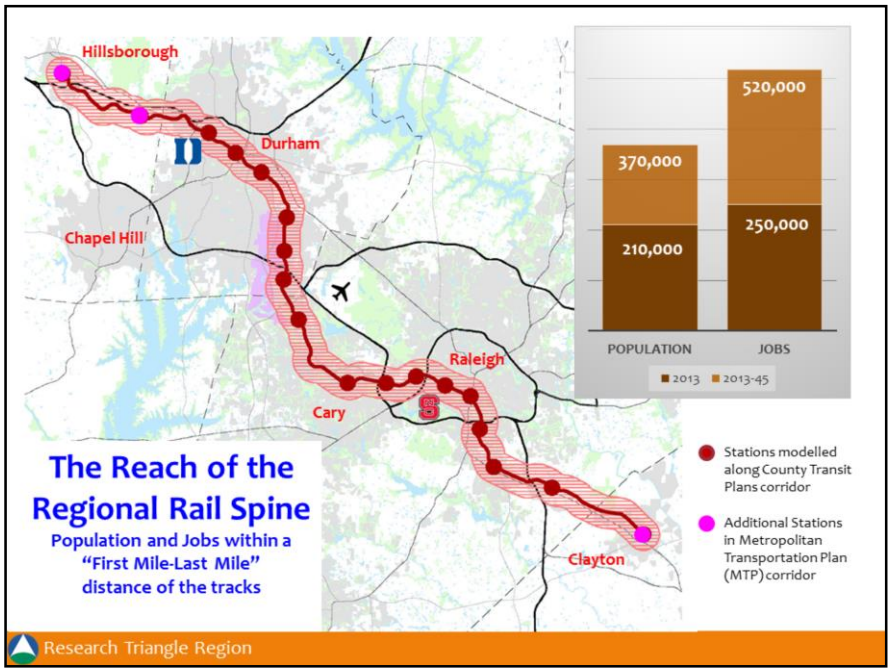
Household Size	Trips per Day
1 person	4.0
2 people	7.1
3 people	10.4

Research Triangle Region

But market size and composition are not the only things that can change. So can traveler behavior. Periodically the two MPOs sponsor a household travel behavior survey. The most recent one was for 2016; the prior one was for 2005. Over that decade, we are seeing some behavior change. This slide shows some examples of how travel behavior is changing, and in ways that are expected.

During the decade, the average number of daily trips each household made dropped from 10 to 9. But that is more a reflection of the changing nature of our households than because individual households are choosing to make fewer trips than they used to.

Smaller household sizes, fewer households with children and more households with retirees – all trends that are predicted to continue – lead to fewer trips per household.

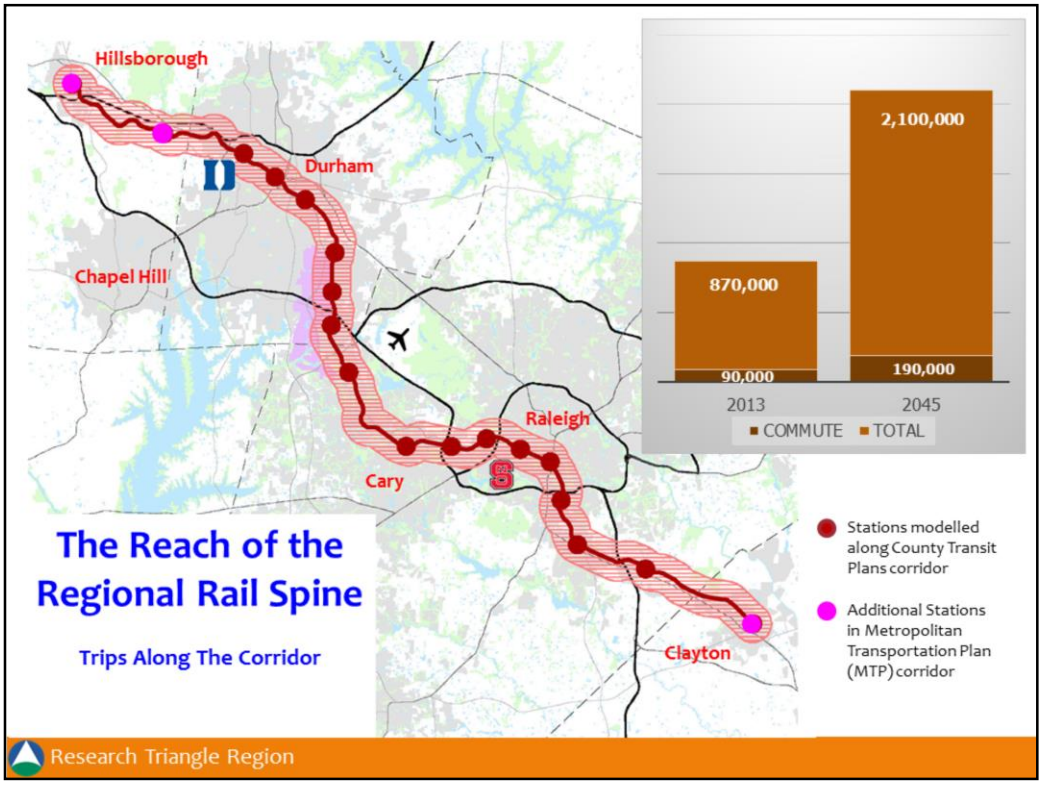


Let me wrap this up with an example. This corridor -- owned by the North Carolina Railroad Company and currently carrying both freight rail and intercity passenger rail traffic [2 travel markets!] -- is being studied for regional passenger rail service, and both the Wake and Durham transit sales tax votes included rail service linking Duke University and Medical Center, downtown Durham, the RTP, central Cary, NCSU, downtown Raleigh and Garner. The MPOs' 2045 Plan has an extended corridor reaching to Clayton in the east and Hillsborough in the west, shown here.

By 2045, there may be 370,000 people and 520,000 jobs located within a "first mile/last mile" ride of that rail line between Clayton and Hillsborough.

If we achieve those growth projections, the travel market for this connection may involve more than just commuters – inbound in the morning and outbound in the evening – and may include people who want a fast, frequent, reliable, convenient way to get back and forth for meetings, events, or other reasons.

Updated: October 30, 2018.



But remember, travel markets are more than just people and jobs – they are about travel flows – people (or goods) moving from one place to another for specific purposes.

Ignoring very important factors, such as trip lengths or the precise location of stations, a rough estimate is that in 2013 almost 900,000 trips each day had both their beginning and end within a mile of the rail line between Hillsborough and Clayton. By 2045, the forecast is that those totals would jump to 2.1 million.

But only a relatively small fraction of those trips are the traditional home-to-work commute and back.

So as you learn about project studies both today and in the future, and as you are asked to make decisions about investments, we hope you will think about the travel markets those investments are designed to serve.

TOLLING & EXPRESS LANES OVERVIEW

TRIANGLE STRATEGIC TOLLING STUDY

Toll Road v. Express Toll Lanes

- Everyone pays a toll to use the facility
- Route-based Choice: option to use the Toll Road or use a different non-toll facility

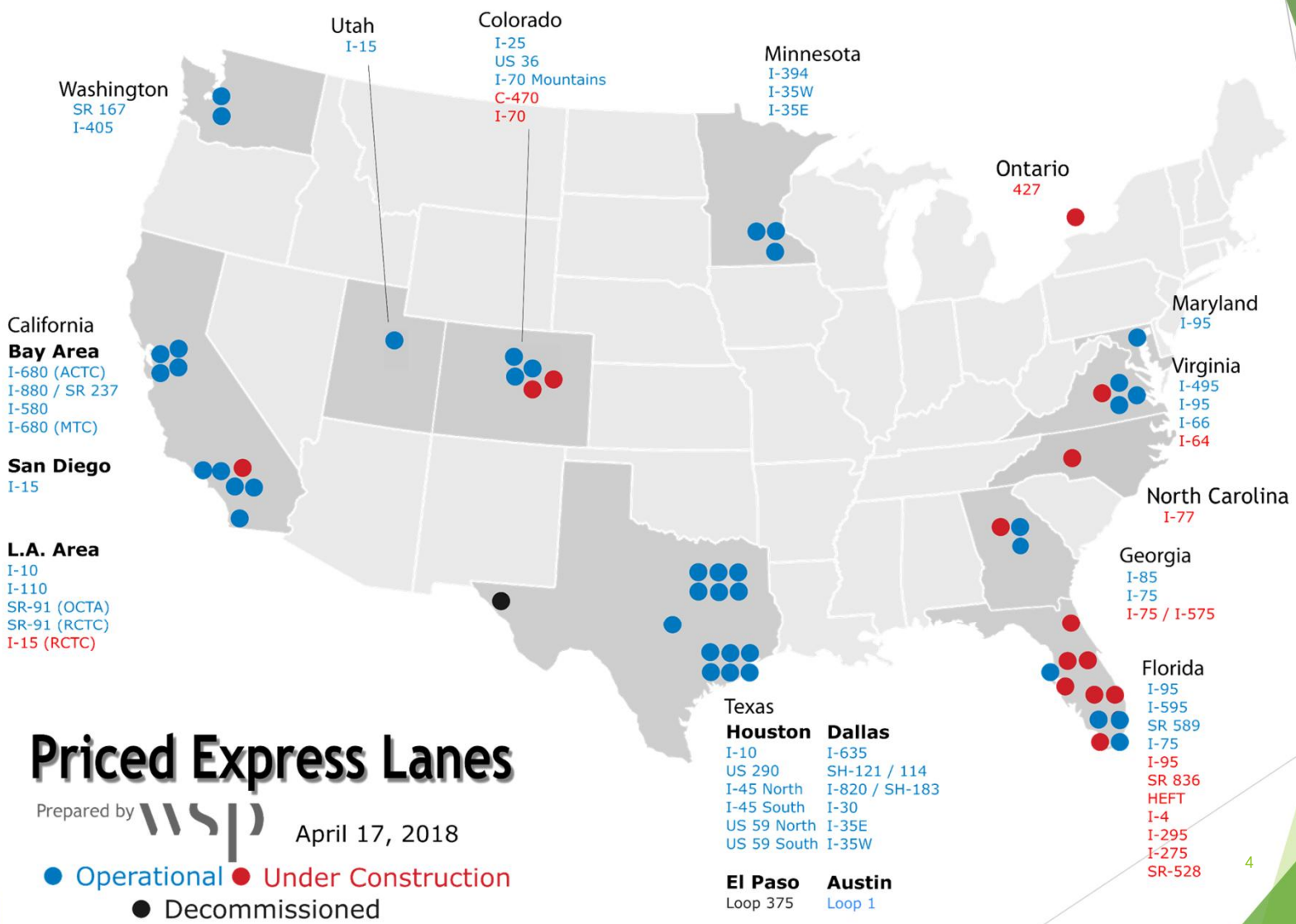
- Only Express Toll Lane users pay a toll
- Lane-based Choice: option to use the Express Toll Lanes or use the toll-free general purpose lanes

TRIANGLE STRATEGIC TOLLING STUDY

So Why Would Anyone Pay a Toll?

Toll Roads and Express Toll Lanes provide higher travel speeds, lower and consistent travel times, and a higher quality of trip than toll-free general purpose lanes …

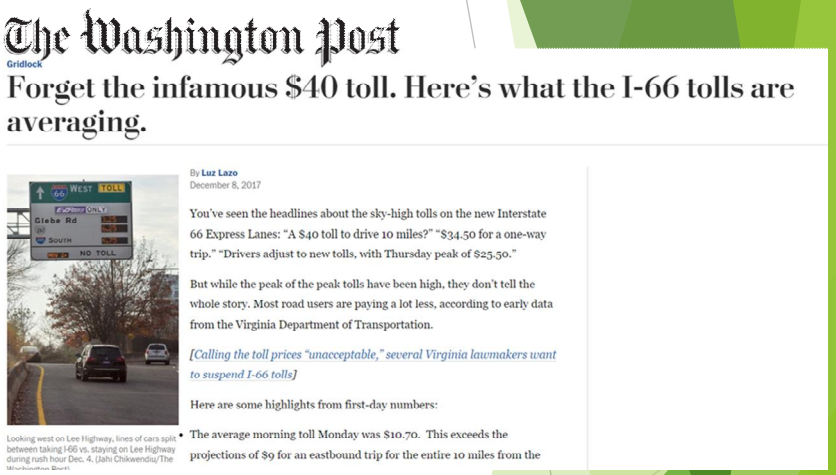
… as proven by over 40 variably priced facilities in 11 states.



TRIANGLE STRATEGIC TOLLING STUDY

Biggest Misconceptions about Express Toll Lanes

- Cost to use express toll lanes is high.
  - National peak period toll is less than $5
- Heavy cost burden per month
  - Less than 1% of corridor commuters use every day
  - National average cost per month is $10-15 / month
- Express toll lanes will be as congested as toll-free lanes
  - Provide congestion relief for all travelers
  - Express lanes managed for 45+ mph at all times
- Foreign ownership concerns for tolling
  - 75% of express toll lanes are wholly owned, operated, and controlled by public agencies
  - Even if P3 concessionaire, state still controls the roadway operations, costs, and revenue through formal P3 contract



The Washington Post

Gridlock

Forget the infamous $40 toll. Here's what the I-66 tolls are averaging.

By Luz Lazo
December 8, 2017

You've seen the headlines about the sky-high tolls on the new Interstate 66 Express Lanes: "A $40 toll to drive 10 miles?" "$34.50 for a one-way trip." "Drivers adjust to new tolls, with Thursday peak of $25.50."

But while the peak of the peak tolls have been high, they don't tell the whole story. Most road users are paying a lot less, according to early data from the Virginia Department of Transportation.

[Calling the toll prices "unacceptable," several Virginia lawmakers want to suspend I-66 tolls]

Here are some highlights from first-day numbers:

- The average morning toll Monday was $10.70. This exceeds the projections of $9 for an eastbound trip for the entire 10 miles from the

Looking west on Lee Highway, lines of cars split between taking I-66 vs. staying on Lee Highway during rush hour Dec. 4. (Jahi Chikwendiu/The

ABOUT THE STUDY

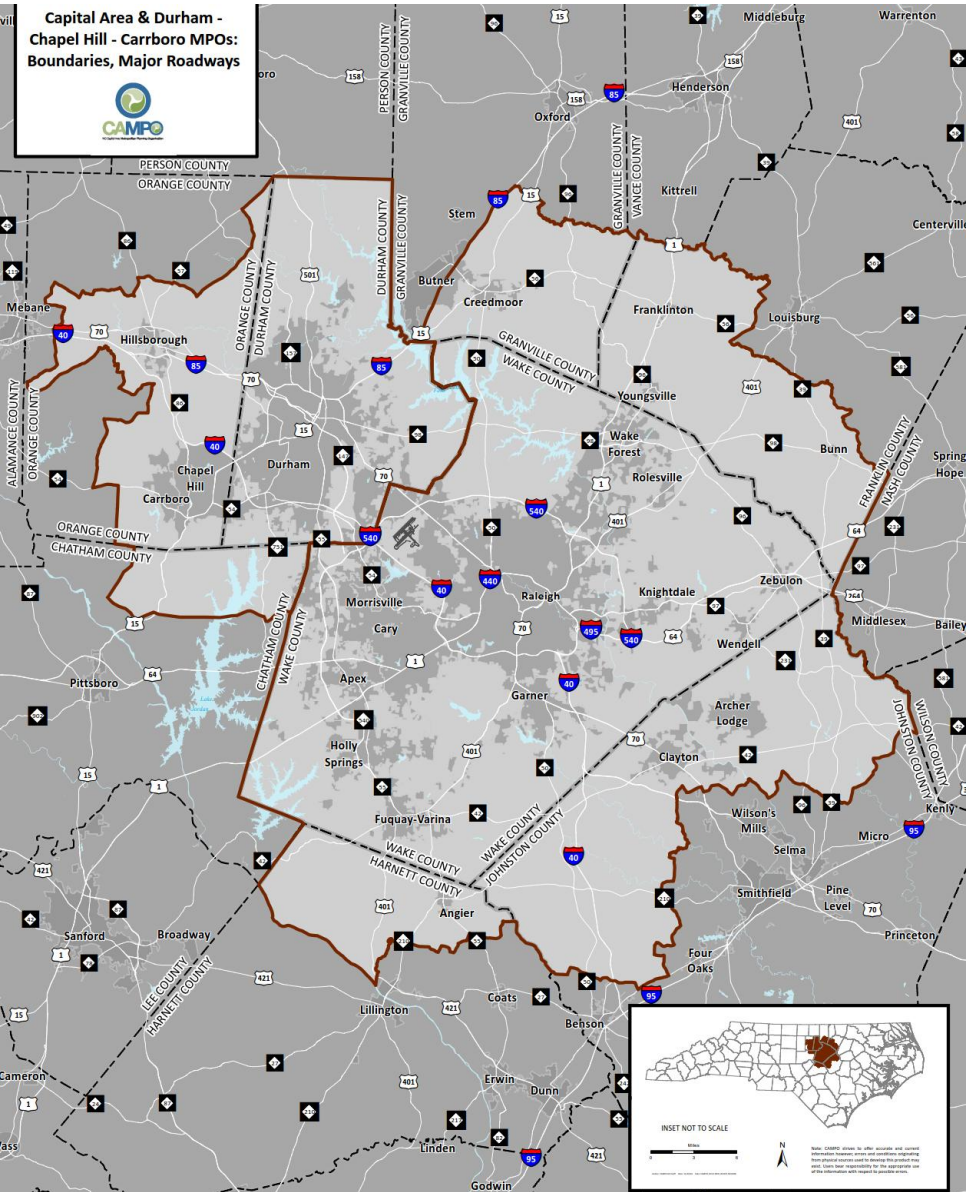
Study Background

- The Triangle Region is growing rapidly and to stay competitive with other regions, a study is being conducted to:

Evaluate the regional transportation network

Determine if toll lanes and/or managed lanes are applicable to the Triangle Region

Develop a toll lane and/or managed lane strategy to address current and future capacity needs with funding deficiencies



Study Sponsors

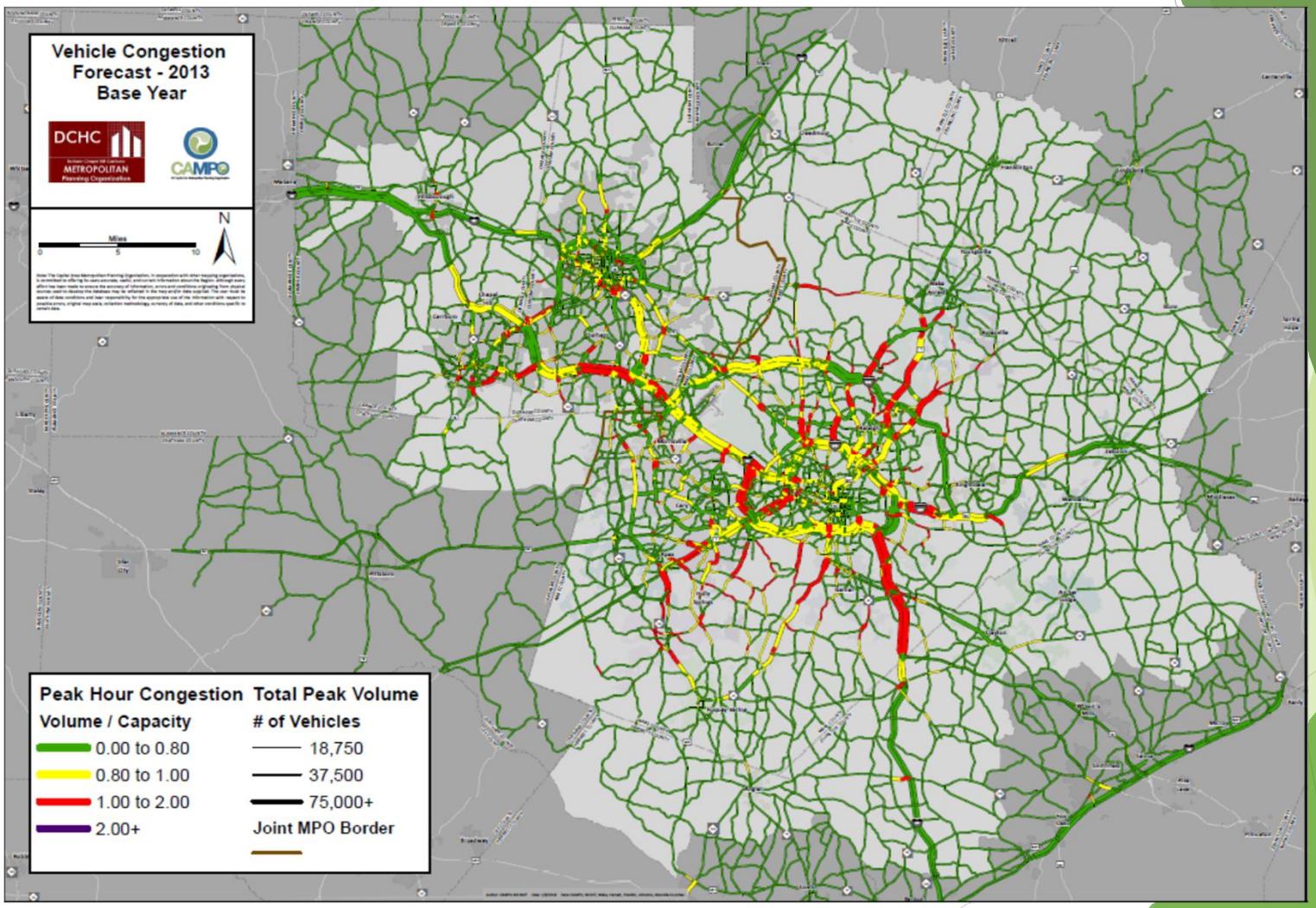
- This study is a collaborative effort of:

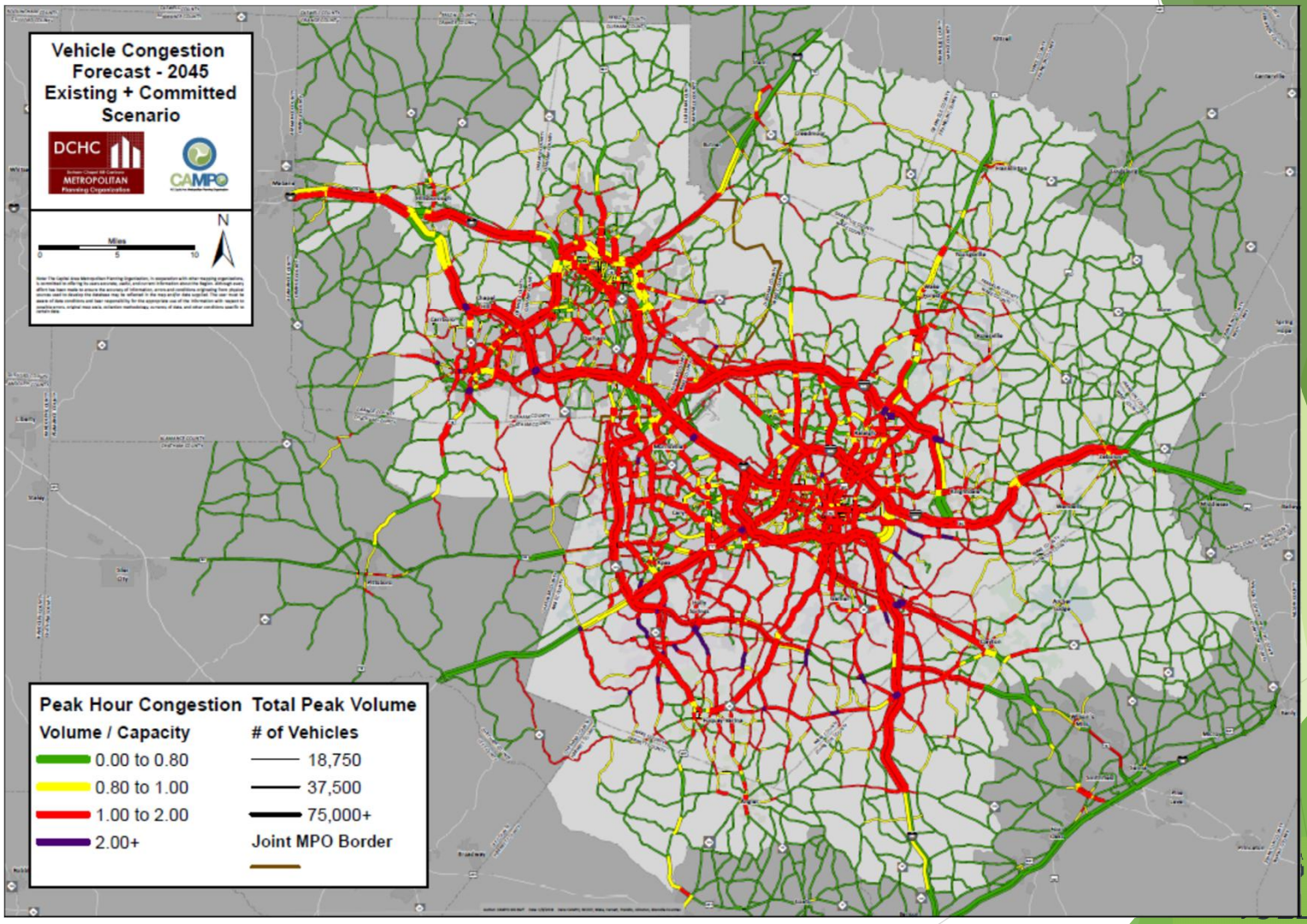
Capital Area MPO

Durham-Chapel Hill-Carrboro MPO

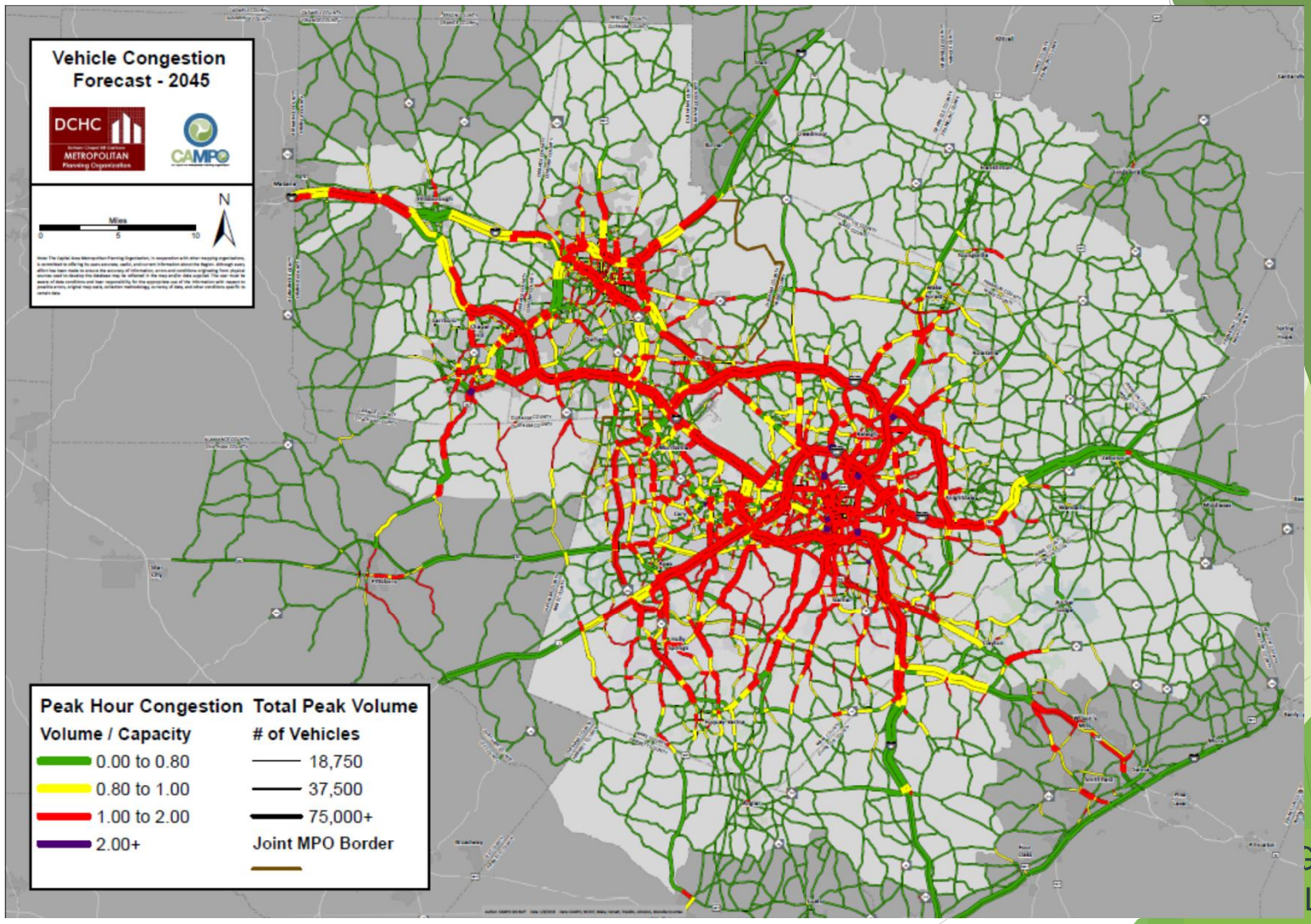
NCDOT

TRIANGLE STRATEGIC TOLLING STUDY


Vehicle Congestion
Forecast - 2013
Base Year
DCHC
METROPOLITAN
Planning Organization
CAMPO
N
Miles
0
5
10
Peak Hour Congestion
Volume / Capacity
0.00 to 0.80
0.80 to 1.00
1.00 to 2.00
2.00+
Total Peak Volume
# of Vehicles
18,750
37,500
75,000+
Joint MPO Border



LE STRATEGIC
LING STUDY



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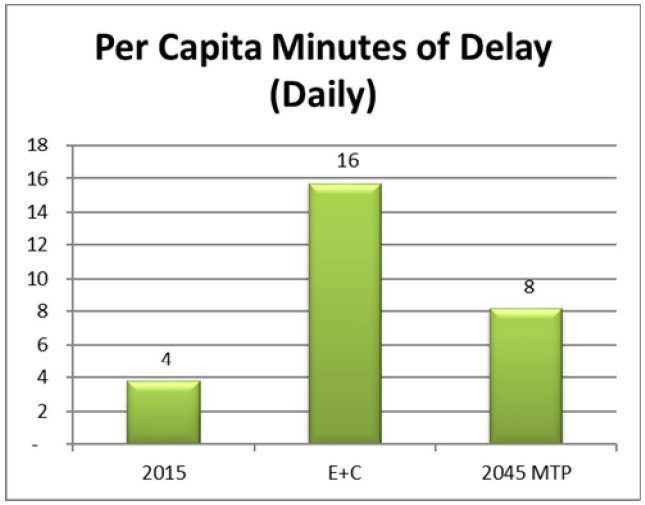
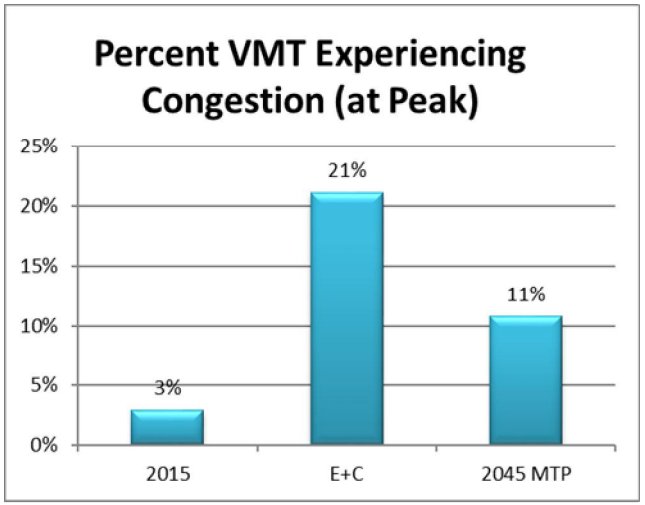
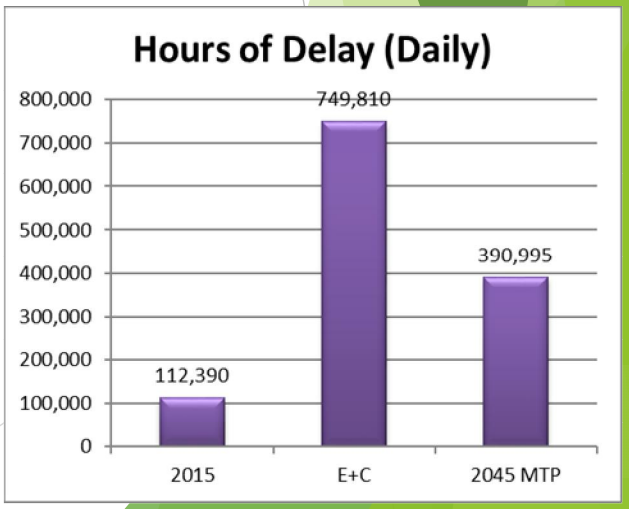
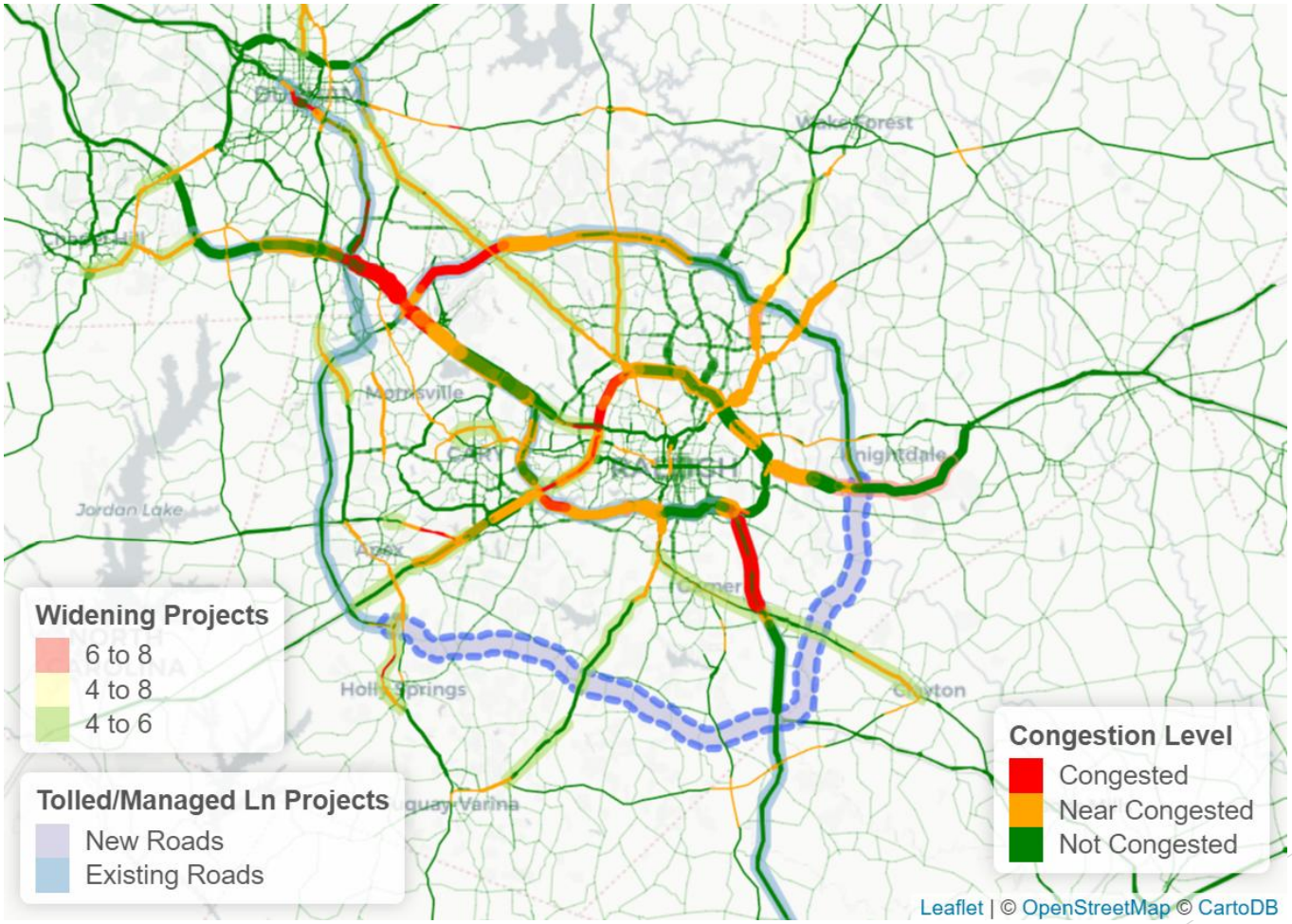

Per Capita Minutes of Delay (Daily)
18
16
14
12
10
8
6
4
2
-
4
16
8
2015
E+C
2045 MTP


Percent VMT Experiencing Congestion (at Peak)
25%
20%
15%
10%
5%
0%
3%
21%
11%
2015
E+C
2045 MTP


Hours of Delay (Daily)
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
112,390
749,810
390,995
2015
E+C
2045 MTP

Current Congestion and MTP Projects



TRIANGLE STRATEGIC TOLLING STUDY

PRELIMINARY SCREENING RESULTS

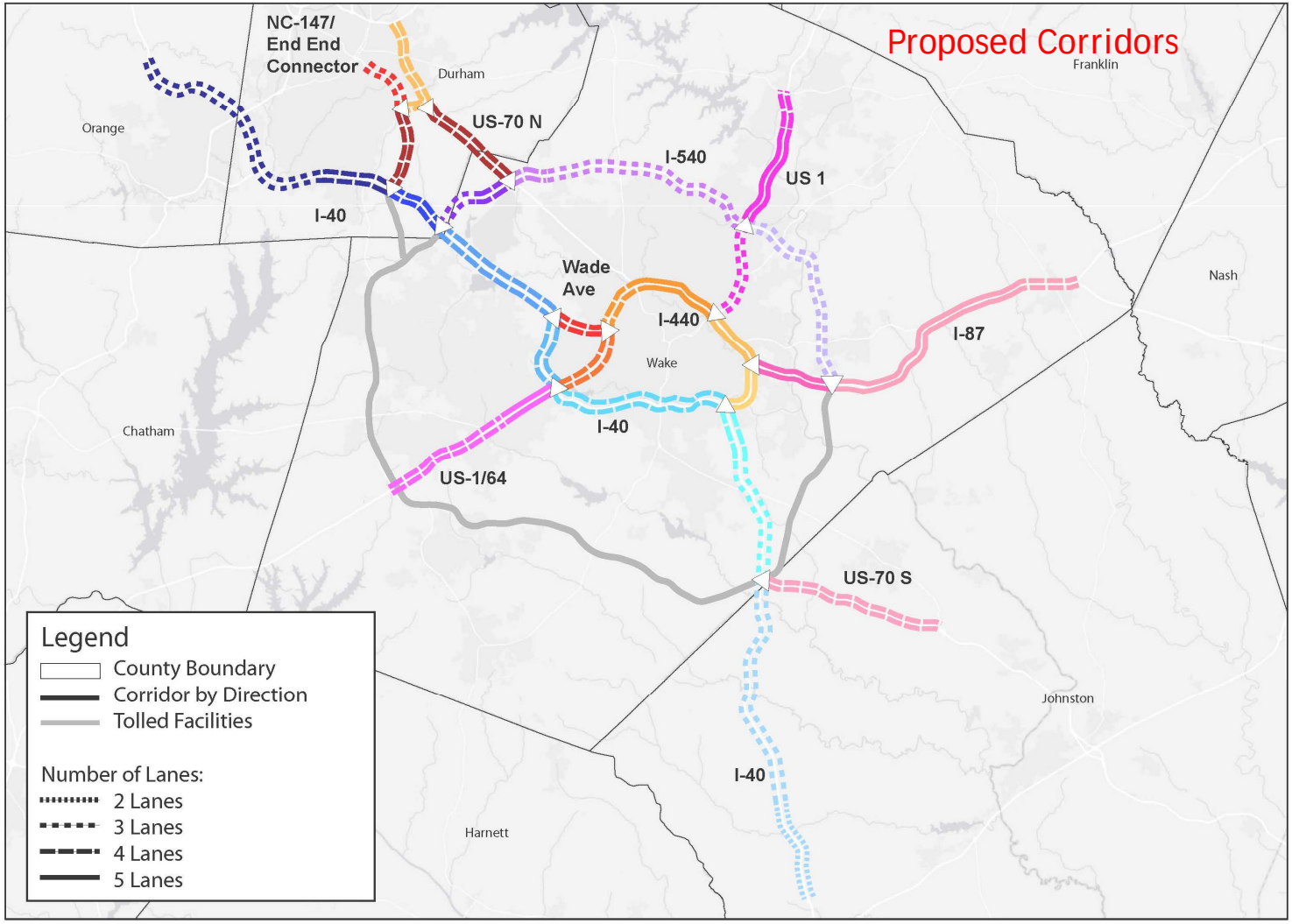
Tier 1 Corridor Evaluation

- Estimated 2045 peak-period congestion levels and speeds using Triangle Regional Model (TRM)
- Examined current PM peak hour congestion using Google
- Used TRM to generate demand volumes for projected express toll lane network (assuming 2045 MTP build-out)
- Applied ECONorthwest's Toll Optimization Model using TRM outputs to test future performance of express toll lane facilities

Preliminary Corridor Modeling Results

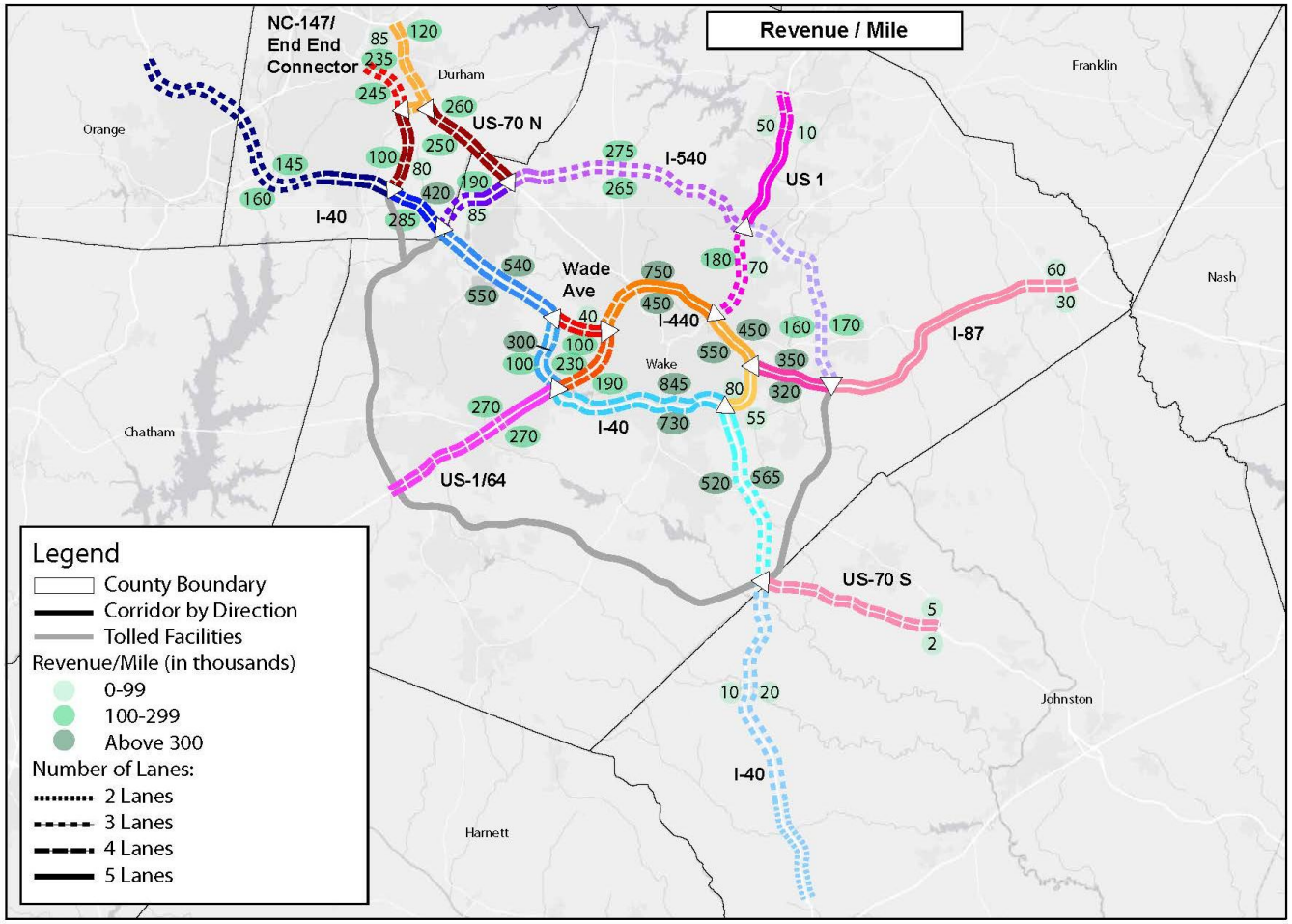
- Revenue & travel time savings results based on all users paying for facility use
- Buses and vanpool vehicles travel for free
- Results are general indication of corridor's relative performance

Tier 1 Corridor Screening



TRIANGLE STRATEGIC TOLLING STUDY

2045 Annual Weekday Gross Revenues/Mile



Legend
County Boundary
Corridor by Direction
Tolled Facilities
Revenue/Mile (in thousands)
0-99
100-299
Above 300
Number of Lanes:
2 Lanes
3 Lanes
4 Lanes
5 Lanes

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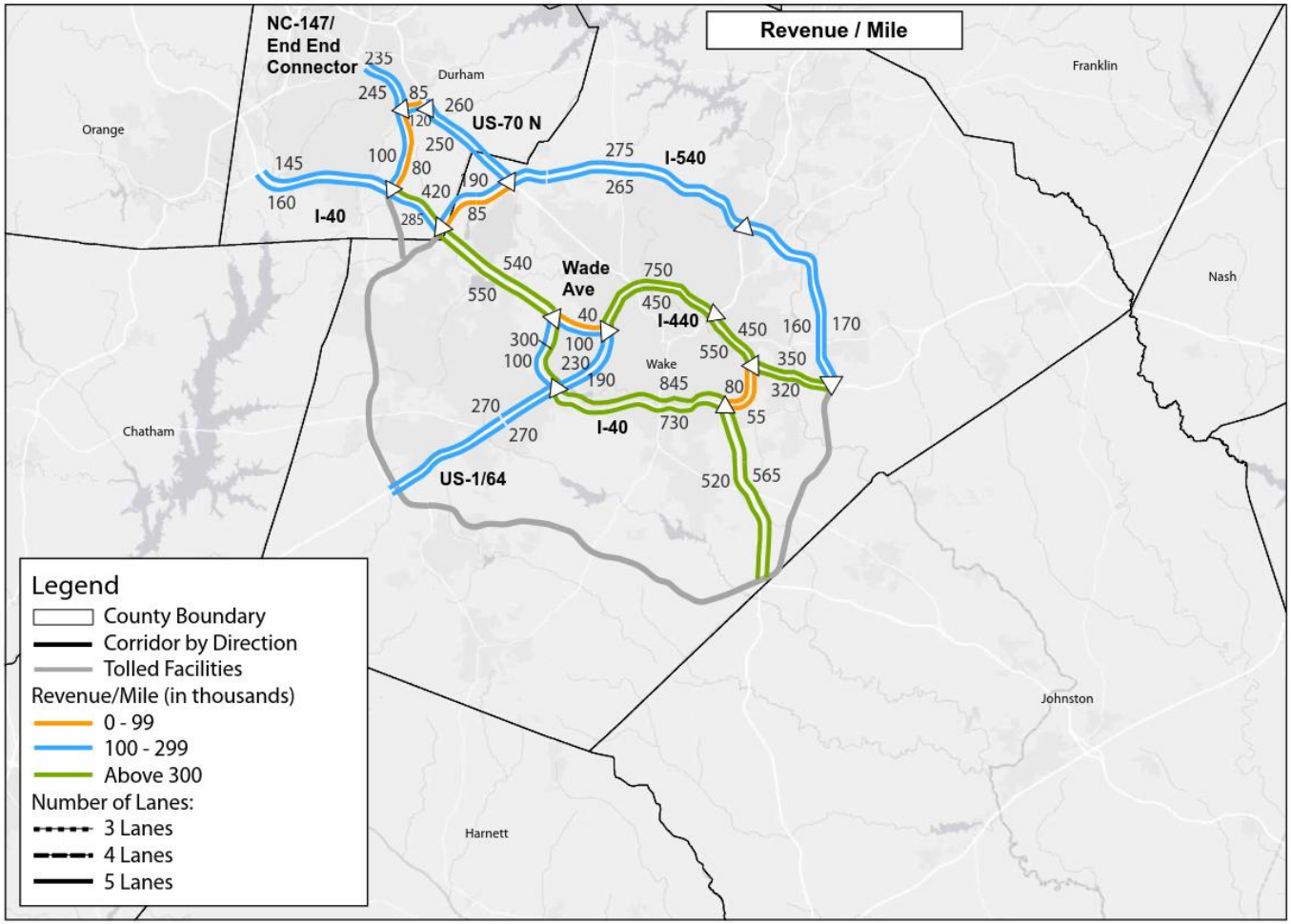

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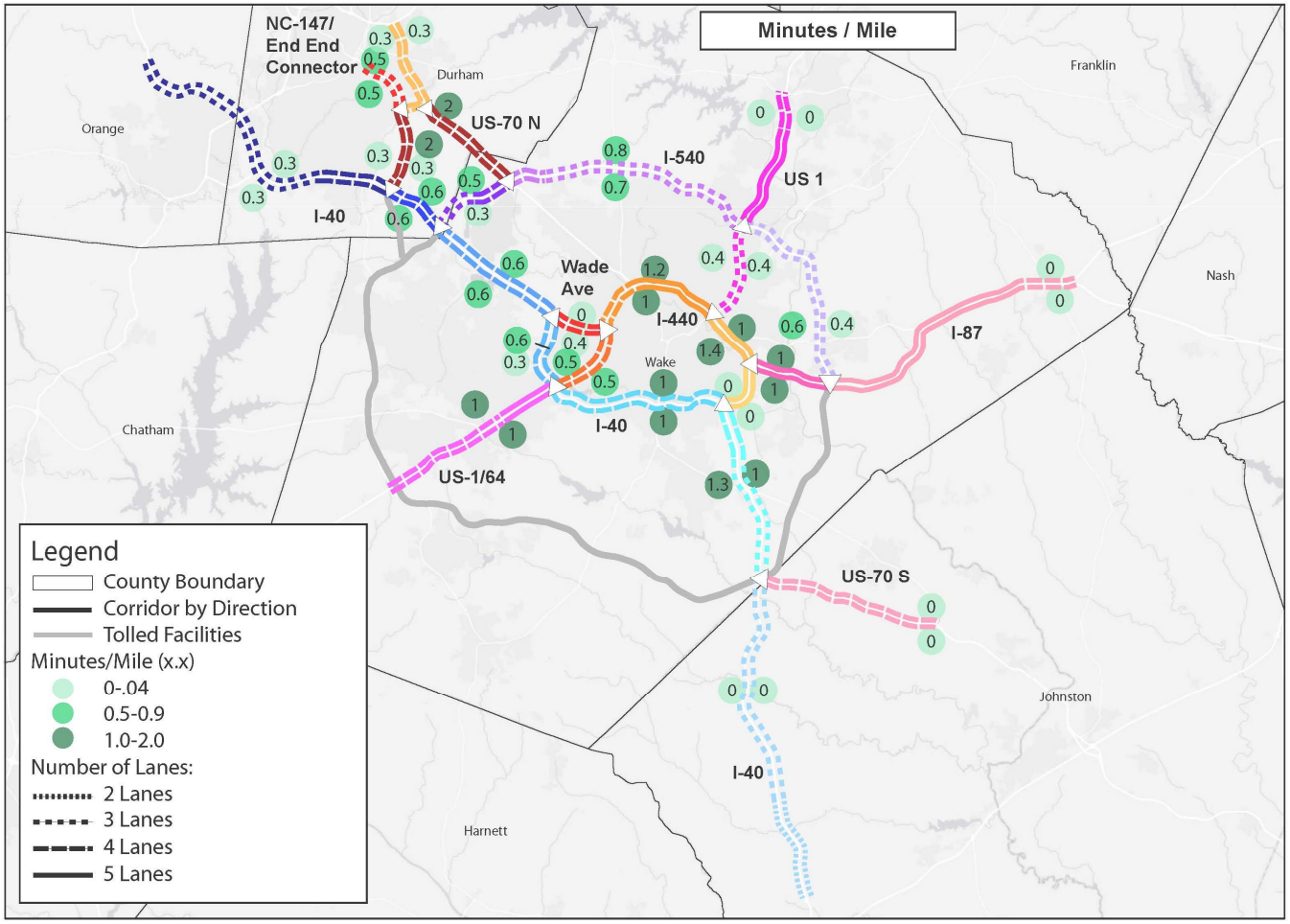
2045 Peak Hour Travel Time Savings



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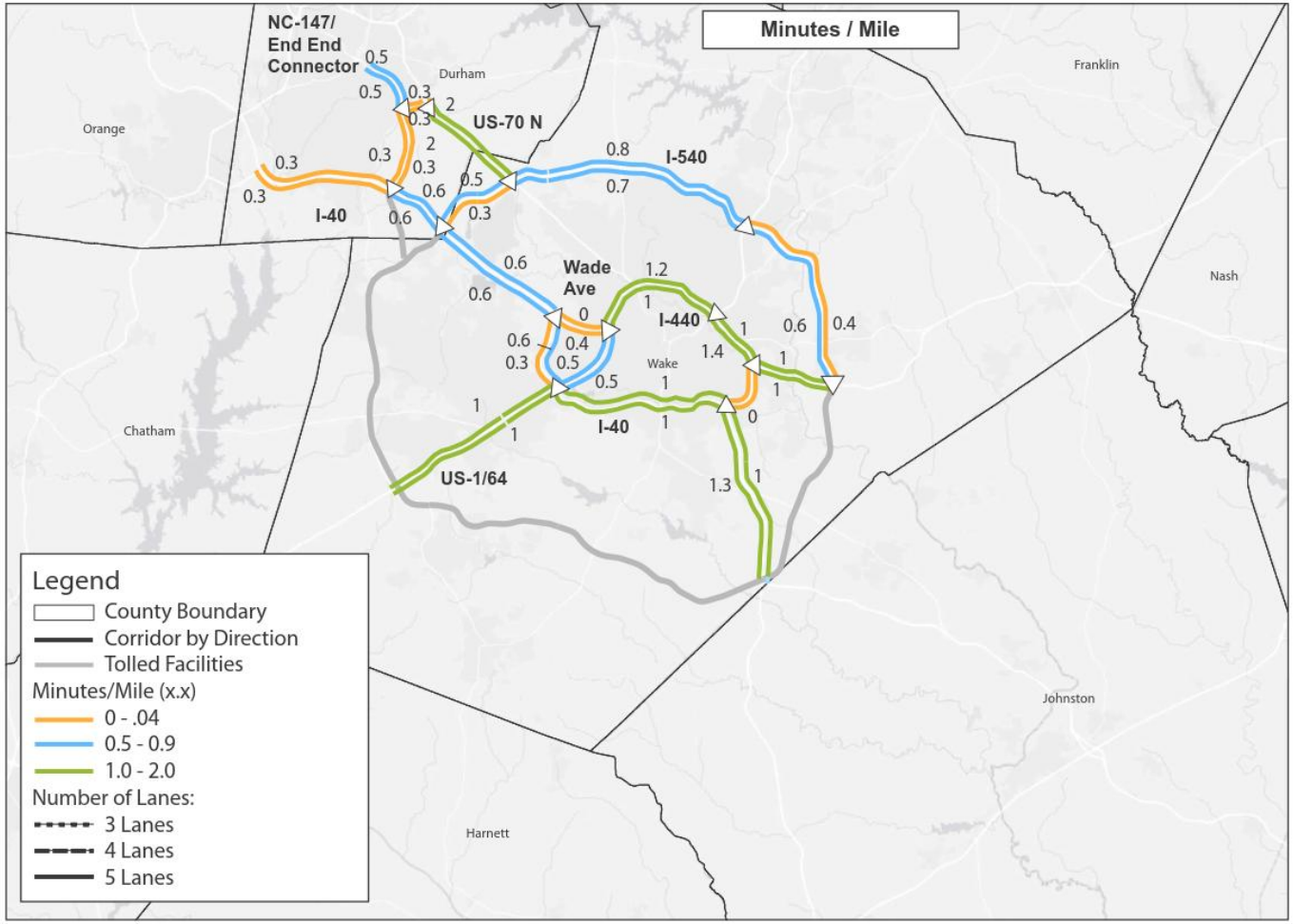

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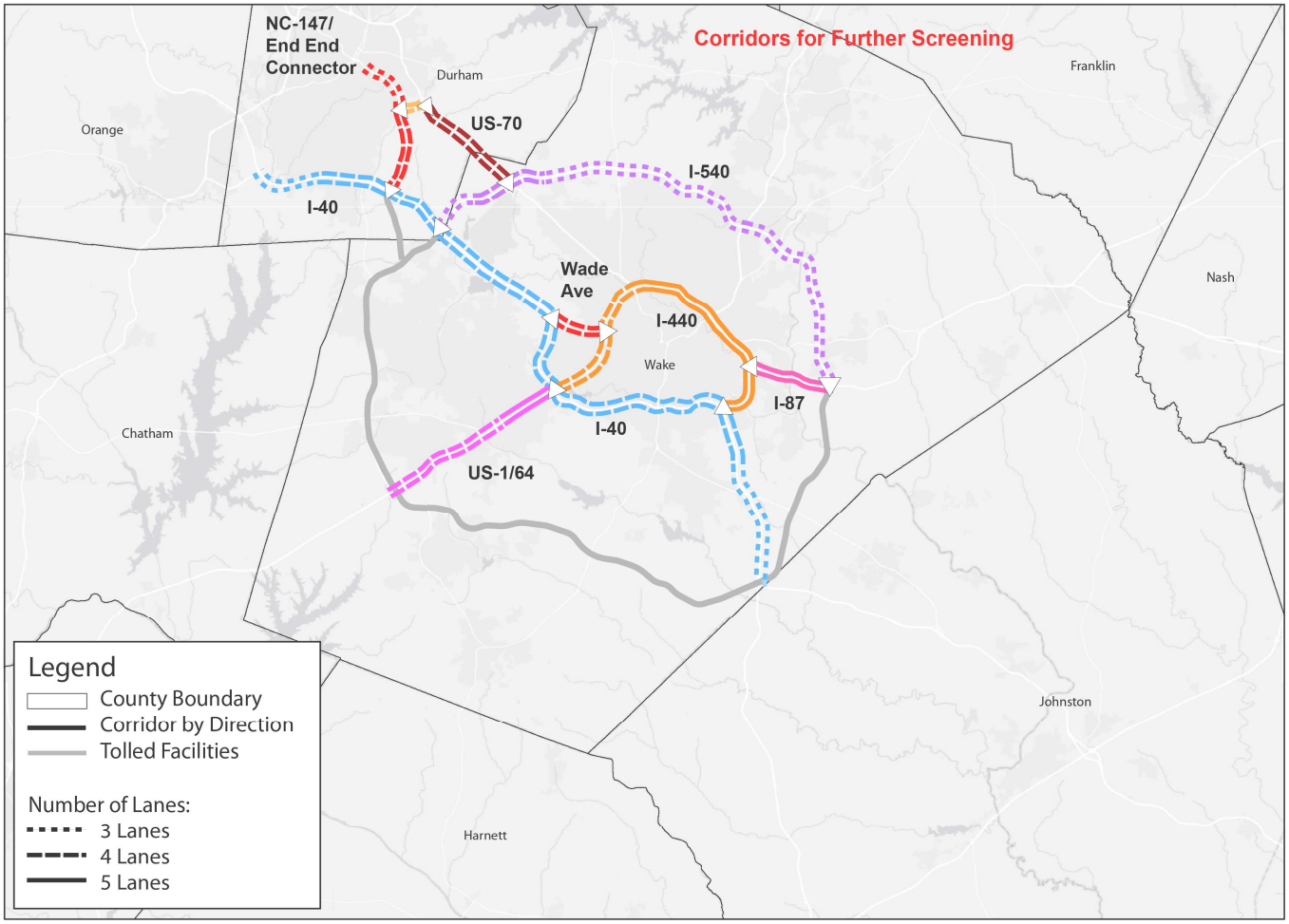
Tier 2 Corridor Screening

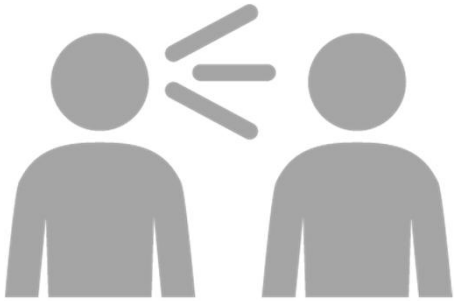


TRIANGLE STRATEGIC TOLLING STUDY

Tier 2 Corridor Screening

- Re-run models using "model feedback" to refine corridor performance results
- Evaluate corridor performance based on:
  - Traffic operations improvements
  - Transit services
  - Equity impacts (Environmental Justice population)
  - Stakeholder input (MPO Executive Board, Stakeholder Oversight Team & Core Technical Team)
  - Revenue, capital and O&M costs & project delivery schedules

More Information?



- http://triangletollingstudy.com
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  (919) 996-4394
- Andy Henry, AICP

  Andrew.Henry@durhamnc.gov

  (919) 560-4366, ext. 36419
- Lynn Purnell, PE, ENV SP

  Lynn.Purnell@wsp.com

  (704) 342-5405

TRIANGLE REGION INTELLIGENT TRANSPORTATION SYSTEMS PLAN UPDATE

CAMPO-DCHC MPO Joint Meeting

October 31, 2018

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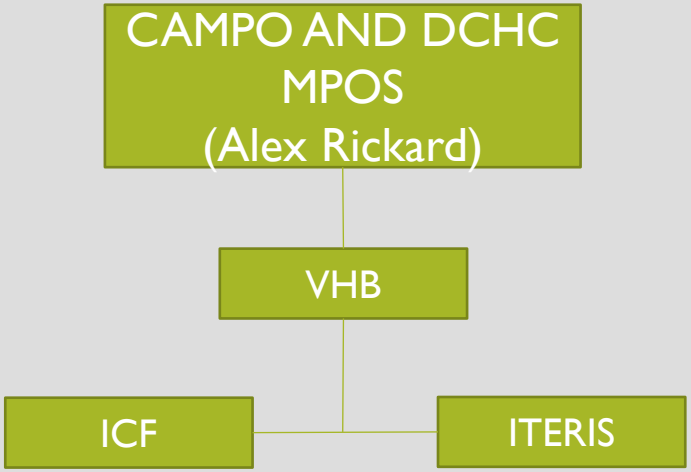
STUDY TEAM



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ITS BENEFITS

- Improved transportation efficiency
- Reduced delays and crashes
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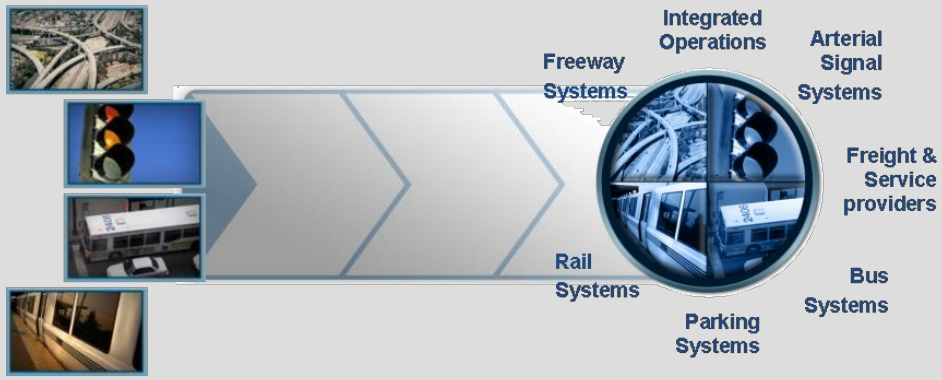

WHAT IS ITS?

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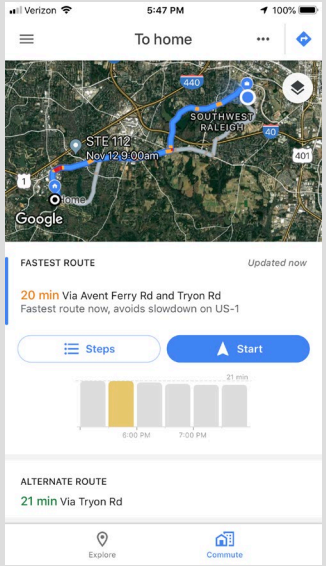
EVERYDAY ITS

- Technology examples include CCTV cameras, speed sensors, preemption receivers and emitters and mobile phone applications for navigation



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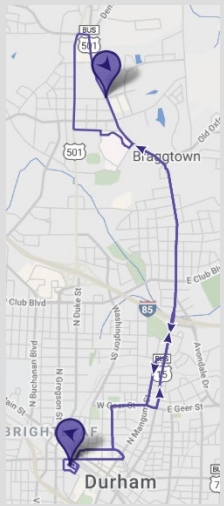

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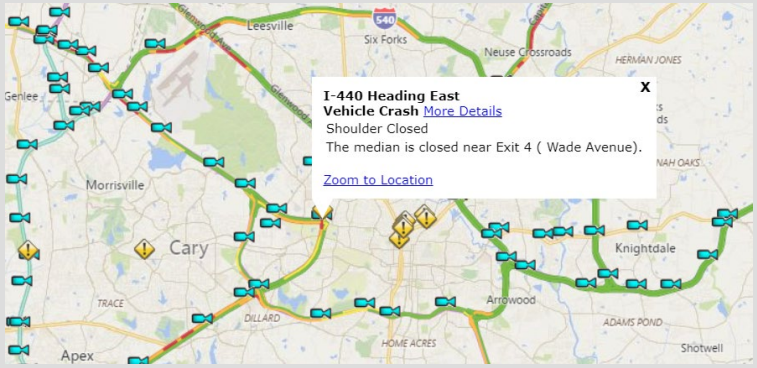

UPCOMING ITS

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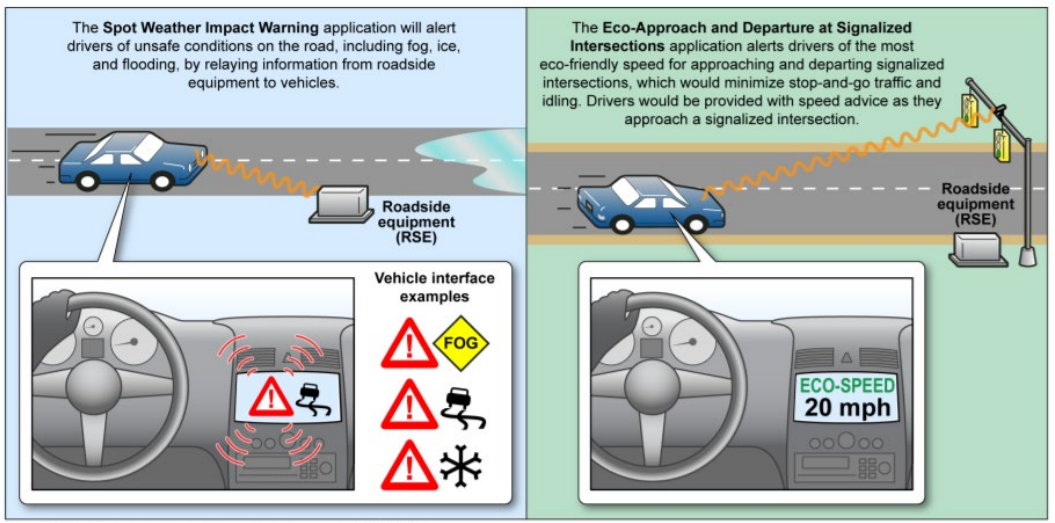

Source: GAO analysis of Department of Transportation documents. | GAO-15-775

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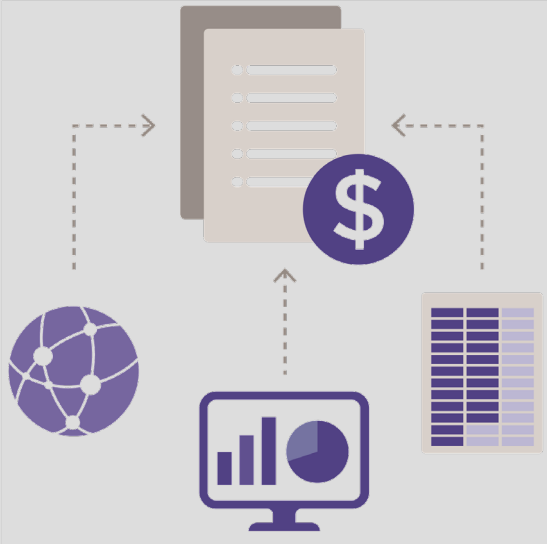

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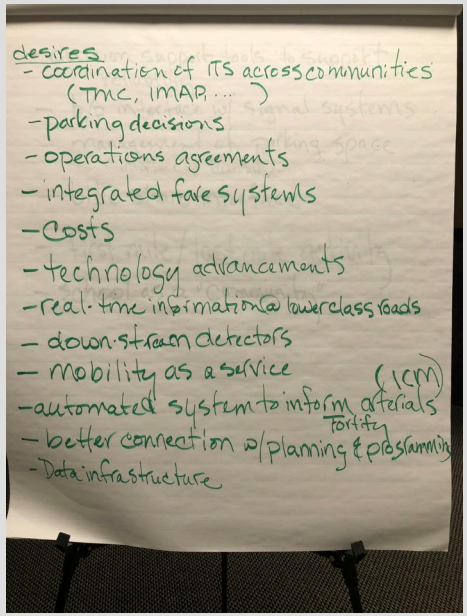

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United States Department of Transportation

ARC-IT Version 8.1

The National ITS Reference Architecture

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Connect 2045
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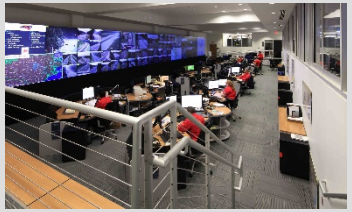

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  - NC Turnpike Authority
- Complete architecture update

QUESTIONS?

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TRIANGLE REGION INTELLIGENT TRANSPORTATION SYSTEMS PLAN UPDATE

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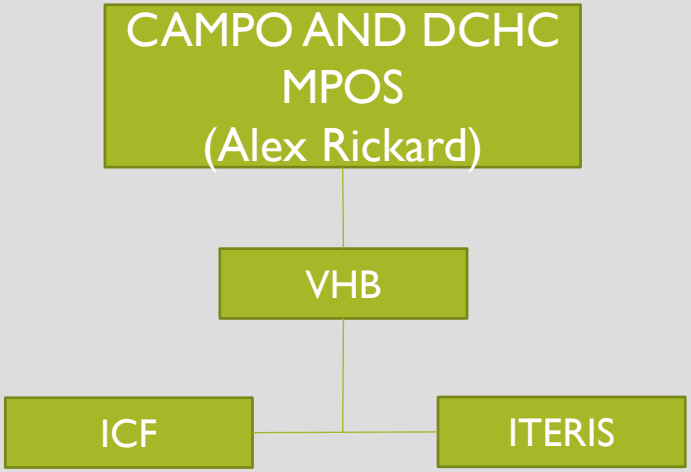

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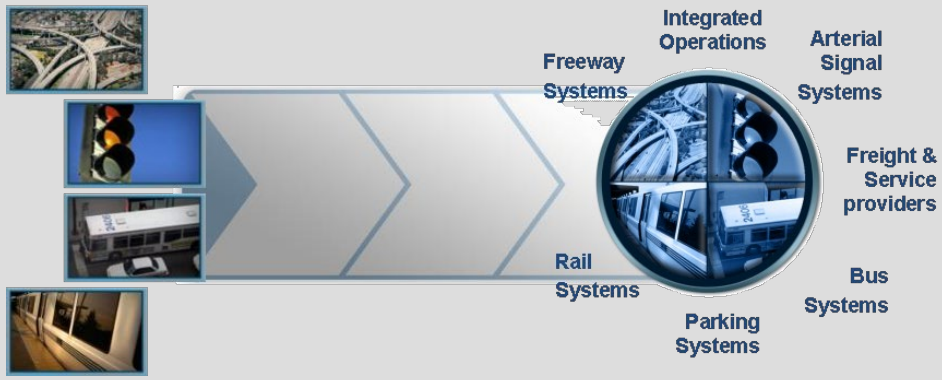

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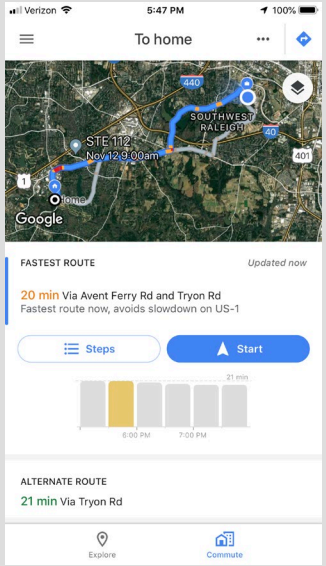

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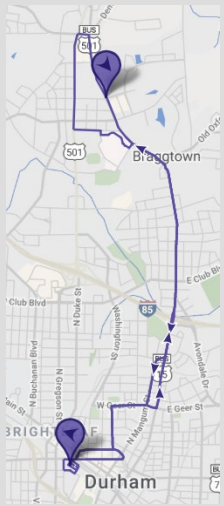

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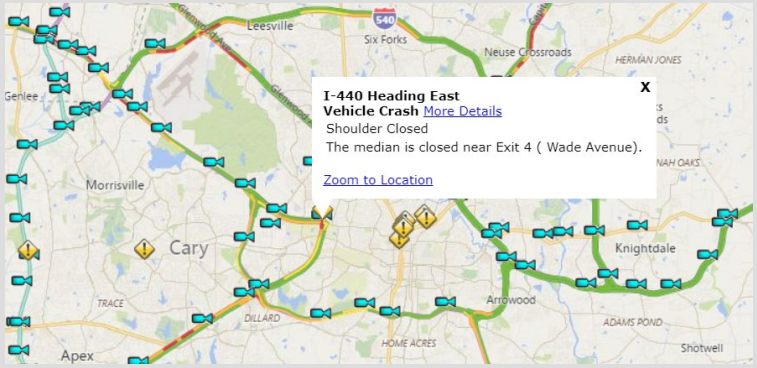

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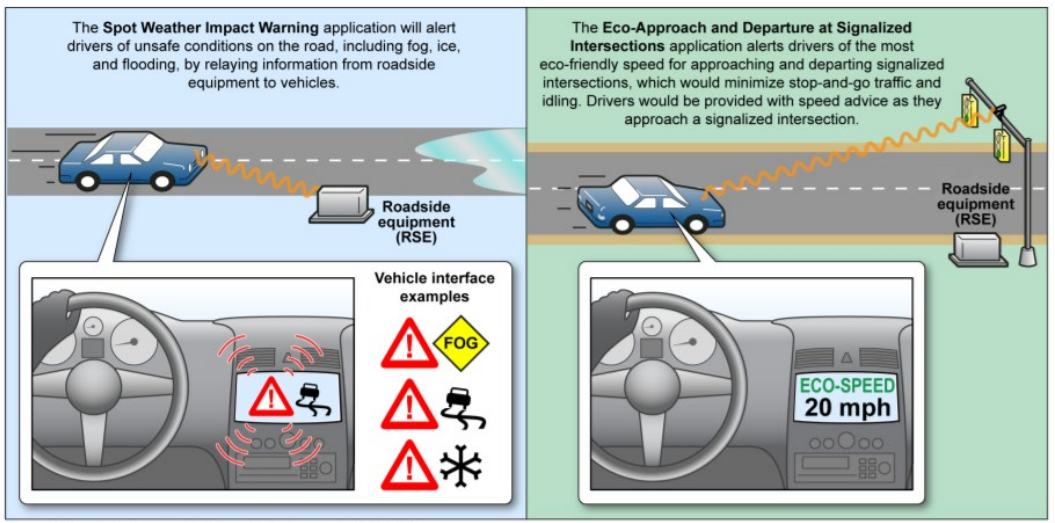

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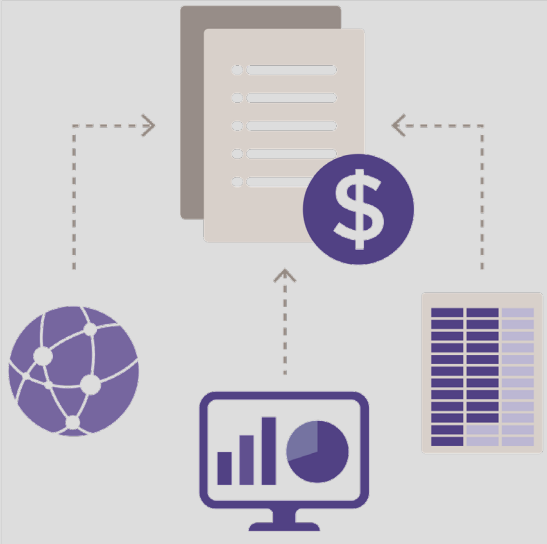

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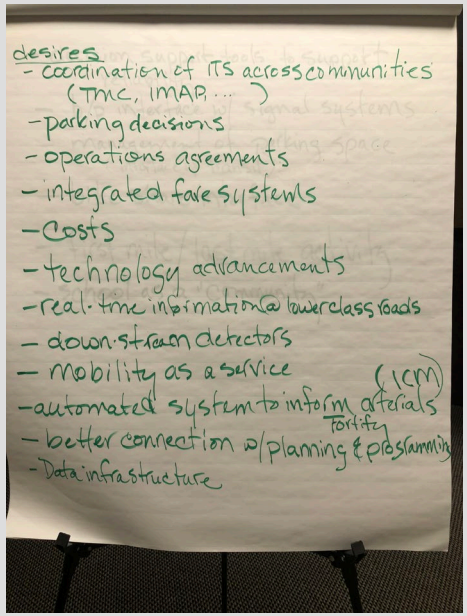

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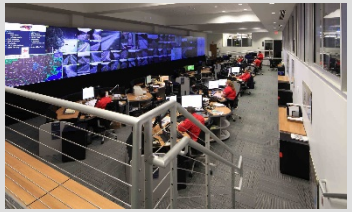

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NC 54 West Corridor Study - Draft Final Report Comments and Responses

Comment	Response
Text and tables repeated in chapters. Clean this up.	Corrected
How many people were interviewed during the public input phase?	Approximately 15
Define the Committed Improvements in terms of the 2018 STIP	Noted; being addressed
Need to include time-line of project development from planning to opening of project to project in Implementation section	Suggestion being addressed
Project will need to be developed under are planning and environmental document	Suggestion being addressed
Add traffic year for HCS software reference	Revised
Double check Historic Properties description of tiering	Noted; being addressed
STIP #U-6071 is not a Committed Project	Reviewing for revision (Note: U-6071 is scheduled for ROW in 2024 and construction in 2026)
45 MPH max posted speed for C&G.	Noted and revised
I would recommend putting the Short-Range Improvements in order of relevance. From our meeting Friday we heard a lot of these measures are considered safety improvements but were not specifically an issue that was seen on NC 54.	Noted and incorporating
Centerline and Shoulder Rumble Strips / Safety Edge – Runoff crashes out there appeared to be more reactionary or avoidance and not identified as a true run off.	This potential countermeasure is identified as part of a menu of options which may be appropriate at specific locations. Avoidance could be a significant cause of runoffs, in which case widening may be a more effective solution. However a more detailed safety audit/analysis would be needed to make that determination.
A comment was made that cars are running off the road intentionally to avoid stopped vehicles and not necessarily drifting off	Possibly true, but difficult to quantify. Specific safety audits/analyses would be needed to determine the cause and appropriate countermeasure. If a significant occurrence, widening may be the most effective solution.
People complain about the noise of rumble strips and bikers complain about the discomfort riding over them on the shoulder.	These are valid points; all solutions present trade-offs. Suitable locations may be identified in the design stages of various improvement projects.
High-Friction Surface Treatment – No specific wet crash locations were identified.	This countermeasure was identified as one of a set of potential solutions to be considered as a generalized recommendation; more rigorous analysis (such as is being conducted for STIP # R-5821A) will be needed to determine appropriate candidate locations and priorities.
Intersection Lighting – I don't think night crashes were an apparent crash problem in the data.	This was more for enhanced wayfinding, and to address anticipated increases in pedestrian crossings.
Is there a VPD limit? How does a roundabout work with a 4-lane divided roadway?	Peak hour capacity is more meaningful than daily, given directional and peaking variations. Analysis determined the recommended roundabouts function very well in the locations suggested, with more than adequate capacity. The fact that all are 3-leg intersections simplifies and improves operations. In some cases, the outer lanes may be set up as bypass lanes for immediate right turns to/from the side street, or for through movements opposite the intersection road.
"Enhance lighting, pavement marking, and signage as needed to ~~maintain~~ visibility" – Change "maintain" to "improve" and add "where appropriate".	Noted; incorporating changes.

Comment	Response
Roundabout max posted speed = 20 MPH	Likely, although we are familiar with 25-MPH roundabouts. Will incorporate discussion.
Roundabout examples show urban setting. What about rural settings?	This example is actually at a commercial/suburban node in a relatively low-density rural/recreational area. However, the specific intent of these images is to show a real-world example of how on-road cyclists can access a shared-use path to negotiate a multi-lane roundabout, as well as typical pedestrian accommodations. These elements would not vary much from what could be implemented on NC 54.
Example of median U-turns in Figure 32 …. Left turns into side streets?	The proposed configuration does not permit left-overs at the intersection. Such a variation could be considered, depending on left-turn volumes.
Is the median U-turn on Figure 32 correct? Are there left overs at the intersection?	The proposed configuration does not permit left-overs at the intersection. Such a variation could be considered, depending on left-turn volumes.
NCDOT is investigating Neville Road and Hatch Road	Noted; considering revised text.
Mention US-5821 during description of Old Fayetteville operations	Noted and incorporating.
NC 54 and Dodsons Crossroads/Butler Road – Can we balance green times during PM travel?	Not sure what is being asked. It should be possible to optimize signal timing and phasing, but directional differences/imbalances in volumes may complicate ability to achieve maximum efficiency.
There are currently two candidate widening projects for this corridor in STOP 5.0 (not none as listed)	Identifying and revising. There are two P5.0 submitted widening projects in the study area. These include H141391, which would widen NC 54 from Orange Grove Road to NC 119, and H140374-A, which would widen NC 54 from Old Fayetteville Road to Orange Grove Road.
Phase I has sections of the corridor that are already failing, and the end of Phase I is late.	The recommended timeframe represents the likely earliest opportunity to complete the recommended widening.
Add note to Figure 33 - Time of project development and construction figure.	Being revised
Phase 1 - According to the charts on page 80, two lane capacity is already exceeded.	In some locations, 2-lane capacity is already exceeded. The recommended timeframe represents the likely earliest opportunity to complete the recommended widening.
Put paragraph into past tense, add NCDOT as Study Team member	Being revised
Add traffic year for Figure 13	Being revised
Add traffic year for Table 4 and Table 5	Being revised
Add traffic year for Table 6	Being revised
Are the southbound poor LOS intersections due to waiting to turn left?	Yes, primarily
Access management is a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. The proactive management of vehicular access points to land parcels.	Revision pending.
What about mobility? You haven't addressed mobility.	Paragraph at bottom of page 72 addresses preservation of mobility, and balancing access and mobility across modes. Considering additional explanation/emphasis.
"The relatively low volumes closer to the middle of the corridor are less sensitive to the difference between 1.0% and 1.5% growth…." – This sentence is confusing. Does the statement about adequate LOS apply only to part of the middle section?	Yes. Paragraph revised for clarity.

Comment	Response
"On the other hand, a single unanticipated subdivision or industrial/commercial site of adequate size could substantially increase volumes in this vicinity." – Are the chances high that this will occur?	Difficult to say, but certainly possible. Revising to better reflect key point: that relatively minor changes in future assumptions could have a disproportionate impact in this lower-volume portion of the corridor.
1.0% Annual Growth – Year 2045 (West of Mebane Oaks, West of Orange Grove, and East of Orange Grove) – Where are they disappearing to?	Volumes are not disappearing. Trips are distributing via Mebane Oaks Rd (2017 AADT = 2600), Saxapahaw Bethlehem Ch Rd (2017 AADT = 1600) Stanford Rd (2016 AADT = 170), Gold Mine Rd, Morrow Mill Rd (2017 AADT = 1300), and Orange Grove Rd (2017 AADT = 1500), as well to/from dozens of businesses and residences with direct access only to NC 54. For example, there are 30+ driveways and intersections (many serving multiple residences and mobile homes), between Mebane Oaks & Orange Grove Roads, including Stanford Rd, Goldmine Rd, and Morrow Mill Rd. Also: Rigmor House, a convenience store, a garden center, a UNC-CH facility, and several other businesses and farms. All of these volumes are forecast to increase over time, and the pattern of volume changes is consistent with land use and the surrounding road network.
Typical LOS E Capacity Range - "E" shows failure. What about showing the "D" range as well? Graph details are not legible	Higher resolution graphics are being developed. Since LOS D is generally acceptable, it was decided to focus on "ultimate capacity" (LOS E), which is rarely considered acceptable in a rural/suburban setting. Showing both would further complicate the image, and dilute the message. LOS E is also more simply and reliably estimated, and easier to explain and understand; LOS D is more variable and covers a broader range of volumes. It can be inferred that volumes just below the LOS E capacity would be experiencing some congestion problems.
AADT West of Mebane Oaks - So, East of Mebane Oaks Road there is a jump in traffic?	Yes; this is reflected in historic traffic counts as well. Traffic to/from Saxapahaw/Mebane Oaks Roads is more heavily oriented to the east than to the west. Also, count locations are not immediately east and west of this intersection; there are some intervening access points.
Project development design year for improvements is 2045.	This is consistent with study assumptions, analysis, and recommendations.
"Without signalization and intersection lane additions, most of the subject intersections fail." - This is a triage approach? At what point are superstreets analyzed…maybe with a signal at U-turn bulb to provide a gap for U-turn traffic.	To some extent, the prioritization of improvements in a competitive, fiscally-constrained programming environment does require a strategy resembling triage. Superstreet treatments were evaluated where conventional intersections performed poorly, required extensive widening/reconstruction, or were otherwise constrained. Median U-turns are recommended at NC 119 and at Old Fayetteville Road.
"Overlapping peaks of school and manufacturing plant traffic generate congestion…..Honda manufacturing plant could also become a more significant problem as traffic increases." – Are these the same considerations that are taken into account for the sentence "The relatively low volumes closer to the middle of the corridor are less sensitive to the difference between 1.0% and 1.5% growth…." taken from page 74	No.

Comment	Response
"Skepticism of projected vehicle volume growth rates through the year 2045;" – Skepticism that projections are low or high?	Our forecasts are based on the best available information, and considered a range of likely outcomes. Portions of the corridor are already operating at or beyond capacity. One reason for the proposed implementation phases is specifically to reduce the risk of significant variation from forecasts. Each phase can be revisited and programmed to better coincide with actual demand. (Assuming funding is available.)
R-5821A is SEPA not NEPA/Merger.	Noted and revising.
"Findings from this corridor study will ~~serve as baseline information and integrate into the purpose~~….." Replace with "help to develop".	Noted and revising.
"The purpose of this near-term project is to address operational and visibility concerns ~~without duplicating or conflicting with the efforts of this NC 54 corridor study. Right of way acquisition is scheduled for 2018 with construction in 2018~~." Remove latter half.	Noted and revising.
"The second potential cross-section…." – Move this paragraph under Figure 24.	Noted. Revision pending
The 9.5' min between Back of Curb and SUP may vary in a steep cut or a fill section, requiring guardrail.	True. Reviewing text for clarification.
Should we mention cost share for Shared Use Path?	It is cited in Appendix, but can be emphasized in text.
Specify what sections are failing LOS now in CRITICAL ISSUES Congestion subsection	Noted & being addressed
Opposes widening NC-54, based on the rationale: increasing lanes results in more cars on the road, this escalates negative impacts on air quality and subsequent impacts on climate change	Forecasts from 4 models consulted all confirm traffic growth regardless of widening, due to continuing development in the area served by NC 54. Recent trends also indicate a sharp increase in traffic volumes, although there has been no widening. Statistically, the recommended cross-section will also lower crash rates, a significant benefit separate from mobility or capacity benefits.
Make intersection improvements first, add passing lanes second	This is consistent with our recommendations.
Provide a dedicated transit lane and improve transit services between all service providers along the corridor, this includes: Better coordinated currently provided services by PART and Chapel Hill Transit; Adding additional services by Go Triangle and Orange County Public Transit; Include Bus Rapid Transit (BRT) as a preferred recommendation to widening	Transit improvements are included in corridor recommendations. Funding for additional services is a significant challenge, especially when multiple agencies are involved, all of which already have unmet needs that may be higher priorities, or which provide more service-per-dollar. The bus ridership needed to eliminate or even delay the need for widening is substantial. East of Dodsons Crossroads, for example, more than 5,000 cars would need to be removed. Assuming 1.2 persons/car yields 6,000 riders, or about a 25% mode share, both of which are extremely high for a long, rural corridor of this type.

Comment	Response
Recommend Bus Rapid Transit (BRT) sooner (before additional lanes) rather than later.	The advantages of BRT result from travel-time benefits (shorter, and more reliable) gained by operating buses in their own lanes, separated from general traffic. In addition, traffic signals can be managed to give buses the right-of-way. Sometimes combined with queue-jumps, this tactic can eliminate or reduce signal delays. Other elements are also designed to favor bus operations, often including low-floor, articulated buses; covered, rail-like platform stations; real-time bus arrival displays; and pre-boarding payment. Buses are very frequent, sometimes with headways of only a few minutes, so schedules are not even needed during peak periods. This level of service and investment is being planned in Raleigh and other urban areas along congested, high-volume corridors with multiple lanes and multiple established bus routes serving larger, denser mixed-use development. The BRT is part of an overall plan to increase density. In such conditions, BRT competes favorably with the automobile in terms of travel time and reliability, as well as costs. No examples of plans for adding dedicated bus lanes to a rural 2-lane highway could be found, especially for 14 miles. The costs and environmental/community impacts of adding bus lanes would be essentially equivalent to the recommended 4-laning, but would not improve the capacity or crash problems identified for NC 54, since a similar volume of traffic would still be constrained to two travel lanes. More importantly, travel times for buses in these dedicated lanes would not be significantly less than for those same buses travelling on the recommended 4-lane divided roadway. Even at optimistic 15-minute headways, the bus lanes would be vacant throughout most of the service day, and entirely empty outside of service hours. Minimal benefits would result from substantial costs, an investment that could undoubtedly be used more effectively on other transit projects. Or roadway, pedestrian, and bicycle improvements, as well as more modest and appropriate transit services.
Recommend increased transit and improved coordination among all transit agencies along the corridor.	Further mention of increased transit service and coordination will be added; however, given budgetary constraints, unmet needs on more productive routes, and relatively low densities and long distances along NC 54, it is difficult to envision an affordable service that could significantly lower traffic volumes. However, rapidly-evolving technologies and service models could lead to non-conventional transit services that are more viable in this corridor than traditional fixed route service. At the same time, advances in connected/ autonomous vehicle (C/AV) technology could also render park-&-ride services obsolete...or at least less attractive.

Comment	Response
Introduction of Transit in the Corridor – TCC members supported the use of park-and-ride and bus service in the corridor to serve employees at UNC that use the corridor to get to work. There are several locations in the corridor that could support at park-and-ride lot. However, any new transit service in the corridor should not be shifted from existing services because of the demand on current routes like GoTriangle's ODX or PART Route 4. Those services should not be diminished to serve the NC 54 corridor. Transit accommodations west of Carrboro could help alleviate Carrboro's concerns about the widening of NC 54.	Since the regional bus route using NC 54 was shifted to I-40/NC 86, productivity appears to have increased substantially due to faster, more efficient, and more reliable routes serving greater concentrations of trip origins and destinations. Although the earlier route followed NC 54, only a small portion of its ridership came from this corridor segment. It would be counter-productive to compete with successful existing services, and "cannibalizing" riders. Westward extension of routes from Carrboro could prove beneficial, especially in combination with suitable park-&-ride lot locations. An eastward extension of service from Graham could yield similar benefits.
Prioritize Park and Ride lot in the study, including potential sites like the UNC facility at intersection of Cinder Fox Trail and NC-54.	Park-&-ride service is noted as an option in the corridor with a relatively high potential for viability. The suggested location will be added to a set of potential candidates for further evaluation.
Incorporate recent advancements in Intelligent Transportation System (ITS) technologies at intersections.	This recommendation will be made more explicit, although specific and appropriate recommendations will be developed during project design, given variations in individual location characteristics, and the rapid pace of ITS evolution.
Provide more information on Lighting issues in the corridor and how they will be addressed.	Specific recommendations require more detailed analysis and design beyond the scope of this study. This would typically be accomplished in the design of a particular signal or roadway improvement project.
Estimates do not include utility improvements necessary to accommodate development in the area nor the relocation of any existing utilities	Generalized utility relocation costs appropriate for a planning level analysis are incorporated in the cost estimates; more precise estimates require design-level details (field surveys and finalized alignments). Our analysis was based on development assumed in the current long-range plans and models relevant to the corridor; utility impacts of future development should be addressed in those plans. It was not part of the scope of this study.
Prioritize pedestrian crossings along the corridor not just at intersections but throughout.	Recognizing that not all desired improvements can be simultaneously implemented due to cost and bandwidth constraints, major intersections were identified as locations providing the greatest benefits vs. costs, due to the level of exposure to conflicts. Locations with significant pedestrian activity were also identified and recommended for improvement (although these were associated with intersections). Any location with significant pedestrian crossing volumes (or potential for crossings due to complementary land use) should be reviewed; such locations were not observed apart from intersections. The addition of shared-use paths or other pedestrian facilities would warrant further review to locate any additional and appropriate crossing treatments.

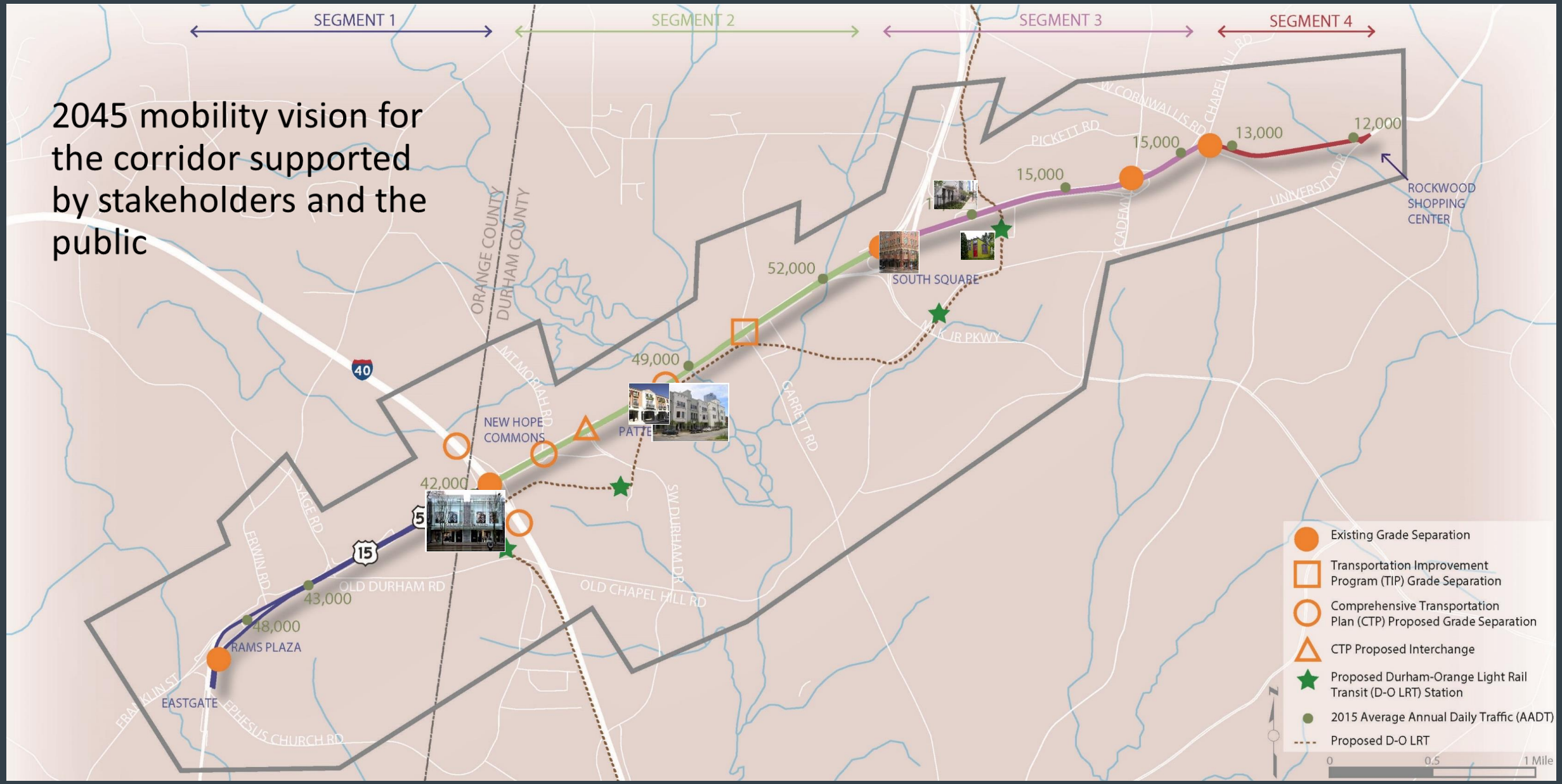
Comment	Response
Median U-Turn at NC 54 and NC 119 Intersection – Several TCC and TAC members commented that using a non-traditional intersection design at this location was problematic due to heavy truck and school bus traffic.	This is an unconventional intersection design. However, the design can be tailored to accommodate trucks and buses. A more traditional design can be implemented, but the result is a much wider, less efficient intersection (with dual left-turns and lengthy, complex signal phases) that is less accommodating to pedestrians and bicyclists, and still generates long queues. Widening of NC 119 in front of the school and Honda plant could be problematic. Changes to school and plant access (such as a new access road/driveway off NC 54 NW of the campus could significantly decrease traffic conflicts at the existing intersection, reducing the extent of improvements needed at NC 119.
Widening of NC 54 throughout the entire corridor is a good project, and scores well in SPOT, and therefore should be supported by all three planning organizations sooner rather than later.	Widening the entire corridor by 2045 appears inevitable, based on anticipated traffic growth. Plans for widening certain segments that are already experiencing capacity and crash problems are probably past due, given the time required to implement new projects. Given logistical, fiscal, and prioritization constraints, it seems unlikely that the entire corridor could be undertaken as a single project, or that it necessarily has to be. A phased approach appears more viable, although planning and design for the entire corridor is needed even for phased implementation, and should be completed as soon as possible.
Shared use path should be on both sides of NC 54	The additional costs--including environmental and property impacts--of constructing and maintaining shared-use paths (SUPs) along both sides of NC 54 do not appear warranted by potential benefits gained. Putting the SUP on the side with the least impacts will provide essentially the same benefits at significantly less than half the total cost.

REIMAGINING 15-501 CORRIDOR STUDY

DCHC MPO Presentation

November 14, 2018

2045 mobility vision for the corridor supported by stakeholders and the public



AGENDA

- Study Overview
- Key Themes from Community and Travel Profile
- Visioning
- Alternative Strategies
- Discussion

STUDY OVERVIEW

PROCESS

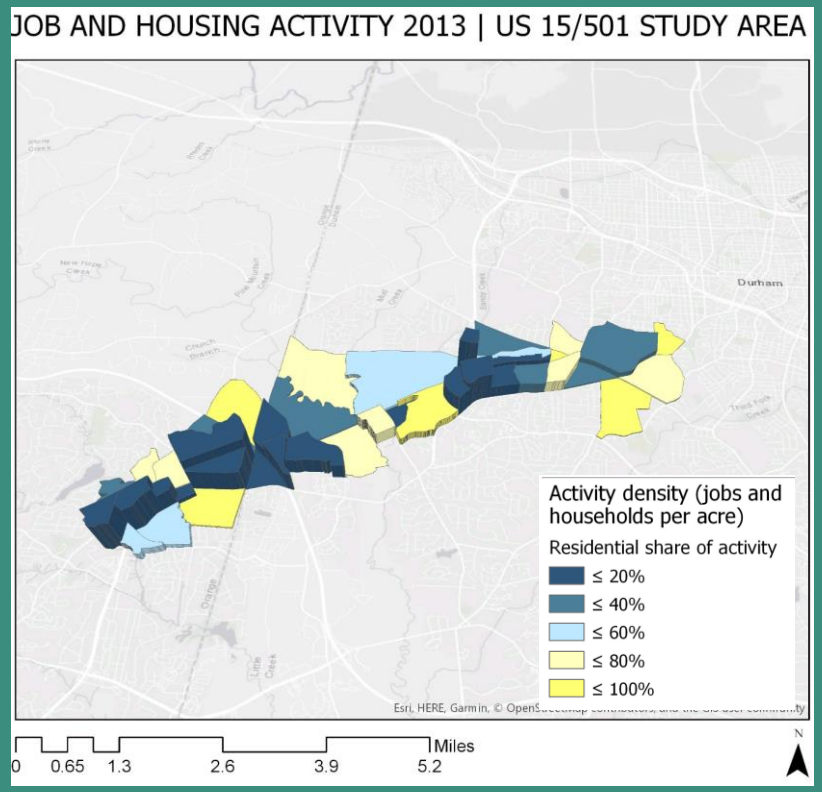

Existing Plans
Community Profile
Travel Profile
Alternative Strategies
Plan Execution Strategy
Final Report
Corridor Vision & Goals
Website
Workshops
Popup Meetings
Website
Workshops
Popup Meetings

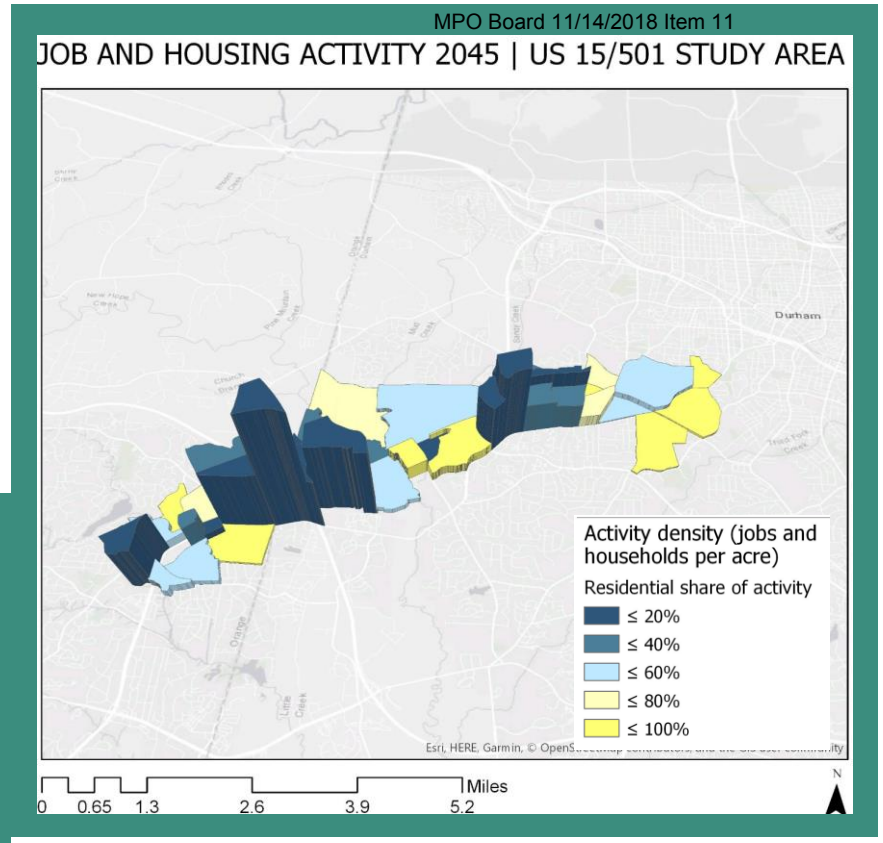
COMMUNITY AND TRAVEL PROFILE

Key Themes

JOBS AND HOUSING

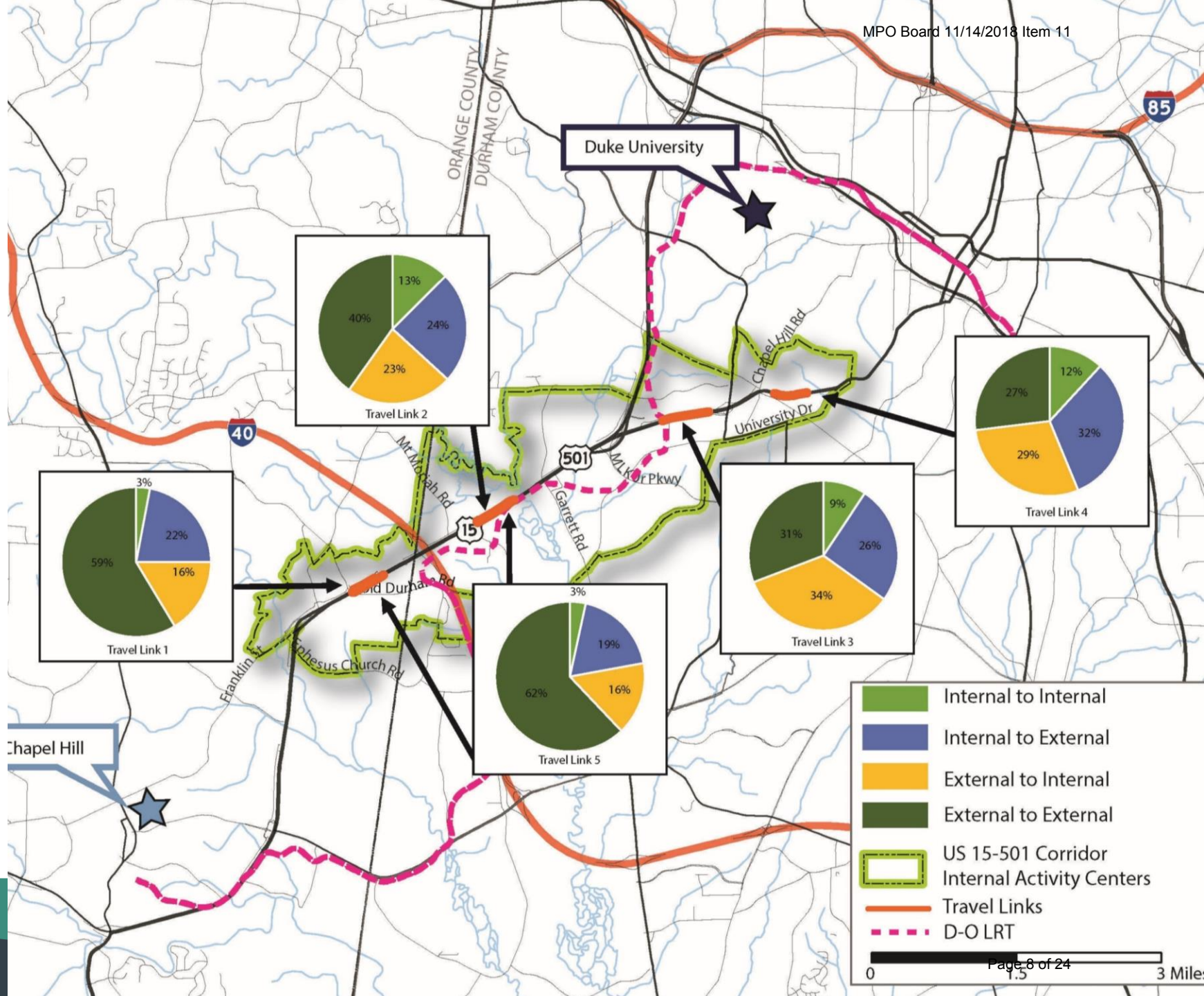
- Substantial growth in jobs and housing
- Growth primarily focused on D-O LRT station areas
- Mixed-use high density
  - Greater internal trip capture
  - Transit supportive
  - Facilitates active transportation





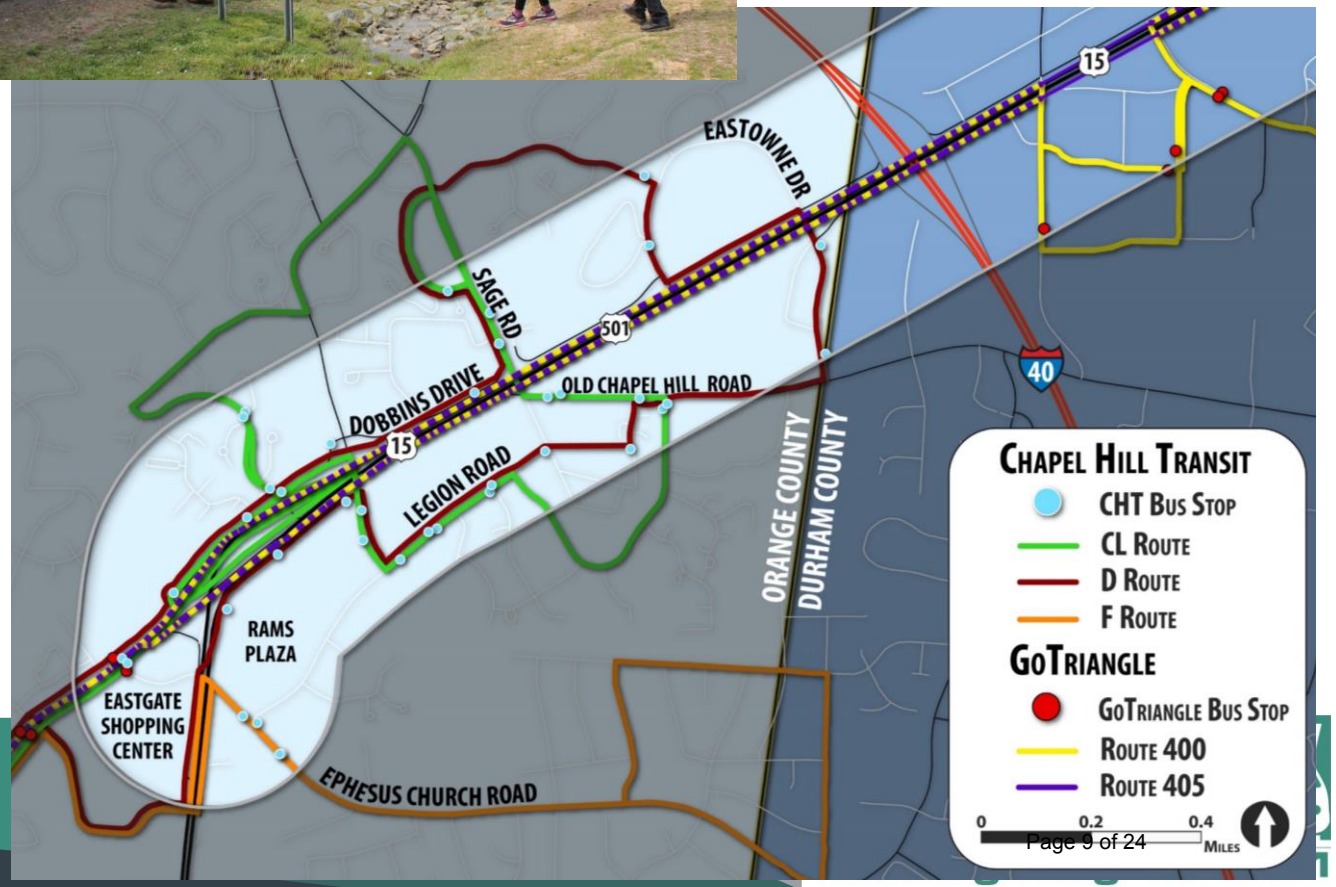
HIGHWAY

- US 15-501 is a gateway to the region
- Demand local and regional
- High conflict between “to” and “through” travelers
- New development patterns should increase internal trip capture
- Attractive destination for travelers outside the study area
- High congestion impacts safety



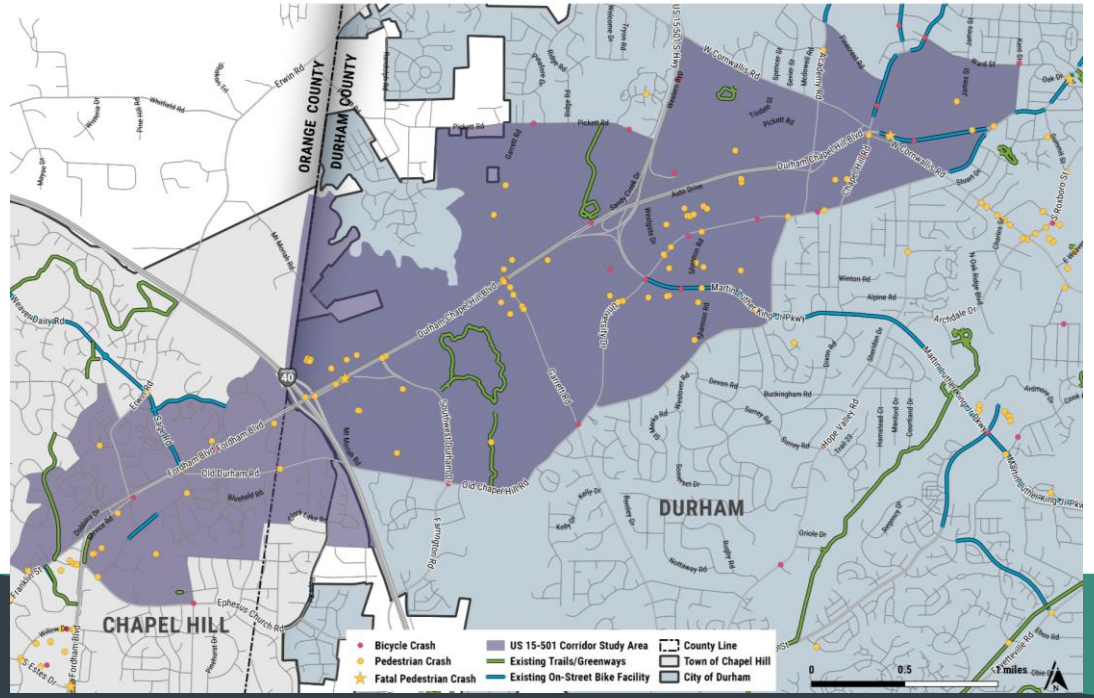
TRANSIT

- Gaps in the existing system
- Difficult to efficiently serve existing development
- Challenging to provide service along the corridor
- Challenges with congestion and delay



ACTIVE TRANSPORTATION

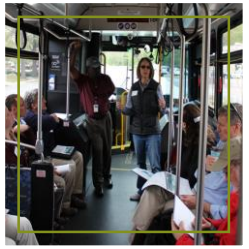
- Lack of connectivity between activity centers
- Few facilities along the corridor
- Concentrated demand
- Several areas with high concentrations of captive users

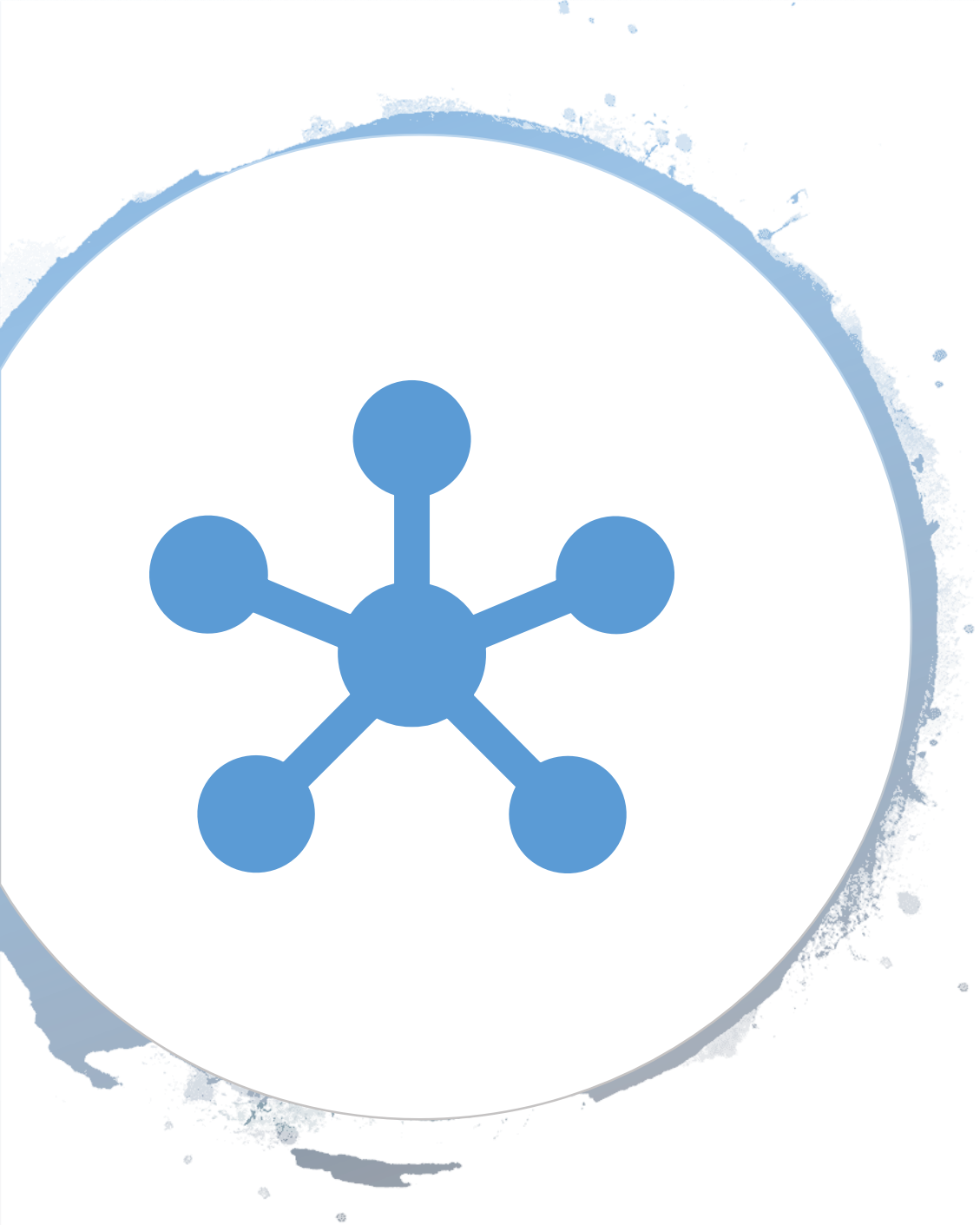


VISIONING

Visioning Process

- Mobile Tour
- Visioning Exercise with Tour Participants
- Visioning Exercise with Citizens at Public Workshop
- Online Crowdsourcing Map





Key Themes

- Multimodal
- Connectivity
- Mobility

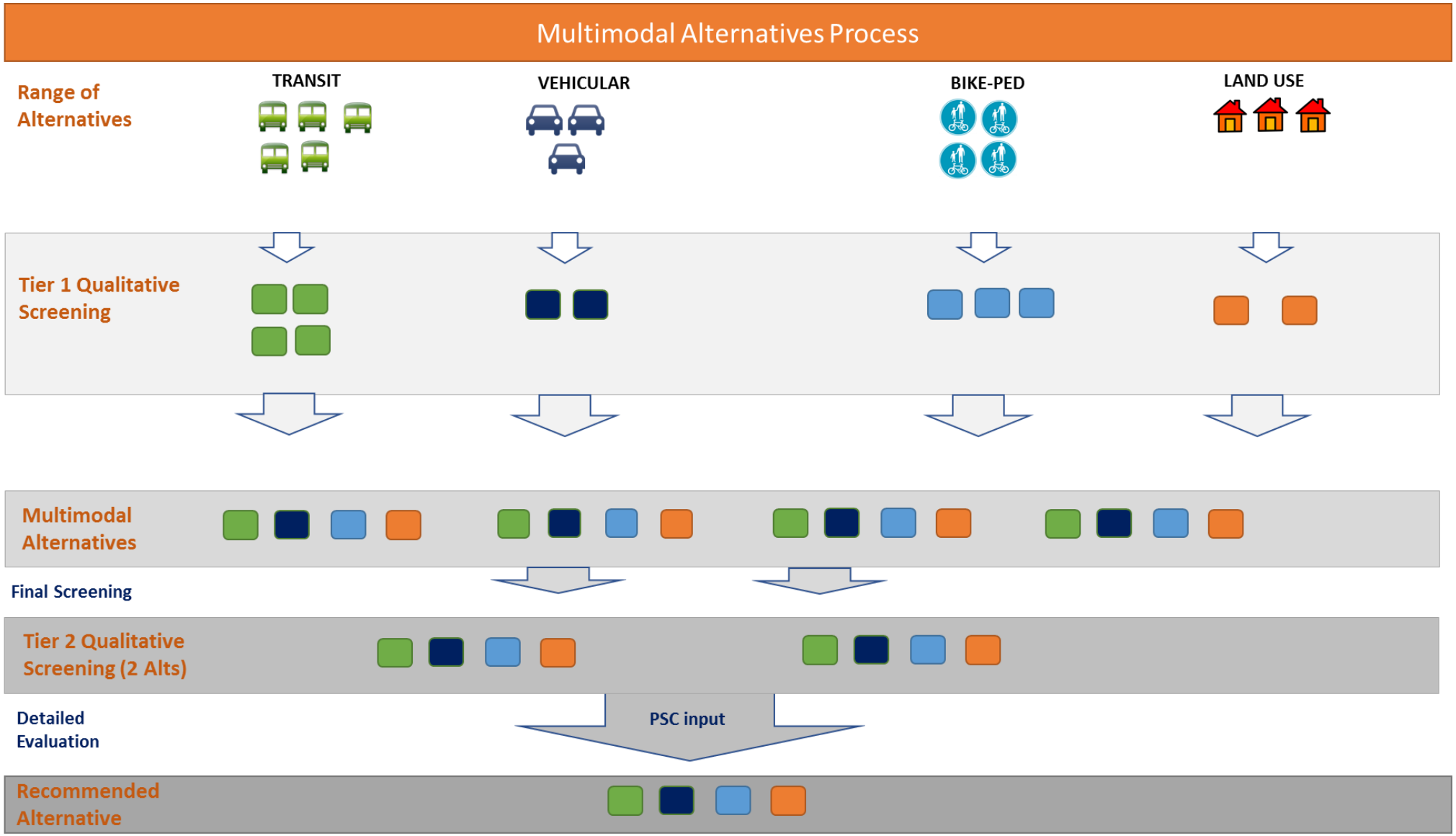
Vision Statement

By 2045, US 15-501 between Durham and Chapel Hill will be a key multimodal transportation corridor, that will complement and support the Durham-Orange Light Rail and the adjacent, mixed use, and multimodal supportive development. The corridor will provide for the safety, mobility, and accessibility of all users, including motorists, pedestrians, bicyclists, and public transportation users; including connections across and through the corridor.

Goals

- Improve accessibility and connectivity for all modes
- Improve mobility for all users
- Enhance safety and health
- Stimulate land use, community, and market performance vitality
- Protect sensitive environmental lands within the study area

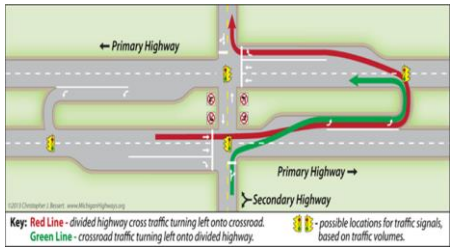
ALTERNATIVE STRATEGIES


Multimodal Alternatives Process
Range of Alternatives
TRANSIT
VEHICULAR
BIKE-PED
LAND USE
Tier 1 Qualitative Screening
Multimodal Alternatives
Final Screening
Tier 2 Qualitative Screening (2 Alts)
Detailed Evaluation
PSC input
Recommended Alternative

US 15-501 SEGMENT ONE STRATEGIES

Ephesus Church Rd to I-40

	OPTION ONE	OPTION TWO	OPTION THREE
1	Widen US 15-501 from a 4-lane median divided to 6-lane median divided superstreet facility (including elimination of service roads and channelization); provide painted pedestrian crosswalks		Widen US 15-501 to an 8-lane median divided facility with traditional intersections; provide painted pedestrian crosswalks
2	Superstreet intersection at Ephesus Church Road and US 15-501	Urban interchange at Ephesus Church Road and US 15-501	No Change from Existing
3	Connect Legion Road and Old Durham Road	No Change from Existing	Connect Legion Road and Old Durham Road
4	Urban interchange with bike/pedestrian facilities at Eastowne Drive and US 15-501		Traditional intersection widening with grade separated pedestrian crossing
5	Connector roads with bike/pedestrian facilities connecting all 4 quadrants of I-40 interchange		Implement bike/pedestrian facilities (see I-40 Segment Boards)
5	Implement bike/pedestrian facilities for this area as shown in Chapel Hill Mobility Plan		
6	Implement local street network as proposed by Blue Hill District TIA		
7	Bus improvements as recommended by Blue Hill District TIA		
8	Bus stop enhancements		
9	Land Use: capitalize on opportunities to create land use patterns that promote multimodal travel, and incorporate urban design and human-scale design		
10			



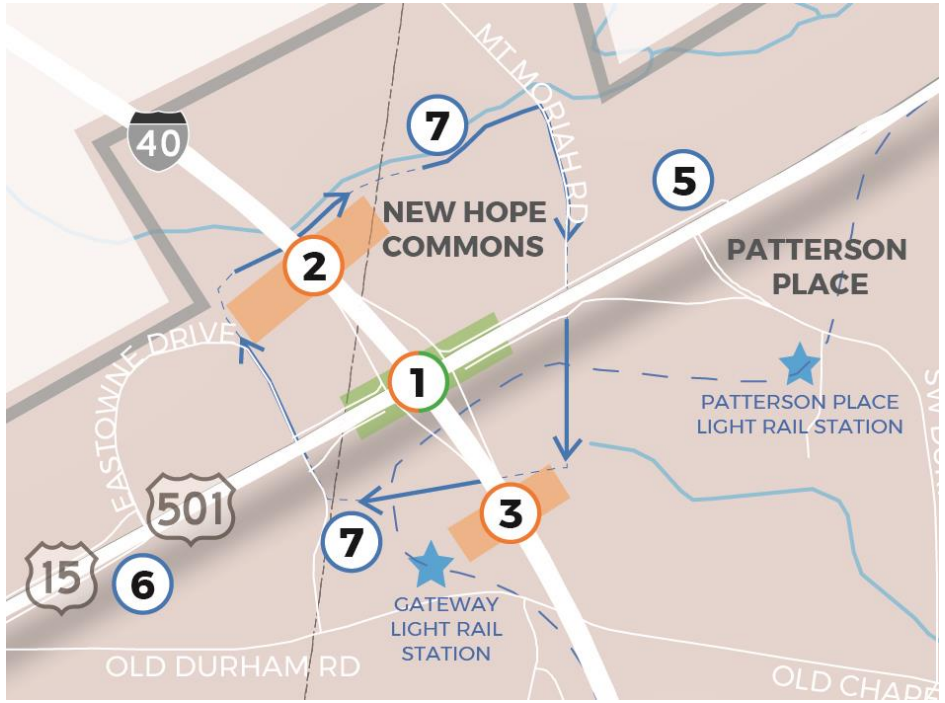
8-lane Median Divided Facility

rated Pedestrian Crossing

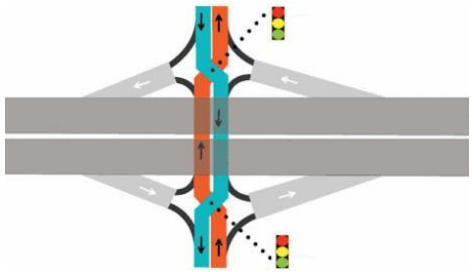
US 15-501 CORRIDOR STUDY
Reimagining 15-501

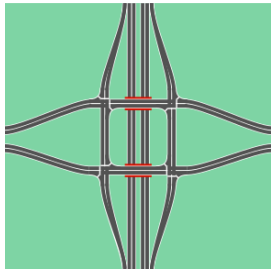
US 15-501 I-40 QUAD STRATEGIES

I-40 Quadrants



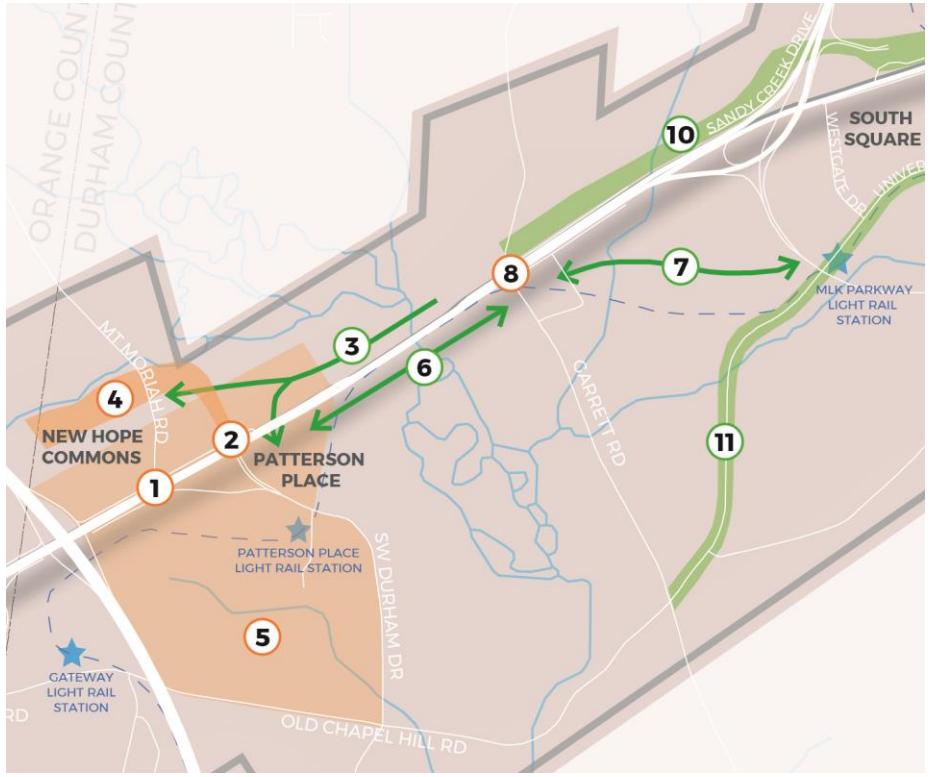
	OPTION ONE	OPTION TWO
1	Redesign I-40/US 15-501 interchange to improve safety and operations	Redesign I-40/US 15-501 interchange to improve safety and operations
2	Grade separated 2-lane roadway with bike/pedestrian facilities across I-40 connecting New Hope Commons to Eastowne Drive	Provide bike/pedestrian facilities within the redesigned interchange
3	Grade separated 2-lane roadway with bike/pedestrian facilities across I-40 connecting Patterson Place to Gateway Station	Provide for bike/pedestrian facilities within the redesigned interchange
4	Put Durham and Chapel Hill signals on the same system to improve traffic flow	
5	Extend GoDurham across I-40 to connect with a transfer point in Chapel Hill (long-term GoDurham to Gateway Station)	
6	Extend Chapel Hill transit across I-40 to connect with a transfer point in Durham (near-term CHT to Patterson Place)	
7	Implement connecting bus service to Eastowne Drive and New Hope Commons	



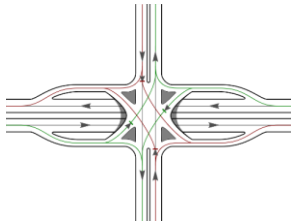


US 15-501 SEGMENT TWO STRATEGIES

I-40 to 15-501 Bypass

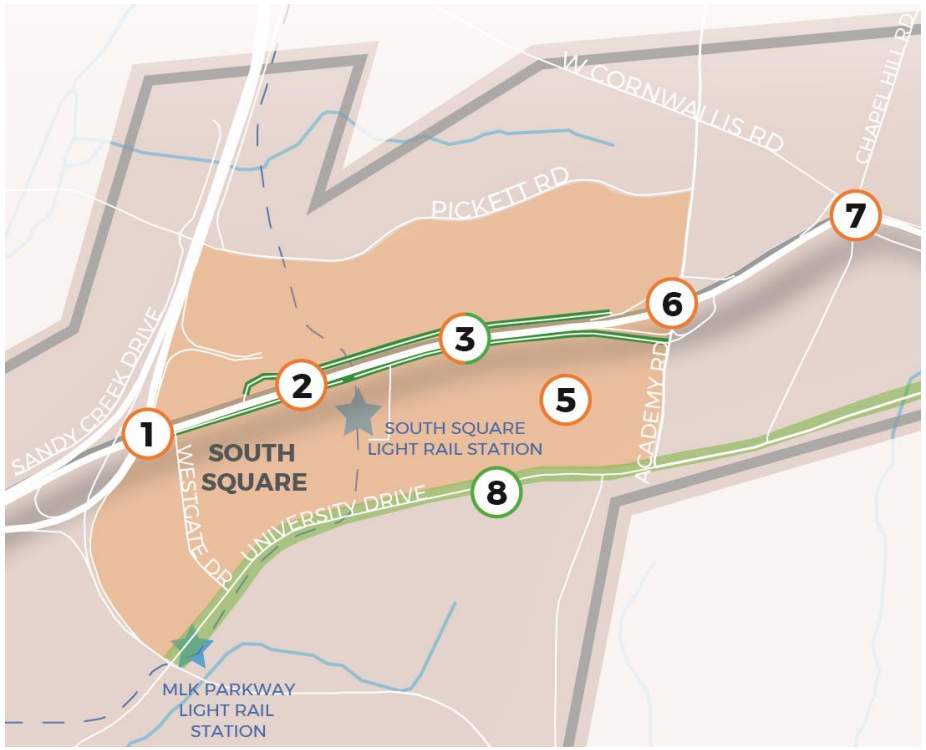


	OPTION ONE	OPTION TWO
1	Grade separate Mt Moriah Road and US 15-501, provide bike/pedestrian accommodations on bridge	Restrict Mt Moriah Road to right in/right out
2	Urban interchange at SW Durham Drive and US 15-501	Traditional intersection widening at SW Durham Drive and US 15-501
3	Bike/pedestrian underpass at New Hope Creek with off road facilities connecting into New Hope Commons and Patterson Place	
4	Extend SW Durham Drive to connect behind shopping center	
5	Implement Patterson Place and New Hope Commons local street network (including connections across I-40 and bike/pedestrian improvements)	
6	Provide bike/pedestrian connectivity between Patterson Place and Garrett Road	
7	Provide bike/pedestrian connections from Garrett Road to University Drive	
8	Urban interchange at Garrett Road	
9	Improve transit access and connectivity to and through the segment	
10	Provide bike/pedestrian connectivity between Sandy Creek Drive, Chapel Hill Blvd Service Road, and Garrett Road	
11	Provide bike/pedestrian facilities along University Drive	



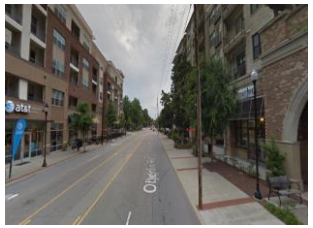
US 15-501 SEGMENT THREE STRATEGIES

15-501 Bypass to Chapel Hill Road



	OPTION ONE	OPTION TWO
1	Implement 2-lane roundabout to transition into a more urban street cross section	Implement other traffic calming measures to transition into a more urban street cross section
2	Implement a fully multimodal 4-lane urban cross-section with landscaped median and roundabouts at key locations	Implement a 4-lane urban cross-section with landscaped median and traditional intersections
3	Remove service roads to provide protected bike lanes and sidewalks from Westgate Drive to Chapel Hill Road	Convert service roads to linear park
4	Implement high density mixed use development fronting US 15-501 Business	Implement high density mixed use development pattern
5	Implement an urban street grid system to the north and south of US 15-501 Business	
6	Replace interchange at Academy Road with a 2-lane roundabout to better accommodate urban design and bike/pedestrians	Redesign Academy Road interchange to better reflect urban design
7	Replace interchange at Chapel Hill Road with a 1-lane roundabout to better accommodate urban design bike/pedestrians.	Redesign Chapel Hill Road interchange to better reflect urban design
8	Continue bike/pedestrian improvements along University Drive	Provide bike/pedestrian facilities outside of the US 15-501 Business corridor, including along University Drive and Pickett Road

Urban Cross-Section



Urban Cross-Section

k, development facing parking lots

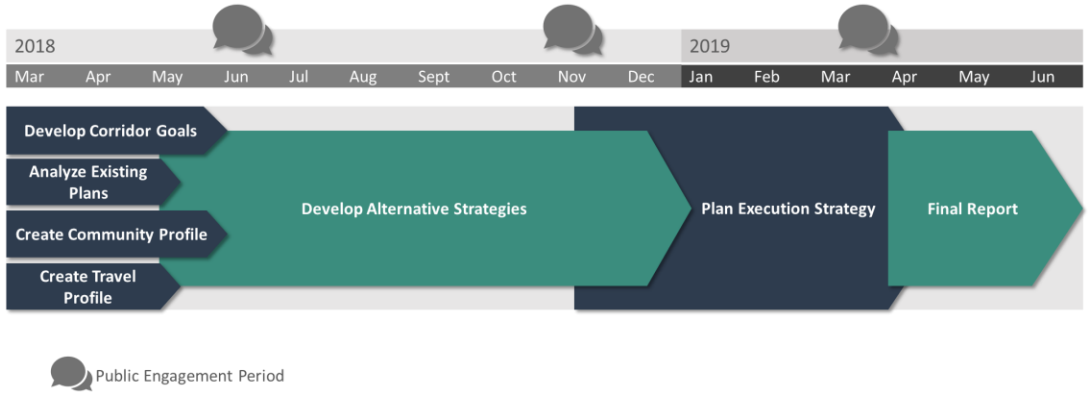
US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 SEGMENT FOUR STRATEGIES

Chapel Hill Road to University Drive

	OPTION ONE	OPTION TWO
1	Implement a 2-lane urban cross section with roundabouts at key intersections, landscaped median, and consolidated driveways fronting US 15-501 Business	Implement a 2-lane urban cross section with traditional intersections, landscaped median and consolidated driveways fronting US 15-501 Business
2	Redesign University Drive intersection as a roundabout with a bike/pedestrian facilities connecting to the proposed bike/pedestrian facilities on University Drive	Redesign University Drive intersection to better accommodate bike/pedestrian travel
3	Improve connectivity between adjoining neighborhoods and US 15-501 Business using sidewalks or greenways for example	
4	Provide a Cycle Track on the south side of US 15-501 Business and sidewalks and parking on the north side	Provide bike lanes and sidewalks on both sides of US 15-501 Business.
5	No Change from Existing	Provide parking on north side of US 15-501 business
6	Improve transit amenities	
7	Pedestrian connection between Chapel Hill Road and US 15-501 Business	

Next Steps



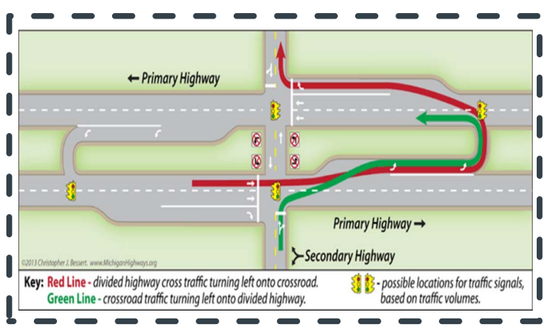
- Conduct detailed evaluation on preferred options/strategies
- Develop conceptual designs
- Public engagement of recommended designs
- Finalize recommendations
- Implementation Plan
- Final Report

DISCUSSION

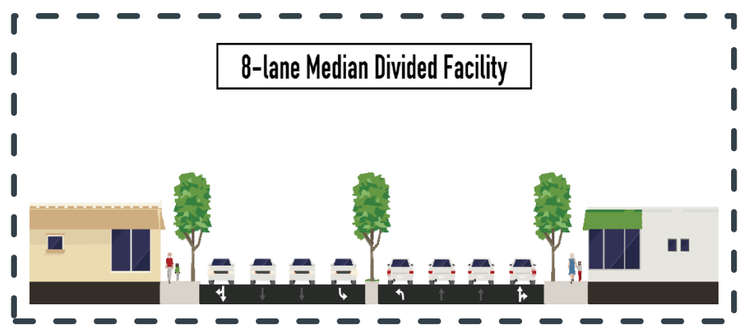
US 15-501 SEGMENT ONE STRATEGIES

Ephesus Church Rd to I-40

	OPTION ONE	OPTION TWO	OPTION THREE
1	Widen US 15-501 from a 4-lane median divided to 6-lane median divided superstreet facility (including elimination of service roads and channelization); provide painted pedestrian crosswalks		Widen US 15-501 to an 8-lane median divided facility with traditional intersections; provide painted pedestrian crosswalks
2	Superstreet intersection at Ephesus Church Road and US 15-501	Urban interchange at Ephesus Church Road and US 15-501	No Change from Existing
3	Connect Legion Road and Old Durham Road	No Change from Existing	Connect Legion Road and Old Durham Road
4	Urban interchange with bike/pedestrian facilities at Eastowne Drive and US 15-501		Traditional intersection widening with grade separated pedestrian crossing
5	Connector roads with bike/pedestrian facilities connecting all 4 quadrants of I-40 interchange		Implement bike/pedestrian facilities (see I-40 Segment Boards strategies 2-3)
6	Implement bike/pedestrian facilities for this area as shown in Chapel Hill Mobility Plan		
7	Implement local street network as proposed by Blue Hill District TIA		
8	Bus improvements as recommended by Blue Hill District TIA		
9	Bus stop enhancements		
10	Land Use: capitalize on opportunities to create land use patterns that promote multimodal travel, and incorporate urban design and human-scale design		



Superstreet Facility Diagram



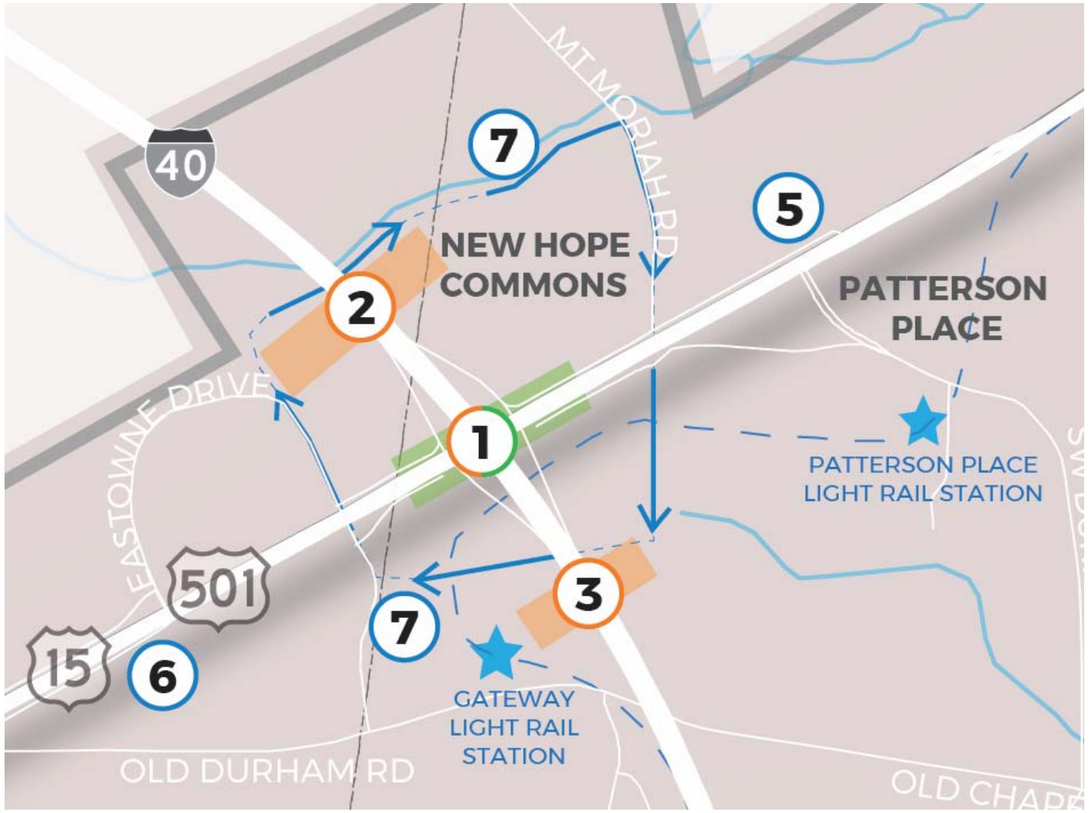
8-Lane Street Section

Grade Separated Pedestrian Crossing

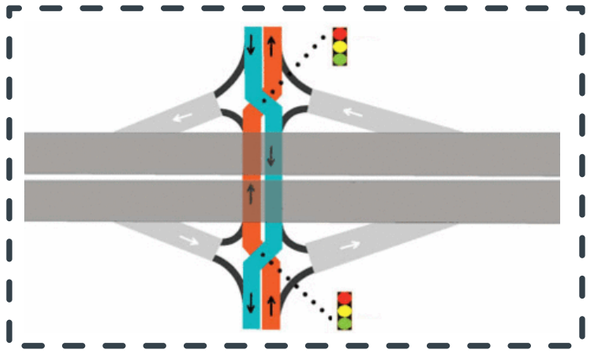
US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 I-40 QUAD STRATEGIES

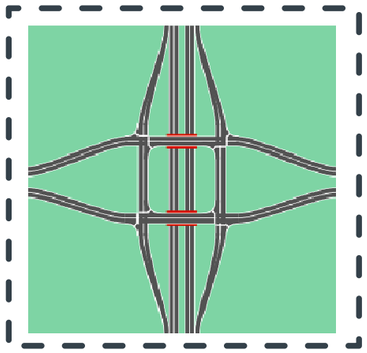
I-40 Quadrants



	OPTION ONE	OPTION TWO
1	Redesign I-40/US 15-501 interchange to improve safety and operations	
2	Grade separated 2-lane roadway with bike/pedestrian facilities across I-40 connecting New Hope Commons to Eastowne Drive	Provide bike/pedestrian facilities within the redesigned interchange
3	Grade separated 2-lane roadway with bike/pedestrian facilities across I-40 connecting Patterson Place to Gateway Station	Provide for bike/pedestrian facilities within the redesigned interchange
4	Put Durham and Chapel Hill signals on the same system to improve traffic flow	
5	Extend Chapel Hill transit across I-40 to connect with a transfer point in Durham (near-term CHT to Patterson Place)	
6	Extend GoDurham across I-40 to connect with a transfer point in Chapel Hill (long-term GoDurham to Gateway Station)	
7	Implement connecting bus service to Eastowne Drive and New Hope Commons	



Diverging Diamond Intersection Diagram



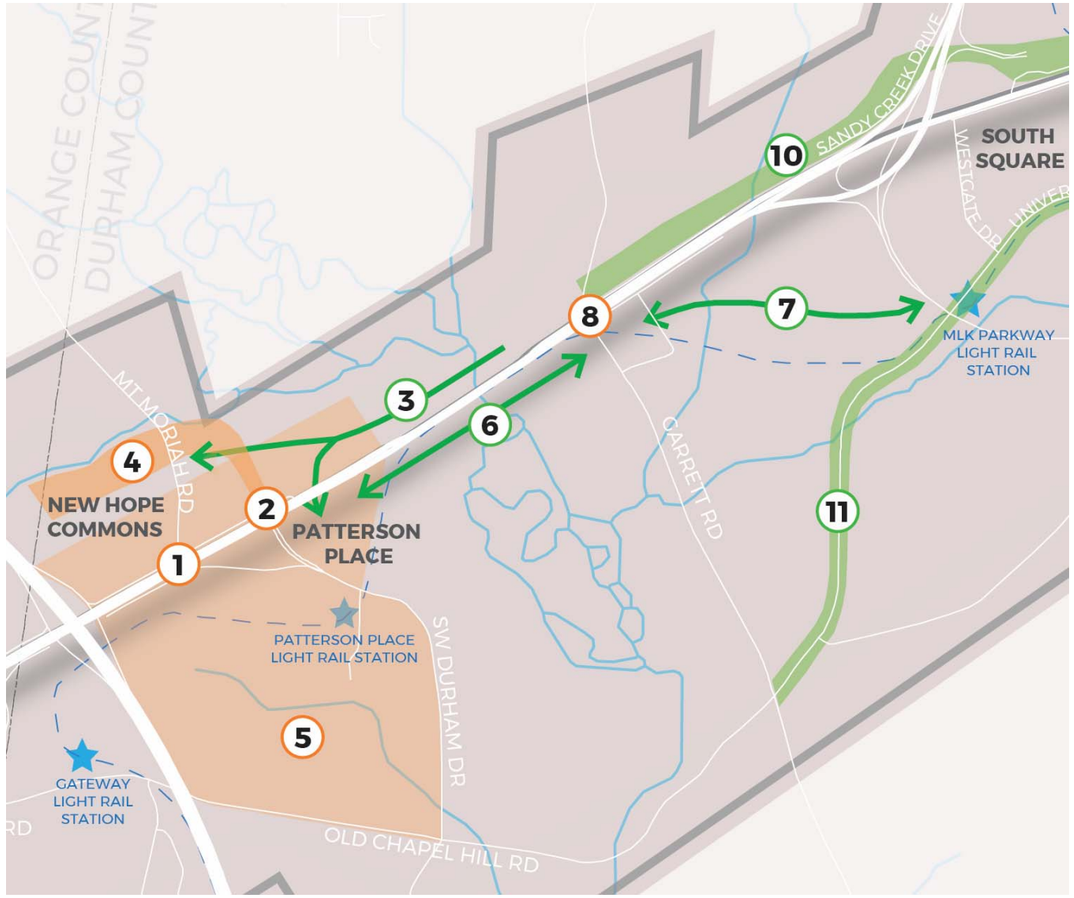
Split Diamond Intersection Diagram

Single Point Diamond Interchange

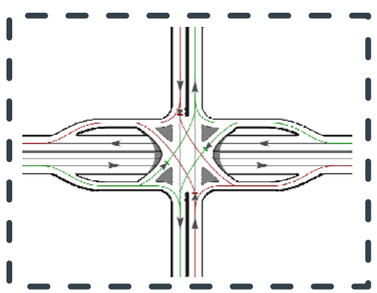
US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 SEGMENT TWO STRATEGIES

I-40 to 15-501 Bypass



	OPTION ONE	OPTION TWO
1	Grade separate Mt Moriah Road and US 15-501, provide bike/pedestrian accommodations on bridge	Restrict Mt Moriah Road to right in/right out
2	Urban interchange at SW Durham Drive and US 15-501	Traditional intersection widening at SW Durham Drive and US 15-501
3	Bike/pedestrian underpass at New Hope Creek with off road facilities connecting into New Hope Commons and Patterson Place	
4	Extend SW Durham Drive to connect behind shopping center	
5	Implement Patterson Place and New Hope Commons local street network (including connections across I-40 and bike/pedestrian improvements)	
6	Provide bike/pedestrian connectivity between Patterson Place and Garrett Road	
7	Provide bike/pedestrian connections from Garrett Road to University Drive	
8	Urban interchange at Garrett Road	
9	Improve transit access and connectivity to and through the segment	
10	Provide bike/pedestrian connectivity between Sandy Creek Drive, Chapel Hill Blvd Service Road, and Garrett Road	
11	Provide bike/pedestrian facilities along University Drive	



Single Point Interchange Diagram

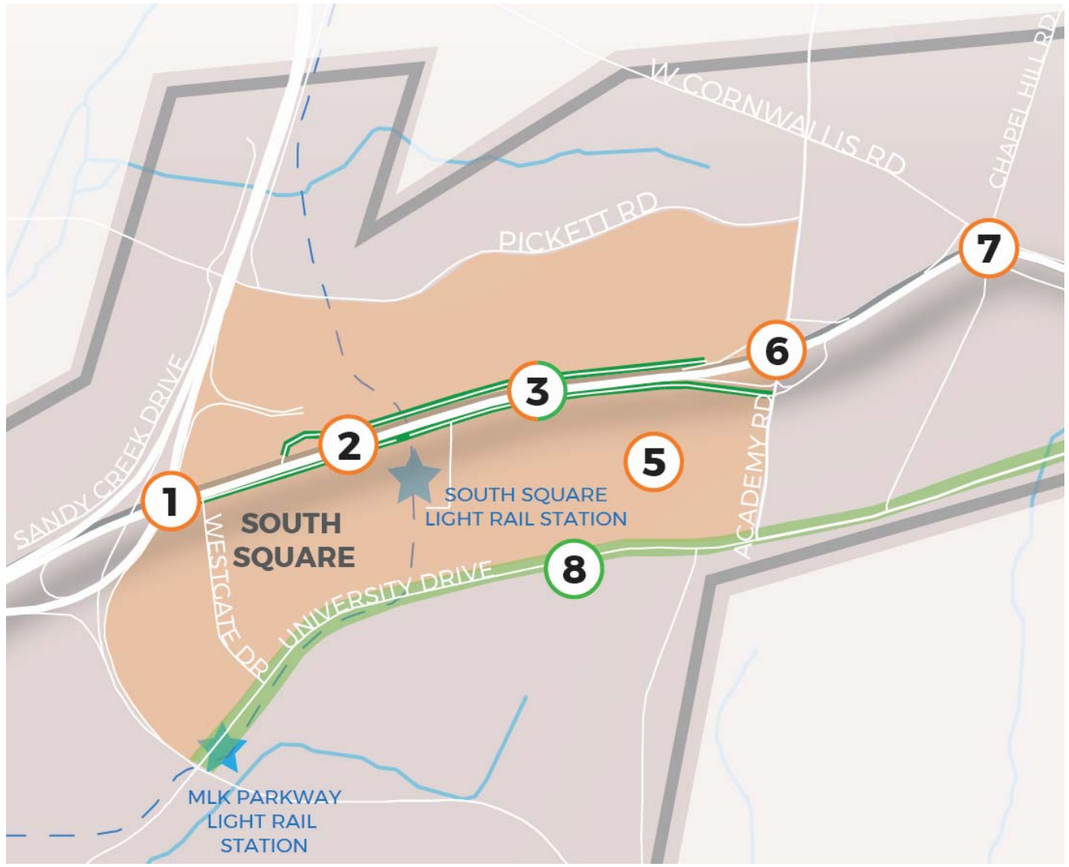
Right In – Right Out

Bike/Pedestrian Under-pass

Multi-use

US 15-501 SEGMENT THREE STRATEGIES

15-501 Bypass to Chapel Hill Road



	OPTION ONE	OPTION TWO
1	Implement 2-lane roundabout to transition into a more urban street cross section	Implement other traffic calming measures to transition into a more urban street cross section
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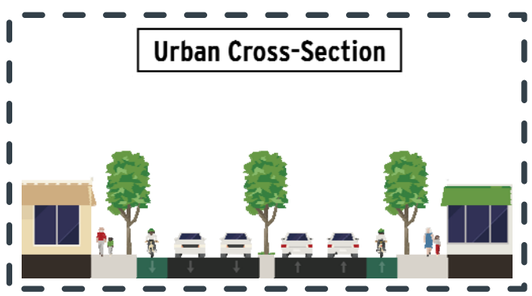
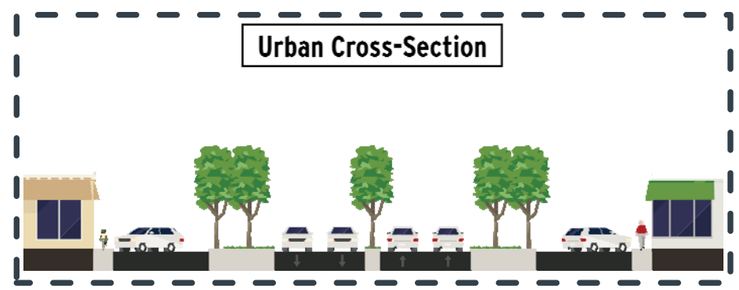
5	Implement an urban street grid system to the north and south of US 15-501 Business	
6	Replace interchange at Academy Road with a 2-lane roundabout to better accommodate urban design and bike/pedestrians	Redesign Academy Road interchange to better reflect urban design
7	Replace interchange at Chapel Hill Road with a 1-lane roundabout to better accommodate urban design bike/pedestrians.	Redesign Chapel Hill Road interchange to better reflect urban design
8	Continue bike/pedestrian improvements along University Drive	Provide bike/pedestrian facilities outside of the US 15-501 Business corridor, including along University Drive and Pickett Road



Landscape median, bike paths, and development facing US 15-501 Business



Landscaped median, convert service roads to park, development facing parking lots

US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 SEGMENT FOUR STRATEGIES

Chapel Hill Road to University Drive

	OPTION ONE	OPTION TWO
1	Implement a 2-lane urban cross section with roundabouts at key intersections, landscaped median, and consolidated driveways fronting US 15-501 Business	Implement a 2-lane urban cross section with traditional intersections, landscaped median and consolidated driveways fronting US 15-501 Business
2	Redesign University Drive intersection as a roundabout with a bike/pedestrian facilities connecting to the proposed bike/pedestrian facilities on University Drive	Redesign University Drive intersection to better accommodate bike/pedestrian travel
3	Improve connectivity between adjoining neighborhoods and US 15-501 Business using sidewalks or greenways for example	
4	Provide a Cycle Track on the south side of US 15-501 Business and sidewalks and parking on the north side	Provide bike lanes and sidewalks on both sides of US 15-501 Business.
5	No Change from Existing	Provide parking on north side of US 15-501 business
6	Improve transit amenities	
7	Pedestrian connection between Chapel Hill Road and US 15-501 Business	

Cycle Track

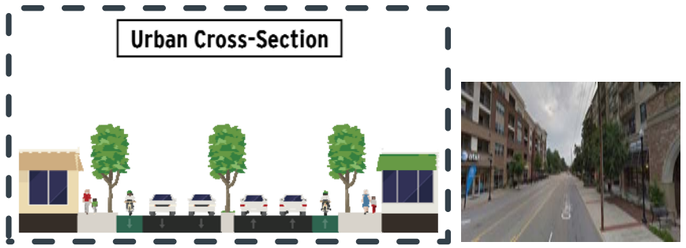
Protected Bike Lane

Bike/Pedestrian Facilities in Roundabout

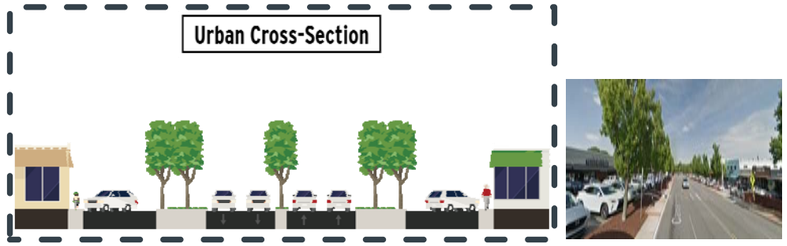
US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 15-501 Example Strategies

URBAN STREET



Landscape median, bike paths, and development facing street



Landscaped median, convert service roads to park, development facing parking lots

INTERCHANGE

Double Roundabout

Double Compressed Diamond

Single Point Diamond

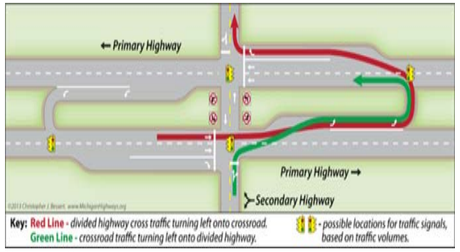
Diverging Diamond

Two Quadrant Cloverleaf

Single Quadrant Cloverleaf

INTERSECTION

Right In – Right Out



Super Street

Bike/Pedestrian Overpass

BIKE/PEDESTRIAN

Cycle Track

Protected Bike Lane

Bike Lane Intergraded into Roundabout

US 15-501 CORRIDOR STUDY
Reimagining 15-501

US 15-501 CORRIDOR STUDY
Reimagining 15-501

Public Workshop October 22, 2018
Comment Form

Please fill out the information below and submit to the project team. This information is for reporting purposes only. Please submit this comment form by November 5 by email at reimagining15501@dchcmpo.org or mail to the address on the back. For more project information visit **reimagining15501.com**.

Include your email below to receive future project updates.

Name: _____ **Home** Zip Code:_____

Email: _____ **Work** Zip Code:_____

Select the Option you would most like to see for each Segment.

	Option 1	Option 2	Option 3
Segment One: Ephesus Church Rd to I-40	☐	☐	☐

Are there any changes you'd make on Segment One improvements 1-10?

_____

_____

_____

_____

_____

	Option 1	Option 2
I-40 Quadrants Segment	☐	☐

Are there any changes you'd make on the I-40 Segment improvements 1-7?

_____

_____

_____

_____

_____

	Option 1	Option 2
Segment Two: I-40 to 15-501 Bypass	☐	☐

Are there any changes you'd make on Segment Two improvements 1-11?

	Option 1	Option 2
Segment Three: 15-501 Bypass to Chapel Hill Rd	☐	☐

Are there any changes you'd make on Segment Three improvements 1-8?

	Option 1	Option 2
Segment Four: Chapel Hill Rd to University Dr	☐	☐

Are there any changes you'd make on Segment Four improvements 1-7?

Fold along this line into thirds and mail

POSTAGE

WSP
ATTN: Leta Huntsinger, Ph.D., PE,
434 Fayetteville Street, Suite 1500
Raleigh, NC 27601

Table of Contents

Appendices

Appendix 1: Road Projects List Make changes to details for twenty-eight DCHC MPO projects.

Appendix 2: [reserved for future use]

Appendix 3: Transit Project List (Capital Area MPO)

Appendix 4: Bicycle and Pedestrian Projects

Appendix 5: Resources on Autonomous & Connected Vehicles

Appendix 6: Complete Streets

Appendix 7: Air Quality (MOVES output) Replace current discussion with Air Quality Conformity Determination report.

Appendix 8: Public Comments and Plan Revisions Add any public comments received during Re-adoption process.

Appendix 9: Acronyms

Appendix 10: Detailed Transportation and Growth Maps

Appendix 11: Year-of-Expenditure Financial Plan

Appendix 12: Environmental Justice Maps and Critical Environmental Resource Maps

Online Interactive Project Maps:

CAMPO: http://arcg.is/2D0kMfj **DCHC MPO:** www.bit.ly/DCHC-MTP-Adopted

A Note to Readers:

The heart of any transportation plan is the investments that will be made to serve the travel needs of our growing region's citizens, businesses and visitors. These investments take the form of road, transit, rail, cycling and walking facilities and services, together with related technologies. Maps are created to help visualize the nature of both the facilities in which we plan to invest and the existing and future population and jobs that the facilities are designed to serve. But the maps in this document are for illustrative purposes only and are subject to change and interpretation. The details of the investments are in the project lists that are included with this report.

Comments may be submitted to either of the MPOs through their websites:
NC Capital Area MPO: www.campo-nc.us/ attention: Chris Lukasina
Durham-Chapel Hill-Carrboro MPO: www.dchcmpo.org/ attention: Andy Henry

Because this document addresses the official plans of both MPOs, the document is color-coded. Text and tables with a white background apply to both MPOs.

Text and tables highlighted in this green color apply only to the Durham-Chapel Hill-Carrboro MPO.

Text and tables highlighted in this yellow color apply only to the Capital Area MPO

2045 Metropolitan Transportation Plan (MTP)
Amendment #1 (January 9, 2019)

Changes to Appendix 1: Roadway Project List

Sorted by Project Name. **Bold font** denotes additions. ~~Strikethrough~~ denotes deletions.

MTP ID	Highway Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type(a)	Length (miles)	Estimated Cost	STI	Reg. Sig.(b)	Exempt (c)	TIP#
2025 MTP												
15	East End Connector (EEC)	NC 147	~~US 70~~ **to north of NC 98 in Durham**	-	4	New Location	~~3.6~~ **3.2**	35,175,000	St	Yes	No	U-0071
23	Fayetteville Rd	Barbee Rd	Cornwallis Rd	2	4	Widening	1	3,374,000	Div	~~No~~ **Yes**	No	N/A
23.1	Fayetteville Rd	Woodcroft Pkwy	Barbee Rd	2	4	Widening	~~1.3~~ **1.4**	4,661,000	Div	~~No~~ **Yes**	No	U-6021
111	Fordham Blvd (US 15-501)	I-40	~~Franklin St~~ **Ephesus Ch Rd**	4	4	Modernization	1.6	2,052,000	St	Yes	No	~~U-5304B~~ **U-5304F**
240	Fordham Blvd (US 15-501)	NC 54	~~Franklin Street~~ **Ephesus Ch Rd**	4	4	Modernization	2.1	45,498,000	St	Yes	No	~~U-5304A~~ **U-5304D**
73	Fordham Blvd (US 15-501)	NC 54	~~US 15-501~~ **NC 86 (S Columbia St)**	4	4	Modernization	~~2.2~~ **2.3**	49,832,000	St	Yes	No	~~U-5304A~~ **U-5304B**
204	Fordham Blvd/Raleigh Rd	Interchange	--	-	-	Upgrade	N/A	14,800,000	St	~~Yes~~ **No**	93.127	U-5774A
626	Fordham Blvd/S Columbia St	Interchange	--	-	-	Upgrade	N/A	35,000,000	St	Yes	No	~~U-5304E~~ **U-5304A**
638	I-40/NC 86	Interchange	--	-	-	~~Upgrade~~ **Improvements**	N/A	16,500,000	St	~~No~~ **Yes**	No	I-3306AC
64.12	NC 147 (Operational Improvements)	~~East End Connector~~ **W Chapel Hill St**	~~Swift Av~~ **Briggs Av**	4	4	Modernization	~~1.7~~ **3.0**	58,400,000	ST	Yes	No	U-5937
64.13	NC 147 (possible Managed Lanes)	East End Conn	I-40	4	8	Widening	~~4.9~~ **3.9**	179,248,000	St	Yes	No	U-5934
428	NC 54	Old Fayetteville Rd	MPO Boundary	2	2	Modernization	2.9	14,457,000	Reg	~~No~~ **Yes**	No	R-5821A

MTP ID	Highway Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (miles)	Estimated Cost	STI	Reg. Sig.	Exempt	TIP#
69.21	NC 54	Highgate Dr	Fayetteville Rd	4	4	Modernization	~~1.5~~ **0.4**	(see #69.2)	Reg	~~Yes~~ **No**	93.126	U-5774H
75.2	NC 55 (Alston Ave)	Main St	NC 98	2	2	Modernization	~~0.5~~ **0.6**	-	Reg	No	No	U-3308
87	S Churton St	~~US 70 Business~~ **Eno River in Hillsborough**	I-40	2	4	Widening	~~2.4~~ **2.2**	31,825,000	Div	No	No	U-5845
485	US 70 (freeway conversion)	~~Pleasant Dr~~ **Lynn Rd**	S Miami Blvd	4	6	Freeway	1.6	111,020,000	St	Yes	No	U-5720A
116.1	US 70/Miami Blvd**/Sherron Rd**	Interchange	--	-	-	New	N/A	46,621,000	St	Yes	No	U-5720B
123.11	Woodcroft Pkwy Ext	Garrett Rd	Hope Valley Rd	-	2	New Location	~~0.2~~ **0.0**	2,219,000	Div	No	No	U-5823
2035 MTP												
43	I-40	~~US 15-501~~ **Durham County Line**	NC 86	4	6	Widening	3.9	29,316,000	St	Yes	No	I-3306AB
45	I-40 Managed Lanes	Wake County Line	NC 147	8	10	Widening	~~7.0~~ **3.4**	446,464,000	St	Yes	No	I-5702B
70.4	I-40/ NC 54 ramp	Farrington Rd.	I-40	-	1	New Location	0.2	1,600,000	St	Yes	No	~~U-5517~~ **N/A**
113	US 15-501 (expressway conversion)	US 15-501 Bypass	I-40	6	6	Expressway	~~2.2~~ **2.0**	195,300,000	St	Yes	No	U-6067
116	US 70 (freeway conversion)	S Miami Blvd	~~Northern Durham Parkway~~ **MPO Boundary**	4	6	Freeway	2.5	173,469,000	St	Yes	No	U-5720C
2045 MTP												
364	Eno Mountain Rd realignment	Mayo St	Eno Mountain Rd	~~0~~ **2**	2	New Location	0.3	2,015,000	Div	No	93.126	N/A
48	I-85	~~US 70~~ **Mt Herman Ch Rd**	I-40	4	6	Widening	~~7.1~~ **6.0**	197,378,000	St	Yes	No	~~I-5983~~ **N/A**
48.1	I-85	~~Sparger Rd~~ **Mt Herman Ch Rd**	~~US 70~~ **Durham County Line**	4	6	Widening	~~3.0~~ **2.5**	39,118,000	St	Yes	No	I-5983

MTP ID	Highway Project	From	To	Existing Lanes	Proposed Lanes	Improvement Type	Length (miles)	Estimated Cost	STI	Reg. Sig.	Exempt	TIP#
81	NC 86 (and US 70 intersection)	US 70 Bypass	NC 57	2	4	Widening	0.3	4,742,000	Reg	No	No	~~I 5984~~ **N/A**
81.1	Wake Forest Hwy (NC 98)	Nichols Farm Dr	Wake County Line	2	4	Widening	6.0	48,474,000	Reg	~~No~~ **Yes**	No	N/A

These footnotes are to clarify the table data and will not be part of Amendment #1.

(a) There is no difference between intersection upgrade and intersection improvement. A text change to improvement is recommended so the MTP and TIP match.
(b) Reg. Sig. means Regionally Significant. Changes to these projects, e.g., deletion from the plan, could require a new air quality conformity determination
(c) Projects that are exempt may continue to move forward in the case of a plan lapse whereas non-exempt projects will not receive federal action until there is an approved MTP. In this column, exempt projects are indicated by the regulation section that provides the exemption, e.g., 93.126.

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)

RESOLUTION ADOPTING THE AMENDED DCHC MPO 2045 METROPOLITAN TRANSPORTATION PLAN (2045 MTP)

A motion was made by MPO Board member _____ and seconded by MPO Board member _____ for the adoption of the following resolution; and upon being put to a vote, was duly adopted.

WHEREAS, the Fixing America's Surface Transportation Act (FAST Act) requires all Metropolitan Planning Organizations to develop and maintain a Metropolitan Transportation Plan; and

WHEREAS, the Metropolitan Transportation Plan must address all modes of transportation in an urban area, have a horizon year of at least 20 years, and be fiscally constrained; and

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Transportation Plan (DCHC MPO) Board is the duly recognized transportation decision-making body for the 3-C transportation planning process (i.e., continuous, cooperative and comprehensive) of the DCHC MPO; and

WHEREAS, the local land use plans and socioeconomic forecasts depicted in the Connect 2045 process were consulted and incorporated into the 2045 MTP, and thereby become the adopted socioeconomic forecasts of the DCHC MPO; and

WHEREAS, the Triangle Regional Model, version 6, was consulted and incorporated into the 2045 MTP; and thereby becomes the adopted travel demand model of the DCHC MPO; and

WHEREAS, the DCHC MPO Board has found the transportation planning process to be in full compliance with Title VI of the Civil Rights Act of 1964 and the Title VI Assurance executed by each State under 23 U.S.C. 324 and 29 U.S.C. 794; and

WHEREAS, the DCHC MPO Board has considered how the Metropolitan Transportation Plan will affect the involvement of Disadvantaged Business Enterprises in the FHWA and the FTA funded planning projects (Sec. 105(f), Pub. L. 97-424, 96 State 2100, 49 CFR part 23); and

WHEREAS, the DCHC MPO Board has considered how the Transportation Planning Process will affect the elderly and the disabled per the provision of the Americans With Disabilities Act of 1990 (Pub.L. 101-336, 104 Stat. 327, as amended) and the U.S. DOT implementing regulations.

BE IT THEREFORE RESOLVED, by the Board of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) that the amended 2045 Metropolitan Transportation Plan, dated January 9, 2019, be adopted for the DCHC MPO on this the 9th day of January, 2019.

(continued)

(Continued – Resolution Adopting DCHC 2045 MTP)

_____

Damon Seils, DCHC MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: January 9, 2019

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

RESOLUTION FINDING THE AMENDED 2045 METROPOLITAN TRANSPORTATION PLAN (MTP) AND THE AMENDED 2018-2027 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

FOR THE DURHAM CHAPEL HILL CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO) IN CONFORMITY WITH THE NORTH CAROLINA STATE IMPLEMENTATION PLAN

A motion was made by TAC Member _____ and seconded by TAC Member _____ for the adoption of the following resolution, and upon being put to a vote, was duly adopted.

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Transportation Planning Organization (DCHC MPO) Board is the duly recognized transportation decision making body for the 3-C transportation planning process (i.e., continuous, cooperative, and comprehensive) of the DCHC MPO; and

WHEREAS, the DCHC MPO Board is the duly recognized transportation decision making body for the DCHC MPO as required by 23 CFR Part 134; and

WHEREAS, the Fixing of America's Surface Transportation Act (FAST Act) requires all Metropolitan Planning Organizations to develop and maintain a Metropolitan Transportation Plan and Transportation Improvement Program; and

WHEREAS, the DCHC MPO 2045 Metropolitan Transportation Plan and the FY 2018- 2027 Transportation Improvement Program meet the planning requirements of 23 CFR Part 134; and

WHEREAS, the United States Environmental Protection Agency (USEPA) designated the Raleigh-Durham Chapel Hill Area as nonattainment area for the prior 1997 8-hour ozone standard on June 15, 2004, and due to improved air quality in the region the area was re-designated from nonattainment to attainment on December 26, 2007; and

WHEREAS, the conformity analysis report dated [insert date] used the latest planning assumptions approved by the DCHC MPO for population, employment, travel and congestion as required in 40 CFR Part 93.110; and

WHEREAS, the conformity determination used the latest emissions model approved by the USEPA; and

WHEREAS, interagency consultation has been made in accordance with the established interagency consultation procedures for North Carolina and the DCHC MPO; and

WHEREAS, there are no transportation control measures listed in North Carolina's State Implementation Plan; and

WHEREAS, the programs and projects included in the amended 2045 Metropolitan Transportation Plan are consistent with the North Carolina State Implementation Plan emissions budgets based on a regional emissions analysis; and

(Continued)

(Continued – Resolution Adopting Air Quality Conformity for the DCHC MPO 2045 MTP and 2018-27 TIP)

WHEREAS, the donut area projects were included in the conformity regional emissions analysis; and

WHEREAS, the programs and projects included in the DCHC MPO Transportation Improvement Program for FY 2018-2027 are financially constrained in accordance with State and Federal law; and

WHEREAS, the programs and projects included in the DCHC MPO Transportation Improvement Program for FY 2018-2027 are a direct subset of the 2045 Metropolitan Transportation Plan.

NOW, THEREFORE BE IT RESOLVED that the DCHC MPO's amended 2045 Metropolitan Transportation Plan and the amended 2018-2027 Transportation Improvement Program conforms to the intent of the North Carolina State Implementation Plan in accordance with the Clean Air Act as Amended on this, the 9th day of January, 2018.

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Damon Seils, DCHC MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: January 9, 2019

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Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

DCHC MPO
Final Allocation of Local Input Points for Division Needs Projects

SPOT ID	Mode	Route/ Project	From	To	Description	Cost to NCDOT	Jurisdiction	SPOT Score	DCHC Points Assigned	Follows Methodology?	Reason	Comment
H170072	Highway	NC 98 (Holloway Street)	SR 1838 (Junction Road)	SR 1919 (Lynn Road)	Construct safety improvements and widen to add median, bicycle lanes, sidewalks, transit stop improvements, and traffic signals where needed.	$ 16,000,000	Durham	43.16	100	N	Local priority and excellent chance for funding	
T150453	Transit	Fayetteville St Transit Corridor Improvements	N/A	N/A	Construct sidewalks, bus stop improvements (including shelters), and better access to stops along Fayetteville Street in Durham.This corridor includes GoDurham routes 5, 5K, 7, 14 and GoTriangle routes 800, 805.	$ 40,000	Durham	41.35	100	Y		
H170312	Highway	US 501 Business (Roxboro Road)	SR 1443 (Horton Road)		Install turn lanes on US 501 Business (Roxboro Road) at Horton Road.	$ 3,300,000	Durham	40.51	100	Y		
B140789	BikePed	NC 54	James Street	Anderson Park	Construct sidepath on the north side of the road to accommodate two-direction bicycle transportation.	$ 1,174,514	Carrboro	40.44	100	N	Local priority and excellent chance for funding	
B170485	BikePed	American Tobacco Trail	US 70 Business (Ramseur Street)	American Tobacco Trail	Construct tunnel underneath NCRR. Extend path to connect American Tobacco Trail to Downtown Durham and future Duke Belt Line Trail.	$ 9,741,612	Durham	40.24	100	N	Local priority that scored well	
B150143	BikePed	Sandy Creek Trail	Pickett Rd	Al Buehler Trail at Cornwallis Rd	Construct a shared use trail.	$ 2,847,422	Durham	40.08	100	N	Local priority that scored well	
B170480	BikePed	NC 54	RTP Trail	American Tobacco Trail	Construct a shared use path along one side of the roadway and pedestrian intersection improvements and sidewalk connections to bus stops on both sides of the road.	$ 6,798,330	Durham	39.91	100	Y		
B170481	BikePed	NC 55 (Apex Highway)	American Tobacco Trail Spur	Cornwallis Road	Construct shared use path on one side of roadway and make intersection improvements.	$ 4,609,168	Durham	39.82	100	Y		

B150607	BikePed	US 15/501 (Fordham Blvd)	Willow Drive	Old Durham Chapel Hill Road	Construct multi-use side paths paralleling US 15/501 (Fordham Blvd) on both sides from Willow Drive to Ephesus Church Road and just the east side from Ephesus Church Road to Old Durham Chapel Hill Road. Construct enhanced pedestrian and bicyclist crossing accommodations at intersections and crossing locations.	$ 1,797,992	Chapel Hill	35.78	100	Y		
H170122	Highway	SR 1321 (Hillandale Road)	SR 1443 (Horton Road)		Construct roundabout	$ 2,600,000	Durham	35.45	100	Y		
H170127	Highway	New Route - Northern Durham Parkway	I-85	SR 1004 (Old Oxford Road)	Construct multi-lane roadway on new location.	$ 29,700,000	Durham	33.85	100	N	Local priority	
H140374-E	Highway	NC 54	SR 1937/SR 1107 Old Fayetteville Road		Improve intersection	$ 1,700,000	Carrboro	31.70	100	N	Local priority and excellent chance for funding	
B170402	BikePed	NC 86 (Martin Luther King, Jr. Parkway)	SR 1770 (Estes Drive)	SR 1777 (Homestead Road)	Construct bicycle lanes and upgrade sidewalks along NC 86.	$ 614,169	Chapel Hill	31.48	100	N	Highest priority under Methodology to not receive points; more competitive for funding	
H170785	Highway	NC 147 (Durham Freeway)	Elba Street/Trent Drive		Improve ramps by tying them into a roundabout with Elba Street and Trent Drive.	$ 1,850,000	Durham	31.17	100	N	Local contribution could make project competitive	
B171175	BikePed	SR 1843 (Seawell School Road)	SR 1780 (Estes Drive Extension)	SR 1777 (Homestead Road)	Construct a sidepath along the entire corridor from Estes Drive to Homestead Road.	$ 3,341,552	Chapel Hill, Carrboro	29.19	100	N	Considered a local priority	
H111036	Highway	NC 86	US 70 Bypass	North of NC 57	Widen to four lanes with a median and Improve intersections at US 70 Bypass and NC 57.	$ 12,400,000	Hillsborough	27.42	100	N	Local priority that scored well	
T150449	Transit	Village Neighborhood Transit Center	N/A	N/A	Design and Construction of NTC: Village Neighborhood Transit Center. Serves GoDurham routes 2B, 3, 3B, 3C	$ 100,000	Durham	35.10	81	Y		
T171425	Transit	Orange Public Transit additional vehicles	N/A	N/A	Purchase two light transit vehicles	$ 97,560	Orange County	24.81	49	N	Considered a local priority	50 points supplied by TARPO

H171698	Highway	US 15, US 501	SR 1919 (Smith Level Rd)	US 64 Pittsboro Bypass	Convert remaining non-synchronized sections of US 15-501 to synchronized between the Orange County Line and the US 64 Pittsboro Bypass	$ 39,900,000	Chatham County	25.98	47	Y		53 points supplied by TARPO
H172189	Highway	Division 5 Non-Muncipal Divisionwide Signal System			Add cameras and fiber to signals in division 5 which are outside of municipal systems and upgrade software and add equipment to enable monitoring of signals by Division staff. Division wide project. Will provide the list of signals.	$ 4,600,000	Division 5	40.00	14	N	Local priority that scored well	49 points supplied by Kerr-Tar RPO; 37 points supplied by CAMPO
T171420	Transit	Chatham Transit additional vehicles	N/A	N/A	Purchase three new ramp-equipped minivans	$ 126,900	Chatham County	33.52	9	Y		91 points supplied by TARPO
H170375	Highway	US 501 Business (Roxboro Road)	NC 55 (Avondale Drive)	SR 1004 (Old Oxford Road)	Construct median along section with potential turn lanes at Lavender Avenue, Bon Air Avenue, and Murray Avenue. Fill in sidewalk gaps and provide streetscape amenities.	$ 37,300,000	Durham	42.71	0	Y		
H111013	Highway	I-40	NC 147	Wade Avenue	Construct Managed Lanes.	$ 727,650,000	Durham	42.56	0	Y		
H170126	Highway	US 501 (Roxboro Road)	US 501 Bypass (Duke Street)	Omega Road	Construct median, access management facilities, safety improvements, bicycle and pedestrian facilities, and transit stop improvements.	$ 23,900,000	Durham	40.61	0	Y		
H172045	Highway	I-40	NC 54 (exit 273)	NC 751 (exit 274)	Construct auxiliary lane between ramps	$ 15,200,000	Durham	39.49	0	Y		
H129638-C	Highway	US 70	SR 1959 (South Miami Blvd) / SR 1811 (Sherron Road)	Page Road Extension / New Leesville Road	Upgrade Roadway to Freeway.	$ 68,100,000	Durham	39.37	0	Y		
B170469	BikePed	SR 1183 (University Drive) and Old Chapel Hill Road	SR 1116 (Garrett Road)	Martin Luther King Jr. Parkway	Construct shared use path along one side of the roadway.	$ 2,246,078	Durham	39.06	0	N	Project not competitive	
B141106	BikePed	Horton Road	US 501 Business (Roxboro Road)	NC 157 (Guess Road)	Construct a sidewalk on one side of the road, sidepath on the other side.	$ 5,090,502	Durham	38.95	0	N	Project not competitive	
B170482	BikePed	US 15/501 Business (University Drive)	Woodridge Drive	US 15/501 Business Lakewood Avenue	Construct sidewalks along entire length and bicycle lanes where needed.	$ 4,339,496	Durham	38.80	0	Y		
B170468	BikePed	SR 1669 (Club Boulevard)	SR 1332 (Broad Street)	Washington Street/Ellerbe Creek Trail	Construct bicycle lanes on both sides of the street and improve intersections for bicycle and pedestrian crossings.	$ 1,849,507	Durham	38.75	0	Y		

B150405	BikePed	Cook Rd	American Tobacco Trail	Martin Luther king Jr Parkway	Construct buffered bike lanes and sidewalks on both sides of the road.	$ 6,599,861	Durham	38.75	0	Y		
B170470	BikePed	US 501 (Roxboro Road)	SR 1456 (Milton Road)	Fairfield Road	Construct sidewalks on both sides of the road.	$ 6,655,782	Durham	38.42	0	Y		
B170479	BikePed	SR 1959 (Miami Boulevard)	SR 1954 (Ellis Road)	Cornwallis Road	Construct a multi-use pathway along east side of Miami Boulevard.	$ 5,932,258	Durham	38.23	0	N	Project not competitive	
B170526	BikePed	Warren Creek Trail Phase II	Warren Creek Trail/Horton Road	US 501	Construct a shared use trail through and outside the boundary of West Point on the Eno Park.	$ 1,976,022	Durham	38.01	0	N	Project not competitive	
B170467	BikePed	NC 55 (Apex Highway)	NC 54	Carpenter Fletcher Road	Construct pedestrian facilities on both sides of the road.	$ 1,886,285	Durham	37.97	0	Y		
B170484	BikePed	US 15/501 Business (Durham-Chapel Hill Boulevard)	Nation Avenue	US 15/501 Business (University Drive)	Construct sidewalks, improve bicycle lanes, and install intersection improvements.	$ 3,392,554	Durham	37.68	0	Y		
H090366-A	Highway	US 15, US 501	I-40	US 15/501 Business	I-40 to US 15/501 Bypass in Durham. Major Corridor Upgrade to Expressway	$ 195,300,000	Durham	36.68	0	Y		
H140374-A	Highway	NC 54	SR 1006 (Orange Grove Rd)	SR 1937 / SR 1107 (Old Fayetteville Rd)	Widen to a four-lane boulevard	$ 83,000,000	Orange County	36.58	0	Y		
B170466	BikePed	NC 98 (Holloway Street)	US-70 Bypass	Ganyard Farm Way	Construct sidewalks on both sides of the road and include intersection improvements.	$ 6,000,552	Durham	35.97	0	N	Project not competitive	
H149000-H	Highway	NC 54	NC 751	SR 1118 (Fayetteville Road)	Widen to Multi-Lanes with Bicycle, Pedestrian, and Transit Accommodations	$ 21,600,000	Durham	35.72	0	Y		
B172002	BikePed	Briar Creek Loop Trail & Connector	Briar Creek Parkway/Lumley Rd	Litle Briar Creek	Construct 10' multi-use path along Little Briar Creek to connect to the Briarcreek Loop Trial	$ 5,722,880	Raleigh, Durham	35.03	0	Y		
R140014	Rail	NS/NCRR H Line	N/A	N/A	Construction of grade separation at SR 1954 (W. Ellis Road) and closure of existing at-grade crossing (Crossing # 735 236Y) in Durham.	$ 11,750,000	Durham	34.80	0	Y		
B150104	BikePed	NC 751 (Academy Road), Cornwallis Road	Duke University Rd	Chapel Hill Rd	Construct on road bicycle lanes and sidewalks for the entire length of the route.	$ 4,859,386	Durham	34.80	0	Y		
H149000-J	Highway	NC 54	SR 1106 (Barbee Road)	NC 55	Widen to Multi-Lanes with Bicycle, Pedestrian, and Transit Accommodations	$ 19,000,000	Durham	34.65	0	Y		
H170298	Highway	US 15, US 501	NC 751	Pickett Road Overpass	Widen section of 15-501 bypass between Tower and NC 751 to 6 lanes	$ 54,300,000	Durham	34.22	0	Y		

H170805	Highway	US 15, US 501	NC 147 (Durham Freeway)	US 70 Business (Hillsborough Road)	Signalize collector-distributor ramp intersections to improve safety.	$ 995,000	Durham	34.08	0	Y		
H170038	Highway	SR 1116 (Garrett Road)	NC 751 (Hope Valley Road)	SR 2220 (Old Chapel Hill Road)	Upgrade roadway corridor to increase capacity and construct bicycle and pedestrian facilities and transit stop improvements.	$ 34,200,000	Durham	33.37	0	Y		
R150325	Rail	NS/NCRR H Line	N/A	N/A	Construction of at-grade crossing improvements at Blackwell Street (Crossing # 735 229N), US 15 (Mangum Street) (Crossing # 735 231P), and SR 1118 (Fayetteville Street) (Crossing # 910 605Y) per Durham TSS in Durham.	$ 650,000	Durham	32.96	0	Y		
T171898	Transit	Commuter Rail from Durham to Garner	N/A	N/A	Construct commuter rail service and infrastructure. Project includes 4 locomotives and 8 coaches.	$ 111,421,000	Durham, Wake	32.59	0	Y		
T171696	Transit	GoTriangle Rougemont Park & Ride and service	N/A	N/A	Construct park-and-ride and additional vehicle to provide new service between Rougemont and central Durham.	$ 155,000	Durham	32.59	0	N	Project no longer desired by sponsor	
B170478	BikePed	Old Durham-Chapel Hill Road	SR 1113 (Pope Road)	Mount Moriah Road	Construct a bicycle and pedestrian bridge along Old Durham-Chapel Hill Road across I-40. Facility may not be required to be the full length of the road segment.	$ 4,444,910	Durham	31.84	0	Y		
H129638-D	Highway	US 70	Page Road Extension / New Leesville Road in Durham County	Alexander Drive in Wake County	Upgrade Roadway to Freeway	$ 87,900,000	Durham, Wake	31.65	0	Y		
H170117	Highway	SR 1171 (Riddle Road)	SR 2100 (South Alston Avenue)		Construct roundabout	$ 1,600,000	Durham	31.25	0	Y		
B171043	BikePed	US 15-501 (Fordham Boulevard)	Legion Road (future)	Service Road	Construct a bicycle/pedestrian bridge over US 15-501 (Fordham Boulevard) in Chapel Hill from where the future Legion Road extension will be on the east side of Fordham Boulevard to the service road on the west side.	$ 2,400,000	Chapel Hill	31.15	0	Y		
H171549	Highway	I-540	I-40	US 1	Construct managed shoulders in both directions along I-540. Managed lanes are expected to be in operation for approx 3 hours during morning and evening peak periods (6 hours total).	$ 59,400,000	Wake, Durham	30.75	0	Y		

T171911	Transit	Durham to Raleigh Commuter Rail Service	N/A	N/A	Construct infrastructure and service for commuter rail service from Durham to Raleigh. Project includes 4 locomotives and 8 coaches.	$ 84,896,916	Wake, Durham	30.74	0	Y		
B170483	BikePed	NC 54, Alston Avenue	Cornwallis Road	RTP Trail	Construct bicycle lanes and sidewalks.	$ 8,953,131	Durham	30.53	0	Y		
B150258	BikePed	Campus to Campus Connector/Tanyard Branch Extension	Broad Street	Village Drive and Tanyard Branch Greenway	Construct an off-road multi-use path providing bicycle and pedestrian safety.	$ 450,505	Chapel Hill	30.44	0	Y		
B141356	BikePed	Hardee St/SR 1800 (Cheek Road)	NC 98 (Holloway St)	SR 1800 (Cheek Rd/Sherwood Park)	Construct sidewalks and bike lanes on Hardee Street, construct sidewalks on Cheek Road.	$ 5,779,080	Durham	30.21	0	Y		
B171963	BikePed	SR 1010 (West Franklin Street)	SR 1010 (East Main Street)	Merritt Mill Street/Brewer Lane	Construct pedestrian improvements, such as crosswalks, improved signage, and pedestrian signals, at the West Franklin/East Main/Merritt Mill/Brewer intersection on the border of Chapel Hill and Carrboro.	$ 279,680	Chapel Hill, Carrboro	29.47	0	Y		
R150312	Rail	NS/NCRR H Line	N/A	N/A	Construction of grade separation at SR 1317 (Neal Road) and closure of existing at-grade crossing (Crossing # 735 202E) in Durham.	$ 5,492,000	Durham	29.26	0	Y		
H090555-A	Highway	NC 751	SR 1740 (Lewter Shop Road)	O'Kelly Chapel Road	Widen road to 4 Lanes with bicycle lanes on existing location.	$ 91,800,000	Chatham County	29.17	0	Y		
B141103	BikePed	Finley Golf Course Road	US 15-501/NC 54	NC 54	Construct sidepath on one side or bicycle lanes.	$ 1,290,866	Chapel Hill	28.62	0	Y		
H149000-I	Highway	NC 54	SR 1118 (Fayetteville Road)	SR 1106 (Barbee Road)	Widen to Multi-Lanes with Bicycle, Pedestrian, and Transit Accommodations	$ 23,900,000	Durham	28.51	0	Y		
H150278	Highway	NC 751 (Hope Valley Road)	South Roxboro Road	Woodcroft Parkway	Widen to four lanes with bike lanes and sidewalks. Improve the NC 751 & South Roxboro Road intersection.	$ 8,500,000	Durham	27.47	0	Y		
T171912	Transit	Durham to Wake Forest Commuter Rail	N/A	N/A	Construct infrastructure and service for commuter rail service from Durham to Wake Forest. Project includes 6 locomotives and 12 coaches.	$ 135,698,527	Wake, Durham	27.41	0	Y		

T171915	Transit	Durham to Raleigh to Garner/Wake Forest commuter rail	N/A	N/A	Construct infrastructure and service for 8-2,8-2 service to Raleigh and 4-1,4-1 service to Wake Forest and Garner. Project includes 6 locomotives and 12 coaches.	$ 162,222,611	Wake, Durham	27.04	0	Y		
H149000-G	Highway	NC 54	I-40	NC 751	Widen to Multi-Lanes with Bicycle, Pedestrian, and Transit Accommodations	$ 32,000,000	Durham	25.78	0	Y		
B171147	BikePed	American Tobacco Trail	American Tobacco Trail	American Tobacco Trail	Construct a tunnel or bridge across O'Kelly Chapel Road.	$ 2,417,453	Chatham County	25.65	0	Y		
T150993	Transit	Regional Transit Center	N/A	N/A	An improved location to increase the efficiency of the overall regional system. The project includes 10 bus bays and 150 parking spaces in a structured facility.	$ 1,040,000	Durham	25.58	0	N	Project not competitive	
H140374-D	Highway	NC 54	Neville Road		Improve intersection	$ 1,100,000	Orange County	25.22	0	Y		
H150716	Highway	I-540	I-40	I-87	Construct managed shoulders in both directions along I-540. Managed lanes are expected to be in operation for approx 3 hours during morning and evening peak periods (6 hours total).	$ 110,970,000	Wake, Durham	25.14	0	Y		
B150122	BikePed	SR 1669 (Club Boulevard)	Ambridge St	SR 1666 (Dearborn Dr)	Construct on road bicycle lanes and sidewalks for the entire length of the route.	$ 3,852,229	Durham	24.81	0	Y		
H171433	Highway	New Route - Northern Durham Parkway	US 70	SR 1811 (Sherron Road)	Construct roadway on new location.	$ 41,800,000	Durham	24.65	0	Y		
B150456	BikePed	SR 1843 (Seawell School Road)	SR 1780 (Estes Drive Extension)	SR 1777 (Homestead Road)	Improve bicycle and pedestrian facilities along the entire corridor from Estes Drive to Homestead Road. Construct bike lanes and sidewalks to fill-in gaps.	$ 3,341,552	Chapel Hill, Carrboro	24.56	0	Y		
T171692	Transit	Commuter Rail Transit, West Durham to Garner	N/A	N/A	Construct commuter-rail transit service adjacent to and/or within the existing NCRR corridor extending from West Durham to Greenfield station in Garner via RTP, Cary, and Raleigh. Provide 4 trains each direction during the morning rush hour, 4 in the evening rush hour, and 1 train each direction in the off-peak AM and PM (a total of 10 trains each direction). The peak services will operate at one-hour intervals (e.g. leave origin station at 6:00 am, 7:00 am, 8:00 am, etc.).	$ 111,421,000	Wake, Durham	24.45	0	Y		

H170037	Highway	SR 1978 (Hopson Road)	NC 54	Distribution Drive	Widen to a four lane divided roadway with bicycle and pedestrian facilities.	$ 8,400,000	Durham	24.40	0	Y		
H170372	Highway	SR 1008 (Farrington Point Road), SR 1726 (Old Farrington Point Road), SR 1109 (Farrington Mill Road)	SR 1110 (Farrington Road)	SR 1717 (Lystra Road)	Modernize roadway to current standards.	$ 36,100,000	Chatham County	23.99	0	Y		
H149000-A	Highway	NC 54 (Raleigh Road)	US 15-501		Improve Interchange	$ 28,000,000	Chapel Hill	23.51	0	Y		
B170403	BikePed	SR 1008 (Mt. Carmel Church Road)	US 15/501	SR 1913 (Bennett Road)	Construct a multi-use path on one side of Mt. Carmel Church Road.	$ 469,423	Chapel Hill	23.03	0	Y		
H170787	Highway	US 70 Business (Morgan Street, Ramseur Street), NC 98 (Morgan Street)	US 15-501 Business (Roxboro Street)	US 15/501 Business (Roxboro Street)	Convert the Downtown Loop from one-way to two-way traffic	$ 15,100,000	Durham	22.92	0	Y		
R150318	Rail	NS/NCRR H Line	N/A	N/A	Construction of grade separation at Dimmocks Mill Road (Crossing # 735 154S) and closure of Bellvue Street existing at-grade crossing (Crossing # 735 152D) and West Hill Avenue existing at-grade crossing (Crossing # 735 151W). Project includes a pedestrian tunnel at Hill Avenue.	$ 21,575,000	Hillsborough	22.86	0	Y		
T171711	Transit	GoTriangle DRX Route bus service expansion FY 19	N/A	N/A	Purchase 3 additional vehicles in FY 19 to support headway reduction on DRX route.	$ 135,000	Durham, Raleigh	22.59	0	Y		
H111162	Highway	SR 1005 (Old Greensboro Road)	SR 1942 (Jones Ferry Rd)	NC 87 in Alamance County	Modernize and add 4-foot Paved Shoulders	$ 42,500,000	Orange County, Alamance County	22.36	0	Y		
H111011	Highway	NC 751 (Hope Valley Road)	NC 54	Southpoint Auto Park Blvd	Widen to four lanes with a median with bicycle, pedestrian and transit facilities as appropriate.	$ 16,500,000	Durham	22.30	0	Y		
R170032	Rail	NCRR/NS H line	N/A	N/A	Construction of curve radius improvements from MP H 44.5 to MP H 48 near Hillsborough.	$ 3,500,000	Orange County	21.97	0	Y		

H172198	Highway	US 15 Business (Roxboro Street)	Pettigrew Street	East Main Street	Improve the crossing at US 15/501 Business (Roxboro Street) in Downtown Durham. Make the bridge higher to reduce truck conflict, make the span wider to facilitate a future two-way of Roxboro Street, and make the bridge wider to be able to accommodate four tracks. Potentially create an intersection at Ramseur and Roxboro.	$ 31,100,000	Durham	21.88	0	Y		
R150320	Rail	NS/NCRR H Line	N/A	N/A	Construction of second main track from East Durham Yard (MP 58.5) to Nelson (MP 63.5) in Durham.	$ 53,900,000	Durham	21.70	0	Y		
H170114	Highway	SR 1731 (O'Kelly-Chapel Road)	NC 751	Yates Store Road	Widen existing road to four lanes and include bicycle accommodations.	$ 31,400,000	Chatham County	20.88	0	Y		
H170399	Highway	SR 1009 (Old NC 86)	SR 1777 (Homestead Road)	SR 1107 (Old Fayetteville Road)	Upgrade roadway corridor and intersection with Homestead Road to improve the safety of users.Construct two-lane improvements on Old NC 86 with left turn lanes at appropriate locations, such as John's Woods Road, and on-road bicycle facilities and sidewalks. Improve intersection at Calvander (Old NC 86/Homestead/Dairyland) for all modes. Intersection improvement could include a roundabout. Design of roadway and facilities may vary along the corridor.	$ 8,700,000	Orange County, Carrboro	19.99	0	Y		
T171904	Transit	Mebane to Selma Commuter Rail Service	N/A	N/A	Construct infrastructure and service for commuter rail service from Mebane to Selma. Project includes 12 locomotives and 24 coaches.	$ 250,727,364	Alamance, Orange, Durham, Wake, Johnston	19.26	0	Y		
B150435	BikePed	Old NC 86 - Hillsborough Road	SR 1777 (Homestead Road)	Farm House Road	Construct bicycle lanes on both sides of roadway	$ 990,199	Orange County, Carrboro	19.22	0	Y		
R170033	Rail	NCRR/NS H line	N/A	N/A	Construction of curve radius improvements from MP H 38 to MP H 40.4 near Efland.	$ 3,500,000	Orange County	17.16	0	Y		
T171722	Transit	GoTriangle ODX Route bus service expansion FY23	N/A	N/A	Purchase one additional vehicle in FY23 to support headway reduction on the ODX route.	$ 48,000	Orange County, Durham	15.93	0	Y		

H140638	Highway	Elliott Road	US 15-501 (Fordham Boulevard)	Ephesus Church Road	Construct extension of existing roadway (Elliott Rd) on new location between Ephesus Church Rd and US 15/501.	$ 9,400,000	Chapel Hill	15.44	0	Y		
H150280	Highway	SR 1148 (Eno Mountain Road), SR 1192 (Mayo Street)	SR 1006 (Orange Grove Road)		Construct new section of SR 1192 (Mayo Street) to align with SR 1148 (Eno Mountain Road) and install signal.	$ 8,700,000	Hillsborough	14.36	0	Y		
H170804	Highway	US 70	US 70 Connector		Reconstruct interchange to an at-grade intersection.	$ 8,200,000	Orange County	13.03	0	Y		
R170029	Rail	NS/NCRR H Line	N/A	N/A	Construction of new railroad bridge, or other railroad approved method, over Exchange Park Lane (Crossing #735 158U) to accommodate pedestrian traffic within the structure.	$ 7,400,000	Hillsborough	12.46	0	Y		
R150319	Rail	NS/NCRR H Line	N/A	N/A	Construction of second main track from Control Point Funston (MP 49.8) to East Durham Yard (MP 56) in Durham.	$ 50,800,000	Durham	10.73	0	Y		
R171833	Rail	I-40 Rail Bridge in Durham County	N/A	N/A	Construct triple track bridge over I-40 in Durham County.	$ 20,000,000	Durham	7.36	0	Y		
									1800			

Durham - Chapel Hill - Carrboro
Metropolitan Planning Organization Board
November 14, 2018

FY 2018-2027 TIP Amendment #7 Summary Sheet
See full report for additional information on each project.

- **C-5179 North Estes Drive**: Move Construction to FY19 and increase CMAQ funding.
- **C-5605E Durham Bike Lanes:** Add CMAQ funding in FY19.
- **C-5605H Downtown Durham Wayfinding:** Add CMAQ funding in FY19.
- **EB-4707A Old Durham Road Bike/Ped:** Add TAP, TAP-DA and STBGDA funding for Construction in FY19.
- **EB-4707B Old Chapel Hill Road Bike/Ped:** Add CMAQ and STBGDA funding for Construction in FY19.
- **U-5937 Durham Freeway Operational Improvements:** Change western terminus from Duke Street to Chapel Hill Street.

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TIP Amendment Request - Revise An Existing Project

Amendment Request Details

(●) **TIP Amendment** (*change in funding greater than $1M*)

( ) **TIP Modification** (*change in funding less than $1M*)

[ ] There are previous amendments to this project.

Date: 9-4-18

Amendment Requested By: DCHC MPO

Existing Project Details

Project Name: North Estes Drive

STIP/TIP #: C-5179

Jurisdiction/Agency: Chapel Hill

WBS or Local ID or Federal Aid #:

MUNIS #:

Existing Project Schedule and Funding: Enter the most current project information.

Use the MPO database: bitly.com/mpoprojects

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	Construction	CMAQ	$1,630,000	$0	$408,000	$2,038,000
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$1,630,000	$0	$408,000	$2,038,000
						Total Project Cost

Proposed Project Schedule and Funding: Enter the full proposed project schedule & funding.

In many cases, the current project information from the above table will be re-entered at the top of the Proposed Table to represent FULL project information.

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2019	Construction	CMAQ	$2,646,618	$0	$661,655	$3,308,273
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$2,646,618	$0	$661,655	$3,308,273
						Total Project Cost

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TIP Amendment Request - Revise An Existing Project

Project Details - Continued

Please provide previous STIP/TIP # or new STIP/TIP # (if applicable):

If this amendment has already been reflected in the NCDOT STIP,
please provide date of STIP action and attach supporting information:

Project Description/Details/Termini/etc. to be amended (if applicable):

Please provide additional details or explanation related to this amendment request such as explanation for schedule delays, project cost changes, or other supporting information (if applicable). For example, why is this amendment being requested?

Move Construction to FY19 in order to match current delivery schedule. Increase CMAQ funding in order to address cost increases.

Please email completed form and any supporting documents to DCHC MPO TIP manager. Please follow-up with TIP manager to confirm receipt of form.

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TIP Amendment Request - Revise An Existing Project

Amendment Request Details

○ **TIP Amendment** (*change in funding greater than $1M*)

◉ **TIP Modification** (*change in funding less than $1M*)

☐ There are previous amendments to this project.

Date: 10-5-18

Amendment Requested By: City of Durham

Existing Project Details

Project Name: Durham Bike Lanes

STIP/TIP #: C-5605E

Jurisdiction/Agency: City of Durham

WBS or Local ID or Federal Aid #:

MUNIS #:

Existing Project Schedule and Funding: Enter the most current project information.

Use the MPO database: bitly.com/mpoprojects

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	Construction	CMAQ	$403,200	$0	$100,800	$504,000
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$403,200	$0	$100,800	$504,000
						Total Project Cost

Proposed Project Schedule and Funding: Enter the full proposed project schedule & funding.

In many cases, the current project information from the above table will be re-entered at the top of the Proposed Table to represent FULL project information.

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	Construction	CMAQ	$403,200	$0	$100,800	$504,000
2019	Construction	CMAQ	$260,136	$0	$65,034	$325,170
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$663,336	$0	$165,834	$829,170
						Total Project Cost

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TIP Amendment Request - Revise An Existing Project

Project Details - Continued

Please provide previous STIP/TIP # or new STIP/TIP # (if applicable):

If this amendment has already been reflected in the NCDOT STIP,
please provide date of STIP action and attach supporting information:

Project Description/Details/Termini/etc. to be amended (if applicable):

Please provide additional details or explanation related to this amendment request such as explanation for schedule delays, project cost changes, or other supporting information (if applicable). For example, why is this amendment being requested?

Add DCHC CMAQ funding and local match in FY 19 for Construction to address cost overruns and requests made during the project's public comment period.

Please email completed form and any supporting documents to DCHC MPO TIP manager. Please follow-up with TIP manager to confirm receipt of form.

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TIP Amendment Request - Revise An Existing Project

Amendment Request Details

○ **TIP Amendment** (*change in funding greater than $1M*)

◉ **TIP Modification** (*change in funding less than $1M*)

☐ There are previous amendments to this project.

Date: 10-5-18

Amendment Requested By: City of Durham

Existing Project Details

Project Name: Downtown Durham Wayfinding

STIP/TIP #: C-5605H

Jurisdiction/Agency: City of Durham

WBS or Local ID or Federal Aid #:

MUNIS #:

Existing Project Schedule and Funding: Enter the most current project information.

Use the MPO database: bitly.com/mpoprojects

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	PE/Design	CMAQ	$72,600	$0	$18,150	$90,750
2019	Construction	CMAQ	$484,000	$0	$121,000	$605,000
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$556,600	$0	$139,150	$695,750
						Total Project Cost

Proposed Project Schedule and Funding: Enter the full proposed project schedule & funding.

In many cases, the current project information from the above table will be re-entered at the top of the Proposed Table to represent FULL project information.

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	PE/Design	CMAQ	$72,600	$0	$18,150	$90,750
2019	Construction	CMAQ	$484,000	$0	$121,000	$605,000
2019	PE/Design	CMAQ	$45,313	$0	$11,329	$56,642
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$601,913	$0	$150,479	$752,392
						Total Project Cost

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TIP Amendment Request - Revise An Existing Project

Project Details - Continued

Please provide previous STIP/TIP # or new STIP/TIP # (if applicable):

If this amendment has already been reflected in the NCDOT STIP,
please provide date of STIP action and attach supporting information:

Project Description/Details/Termini/etc. to be amended (if applicable):

Please provide additional details or explanation related to this amendment request such as explanation for schedule delays, project cost changes, or other supporting information (if applicable). For example, why is this amendment being requested?

Add DCHC CMAQ funding and local match for PE/Design to address cost overruns.

Please email completed form and any supporting documents to DCHC MPO TIP manager. Please follow-up with TIP manager to confirm receipt of form.

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TIP Amendment Request - Revise An Existing Project

Amendment Request Details

(●) **TIP Amendment** (*change in funding greater than $1M*)

( ) **TIP Modification** (*change in funding less than $1M*)

[✓] There are previous amendments to this project.

Date: 9-4-18

Amendment Requested By: DCHC MPO

Existing Project Details

Project Name: Old Durham Road Bike/Ped

STIP/TIP #: EB-4707A

Jurisdiction/Agency: Chapel Hill

WBS or Local ID or Federal Aid #:

MUNIS #:

Existing Project Schedule and Funding: Enter the most current project information.

Use the MPO database: bitly.com/mpoprojects

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2018	Construction	STBGDA	$1,540,000	$0	$385,000	$1,925,000
2018	Construction	TAP-DA	$280,000	$0	$70,000	$350,000
2018	Construction	LOCAL	$569,000	$0	$569,000	$1,138,000
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$2,389,000	$0	$1,024,000	$3,413,000
						Total Project Cost

Proposed Project Schedule and Funding: Enter the full proposed project schedule & funding.

In many cases, the current project information from the above table will be re-entered at the top of the Proposed Table to represent FULL project information.

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2019	Construction	STBGDA	$2,577,068	$0	$644,267	$3,221,335
2019	Construction	TAP-DA	$1,006,636	$0	$251,659	$1,258,295
2019	Construction	TAP	$0	$525,000	$0	$525,000
2019	Construction	LOCAL	$0	$0	$128,074	$128,074
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$3,583,704	$0	$1,024,000	$5,132,704
						Total Project Cost

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TIP Amendment Request - Revise An Existing Project

Project Details - Continued

Please provide previous STIP/TIP # or new STIP/TIP # (if applicable):

If this amendment has already been reflected in the NCDOT STIP,
please provide date of STIP action and attach supporting information:

Project Description/Details/Termini/etc. to be amended (if applicable):

Please provide additional details or explanation related to this amendment request such as explanation for schedule delays, project cost changes, or other supporting information (if applicable). For example, why is this amendment being requested?

Add state TAP funds and additional STBGDA and TAP-DA funds. Move all funds to FY19 to meet current delivery schedule.

Please email completed form and any supporting documents to DCHC MPO TIP manager. Please follow-up with TIP manager to confirm receipt of form.

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TIP Amendment Request - Revise An Existing Project

Amendment Request Details

(●) **TIP Amendment** (*change in funding greater than $1M*)

( ) **TIP Modification** (*change in funding less than $1M*)

[✓] There are previous amendments to this project.

Date: 9-4-18

Amendment Requested By: DCHC MPO

Existing Project Details

Project Name: Old Chapel Hill Road Bike/Ped

STIP/TIP #: EB-4707B

Jurisdiction/Agency: City of Durham

WBS or Local ID or Federal Aid #:

MUNIS #:

Existing Project Schedule and Funding: Enter the most current project information.

Use the MPO database: bitly.com/mpoprojects

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2016	ROW	STP-DA	$1,665,426	$0	$416,356	$2,081,782
2017	Construction	STP-DA	$3,392,850	$250,000	$598,212	$4,241,062
2017	Construction	HP	$2,002,950	$0	$500,738	$2,503,688
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$7,061,226	$250,000	$1,515,306	$8,826,532
						Total Project Cost

Proposed Project Schedule and Funding: Enter the full proposed project schedule & funding.

In many cases, the current project information from the above table will be re-entered at the top of the Proposed Table to represent FULL project information.

FY	Phase/Work	Funding Source	Federal Share	State Share	Local Share	Total
2016	ROW	STP-DA	$1,665,426	$0	$416,356	$2,081,782
2017	Construction	STP-DA	$3,392,850	$250,000	$598,212	$4,241,062
2017	Construction	HP	$2,002,950	$0	$500,738	$2,503,688
2019	Construction	CMAQ	$1,710,393	$0	$427,598	$2,137,991
			$0	$0	$0	$0
2019	Construction	STBGDA	$309,812	$0	$77,453	$387,265
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
			$0	$0	$0	$0
		Funding Totals:	$9,081,431	$250,000	$2,020,357	$11,351,788
						Total Project Cost

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TIP Amendment Request - Revise An Existing Project

Project Details - Continued

Please provide previous STIP/TIP # or new STIP/TIP # (if applicable):

If this amendment has already been reflected in the NCDOT STIP,
please provide date of STIP action and attach supporting information:

Project Description/Details/Termini/etc. to be amended (if applicable):

Please provide additional details or explanation related to this amendment request such as explanation for schedule delays, project cost changes, or other supporting information (if applicable). For example, why is this amendment being requested?

Add CMAQ and STBGDA funds to address cost increases.

Please email completed form and any supporting documents to DCHC MPO TIP manager. Please follow-up with TIP manager to confirm receipt of form.

ITEM N
(HANDOUT)

REVISIONS TO THE 2018-2027 STIP

HIGHWAY PROGRAM

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

U-5937 DURHAM PROJ.CATEGORY STATEWIDE	- DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION	NC 147 (DURHAM FREEWAY), SR 1127 (WEST CHAPEL HILL STREET) TO BRIGGS AVENUE IN DURHAM. CONSTRUCT AUXILIARY LANES AND OPERATIONAL IMPROVEMENTS. *CHANGE PROJECT LIMITS (REVISED NORTHERN TERMIINUS) AT THE REQUEST OF MPO AND DIVISION TO CORRESPOND TO PROJECT STUDY AREA.*	RIGHT-OF-WAY	FY 2022 -	$4,950,000	(T)
				FY 2023 -	$4,950,000	(T)
			UTILITIES	FY 2022 -	$216,000	(T)
			CONSTRUCTION	FY 2024 -	$11,750,000	(T)
				FY 2025 -	$11,750,000	(T)
				FY 2026 -	$11,750,000	(T)
				FY 2027 -	$11,750,000	(T)
					$57,116,000	

* INDICATES FEDERAL AMENDMENT

RESOLUTION TO MODIFY THE 2018-2027 TRANSPORTATION IMPROVEMENT PROGRAM FOR THE DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING AREA

AMENDMENT #7
November 14, 2018

A motion was made by MPO Board Member _____and seconded by MPO Board Member _____ _____for the adoption of the following resolution, and upon being put to a vote, was duly adopted.

WHEREAS, the Transportation Improvement Program (TIP) is a staged multiple year listing of all federally funded transportation projects scheduled for implementation within the Durham-Chapel Hill-Carrboro Metropolitan Planning Area which have been selected from a priority list of projects; and

WHEREAS, the document provides the mechanism for official endorsement of the program of projects by the MPO Board; and

WHEREAS, the inclusion of the TIP in the transportation planning process was first mandated by regulations issued jointly by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and no project within the planning area will be approved for funding by these federal agencies unless it appears in the officially adopted TIP; and

WHEREAS, the procedures for developing the TIP have been modified in accordance with certain provisions of the MAP-21 Federal Transportation Act, Fixing America's Surface Transportation (FAST) Act, and guidance provided by the State; and

WHEREAS, projects listed in the TIP are also included in the State TIP (STIP) and balanced against anticipated revenues as identified in both the TIP and the STIP; and

WHEREAS, the North Carolina Department of Transportation and the MPO Board have determined it to be in the best interest of the Urban Area to amend the FY 2018-2027 Transportation Improvement Program as described in the attached sheets; and

WHEREAS, the United States Environmental Protection Agency Designated the DCHC MPO from nonattainment to attainment under the prior 1997 Ozone Standard on December 26, 2007; and

WHEREAS, the DCHC MPO certifies that this TIP amendment is consistent with the intent of the DCHC MPO 2040 Metropolitan Transportation Plan (MTP); and

WHEREAS, in accordance with 23 CFR 450.326 (d), the TIP shall include, to the maximum extent practicable, a description of the anticipated effect of the TIP toward achieving the performance targets identified in the metropolitan transportation plan, linking investment priorities to those performance targets; and

BE IT THEREFORE RESOLVED that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Board hereby approves Amendment #7 to the FY 2018-2027 Transportation Improvement Program of the Durham-Chapel Hill-Carrboro Urban Area, as approved by the Board on November 14, 2018, and as described in the "FY 2018-2027 TIP Amendment #7 Summary Sheet" on this, the 14th day of November, 2018.

_____

Damon Seils, MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: November 14, 2018

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

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Transportation Performance Measures

November 14, 2018

www.dchcmpo.org

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Today's Objective

- Status of Transportation Performance Measures (TPM)
- Review four sets of TPMs for DCHC MPO
- Adopt four TPMs using three resolutions

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TPMs

	TPM	MPO first adoption	Next due date (b)	Expected adoption
1	Transit Asset Management	June 2017	10/01/18	11/14/18
2	Bridge and Pavement	--	11/14/18	11/14/18
	System Performance	--	11/14/18	11/14/18
3	Safety	February 2018	02/27/19	11/14/18
	~~Peak Hour~~ (a) ~~Excessive Delay~~	--	--	--

(a) MPO not required to do PHED. Must be over 1 million population and AQ non-attainment. But, goes to over 200,000 in 2022.

(b) Original due date is always 180 days after NCDOT reports original measures to U.S. DOT.

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TPMs

- Required by FAST ACT (federal transportation legislation)
- Process:
  - U.S. DOT final rule becomes effective
  - NCDOT set targets within one year of each federal measure
  - MPOs have 180 days to support NCDOT's TPM, or adopt MPO customized TPM
- Must be integrated into the MTP (adoptions and amendments)
- MTP and TIP must describe how MTP and TIP will contribute to achieving Targets
- At this point, no known consequences for MPO if Targets not achieved.

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Transit Asset Management (TAM) and State of Good Repair (SGR)

MPO Plan

- GoDurham
- GoTriangle
- Chapel Hill Transit (CHT)

Group Plan (NCDOT/PTD)

- Orange Public Transportation (OPT)
- Durham Access
- Chatham Transit Network

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Transit Asset Management -- TAM

- Tier II agencies are those without rail transit, and having 100 or fewer vehicles in service
- If in MPO Plan, must provide Transit Asset Management plan and State of Good Repair (SGR) measures/targets to the MPO
- TAM plan – updated every 4 years, horizon period of at least 4 years
- SGR Targets updated annually:
  - Transit provider – Yes
  - MPO -- No

* Note that transit systems have already submitted TAM Plan to FTA

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What is a TAM Plan?

- A plan that includes an inventory of capital assets, a condition assessment of these assets, and a decision support tool that leads to the prioritization of transit capital investments,
- A policy that documents the transit provider's commitment to achieving and maintaining a state of good repair (SGR) for all of its capital assets, and
- A strategy for carrying out this policy that includes SGR objectives and performance targets.
- A group plan must have a sponsor. NCDOT-PTD will sponsor group TAM plans for their sub recipients: Durham County Access, Chatham Transit Network and Orange Public Transportation

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TAM Definitions

- *State of Good Repair (SGR)* means the condition in which a capital asset is able to operate at a full level of performance.
- *Useful Life Benchmark (ULB)* means the expected life cycle or the acceptable period of use in service for a capital asset, as determined by a transit provider, or the default benchmark provided by FTA.
- *Performance measure* means an expression based on a quantifiable indicator of performance or condition that is used to establish targets and to assess progress toward meeting the established targets.
- *Performance target* means a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by FTA.

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Examples: Asset Categories & Classes

Category	Class	
Equipment	▪ Construction ▪ Service Vehicles	▪ Maintenance
Rolling Stock	▪ Railcars ▪ Buses ▪ Other Passenger Vehicles	▪ Ferries
~~Infrastructure~~	▪ Fixed Guideway ▪ Signal Systems ▪ Structures	▪ Power
Facilities	▪ Support Facilities ▪ Passenger Facilities	▪ Parking Facilities

DCHC MPO does not have to have infrastructure in the plans because there is no passenger rail.

SGR Targets

		GoDurham:		Chapel Hill Transit:		GoTriangle:	
Asset Category - Performance Measure	**Asset Class**	**Useful Life Benchmark**	**2019 Target**	**Useful Life Benchmark**	**2019 Target**	**Useful Life Benchmark**	**2019 Target**
REVENUE VEHICLES							
Age -- % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AO - Automobile	8	N/A	8	20%	8	13%
	BU - Bus	14	18%	14	10%	14	13%
	CU - Cutaway Bus	10	55%	10	20%	10	13%
	MB - Mini-bus	10	N/A	10	20%	10	13%
	MV - Mini-van	8	0%	8	20%	8	13%
	SV - Sport Utility Vehicle	8	N/A	8	20%	8	13%
	VN - Van	8	N/A	8	20%	8	13%
	Other	N/A	N/A	8	20%	8	13%
EQUIPMENT							
Age -- % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	8	0%	8	20%	8	22%
	Steel Wheel Vehicles	8	N/A	8	20%	8	22%
	Trucks and other Rubber Tire Vehicles	8	0%	8	20%	8	22%
	Maintenance Equipment	N/A	N/A	N/A	N/A	TBD	22%
	Computer Software	N/A	N/A	N/A	N/A	TBD	22%
	Custom 1	N/A	N/A	N/A	N/A	TBD	22%
FACILITIES							
Condition -- % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	(no benchmark)	0%	(no benchmark)	0%	(no benchmark)	0%
	Maintenance	(no benchmark)	0%	(no benchmark)	0%	(no benchmark)	0%
	Parking Structures	(no benchmark)	N/A	(no benchmark)	0%	(no benchmark)	0%
	Passenger Facilities	(no benchmark)	0%	(no benchmark)	N/A	(no benchmark)	0%
	Shelter	(no benchmark)	50%	(no benchmark)	0%	(no benchmark)	0%
	Storage	(no benchmark)	0%	(no benchmark)	N/A	(no benchmark)	0%
	Custom 1	(no benchmark)	N/A	(no benchmark)	N/A	(no benchmark)	0%

Notes: * Facilities do not have a Useful Life Benchmark such as "years." The TERM scale is used instead of years.

* TERM scale example: 5 = excellent, 1 = poor * Usefule Life Benchmark values are in years.

* N/A: System does not have asset in this class that requires monitoring.

Action Today:
TAM

- Receive the 1) TAM plans and checklist; 2) TAM Targets, and
- Adopt the TAM resolution (which includes Targets)

TPM
✓ Transit Asset Management
Bridge and Pavement
System Performance
Safety
X ~~Peak Hour~~ (a) ~~Excessive Delay~~

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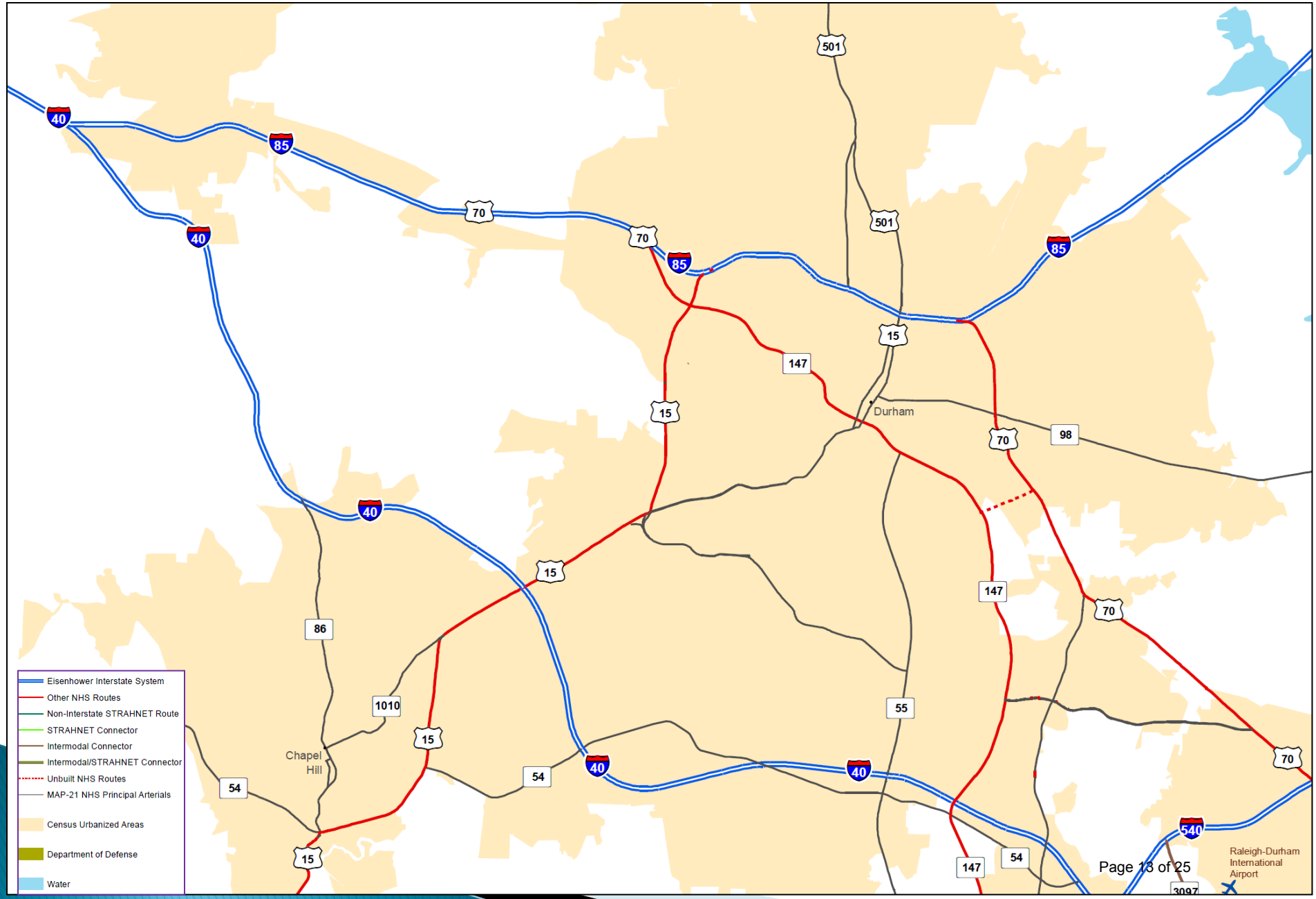
Pavement and Bridge Condition and System Performance

- Two options (to be done within 180 days of NCDOT establishing targets):
  - MPO establish own measures
  - Support NCDOT measures
- MPO will adopt NCDOT measures because NCDOT has data and experience in methodology
- Includes only roadways and bridges on National Highway System (NHS)
- 2-year and 4-year Targets
- NCDOT reports and can update Targets every two years

National Highway System



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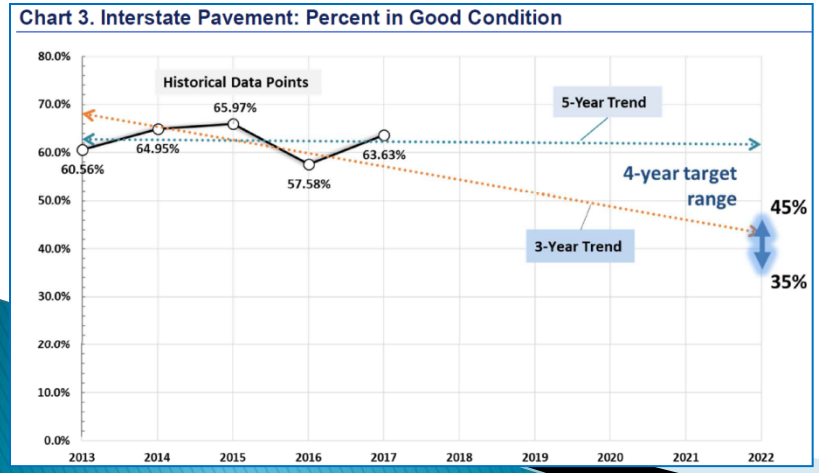
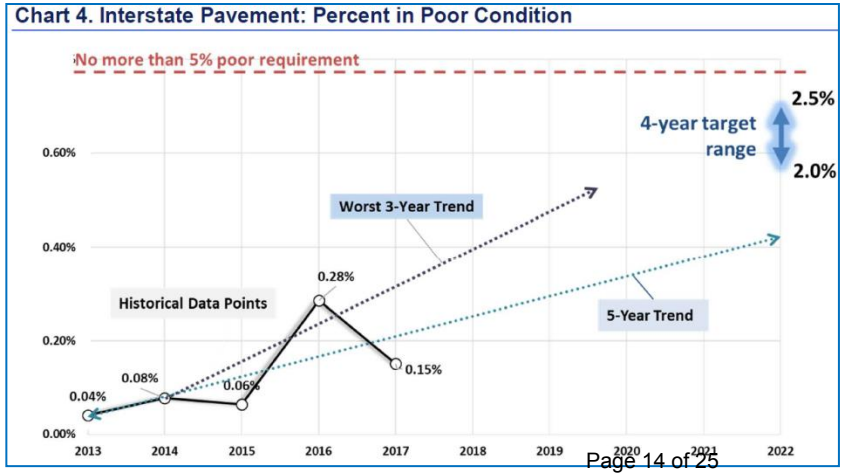
Pavement Condition – How Targets were developed

Pavement Condition (NCDOT is responsible for Target):

- Analyzed 5-year statewide trend
- Created 3-year and 5-year future trend path – historical trends are negative, i.e., good percentage declining and poor percentage increasing
- Set targets based on target range, which were an improvement to future trends
- Targets are conservative because of uncertainty in method, analysis and investment impact
- 5% federal threshold for poor condition on interstates (if don't meet this threshold for any one year, must obligate funds to improve pavement)





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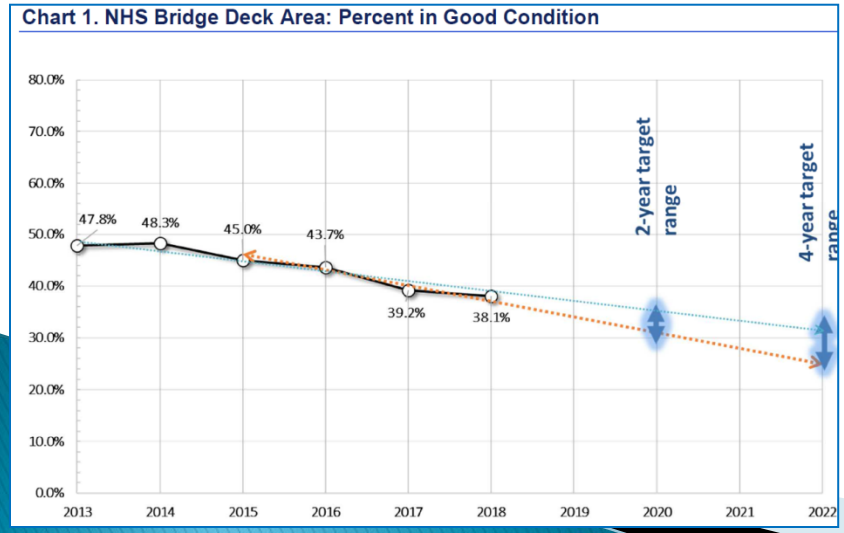
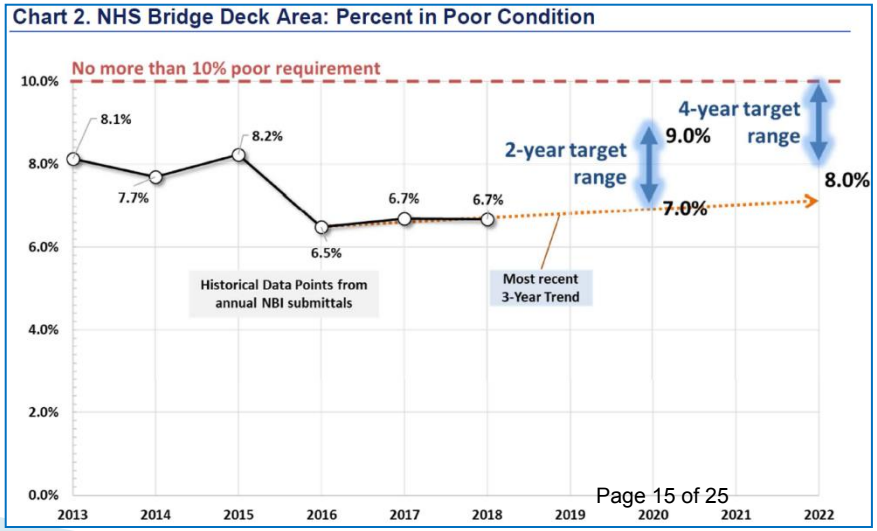
Bridge Condition – How Targets were developed

Bridge Condition (NCDOT is responsible for Target):

- Analyzed 5-year statewide trend
- Created 2-year and 4-year future trend path – historical trends are negative, i.e., good percentage declining and poor percentage increasing
- Set targets based on target range, which were an improvement to future trends
- Targets are conservative because of uncertainty in method, analysis and investment impacts





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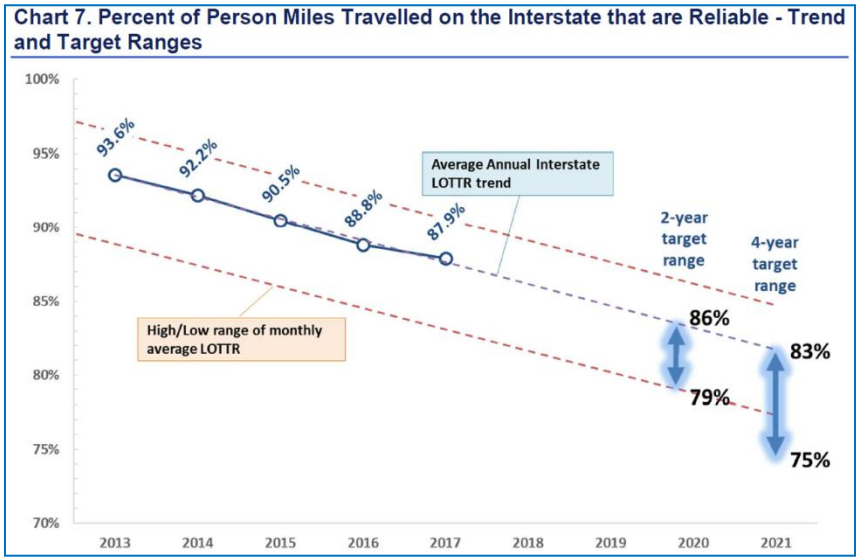
System Performance – How Targets were developed

System Performance (NCDOT is responsible for Target):

- Use traffic probe data from NPMRDS (National Performance Mgmt. Research Data Set)
- Analyzed 5-year statewide trend
  - Interstate LOTTR annual decrease 1-1.5%
  - Non-interstate LOTTR annual decrease 2.9-3.9%
  - TTTR annual increase 1.7%
- Large urban and rural difference
- Urban and VMT growth is primary external factor impacting LOTTR and TTTR



Step 1: $\text{LOTTR} = \frac{\text{80th Percentile Travel Time}}{\text{50th Percentile Travel Time}}$

Segments with LOTTR < 1.5 are considered reliable
Segments with LOTTR ≥ 1.5 are considered unreliable

Step 2:

% of Person Miles Traveled on Interstate that are Reliable

A segment is considered reliable if LOTTR for all four time periods is < 1.5. If LOTTR is >= 1.5 for any of the four time periods, the segment is considered unreliable.

Pavement and Bridge Condition, and System Performance

	Performance Measure	2-Year Target (1/1/2018 – 12/31/2019)	4-Year Target (1/1/2018 – 12/31/2021)
Balance	Interstate Pavement Condition (Good)	(no target)	37.0 %
	Interstate Pavement Condition (Poor)	(no target)	2.2 %
	Non-Interstate NHS Pavement Condition (Good)	27.0%	21.0%
	Non-Interstate NHS Pavement Condition (Poor)	4.2%	4.7%
	NHS Bridge Condition (Good)	33.0%	30.0%
	NHS Bridge Condition (Poor)	8.0%	9.0%
	Interstate Level of Travel Time Reliability	80.0%	75.0%
	Non-Interstate NHS Level of Travel Time Reliability	(no target)	70.0%
	Interstate Truck Travel Time Reliability	1.65	1.70

These are the same measures and targets in the adoption resolution.

LOTTR of 80% means that 80% of the system over four time periods (AM, mid-day, PM and off-peak) has TTR of 1.5 or better ($80^{th}/50^{th}$).

TTR of 1.65 means that the 95th percentile of truck traffic travel time divided by the 50th percentile of truck traffic travel time is 1.65 or lower.

What do if don't achieve Target?

Pavement

State – set aside and obligate certain funds if more than 5% lane miles in poor condition for three consecutive years

Bridge

State – set aside and obligate certain funds if more than 10% bridge deck in poor condition for two consecutive years

System Performance

State – document actions to take to achieve targets if can't demonstrate significant progress

MPO – At this point, no known consequences. But, continue describing how support Targets in MTP and TIP.

Action Today:
Pavement and Bridge Condition, and System Performance

- Adopt the Pavement and Bridge and System Performance resolution (which includes Targets)

TPM
✗ Transit Asset Management
✓ Bridge and Pavement
✓ System Performance
Safety
✗ ~~Peak Hour~~ (a) ~~Excessive Delay~~

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Safety Targets

- Two options (to be done within 180 days of NCDOT establishing targets):
  - MPO establish own measures
  - Support NCDOT measures
- MPO will adopt NCDOT measures because NCDOT has data and experience in methodology
- Based on 50% reduction by 2030 (2014 NC Strategic Highway Safety Plan Goal)
- Includes all roadways
- NCDOT reports and can update Targets annually.
- If NCDOT does not make significant progress toward meeting its target, must obligate funding to safety and submit implementation plan
  - Will likely require annual updates

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Safety Targets

For the 2019 Highway Safety Improvement Plan (HSIP), the goal is to reduce:

a. total fatalities by 5.59 percent each year from 1,362.8 (2013-2017 average) to 1,214.7 (2015-2019 average) by December 31, 2019.
b. the fatality rate by 5.02 percent each year from 1.216 (2013-2017 average) to 1.097 (2015-2019 average) by December 31, 2019.
c. total serious injuries by 6.77 percent each year from 2,865.2 (2013-2017 average) to 2,490.6 (2015-2019 average) by December 31, 2019.
d. the serious injury rate by 6.12 percent each year from 2.528 (2013-2017 average) to 2.228 (2015-2019 average) by December 31, 2019.
e. the total non-motorized fatalities and serious injuries by 6.02 percent each year from 457.0 (2013-2017 average) to 403.7 (2015-2019 average) by December 31, 2019.

Note: Safety targets use a five-year rolling average.

What do if don't achieve Target?

Safety

State – If NCDOT does not make significant progress toward meeting its target, must obligate funding to safety and submit implementation plan

MPO – Need to show in certification review, self-certification and TIP planning that supporting the Targets

Action Today:
Safety Targets

- Adopt the Safety Targets resolution (which includes the Targets)

	TPM
X	Transit Asset Management
X	Bridge and Pavement
X	System Performance
✓	Safety
X	~~Peak Hour~~ (a) ~~Excessive Delay~~

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2045 MTP

- Each TPM resolution notes the inclusion in the MPO's 2045 MTP.

NOW THEREFORE, BE IT FURTHER RESOLVED, that by approval of this resolution an amendment is hereby made to the 2045 Metropolitan Transportation Plan adopted on March 14, 2018 by the DCHC MPO.

- The performance measure section of the DCHC MPO's 2045 Metropolitan Transportation Plan (MTP) will reference the most recent adoption of each TPM.

Performance Measure	*FAST Act Target*
ired within two days by NCDOT	
ting or exceeding useful life benchmark	CAMPO: 30% DCHC MPO: 50%

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TIP

- Discussion of the anticipated effect of the STIP or TIP toward meeting performance targets
- Must link investment priorities to performance targets

GoTriangle Transit Asset Management Plan

Focusing on the Management of Our Transit Investments

Lastest Revision: August 2018

FTA Transit Asset Management Guide for Small Providers
Part II – Transit Asset Management (TAM) Plan Template

This Transit Asset Management Plan (TAM plan) template has been provided as a tool to assist small transit providers and their state Departments of Transportation (DOTs) in developing their TAM Plans according to best practice and in alignment with MAP-21 requirements. This template is not a tool to meet MAP-21 compliance; it is simply a technical assistance guide.

Text in these boxes throughout the template provides some additional information to differentiate between state DOT and small provider use of the template.

Who Should Use the Template?

The tool is designed for two demographics: (1) state DOTs developing plans for subrecipient agencies, and (2) small transit providers developing their own individual plans. For state DOTs developing a TAM plan for subrecipients, the template can be used as a data collection tool to consolidate information from subrecipients to produce a comprehensive plan. For individual small providers, a completed template will give you a TAM plan that can be modified as desired.

Personnel most knowledgeable about your agency's assets and responsible for implementing internal processes to manage assets (e.g., procurement, maintenance, compliance, etc.) should complete the template. The completed template should then be reviewed by your organization's designated senior manager or executive to ensure that the necessary resources are available to carry out the Plan.

Navigating Through The Tool

Beginning a New Plan

Begin a new plan by saving a copy of this template. Go to **File -> Save As**. Include your agency name or other descriptors in the filename. **Ensure that you have enabled all macros** for the tool to work correctly. You may use the Excel Help feature for assistance with this.

Workbook Structure

The tool is organized into sections following the format of a TAM plan. There are two (2) introductory/reference tabs, five (5) yellow tabs for each section of your Plan, and seven (7) green output tabs that can be printed using controls in the sheet or copied into a Microsoft Word document. The key below summarizes the use of each tab type. It is best to view the pages in the tool in **"Page Layout"** view (select this from the leftmost section in the **"View"** menu at the top of the screen). Navigate between pages using the buttons at the bottom of each sheet. A description of each worksheet is provided in the next section for guidance.

TAB COLOR KEY
Data Entry
Output
Intro/Reference

Worksheet Descriptions

Getting Started: An introductory page to help you begin using the template. The information entered in this sheet will not be included in the final output.

Introduction: Accepts information for the first section in your TAM Plan providing an introduction to your agency's approach to asset management.

Asset Portfolio: Data entry sheet for your capital asset inventory. This is also known as the asset register.

Condition Assessment: Pulls information from the inventory list and accepts additional details to develop an asset condition summary.

Management Approach: Accepts information on the strategies, processes, and activities needed over your asset lifecycles.

Work Plans & Schedules: Data entry sheet for the specific activities and projects over the horizon period of the TAM Plan to maintain a state of good repair or enhance asset condition.

TAM Plan & Appendices: Displays all the information entered in the template. Do not enter information into these sheets. You can print a completed TAM Plan using the controls on the "TAM Plan" sheet.

Data Entry

Information should only be entered in light yellow shaded cells as shown in the key below. The questions on each Data Entry sheet are presented in two sections. The first group of questions request information that is required by MAP-21 (**"Compliant"**). The second group include additional information for a more complete TAM plan closely aligned to international best practice and standards (**"Comprehensive"**). Use the buttons below to develop a basic Compliant plan, if desired.

DATA ENTRY KEY:

Input Cell
Error

After completing each sheet, click the **"Continue"** button to record your responses and navigate to the next section. You may save your progress and return to the tool at any time by using the **"Save"** buttons on each sheet. The **"Back"** button will take you to the previous sheet but will not erase your progress. On the last data entry page, click **"Finish"** to generate a PDF of your completed plan. Note that the PDF generated will only include questions from the **"Compliant"** section and those in the **"Comprehensive"** section for which a response was provided.

Unless you are a State DOT customizing the tool for your subrecipients, do not make any changes except in the input cells. Do not hide or unhide any cells.

Getting Started

The following information is for reference purposes and document control. Please be sure to complete these fields before proceeding with the tool.

Agency Name: Research Triangle Regional Public Transportation A

Last Modified By (your name): *Brian Mclean*

Last Modified: 8/22/2018 12:51

Related Documents

As a first step, there are a number of documents that may be helpful in facilitating development of your TAM plan, if you have them. Please indicate below by using the dropdown menus where this information is available. While your agency may not have the specifically named reports, you may have the information stored in other formats. If not available, the information can be collected through workshops or conversations with staff.

Select a response from the drop down menu:

Asset register or inventory information including for spare parts or equipment	Have
Routine checklist for inspections or other preventive maintenance activities	Have
Reports or information on asset condition	Have
Original Equipment Manufacturer (OEM) Manual	Have
Warranty information for any asset types	Have
Fleet management plan or documentation on how you manage your fleet	Have
Facilities management plan or documentation on how you manage your facilities	Have
Work plans or schedules (preventive maintenance schedules and/or reports)	Have
Trouble log (information on asset defects, faults, and/or unplanned maintenance)	Have
Any documentation related to risks and/or risk management	Have
Standard operating procedures (SOPs)	Have
Asset transition (or hand over) protocol or policy	Have

Introduction

*****COMPLIANT*****

Provide a brief overview of/introduction to your agency. You may include general information including state geography, demographics, interdependencies between asset classes, etc. The TAM Plan will cover all equipment that cost over $50,000.00

Research Triangle Regional Public Transportation Authority, DBA GoTriangle, is a regional transit agency in North Carolina. We service a three county area that includes Durham, Orange and Wake counties. We also operate a regional paratransit and vanpool program.

Performance Targets & Measures: **What are the annual targets set for the FTA performance measures? Refer to Part I of the Guide for definitions of the performance measures and information on how to set targets. Provide your targets in the table below.**

Asset Category	Performance Measure	Target
Rolling Stock *All revenue vehicles*	**Age** - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	13%
Equipment *Non-revenue vehicles*	**Age** - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	22%
Facilities *All buildings or structures*	**Condition** - % of facilities with a condition rating below 3.0 on a the FTA Transit Economic Requirements Model (TERM) Scale	0%

For State DOTs: You may set targets for your subrecipients. If you choose to do so, click the "Hide Targets" button below before you send the template out. You may leave this questionto obtain input from subrecipients on appropriate targets.

You may provide text explaining the methods used in setting the targets here:

Within our rolling stock of revenue vehicles there are vans for the vanpool program, LTV's for the paratransit service and buses for the fixed route service. Our method for setting targets is relatively straight forward, 10% of each asset class vehicles may meet or exceed their ULB. Facilities must

****These buttons are for State DOT use only****

COMPREHENSIVE

For State DOTs: The following foundational pieces (vision, state of good repair policy, goals, and objectives) can be established by the State for all subrecipients but should be determined in collaboration with them. Consider their needs as well as their ability to achieve and/or comply. If you choose to establish them for your subrecipients, use the "Hide" and "Show" buttons as necessary.

TAM Vision: **What do you ultimately hope to achieve with your TAM system? What is the broader goal?**

We hope to decrease maintenance cost, improve the safety, reliability and performance of our assets over their useful life.

****These buttons are for State DOT use only****

TAM and SGR Policy: **What is your agency's TAM and/or State of Good Repair (SGR) policy? Here, you can document expectations for your employees and demonstrate executive-level direction to support the goals of the TAM system. This can be a short statement or a detailed policy. You may also attach a policy document in the appendix of the TAM plan.**

GoTriangle is committed to maintaining a safe enviroment for it's riders and employees. To insure that vehicles and facilities remain in a state of good repair, funds will be provided each year to make sure all repairs and preventative maintenance are successfully addressed for our assets.

****These buttons are for State DOT use only****

TAM Goals and/or Objectives: **Based on your vision, what are your specific, measurable, achievable, realistic, and time-bound (S.M.A.R.T.) goals? What measurable steps (objectives) will you take to achieve the goals? This should be written in tabular format as shown below. The table includes an example goal and associated objectives. Use the buttons shown on the right.**

Goals	Objectives
Increase customer satisfaction score by 20 percent in fiscal year.	Respond to customer feedback from past survey by mid-fiscal year.
	Respond to customer complaints through Zendesk within one week of complaint.
Increase vehicle readiness by 5%	**Complete all PM's on time 100%**

Decrease roadcalls by 5%	Provide additional operator training regarding pre & post trip inspections

About the TAM Plan: **Provide an overview of the TAM Plan describing the contents and structure. What time horizon does the document cover and what are the expected update and improvement timelines?**

For State DOTs: You may specify TAM Plan contents, structure, and time horizon for subrecipients. If you choose to do so, hide this question.

The inventory in this includes vehicles from Bus, Paratransit and the Vanpool program. Additionally, it includes the Bus Operations and Maintenance building, RTC ticket building and the Administration building. You will find yearly goals and targets in this plan to help identify replacements, overhauls, disposal of equiqment and building assets. The plan will be updated each year in conjunction with the

****These buttons are for State DOT use only****

Roles and Responsibilities: **What roles have been assigned to your employees to achieve the goals of the TAM system? Who owns the TAM Plan and is responsible for monitoring and updating it? Who is your accountable executive? Click "Add More" only after all yellow cells are filled.**

For Small Providers: If you are developing an individual plan, you may ignore the third column in this table.

Department/Individual	Role (Title and/or Description)	Subrecipient
Patrick Stephens / Brian Mclean	Transit Director / Fleet Maintenance Manager	Bus Agency
Gary Tober	Real Estate Manager	Bus Agency
Saundra Freeman	Accountable Executive	Bus Agency

Asset Portfolio

*****COMPLIANT*****

Asset Inventory Listing: To complete the inventory list, use the following steps:

1. On the table to the right, list all the capital assets that you own, operate, or manage that support the delivery of public transportation services. This should include leased assets, assets operated under contract, and all assets that would be included in a program of projects. You may include assets acquired without FTA funds. Complete the table and use the drop down menus where provided. An example is shown for guidance.

2. Click the "Add More" button only after some yellow cells are filled.

3. Be sure to click "Finish" when complete.

4. Click the "Summarize" button to populate the summary table.

5. Click "Continue" to proceed to the next sheet.

Asset Category	Total Number	Avg Age	Avg Value
Equipment	9	5.222222	$28,944.44
Facilities	4	33	$4,637,750.00

Inventory Table

Asset Category	Asset Class	Asset Name	Make	Model	ID/Serial No.	Asset Owner	Age (Yrs)	Replacement Cost/Value
Facilities	Administration	Raleigh Office	n/a	n/a	Raleigh	Agency	80	$2,000,000.00
Facilities	Bus and Maintenance Facility	BOMF	n/a	n/a	BOMF	Agency	18	$12,500,000.00
Facilities	Passenger waiting Facilitiy	Ticket Building	n/a	n/a	TickBldg	Agency	1	$277,000.00
Facilities	Administration	Plaza	n/a	n/a	Plaza	Agency	33	$3,774,000.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4101	Agency	7	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4103	Agency	7	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4104	Agency	7	$72,362.00
Rolling Stock	Paratransit	LTV	Ford	E-350	4301	Agency	5	$72,362.00
Rolling Stock	Paratransit	LTV	Ford	E-350	4302	Agency	5	$72,362.00
Rolling Stock	Paratransit	LTV	Ford	E-350	4303	Agency	5	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4304	Agency	5	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4305	Agency	5	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4306	Agency	5	$72,362.00

Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4603	Agency	2	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4604	Agency	2	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4605	Agency	2	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4606	Agency	2	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4607	Agency	2	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4711	Agency	1	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4712	Agency	1	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4713	Agency	1	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4714	Agency	1	$72,362.00
Rolling Stock	Paratransit Vehicle	LTV	Ford	E-350	4715	Agency	1	$72,362.00
Rolling Stock	Paratransit Vehicle	Light Duty Transit	Goshen	25 ft	3801	Agency	10	$72,362.00
Rolling Stock	Paratransit Vehicle	Light Duty Transit	Goshen	25 ft	3802	Agency	10	$72,362.00
Rolling Stock	Paratransit Vehicle	Light Duty Transit	Goshen	25 ft	3803	Agency	10	$72,362.00
Rolling Stock	Paratransit Vehicle	Light Duty Transit	Goshen	25 ft	3804	Agency	10	$72,362.00
Rolling Stock	Paratransit Vehicle	Light Duty Transit	Goshen	25 ft	3805	Agency	10	$72,362.00
Rolling Stock	Bus	Heavy Duty Transit	Orion	40 Ft	2609	Agency	11	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Orion	40 Ft	2610	Agency	11	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Orion	40 Ft	2611	Agency	11	$462,200.00

Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2823	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2825	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2826	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2827	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2828	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2829	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2830	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2831	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2832	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2833	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2834	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2835	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2836	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2837	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2838	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2839	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2840	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2841	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2842	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	35 ft	2843	Agency	10	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2901	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2902	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2903	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2904	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2905	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2906	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2907	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2908	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2909	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2910	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2911	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2912	Agency	9	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2016	Agency	8	$462,200.00

Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2017	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2018	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2019	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2020	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2021	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2022	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2023	Agency	8	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2114	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2115	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2116	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2117	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2118	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2119	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2120	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2121	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2122	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2123	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2124	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2125	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2126	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2127	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2128	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2129	Agency	7	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2701	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2702	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2703	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2704	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2705	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2706	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2707	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2708	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2709	Agency	1	$462,200.00
Rolling Stock	Bus	Heavy Duty Transit	Gillig	40 ft	2710	Agency	1	$462,200.00

Equipment	Maintenance Vehicle	Truck	Ford	F-350	2200	Agency	6	$40,000.00
Equipment	Maintenance Vehicle	Truck	Ford	F-350	2600	Agency	12	$40,000.00
Equipment	Supervisor Vehicle	SUV	Chevrolet	Trailblazer	61	Agency	12	$26,000.00
Equipment	Maintenance Vehicle	Truck	Ford	F-150	10	Agency	8	$24,000.00
Equipment	Maintenance Vehicle	Truck	Ford	F-250	2601	Agency	2	$26,000.00
Equipment	Supervisor Vehicle	SUV	Nissan	Pathfinder	2602	Agency	2	$25,500.00
Equipment	Supervisor Vehicle	Mini Van	Dodge	Caravan	4600	Agency	2	$44,000.00
Equipment	Staff Car	Car	Ford	Fusion	6601	Agency	2	$17,500.00
Equipment	Staff Car	Car	Ford	Fusion	6701	Agency	1	$17,500.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	571	Agency	10	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	572	Agency	10	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Chevrolet	Uplander	585	Agency	9	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Chevrolet	Uplander	586	Agency	9	$22,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	587	Agency	9	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	588	Agency	9	$30,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	1937	Agency	10	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	1938	Agency	10	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5001	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5002	Agency	7	$22,000.00

Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5003	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5004	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5010	Agency	6	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5101	Agency	6	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5102	Agency	6	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5103	Agency	6	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5104	Agency	6	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5201	Agency	5	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5202	Agency	5	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5203	Agency	5	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5204	Agency	5	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5301	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5302	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5303	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5304	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5305	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5306	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5307	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5308	Agency	4	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5401	Agency	3	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5402	Agency	3	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5810	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5812	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5813	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5815	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5816	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5901	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5904	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5906	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5907	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5908	Agency	7	$30,000.00

Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5910	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5911	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5912	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Mini Van	Dodge	Grand Caravan	5913	Agency	7	$22,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5914	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5915	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5916	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5917	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5918	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5919	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5921	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5922	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5923	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5925	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	E-350	5926	Agency	7	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5501	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5502	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5503	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5504	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5505	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5506	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 250	5507	Agency	2	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5601	Agency	1	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5603	Agency	1	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5604	Agency	1	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5701	Agency	0	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5702	Agency	0	$30,000.00
Rolling Stock	Vanpool Van	Van	Ford	Transit 350	5703	Agency	0	$30,000.00

Condition Assessment

*****COMPLIANT*****

Asset Condition: What condition are your assets in to run the services required? How does the actual condition compare to the target set for the assets? The tables to the right are automatically populated based on your inventory on the previous sheet. There is one table for each asset category (three total). Scroll to the right to view all tables.

Complete the tables by filling in the input cells with the Useful Life Benchmark for each asset. Refer to Section 3.1.1 of Part I for an explanation of the Useful Life Benchmark.

Asset Condition Summary: Click the "Summarize" button to update the summary table to calculate the percent of

Equipment	8	4.25	N/A	$29,562.50	12.50%
Facilities	3	17.33333	3.333333333	$5,517,000.00	0.00%
Rolling Stock	141	7.29078	N/A	$215,100.72	17.73%

Equipment Condition Table

***Age is the surrogate performance measure for condition as determined by the FTA.*

Asset Category	Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
	Maintenance \	Truck	2200	6	$40,000.00	10	No
	Maintenance \	Truck	2600	12	$40,000.00	10	Yes
	Supervisor Vel	SUV	61	8	$26,000.00	10	No
						10	
	Maintenance \	Truck	2601	2	$26,000.00	10	No
	Supervisor Vel	SUV	2602	2	$25,500.00	10	No
	Supervisor Vel	Mini Van	4600	2	$44,000.00	10	No
Equipment	Staff Car	Car	6601	1	$17,500.00	10	No
Equipment	Staff Car	Car	6701	1	$17,500.00	10	No

Facilities Condition Table

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Asset Category	Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	TERM Scale Condition	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark	C
Agency	Bus Operations & Maintenance Facility	BOMF	BOMF	18	3	$12,500,000.00	35	No	
Agency	Passenger wai	Ticket Building	TickBldg	1	4	$277,000.00	50	No	
Agency	Administratior	Plaza	Plaza	33	3	$3,774,000.00	50	No	
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‹ Condition Table

·ogate performance measure for condition as determined by the FTA.

Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
Paratransit Ve	LTV	4101	7	$72,362.00	5	Yes
Paratransit Ve	LTV	4103	7	$72,362.00	5	Yes
Paratransit Ve	LTV	4104	7	$72,362.00	5	Yes
Paratransit Ve	LTV	4301	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4302	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4303	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4304	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4305	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4306	5	$72,362.00	5	Yes
Paratransit Ve	LTV	4606	2	$72,362.00	5	No
Paratransit Ve	LTV	4607	2	$72,362.00	5	No
Paratransit Ve	Light Duty Transit	3801	10	$72,362.00	5	Yes
Paratransit Ve	Light Duty Transit	3802	10	$72,362.00	5	Yes
Paratransit Ve	Light Duty Transit	3803	10	$72,362.00	5	Yes
Paratransit Ve	LTV	4711	1	$74,000.00	5	No
Paratransit Ve	LTV	4712	1	$74,000.00	5	No
Paratransit Ve	LTV	4713	1	$74,000.00	5	No
Paratransit Ve	LTV	4714	1	$74,000.00	5	No
Paratransit Ve	LTV	4715	1	$74,000.00	5	No
Paratransit Ve	Light Duty Transit	3801	9	$72,362.00	7	No
Paratransit Ve	Light Duty Transit	3802	9	$72,362.00	7	No
Paratransit Ve	Light Duty Transit	3803	9	$72,362.00	7	No
Paratransit Ve	Light Duty Transit	3804	9	$72,362.00	7	No
Paratransit Ve	Light Duty Transit	3805	9	$72,362.00	7	No
Paratransit Ve	Light Duty Transit	3804	9	$72,362.00	7	Yes

Paratransit Ve	Light Duty Transit	3805	10	$72,362.00	12	No
Bus	Heavy Duty Transit	2823	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2833	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2834	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2835	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2836	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2837	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2838	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2839	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2840	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2841	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2842	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2843	10	$462,200.00	12	No
Bus	Heavy Duty Transit	2901	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2902	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2903	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2904	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2905	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2906	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2907	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2908	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2909	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2910	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2911	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2912	9	$462,200.00	12	No
Bus	Heavy Duty Transit	2016	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2017	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2018	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2019	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2020	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2021	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2022	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2023	8	$462,200.00	12	No
Bus	Heavy Duty Transit	2114	7	$462,200.00	12	No

Bus	Heavy Duty Transit	2115	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2116	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2117	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2118	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2119	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2120	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2121	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2122	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2123	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2124	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2125	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2126	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2127	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2128	7	$462,200.00	12	No
Bus	Heavy Duty Transit	2129	7	$462,200.00	12	No
Vanpool Van	Mini Van	571	10	$22,000.00	12	No
Vanpool Van	Mini Van	572	10	$22,000.00	12	No
Vanpool Van	Mini Van	585	9	$22,000.00	12	No
Vanpool Van	Mini Van	586	9	$22,000.00	12	No
Vanpool Van	Van	587	9	$30,000.00	12	No
Vanpool Van	Van	588	9	$30,000.00	12	No
Vanpool Van	Mini Van	1937	10	$22,000.00	12	No
Vanpool Van	Mini Van	1938	10	$22,000.00	12	No
Vanpool Van	Mini Van	5001	7	$22,000.00	12	No
Bus	Heavy Duty Transit	2701	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2702	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2703	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2704	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2705	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2706	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2707	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2708	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2709	1	$464,000.00	12	No
Bus	Heavy Duty Transit	2710	1	$464,000.00	12	No

Vanpool Van	Mini Van	5002	11	$22,000.00	10	Yes
Vanpool Van	Mini Van	5003	11	$22,000.00	10	Yes
Vanpool Van	Van	5101	10	$30,000.00	10	Yes
Vanpool Van	Van	5102	10	$30,000.00	10	Yes
Vanpool Van	Van	5103	10	$30,000.00	10	Yes
Vanpool Van	Van	5201	11	$30,000.00	10	Yes
Vanpool Van	Van	5202	11	$30,000.00	10	Yes
Vanpool Van	Van	5203	8	$30,000.00	10	No
Vanpool Van	Van	5204	8	$30,000.00	10	No

Management Approach

NOTE: Complete some yellow cells before clicking "Add More" under each question.

*****COMPLIANT*****

Decision Support: **List and briefly describe the processes and/or tools in place to support investment decision-making, including project selection and prioritization. Enter this information in the table below. Click the button to add more rows.**

Process/Tool	Brief Description
Example Asset Condition Information System	A software system that uses asset inventory and condition information to generate 5 to 10-year condition forecasts.
Trapeze Asset Management System (EAM)	A software system that tracks inventory, maintenance cost, condition, etc. Asset management software.
Road breakdown analysis	Analysis is used to monitor the reliability of all vehicles. We use various trends to implement campaigns.
Track system trend analysis on building systems via spreadsheet and Asset Management Software	Based on regular maintenance and inspections.

Investment Prioritization: **How do you determine what priority investments are needed in order to maintain a state of good repair? Describe your agency's investment prioritization process.**

Use maintenance management systems, analyze failure trends, monitor maintenance cost over asset useful life to assist in determining the correct course of action. Vehicle breakdown analysis also plays an important role. Each year we have a capital improvement project process in which we determine departmental priority.

COMPREHENSIVE

Risk Management: **Identify any risks faced to your assets or organization as a whole (particularly safety-related risks) and describe the mitigation strategies for each one. This can also include how scheduled maintenance can affect service delivery. As applicable, describe any planned changes or improvements to these processes. Enter this information in the table below. Click the button to add more rows.**

Risk	Mitigation Strategy
Loss of significant amounts of federal funds	Decrease dependence on federal funds for capital
Decrease of funding for vehicle replacements	Increase budget for maintenance expenditures to keep vehicle in SGR
Increase of errors related to manual data input for facility inspections	Purchase a facility module that integrates with existing maintenance and financial systems. In the process of implementing an asset management system for the facilities division.
Lack of sufficent funding to keep technology related components current	Increase budget for technology components and training.

Maintenance Strategy: **List your regularly-planned maintenance activities (e.g., inspections, routine preventive maintenance activities, etc). As applicable, describe any planned changes or improvements to these processes. Enter this information in the table**

Asset Category/Class	Maintenance Activity	Frequency	Avg Duration (Hrs)	Cost
35ft & 40ft buses	Preventative maintenance	Every 6,000 mi	7.5	$741
LTV's & Vans	Preventative maintenance	6,000 & 7,500 mi	1.5	$82
35ft & 40ft buses	Emission maintenance	72,000 mi	7	$400-$5,000
BOMF & RTC	Regular preventative maintenance and inspections	Based on OEM requirements	120	$3,500

How does your agency address unplanned maintenance needs?

Building systems and vehicles are repaired based on the priority of the defect. The goal of our maintenance programs are to increase the amount of scheduled maintenance and decrease unplanned maintenance.

Overhaul Strategy: **How and when do assets get overhauled or replaced? What activities take place during overhaul (e.g., mini, mid-life, or major overhaul)? As applicable, describe any planned changes or improvements to these processes. Enter this information in the table below. Click the button to add more rows.**

Asset Category/Class	Overhaul Strategy
30ft Bus	Mid-life overhaul - rebuilds bus engine, transmission and electronics, replaces chassis parts and seats, and repaints the body, restoring the bus to an "as new" condition. Cost is about $120,000 per bus.
40ft / 35ft Buses	Vehicles are kept in a like new condition. All defects noted on preventative maintenance inspection are repaired. Goal is to repair any known defect on the bus. Vehicle damage is priortized by condition and vehicles are sent to the body shop accordingly. We highly rely on the quality of inspections and oil analysis samples. Major drive train components are replaced at the time of failure. We are in the process of transitioning from a reactive maintenance program to a proactive maintenance program in effort to insure excellent quality of service. In addition, we have implemented a bus repower program to extend the useful life of our buses while implementing a 1/12 buying level program.
LTV's / Vans	Vehicles are kept in a like new condition. All defects noted on preventative maintenance inspection are repaired. Goal is to repair any known defect on the vehicle. Vehicle damage is priortized by condition and vehicles are sent to the body shop accordingly. We highly rely on the quality of inspections. Major drive train components are only replaced at the time of failure. We are in the process of transitioning from a reactive maintenance program to a proactive maintenance program in effort to insure excellent quality of service.

Disposal Strategy: **What is your agency's strategy for disposing of assets that are being renewed or replaced? Describe any approval processes and detail, including the procedures for physically removing the asset from the property. As applicable, describe any planned changes or improvements to these processes. Provide brief paragraphs describing the strategies in the table below. Click the button to add more rows.**

Asset Category/Class	Disposal Strategy
All Buses	Buses at the end of their useful lives (15 years) are retired according to three options: (i) salvage sale; (ii)
Buses	At the end of their useful life, buses are sold to the highest bidder
Paratransit Vehicles	Paratransit vehicles are replaced at the end of their useful life. Vehicles are kept for spares until the cost of repairing them exceeds the value of the vehicles. Vehicles (regardless if running) are sold to the highest
Vans	Vans are sold once they reach 100,000 miles or 10 years. Vans are sold to the highest bidder.

Acquisition and Renewal Strategy: **How do you determine when to initiate acquisition activities for your assets? Describe your long-term replacement strategy and how long-term renewal and improvement activities are assessed based on the asset's lifecycle. As applicable, describe any planned changes or improvements to these processes. Provide brief paragraphs describing the strategies in the table below. Click the button to add more rows.**

Asset Category/Class	Acquisition and Renewal Strategy
Clean Diesel Bus	GoTriangle currently operates a fixed route fleet of clean diesel buses. The life cycle of our buses are 12 years/500,000 miles. GoTriangle is in the process of expanding it's service over the next 10 years due to a recently approved increase of the local sales tax, becuase of the funding requirements that are needed for both expansion and replacement buses, GoTriangle will need to plan to operate some of these buses beyond there planned useful life. The details of our plan are are outlined in the Bus Fleet Manangement Plan, Wake County Transit Plan, and the Orange & Durham Transit Plan.
Vans	Go Triangle uses 12 passenger vans for our shuttle relief and on demand service. The life cycle of our vans are 10 years/100,000 miles.

Work Plans & Schedules

NOTE: Complete some yellow cells before clicking "Add More" under each question.

*****COMPLIANT*****

Proposed Investments: **Provide a list of the selected projects and programs prioritized based on your agency's criteria. Rank the projects and order them by year of planned implementation. Enter this information in the table below. Click the button to add more**

Project Year	Project Name	Asset/Asset Class	Cost	Priority
2016	Diesel-Hybrid Bus Acquisition	30ft Bus	$5,000,000.00	Medium
2018	Clean Diesel Bus Procurement	40ft	$2,500,000.00	High
2018	Paratransit Vehicle Procurement	LTV	$320,000.00	High
2018	Support Vehicles	Support Vehicles	$68,000.00	Medium
2018	Bus Repowers	40ft	$800,000.00	High

*****COMPREHENSIVE*****

Capital Investment Activity Schedules: **You may attach any work plans or schedules you have for capital investment activities as separate files when delivering this template. Provide the names of documents attached and their file formats in the table below. Click the button to add more rows.**

Document Name	File Extension
Example - Bus Overhaul Schedule	MS Project

Related Documents

Adobe Acrobat Document

Wake Transit Plan Equipment Assessment PDF document is pasted above. Double click PDF document to access.

Adobe Acrobat Document

Bus Replacement Schedule PDF document is pasted above. Double click PDF document to access.

Adobe Acrobat Document

Paratransit Replacement Schedule PDF document is pasted above. Double click PDF document to access.

Adobe Acrobat Document

Bus Management Plan document is pasted above. Double click PDF document to access.

Adobe Acrobat Document

GoTriangle fixed route inventory document is pasted above. Double click PDF document to access.

Related Documents

Adobe Acrobat Document

GoTriangle FY19 Capital Improvement Projects

Adobe Acrobat Document

GoTriangle Facility Equipment Inventory

Adobe Acrobat Document

GoTriangle Shop Equipment Inventory

Triangle Regional Public Transportation Authority Transit Asset Managem

Last modified by Brian Mclean on 23 Aug 18 at 10:43

Introduction

Research Triangle Regional Public Transportation Authority, DBA GoTriangle, is a regional transit agency in North Carolina. We service a three county area that includes Durham, Orange and Wake counties. We also operate a regional paratransit and vanpool program.

Performance Targets & Measures

Asset Class	Performance Measure	Target
Rolling Stock *All revenue vehicles*	**Age** - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	**0.13**
Equipment *Non-revenue vehicles*	**Age** - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	**0.22**
Facilities *All buildings or structures*	**Condition** - % of facilities with a condition rating below 3.0 on a the FTA Transit Economic Requirements Model (TERM) Scale	**Target Required**

Target Setting Methodology

Within our rolling stock of revenue vehicles there are vans for the vanpool program, LTV's for the paratransit service and buses for the fixed route service. Our method for setting targets is relatively straight forward, 10% of each asset class vehicles may meet or exceed their ULB. Facilities must maintain a rating of 3 or higher.

TAM Vision

We hope to decrease maintenance cost, improve the safety, reliability and performance of our assets c

TAM and SGR Policy

GoTriangle is committed to maintaining a safe enviroment for it's riders and employees. To insure that

TAM Goals and/or Objectives

Goals	Objectives
Increase vehicle readiness by 5%	Complete all PM's on time 100%
Decrease roadcalls by 5%	Provide additional operator training regarding pre & post trip ins

About the TAM Plan

The inventory in this includes vehicles from Bus, Paratransit and the Vanpool program. Additionally, it

Roles and Responsibilities

Department/Individual	Role (Title and/or Description)	Subrecipient
atrick Stephens / Brian Mcle	ansit Director / Fleet Maintenance Mana	Bus Agency
Gary Tober	Real Estate Manager	Bus Agency
Saundra Freeman	Accountable Executive	Bus Agency

Asset Portfolio

Please see Appendix A (Asset Register) for the asset inventory listing.

Asset Inventory Summary

Asset Category	Total Number	Avg Age	Avg Value
Equipment	9	5.222222	$28,944.44
Facilities	4	33	$4,637,750.00
Rolling Stock	141	7.29078	$215,100.72

Condition Assessment

Please see Appendix B (Asset Condition Data) for individual asset condition listing.

Asset Condition Summary

Asset Category	Count	Avg Age	Avg TERM Condition	Avg Value	% At or Past ULB
Equipment	8	4.25	N/A	$29,562.50	12.50%
Facilities	3	17.33333	3.333333333	$5,517,000.00	0.00%
Rolling Stock	141	7.29078	N/A	$215,100.72	17.73%

Management Approach

Investment Prioritization

Use maintenance management systems, analyze failure trends, monitor maintenance cost over asset useful life to assist in determining the correct course of action. Vehicle breakdown analysis also plays an important role. Each year we have a capital improvement project process in which we determine departmental priority.

Decision Support Tools

The following tools are used in making investment decisions:

Process/Tool	Brief Description
Trapeze Asset Management System (EAM)	A software system that tracks inventory, maintenance cost, condition, etc. Asset management software.
Road breakdown analysis	Analysis is used to monitor the reliability of all vehicles. We
Track system trend analysis on building	Based on regular maintenance and inspections.

Risk Management

Risk	Mitigation Strategy
Decrease of funding for vehicle replacen	Increase budget for maintenance expenditures to keep vehic
Increase of errors related to manual data	Purchase a facility module that integrates with existing main
Lack of sufficent funding to keep techno	Increase budget for technology components and training.

Maintenance Strategy

Asset Category/Class	Maintenance Activity	Frequency	Avg Duration (Hrs)	Cost
35ft & 40ft buses	ventative maintenar	Every 6,000 mi	7.5	$741
LTV's & Vans	ventative maintenar	6,000 & 7,500 mi	1.5	$82
35ft & 40ft buses	mission maintenanc	72,000 mi	7	$400-$5,000
BOMF & RTC	tative maintenance	ed on OEM requirem	120	$3,500

Unplanned Maintenance Approach

Building systems and vehicles are repaired based on the priority of the defect. The goal of our mainte

Overhaul Strategy

Asset Category/Class	Overhaul Strategy
40ft / 35ft Buses	Vehicles are kept in a like new condition. All defects noted on preventative
LTV's / Vans	Vehicles are kept in a like new condition. All defects noted on preventative

Disposal Strategy

Asset Category/Class	Disposal Strategy
Buses	At the end of their useful life, buses are sold to the highest bidder
Paratransit Vehicles	Paratransit vehicles are replaced at the end of their useful life. Vehicles are
Vans	Vans are sold once they reach 100,000 miles or 10 years. Vans are sold to the

Acquisition and Renewal Strategy

Asset Category/Class	Acquisition and Renewal Strategy
Clean Diesel Bus	GoTriangle currently operates a fixed route fleet of clean diesel buses. The life
Vans	Go Triangle uses 12 passenger vans for our shuttle relief and on demand service.

Work Plans & Schedules

The list of prioritized investment projects is provided in Appendix C.

Appendices

Appendix A	Asset Register
Appendix B	Asset Condition Data
Appendix C	Proposed Investment Project List

Appendix C: Proposed Investment Project List

Project Year	Project Name	Asset/Asset Class	Cost	Priority
2018	Clean Diesel Bus Procurement	40ft	$2,500,000.00	High
2018	Paratransit Vehicle Procurement	LTV	$320,000.00	High
2018	Support Vehicles	Support Vehicles	$68,000.00	Medium
2018	Bus Repowers	40ft	$800,000.00	High

CITY OF DURHAM (GoDurham)
TRANSIT ASSET MANAGEMENT PLAN

July 2017

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 EXECUTIVE SUMMARY

Asset Management is a broad term that encompasses the various actions that the City of Durham undertakes to ensure that its assets are efficiently planned for, delivered, managed, and reviewed in a cost effective and sustainable manner. The Durham community is continuously seeking improved services, such as safer roads, an attractive transit system, better parks, and enduring facilities. However, the funds available cannot keep pace with public demand. Best Practice Asset Management plans allow available funds to go further by "doing more with less" through identifying all assets and their condition and incorporating an Asset Management strategy to monitor the effect of the City's actions. A proactive approach to maintenance and planning to address issues prior to costly and dangerous asset failures are key to sound Asset Management.

1.2 This strategy aims to raise the City of Durham's Transit Asset Management activities to the level of best appropriate practice. By increasing the transit division's ability to manage its assets and by improving its knowledge of those assets, a sustainable community will be able to be maintained in a manner that delivers economic, environmental and social value.

1.3 The Federal Transit Administration (FTA) has new requirements for transit agencies related to asset management in Moving Ahead for Progress in the Twenty-First Century (MAP-21) and Fixing America's Surface Transportation (FAST Act). The regulations require all recipients or sub-recipients of federal financial assistance under 49 U.S.C. Chapter 53 to prepare a Transit Asset Management Plan (TAMP). As a recipient of these funds, the City of Durham Transit (GoDurham) must comply with the new regulations. This plan satisfies the FTA TAMP requirement. The plan, together with its maintenance outlook, also meets the requirements of the Fleet Management Plan. GoDurham's operations fall into Tier II classification for transit providers because it operates fewer than 100 vehicles at peak revenue service. The required elements of the TAMP for Tier II providers are summarized in the table below.

Tier II TAMP Requirements

1	Inventory of Capital Assets
2	Condition Assessment
3	Decision Support Tools
4	Investment Prioritization

The for all capital assets has been determined and is summarized in the table below.

FTA Condition Assessment Summary

Assessment Measure	Condition Rating
FTA State of Good Repair (SGR) Criteria	52% of all capital assets are in a SGR
FTA Performance Measures	**Rolling Stock** o 44% of rolling stock meets or exceeds Useful Life Benchmark (ULB) **Equipment** o 78% of equipment meets or exceeds ULB **Facility** o 100% of units are rated above 3 on the TERM scale all meet SRG gauge.

In addition to the application of FTA State of Good Repair (SGR) criteria and performance measures as required by the TAMP, this report further analyzes the capital asset inventory using methods recommended by the American Public Transportation Association (APTA). Results of the assessment are summarized in the table below.

GoDurham Inventory Analysis Results based on APTA's Recommended Format

Analytic Applied	Result
System Replacement Value (Rolling Stock & Equipment Only)	$29,515,000 (Estimated)
Normal Reinvestment (over 10 years)	$16,135,000 (Estimated)
Capital Asset Backlog	$12,975,000 (Estimated)
SGR Need (over 10 years)	$29,110,000 (Estimated) $2,911,000 (Annual SGR Need)

1.4 TRANSIT ASSET MANAGEMENT PLAN (TAMP) SCOPE AND REVISIONS

This TAMP has a scope of five years. This plan will be revised at a minimum of every five years, or more frequently if significant changes occur to the assets or the system. The next FTA mandatory plan update is due on March 23, 2021.

The current North Carolina Statewide Transportation Improvement Program (STIP) was finalized in August 2016, and runs through 2025. Updates to this plan are being coordinated with the state's transportation improvement updates and related amendments. GoDurham will update its plans in line with the implementation of the STIP program.

2.0 FTA DEFINITIONS

The following definitions are defined by the FTA in the final rule regarding Transit Asset Management requirements, published in July 26, 2016.

2.1 CAPITAL ASSET

According to the FTA, a capital asset includes the categories of rolling stock, equipment, infrastructure, and facilities. Capital assets can include those a transit provider owns, operates, manages, leases, or operates under contract. **Rolling Stock** refers to revenue vehicles used in providing public transportation, including vehicles used for carrying passengers on fare-free services. **Equipment** is defined as an article of nonexpendable, tangible property having a useful life of not less than one year. **Infrastructure** refers to the underlying framework or structures that support a public transportation system. A **facility** is a building or structure that is used to provide public transportation. The definition of a facility is further clarified by APTA as: "structures that enclose or support maintenance, operations and administrative activities, including those that house specialized equipment that support the operations and maintenance of the vehicles." These definitions are summarized below in Table 1. GoDurham's does not have any infrastructure in its asset inventory to report on.

Table 1. FTA Capital Asset Definitions

Capital Asset	Definition
Rolling Stock	A revenue vehicle used in providing public transportation, including vehicles used for carrying passengers on fare-free services
Equipment	Nonexpendable, tangible property with a useful life of not less than one year
Infrastructure	The underlying framework or structures that support a public transportation system

Facilities	Building or structure used in providing public transportation

2.2 STATE OF GOOD REPAIR

The FTA defines a SGR as: "**the condition in which a capital asset is able to operate at a full level of performance**." Further, a capital asset is in a SGR when the following criteria are met: 1) it is able to perform its designated function, 2) it does not pose a known unacceptable safety risk, and 3) its lifecycle investments must have been met or recovered including all preventive maintenance, rehabilitation, and replacements.

Table 2. FTA SGR Criteria

1. Asset is able to perform its designated function
2. Asset does not pose a known unacceptable safety risk
3. Asset lifecycle investments have been met or recovered

2.3 SGR PERFORMANCE MEASURES

If an asset meets the SGR criteria and is determined to be in a state of good repair then its performance can be measured. The FTA proposes an SGR performance measure for each asset that is the least burdensome to measure while still efficient. For the measurement of rolling stock and equipment, the FTA proposes an age-based assessment which would measure the percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark (ULB). Length of useful life for each unit is determined by a FTA based agency depreciation schedule, which groups assets into 8 categories, and varies by asset type within a range of 4 to 12 years or 100,000 to 500,000 miles. The depreciation schedule is provided in Table 4 and Appendix A. The City Durham (GoDurham) does not currently own any infrastructure assets. Therefore, performance measures for that asset category will not be discussed. The FTA suggests a condition-based assessment of facilities using the **Transit Economic Requirements Model** (TERM) scale to discover the percentage of facilities within an asset class rated below 3 on the TERM scale (1=poor to 5=excellent).

Table 3. Proposed FTA Performance Measures

Asset Category	Classes Measured	Performance Measure
Rolling Stock	All revenue vehicles	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their ULB
Equipment	Non-revenue vehicles Maintenance equipment	Percentage of vehicles and equipment that have met or exceeded their ULB
Facilities	All buildings or structures	Percentage of facilities within an asset class, rated below 3 on the Transit Economic Requirements Model (TERM) scale (1=poor to 5=excellent)

3.0 CAPITAL ASSET INVENTORY

This inventory includes all agency capital assets, as defined by the FTA. Capital asset categories are limited to rolling stock, equipment, and facilities as noted above. The City of Durham (GoDurham Transit) uses FASTER Fleet Management software which tracks assets including rolling stock, equipment, and facilities. In addition, each asset listed is maintained using a manufacturer recommended preventive maintenance (PM) schedule and/or is inspected annually. PM programs and inspections have been entered into the FASTER program and managers are alerted to scheduled maintenance through a forecasting calendar.

3.1 ROLLING STOCK

The City Transit system (GoDurham) currently owns 102 units of rolling stock in revenue service. These units include heavy-duty buses, light transit vehicles, and minivans. GoDurham also owns 18 support vehicles.

For all 102 units of rolling stock (fixed route & paratransit), a SGR requirement has been determined and a performance measure can be applied. The FTA performance measure for rolling stock is the percentage of units that have either met or exceeded their ULB. The length of useful life for each unit is determined by an FTA based agency depreciation schedule, which groups assets into 8 categories, and varies by vehicle type within a range of 4 to 12 years or 100,000 to 500,000 miles. The depreciation schedule is provided in Table 4 and Appendix A. Table 5 provides the rolling stock inventory with the age of the vehicle, depreciation category, and indicates whether or not the unit has met or exceeded its ULB as determined by the depreciation schedule. In order to meet or exceed the benchmark a unit must fulfill the criteria for age or mileage. Currently 46 % or 47 of the 102 units of rolling stock exceed their ULB, while 54% or 55 meet the expected ULB (in SGR).

Table 4. City of Durham (GoDurham) Useful life & Depreciation Schedule

Category	Vehicle Type	ULB
1	Large (35'-40'), heavy-duty buses	12 yrs. or 500,000 miles
2	Medium (30'), heavy-duty buses	10 yrs. or 350,000 miles
3	Medium (30'), medium-duty buses	7 yrs. or 200,000 miles
4	Medium (25'-35'), light-duty buses	5 yrs. or 150, 000 miles
5	Small (16'-28'), light-duty buses	4 yrs. or 100,000 miles
6	Other Revenue Vehicles (minivans)	5 yrs. or 100,000 miles
7	Non-Revenue Vehicles	5yrs. or 100,00 miles
8	Furniture, fixtures, machinery and equipment	3, 5, 7 or 10 yrs.

The items highlighted are the current vehicle types in the City's fleet inventory.

Table 5. Rolling Stock ULB (Buses)

	Vehicle Number	Vehicle Year	Make/Model	In Service Date	Age	Reached or Not Reached ULB
1	801	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
2	802	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
3	803	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
4	804	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
5	805	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
6	806	2008	Gillig 40Ft Low-Floor Bus	7/1/2008	9	Not Reached ULB
7	808	2008	Goshen Cutaway	7/1/2008	8	***Retired***
8	1001	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
9	1002	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
10	1003	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
11	1004	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
12	1005	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
13	1006	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
14	1007	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
15	1008	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
16	1009	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
17	1010	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
18	1011	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
19	1012	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
20	1013	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB

21	1014	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
22	1015	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
23	1016	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
24	1017	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
25	1018	2010	Gillig 40Ft Low-Floor Hybrid Bus	7/1/2010	7	Not Reached ULB
26	1019	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
27	1020	2010	Gillig 40Ft Low-Floor Hybrid	7/1/2010	7	Not Reached ULB
28	1201	2012	Gillig 40Ft Low-Floor Hybrid	7/1/2012	5	Not Reached ULB
29	1202	2012	Gillig 40Ft Low-Floor Hybrid	7/1/2012	5	Not Reached ULB
30	1203	2012	Gillig 40Ft Low-Floor Hybrid	7/1/2012	5	Not Reached ULB
31	1204	2012	Gillig 40Ft Low-Floor Hybrid	7/1/2012	5	Not Reached ULB
32	1205	2012	Gillig 40Ft Low-Floor Hybrid	7/1/2012	5	Not Reached ULB
33	301	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
34	302	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
35	303	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
36	304	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
37	305	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
38	308	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
39	309	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
40	310	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
41	311	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
42	312	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
43	315	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
44	316	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
45	317	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
46	320	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
47	322	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
48	324	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
49	325	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
50	326	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
51	327	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
52	328	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
53	329	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
54	331	2003	Gillig 40Ft Low-Floor Bus	7/1/2003	14	Reached ULB
55	501	2005	Gillig 40Ft Low-Floor Bus	7/1/2005	12	Reached ULB

(Paratransit)

	Vehicle Number	Year of Purchase	Make/Model	In Service Date	Age	Reached or Not Reached ULB
1	1602	2016	DODGE CARAVAN-LOW FLOOR	10/10/2016	1	Not Reached ULB
2	1603	2016	DODGE CARAVAN-LOW FLOOR	10/10/2016	1	Not Reached ULB
3	1604	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
4	1605	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
5	1606	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
6	1607	2016	DODGE CARAVAN-LOW FLOOR	10/10/2016	1	Not Reached ULB
7	1608	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
8	1609	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
9	1610	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
10	1611	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
11	1612	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
12	1613	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
13	1614	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
14	1615	2016	FORD SENATOR II 22 FT LTV	10/24/2016	1	Not Reached ULB
15	8	2008	FORD HIGH TOP VAN	7/1/2008	9	Reached ULB
16	9	2008	FORD HIGH TOP VAN	7/1/2008	9	Reached ULB
17	11	2008	FORD HIGH TOP VAN	7/1/2008	9	Reached ULB
18	12	2008	FORD HIGH TOP VAN	7/1/2008	9	Reached ULB
19	F-15	2010	FORD CHAMPION 22FT LTV CDL	7/1/2010	7	Reached ULB
20	F-16	2010	FORD CHAMPION 22FT LTV CDL	7/1/2010	7	Reached ULB
21	F-20	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB
22	F-24	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB
23	F-26	2010	FORD CHAMPION 22FT LTV CDL	7/1/2010	7	Reached ULB
24	F-27	2010	FORD CHAMPION 22FT LTV CDL	7/1/2010	7	Reached ULB
25	F-28	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
26	F-29	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
27	F-30	2010	FORD CHAMPION 22FT LTV CDL	7/1/2010	7	Reached ULB
28	F-31	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
29	F-33	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
30	F-34	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
31	F-37	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
32	F-41	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB
33	F-42	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
34	F-43	2010	FORD CHAMPION 22FT LTV	7/1/2010	7	Reached ULB
35	F-49	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB
36	F-50	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB

37	F-51	2010	FORD CHAMPION 20FT LTV	7/1/2010	7	Reached ULB
38	H-23	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
39	H-25	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
40	H-38	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
41	H-39	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
42	H-44	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
43	H-45	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
44	H-46	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
45	H-52	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
46	H-53	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB
47	H-54	2011	FORD CHAMPION 22FT LTV	7/1/2011	6	Reached ULB

3.2 EQUIPMENT

Eighteen units of non-revenue/support vehicles owned by GoDurham Transit meet the FTA definition of equipment or "Nonexpendable, tangible property with a useful life of not less than one year… including nonrevenue vehicles and maintenance shop equipment." A performance measure was applied to the equipment or support vehicle inventory. The FTA performance measure for equipment is the percentage of units that have either met or exceeded their ULB. Length of useful life for each unit is determined by an FTA regulation based agency depreciation schedule and varies from 4 to 10 years. See Appendix A for the full depreciation schedule. Table 6 provides the equipment inventory with the age of the equipment, depreciation category, and indicates whether or not the unit has met or exceeded its ULB as determined by the depreciation schedule. A unit must fulfill the criteria for age or mileage in order to meet or exceed the benchmark. Currently 22% or 4 of the 18 equipment exceeded their ULB as noted below.

Table 6. Equipment (Non-Revenue/Support Vehicles) ULB

Fleet ID #	Year	Description	In service date	Age	Location	Reached or Not Reached ULB
48145	2017	FORD FUSION S	01/04/17	0	0U05	Not Reached ULB
48101	2016	FORD FUSION S	04/22/16	1	0U05	Not Reached ULB
48144	2015	FORD FUSION S	04/29/15	2	0U05	Not Reached ULB
48203	2016	CHEVY EQUINOX	06/24/16	1	0U05	Not Reached ULB
48205	2016	CHEVY EQUINOX	06/24/16	1	0U05	Not Reached ULB
48206	2016	FORD F250	08/26/16	1	0U05	Not Reached ULB
48207	2016	FORD F250	08/10/16	1	0U05	Not Reached ULB
48304	2012	FORD E350 ECONOLINE	05/18/12	5	0U05	Not Reached ULB
48306	2016	CHEVY MALIBU	11/14/12	5	0U05	Not Reached ULB
9050	2017	NISSAN ROGUE	03/22/17	0	0U05	Not Reached ULB
48302	2012	FORD E150 VAN	08/15/12	5	0U05	Not Reached ULB
48296	2015	FORD ESCAPE	03/25/15	2	0U05	Not Reached ULB
48297	2015	FORD TRANSIT	05/20/15	2	0U05	Not Reached ULB
48300	2012	FORD F350	09/07/12	5	0U05	Not Reached ULB

11101	1999	CHEVY CAVALIER	09/30/99	18	0U05	Reached ULB
48286	2003	FORD F350	06/25/03	14	0U05	Reached ULB
48142	2006	FORD TAURUS	03/22/06	11	0U05	Reached ULB
48143	2006	FORD TARUS	03/22/06	11	0U05	Reached ULB

3.3 FACILITIES

According to the FTA asset definition, facilities include a "Building or structure used in providing public transportation." The definition of a facility is further clarified by the APTA as structures that enclose or support maintenance, operations and administrative activities, including those that house specialized equipment that supports the operations and maintenance of the vehicles. Six buildings or facilities owned by the City of Durham (GoDurham) fit this definition. These transit buildings meet the FTA criteria for inclusion in the asset (facilities) category, and all these units meet the criteria for SGR criteria determination. The performance measure for this asset class is the percentage of units rated below 3 on the TERM scale (1= poor to 5 = excellent). The TERM scale is shown in Table 7 which provides both a qualitative and numeric condition rating. The facility units and their TERM ratings are shown in Table 7. Currently 0% or no facility units are rated below 3 on the TERM scale.

Table 7- FTA TERM Scale*

Rating	Condition	Description
Excellent	4.8-5.0	No visible defects, near new condition.
Good	4.0-4.7	Some slightly defective or deteriorated components.
Adequate	3.0-3.9	Moderately defective or deteriorated components.
Marginal	2.0-2.9	Defective or deteriorated components in need of replacement.
Poor	1.0-1.9	Seriously damaged components in need of immediate repair.

* Source: Transit Economic Requirements Model

Table 8. City of Durham (GoDurham) Facility TERM Rating

	Equipment ID	Const. Year	Equipment description	TERM Rating
1	505 Pettigrew St	2009	Durham Station Bus Transfer Center	4.8
2	1907 Fay St	2007	Bus Operations Bldg. 1907 Fay St	4.7
3	1911 Fay St	2007	Paratransit Operations Bldg. 1911 Fay St	4.7
4	1907 Fay St	2007	Transit Admin Bldg. 1907 Fay St	4.7
5	1820 N. Miami Blvd	2007	Bus Maintenance Bldg. 1820 N. Miami Blvd	4.7
6	1824 N. Miami Blvd	2007	Van Maintenance Bldg. 1824 N. Miami Blvd	4.7

4.0 CONDITION ASSESSMENT

The TAMP condition assessment process is comprised of two steps. First, the application of FTA SGR criteria and second, a performance assessment with differing FTA measures for each asset category. Results of the condition assessment are summarized in Table 9. The application of the FTA criteria for SGR shows that out a total of 126 asset classes, 53% or **67** of the total capital assets of City of Durham (GoDurham) units including rolling stock, equipment, and facilities are in a SGR. Furthermore,

- 46% of all Rolling Stock (Revenue Vehicles) is in a SGR;
- 78% of all Equipment including non-revenue vehicles is in a SGR; and
- 100% of Facility units meet the SGR criteria.

Of the remaining 61 assets that exceed the SGR benchmark, the following applies

- 54 % of Rolling Stock have exceeded their ULB;
- 22% of Equipment units have exceeded their ULB.

Table 9. FTA Condition Assessment

Assessment Measure	Condition Rating
FTA SGR Criteria	52% of all capital assets are in a SGR
FTA Performance Measures	Rolling Stock ○ 44% of rolling stock reached ULB Equipment ○ 78% equipment reached ULB Facility ○ 100% all of units are rated above 3 on the TERM scale all meet SRG gauge

4.1 ASSET CONDITION ANALYSIS

In addition to the application of FTA SGR criteria and performance measures as required by the TAMP, this report further analyzes the capital asset inventory using methods recommended by APTA. The APTA recommended method of inventory assessment was developed by the Chicago Regional Transportation Authority (RTA) and put forth by the APTA in their 2013 Standards Development Program publication, *Capital Asset Inventory and Condition Assessment*.

The excerpted methodology is provided in Appendix B. This method of assessment prescribes analysis of the capital asset inventory resulting in the following data shown in Table 10: System Replacement Value, Normal Reinvestment, Asset Backlog, and State of Good Repair Need (SGR Need).

System Replacement Value is defined as the cost to replace all assets with new assets. This cost is based on the last actual cost of replacing an asset in that category, when available. For assets where this data is not available, the original purchase price of the asset is used. The **Normal Reinvestment** figure is the anticipated cost for asset replacements/investments over a 10 year period**.** **Asset Backlog** is defined by APTA as the cost to replace all assets that have exceeded their useful life. In this analysis the FTA ULB criteria is used to determine the useful life of an asset. Thus, the Backlog will include assets that have exceeded their ULB as well as those that have met their ULB. **A SGR Need** is defined as the sum of the Backlog and Normal Reinvestment quantities, and represents the total projected monetary investment needed for a 10 year period. For the APTA analytics, facility asset data are only used in the calculation of the System Replacement Value.

The decision not to include facility assets in the SGR need calculation is based on the fact that most facility assets are less than 10 years old and are fairly new, with many years of useful life remaining (and no Backlog). Additionally, they have a limited history of expenditure/investment to inform a Normal Reinvestment estimate, and no replacements are anticipated during the 10 year period.

Table 10. Capital Asset Inventory Analysis

	Applied Analytic	Result
4.1	System Replacement Value (including all Rolling Stock & Equipment)	$29,515,000 (Estimated)
4.2	Normal Reinvestment (over 10 years for rolling stock and equipment in the current *do not exceed* now category but will exceed in the next 10 years)	$16,135,000 (Estimated)
4.3	Capital Asset Backlog	$12,975,000 (Estimated)
4.4	SGR Need (over 10 years)	$29,110,000 (Estimated) $2,911,000 (Annual SGR Need)

4.2 SYSTEM REPLACEMENT VALUE (ROLLING STOCK & EQUIPMENT ONLY)

The System Replacement Value or cost to replace all capital assets with new assets is estimated at $29,515,000. This figure is a sum of the current estimated cost (when available), or the original cost for all capital assets including rolling stock and squipment only.

4.3 NORMAL REINVESTMENT

Normal Reinvestment, or anticipated asset replacements/investment cost over a 10 year period is estimated to be $16,135,000. This figure is a sum of the estimated rolling stock Normal Reinvestment of $15,685,000 and the estimated equipment Normal Reinvestment cost of $450,000. No Normal Reinvestment cost has been estimated for facility assets.

4.4 ASSET BACKLOG

The total asset Backlog or replacement cost for all capital assets that have met or exceeded their useful life is estimated at $12,975,000. This figure is a sum of the estimated rolling stock Backlog of $12,845,000 and the estimated equipment Backlog of $130,000. There is no facilities Backlog.

4.5 SGR NEED

The sum of the total Normal Reinvestment and capital asset Backlog amounts, the SGR Need, is estimated at $29,110,000 for a 10 year period. The annual SGR Need (for 10 years) is estimated at $2,911,000. The SGR Need for Rolling Stock is estimated to be $28,530,000. Equipment SGR Need is an estimated at $580,000. No SGR Need has been calculated for facility assets.

5.0 DECISION SUPPORT TOOLS

The City of Durham (GoDurham) primarily utilizes FASTER software to aid in the development of capital project prioritization. The information that is collected and organized by this software is used to guide investment prioritization.

5.1 FASTER

FASTER is the City of Durham (GoDurham's) data clearinghouse for all asset management related data. FASTER stores all equipment records, including maintenance records, preventive maintenance schedules, fuel records, mileage history, parts usage, and labor and parts allocation to work order. This single source allows GoDurham to see a comprehensive history of the maintenance failures and repairs made to each asset, as well as usage and service history. This data is then tracked by asset type in an attempt to see maintenance cost by asset type and age.

Currently, the City of Durham (GoDurham) has access to approximately six years of detailed records (how long FASTER software has been in place). While this provides some useful information, it is not sufficient to predict maintenance costs and needs over the course of a 12 year vehicle life. Over these six years, accuracy has increased as employee training has improved, and the organization has learned how to better utilize the software. The value of this decision support tool will increase as we accumulate more data in coming years.

6.0 INVESTMENT PRIORITIZATION

It is estimated that 102 revenue vehicles, or 88% of the Authority's revenue rolling stock, will have met or exceeded its useful life within the five year forecast of this plan. While this number seems high, all of our current paratransit vehicles have a useful life of four years or less so all vehicles in these two categories would be eligible for replacement regardless of their current condition.

Vehicle replacement prioritization is a fluid process as the transit system is regularly replacing rolling stock. At the time of this report, funding for some of the replacement vehicles has been identified through local funding sources, state grant funds, and anticipated federal funding appropriations. Additionally, medium and small size transit

vehicles are being prioritized in order to service low-ridership routes in part because identifying funding for large buses is significantly more challenging than for other vehicles.

Replacement asset prioritization for GoDurham is outlined in Table 11. Replacement of current assets is rated as high priority, medium priority, or low priority investment. Replacement of vehicles has been prioritized in chronological order from oldest to newest. Unfortunately, investment priority is directly related to available funding which is inconsistent in the current political climate. The following is the lists of the investment prioritization for capital assets over the next five years:

Twenty-two (22) buses are rated as high priority for replacement due to age and current condition. The high priority buses and paratransit LTVs have a replacement value of $10,925,000.

Twelve (23) paratransit vehicles are rated as high priority for replacement due to age and current condition. The high priority paratransit vehicles have a replacement value of $1,380,000. Ten (10) paratransit vehicles that have a 2017 replacement value of $600,000 are rated as medium priority.

One (1) Non-Revenue/Support Vehicle is rated as high priority for replacement due to age and current condition. The high priority Non-Revenue/Support Vehicle has a replacement value of $30,000. One (1) Non-Revenue/Support Vehicles is rated as medium priority for replacement due to age and condition. The medium priority Non-Revenue/Support Vehicle has a replacement value of $40,000. Lastly, two (2) Non-Revenue/Support Vehicles are rated as low priority for replacement due to age or current condition. The low priority Non-Revenue/Support Vehicle have a replacement value of $60,000.

Table 11. Capital Asset Investment Prioritization

BUS

Priority	Vehicle	Year	Make/Model	VIN	Date in Revenue Service	Date Removed/Planned from Service	Useful Life Year	Actual Life Yea	Useful Life Miles	Actual Mileage as of 05/01/17	Replacement Cost
High	301	2003	Gillig 40Ft Low-Floor Bus	15GGD201731073946	7/1/2003	6/1/2015	12	13	500,000	561,315	$ 475,000
High	302	2003	Gillig 40Ft Low-Floor Bus	15GGD201931073947	7/1/2003	6/1/2015	12	13	500,000	665,576	$ 475,000
High	303	2003	Gillig 40Ft Low-Floor Bus	15GGD201031073948	7/1/2003	6/1/2015	12	13	500,000	784,532	$ 475,000
High	304	2003	Gillig 40Ft Low-Floor Bus	15GGD201231073949	7/1/2003	6/1/2015	12	13	500,000	654,219	$ 475,000
High	305	2003	Gillig 40Ft Low-Floor Bus	15GGD201931073950	7/1/2003	6/1/2015	12	13	500,000	718,279	$ 475,000
High	308	2003	Gillig 40Ft Low-Floor Bus	15GGD201431073953	7/1/2003	6/1/2015	12	13	500,000	713,014	$ 475,000
High	309	2003	Gillig 40Ft Low-Floor Bus	15GGD201631073954	7/1/2003	6/1/2015	12	13	500,000	703,295	$ 475,000
High	310	2003	Gillig 40Ft Low-Floor Bus	15GGD201831073955	7/1/2003	6/1/2015	12	13	500,000	537,052	$ 475,000

High	311	2003	Gillig 40Ft Low-Floor Bus	15GGD201X31073956	7/1/2003	6/1/2015	12	13	500,000	692,456	$ 475,000
High	312	2003	Gillig 40Ft Low-Floor Bus	15GGD201131073957	7/1/2003	6/1/2015	12	13	500,000	659,394	$ 475,000
High	315	2003	Gillig 40Ft Low-Floor Bus	15GGD201131073960	7/1/2003	6/1/2015	12	13	500,000	719,663	$ 475,000
High	316	2003	Gillig 40Ft Low-Floor Bus	15GGD201331073961	7/1/2003	6/1/2015	12	13	500,000	697,300	$ 475,000
High	317	2003	Gillig 40Ft Low-Floor Bus	15GGD201531073962	7/1/2003	6/1/2015	12	13	500,000	719,533	$ 475,000
High	320	2003	Gillig 40Ft Low-Floor Bus	15GGD201031073965	7/1/2003	6/1/2015	12	13	500,000	639,620	$ 475,000
High	322	2003	Gillig 40Ft Low-Floor Bus	15GGD201431073967	7/1/2003	6/1/2015	12	13	500,000	731,250	$ 475,000
High	324	2003	Gillig 40Ft Low-Floor Bus	15GGD201831073969	7/1/2003	6/1/2015	12	13	500,000	704,026	$ 475,000
High	325	2003	Gillig 40Ft Low-Floor Bus	15GGD201431073970	7/1/2003	6/1/2015	12	13	500,000	644,717	$ 475,000
High	326	2003	Gillig 40Ft Low-Floor Bus	15GGD201631073971	7/1/2003	6/1/2015	12	13	500,000	698,316	$ 475,000
High	327	2003	Gillig 40Ft Low-Floor Bus	15GGD201831073972	7/1/2003	6/1/2015	12	13	500,000	728,218	$ 475,000
High	328	2003	Gillig 40Ft Low-Floor Bus	15GGD201X31073973	7/1/2003	6/1/2015	12	13	500,000	768,155	$ 475,000
High	329	2003	Gillig 40Ft Low-Floor Bus	15GGD201131073974	7/1/2003	6/1/2015	12	13	500,000	676,683	$ 475,000
High	331	2003	Gillig 40Ft Low-Floor Bus	15GGD201531073976	7/1/2003	6/1/2015	12	13	500,000	680,858	$ 475,000
Medium	501	2005	Gillig 40Ft Low-Floor Bus	15GGD201351073977	7/1/2005	6/1/2017	12	11	500,000	567,643	$ 475,000

PARATRANSIT

Priority	Vehicle	Model Year	Make/Model	VIN	Date in Revenue Serv	Date Removed/ Planned from Service	Useful Life Years	Actual Life Years	Useful Life Miles	Actual Mileage as of 05/01/2017	Replacement Cost
High	8	2008	FORD HIGH TOP VAN	1FT2S34L98DB16973	7/1/2008	6/1/2013	4	9	100,000	262,200	60,000
High	9	2008	FORD HIGH TOP VAN	1FT2S34L98DA63952	7/1/2008	6/1/2013	4	9	100,000	300,294	60,000
High	11	2008	FORD HIGH TOP VAN	1FT2S34LX8DA63927	7/1/2008	6/1/2013	4	9	100,000	259,400	60,000
High	12	2008	FORD HIGH TOP VAN	1FT2S34L78DB16972	7/1/2008	6/1/2013	4	9	100,000	289,398	60,000
High	F-15	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS7ADA20926	7/1/2010	6/1/2015	4	7	100,000	271,209	60,000
High	F-16	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS7ADA23163	7/1/2010	6/1/2015	4	7	100,000	299,578	60,000
High	F-20	2010	FORD CHAMPION 20FT LTV	1FDEE3FL6ADA15411	7/1/2010	6/1/2015	4	7	100,000	361,795	60,000
High	F-24	2010	FORD CHAMPION 20FT LTV	1FDEE3FL0ADA23164	7/1/2010	6/1/2015	4	7	100,000	294,085	60,000
High	F-26	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS4ADA34718	7/1/2010	6/1/2015	4	7	100,000	238,381	60,000
High	F-27	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS2ADA34720	7/1/2010	6/1/2015	4	7	100,000	249,961	60,000
High	F-28	2010	FORD CHAMPION 22FT LTV	1FDFE4FS9ADA20930	7/1/2010	6/1/2015	4	7	100,000	283,515	60,000

High	F-29	2010	FORD CHAMPION 22FT LTV	1FDFE4FS5ADA23162	7/1/2010	6/1/2015	4	7	100,000	230,584	60,000
High	F-30	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS1ADA34725	7/1/2010	6/1/2015	4	7	100,000	227,196	60,000
High	F-31	2010	FORD CHAMPION 22FT LTV	1FDFE4FS7ADA34728	7/1/2010	6/1/2015	4	7	100,000	286,823	60,000
High	F-33	2010	FORD CHAMPION 22FT LTV	1FDFE4FS9ADA34729	7/1/2010	6/1/2015	4	7	100,000	262,458	60,000
High	F-34	2010	FORD CHAMPION 22FT LTV	1FDFE4FS6ADA34719	7/1/2010	6/1/2015	4	7	100,000	269,571	60,000
High	F-37	2010	FORD CHAMPION 22FT LTV	1FDFE4FS5ADA34727	7/1/2010	6/1/2015	4	7	100,000	283,924	60,000
High	F-41	2010	FORD CHAMPION 20FT LTV	1FDEE3FLXADA12754	7/1/2010	6/1/2015	4	7	100,000	314,910	60,000
High	F-42	2010	FORD CHAMPION 22FT LTV	1FDFE4FS4ADA34721	7/1/2010	6/1/2015	4	7	100,000	224,991	60,000
High	F-43	2010	FORD CHAMPION 22FT LTV	1FDFE4FS6ADA34722	7/1/2010	6/1/2015	4	7	100,000	227,196	60,000
High	F-49	2010	FORD CHAMPION 20FT LTV	1FDEE3FL8ADA15409	7/1/2010	6/1/2015	4	7	100,000	299,578	60,000
High	F-50	2010	FORD CHAMPION 20FT LTV	1FDEE3FL6ADA23167	7/1/2010	6/1/2015	4	7	100,000	293,260	60,000
High	F-51	2010	FORD CHAMPION 20FT LTV	1FDEE3FL4ADA15410	7/1/2010	6/1/2015	4	7	100,000	294,994	60,000
Medium	H-23	2011	FORD CHAMPION 22FT LTV	1FDFE4FLOBDA82873	7/1/2011	6/1/2016	4	6	100,000	183,490	60,000
Medium	H-25	2011	FORD CHAMPION 22FT LTV	1FDFE4FL1BDA82879	7/1/2011	6/1/2016	4	6	100,000	215,839	60,000
Medium	H-38	2011	FORD CHAMPION 22FT LTV	1FDFE4FL8BDA82877	7/1/2011	6/1/2016	4	6	100,000	125,814	60,000
Medium	H-39	2011	FORD CHAMPION 22FT LTV	1FDFE4FL8BDA82880	7/1/2011	6/1/2016	4	6	100,000	144,492	60,000
Medium	H-44	2011	FORD CHAMPION 22FT LTV	1FDFE4FL4BDA82875	7/1/2011	6/1/2016	4	6	100,000	215,925	60,000
Medium	H-45	2011	FORD CHAMPION 22FT LTV	1FDFE4FLXBDA82878	7/1/2011	6/1/2016	4	6	100,000	154,342	60,000
Medium	H-46	2011	FORD CHAMPION 22FT LTV	1FDFE4FL9BDA82872	7/1/2011	6/1/2016	4	6	100,000	151,034	60,000
Medium	H-52	2011	FORD CHAMPION 22FT LTV	1FDFE4FL2BDA82874	7/1/2011	6/1/2016	4	6	100,000	141,153	60,000
Medium	H-53	2011	FORD CHAMPION 22FT LTV	1FDFE4FLXBDA82881	7/1/2011	6/1/2016	4	6	100,000	97,078	60,000
Medium	H-54	2011	FORD CHAMPION 22FT LTV	1FDFE4FL1BDA82882	7/1/2011	6/1/2016	4	6	100,000	140,097	60,000

NON-REVENUE/SUPPORT VEHICLES

Priority	Vehicle	Model Year	Make/Model	VIN	Date in Revenue Service	Date Removed/Planned from Service	Useful Life Years	Actual Life Years	Replacement Cost

High	11101	1999	CHEVY CAVALIER	1G1JC5243X7311750 (TAG 27374V)	09/30/99	08/01/2009	10	18	30,000
Medium	48286	2003	FORD F350	1FTWF33P43ED34882 (TAG 27370V)	06/25/03	05/01/2003	10	14	40,000
Low	48142	2006	FORD TAURUS	1FAFP53U26A237812 (TAG 65675V)	03/22/06	02/01/2016	10	11	30,000
Low	48143	2006	FORD TARUS	1FAFP53U46A237813 (TAG 65676V)	03/22/06	02/01/2016	10	11	30,000

7.0 FLEET REQUIREMENTS

In order to operate an effective transit service, it is imperative that GoDurham's fleet contain the appropriate number and type of vehicles, in addition to being in a state of good repair. This section analyzes fleet needs and presents a plan for vehicle replacement based on these needs.

7.1 FIXED ROUTE VEHICLE NEEDS

GoDurham operates 50 vehicles in peak service on a fixed route. Each route is assigned a type of vehicle, depending on the unique route requirements. These are heavy duty hybrid electric buses. Each route is evaluated on a monthly basis to determine if the requirements have changed. These requirements, applied in order, are:

Route	Vehicle Type	Vehicle Size	# of Vehicles
1	Gillig	40'	1
1A	Gillig	40'	1
1B	Gillig	40'	1
2	Gillig	40'	1
2A	Gillig	40'	1
2B	Gillig	40'	1
3	Gillig	40'	2
3A	Gillig	40'	1
3B	Gillig	40'	1
3C	Gillig	40'	1
4	Gillig	40'	2
5	Gillig	40'	3
5K	Gillig	40'	2
6	Gillig	40'	1
6B	Gillig	40'	1
7	Gillig	40'	2
8	Gillig	40'	2
9	Gillig	40'	2
9A	Gillig	40'	2
9B	Gillig	40'	2
10	Gillig	40'	2

10A	Gillig	40’	3
10B	Gillig	40’	2
11	Gillig	40’	2
12	Gillig	40’	3
14	Gillig	40’	1
15	Gillig	40’	1
20	Gillig	40’	2
23	Gillig	40’	1
Bull City Connector	Gillig	40’	3

7.2 FIXED ROUTE VEHICLE SPECIFICATIONS

To best meet the needs of passengers, three types of fixed route vehicles have been determined to be valuable to the fleet. Each requires some specifications:

7.2.1 HEAVY DUTY BUS (HHD)

The primary fixed route vehicle is a heavy duty bus. GoDurham currently operates Gillig buses. Heavy duty buses are ordered as 40’ low floor buses for maximum cost efficiency, and convenience to customers. GoDurham is currently looking into the possibility of including smaller (30ft buses) in the mix of vehicles operated on all fixed routes. Also, GoDurham will be piloting a new total electric vehicle on a select fixed route in 2019 using an electric vehicle purchased through Congestion Mitigation Air Quality (CMAQ) grant.

7.3 PARATRANSIT VEHICLE NEEDS

GoDurham ACCESS currently operates up to 40 paratransit vehicles at peak hours. This number is based on service demand and can vary. It is reevaluated annually. The service utilizes cutaway vehicles with a capacity of two wheelchair positions, and up to eight passenger seats. While it may be beneficial to have one or two vehicles with a smaller capacity (such as one wheelchair position and two or three seats), the majority of vehicles need the larger capacity or service would be inefficient. At this time, no smaller capacity vehicles have been identified that would fulfill the need at a reasonable cost. All our paratransit vehicles are powered by gasoline engines.

7.4 NON-REVENUE VEHICLE NEEDS

GoDurham utilizes a variety of non-revenue vehicles in support of daily operations and administration. The following list outlines the non-revenue vehicle needs.

- Two service trucks for maintenance of bus stops, facilities, and road call response
- Three administrative vehicles for business travel, road supervision, and accident response
- One administrative vehicle for the 5310 program
- Three retired paratransit vans for fixed route operator relief driver transportation

7.5 SPARE RATIO REQUIREMENTS

Fleet requirements or replacement are based on the mileage and age each vehicle will be required to operate, versus the mileage put on the vehicle each year. For example, a heavy duty bus is Altoona tested for 12 years or 500,000 miles. If the bus will be required to last 12 years, it should average 41,700 miles per year of service. Therefore, for every 41,700 miles of scheduled service to be performed each year by a heavy duty bus, one such bus is required. Fewer vehicles would require the remaining vehicles to operate in revenue service beyond their tested service life.

These two factors combined, with the vehicle requirements determined to be the higher number for each vehicle category, either based on the average age dictated spare ratio, or on the number of vehicles needed to maximize life and utilization of the vehicle category.

The charts and calculations used by GoDurham are included in Appendix C. The results are as follows:

	Max in Service	Vehicles Needed	Spare Ratio
Heavy Duty Bus	45	54	20%
Paratransit	40	46	15%

7.6 CURRENT FLEET ANALYSIS AND PLAN

GoDurham currently owns about the same number of vehicles, including spare ratio, that the plan identifies. Current need, compared to actual ownership, is shown in the chart below:

	Vehicles Needed	Vehicles Owned
Heavy Duty Bus	45	54
Paratransit	46	46

8.1 ADOPTION

The City of Durham Transportation Department hereby adopts this GoDurham Transit Asset Management Plan on _____, 2017.

_____
Director of Transportation
City of Durham

APPENDIX A
DEPRECIATION SCHEDULE

Depreciation is calculated by the straight-line method over an estimated useful life. The FTA determines the estimated useful life for each type of asset. The City of Durham (GoDurham) has adopted the following depreciation schedule in line with the TAMP requirement:

1. Large (35'-40'), heavy-duty buses = 12 yrs. or 500,000 miles
2. Medium (30'), heavy-duty buses =10 yrs. or 350,000 miles
3. Medium (30'), medium-duty buses = 7 yrs. or 200,000 miles
4. Medium (25'-35'), light-duty buses = 5 yrs. or 150, 000 miles
5. Small (16'-28'), light-duty buses = 4 yrs. or 100,000 miles
6. Other Revenue Vehicles = 5 yrs. or 100,000 miles
7. Non-Revenue Vehicles = 5 yrs. or 100,000 miles
8. Furniture, fixtures, machinery and equipment = 3, 5, 7 or 10 yrs.

APPENDIX B
INVENTORY ASSESSMENT METHODOLOGY

Excerpted from the APTA Standards Development Program Recommended Practice, Capital Asset Inventory and Condition Assessment © 2013 American Public Transportation Association

Inventory Assessment Methodology (Developed by Chicago Regional Transportation Authority [RTA]) the following recommended steps are herewith offered in order to follow a relatively easy, seamless, affordable and understandable procedure in developing an asset inventory and asset condition assessment.

1. Based on the agreed upon condition assessment strategy and agency may assemble an inventory assessment team composed of in-house asset stewards and contracted asset type experts to form a project team to collect and assemble the data into the inventory/assessment (I/A). The in house staff may be asked to work part time on the I/A or to take it on as a temporary full time project.
2. Review sample I/A within this report, and select one or more to use as a guide for your I/A. Guidance and templates for this process will be forthcoming.
3. Define, tally, categorize and construct a living listing of every asset type, to form the basis of your agencies I/A. This is meant to be a large exhaustive list of every asset type within the agency's properties. For example a large transit system may include as many as 100 asset types broken into as many as 10 categories. These may include facilities, structures, rolling stock, track, yards etc. When assembling an inventory for the first time, asset data will most likely need to be obtained from a variety of sources. Potential asset data sources include:
    - Prior I/A efforts
    - Maintenance Management Systems (MMS, e.g., Maximo, Ellipse, etc.)
    - Fleet roster (for vehicles)
    - Department level / asset manager records: which may exist in spreadsheet format
    - Fixed Asset Ledger (accounting system): Generally not a preferred source for larger assets but useful for small value items such as radios, shelters, and non-revenue vehicles
    - Primary data collection
4. Create a recording template for each asset type (using the guide documents noted above). The templates should be designed to provide enough data to document each asset's type, date built or acquired (to assess age), quantity, unit cost and condition.
5. Determine estimated useful life for each asset. These may be copied from the provided guide document samples or determined by the I/A team.
6. Establish age for each asset. Should the actual purchase or installation date be unavailable, proxies (estimates) must be used to determine these quantities.
7. The ratio of age to useful life can be used to group assets into age quintiles and these quintiles can then be used as simple measures of asset condition as follows:
    - 5 = 25% of useful life consumed
    - 4 = 26% to 50% of useful life consumed
    - 3 = 51% to 75% of useful life consumed
    - 2= 76% to 100% of useful life consumed

- 1 = > 100% of useful life consumed

8. Populate the asset type templates with available data. Proxies (educated estimates) must be used for any unavailable data in order for the I/A to be as complete as possible.
9. Perform an inspection of a sampling segment of each asset type in order to verify the consistency of the calculated conditions above with the observed conditions. This activity may necessitate changes to some of the condition ratings of the I/A.
10. Determine replacement costs (Cost to replace with new asset) for each asset. Knowledge of the original cost is helpful in this task. If unavailable; a proxy must be used to estimate such. This quantity represents the System Replacement Value. How do we handle betterment of an asset? Technology, etc.
11. Calculate the replacement cost for all assets that exceed their useful life (i.e., rated 1 using the condition measure suggested above). This quantity represents the Backlog.
12. Determine the time period for the asset condition assessment. For consistency it is recommended that a 10 year period be utilized by all agencies. Create a 10 year matrix using Excel or other to record the following.
13. Determine any anticipated asset replacements (example bus fleet replacements) and any anticipated large capital investments (example locomotive half-life overhaul) over the 10 year period. This quantity represents the Normal Reinvestment. Plot these on the 10 year matrix.
14. Add the quantities Backlog and Normal Reinvestment. This quantity represents the SGR Need for the 10 year period.

In order for different agencies' quantities to be comparable, a level of consistency is important. As mentioned in item 12, it is recommended that all agencies utilize a consistent 10 year I/A period. In that same spirit, it is also recommended that the quantities used throughout the assessment period remain in starting dollar quantities, without addition of yearly inflationary adjustments. These costing upgrades may be added separately to individual reports. It is further recommended that a consistent 20% to 30% be added to all quantities to account for soft costs, including force account and contingencies. It is recommended that after performing a Capital Asset Inventory and Condition Assessment, that it be upgraded every year for five years in order to maximize its accuracy. A computerized, continual, living, work authorization SGR tracking system by in house maintenance specialists for the purpose of keeping the SGR accurately definable over time is an excellent goal.

APPENDIX C

VECHICLES NEEDED BY AGE ONLY:

	Ave. Fleet Age	Max in Service	Vehicles Needed
Gillig	10	45	54
Paratransit	5	40	46
Minivans	1	2	3

VEHICLE NEED BY MILEAGE:

	Life Expectancy	Mileage Expectancy	Miles per Year	Annual Miles Used	# vehicles Needed
Gillig	12	500,000	41,667	902,078	22
Cutaway	5	150,000	30,000	320,346	11
Minivans	5	100,000	20,000	3000	3

CHAPEL HILL TRANSIT TAM PROJECTIONS/TARGETS

Introduction

Chapel Hill Transit, the second largest transit system in North Carolina, is the public transportation provider for Chapel Hill, Carrboro and the University of North Carolina at Chapel Hill, serving over 60 square miles. Chapel Hill Transit provides fixed-route bus services (30 weekday & weekend routes) and EZ Rider (ADA) services.

Performance Targets & Measures

Asset Class	Performance Measure	Target
Rolling Stock *All revenue vehicles*	**Age** - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	**10**
Equipment *Non-revenue vehicles*	**Age** - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	**10**
Facilities *All buildings or structures*	**Condition** - % of facilities with a condition rating below 3.0 on a the FTA Transit Economic Requirements Model (TERM) Scale	**0**

Roles and Responsibilities

Department/Individual	Role (Title and/or Description)	Subrecipient
Brian Litchfield	Transit Director	Transit
Peter Aube	Maintenance Manager	Transit
Timothy Schwarzauer	Grants Coordinator	Transit

Asset Portfolio

Please see Appendix A (Asset Register) for the asset inventory listing.

Asset Inventory Summary

Asset Category	Total Number	Avg Age	Avg Value
Facilities	1	13	$20,000,000.00
Rolling Stock	110	7.666666667	$390,930.67

Condition Assessment

Asset

Asset Category	Count	Avg Age	Avg TERM Condition	Avg Value	% At or Past ULB
Facilities	1	13	4	$20,000,000.00	0.00%
Rolling Stock	110	7.666666667	N/A	$390,930.67	20.00%

Management Approach

Investment Prioritization

Use maintenance management systems, analyze failure trends, monitor maintenance cost over asset useful life to assist in determining the correct course of action. Vehicle breakdown analysis also plays an important role. Each year we have a capital improvement project process in which we determine departmental priority.

Decision Support Tools

The following tools are used in making investment decisions:

Process/Tool	Brief Description
Trapeze Asset Management System	A software system that tracks inventory maintenance cost, condition, etc. Asset management software.

Overhaul Strategy

Asset Category/Class	Overhaul Strategy
40ft / 35ft Buses	Vehicles are kept in a like new condition. All defects noted on preventative maintenance
LTV's / Vans	Vehicles are kept in a like new condition. All defects noted on preventative maintenance

Disposal Strategy

Asset Category/Class	Disposal Strategy
Buses	At the end of their useful lives, buses are sold to the highest bidder
Paratransit Vehicles	At the end of their useful lives, buses are sold to the highest bidder
Vans	Vans are sold once they reach 150,000 miles. Vans are sold to the highest bidder.

Acquisition and Renewal Strategy

Asset Category/Class	Acquisition and Renewal Strategy
Clean Diesel Bus	Vehicles procured as funding available.
Mini-vans	na
LTV	Vehicles procured as funding available.
Electric Buses	Vehicles procured as funding available.

Work Plans & Schedules

The list of prioritized investment projects is provided in Appendix C.

Appendices

Appendix A	Asset Register
Appendix B	Asset Condition Data
Appendix C	Proposed Investment Project List

Appendix A: Asset Register

Asset Category	Asset Class	Asset Name	Make	Model	ID/Serial No.	Asset Owner	Age (Yrs)	Replacement Cost/Value

Appendix B: Asset Condition Data

Equipment Assets

Asset Category	Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark

Facilities Assets

Asset Category	Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	TERM Scale Condition	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
Facilities	Facilities	Maintenance	Transit	13	4	$20,000,000.00	35	No

Rolling Stock Assets

Asset Category	Asset Class	Asset Name	ID/Serial No.	Age (Yrs)	Replacement Cost/Value	Useful Life Benchmark (Yrs)	Past Useful Life Benchmark
Rolling Stock	Paratransit Veh	LTV	2006	8	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	2007	8	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	2009	8	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	2010	8	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	2011	4	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	2012	4	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	2013	4	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	2501	9	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	2502	9	$70,000.00	8	Yes
Rolling Stock	Paratransit Veh	LTV	1751	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1752	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1753	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1754	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1755	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1756	1	$70,000.00	8	No
Rolling Stock	Paratransit Veh	LTV	1757	1	$70,000.00	8	No
Rolling Stock	Bus	Heavy Duty Transit	735	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	736	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	737	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	740	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	743	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	746	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	747	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	748	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	801	17	$457,862.00	14	Yes

Rolling Stock	Bus	Heavy Duty Transit	802	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	803	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	804	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	805	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	807	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	808	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	809	17	$457,862.00	14	Yes
Rolling Stock	Bus	Heavy Duty Transit	107	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	207	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	307	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	407	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	507	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	607	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	707	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	807	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	907	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1007	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1107	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1207	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1307	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1407	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1507	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1607	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1707	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1807	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1907	11	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	109	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	209	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	309	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	409	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	509	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	609	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	709	9	$457,862.00	14	No

Rolling Stock	Bus	Heavy Duty Transit	809	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	909	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1009	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1109	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1209	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1409	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1509	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1609	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1709	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1809	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1909	9	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1201	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1202	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1203	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1204	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1301	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1302	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1303	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1304	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1305	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1306	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1308	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1309	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1310	6	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1311	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1312	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1313	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1314	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1315	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1316	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1317	5	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1710	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1711	1	$457,862.00	14	No

Rolling Stock	Bus	Heavy Duty Transit	1712	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1713	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1714	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1718	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1719	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1720	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1721	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1723	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1724	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1725	1	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1801	0	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1802	0	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1803	0	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1804	0	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1805	0	$457,862.00	14	No
Rolling Stock	Bus	Heavy Duty Transit	1806	0	$457,862.00	14	No
Rolling Stock	Van	Paratransit	1401	3	$50,000.00	8	No
Rolling Stock	Van	Paratransit	1402	3	$50,000.00	8	No
Rolling Stock	Van	Paratransit	1403	3	$50,000.00	8	No

Appendix C: Proposed Investment Project List

Project Year	Project Name	Asset/Asset Class	Cost	Priority
2018	Clean Diesel Bus Procurement	40ft	$2,742,000.00	High
2019	LTV Bus Purchase	LTV	$400,000.00	Medium
2019	Electric Bus Procurement	40ft	$2,285,000.00	High
2019	Clean Diesel Bus Procurement	40ft	$1,600,000.00	High

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)

RESOLUTION SUPPORTING TARGETS FOR TRANSIT ASSET MANAGEMENT PERFORMANCE MEASURES

A motion was made by MPO Board member _____ and seconded by MPO Board member _____ for the adoption of the following resolution; and upon being put to a vote, was duly adopted.

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) has been designated by the Governor of the State of North Carolina as the Metropolitan Planning Organization (MPO) responsible, together with the State, for the comprehensive, continuing, and cooperative transportation planning process for the MPO's metropolitan planning area; and

WHEREAS, the FAST Act continued the implementation of performance based planning and programming to achieve desired performance outcomes for the multimodal transportation system, including the setting of targets for future performance by States, providers of public transportation, and metropolitan planning organizations (MPOs); and

WHEREAS, the Federal Transit Administration (FTA) issued a final rule on transit asset management to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, under which providers of public transportation receiving federal funds were required to set their initial asset management targets by January 1, 2017; and

WHEREAS, the Federal Highway Administration (FHWA) and the FTA issued a joint final rule on planning (Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning), under which MPOs shall establish performance targets within 180 days of a State or transit provider setting targets; and

WHEREAS, the transit agencies or jurisdictions operating public transportation in the MPO's planning area have developed information and targets toward compliance with the law and regulation and have communicated their current targets for transit asset management to the MPO; and

WHEREAS, 49 CFR Part 625, the FTA Transit Asset Management Rule, which became effective on October 1, 2016, requires transit operators to develop and adopt a Transit Asset Management Plan that addresses State of Good Repair for rolling stock, infrastructure, equipment, and facilities.

NOW THEREFORE, BE IT RESOLVED, that the MPO's Board supports the GoTriangle, GoDurham and Chapel Hill Transit targets and agrees to plan and program projects that contribute toward the accomplishment of the transit agency's targets as noted in the attached table called "2019 TAM Targets for DCHC MPO."

NOW THEREFORE, BE IT FURTHER RESOLVED, that by approval of this resolution an amendment is hereby made to the 2045 Metropolitan Transportation Plan adopted on March 14, 2018 by the DCHC MPO.

(continued)

(Continued – Resolution Adopting TAM Targets)

_____

Damon Seils, DCHC MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: November 14, 2018

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

2019 TAM Targets for DCHC MPO

(November 14, 2018)

		GoDurham:		Chapel Hill Transit:		GoTriangle:	
Asset Category - Performance Measure	**Asset Class**	**Useful Life Benchmark**	**2019 Target**	**Useful Life Benchmark**	**2019 Target**	**Useful Life Benchmark**	**2019 Target**
REVENUE VEHICLES							
Age -- % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	AO - Automobile	8	N/A	8	20%	8	13%
	BU - Bus	14	18%	14	10%	14	13%
	CU - Cutaway Bus	10	55%	10	20%	10	13%
	MB - Mini-bus	10	N/A	10	20%	10	13%
	MV - Mini-van	8	0%	8	20%	8	13%
	SV - Sport Utility Vehicle	8	N/A	8	20%	8	13%
	VN - Van	8	N/A	8	20%	8	13%
	Other	N/A	N/A	8	20%	8	13%
EQUIPMENT							
Age -- % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue/Service Automobile	8	0%	8	20%	8	22%
	Steel Wheel Vehicles	8	N/A	8	20%	8	22%
	Trucks and other Rubber Tire Vehicles	8	0%	8	20%	8	22%
	Maintenance Equipment	N/A	N/A	N/A	N/A	TBD	22%
	Computer Software	N/A	N/A	N/A	N/A	TBD	22%
	Custom 1	N/A	N/A	N/A	N/A	TBD	22%
FACILITIES							
Condition -- % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	(no benchmark)	0%	(no benchmark)	0%	(no benchmark)	0%
	Maintenance	(no benchmark)	0%	(no benchmark)	0%	(no benchmark)	0%
	Parking Structures	(no benchmark)	N/A	(no benchmark)	0%	(no benchmark)	0%
	Passenger Facilities	(no benchmark)	0%	(no benchmark)	N/A	(no benchmark)	0%
	Shelter	(no benchmark)	50%	(no benchmark)	0%	(no benchmark)	0%
	Storage	(no benchmark)	0%	(no benchmark)	N/A	(no benchmark)	0%
	Custom 1	(no benchmark)	N/A	(no benchmark)	N/A	(no benchmark)	0%

Notes: * Facilities do not have a Useful Life Benchmark such as "years." The TERM scale is used instead of years.

* TERM scale example: 5 = excellent, 1 = poor * Usefule Life Benchmark values are in years.

* N/A: System does not have asset in this class that requires monitoring.

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)

RESOLUTION SUPPORTING PAVEMENT, BRIDGE AND TRAVEL TIME TARGETS FOR PERFORMANCE MEASURES ESTABLISHED BY NCDOT

A motion was made by MPO Board member _____ and seconded by MPO Board member _____ for the adoption of the following resolution; and upon being put to a vote, was duly adopted.

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) has been designated by the Governor of the State of North Carolina as the Metropolitan Planning Organization (MPO) responsible, together with the State, for the comprehensive, continuing, and cooperative transportation planning process for the MPO's metropolitan planning area; and

WHEREAS, federal regulations (23 CFR Part 490) require States to set targets for interstate and non-interstate National Highway System (NHS) pavement condition, NHS bridge condition, travel time reliability, freight reliability, and emissions reduction; and

WHEREAS, the North Carolina Department of Transportation (NCDOT) has established targets for the performance measures noted above; and

WHEREAS, the NCDOT coordinated the establishment of targets with the nineteen Metropolitan Planning Organizations (MPOs) in North Carolina through a series of work group meetings, webinars, and email communications between the winter of 2017 and spring of 2018; and

WHEREAS, the NCDOT has officially established targets and transmitted them to the FHWA on May 18, 2018, and

WHEREAS, federal regulations require MPO's to establish targets by agreeing to plan and program projects that contribute toward the accomplishment of the State's targets for each measure, or establish its own target within 180 days of the State establishing and reporting its targets to FHWA.

NOW THEREFORE, BE IT RESOLVED, that the DCHC MPO Board agrees to plan and program projects that contribute toward the accomplishment of the State's targets for each performance measure listed in the attached table called "Pavement, Bridge and Travel Time Reliability Targets for DCHC MPO."

NOW THEREFORE, BE IT FURTHER RESOLVED, that by approval of this resolution an amendment is hereby made to the 2045 Metropolitan Transportation Plan adopted on March 14, 2018 by the DCHC MPO.

(continued)

(Continued – Resolution Adopting Pavement, Bridge and Travel Time Targets)

_____

Damon Seils, DCHC MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: November 14, 2018

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

Pavement, Bridge and Travel Time Reliability Targets for DCHC MPO

(November 14, 2018)

Performance Measure	**2-Year Target** (1/1/2018 – 12/31/2019)	**4-Year Target** (1/1/2018 – 12/31/2021)
Interstate Pavement Condition (Good)	(no target)	37.0 %
Interstate Pavement Condition (Poor)	(no target)	2.2 %
Non-Interstate NHS Pavement Condition (Good)	27.0%	21.0%
Non-Interstate NHS Pavement Condition (Poor)	4.2%	4.7%
NHS Bridge Condition (Good)	33.0%	30.0%
NHS Bridge Condition (Poor)	8.0%	9.0%
Interstate Level of Travel Time Reliability	80.0%	75.0%
Non-Interstate NHS Level of Travel Time Reliability	(no target)	70.0%
Interstate Truck Travel Time Reliability	1.65	1.70

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION (DCHC MPO)

RESOLUTION SUPPORTING SAFETY PERFORMANCE MEASURES ESTABLISHED BY NCDOT

A motion was made by MPO Board member _____ and seconded by MPO Board member _____ for the adoption of the following resolution; and upon being put to a vote, was duly adopted.

WHEREAS, the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) has been designated by the Governor of the State of North Carolina as the Metropolitan Planning Organization (MPO) responsible, together with the State, for the comprehensive, continuing, and cooperative transportation planning process for the MPO's metropolitan planning area; and

WHEREAS, the Highway Safety Improvement Program (HSIP) final rule (23 CFR Part 490) requires States to set targets for five safety performance measures by August 31, 2018; and

WHEREAS, the North Carolina Department of Transportation (NCDOT) has established targets for the performance measures noted above; and

WHEREAS, the North Carolina Department of Transportation (NCDOT) has established targets for five performance measures based on five year rolling averages for: (1) Number of Fatalities, (2) Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT), (3) Number of Serious Injuries, (4) Rate of Serious Injuries per 100 million VMT, and (5) Number of Non-Motorized (bicycle and pedestrian) Fatalities and Non-motorized Serious Injuries; and

WHEREAS, the NCDOT has officially established and reported targets to the Federal Highway Administration (FHWA) on August 31, 2018, and

WHEREAS, federal regulations require MPO's to establish targets by agreeing to plan and program projects that contribute toward the accomplishment of the State's targets for each measure, or establish its own target within 180 days of the State establishing and reporting its targets to FHWA.

NOW THEREFORE, BE IT RESOLVED, that the DCHC MPO Board agrees to plan and program projects that contribute toward the accomplishment of the State's targets for each performance measure listed in the attached table called "Safety Targets for DCHC MPO."

NOW THEREFORE, BE IT FURTHER RESOLVED, that by approval of this resolution an amendment is hereby made to the 2045 Metropolitan Transportation Plan adopted on March 14, 2018 by the DCHC MPO.

(continued)

(Continued – Resolution Adopting Safety Targets)

_____

Damon Seils, DCHC MPO Board Chair

Durham County, North Carolina

I certify that Damon Seils personally appeared before me this day acknowledging to me that he signed the forgoing document.

Date: November 14, 2018

_____

Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2020

Safety Targets for DCHC MPO

(November 14, 2018)

For the 2019 Highway Safety Improvement Plan (HSIP), the goal is to reduce:

a. total fatalities by 5.59 percent each year from 1,362.8 (2013-2017 average) to 1,214.7 (2015-2019 average) by December 31, 2019.
b. the fatality rate by 5.02 percent each year from 1.216 (2013-2017 average) to 1.097 (2015-2019 average) by December 31, 2019.
c. total serious injuries by 6.77 percent each year from 2,865.2 (2013-2017 average) to 2,490.6 (2015-2019 average) by December 31, 2019.
d. the serious injury rate by 6.12 percent each year from 2.528 (2013-2017 average) to 2.228 (2015-2019 average) by December 31, 2019.
e. the total non-motorized fatalities and serious injuries by 6.02 percent each year from 457.0 (2013-2017 average) to 403.7 (2015-2019 average) by December 31, 2019.

MEMORANDUM

To: DCHC MPO Board

From: DCHC MPO Lead Planning Agency

Date: November 14, 2018

Subject: **Lead Planning Agency (LPA) Synopsis of Staff Report**

This memorandum provides a summary status of tasks for major DCHC MPO projects in the Unified Planning Work Program (UPWP).

- • Indicates that task is ongoing and not complete.
- ✓ Indicates that task is complete.

Major UPWP – Projects

Comprehensive Transportation Plan (CTP)

- ✓ Completed
- • Farrington Road Amendment likely to be adopted – September 2018

2045 Metropolitan Transportation Plan (MTP)

- • 2045 MTP amendment related to Air Quality Conformity Determination will be released for public comment– September 2018
- • Adopt 2045 MTP Amendment #1 – November 2018

MPO Community Viz. Scenarios Planning and Visualization -2.0 (Connect 2025)

- ✓ Field verification – Complete
- ✓ Focus Groups/Delphi Process – FY 2015
- ✓ Model update and testing – September 2016
- ✓ Model/Scenario Building – May 2017
- ✓ Adopted SE Data – December 2017

2016/2017 MPO Data Collection & Surveillance of Change (Traffic/Travel Time/Crash/Transit)

- ✓ Data collection (Volume/Trucks/Travel Time/Speed/Bike/Ped) – ongoing –continuous data collection
- ✓ Data collection (AirSage, INRIX, HERE data)
- ✓ Transit data collection – ongoing –continuous data collection

GIS Online (AGOL)/Data Management

- ✓ MPO Interactive GIS/Mapping – Continuous/On-going
- ✓ Development of public portals for MPO applications – Continuous/On-going
- ✓ Maintenance and updates – Continuous/On-going
- ✓ Development of open data – Continuous/On-going

MPO Website Update and Maintenance

- ✓ Post Launch Services – Continuous/On-going
- ✓ Interactive GIS – Continuous/On-going
- ✓ Facebook/Twitter management – Continuous/On-going
- ✓ Enhancement of Portals – Continuous/On-going

Triangle Regional Model Update

- ✓ Completed
- Work Commences on the Rolling Household Survey

Prioritization 5.0/STI/FY 2020-2029 TIP Development

- ✓ Summarize MPO P4 projects not funded ("Holding Tank" for P5) –February 2017
- ✓ Board approves existing projects revisions/modifications projects to be submitted for SPOT-5 – May 10, 2017 (deadline July 30, 2017)
- ✓ Preparation and ranking of new projects (23 for each mode) –February to June 2017
- ✓ Existing project revision/modification/deletion due to NCDOT for receiving extra new submittals (one out, one in) – July 30, 2017
- ✓ SPOT-5 Online opens for entering new P5 projects July 5 (deadline September 29, 2017)
- ✓ Board approves new projects to be submitted for SPOT-5 – September 13, 2017
- ✓ MPO submits new SPOT-5 projects to NCDOT – September 29, 2017
- ✓ LPA updates local ranking methodology – December 2017
- ✓ TCC makes recommendation on local ranking methodology – January 2018
- ✓ Board approves local ranking methodology – March 2018
- ✓ MPO applies local ranking methodology for Regional projects – April 2018
- ✓ Board releases MPO initial Regional points list for local input/public comments – May 9, 2018
- ✓ LPA addresses public comments and makes draft recommendation on local points for Regional category – June 2018
- ✓ Approval of Regional Impact points – June-July 2018
- ✓ Submission of Regional Impact points to NCDOT – July 2018
- ✓ MPO applies local ranking methodology for Division projects – August 2018
- ✓ Board releases MPO initial Division points list for local input/public comments – August 2018
- ✓ LPA addresses public comments and makes draft recommendation on local points for Division category – September 2018
- Approval of Division Needs points – November 2018
- Submission of Division Needs points to NCDOT – November 2018
- Draft STIP Released – January 2019

Regional Freight Plan

- ✓ Consultant Selection/Contract Approval Complete
- ✓ Kick-Off Meeting – Conducted in July 2015
- ✓ Stakeholder outreach and engagement – October 2015
- ✓ Formation of the freight advisory committee – October 2015
- ✓ Data collection, analysis and assessment – November 2015
- ✓ Freight goals & objectives and performance measures – February 2016
- ✓ Analysis of freight existing conditions and trends – TBD
- ✓ Forecasts of future demands (2035 and 2045) – TBD
- ✓ Evaluation of future conditions – TBD
- ✓ Strategic freight corridors and zones – TBD
- ✓ Recommendation & implementation strategies – TBD
- ✓ Final report and presentation – September 2018

- ✓ Release formal report for public comment – September 2018
- ✓ Approve final report – November 2018

MPO ADA Transition Plan

- ✓ Update self-assessment – Underway
- ✓ Draft MPO Transition Plan – August 2015
- ✓ Local reviews – September 2015
- ✓ FHWA review – September 2015
- ✓ Public comments – October-December 2015
- ✓ Stakeholder outreach – February 2017
- ✓ Roundtable discussion – May 11, 2017
- ✓ Self-assessment Data Analysis – July 2017-December 2017
- ✓ FHWA/NCDOT Final Review – February 2018
- ✓ Final approval – December 2017
- ✓ Implementation and self-evaluation – Ongoing

NC 98 Corridor Study

- ✓ Project kick-off and initial public engagement – February 2017
- ✓ Transportation analysis (and public engagement) – June 2017
- ✓ Conceptual designs and options (and public engagement) – September/October 2017
- ✓ Draft Final plan – February 2018
- ✓ Recommendation/Public workshop – Underway
- ✓ Release final report for comment – August 2018
- ✓ Approve formal report – October 2018

NC 54 West Corridor Study

- ✓ Select consultant – February 2017
- ✓ Project kick-off and initial public engagement – September 2017
- ✓ Inventory and Existing Conditions – November 2017
- ✓ Transportation analysis (and public engagement) – January 2018
- ✓ Conceptual designs and options (and public engagement) – May 2018
- ✓ Final plan – September 2018

US 15-501 Corridor Study

- ✓ Funding approved by NCDOT
- ✓ Project Management Plan
- ✓ Public engagement plan
- ✓ Technical Kick-off meeting
- Development of corridor vision goals and performance measures
- Development of corridor profile
- Prepare summary of existing plans
- Prepare community profile report
- Develop and forecast travel profile/multi modal analysis
- ITS Screening
- Accessibility evaluation
- Evaluation of alternative strategies
- Implementation plan and final report
- Plan adoption
- SPOT submittal

Regional Intelligent Transportation System

- ✓ Project management plan
- Development of public involvement strategy and communication plan
- Conduct stakeholder workshops
- Analysis of existing conditions
- Assessment of need and gaps
- Review existing deployments and evaluate technologies
- Identification of ITS strategies
- Update Triangle Regional Architecture
- Develop Regional Architecture Use and maintenance
- Develop project prioritization methodology
- Prepare Regional ITS Deployment Plan and Recommendation
-

Regional Toll Study

- ✓ Prepare project management and coordination plan
- ✓ Project initiation
- ✓ Survey and questionnaire/education
- ✓ Data preparation /data collection/screening
- ✓ Review state of the practice
- ✓ Analysis of market characteristics
- Screening and presentation to MPO Boards at joint MPO Board Meeting – October 2018
- Tolling and managed lane strategies
- Recommendations
- Project prioritization

Project Development/NEPA

- US 70 Freeway Conversion
- NC 54 Widening
- NC 147 Interchange Reconstruction
- I-85
- I-40

DOLRT-Engineering

- Administration of the Staff Working Group
- Review of engineering plans
- Stakeholder participation

Safety Performance Measures Target Setting

- ✓ Data mining and analysis
- ✓ Development of rolling averages and baseline
- ✓ Development of targets setting framework
- ✓ Estimates of achievements
- Forecast of data and measures

Up Coming Projects

- Mobility Report Card
- Congestion Management Process (CMP)
- State of Systems Report

Contract Number: C203394
Route: I-885, NC-147, NC-98 US-70
Division: 5
County: Durham
TIP Number: U-0071
Length: 4.009 miles
Federal Aid Number:
NCDOT Contact: Cameron D. Richards
NCDOT Contact No: (919)835-8200
Location Description: EAST END CONNECTOR FROM NORTH OF NC-98 TO NC-147 (BUCK DEAN FREEWAY) IN DURHAM.
Contractor Name: DRAGADOS USA INC
Contract Amount: $141,949,500.00
Cost Overrun/Underrun: 9.53%
Work Began: 02/26/2015
Letting Date: 11/18/2014
Original Completion Date: 05/10/2020
Revised Completion Date:
Latest Payment Thru: 10/22/2018
Scheduled Progress: 71%
Latest Payment Date: 10/30/2018
Actual Progress: 71.85%

Contract Number: C203492
Route: SR-2220
Division: 5
County: Durham
TIP Number: EB-4707B
Length: 1.756 miles
Federal Aid Number: STPDA-0505(64)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: SR-2220 (OLD CHAPEL HILL ROAD) FROM SR-1113 (POPE ROAD) TO SR-1116 (GARRETT ROAD).
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $7,295,544.75
Cost Overrun/Underrun: 5.7%
Work Began: 06/26/2017
Letting Date: 05/16/2017
Original Completion Date: 05/14/2019
Revised Completion Date:
Latest Payment Thru: 09/30/2018
Scheduled Progress: 84.3%
Latest Payment Date: 10/15/2018
Actual Progress: 73.04%

Contract Number: C203567
Route: NC-55
Division: 5
County: Durham
TIP Number: U-3308
Length: 1.134 miles
Federal Aid Number: STP-55(20)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: NC-55 (ALSTON AVE) FROM NC-147 (BUCK DEAN FREEWAY) TO NORTH OF US-70BUS/NC-98 (HOLLOWAY ST).
Contractor Name: ZACHRY CONSTRUCTION CORPORATION
Contract Amount: $39,756,916.81
Cost Overrun/Underrun: 3.5%
Work Began: 10/05/2016
Letting Date: 07/19/2016
Original Completion Date: 03/30/2020
Revised Completion Date: 07/16/2020
Latest Payment Thru: 10/15/2018
Scheduled Progress: 46.1%
Latest Payment Date: 10/29/2018
Actual Progress: 36.72%

Contract Number: C203987
Route: SR-1616
Division: 5
County: Durham
TIP Number: B-4943
Length: 0.18 miles
Federal Aid Number: BRZ-1616(10)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: BRIDGE #20 OVER DIAL CREEK ON SR-1616.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $1,475,475.00
Cost Overrun/Underrun: 1.97%
Work Began: 05/07/2018
Letting Date: 01/16/2018
Original Completion Date: 04/30/2019
Revised Completion Date: 05/14/2019
Latest Payment Thru: 09/30/2018
Scheduled Progress: 82.1%
Latest Payment Date: 10/19/2018
Actual Progress: 72.74%

Contract Number: C204087
Route: US-70
Division: 5
County: Durham
TIP Number:
Length: 44.124 miles
Federal Aid Number:
NCDOT Contact: Cameron D. Richards
NCDOT Contact No: (919)835-8200
Location Description: 1 SECTION OF US-70 AND 106 SECTIONS OF SECONDARY ROADS.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $7,054,264.20
Cost Overrun/Underrun: 15%
Work Began: 01/16/2018
Letting Date: 09/19/2017
Original Completion Date: 11/15/2018
Revised Completion Date:
Latest Payment Thru: 10/01/2018
Scheduled Progress: 40%
Latest Payment Date: 10/09/2018
Actual Progress: 42.88%

Contract Number: C204167
Route: -, SR-1118, SR-1407 SR-1648, SR-1811, SR-1973
Division: 5
County: Durham
TIP Number:
Length: 24.77 miles
Federal Aid Number: STATE FUNDED
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: 51 SECTIONS OF SECONDARY ROADS.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $0.00
Cost Overrun/Underrun: 0%
Work Began: 08/01/2018
Letting Date: 05/15/2018
Original Completion Date: 11/30/2019
Revised Completion Date:
Latest Payment Thru:
Scheduled Progress: 0%
Latest Payment Date:
Actual Progress: 0%

Contract Number: C204168
Route: -
Division: 5
County: Durham
TIP Number:
Length: 15.188 miles
Federal Aid Number: STATE FUNDED
NCDOT Contact: Cameron D. Richards
NCDOT Contact No: (919)835-8200
Location Description: 14 SECTIONS OF SECONDARY ROADS.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $5,334,770.46
Cost Overrun/Underrun: 0.9%
Work Began: 07/02/2018
Letting Date: 05/15/2018
Original Completion Date: 11/30/2019
Revised Completion Date:
Latest Payment Thru: 10/31/2018
Scheduled Progress: 21%
Latest Payment Date: 11/07/2018
Actual Progress: 20.85%

Contract Number: DE00228
Route: I-85
Division: 5
County: Durham
TIP Number: I-5729
Length: 5.61 miles
Federal Aid Number: NHPP-0085(013)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: I-85 FROM US-15/501 TO EAST OF SR-1827 (MIDLAND TERRACE RD) IN DURHAM
Contractor Name: INTERSTATE IMPROVEMENT INC
Contract Amount: $4,168,265.78
Cost Overrun/Underrun: 57.41%
Work Began: 03/13/2018
Letting Date: 10/11/2017
Original Completion Date: 11/01/2018
Revised Completion Date:
Latest Payment Thru: 10/22/2018
Scheduled Progress: 100%
Latest Payment Date: 11/01/2018
Actual Progress: 83.44%

Contract Number: DE00248
Route: SR-1637
Division: 5
County: Durham
TIP Number:
Length: 0.18 miles
Federal Aid Number: 15005.1032011
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: BRIDGE #72 IN DURHAM COUNTY
Contractor Name: DANE CONSTRUCTION INC
Contract Amount: $1,123,051.10
Cost Overrun/Underrun: 4.21%
Work Began: 06/14/2018
Letting Date: 05/23/2018
Original Completion Date: 03/21/2019
Revised Completion Date:
Latest Payment Thru: 10/07/2018
Scheduled Progress: 100%
Latest Payment Date: 10/15/2018
Actual Progress: 91.6%

Contract Number: DE00253
Route: -
Division: 5
County: Durham
TIP Number: W-5705K
Length: 0 miles
Federal Aid Number: HSIP-1327(006)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: SR 1327 (GREGSON ST) AND LAMOND AVE
Contractor Name: TRAFFIC CONTROL DEVICES INC
Contract Amount: $0.00
Cost Overrun/Underrun: 0%
Work Began: 09/01/2018
Letting Date: 07/25/2018
Original Completion Date: 02/28/2019
Revised Completion Date:
Latest Payment Thru:
Scheduled Progress: 0%
Latest Payment Date:
Actual Progress: 0%

Contract Number: DE00255
Route: US-501
Division: 5
County: Durham

TIP Number: W-5705C
Length: 0 miles
Federal Aid Number: HSIP-0501(046)
NCDOT Contact: James M. Nordan, PE
NCDOT Contact No: (919)220-4680
Location Description: US 15-501 AT SR 1116 (GARRETT RD) US 15-501 BUS AT WESTGATE DR
Contractor Name: ALS OF NORTH CAROLINA LLC
Contract Amount: $540,904.71
Cost Overrun/Underrun: 0.99%
Work Began: 08/06/2018
Letting Date: 05/23/2018
Original Completion Date: 12/21/2018
Revised Completion Date:
Latest Payment Thru: 09/07/2018
Scheduled Progress: 14.8%
Latest Payment Date: 09/12/2018
Actual Progress: 7.8%

NCDOT Division 5 Contract Status

Let Est	TIP Sub No.	Let Type	Description	R/W (B)	Division Project Manager	Con Est	ROW Est	Comments
12/18	EB-4707A	Division Desig	SR 1838 / SR 2220 (OLD DURHAM ROAD) FROM US 15 / US 501 IN ORANGE COUNTY TO SR 1113 (POPE ROAD) IN DURHAM COUNTY	08/15	BENJAMIN J. UPSHAW	$3,500,000	$1,534,000	Coordination with development.
12/18	U-5745	Division POC	NC 751 (HOPE VALLEY ROAD) AT SR 1183 (UNIVERSITY DRIVE) INTERSECTION IN DURHAM. CONSTRUCT ROUNDABOUT.	07/17	STEPHEN REID DAVIDSON	$1,300,000	$150,000	Scheduled for January letting.
12/18	W-5601EM	Division POC	SR 1118 (FAYETTEVILLE ROAD) AT PILOT STREET AND CECIL STREET. SAFETY IMPROVEMENTS.		JOHN EDWARD SANDOR	$14,000		waiting on signal designs from Durham
01/19	W-5705M	Division POC	I-40 WESTBOUND AT NC 147 SAFETY IMPROVEMENTS (MP: 9.359 - 9.359)		JOHN EDWARD SANDOR	$80,000		submitted for construction authorization
01/19	W-5705U	Division POC	US 70 BUSINESS (MORGAN STREET) AT CAROLINA THREATRE		JOHN EDWARD SANDOR	$20,000		Coordinating final design with w/City of Durham
01/19	W-5705V	Division POC	NC 54 AT HUNTINGRIDGE ROAD		JOHN EDWARD SANDOR	$80,000		waiting on designs from signals
04/19	U-5968	Raleigh Lettin	CITY OF DURHAM UPGRADE ITS / SIGNAL SYSTEM			$21,865,000	$750,000	
08/19	I-5994	Division Desig	I-40 - DURHAM COUNTY FROM US 15/US 501 TO EAST OF NC 147. BRIDGE REHABILITATION. MULTIPLE STRUCTURES. COORDINATE WITH I-5993.		DOUGLAS R. MCNEAL	$6,652,000		
08/19	I-5995	Division Desig	I-40 - DURHAM/WAKE COUNTIES FROM EAST OF NC 147 TO SR 3015(AIRPORT BOULEVARD). PAVEMENT REHABILITATION.		DOUGLAS R. MCNEAL	$5,272,000		
10/19	Z-5700EB	NON - DOT L	RAILWAY-HIGHWAY SAFETY PROJECT AT SR 1632 (RED MILL ROAD) AND NS CROSSING 734 914C NEAR DURHAM					
01/20	I-5993	Division Desig	I-40 - DURHAM COUNTY FROM US 15/US 501 TO EAST OF NC 147. PAVEMENT REHABILITATION. COORDINATE WITH I-5994. PROJECT CREATED PER THE DRAFT 2020-2029 STIP.		DOUGLAS R. MCNEAL	$4,900,000		
04/20	U-5717	Division Desig	US 15/US 501 @ SR 1116 (GARRETT ROAD) IN DURHAM CONVERT AT-GRADE INTERSECTION TO INTERCHANGE	04/19	BENJAMIN J. UPSHAW	$27,700,000	$53,500,000	25% plans completed
05/20	U-5516	Division Desig	AT US 501 (ROXBORO ROAD) TO SR 1448 (LATTA ROAD) / SR 1639 (INFINITY ROAD) INTERSECTION IN DURHAM. INTERSECTION IMPROVEMENTS.	05/19	BENJAMIN J. UPSHAW	$5,500,000	$6,341,000	CE document to be completed by end of year.
06/20	I-5707	Raleigh Lettin	I-40 - FROM NC 55 (ALSTON AVENUE) TO NC 147 (DURHAM FREEWAY/TRIANGLE EXPRESSWAY) IN DURHAM	06/19		$3,550,000	$323,000	
06/20	P-5717	Raleigh Lettin	NORFOLK SOUTHER H LINE CROSSING 734742W AT SR 1121 (CORNWALLIS ROAD) IN DURHAM. CONSTRUCT GRADE SEPARATION.	06/19		$16,100,000	2500000	
09/20	W-5705S	Division POC	US 15/501 AT NC 751 SOUTHBOUND ON RAMP - EXTEND RAMP		JOHN EDWARD SANDOR	$460,000		Surveys completed
12/20	B-5674	Raleigh Lettin	REPLACE BRIDGE 80 OVER SR 1308 IN DURHAM ON US 15-501 NORTHBOUND	09/19		$2,209,000	$110,000	
04/21	W-5705T	Division POC	SR 1815/1917 (MINERAL SPRINGS ROAD) AT PLEASANT DRIVE CONSTRUCT ROUNDABOUT	04/20	JOHN EDWARD SANDOR	$800,000	85000	Surveys completed
01/22	I-6000	Division POC	I-540 - DURHAM/WAKE COUNTIES FROM I-40 IN DURHAM TO US 1 INRALEIGH. BRIDGE PRESERVATION/REHABILITATION. COORDINATE WITH I-5998 & I-5999.		DOUGLAS R. MCNEAL	$4,541,000		
02/22	U-5934	Design Build L	NC 147 FROM I-40 TO FUTURE I-885(EAST END CONNECTOR)IN DURHAM ADD LANES AND REHABILITATE PAVEMENT	44607		$177,100,000	$2,148,000	
03/22	U-5720A	Design Build L	US 70 (MIAMI BLVD) FROM LYNN ROAD TO SR 1959 (SOUTH MIAMI BOULEVARD/SR 1811 (SHERRON ROAD)	44635		$57,000,000	$35,800,000	
03/22	U-5720B	Design Build L	US 70 (MIAMI BLVD) AT SR 1959 (SOUTH MIAMI BOULEVARD)/SR 1811 (SHERRON ROAD)INTERSECTION	44635		$25,300,000	$17,321,000	
03/22	U-5720C	Design Build L	US 70 (MIAMI BLVD) FROM SR 1959 (SOUTH MIAMI BLVD)/SR 1811 (SHERRON ROAD) TO SR 2095 (PAGE ROAD EXTENSIONS). UPGRADE TOCONTROLLED-ACCESS FACILITY AND CONVERT AT-GRADE INTERSECTION TO INTERCHANGE.	03/22		$110,800,000	40400000	
01/23	I-5998	Division POC	I-540 - DURHAM/WAKE COUNTIES FROM I-40 IN DURHAM TO US 70 IN RALEIGH. PAVEMENT REHABILITATION. COORDINATE WITH I-5999 &I-6000.		DOUGLAS R. MCNEAL	$3,800,000		

NCDOT Division 5 Contract Status

Let Est	TIP Sub No.	Let Type	Description	R/W (B)	Division Project Manager	Con Est	ROW Est	Comments
02/23	U-6021	Division Desig	SR 1118 (FAYETTEVILLE ROAD),FROM WOODCROFT PARKWAY TO BARBEE ROAD IN DURHAM. WIDEN TO 4-LANE DIVIDED FACILITY WITH BICYCLE / PEDESTRIAN ACCOMMODATIONS.	02/21	BENJAMIN J. UPSHAW	$13,770,000	$5,769,000	Design concepts in development. Planning public meeting.
03/23	U-5937	Raleigh Lettin	NC 147 DURHAM FREEWAY, DURHAM COUNTY FROM SR 1445(SOUTH DUKE STREET)TO BRIGGS AVENUE IN DURHAM. CONSTRUCT AULILIARY LANES AND OPERATIONAL IMPROVEMENTS.	03/21		$47,001,000	$10,202,000	

NCDOT DIV 7 PROJECTS LOCATED IN DCHCMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status	Project Lead
SS-4907BS 44894.2.1 44894.3.1	Installation of traffic signal at the intersection of US70 and SR 1114 (Buckhorn Road) East of **Mebane.**	5/31/2017	Dec. 2018	$40,500 R/W $43,200 CON	Utility relocations complete, Right of entry complete, R/W acquisition pending	Dawn McPherson
U-5846 50236.1.1 50236.2.1 50236.3.1	Construct a roundabout at SR 1772 (Greensboro Street) and SR 1780 (Estes Drive) in **Carrboro.**	9/6/2018	FY2021	$775,000	1st bid opening received no bids, Re-let 9/6/18 bids exceeded engineers estimate, project cost evalution being performed	Chad Reimakoski
W-5707C 44853.1.3 44853.3.3 47490	Revise pavement markings and overhead lane use signs for removal of inside lane drop configuration on I-40 Westbound in vicinity of US 15-501 interchange. Resurfacing I-40 WB by use of contingency funds	11/1/2018	Aug. 2019	$395,000	Planning and design activities underway, re-let due to bids exceeded engineers estimate, new let date 11/1/18	Chad Reimakoski
47798	Increase length of existing turn lane / slip ramp and improve existing radius in the SE quadrant of US 70 Business/ NC 86 at US 70 Bypass in **Hillsborough**	1/17/2019	Jun. 2019	$189,000	Planning and design activities complete, R/W certified 9/18/18	Chad Reimakoski
U-5847 50238.1.1 50238.2.1 50238.3.1	Intersection improvements at SR 1010 (West Franklin St.) and SR 1771 (Merritt Mill Rd)/SR1927 (Brewer Lane) in **Chapel Hill / Carrboro.**	1/17/2019	FY 2020	$775,000	Planning and design activities underway, bike/ped improvements to be completed under project 48283	Chris Smitherman
48283	Remove and replace existing curb & gutter and sidewalk, add pedestrian signals, concrete island, and signal modifications on SR 1010 (E. Main St / W. Franklin St) from Brewer Ln to Graham St. in **Chapel Hill and Carrboro**	5/31/2019	Sept. 2019	$250,000	Funds approved 9/6/18, Construction May 2019	Chris Smitherman
B-4962 40174.1.1 40174.2.1 40174.3.1	Replace Bridge #46 over Eno river on US 70 Bypass	4/16/2019	FY 2021	$5,826,000	Planning and Design activities underway, ROW acquisition - 15% complete	Kevin Fischer

NCDOT DIV 7 PROJECTS LOCATED IN DCHCMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status	Project Lead
SS-4907CD 47936.1.1 47936.2.1 47936.3.1	Horizontal curve improvements on SR 1710 (Old NC 10) west of SR 1561/SR 1709 (Lawrence Road) east of Hillsborough. Improvements consist of wedging pavement and grading shoulders.	12/5/2019	Spring 2020	$261,000	Planning and design activities underway	Chad Reimakoski
I-3306A 34178.1.3 34718.2.2 34178.3.3	Wideing I-40 from I-85 in Orange Co. to Durham Co. line (US 15/501 Interchange)	TBD	TBD	$98,800,000	Planning and design activities underway, No schedule at this time other than CE doucment scheduled for 12/28/2018	Laura Sutton
P-5701 46395.1.1 46395.3.1	Construct Platform, Passenger Rail Station Building at Milepost 41.7 Norfolk Southern H-line in **Hillsborough**	6/30/2021	FY2022	$7,200,000	PE funding scheduled 7/1/2020, Coordinate with U-5848	Matthew Simmons
R-5821A 47093.1.2 47093.2.2 47093.3.2	Construct operational improvements including Bicycle/Pedestrian accommodations on NC 54 from SR 1006 (Orange Grove Road) to SR 1107 /SR 1937 (Old Fayetteville Road).	6/21/2022	FY2024	$3,924,000	Planning and design activities underway, coordinating with NC54 West Corridor Study	Jennifer Evans
U-5848 50237.1.1 50237.2.1 50237.3.1	Extend SR 1006 (Orange Grove Road) on new location with Sidewalks and bike lanes from existing SR 1006 (Orange Grove Road) to US 70 Business in **Hillsborough**.	3/21/2023	FY 2025	$5,326,000	Planning and Design activities underway, Coordinate with P-5701 and U-5845	Laura Sutton
I-3306AC 34178.1.6 34178.2.5 434178.3.9	Interchange improvements at I-40 and NC86 in **Chapel Hill**	3/21/2023	FY 2025	$16,500,000	Planning and Design activities underway	Laura Sutton
I-5959 45911.1.1 45911.3.1	Pavement Rehabilitation on I-85 from West of SR 1006 (Orange Grove Road) to Durham County line	11/21/2023	FY 2025	$11,155,000	Funding approved 10/10/17	Chris Smitherman
I-5967 45917.1.1 45917.2.1 45917.3.1	Interchange improvements at I-85 and SR 1009 (South Churton Street) in **Hillsborough**	1/16/2024	FY 2027	$20,700,000	Planning and Design activities underway	Laura Sutton

NCDOT DIV 7 PROJECTS LOCATED IN DCHCMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status	Project Lead
U-5845 50235.1.1 50235.2.1 50235.3.1	Widen SR 1009 (South Churton Street) to multi-lanes from I-40 to Eno River in **Hillsborough**	1/16/2024	FY 2027	$49,751,000	Planning and Design activities underway, Coordinate with U-5848 and I-5984	Laura Sutton
I-5984 47530.1.1 47530.2.1 47530.3.1	Interchange improvements at I-85 and NC 86 in **Hillsborough**	11/18/2025	FY 2027	$16,488,000	Funding approved 10/10/17, Coordinate with U-5845 and I-5959	Laura Sutton
U-6071 47496.1.1 47496.2.1 47496.3.1	Intersection improvements at NC 54 and SR 1007 (Old Fayetteville Rd) in **Carrboro**	1/15/2026	FY 2027	$1,216,000	Planning and design activities underway	Jennifer Evans

North Carolina Department of Transportation

Active Projects Under Construction - Orange Co.

Contract Number	TIP Number	Location Description	Contractor Name	Resident Engineer	Contract Bid Amount	Availability Date	Completion Date	Work Start Date	Estimated Completion	Progress Schedule	Completion Percent
C203640		REPLACEMENT OF 4 BRIDGES IN GUILFORD COUNTY AND 3 BRIDGES IN ORANGE COUNTY.	HAYMES BROTHERS, INC.	Lorenz, PE, Kris	$3,124,500.00	06/01/2015	11/01/2017	09/02/2015	12/01/2018	100.00	87.93
C203946	B-5348	REPLACE BRIDGE #85 OVER PHILS CRK ON SR-1005(OLD G'BORO RD)	DANE CONSTRUCTION INC	Kirkman, PE, Christopher D	$984,596.98	02/01/2018	12/27/2018	02/01/2018	01/30/2019	99.00	92.33
C204025	I-5954	PAVEMENT REHABI-40/I-85 FROM EAST OF NC-54 IN GRAHAM IN ALAMANCE CO. TO WEST OF SR-1114 (BUCKHORN RD) IN ORANGE CO.	APAC - ATLANTIC INC THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	$9,699,053.68						
DG00302	P-4405K	EXTEND BRYDSVILLE ROAD TO NC 86 AND REMOVE RAIL CROSSING	TRIANGLE GRADING & PAVING INC	Kirkman, PE, Christopher D	$1,683,900.00	07/01/2016	12/30/2017	09/29/2016	10/31/2018	100.00	89.87
DG00321	W-5143	IMPROVEMENTS ONSR 1004 (EFLAND-CEDAR GROVE RD)	CAROLINA SUNROCK,LLC	Kirkman, PE, Christopher D	$1,711,133.05	04/02/2018	04/02/2019	04/02/2018	04/02/2019	85.20	69.86
DG00332	W-5601 IF	I-85 GUARDRAIL END TERMINAL UPGRADES	NICKELSTON INDUSTRIES INC	Kirkman, PE, Christopher D	$494,243.00	12/05/2016	09/05/2017	05/01/2017	08/22/2018	100.00	100.00
DG00371		RESURFACE 9 SECONDARY ROADS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$1,688,750.33	07/05/2017	11/01/2018	08/30/2017	11/01/2018	62.00	96.08
DG00372	R-5787B	ADA CURB RAMPS IN BURLINGTON, GIBSONVILLE, GRAHAM, MEBANE IN ALAMANCE CO., CARRBORO & CHAPEL HILL IN ORANGE COUNTY	ATLANTIC CONTRACTING COMPANY, INC.	Kirkman, PE, Christopher D	$128,910.00	07/24/2017	03/28/2019	02/26/2018	08/31/2018	89.81	98.29
DG00391		REPLACE BRIDGE # 104 OVER STONEY CREEK ON SR 1712 (UNIVERSITY STATION RD)	R.E. BURNS & SONS CO., INC.	Kirkman, PE, Christopher D	$561,562.02	01/30/2018	10/26/2018	03/01/2018	05/02/2019	99.00	63.09
DG00393		RESURFACE SR 1101, SR 1118, SR 1119, SR 1124, SR 1125, SR 1127,SR 1128 SR 1130, SR 1134, SR 1135, SR 1137, SR 1141, SR 1143, ETC.	RILEY PAVING INC	Kirkman, PE, Christopher D	$1,084,520.40	04/02/2018	10/12/2018	06/18/2018	10/12/2018	60.00	63.83
DG00395		REPLACE BRIDGE #189 ON SR 1114 (BUCKHORN ROAD) OVER CANE CREEK	S T WOOTEN CORPORATION	Kirkman, PE, Christopher D	$723,924.13	04/01/2018	01/01/2019	05/07/2018	02/07/2019	97.00	99.75
DG00413		RESURFACE US 70 BUS, SR 1009, SR 1102 , SR 1129, SR 1239, SR 1352, SR 1716 AND SR 1841	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$3,562,232.66	05/28/2018	11/01/2019	05/29/2018	11/01/2019	32.00	38.14
DG00419		RESURFACE NC 86 AND 17 SECONDARY ROADS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$3,764,001.64	05/14/2018	11/01/2019	05/14/2018	11/01/2019	40.00	23.23
DG00427		REPLACE BRIDGE #51 ON SR 1534 (MCKEE ROAD) OVER BUFFALO CRK	NATIONAL BRIDGE BUILDERS LLC	Kirkman, PE, Christopher D	$521,443.82	05/07/2018	03/04/2019	07/30/2018	04/29/2019	23.00	24.84
DG00435		RESURFACE 22 SECONDARY ROADS	WHITEHURST PAVING CO INC	Kirkman, PE, Christopher D	$846,340.66	04/01/2019	10/11/2019				
DG00444	R-5821B	INTERSECTION IMPORVEMENTS AT THE INTERSECTION OF NC 54 AND SR 1006 (ORANGE GROVE ROAD)	FSC II LLC DBA FRED SMITH COMPANY	Kirkman, PE, Christopher D	$1,039,900.00	07/16/2018	05/16/2019	08/13/2018	05/16/2019	14.21	4.85
DG00445	R-5787BB	INSTALLATION OF ADA COMPLIANT CURB RAMPS AT VARIOUS INTERSECTIONS	LITTLE MOUNTAIN BUILDERS OF CATAWBA COUNTY INC	Kirkman, PE, Christopher D	$319,319.80	06/25/2018	02/15/2020	08/06/2018	02/15/2020	10.00	22.75

North Carolina Department of Transportation

Active Projects Under Construction - Orange Co.

Contract Number	TIP Number	Location Description	Contractor Name	Resident Engineer	Contract Bid Amount	Availability Date	Completion Date	Work Start Date	Estimated Completion	Progress Schedule	Completion Percent
DG00445	W-5707A	INSTALLATION OF ADA COMPLIANT CURB RAMPS AT VARIOUS INTERSECTIONS	LITTLE MOUNTAIN BUILDERS OF CATAWBA COUNTY INC	Kirkman, PE, Christopher D	$319,319.80	06/25/2018	02/15/2020	08/06/2018	02/15/2020	10.00	22.75
DG00451	U-5854	SR 1008 (MT. CARMEL CHURCH ROAD) AND SR 1913 (BENNETT ROAD) ROUNDABOUT AND RELATED SAFETY IMPROVEMENTS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$1,833,468.84	08/15/2018	04/30/2020				

North Carolina Department of Transportation

Active Projects Under Construction - Orange Co.

Contract Number	TIP Number	Location Description	Contractor Name	Resident Engineer	Contract Bid Amount	Availability Date	Completion Date	Work Start Date	Estimated Completion	Progress Schedule	Completion Percent
C203640		REPLACEMENT OF 4 BRIDGES IN GUILFORD COUNTY AND 3 BRIDGES IN ORANGE COUNTY.	HAYMES BROTHERS, INC.	Lorenz, PE, Kris	$3,124,500.00	06/01/2015	11/01/2017	09/02/2015	11/01/2017	93.20	86.93
C203641		REPLACEMENT OF 5 BRIDGES IN GUILFORD COUNTY AND 5 BRIDGES IN ORANGE COUNTY.	R.E. BURNS & SONS CO., INC.	Kirkman, PE, Christopher D	$5,940,323.00	06/01/2015	11/01/2018	06/01/2015	08/31/2018	100.00	99.40
C203946	B-5348	REPLACE BRIDGE #85 OVER PHILS CRK ON SR-1005(OLD G'BORO RD)	DANE CONSTRUCTION INC	Kirkman, PE, Christopher D	$984,596.98	02/01/2018	12/27/2018	02/01/2018	01/30/2019	99.00	85.05
C204025	I-5954	PAVEMENT REHAB ON I-40/I-85 FROM EAST OF NC-54 IN GRAHAM TO WEST OF SR-1114 (BUCKHORN RD) IN ORANGE COUNTY.	APAC - ATLANTIC INC THOMPSON ARTHUR DIVISION	Kirkman, PE, Christopher D	$9,699,053.68						
DG00302	P-4405K	EXTEND BRYDSVILLE ROAD TO NC 86 AND REMOVE RAIL CROSSING	TRIANGLE GRADING & PAVING INC	Kirkman, PE, Christopher D	$1,683,900.00	07/01/2016	12/30/2017	09/29/2016	10/31/2018	100.00	89.87
DG00321	W-5143	SR 1004 (EFLAND-CEDAR GROVE RD)	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$1,711,133.05	04/02/2018	04/02/2019	04/02/2018	04/02/2019	25.00	49.86
DG00332	W-5601 IF	I-85 GUARDRAIL END TERMINAL UPGRADES	NICKELSTON INDUSTRIES INC	Kirkman, PE, Christopher D	$494,243.00	12/05/2016	09/05/2017	05/01/2017	09/05/2018	100.00	100.00
DG00371		RESURFACE 9 SECONDARY ROADS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$1,688,750.33	07/05/2017	11/01/2018	08/30/2017	11/01/2018	42.40	92.43
DG00372	R-5787B	ADA CURB RAMPS IN BURLINGTON, GIBSONVILLE, GRAHAM, MEBANE IN ALAMANCE CO., CARRBORO & CHAPEL HILL IN ORANGE COUNTY	ATLANTIC CONTRACTING COMPANY, INC.	Kirkman, PE, Christopher D	$128,910.00	07/24/2017	03/28/2019	02/26/2018	03/28/2019	40.95	54.52
DG00391		REPLACE BRIDGE # 104 OVER STONEY CREEK ON SR 1712 (UNIVERSITY STATION RD)	R.E. BURNS & SONS CO., INC.	Kirkman, PE, Christopher D	$561,562.02	01/30/2018	10/26/2018	03/01/2018	05/02/2019	60.07	72.05
DG00393		RESURFACE SR 1101, SR 1118, SR 1119, SR 1124, SR 1125, SR 1127,SR 1128 SR 1130, SR 1134, SR 1135, SR 1137, SR 1141, SR 1143, ETC.	RILEY PAVING INC	Kirkman, PE, Christopher D	$1,084,520.40	04/02/2018	10/12/2018	06/18/2018	10/12/2018	24.00	25.98
DG00395		REPLACE BRIDGE #189 ON SR 1114 (BUCKHORN ROAD) OVER CANE CREEK	S T WOOTEN CORPORATION	Kirkman, PE, Christopher D	$723,924.13	04/01/2018	01/01/2019	05/07/2018	02/07/2019	95.25	69.47
DG00413		RESURFACE US 70 BUS, SR 1009, SR 1102 , SR 1129, SR 1239, SR 1352, SR 1716 AND SR 1841	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$3,562,232.66	05/28/2018	11/01/2019	05/29/2018	11/01/2019	23.00	24.53
DG00419		RESURFACE NC 86 AND 17 SECONDARY ROADS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$3,764,001.64	05/14/2018	11/01/2019	05/14/2018	11/01/2019	26.00	7.32
DG00427		REPLACE BRIDGE #51 ON SR 1534 (MCKEE ROAD) OVER BUFFALO CRK	NATIONAL BRIDGE BUILDERS LLC	Kirkman, PE, Christopher D	$521,443.82	05/07/2018	03/04/2019	07/30/2018			
DG00435		AST RETREATMENT ON 22 SECONDARY ROADS	WHITEHURST PAVING CO INC	Kirkman, PE, Christopher D	$846,340.66	04/01/2019	10/11/2019				
DG00444	R-5821B	INTERSECTION IMPORVEMENTS AT THE INTERSECTION OF NC 54 AND SR 1006 (ORANGE GROVE ROAD)	FSC II LLC DBA FRED SMITH COMPANY	Kirkman, PE, Christopher D	$1,039,900.00	07/16/2018	05/16/2019				

North Carolina Department of Transportation

Active Projects Under Construction - Orange Co.

Contract Number	TIP Number	Location Description	Contractor Name	Resident Engineer	Contract Bid Amount	Availability Date	Completion Date	Work Start Date	Estimated Completion	Progress Schedule	Completion Percent
DG00445	R-5787BB	INSTALLATION OF ADA COMPLIANT CURB RAMPS AT VARIOUS INTERSECTIONS	LITTLE MOUNTAIN BUILDERS OF CATAWBA COUNTY INC	Kirkman, PE, Christopher D	$319,319.80	06/25/2018	02/15/2020				
	W-5707A	INSTALLATION OF ADA COMPLIANT CURB RAMPS AT VARIOUS INTERSECTIONS	LITTLE MOUNTAIN BUILDERS OF CATAWBA COUNTY INC	Kirkman, PE, Christopher D	$319,319.80	06/25/2018	02/15/2020				
DG00451	U-5854	SR 1008 (MT. CARMEL CHURCH ROAD) AND SR 1913 (BENNETT ROAD) ROUNDABOUT AND RELATED SAFETY IMPROVEMENTS	CAROLINA SUNROCK LLC	Kirkman, PE, Christopher D	$1,833,468.84	08/15/2018	04/30/2020				

Chatham County - DCHC MPO - Upcoming Projects - Division 8--October 2018								
Contract # or WBS # or TIP #	**Route**	**Description**	**Let Date**	**Completion Date**	**Contractor**	**Project Admin.**	**Project Cost**	**Notes**
R-5825	NC 751 at SR 1731 (O'Kelly Chapel Road)	Upgrade and Realign Intersection	1/22/2019	TBD	TBD	Greg Davis (910) 773-8022	TBD	Right of Way in progress

Election Results – Big Picture

Republicans Retain Majority in the Senate and Democrats Take Over the Majority in the House

Democrats	115th Congress → 116th Congress		Republicans	115th Congress → 116th Congress	
Senate	49	45*	Senate	51	52*
House	194	220*	House	235	196*

*Not all races declared

The polls are closed across the country but there are several races that will drag on a few more days. Senator Bill Nelson (D-FL), Ranking Democrat on the Senate Commerce Committee, announced that his race is headed to a recount, as is Rep. Jeff Denham (R-CA), who is competing for the top slot on the House T&I Committee. However, two things are clear - the Democrats are now in the Majority in the US House of Reps and the Senate remains in Republican hands.

Lame-Duck Session/ Leadership Elections & Organization, Finish up 2018 Legislative Business

Key Dates

- Nov 13 - Congress returns to Washington for Lame-Duck session
- Nov 14 - House and Senate Republican Leadership elections
- Nov 14 - Senate Democrat Leadership elections
- Nov 28 - House Democrat Leadership elections
- Dec 7 – Current CR expires
- Jan 3, 2019 – the 116th Congress convenes

Legislation - Congress will return to DC and attempt to complete the remaining seven appropriations bills, including USDOT spending. The last minibus being negotiated, a four-bill package that included Agriculture; Interior; Financial Services and General Government; and Transportation, Housing and Urban Development, was close to being wrapped up before negotiations stalled and the House recessed for the election. Agencies covered under the remaining seven bills are running on a CR and failure to pass any of those bills could lead to a partial government shutdown. The primary appropriations bill Republicans and Democrats will be arguing over is the Department of Homeland Security, which is where wall funding and other immigration security and enforcement provisions will be debated. The outcome of the elections will have an impact on what Congress can accomplish in Lame-Duck. With the Democrats taking over the House in the next Congress, they are not going to give Republicans any big wins in Lame- Duck, and negotiations could break down pushing any unfinished business till next year.

Some other issues Congress may consider include – the Farm Bill, and tax-extenders, maybe autonomous vehicle legislation.

House Leadership

Republican - House Republicans are planning to hold their leadership races on November 14. Having lost control of the House, the top race will be for Minority Leader. This race is expected to pit current Majority Leader Kevin McCarthy (R-CA) against Representative Jim Jordan (R-OH), founding Chair of the conservative Freedom Caucus. Jordan is a staunch ally of President Trump. Should the Leader's race be decided on the first ballot, the current Republican Whip, Steve Scalise (R-LA), is expected to run again for Minority Whip. Representative Patrick McHenry (R-NC) is expected to jump into the Whip race if Scalise opts to mount a run for Leader. The Current Republican

Conference Chairman, Cathy McMorris Rogers (R-WA), may decide to opt out of the Leadership ranks in order to reclaim a top subcommittee post on the Energy & Commerce Committee. Should she seek to return to leadership, however, Representative Liz Cheney (R-WY) has indicated she intends to run for Conference Chairman, thus setting up a potential contest with McMorris Rogers. The position of Republican Policy Committee Chairman is vacant, due to the primary loss by Representative Luke Messer (R-IN) in his bid for a Senate seat. Both Representatives Gary Palmer (R-AL) and David Schweikert (R-AZ) have indicated an interest in running for this post.

Democrat - The current leadership team is comprised of Democratic Leader Nancy Pelosi (D-CA), Minority Whip Steny Hoyer (D-MD), and Assistant to the Leader Jim Clyburn (D-SC). In 2016, they were forced to respond to pressures created by the disappointing election results for Democrats, combined with generational issues and a desire for new opportunities by rank and file Members, by creating a more inclusive Democratic steering Committee and a new leadership position. Even though Democrats increased their ranks and reclaimed control of the House, these pressures have not abated. Congressman Tim Ryan (D-OH), who mounted and lost a challenge to Leader Pelosi in 2016, has not ruled out another challenge now. Moreover, the Congressional Black Caucus recently penned a Dear Colleague reiterating that "if there is any change in our top leadership positions" that it would advocate for one of the two top slots being filled by an African American representative. Every other leadership spot below the top three is contested.

Given that Democrats have won back the majority, the most likely scenario is that the current slate of leaders retains the top three spots – Speaker Pelosi, Majority Leader Hoyer, and Majority Whip Clyburn. In order to do so, however, they will again have to create more opportunities for rank and file Members to play enhanced decision-making roles within the Caucus, which could result in term limits, other changes in the rules package, creation of select committees, and other newly established leadership roles.

Senate Leadership

Republican – There will be some changes in the Senate Republican leadership due to term limits. However, Majority Leader Mitch McConnell (R-KY) will retain his spot as Leader. Senator John Thune (R-SD) is expected to move up to the Republican Whip, replacing term-limited Senator John Cornyn (R-TX). With the move to Whip Thune will likely give up his post as Chairman of the Senate Commerce Committee, opening the door for Senator Roger Wicker (R-MS) to lead the minority on the Commerce Committee. Senator John Barrasso (R-WY) is expected to move into the role of Chairman of the Senate Republican Conference and Senator Roy Blunt (R-MO) is expected to lead the Senate Republican Policy Committee. Senators Joni Ernst (R-IA) and Deb Fischer (R-NE) are expected to vie for the Conference Vice Chairman position. Republicans also will have to choose a new chair of the National Republican Senatorial Committee, the election arm of the conference.

Democrat – There are not any anticipated changes to the Senate Minority leadership. Senator Schumer (D-NY) will continue to be the Minority Leader, Whip Richard Durbin (D-IL), Assistant Democratic Leader Patty Murray (D-WA), and Policy and Communications Chairman Debbie Stabenow (D-MI).

Congressional Committees

Final decisions on who will lead committee, who will be appointed to committee, and the ratio of Democrats to Republican will all be decided in the upcoming weeks and months. Members-elect will start lobbying their leadership for appointment to committees and once the election results are complete then ratios on committees will be determined. Committee size will also be a factor in which committees members sit on.

In the House two retirements on two key transportation related committees will result in new Republican leaders. Appropriations, and Transportation & Infrastructure Committees will have competition for the top spot.

Possible Ranking Republican	House Committee	Possible Democrat Chairman
Kay Granger (TX) Michael Simpson (ID) Tom Cole (OK) Tom Graves (GA) (Rep. Aderholt (AL) is from the same state as Senate Approps Chair Sen. Shelby and leadership is unlikely to want two members from the same state leading Approps)	Appropriation	Nita Lowey (NY)
Greg Walden (OR)	Energy & Commerce	Frank Pallone (NJ)
Jeff Denham (CA) Sam Graves (MO)	Transportation &Infrastructure	Peter DeFazio (OR)
Kevin Brady (TX)	Ways & Means	Richard Neal (MA)

In the Senate, election losses and leadership changes opened several key committee slots, and the individual choices Senators make about their committee assignments could make the committee shuffles even more interesting. The potential loss of Senator Bill Nelson (D) has perhaps the biggest domino effect on Committees in the Senate for Democrats. As noted earlier with Sen. Thune moving up in leadership the Chairmanship may fall to Sen. Wicker (MS). Again, once the elections are finalized, we will know more about how the Senate committee leadership shakes out.

Possible Republican Chairman	Senate Committee	Possible Ranking Democrat
Richard Shelby (AL)	Appropriations	Patrick Leahy (VT)
Mike Crapo (ID) Pat Toomey (PA)	Banking	Sherrod Brown (OH)
John Thune (SD) Roger Wicker (MS)	Commerce, Science, and Transportation	Bill Nelson (FL) Maria Cantwell (WA)
John Barrasso (WY)	Environment and Public Works	Tom Carper (DE)
Chuck Grassley (IA)	Finance	Ron Wyden (OR)

Durham wins $1M grant to promote public transportation in downtown

11 ABC by Ana Rivera October 29, 2018

- Transportation in downtown Durham is getting some extra attention thanks to a $1 million grant.

Durham is among cities like Philadelphia and Los Angeles to win the money, which will be used to get residents out of their car and using public transportation.

During a six-month period, Durham competed against 350 other cities to fix common problems in the Bloomberg Philanthropies U.S. Mayors Challenge.

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For Durham, the focus was on transportation and to reduce congestion, pollution, and parking issues.

Sixteen hundred downtown employees participated in a pilot program that encouraged them to stop driving their personal cars to work and start using alternative methods of transportation, like the bus or a bike.

"You want to be able to breathe clean air, and you want to be able to get to work in a reasonable amount of time without lots of frustration and something that reduces the number of cars is good," said Michael Bloomberg.

The pilot program used different strategies like creating personal routes for employees and creating a bus lottery.

The more someone rides the bus, the better chance they have of winning a prize.

Within five months, the program reduced the number of people driving their personal vehicles into downtown Durham by five percent.

And Bloomberg said the best part -- and the reason Durham won the grant -- is other cities can use the same strategies.

Durham will receive the million over a period of three years.

With that money, they'll be able to try new strategies and get more people looking into different ways of getting into downtown Durham.