



Technical Committee Meeting Agenda

Wednesday, October 24, 2018

9:00 AM

Committee Room 2nd Floor
Durham City Hall 101 City Hall Plaza
Durham, NC 27701

1. Roll Call
2. Adjustments to the Agenda
3. Public Comment

CONSENT AGENDA

4. **Approval of the September 26, 2018 TC Meeting Minutes**

[18-188](#)

A copy of the September 26, 2018 minutes is enclosed.

TC Action: Approve the minutes of the September 26, 2018 TC meeting.

Attachments: [2018-10-24 \(18-188\) 9.26.2018 TC Meeting Minutes_LPA2.pdf.pdf](#)

ACTION ITEMS

5. **2045 Metropolitan Transportation Plan (MTP) -- Re-adoption (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 s are incorporated into the report). Note that the Board 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 December 1, 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

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.

Attachments: [2018-10-24 \(18-172\) 2045MTP-Re-adoption.pdf](#)
 [2018-10-24 \(18-172\) 2045MTP-Report Changes.pdf](#)

6. Triangle Regional Freight Plan (10 minutes)

[18-170](#)

Andy Henry, LPA Staff

The MPO Board released the Triangle Regional Freight Plan for a minimum 30-day public comment period in September and conducted a public hearing in October. Staff received comments from the City of Durham and will develop a response to those comments for the November MPO Board meeting. Those comments are attached.

Approval of the Freight Plan means that the MPO will consider including the Plan's recommendations in the MPO's long-range transportation plans and policies as they are updated. In addition, local governments might want to consider some of the recommendations for their plans, programs and policies.

The executive summary, full report and appendices of the Triangle Regional Freight Plan and an interactive map of the Strategic Freight Corridor (SFC) are available at this MPO Web page: www.bit.ly/DCHC-FreightPlan. The remaining review schedule is as follows:

- * 10/15 -- Public comment period ends
- * 11/14 -- Board approves Freight Plan

TC Action: Provide final comments on the Triangle Regional Freight Plan and recommend that the MPO Board approve the Plan.

Attachments: [2018-10-24 \(18-170\) Freight Plan Comments.pdf](#)

7. NC 54 West Corridor Study (10 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 government 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. A copy of the study and supporting materials is available at www.nc54west.com. The DCHC MPO Board released the study for a 30-day public comment period at its October 10, 2018 meeting. LPA staff and the consultant, VHB, are currently compiling comments. A list of comments to date will be provided at the DCHC MPO TC meeting. The MPO Board will hold a public hearing and consider the study for adoption in November.

TC Action: Recommend that the Board approve the NC 54 West Corridor Study.

8. US 15-501 Corridor Study (30 minutes)[18-192](#)**Rachel Gaylord-Miles, 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 TC and Board the same array of concepts presented to the public on October 22 with the goal of receiving TC and Board input on your preferred concepts.

TC Action: Receive information and use the materials contained in the agenda package to provide feedback to Mike Bruff, Project Manager, on your preferred concepts no later than November 7, 2018.

Attachments: [2018-10-24 \(18-192\) US 15-501 Comment Form.pdf](#)

[2018-10-24 \(18-192\) US 15-501 Presentation Boards.pdf](#)

9. Update on Wake Transit Major Investment Study (15 minutes)[18-191](#)**Geoff Green, GoTriangle****Aaron Cain, LPA Staff**

In 2016, after the adoption of the Wake County Transit Plan, CAMPO, GoTriangle, and the City of Raleigh enlisted the assistance of Nelson Nygaard to develop a Major Investment Study (MIS) for Wake County Bus Rapid Transit (BRT) and Commuter Rail Transit (CRT). Durham County, the City of Durham, and DCHC MPO have been participants on the Core Technical Team (CTT) to develop the CRT portion of the MIS as the joint DCHC and CAMPO Metropolitan Transportation Plan (MTP) envisions CRT serving both Wake and Durham counties, with eventual service to Orange and Johnston counties.

GoTriangle will present an update on progress and future development of the CRT portion of the MIS.

TC Action: No action is necessary for this item, it is for informational purposes only.

10. 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.

A TC subcommittee met on August 22 and September 18 to develop recommendations for local input points for Division Needs projects. The recommendation of that subcommittee is attached with one change. Points have been removed from H111162, Old Greensboro Road, because neither TARPO nor BGMPO decided to put points on that project, and points from DCHC would have no ability to help the project get funded. Those points have been redistributed to T150448, Village Neighborhood Transit Center.

Division 8 has provided its points for calculation, but Division 5 and Division 7 are still reviewing public comments and evaluating projects. Points from those Divisions should be available before the MPO Board meeting next month. TARPO and BGMPO have adopted their local input point allocations and those points are provided, as applicable.

LPA staff will take the final recommended local points allocation to the MPO Board for adoption at its November 14, 2018, meeting. The deadline for submission of local allocation points for Division Needs projects is November 29.

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

Attachments: [2018-10-24 \(18-153\) Allocation of Local Input Points for Division Needs Projects](#)

11. 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, all three projects will have a 21-day public comment period for this amendment.

In addition to the above projects, there are two additional projects requesting additional CMAQ funds: C-5605E, Durham Bike Lanes, and C-5605, Downtown Durham Wayfinding. 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: Recommend that the Board approve Amendment #7 to the FY2018-2027 TIP.

Attachments: [2018-10-24 \(18-185\) TIP Amendment #7 Resolution.pdf](#)
 [2018-10-24 \(18-185\) TIP Amendment #7 Full Report.pdf](#)
 [2018-10-24 \(18-185\) TIP Amendment #7 Summary Sheet.pdf](#)

12. 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: Recommend the Board approve and sign the resolution to transfer funds.

Attachments: [2018-10-24 \(18-186\) Resolution to transfer FHWA funds to FTA.pdf](#)

13. Transit Asset Management - Targets (10 minutes)[18-193](#)**Andy Henry, LPA Staff**

Federal regulations require the DCHC MPO to develop performance measures and targets for the Transit Asset Management (TAM) program and to update the targets each year. 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 and checklist for each of the transit systems is 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 elected 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.

Attachments:[2018-10-24 \(18-193\) TAM Resolution-Targets.pdf](#)[2018-10-24 \(18-193\) TAM Plan - GoTriangle.pdf](#)[2018-10-24 \(18-193\) TAM Plan - GoDurham.pdf](#)[2018-10-24 \(18-193\) TAM Plan - CHT.pdf](#)**14. 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, and to update the targets each year. 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 adopt 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.

Attachments:[2018-10-24 \(18-194\) Resolution-Targets-Pavement-Bridge-TT.pdf](#)

15. 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 them 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.

Attachments: [2018-10-24 \(18-195\) Resolution-Safety-Targets.pdf](#)

16. Performance Management Agreement on Data Sharing (5 minutes)[18-189](#)**Aaron Cain, DCHC MPO****Julie Bogle, NCDOT**

Federal regulations require that MPOs and transit agencies sign an agreement with NCDOT to share data amongst agencies. The attached document is the agreement to be signed by the MPO Board Chair and the managers of the transit agencies. DCHC MPO is coordinating the effort to obtain the signatures from the transit agencies within the MPO's jurisdiction.

TC Action: Recommend the Board Chair sign the Performance Management Agreement on Data Sharing.

Attachments: [2018-10-24 \(18-189\) NCDOT-DCHC TPM Data Sharing Agreement.pdf](#)

17. Election for DCHC MPO Technical Committee Vice Chair (10 minutes)[18-190](#)**Aaron Cain, LPA Staff**

Due to the resignation of Margaret Hauth, the position of Vice Chair of the DCHC MPO TC is vacant. Staff sent a call for nominations on October 3. One nomination has been received, that of Nishith Trivedi of Orange County. Since the current Chair, Ellen Beckmann, represents a jurisdiction in Durham County, the new Vice Chair must represent a jurisdiction primarily located in either Orange or Chatham County. Mr. Trivedi meets that qualification.

TC Action: Elect a new Vice Chair of the DCHC MPO Technical Committee.

REPORTS FROM STAFF:

18. Report from Staff [18-107](#)**Felix Nwoko, Andy Henry, LPA Staff****TC Action:** Receive report from Staff.**Attachments:** [2018-10-24 \(18-107\) LPA staff report.pdf](#)**19. Report from the Chair** [18-108](#)**Ellen Beckmann, TC Chair****TC Action:** Receive report from the TC Chair.**20. NCDOT Reports** [18-109](#)**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****TC Action:** Receive reports from NCDOT.**Attachments:** [2018-10-24 \(18-109\) NCDOT Progress Report.pdf](#)**INFORMATIONAL ITEMS:****Adjourn****Next meeting: November 28, 9 a.m., Committee Room****Dates of Upcoming Transportation-Related Meetings: None**

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

TECHNICAL COMMITTEE

September 26, 2018

MINUTES OF MEETING

The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Technical Committee met on September 26, 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:

Ellen Beckmann (Chair)	City of Durham Transportation
Margaret Hauth (Vice Chair)	Hillsborough Planning
Kayla Seibel (Member)	Chapel Hill Planning
Kumar Neppalli (Member)	Chapel Hill Engineering
Bergen Watterson (Member)	Chapel Hill Planning
Hannah Jacobson (Member)	City of Durham Planning
Zach Hallock (Member)	Carrboro Planning
Evan Tenenbaum (Member)	Durham County Planning
Scott Whiteman (Member)	Durham County Planning
Tom Altieri (Member)	Orange County Planning
Nishith Trivedi (Member)	Orange County Planning
Chance Mullis (Member)	Chatham County Planning
Geoff Green (Member)	GoTriangle
John Hodges-Copple (Member)	TJCOG
Tim Brock (Member)	Research Triangle Foundation
Julie Bogle (Member)	NCDOT TPD
John Grant (Member)	NCDOT Traffic Operations
Ed Lewis (Alternate)	NCDOT, Division 7
Bryan Kluchar (Member)	NCDOT, Division 8
Bill Judge (Alternate)	City of Durham Transportation
Eddie Dancausse	Federal Highway Administration
Andy Henry	DCHC MPO
Aaron Cain	DCHC MPO
Meg Scully	DCHC MPO
Dale McKeel	City of Durham/DCHC MPO
Cy Stober	City of Mebane
Don Bryson	VHB

Quorum Count: 20 of 31 Voting Members

Chair Ellen Beckmann called the meeting to order at 9:02 a.m. A roll call was performed. The

Voting Members and Alternate Voting Members of the DCHC MPO Technical Committee (TC) were

identified and are indicated above. Chair Ellen Beckmann reminded everyone to sign-in using the sign-in sheet that was being circulated.

PRELIMINARIES:

2. Adjustments to the Agenda

Items 6 and 7 were presented in reverse order, as were Items 12 and 13.

3. Public Comments

There were no members of the public signed up to speak during the meeting.

CONSENT AGENDA:

4. Approval of August 22, 2018, Meeting Minutes

Chair Ellen Beckmann asked if there were any comments for the August 22, 2018, Meeting Minutes. Aaron Cain responded that North Carolina Department of Transportation (NCDOT) preferred that Item 17 be changed to, "The report was presented with no comments or questions."

John Hodges-Copple made a motion to approve the amended August 22, 2018, Meeting Minutes. Geoff Green seconded the motion. The motion passed unanimously.

ACTION ITEMS:

5. NC 98 Corridor Study
Andy Henry, MPO Staff

Andy Henry stated that the MPO Board released the draft report of the NC 98 Corridor Study for a minimum 30-day public comment period at their August 8 meeting and conducted a public hearing at their September 12 meeting. Andy Henry stated that comments from the public and the Durham Board of County Commissioners (BOCC) led to adding the option of multiuse pathways on both sides of NC 98 in Durham County rather than having bike lanes and sidewalks. Andy Henry added that funding could become an issue with the multiuse pathway, and that North Carolina Department of Transportation (NCDOT) should be included in the decision-making process.

Evan Tenenbaum made a motion to recommend that the MPO Board approve the NC 98 Corridor Study. Geoff Green seconded the motion. The motion passed unanimously.

6. NC 54 West Corridor Study

Don Bryson, VHB

Aaron Cain, LPA Staff

Don Bryson stated that the NC 54 West Corridor Study was to determine the long term needs of the corridor in terms of traffic growth, land use, and other issues. Don Bryson stated the NC 54 West Corridor is slightly over 20 miles that starts from Old Fayetteville Road in Carrboro and ends at I-85 in Graham, and the DCHC MPO section of the corridor is about a quarter of its total length. Don Bryson mentioned that there are ongoing improvements to the corridor, such as signalization and other intersection improvements. Don Bryson added that outreach to other MPOs, RPOs and local jurisdictions will take place before the MPO Board's November 14 meeting. Don Bryson stated that workshops were conducted as part of the Corridor Study, which identified stakeholders' feedback that included the need for pedestrian and bicycle facilities.

Don Bryson described that the levels of traffic along the corridor are higher on the ends and lower in the middle, with the traffic at Carrboro being very heavy and directional. Don Bryson stated that there has been strong growth along the corridor in the past three years. Don Bryson added that the corridor has already surpassed its two-lane capacity in some areas.

Don Bryson discussed solutions to long-term needs of the corridor. Don Bryson stated that the Corridor Study recommended median U-turn at two intersections, NC 119 and Old Fayetteville Road. Don Bryson added that T-intersections with two-lane roundabouts were also recommended at other locations. Don Bryson also stated that a four-lane divided median would be preferred, with the implementation timeframe depending on the node, or section, of the corridor. Don Bryson also stated that a multiuse path on one side of the corridor would also be preferred. Don Bryson listed obstacles to achieving the long-term goals for this corridor, including existing driveways, right-of-way, grading, and wells and septic systems.

94 Don Bryson stated that the Corridor Study conceptualized the corridor into nodes, which are
95 focused around six to eight major intersections. Don Bryson discussed how the improvements to the
96 corridor would be in four phases, the first of which would begin between 2020 and 2030 in the DCHC MPO
97 section in Carrboro. Don Bryson commented that the first phase is estimated at \$43M. Don Bryson stated
98 that the total cost is approximately \$180M, with \$100M of that in Orange County. Nish Trivedi asked about
99 how the boundaries for the corridor were established for each phase. Don Bryson responded that the
100 phases were based on demand, but also based on feasibility of funding. Aaron Cain added that Dodsons
101 Crossroads is the MPO boundary.

102 Nishith Trivedi and Don Bryson discussed that the multiuse path would be on the north side of the
103 corridor until Dodsons Crossroads. Chair Ellen Beckmann and Cy Stober asked if bike lanes would be better
104 applied to this corridor. Don Bryson stated that the multiuse path would increase safety since most of the
105 corridor consists of rural areas. Don Bryson added that adding a multiuse path that's not connected the
106 roadway itself allows for future widening. Ellen Beckmann stated that multiuse paths require funding from
107 the local government for maintenance.

108 Geoff Green questioned the size of the median. Don Bryson responded that the median was 17 to
109 22 feet in width to allow for left turn lanes, and is standard width per NCDOT.

110 Zach Hallock asked about how the State Transportation Improvement Plan (STIP) projects will
111 impact the Carrboro section of the corridor. Don Bryson responded that there are safety and congestion
112 problems that may be relieved by having more lanes for travel because the traffic in the Carrboro section
113 of the corridor is directional. Zach Hallock also mentioned that the residents of Carrboro might not
114 welcome any changes that they perceive will add more traffic to their community.

115 Don Bryson and Aaron Cain discussed funding options for the recommended improvements to the
116 West NC 54 Corridor. Aaron Cain stated that widening NC 54 in Carrboro is not currently in the MTP, and it
117 would be approximately five years before the next MTP is adopted, and only after that before any

widening can be submitted for Strategic Planning Office of Transportation (SPOT) scoring. Don Bryson stated that breaking the project down into pieces might increase the desirability about certain aspects, but leave other aspects vulnerable.

Nishith Trivedi made a motion to recommend that the MPO Board release the NC 54 West Corridor Study for a 30-day public comment period, and to hold a public hearing at its November 14, 2018 meeting. Zach Hallock seconded the motion. The motion passed unanimously.

7. Quarterly Update on the Durham-Orange Light Rail Transit (D-OLRT) Project
Geoff Green, GoTriangle

Geoff Green reviewed the transit plan revenues and noted that actual revenues have tracked closely to the projected numbers. Geoff Green discussed the short range transit plan, which includes efforts by transit agencies throughout the MPO including GoTriangle. Geoff Green also discussed that GoTriangle's short-term transit plan includes investigating changes to the bus operating plan to accommodate light rail. Geoff Green briefly discussed suggested changes in routes and/or locations for the current bus routes of 400, 405, 800, and ODX (Orange-Durham Express). Chair Ellen Beckmann and Geoff Green discussed if and how the changes in bus routes would impact cost. Chair Ellen Beckmann and Geoff Green also discussed increased transportation service needs for the Rougemont area. Geoff Green also mentioned that there were public outreach events for the D-O LRT project.

Geoff Green stated that GoTriangle is still on schedule for the Full Funding Grant Agreement (FFGA) for \$1.2B from the Federal Government. Geoff Green added that Durham County made an agreement to fill the funding gap that was caused by recent legislation in the North Carolina General Assembly, which limited the amount of state money available to the light-rail project. Geoff Green also added that the Interlocal Cost-Sharing Agreement and the county transit plan would also need to be updated, and that those updates are targeted for completion by February 2019. Geoff Green stated that GoTriangle remains on schedule for executing the FFGA in September 2019 and added that the final application is due by April 2019. Geoff Green also mentioned that the Federal Transit Administration

(FTA) Risk Assessment is tentatively scheduled for October 2018. Meg Scully and Geoff Green discussed contingency and overall budget. John Hodges-Copple and Geoff Green discussed the federal FY19 and FY20 funding assumptions for light rail, which are both necessary to fulfill the overall D-O LRT budget. John Hodges-Copple, Chair Ellen Beckmann, and Geoff Green discussed critical railroad agreements which are due in April 2019. Geoff Green added that the agreements are not required to be comprehensive, rather, the critical agreements help demonstrate to FTA that GoTriangle is working cooperatively with local community stakeholders.

Geoff Green stated a Supplemental Environmental Assessment (EA) is scheduled to be published by FTA before October 31, and that the Supplemental EA is a follow-up on the Draft Environmental Impact Statement (DEIS) and Supplemental EA for the NCCU Station. Geoff Green added that the document evaluates all the proposed refinements to the D-O LRT since December 2016, such as the changes to the Alston Avenue, Alston Avenue Station, Alston Avenue Park and Ride, and Gateway Station.

Geoff Green also noted other ongoing efforts. Geoff Green stated that project engineers had encountered challenges with the at-grade alignment along Erwin Road such as sensitive powerlines located underneath the road and emergency access at the medical centers. Geoff Green stated that GoTriangle is preparing a new design that includes an elevated light rail structure from Lasalle Street until the D-O LRT crosses NC 147. Geoff Green stated that there were issues with grade crossing along Pettigrew Street, adjacent to the existing freight railroad tracks, and that GoTriangle is working with the FTA on how to incorporate the proposed changes into the EA. Geoff Green added that there are gate timing issues at Dillard Street, and GoTriangle is evaluating making Dillard Street a southbound one-way roadway at the railroad crossing. Chair Ellen Beckmann commented that it would impact neighboring streets. Geoff Green added that there are plans to make Ramseur Street a two-way roadway from Dillard Street to Chapel Hill Street, which would also provide westbound access for buses and other

vehicles. Evan Tenenbaum, Geoff Green, and John Hodges- Copple discussed the grade of the light rail as opposed to freight rail and also the construction restrictions near the Old Bull Building. Geoff Green stated that there would be a hearing at the Durham Planning Commission on October 9 for the Rail Operations Maintenance Facility (ROMF), and then following the plans would then be presented to the Durham City Council.

Geoff Green discussed the design schedule. Geoff Green stated that the D-O LRT design is past the 50% milestone. Geoff Green added that the 90% design is scheduled for summer 2019, and the 100% design review is anticipated for November 2019. Geoff Green and John Hodges-Copple discussed the possible requirement of a 100% design in order to obtain the FFGA. Geoff Green also stated that the D-O LRT project is currently under the Disadvantaged Business Enterprise (DBE) target. Chair Ellen Beckmann and Geoff Green discussed the role of the MPO Board and its relationship to funding of the D-O LRT, as well as the counties' relationship to funding as well. Bergen Watterson, John Hodges-Copple and Geoff Green discussed the impacts of the proposed commuter rail project and how that will impact travel and freight rail lines.

8. Allocation of Local Input Points for Division Needs Projects
Aaron Cain, LPA Staff

Aaron Cain stated that 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. Aaron Cain stated that a TC subcommittee met on August 22 and September 18 to develop recommendations for local input points for Division Needs projects. Aaron Cain added the only change in the recommendation from the August meeting was to remove points from Finley Golf Course Road Bike/Ped project and place points on the Northern Durham Parkway. LPA staff will request that the MPO Board allow for changes to the allocation after adoption due to external factors, such as assignment of points from the Divisions and other MPOs and RPOs. Local input points for Division Needs projects are now due on November 29, 2018, due to ramifications from Hurricane Florence.

Tom Altieri asked if the TC will have an opportunity recommend approval of the local input points before the MPO Board votes on it. Aaron Cain responded that the TC will be able to recommend approval on the October 24 TC meeting. Aaron Cain added that this is an informational item only.

9. Reprogramming of CMAQ Funds

Aaron Cain, LPA Staff

Aaron Cain stated that the Fixing American's Surface Transportation (FAST) Act of 2015 dictates that any unobligated Congestion Mitigation/Air Quality (CMAQ) or Transportation Alternative Program – Direct Attributable (TAP-DA) funds that are not obligated by September 30, 2019, are subject to rescission. Aaron Cain stated 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 added that staff and other partners have developed a plan to reprogram CMAQ dollars to projects that can obligate the funds by September 30.

Aaron Cain referenced the attachment and explained which projects would and would not receive FY18 CMAQ funding. Zach Hallock asked about assurances CMAQ projects would be programmed following the change. Aaron Cain responded that Heather Hildebrandt of NCDOT noted that the process is simpler to allocate CMAQ funds projects once they have already been approved. Aaron Cain mentioned that Heather Hildebrandt is amenable to streamlining the allocation process in future years for projects that have already gone through the approval process. Aaron Cain added that CMAQ funding for FY20 and FY21 might have comparatively less funding for new projects due to the reserving of funds for existing projects. Aaron Cain and Chair Ellen Beckmann discussed that projects that have future CMAQ funding remain in the Transportation Improvement Plan (TIP). Aaron Cain and Chair Ellen Beckmann discussed that the City of Durham is starting to discuss their FY20 Budget and that it would be helpful to staff for future planning.

Vice Chair Margaret Hauth made a motion to recommend that the MPO Board approve the reprogramming of CMAQ funds. Scott Whitehead seconded the motion. The motion passed unanimously.

10. Programming of FY2018-19 Regional Bicycle and Pedestrian Funds
Aaron Cain, LPA Staff

Aaron Cain stated that, per MPO policy and the adopted FY18 and FY19 United Planning Working Groups (UPWP), the full amount of the MPO's TAP-DA funds are combined with a portion of the MPO's Surface Transportation Block Grant – Direct Attributable (STBG-DA) funds to create a pool of funds for regional bicycle and pedestrian 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-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 the Durham portion of this project is already under construction, and the Chapel Hill portion is set for construction bidding later in 2018. Aaron Cain stated that conversations earlier this year with NCDOT revealed a significant funding gap for completion of the project. Aaron Cain stated that LPA staff and local government staff recommends programming the entirety of the Regional Bicycle and Pedestrian fund, \$2.073M, to this project. Aaron Cain continued that 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 Chapel Hill side of this project (EB-4707 A) has already been through the call for projects for TAP-DA, which is why that source of funding can be used. Aaron Cain also stated that due to the TAP-DA funding being used on the Chapel Hill side, it would be necessary to use CMAQ funding for the Durham side of this project (EB-4704-B). Aaron Cain stated that MPO staff would review the existing distribution policy that would allow for more communities and projects to be eligible in future calls.

Vice Chair Margaret Hauth made a motion to recommend that the MPO Board authorize the programming of Regional Bicycle and Pedestrian Funds for FY18 and FY19 to EB-4707 A & B, Old Durham-Chapel Hill Road. Nishith Trivedi seconded the motion. The motion passed unanimously.

11. Amendment #6 to the FY2018-2027 TIP
Aaron Cain, LPA Staff

Aaron Cain stated that Amendment #6 to the FY2018-2027 TIP is comprised of four components: (1) reprogramming of CMAQ funds in order to ensure their obligation before September 30, 2019; (2) programming of TAP-DA and STBG-DA funds through the Regional Bicycle and Pedestrian set aside to EB-4707 A & B, Old Durham/Chapel Hill Road; (3) moving of funds from FY18 to FY19 for those projects that have not obligated their funds in FY18; and (4) several modifications and additions to STIP as requested by NCDOT. There was discussion about if Estes Road Bike/Ped (5886-A) was located in Carrboro or Chapel Hill. Geoff Green and Aaron Cain discussed that for Old Chapel Hill Road Bike/Ped (EB-4707A) a small amount of the terminus would be located in Durham County rather than Orange County. Geoff Green also asked why there is no right-of-way funding for the EB-4707A, Old Durham Road Bike/Ped. Chair Ellen Beckmann and Aaron Cain discussed the need to contact Division 5 concerning the \$85K of State funding for resurfacing the Old Chapel Hill project. Aaron Cain mentioned that C-5179 North Estes Drive, EB-4707A Old Durham Road Bike/Ped, and EB-4707B Old Chapel Hill Road Bike/Ped would need to have a 21-day public comment period because their funding changed by more than \$1M. Chair Ellen Beckmann suggested that the projects that require a 21-day public comment period be put into a separate TIP amendment so as not to confuse the Board. Aaron Cain agreed to do so for the MPO Board meeting.

Scott Whitehead made a motion to recommend approval of projects in Amendment #6 except for C-5179 and EB-4707 A&B, for which the TC recommends that the MPO Board release for a 21-day public comment period and be designated as TIP Amendment #7. Bergen Watterson seconded the motion. The motion passed unanimously.

12. STBG-DA Call for Projects for FY2019**Aaron Cain and Meg Scully, LPA Staff**

Aaron Cain stated that federal regulations require a competitive call for new projects that will utilize locally administered STBG funds to be entered into the MPO's Transportation Improvement Program (TIP). Aaron Cain continued that the DCHC MPO is therefore issuing a call for projects using the local discretionary portion FY2019 UPWP allocated funding to each jurisdiction within the MPO for local discretionary use. Aaron Cain added that the amounts in the Agenda are not correct, and that there is a revision that is located in supplemental material. Aaron Cain added that STBG-DA funding for 2018 is also included in the figure for the City of Durham. Aaron Cain stated that he will update the funding amounts available for the call soon after November 2, the due date for items to be submitted for UPWP funding. Aaron Cain added that projects for this call are due on November 30.

13. Surface Transportation Block Grant -Direct Attributable (STBG-DA) and Transportation Alternative Program (TAP) Funding Distribution for FY2020**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. Bergen Watterson asked if the funding in FY19 and FY20 is less than previous years. Meg Scully stated that the funding is consistent with funding from recent years. Meg Scully also stated that the STBG-DA and TAP distribution process is different for each jurisdiction within the MPO.

Nishith Trivedi made a motion to recommend that the MPO Board approve the FY20 Distribution of STBG-DA and TAP funds. Vice Chair Margaret Hauth seconded the motion. The motion passed unanimously.

REPORTS:

14. Reports from the LPA Staff

Andy Henry, LPA Staff

There was no report from LPA Staff.

15. Report from the DCHC MPO TC Chair

Ellen Beckmann, DCHC MPO TC Chair

There was no report from Chair Ellen Beckmann.

17. NCDOT Reports

The report from NCDOT Division 5 was presented with no questions or comments.

Ed Lewis, NCDOT Division 7, stated that the date for the second public meeting for the Orange Grove Road extension (U-5848) has not yet been scheduled. Ed Lewis announced that the public meeting of local officials for the Interchange improvements at I-40 and NC86 in Chapel Hill (I-3306AC) will occur on November 5 at the Southern Human Services Center.

Bryan Kluchar, NCDOT Division 8, stated that the SPOT Period 5.0 Division Needs preliminary points comment period began on August 24 and will last two weeks. Bryan Kluchar stated that the one week drop-in period begins on October 1 in the New Carthage office.

There was no report from the Transportation Planning Division.

There was no report from NCDOT Traffic Operations.

INFORMATIONAL ITEMS:

18. Recent News, Articles, and Updates

There were no informational items.

ADJOURNMENT:

314 There being no further business before the DCHC MPO Technical Committee, the meeting was
315 adjourned at 11:10am.

2045 Metropolitan Transportation Plan (MTP)
Re-adoption (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	1-5984 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 the re-adopted 20450 MTP:

- (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.

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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://arccg.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

PROJECT REVIEW COMMENTS FORM

Project Number:

Project Name: Triangle Regional Freight Plan

Project Manager(s): Andrew Henry

Project Phase: Planning Study Report

Consultant: WSP and Others

Review by: Transportation Department, City of Durham.

Date of Comments: 10/15/2018

Date of Response:

Link to access review documents:

<http://www.dchcmpo.org/civicax/filebank/blobdload.aspx?BlobID=30279>

COMMENTS

RESPONSES

1. For the various objectives given to attain the outlined freight plan goals, are there specific industry base measurements/LOS/Indices that can be given to act as a benchmark standard against which to establish whether the Triangle region is doing good or not in the future? For instance, what percentage of structrualy	1.
2. While EJ impact areas of the freight plan were well marked and various possible adverse effects identified, the recommendations section lack strategies on: <ul style="list-style-type: none"> How can these community areas be protected by varous mitigation measures like noise attenuation etc . How can the economic wellbeing and welfare of the identified community areas be enhanced to benefit from the freight industry, e.g. how can accessibility to jobs in freight cluster activities be improved for these community areas' working classes? 	2.
3. Were the EJ communities' residents identified and given a chance as a special focus group to provide input and/or share their freight-related plight in the course of the study or were they just expected to participate during the general public comment periods?	3.
4. The recommended freight network, including the SFC, covers a vast area of the Triangle region. This and given the fact that a majority of recommndations call for road lane	4.

additions/widening, identification of environmentally sensitive, historic and cultural resources areas should have been identified along with strategies to protect these resources from adverse impacts like fragmentation.	
5. While pipeline and other hazard material freight routes have been well identified, the recommendations section lack specific physical control and response practice strategies for various critical areas (e.g. areas with high concentration of residents & commercial centers) in case of accidental material spills to prevent contamination disasters .	5.
6. What specific recommendations are outlined for parking/loading and unloading strategies for the Triangle regions' major urban centers to abate unnecessary congestion, idling related emissions and conflict with active modes of transportation especially for trucking activity between the Triangle counties?	6.



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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

	Option 1	Option 2
I-40 Quadrants Segment	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>

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	<input type="checkbox"/>	<input type="checkbox"/>

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

	Option 1	Option 2
Segment Two: Chapel Hill Rd to University Dr	<input type="checkbox"/>	<input type="checkbox"/>

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

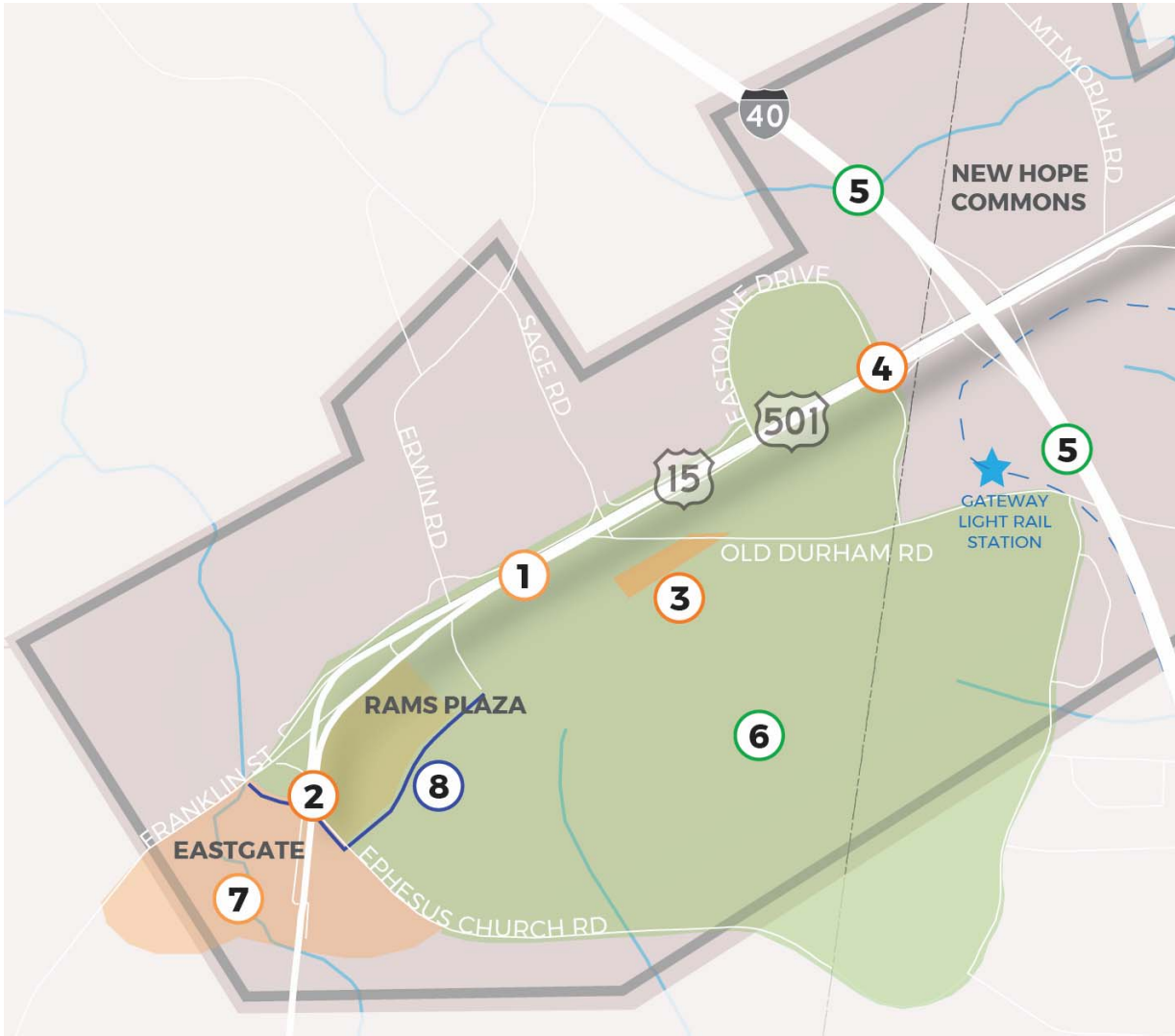
Fold along this line into thirds and mail



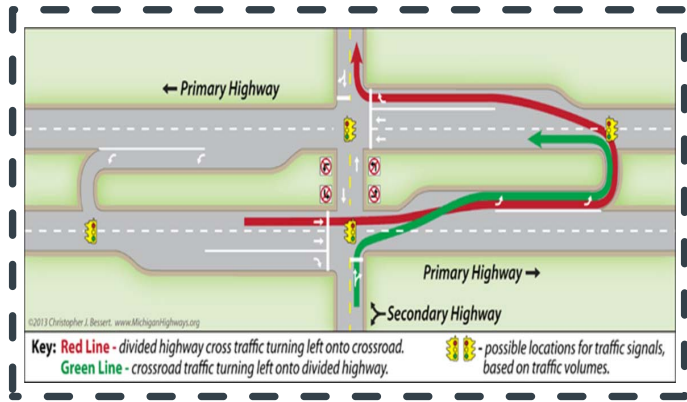
WSP
ATTN: Leta Huntsinger, Ph.D., PE,
434 Fayetteville Street, Suite 1500
Raleigh, NC 27601

US 15-501 SEGMENT ONE STRATEGIES

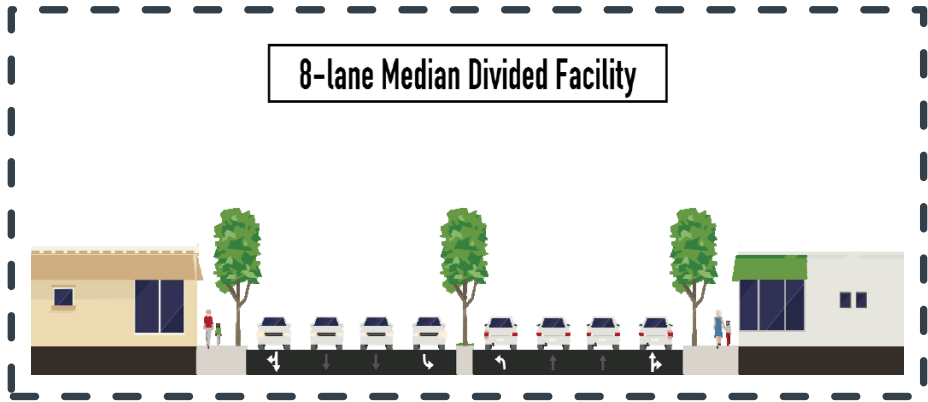
Ephesus Church Rd to I-40



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

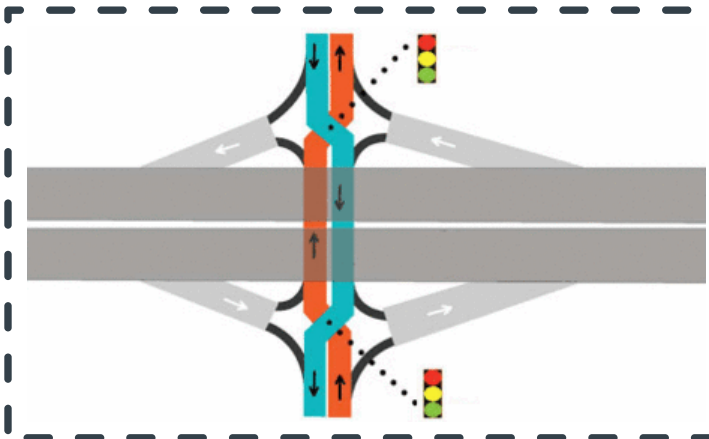


Grade Separated Pedestrian Crossing

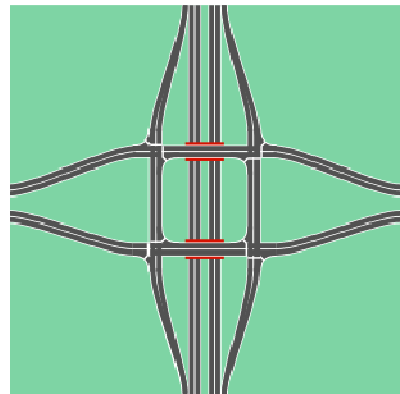
US 15-501 I-40 QUAD STRATEGIES



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



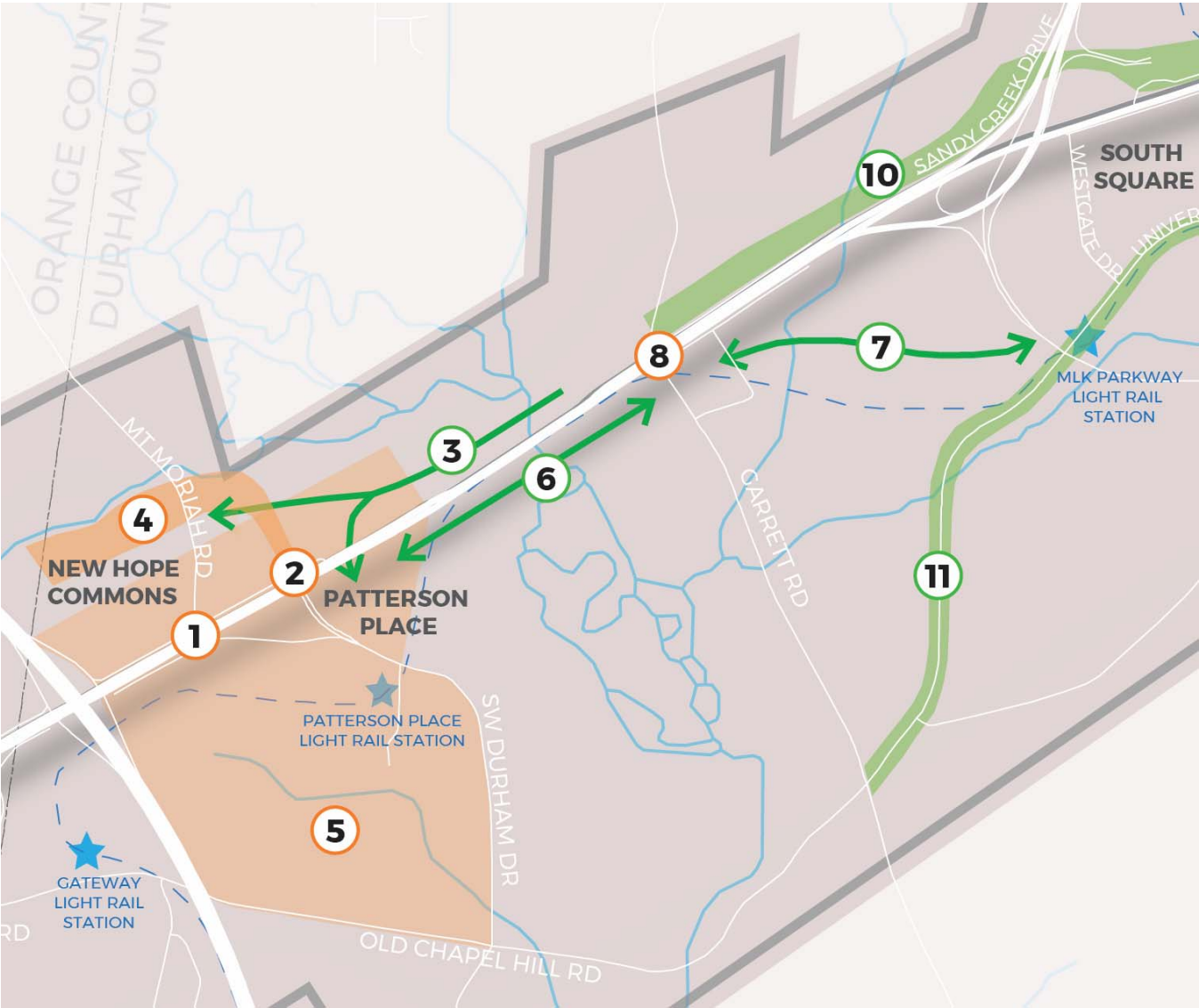
Split Diamond Intersection Diagram



Single Point Diamond Interchange

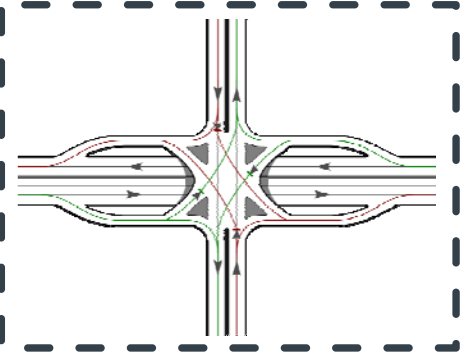
US 15-501 SEGMENT TWO STRATEGIES

I-40 to 15-501 Bypass



OPTION ONE

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 Carrett 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



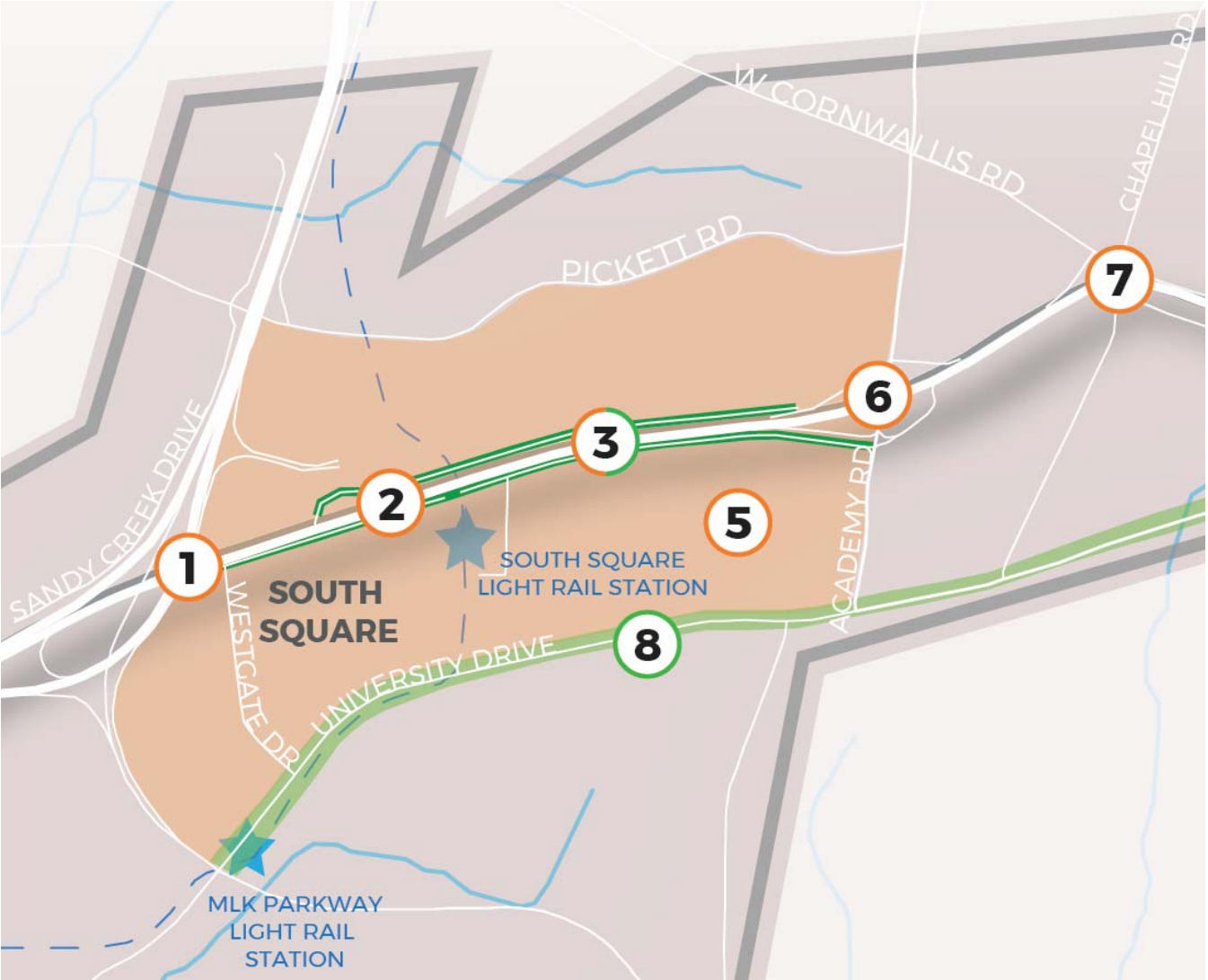
Bike/Pedestrian Under-pass



Multi-use

US 15-501 SEGMENT THREE STRATEGIES

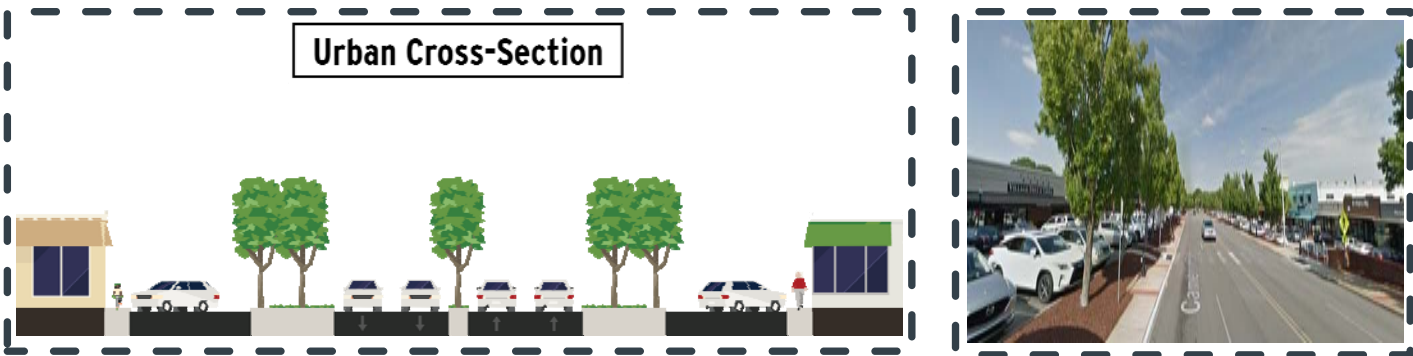
15-501 Bypass to Chapel Hill Road



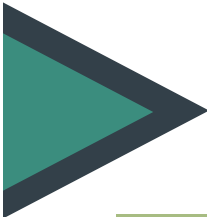
OPTION ONE		OPTION TWO	
Implement 2-lane roundabout to transition into a more urban street cross section		Implement other traffic calming measures to transition into a more urban street cross section	
Implement a fully multimodal 4-lane urban cross-section with landscaped median and roundabouts at key locations		Implement a 4-lane urban cross-section with landscaped median and traditional intersections	
Remove service roads to provide protected bike lanes and sidewalks from Westgate Drive to Chapel Hill Road		Convert service roads to linear park	
Implement high density mixed use development fronting US 15-501 Business		Implement high density mixed use development pattern	
Implement an urban street grid system to the north and south of US 15-501 Business			
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	
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	
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 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



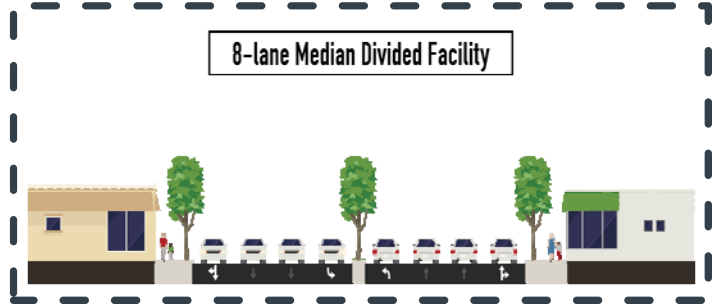
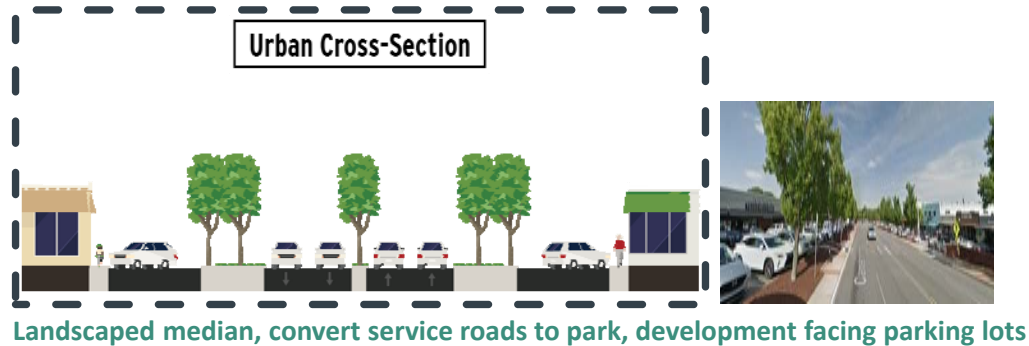
Protected Bike Lane



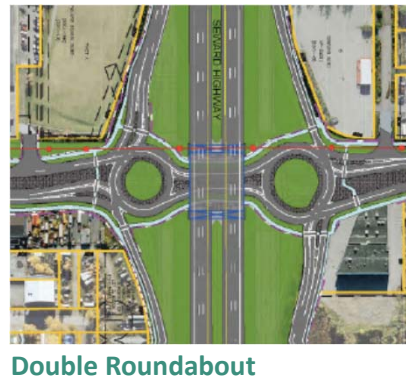
Bike/Pedestrian Facilities in Roundabout

US 15-501 15-501 Example Strategies

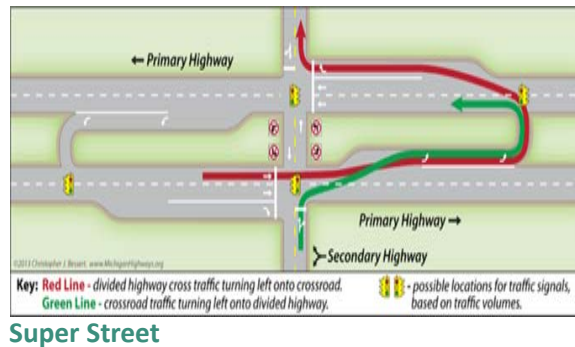
URBAN STREET



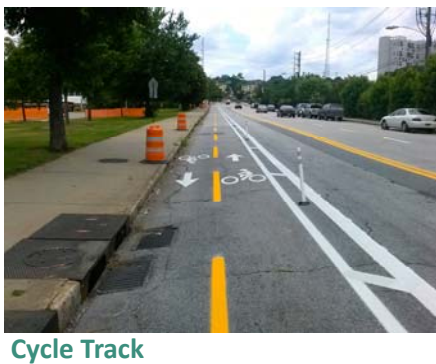
INTERCHANGE



INTERSECTION



BIKE/PEDESTRIAN



DCHC MPO Technical Committee

Proposed Allocation of Local Input Points for Division Needs Projects

<u>SPOT ID</u>	<u>Mode</u>	<u>Route/ Project</u>	<u>From</u>	<u>To</u>	<u>Description</u>	<u>Cost to NCDOT</u>	<u>Jurisdiction</u>	<u>SPOT Score</u>	<u>DCHC Points Assigned</u>	<u>Other PO Points Assigned</u>	<u>Final Score</u>	<u>Follows Methodology?</u>	<u>Reason</u>
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	0	68.16	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	0	66.35	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	0	65.51	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	0	65.44	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	0	65.24	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	0	65.08	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	0	64.91	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	0	64.82	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	0	60.78	Y	
H170122	Highway	SR 1321 (Hillandale Road)	SR 1443 (Horton Road)		Construct roundabout	\$ 2,600,000	Durham	35.45	100	0	60.45	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	0	58.85	N	Local priority
H140374-E	Highway	NC 54	SR 1937/SR 1107 Old Fayetteville Road		Improve intersection	\$ 1,700,000	Carrboro	31.70	100	0	56.70	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	0	56.48	N	Highest priority under Methodology to not receive
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	0	56.17	N	Local contribution could make project
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	0	54.19	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	0	52.42	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	0	55.35	Y	
T171425	Transit	Orange Public Transit additional vehicles	N/A	N/A	Purchase two light transit vehicles	\$ 97,560	Orange County	24.81	49	50	49.56	N	Considered a local priority
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	53	75.98	Y	

H172189	Highway	Division 5 Non-Municipal 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	0	68.50	N	Local priority that scored well
T171420	Transit	Chatham Transit additional vehicles	N/A	N/A	Purchase three new ramp-equipped minivans	\$ 126,900	Chatham County	33.52	9	91	58.52	Y	
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	0	42.71	Y	
H111013	Highway	I-40	NC 147	Wade Avenue	Construct Managed Lanes.	\$ 727,650,000	Durham	42.56	0	0	42.56	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	0	40.61	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	0	39.49	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	0	39.37	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	0	39.06	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	0	38.95	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	0	38.80	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	0	38.75	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	0	38.75	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	0	38.42	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	0	38.23	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	0	38.01	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	0	37.97	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	0	37.68	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	0	36.68	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	0	36.58	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	0	35.97	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	0	35.72	Y	
B172002	BikePed	Briar Creek Loop Trail & Connector	Briar Creek Parkway/Lumley Rd	Little Briar Creek	Construct 10' multi-use path along Little Briar Creek to connect to the Briarcreek Loop Trail	\$ 5,722,880	Raleigh, Durham	35.03	0	0	35.03	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	0	34.80	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	0	34.80	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	0	34.65	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	0	34.22	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	0	34.08	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	0	33.37	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	0	32.96	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	0	32.59	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	0	32.59	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	0	31.84	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	0	31.65	Y	
H170117	Highway	SR 1171 (Riddle Road)	SR 2100 (South Alston Avenue)		Construct roundabout	\$ 1,600,000	Durham	31.25	0	0	31.25	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	0	31.15	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	0	30.75	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	0	30.74	Y	
B170483	BikePed	NC 54, Alston Avenue	Cornwallis Road	RTP Trail	Construct bicycle lanes and sidewalks.	\$ 8,953,131	Durham	30.53	0	0	30.53	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	0	30.44	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	0	30.21	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	0	29.47	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	0	29.26	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	0	29.17	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	0	28.62	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	0	28.51	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	0	27.47	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	0	27.41	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	0	27.04	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	0	25.78	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	0	25.65	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	0	25.58	N	Project not competitive

H140374-D	Highway	NC 54	Neville Road		Improve intersection	\$ 1,100,000	Orange County	25.22	0	0	25.22	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	0	25.14	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	0	24.81	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	0	24.65	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	0	24.56	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	0	24.45	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	0	24.40	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	0	23.99	Y	
H149000-A	Highway	NC 54 (Raleigh Road)	US 15-501		Improve Interchange	\$ 28,000,000	Chapel Hill	23.51	0	0	23.51	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	0	23.03	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	0	22.92	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	0	22.86	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	0	22.59	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	0	22.36	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	0	22.30	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	0	21.97	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	0	21.88	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	0	21.70	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	0	20.88	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	0	19.99	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	0	19.26	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	0	19.22	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	0	17.16	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	0	15.93	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	0	15.44	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	0	14.36	Y	
H170804	Highway	US 70	US 70 Connector		Reconstruct interchange to an at-grade intersection.	\$ 8,200,000	Orange County	13.03	0	0	13.03	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	0	12.46	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	0	10.73	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	0	7.36	Y	

1800

**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

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

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.

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

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.

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	\$529,313	\$0	\$132,329	\$661,642
			\$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
			\$0	\$0	\$0	\$0
Funding Totals:			\$601,913	\$0	\$150,479	\$752,392

Total Project
Cost

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.

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

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

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.

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

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.

**REVISIONS TO THE 2018-2027 STIP
HIGHWAY PROGRAM**

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

STIP MODIFICATIONS

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

* INDICATES FEDERAL AMENDMENT

Thursday, October 11, 2018



Durham - Chapel Hill - Carrboro
Metropolitan Planning Organization Technical Committee
October 24, 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.

**RESOLUTION TO REQUEST THE TRANSFER OF
FUNDS FROM FEDERAL HIGHWAY ADMINISTRATION (FHWA) TO FEDERAL
TRANSIT 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

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 "TAM Targets for DCHC MPO."

NOW THEREFORE, BE IT FURTHER RESOLVED, that the DCHC MPO's 2045 Metropolitan Transportation Plan references this resolution to incorporate these targets into the 2045 MTP.
(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

Note: Some of these values are still being worked out and thus are likely to change for the Technical Committee meeting.

TAM Targets for DCHC MPO

(November 14, 2018)

Technical Committee 10/24/2018 Item 13

		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	0	N/A	8	20%	8	13%
	BU - Bus (61)	14	18%	14	10%	14	13%
	CU - Cutaway Bus (47)	32	55%	10	20%	10	13%
	MB - Mini-bus	0	N/A	10	20%	10	13%
	MV - Mini-van (3)	0	0%	8	20%	8	13%
	SV - Sport Utility Vehicle	0	N/A	8	20%	8	13%
	VN - Van	0	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 (9 Ope+3 Adm)	2	0%	8	20%	8	22%
	Steel Wheel Vehicles	0	N/A	8	20%	8	22%
	Trucks and other Rubber Tire Vehicles (6)	1	0%	8	20%	8	22%
	Maintenance Equipment	5	50%	TBD	20%	TBD	22%
	Computer Software	5	50%	TBD	20%	TBD	22%
	Custom 1	(no custom assets)	N/A	TBD	20%	TBD	22%
FACILITIES							
Condition -- % of facilities with a condition rating above 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	(no benchmark)	100%	(no benchmark)	20%	(no benchmark)	100%
	Maintenance	(no benchmark)	100%	(no benchmark)	20%	(no benchmark)	100%
	Parking Structures	(no benchmark)	N/A	(no benchmark)	20%	(no benchmark)	100%
	Passenger Facilities	(no benchmark)	100%	(no benchmark)	20%	(no benchmark)	100%
	Shelter	(no benchmark)	50%	(no benchmark)	20%	(no benchmark)	100%
	Storage	(no benchmark)	100%	(no benchmark)	20%	(no benchmark)	100%
	Custom 1	(no benchmark)	N/A	(no benchmark)	20%	(no benchmark)	100%

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

Usefull Life Benchmark values are in years.

GoTriangle Transit Asset Management Plan

Focusing on the Management of Our Transit Investments



Latest 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.

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.

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

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.

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.

DATA ENTRY KEY:

Input Cell

Error

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 <i>All revenue vehicles</i>	Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	13%
Equipment <i>Non-revenue vehicles</i>	Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	22%
Facilities <i>All buildings or structures</i>	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 question to 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 environment for its 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 equipment 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	Administrati on	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	Administrati on	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

FTA Transit Asset Management Guide for Small Providers

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

FTA Transit Asset Management Guide for Small Providers

10/15/2018 2:21 PM

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

FTA Transit Asset Management Guide for Small Providers

10/15/2018 2:21 PM

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

FTA Transit Asset Management Guide for Small Providers

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

FTA Transit Asset Management Guide for Small Providers

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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
	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	
Agency	Bus Operations & Maintenance Facility	BOMF	BOMF	18	3	\$12,500,000.00	35	No	
Agency	Passenger waiting	Ticket Building	TickBldg	1	4	\$277,000.00	50	No	
Agency	Administration	Plaza	Plaza	33	3	\$3,774,000.00	50	No	
Agency									
Agency									
Agency									
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Condition Table

rogate 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

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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

FTA Transit Asset Management Guide for Small Providers

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

FTA Transit Asset Management Guide for Small Providers

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 sufficient 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.

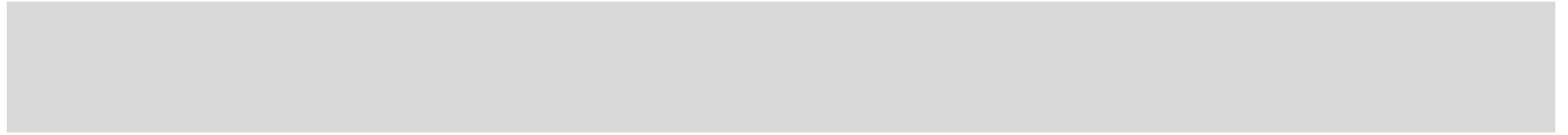
Asset Category/Class	Overhaul Strategy
30ft Bus	Mid-life overhaul - rebuilds bus engine, transmission and electronics, replaces chassis parts and seats, and repaints the body, restoring the bus to an "as new" condition. Cost is about \$120,000 per bus.
40ft / 35ft Buses	Vehicles are kept in a like new condition. All defects noted on preventative maintenance inspection are repaired. Goal is to repair any known defect on the bus. Vehicle damage is prioritized 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 prioritized 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, because 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 their planned useful life. The details of our plan are outlined in the Bus Fleet Management 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

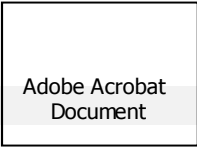
Project Year	Project Name	Asset/Asset Class	Cost	Priority
2016	Diesel-Hybrid Bus Acquisition	30ft Bus	\$5,000,000.00	Medium
2018	Clean Diesel Bus Procurement	40ft	\$2,500,000.00	High
2018	Paratransit Vehicle Procurement	LTV	\$320,000.00	High
2018	Support Vehicles	Support Vehicles	\$68,000.00	Medium
2018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



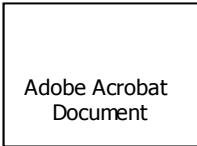
Adobe Acrobat
Document

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 Manager

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 <i>All revenue vehicles</i>	Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	0.13
Equipment <i>Non-revenue vehicles</i>	Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	0.22
Facilities <i>All buildings or structures</i>	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 environment for its 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
Patrick Stephens / Brian Mcleansit	Director / Fleet Maintenance Mana	Bus Agency
Gary Tober	Real Estate Manager	Bus Agency
Sandra 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 replacement	Increase budget for maintenance expenditures to keep vehicles
Increase of errors related to manual data entry	Purchase a facility module that integrates with existing main
Lack of sufficient funding to keep technology current	Increase budget for technology components and training.

Maintenance Strategy

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	mission maintenance	72,000 mi	7	\$400-\$5,000
BOMF & RTC	preventative maintenance	based on OEM requirements	120	\$3,500

Unplanned Maintenance Approach

Building systems and vehicles are repaired based on the priority of the defect. The goal of our maintenance is to keep assets in a like new condition.

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

City of Durham Transit Asset Management Plan

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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.

City of Durham Transit Asset Management Plan

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 <ul style="list-style-type: none"> ○ 44% of rolling stock meets or exceeds Useful Life Benchmark (ULB) Equipment <ul style="list-style-type: none"> ○ 78% of equipment meets or exceeds ULB Facility <ul style="list-style-type: none"> ○ 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
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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

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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

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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

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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 <ul style="list-style-type: none"> ○ 44% of rolling stock reached ULB Equipment <ul style="list-style-type: none"> ○ 78% equipment reached ULB Facility <ul style="list-style-type: none"> ○ 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).

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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 <i>do not exceed</i> 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 equipment 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

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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

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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 Service	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

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High	F-29	2010	FORD CHAMPION 22FT LTV	1FDFE4FS5ADA231 62	7/1/2010	6/1/2015	4	7	100,000	230,584	60,000
High	F-30	2010	FORD CHAMPION 22FT LTV CDL	1FDFE4FS1ADA347 25	7/1/2010	6/1/2015	4	7	100,000	227,196	60,000
High	F-31	2010	FORD CHAMPION 22FT LTV	1FDFE4FS7ADA347 28	7/1/2010	6/1/2015	4	7	100,000	286,823	60,000
High	F-33	2010	FORD CHAMPION 22FT LTV	1FDFE4FS9ADA347 29	7/1/2010	6/1/2015	4	7	100,000	262,458	60,000
High	F-34	2010	FORD CHAMPION 22FT LTV	1FDFE4FS6ADA347 19	7/1/2010	6/1/2015	4	7	100,000	269,571	60,000
High	F-37	2010	FORD CHAMPION 22FT LTV	1FDFE4FS5ADA347 27	7/1/2010	6/1/2015	4	7	100,000	283,924	60,000
High	F-41	2010	FORD CHAMPION 20FT LTV	1FDEE3FLXADA127 54	7/1/2010	6/1/2015	4	7	100,000	314,910	60,000
High	F-42	2010	FORD CHAMPION 22FT LTV	1FDFE4FS4ADA347 21	7/1/2010	6/1/2015	4	7	100,000	224,991	60,000
High	F-43	2010	FORD CHAMPION 22FT LTV	1FDFE4FS6ADA347 22	7/1/2010	6/1/2015	4	7	100,000	227,196	60,000
High	F-49	2010	FORD CHAMPION 20FT LTV	1FDEE3FL8ADA154 09	7/1/2010	6/1/2015	4	7	100,000	299,578	60,000
High	F-50	2010	FORD CHAMPION 20FT LTV	1FDEE3FL6ADA231 67	7/1/2010	6/1/2015	4	7	100,000	293,260	60,000
High	F-51	2010	FORD CHAMPION 20FT LTV	1FDEE3FL4ADA154 10	7/1/2010	6/1/2015	4	7	100,000	294,994	60,000
Medium	H-23	2011	FORD CHAMPION 22FT LTV	1FDFE4FLOBDA828 73	7/1/2011	6/1/2016	4	6	100,000	183,490	60,000
Medium	H-25	2011	FORD CHAMPION 22FT LTV	1FDFE4FL1BDA828 79	7/1/2011	6/1/2016	4	6	100,000	215,839	60,000
Medium	H-38	2011	FORD CHAMPION 22FT LTV	1FDFE4FL8BDA828 77	7/1/2011	6/1/2016	4	6	100,000	125,814	60,000
Medium	H-39	2011	FORD CHAMPION 22FT LTV	1FDFE4FL8BDA828 80	7/1/2011	6/1/2016	4	6	100,000	144,492	60,000
Medium	H-44	2011	FORD CHAMPION 22FT LTV	1FDFE4FL4BDA828 75	7/1/2011	6/1/2016	4	6	100,000	215,925	60,000
Medium	H-45	2011	FORD CHAMPION 22FT LTV	1FDFE4FLX8BDA828 78	7/1/2011	6/1/2016	4	6	100,000	154,342	60,000
Medium	H-46	2011	FORD CHAMPION 22FT LTV	1FDFE4FL9BDA828 72	7/1/2011	6/1/2016	4	6	100,000	151,034	60,000
Medium	H-52	2011	FORD CHAMPION 22FT LTV	1FDFE4FL2BDA828 74	7/1/2011	6/1/2016	4	6	100,000	141,153	60,000
Medium	H-53	2011	FORD CHAMPION 22FT LTV	1FDFE4FLX8BDA828 81	7/1/2011	6/1/2016	4	6	100,000	97,078	60,000
Medium	H-54	2011	FORD CHAMPION 22FT LTV	1FDFE4FL1BDA828 82	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
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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

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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

City of Durham Transit Asset Management Plan

- 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 <i>All revenue vehicles</i>	Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	10
Equipment <i>Non-revenue vehicles</i>	Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	10
Facilities <i>All buildings or structures</i>	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 Schwarzauser	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

[illegible]

[illegible][illegible]

[illegible][illegible]

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Appendix B: Asset Condition Data

Equipment Assets

[illegible]

[illegible]

[illegible]

[illegible]

Facilities Assets

[illegible]

[illegible]

[illegible]

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

[illegible]

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 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 the DCHC MPO's 2045 Metropolitan Transportation Plan references this resolution to incorporate these targets into the 2045 MTP.

(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, 2017; 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 the DCHC MPO's 2045 Metropolitan Transportation Plan references this resolution to incorporate these targets into the 2045 MTP.

(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.

April 5, 2018

Performance Management Agreement

between

Durham-Chapel Hill-Carrboro MPO,

**Chapel Hill Transit, Chatham County Transit, Durham County Access, GoDurham, GoTriangle,
Orange Public Transit, and**

the North Carolina Department of Transportation (NCDOT)

WHEREAS, the United States Department of Transportation promulgated transportation planning regulations in 23 CFR 450.314, and

WHEREAS, MPO(s), State(s), and providers of public transportation are required by 23 CFR 450.314 to cooperatively determine their mutual responsibilities in carrying out the performance-based planning and programming requirements established by federal law, and

WHEREAS, the 23 CFR 450.314(h) requires that Metropolitan Planning Organizations (MPO)(s), State(s), and providers of public transportation shall jointly agree upon and develop specific written procedures for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress toward achievement of critical outcomes for the region of the MPO, and the collection of data for the State asset management plan for the National Highway System (NHS).¹

NOW, THEREFORE, BE IT RESOLVED, that the parties do hereby agree to adhere to the following protocols for coordination to meet performance-based planning and programming requirements in accordance with 23 CFR 450 and established federal guidance.

1) Transportation performance data

- a. NCDOT will collect and provide (or otherwise make available) to the DCHC MPO and the providers of public transportation, with data used in developing statewide targets for all applicable measures.
- b. If the MPO chooses to develop its own target for any measure, DCHC MPO will collect and provide NCDOT with any supplemental data used in association with the MPO target setting process, if applicable.

¹ For definitions of performance “targets” and other terms in this agreement, see 23 CFR 490.101.

2) Selection of transportation performance targets

- a) NCDOT, the MPO, and the provider(s) of public transportation will set performance targets in coordination with each other.
 - (i) Coordination will include as many of the following opportunities as deemed appropriate for the measure: in-person meetings, webinars, conference calls, work group/committee representation, and email/written communication.
 - (ii) For each performance measure, MPO's shall establish a target by either agreeing to plan and program projects so that they contribute toward the accomplishment of NCDOT's target for that performance measure, or commit to a quantifiable target for that performance measure for their metropolitan planning area (23 CFR 490.209 (c)(4)).
 - (iii) Per 23 CFR 490.209 (c) (5), MPO's that establish quantifiable fatality rate or serious injury rate targets shall report the VMT estimate to NCDOT used for such targets and the methodology used to develop the estimate. The methodology should be consistent with other Federal reporting requirements, if applicable.
 - (iv) If the MPO chooses to set its own target, the MPO will develop the target in coordination with NCDOT and the provider(s) of public transportation.
- b) The NCDOT will set statewide performance targets to meet the federal performance management requirements
 - (i) The NCDOT will provide written notice to the MPO when NCDOT sets a target. This notice will provide the targets and the date NCDOT set the target, which will begin the 180-day time-period in which the MPO must set performance targets.
 - (ii) If the MPO chooses to support the statewide or provider(s) of public transportation targets, the MPO will provide documentation in the form of a support resolution to NCDOT and the provider(s) of public transportation that the MPO agrees to plan and program projects that will contribute toward the achievement of the statewide and/or provider(s) of public transportation targets.
 - (iii) If the MPO chooses to set its own target(s), the MPO will provide NCDOT and the provider(s) of public transportation documentation (in the form of a signed resolution) that includes the target(s) and when the MPO established those target(s).

- c) Provider(s) of public transportation Targets:
- i) The Tier 1 providers of public transportation will establish performance targets to meet the federal performance management requirements for transit asset management and transit safety (pending final rule). Tier 1 transit providers are defined in 23 CFR 625.5.
 - ii) The provider of public transportation will provide written notice to the MPO and NCDOT when they establish target(s). This notice will provide the targets and the date the target was set. The date the initial targets were set will begin the 180-day time-period within which the MPO must establish their transit-related performance targets. MPO's may choose to update their targets when the provider(s) of public transportation updates their targets, or when the MPO amends their Metropolitan Transportation Plan (MTP). At a minimum, an MPO shall update their transit-related targets when the MPO updates the MTP by extending the MTP's horizon year in accordance with 23 CFR 450.324 (c).
 - iii) If the MPO chooses to support the provider(s) of public transportation target(s), the MPO will provide to NCDOT and the provider of public transportation documentation in the form of a support resolution duly considered by the MPO's governing body that the MPO agrees to plan and program MPO projects so that they contribute toward achievement of the transit provider's target.
 - iv) For Tier 2 providers of public transportation that choose to participate in NCDOT's group plan: NCDOT shall notify MPOs and those participating Tier 2 providers within 30 days of establishment of transit-related targets. The MPO will provide documentation to NCDOT and the provider of public transportation of target establishment or support in the form of a resolution duly considered by the MPO's governing body. Tier 2 transit providers are defined in 23 CFR 625.5.

3) Reporting of performance targets

- a. Reporting of targets and performance will be done as specified in 23 CFR 490, 23 CFR 450, 49 CFR 625, and 49 CFR 673.
- b. NCDOT will report all targets to FHWA and FTA as applicable. NCDOT will provide written notice of the targets to the MPO within 15 business days of reporting targets.
- c. The MPOs will report any MPO targets to NCDOT within 15 business days after the MPO establishes a target. The MPO will provide documentation of target

establishment to NCDOT and the provider of public transportation in the form of a resolution duly considered by the MPO's governing body.

- d. The MPO agrees to report their annually established safety targets to NCDOT within 15 business days of establishment. (23 CFR 490.209(c)). Establishment of targets shall be evidenced by a signed resolution from the MPO's governing board.
- 4) Reporting of performance to be used in tracking progress toward achievement of critical outcomes for the region of the MPO.
- a. Where available and practicable, NCDOT will provide the MPO with the statewide performance data used in developing statewide targets. All updates of this data will include prior performance data, as available and practicable.
 - b. If MPO sets a different target than the statewide target the MPO will provide NCDOT with MPO-wide performance data used to develop the target. All updates of performance data by the MPO will include prior performance data.
 - c. Where applicable, the MPO will provide data to NCDOT for the CMAQ on-road emissions measure.
 - d. Where applicable, the MPO will provide NCDOT and the provider of public transportation with a copy of the CMAQ Performance Plan at least 45 days prior to when NCDOT's performance period reports are due per 23 CFR 490.107. As applicable, NCDOT will include as an attachment the MPO's CMAQ Performance Plan as a part of NCDOT's performance period report.
- 5) The collection of data for the State asset management plans for the NHS
- a. NCDOT will be responsible for the collection of bridge and pavement condition data for the State asset management plan for the NHS. This includes NHS roads are that are not on a State highway system but instead are under the ownership of local jurisdictions, if such roads exist.
- 6) All parties agree that email communications shall be considered written notice for all portions of this agreement.
- 7) The State, MPO, and providers of public transportation are responsible for financial planning that demonstrates how MTP's and TIP's can be implemented consistent with principles of fiscal constraint. Federal requirements (23 CFR 450.314(a)) direct that specific provisions be agreed upon for cooperatively developing and sharing information for development of financial plans to support the MTP (23 CFR 450.324) and metropolitan TIP (23 CFR 450.326), as well as development of the annual listing

of obligated projects (23 CFR 450.334). For purposes of this agreement, the following shall not apply to providers of public transportation:

- a) To support the development of the financial plan for the MTP, the North Carolina Department of Transportation (NCDOT) shall provide the MPO with a listing of the most recent 10-year historical funding for the Counties located within the MPO boundary categorized by funding source. The MPO will review the historical information and extrapolate the funding trends for the MTP's planning horizon while considering other factors that may affect a reasonable funding forecast. The MPO shall add any local or private funding sources reasonably expected to be available during the planning horizon. If the MPO recommends any alternative financing strategies to fund the projects and programs in the MTP, they shall be identified and included in the MTP. In the case of new funding sources, strategies for ensuring their availability shall be identified and documented. If a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), the MPO will not act on a full update or amended MTP and/or TIP that does not reflect the changed revenue situation. Updates or amendments to a TIP or the STIP are acceptable as long as the changes don't involve the removed or reduced sources of funding.
- b) Annual Obligation Report: Within 90 days after the close of a federal fiscal year, NCDOT shall provide the MPO with the information needed to be included in the annual listing of obligated projects. The MPO shall publish the annual listing of obligated projects on their web site and in accordance with any other procedures outlined in their Public Participation Plan to ensure adequate access by the public and other interested stakeholders. To the extent possible, this report will contain the projects (including investments in pedestrian walkways and bicycle transportation facilities) for which federal highway or transit funds were obligated in the preceding program year. It shall include all federally funded projects authorized, including those revised to increase obligations in the preceding program year. At a minimum, it shall include:
 - i) TIP project description and implementing agency information,
 - ii) Identify for each project, the amount of Federal funds requested in the TIP/STIP,
 - iii) the Federal funding that was obligated during the preceding year,
 - iv) and the Federal funding remaining and available for subsequent years.

[signature page to follow]

Signature page

Representation on Authority of Parties/Signatories.

Each person signing this Agreement represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement. Each party represents and warrants to the other that the execution and delivery of the Agreement and the performance of such party's obligations hereunder have been duly authorized and that the Agreement is a valid and legal agreement binding on such party and enforceable in accordance with its terms.

Damon Seils, DCHC MPO Board Chair

Date

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 and Submission of Division Needs points – 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
- Plan Adoption – November 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
- Prepare Market Analysis
- 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: 9.24%	
Work Began: 02/26/2015		Letting Date: 11/18/2014	
Original Completion Date: 05/10/2020		Revised Completion Date:	
Latest Payment Thru: 09/22/2018		Scheduled Progress: 70.91%	
Latest Payment Date: 10/02/2018		Actual Progress: 70.86%	

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: 2.77%	
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: 09/15/2018		Scheduled Progress: 42.1%	
Latest Payment Date: 09/25/2018		Actual Progress: 33.26%	

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: 08/31/2018		Scheduled Progress: 65.5%	
Latest Payment Date: 09/13/2018		Actual Progress: 69.46%	

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	
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%	
Work Began: 07/02/2018		Letting Date: 05/15/2018	
Original Completion Date: 11/30/2019		Revised Completion Date:	
Latest Payment Thru: 10/01/2018		Scheduled Progress: 20%	
Latest Payment Date: 10/05/2018		Actual Progress: 20.88%	

Contract Number: DE00173		Route: SR-1104	
Division: 5		County: Durham	
TIP Number: W-5205V			
Length: 0 miles		Federal Aid Number: HSIP-1104(19)	
NCDOT Contact: James M. Nordan, PE		NCDOT Contact No: (919)220-4680	
Location Description: SR 1104/SR 1105 (HERNDON RD) AT SR 1106 (MASSEY CHAPEL/ BARBEE RD) IN DURHAM COUNTY			
Contractor Name: TRIANGLE GRADING & PAVING INC			
Contract Amount: \$1,046,988.75		Cost Overrun/Underrun: 18.91%	
Work Began: 05/01/2017		Letting Date: 11/09/2016	
Original Completion Date: 08/18/2017		Revised Completion Date: 11/05/2017	
Latest Payment Thru: 09/15/2018		Scheduled Progress: 100%	
Latest Payment Date: 09/25/2018		Actual Progress: 87.33%	

Contract Number: DE00206		Route: SR-1308	
Division: 5		County: Durham	
TIP Number:			
Length: 0.23 miles		Federal Aid Number:	
NCDOT Contact: Cameron D. Richards		NCDOT Contact No: (919)835-8200	
Location Description: BRIDGE #117 OVER MUD CREEK SR 1308 (CORNWALLIS ROAD)			
Contractor Name: DANE CONSTRUCTION INC			
Contract Amount: \$919,328.69		Cost Overrun/Underrun: 19.81%	
Work Began: 05/09/2018		Letting Date: 12/13/2017	
Original Completion Date: 02/24/2019		Revised Completion Date: 04/04/2019	
Latest Payment Thru: 09/15/2018		Scheduled Progress: 100%	
Latest Payment Date: 09/25/2018		Actual Progress: 79.12%	

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: 56.23%	
Work Began: 03/13/2018		Letting Date: 10/11/2017	
Original Completion Date: 11/01/2018		Revised Completion Date:	
Latest Payment Thru: 08/22/2018		Scheduled Progress: 100%	
Latest Payment Date: 08/28/2018		Actual Progress: 76.06%	

Contract Number: DE00248		Route: SR-1637	
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Division: 5 TIP Number: Length: 0.18 miles NCDOT Contact: James M. Nordan, PE Location Description: BRIDGE #72 IN DURHAM COUNTY Contractor Name: DANE CONSTRUCTION INC Contract Amount: \$1,123,051.10 Work Began: 06/14/2018 Original Completion Date: 03/21/2019 Latest Payment Thru: 10/07/2018 Latest Payment Date: 10/15/2018	County: Durham Federal Aid Number: 15005.1032011 NCDOT Contact No: (919)220-4680 Cost Overrun/Underrun: 4.21% Letting Date: 05/23/2018 Revised Completion Date: Scheduled Progress: 100% Actual Progress: 91.6%
Contract Number: DE00253 Division: 5 TIP Number: W-5705K Length: 0 miles NCDOT Contact: James M. Nordan, PE Location Description: SR 1327 (GREGSON ST) AND LAMOND AVE Contractor Name: TRAFFIC CONTROL DEVICES INC Contract Amount: \$0.00 Work Began: 09/01/2018 Original Completion Date: 02/28/2019 Latest Payment Thru: Latest Payment Date:	Route: - County: Durham Federal Aid Number: HSIP-1327(006) NCDOT Contact No: (919)220-4680 Cost Overrun/Underrun: 0% Letting Date: 07/25/2018 Revised Completion Date: Scheduled Progress: 0% Actual Progress: 0%
Contract Number: DE00255 Division: 5 TIP Number: W-5705C Length: 0 miles NCDOT Contact: James M. Nordan, PE 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 Work Began: 08/06/2018 Original Completion Date: 12/21/2018 Latest Payment Thru: 09/07/2018 Latest Payment Date: 09/12/2018	Route: US-501 County: Durham Federal Aid Number: HSIP-0501(046) NCDOT Contact No: (919)220-4680 Cost Overrun/Underrun: 0.99% Letting Date: 05/23/2018 Revised Completion Date: Scheduled Progress: 14.8% 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 SOUTHERN 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 IN RALEIGH. BRIDGE PRESERVATION/REHABILITATION. COORDINATE WITH I-5998 & I-5999.		DOUGLAS R. MCNEAL	\$4,541,000		
02/22	U-5934	Design Build	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	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	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	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	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	Utility coordination underway, R/W certified with delay of entries, Project let and received no bids, Re-let scheduled 9/6/18	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	Dec. 2018	Jun. 2019	\$189,000	Planning and design activities underway - 75% plans complete, R/W acquisition - 15% complete	Chad Reimakoski
I-5822 50465.1.1 50465.3.1	Pavement Rehabilitation on I-40 from I-85 to East of SR 1734 (Erwin Road)	1/15/2019	FY 2020	\$12,450,000	Project to be completed under I-3306A	Chris Smitherman
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	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
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.	Summer 2019	Fall 2019	\$261,000	Planning and design activities underway	Chad Reimakoski

NCDOT DIV 7 PROJECTS LOCATED IN DCHCMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status	Project Lead
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	6/30/2019	Aug. 2019	\$395,000	Planning and design activities underway, re-let due to bids exceeded engineers estimate, new let date pending - tentative June 2019	Chad Reimakoski
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
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

NCDOT DIV 7 PROJECTS LOCATED IN DCHCMPO - UNDER DEVELOPMENT

TIP/WBS #	Description	Let/Start Date	Completion Date	Cost	Status	Project Lead
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.

<u>Contract Number</u>	<u>TIP Number</u>	<u>Location Description</u>	<u>Contractor Name</u>	<u>Resident Engineer</u>	<u>Contract Bid Amount</u>	<u>Availability Date</u>	<u>Completion Date</u>	<u>Work Start Date</u>	<u>Estimated Completion</u>	<u>Progress Schedule</u>	<u>Completion Percent</u>
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.

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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