DCHC

DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION

Member Governments
Town of Carrboro
Town of Chapel Hill
County of Chatham
City of Durham
County of Durham
Town of Hillsborough
NC Department of Transportation
County of Orange

DURHAM – CHAPEL HILL-CARRBORO METROPOLITAN PLANNING ORGANIZATION TECHNICAL COORDINATING COMMITTEE (TCC)

August 28, 2013
9:00 a.m.

Committee Room
2nd Floor Durham City Hall

1. **Roll Call**
2. **Ethics Reminder**
   In accordance with the State Government Ethics Act, it is the duty of every Board member to avoid conflicts of interest. Does any Board member have any known conflict of interest with respect to any matters coming before the Board today? If so, please identify the conflict and refrain from any participation in the particular matter involved.
3. **Adjustments to the Agenda**
4. **Public Comments**

CONSENT AGENDA

5. **Approval of July 24, 2013 TCC Meeting Minutes**
   Attachment 5
   A copy of the July 24, 2013 minutes is enclosed as Attachment 5.

   TCC Action: Approve minutes of the July 24, 2013 TCC meeting.

ACTION ITEMS

6. **TIP Update/Spot 3.0 Prioritization**
   Attachment 6, 6A, 6B, 6C, 6D, 6E and 6F
   Andy Henry, LPA Staff

   In 2011 and 2012, the MPO completed the prioritization process for the FY 2014-2020 Transportation Improvement Plan (TIP) by completing the MPO prioritization, receiving scores from the NCDOT prioritization (called SPOT 2.0), and awarding points to selected projects. New federal and pending state transportation legislation forced the cancellation of the FY14-20 TIP process.

   The new TIP planning and approval process, which is based on the new State Mobility Formula (SMF), is shown in Attachment 6. The next step for the MPO is to submit projects for the SPOT 3.0 prioritization process by the end of January 2014. The MPO can submit up to 14 new highway and 20 new bicycle or pedestrian projects, and an unlimited number of transit projects to NCDOT for prioritization. Bicycle, pedestrian and transit projects that were previously submitted to SPOT will be removed from the prioritization system and therefore any desired

projects will need to be resubmitted. The previously submitted highway projects will remain in the system for prioritization in SPOT 3.0 (i.e., the new prioritization process).

There are several issues that need to be resolved in this next MPO prioritization process. For example, Should the MPO keep its current prioritization criteria and weights? Or, should the MPO make changes to reflect the SMF. The TCC needs to direct the TIP subcommittee to discuss these issues and provide a recommended process and schedule to the TCC.

Detailed information on the new SPOT 3.0 and DCHC MPO prioritization methods are in the following attachments:

- Attachment 6A – STI: Overall framework of new State Strategic Transportation Initiative (STI);
- Attachment 6B – SPOT: New SPOT Scoring Criteria (draft);
- Attachment 6C – SPOT: Presentation on SPOT 3.0 highway scoring, including comparison with previous scoring (SPOT 2.0);
- Attachment 6D – SPOT: Presentation on SPOT 3.0 non-highway scoring, including comparison with previous scoring (SPOT 2.0);
- Attachment 6E – MPO: MPO Prioritization Methodology (used for FY14-20 TIP);
- Attachment 6F – MPO: MPO's Priority List for FY 14-20 TIP (October 2012), including MPO and SPOT priority points.

TCC Recommendation: Direct the TIP subcommittee to provide a prioritization process and schedule.

7. 2045 MTP/Socioeconomic Data
Attachment 7
Andy Henry, LPA Staff

Although the updated Metropolitan Transportation Plan (MTP) does not have to be adopted until June 2017, activities to support that effort have already begun. Attachment 7 summarizes the long-term schedule and the next steps, including training in September 2013 for local planners to use an online application to identify the location of employment.

TCC Recommendation: Receive report and provide comments.

8. Transportation Alternatives Program (TAP)
Attachment 8
Andy Henry, LPA Staff

MAP-21 created the Transportation Alternatives Program (TAP), which replaces the Transportation Enhancements, Safe Routes to Schools, and the Recreational Trails programs. The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

A portion of the TAP funding is sub-allocated to MPOs over 200,000 population; DCHC's annual allocation is $351,069. The DCHC MPO must develop a competitive project selection process and submit it for review to NCDOT and FHWA. MPOs have discretion about how to establish project priorities, or whether to fund (or not fund) particular categories. There is no requirement to consider all eligible TAP activities equally. The MPO is not an eligible entity to receive TAP funding; eligible entities include local governments, regional transportation authorities, transit agencies, natural resource or public land agencies; and school districts or local education agencies.

The DCHC MPO has an extensive level of experience developing and managing competitive project selection processes. It is recommended that the TIP subcommittee meet to review the FHWA guidance on the TAP program and develop a competitive selection process and schedule.

TCC Recommendation: Direct the TIP subcommittee to provide a competitive selection process and schedule.

9. FY 2013-2015 CMAQ Changes
Attachment 9, 9A
David Bonk, Town of Chapel Hill

The Town of Chapel Hill is requesting changes to the FY 2013-2015 Congestion Mitigation Air Quality funding approved by the TAC on August 11, 2010. The Town is requesting to reallocate $906,000 in funding from CMAQ project C-5177, Martin Luther King Jr. Boulevard/NC86 (Homestead Road to Piney Mountain Road) shared use paths, to C-5179, North Estes Drive (Martin Luther King Jr. Boulevard/NC86 – Caswell Drive) transit, bicycle, and pedestrian improvements.

Attached is a memo providing additional information and an amended CMAQ application. In order to move forward with this request, the next steps are as follows:

- NCDOT and the interagency review team will need to review and approve the new CMAQ application.
- The DCHC MPO will need to amend the projects in the MTIP and the NC Board of Transportation will need to approve a STIP amendment.

Two changes have previously been approved to the FY 2013-2015 CMAQ program. On May 9, 2012, the TAC approved funding changes requested by the Town of Hillsborough and the Durham Area Transit Authority (DATA).

TCC Recommendation: Receive report and **r**ecommend that the TAC approve the CMAQ program change.

10. FY 2012-2018 Transportation Improvement Program – Amendment #11
Attachment 10
Felix Nwoko, LPA Staff

Amendment #11 to the FY 2012-2018 Transportation Improvement Program is necessary to reflect modifications to DCHC-area projects. Attachment 10 is the resolution with attached tables.

TCC Recommendation: Recommend approval of the Resolution to Modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area.

REPORTS FROM STAFF:

11. Reports from Staff
Attachment 11
Felix Nwoko, LPA Staff

TCC Action: Receive Report from staff

12. Report from the Chair
No attachment
Mark Ahrendsen, TCC Chair

TCC Action: Receive Report from TCC Chair

13. NCDOT Report
Attachment 13
Wally Bowman, Division 5 – NCDOT
Mike Mills, Division 7 – NCDOT
Richard Hancock, Division 8 – NCDOT
Julie Bollinger, Transportation Planning Branch – NCDOT
Kelly Becker, Traffic Operations – NCDOT

TCC Action: Receive Report from NCDOT

INFORMATIONAL ITEMS:

14. None
No Attachment

Adjourn

Next meeting: September 25, 2013

TECHNICAL COORDINATING COMMITTEE

MEETING MINUTES

July 24, 2013

The Technical Coordinating Committee met on July 24, 2013 at 9:06 a.m. in the Council Committee Room on the second floor of Durham City Hall. The following attended:

**David Bonk	Town of Chapel Hill (TCC Vice-Chair)
**Tom Altieri	Orange County
**Kelly Becker	NCDOT – Traffic Operations
**Julie Bollinger	NCDOT – TPB
**Jeff Brubaker	Town of Carrboro
**Andy Henry	DCHC MPO
**Dale McKeel	DCHC MPO
**John Hodges-Copple	Triangle J COG
**Wally Bowman	NCDOT – Division 5
**Patrick Wilson	NCDOT – Division 7
**Amanda Simmons (Alternate)	UNC – Transportation
**Mila Vega (Alternate)	Chapel Hill Transit
**Tina Moon	Town of Carrboro
**Bret Martin	Orange County
**Felix Nwoko	DCHC MPO
**Meg Scully	Durham County
**Scott Whiteman	Durham City/County Planning
**Laura Woods	Durham City/County Planning
**Sam Veraldi	Duke University
Maricia Brown	DCHC MPO
Brian Rhodes	DCHC MPO
Hillary Pace	Chatham County
Jill Stark	FHWA
Al Terry	Orange County
Geoffrey Green	Triangle Transit

**Voting Member
^Temporary or Non-Voting Member
Quorum Count: 22 of 25 Voting Members

David Bonk, TCC Chair, called the meeting to order at 9:06 a.m. The Alternate Voting Members were identified and indicated above.

PRELIMINARIES:

Ethics Reminder

In accordance with the State Governmental Ethics Act, it is the duty of every Board member to avoid conflicts of interest. Does any Board member have any known conflict of interest with respect to any matters coming before the Board today? If so, please identify the conflict and refrain from any participation in the particular matter involved. There were none.

Adjustments to the Agenda

David Bonk stated he had an adjustment to the agenda that was more informational in reference to updating everyone in attendance on the Town of Chapel Hill modifying their CMAQ application award that was received several years ago. David Bonk will elaborate toward the end of the meeting.

Public Comments

There were no comments from the public.

CONSENT AGENDA:

Approval of April 24 2013 TCC Meeting Minutes (Attachment 5)

There were no comments, corrections, or adjustments to the April 24, 2013 minutes. A motion was made by Felix Nwoko to adopt and seconded by John Hodges-Copple. The motion carried unanimously.

Approval of May 22, 2013 TCC Meeting Minutes (Attachment 6)

Andrew Henry stated that there was a correction noted by Julie Bollinger that line #148 should read “Traffic suggest using an 8 lane freeway for US 70, and 6 lane for a segment of the Northern Durham Parkway” and line #150 should read “changes if the Northern Durham Parkway is a

higher capacity roadway they had a 4 lane boulevard". A motion was made by Felix Nwoko to move with the recommended adjustment and seconded by John Hodges-Copple. The motion carried unanimously.

ACTION ITEMS:

FY 2012-2018 Transportation Improvement Program – Amendment #10 (Attachment 7)

Dale McKeel provided an introduction for the FY 2012-2013 Transportation Improvement program. Dale McKeel identified two separate amendments. The amendments should reflect the changes to the JARC and New Freedom program that were approved by TAC in May 2013, and changes from NCDOT to delay construction on two projects funded through the mobility fund. Dale McKeel noted two corrections to the resolution located in the last two statements in the first page (date change in the air quality conformity findings to May 8, 2013 and to correct the reference from 2035 LRTP to 2040 MTP). With the suggested changes Dale McKeel recommended approval of this resolution to the TAC, and asked if there were any comments or questions.

Bret Martin recommended changing in the technical terminology of the title in the resolution from "resolution to modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Urban Area" to "Resolution to modify the 2012-2018 Transportation Improvement Program for the Durham-Chapel Hill-Carrboro Metropolitan Planning Area". Bret Martin suggested the change because the urban area has a specific definition per the Census Bureau and the urbanized area is a subset of urban areas and this program involves projects not only in the urban area but in the Metropolitan planning area as well, which is larger than the urbanized area. Bret Martin also suggested amending the word "Urban Area" to "MPO Area" in the first whereas on attachment 9A.

Bret Martin asked if SAFETEA-LU should be referenced in paragraph four or should it reference the new transportation authorization MAP-21.

Maricia Brown clarified that SAFETEA-LU is referenced because the funds that were obligated to those grants in that project belong under the SAFETEA-LU confines. There is no federal FY- 2013 money in this grant so MAP- 21 cannot be referenced under the oversight policy until FY-2013. Bret Martin state that there were words inside the resolution that are economized in one area that are not economized in other areas of the resolution.

David Bonk explained the reason for using full titles and acronyms in the resolutions.

Maricia Brown stated that the resolution can be modified depending on the funding source. Funds are allocated just to specific areas that are urbanized and not the entire planning area, so when it comes to projects like the JARC and New Freedom projects that are for urbanized areas the funding is dedicated for these projects, therefore the resolution must state "urban area."

Bret Martin asked if there will be any revisions to the highway program.

Felix Nwoko stated that he will speak with NCDOT and FHWA for clarification on the technical terminology in the resolutions.

David Bonk advised MPO staff to take the suggested changes under advisement and work with NCDOT to see if the suggested changes are appropriate.

David Bonk asked if there were any other comments on the proposed resolution to amend the TIP, there were no other comments. A motion was made to amend the TIP and approve the resolution by Andrew Henry, and seconded by Tom Altieri. The motion carried unanimously.

TIP Administrative Amendment – Fiscally Constrained Financial Report for the 2012-18 TIP – (Attachment 8)

Andrew Henry stated that federal legislation requires a fiscally constrained financial plan for the TIP and that the MPO has prepared a financial plan for the first four years (FY 2012-2015) of 2012-2018 to meet the federal requirements. There were no changes in the project descriptions, cost or duration of the projects in the TIP. This is just a different look of the TIP fiscal picture and its administrative amendment. The practice of the MPO is to have the administrative amendments be

presented to the TCC and TAC board as informational items. Andrew Henry stated that MPO is still using the old highway equity form for distribution of funding; however, next time the format will change.

David Bonk suggested that an update on recent changes be provided about the new funding constraints and new categories of federal funding that will be available to the MPO. Andrew Henry agreed to set up time to present the state legislation on the knowledge he received while attending a workshop by NCDOT on how points are awarded and prioritization of projects under the new legislation. Andrew Henry suggested getting someone from NCDOT who can present information about the federal legislation on the suggested item. David Bonk asked if the national MPO organization can provide summaries containing the information. Felix Nwoko and Andrew Henry stated that they will check to see if they can obtain the information. Andrew Henry asked if the information should be bought to the attention of the TCC or the TAC. David Bonk stated both boards should be informed for the opportunity to address any questions.

Wally Bowman informed the committee that the board had a work session to provide information about the status of the work group activities for the last six months. Wally Bowman stated that there were three representatives from the MPO's on the work group and advised the committee that the Board will take action in August and then it goes to the Joint Legislative Oversight Transportation Committee.

Dale McKeel asked when for an estimated time for the Draft TIP to be released. Wally Bowman stated he believed it would be released this time next year; however, he would look at the schedule and get back to Dale McKeel.

David Bonk suggested to have the anticipated schedule for various elements of the TIP be part of the discussion during the briefing next month. Wall Bowman agreed that the information can be provided to both the TCC and TAC Committees.

A motion was made by Felix Nwoko to approve the resolution and seconded by John Hodges-Copple. The motion carried unanimously.

Section 5310 Designation Status – (Attachment 9, 9a)

Maricia Brown stated that there were changes made to the MPO and funding status. Maricia Brown stated the MPO has been designated status to receive 5310 funding. The requirement for receiving the funds set forth by the State is to support the designated status of the Urbanized Area that will receive a direct funding allocation. Maricia Brown will provide the amount of the initial designation in the follow up once the competitive selection process is developed and it will be bought to the board for approval. Maricia Brown stated that attachment 9 is the letter and 9A is the resolution to the State, stating that we will accept the funding and the responsibility for it making sure the regulations are followed according federal law for this designation. Maricia Brown stated that the MPO staff will submit the letter and the resolution for approval to the TAC.

David Bonk asked if there was a specific amount of funding that will be provided yearly.

Maricia Brown stated that there is a FY-13 allocation; however, she was unsure of it at the time.

David Bonk asked about the estimated time of anticipation for a solicitation process for the 5310 funds.

Maricia Brown stated that the timeline for updating the coordinated plan is to have it done by the end of August and within the solicitation there will be a competitive selection process developed at the same time. Depending on the timing the selection process could tentatively be held at the end of the year.

Bret Martin suggested removing the second paragraph in the current resolution in attachment 9A. Felix Nwoko stated that the resolution as it is written was provided from NCDOT-PTD to all MPO's.

A motion was made to submit the recommended approval of the Resolution and letter of the Durham UAZ Designation status by Felix Nwoko and seconded by Dale McKeel. The motion carried unanimously.

Update on Old Durham-Chapel Hill Road Project (TIP Project EB-4707) (Attachment 10)

Dale McKeel provided an overview of the project and requested it be presented to the board for reevaluation due to the cost escalation.

David Bonk commented about the changes to the design as it is related to the pedestrians and the protection and preservation of the natural elements in that area. David Bonk also elaborated on the various cost increases that affect the local town match and where the additional funding will need to be resourced from. David Bonk stated that the town council was presented with various options for a redesign of the project. (1) Includes the exclusion of bike lines and sidewalks to the entire corridor on the Chapel Hill side from the Pope Road roundabout back to the western property line of Blue Cross Blue Shield (Standish Drive), and with this option previsions can be made overtime. (2) To extend the bike lanes and sidewalks only to Lake View Drive which is at the eastern end of the Blue Cross Blue Shield property line; however, the major concern was the transition. This option is more cost effective; however, it does not provide great benefit over time. (3) Involves a little more cost because it has the least amount of impact on the potential water line which would be to extend the bike and pedestrian facilities to Cooper which is to the West of Standish Drive. David Bonk stated that out of the three options presented to Council they suggested that the off road path on the North side of the road seems to be the most feasible and in part was preliminarily recommending this option to Council with consideration to the response received after the completion of an update to the Town's Comprehensive Plan which included feedback from the public about bike and pedestrian facilities. The public commented that when possible they would like to be separated from the roadways. Independent bike paths that are away from the motor vehicles would

encourage the use of bikes. Several members of the public representing Old Durham-Chapel Hill Road reemphasizing their interest for a sidewalk along the south side of Old Durham-Chapel Hill Road. The Town Council instructed the staff to reevaluate the feasibility of the side walk on the south side. David Bonk stated that this becomes problematic because of the large pond across from BCBS (Blue Cross Blue Shield). David Bonk stated that they will began the process of consulting with the Advisory Boards (Transportation and Bike and Pedestrian) as well as hold a neighborhood meeting towards the end of the Summer to get additional public comment. David Bonk advised the Committee that BCBS will be abandoning the property they have on Old Durham-Chapel Hill Road in Chapel Hill to sell it, to do something with it. David Bonk has not been advised of BCBS willingness to enter into an easement agreements or encumbering the property. This project is currently redirected review due to the lack of funding.

Felix Nwoko asked what should the recommendation be for today, should this matter be presented to the TAC?

David Bonk stated that it should be presented to the TAC once the fiscal and design aspects of the project have been agreed upon; however, it should be presented to TCC in October for review, and presented to TAC in November.

Dale McKeel stated Durham will make a decision to move forward or wait; however, per the Durham Bike and Pedestrian Advisory Commission they would like to move forward with the project on the Durham side as designed.

Felix Nwoko asked if this should be added as an informational item for the TAC.

David Bonk suggested that this project be bought to the TAC next month as an informational item that will require them to take action possibly in November and move forward with resolving the design issues.

Town of Chapel Hill CMAQ Award Modification

David Bonk provided introduction about the CMAQ funding for two projects. The first project was for bike and pedestrian improvement along Estes Drive from Martin Luther King toward the schools along Estes Drive and the other allocation for bike and pedestrian facilities along Martin Luther King Drive from Estes Drive North. David Bonk stated the funds should be reallocated from the Martin Luther King project to the Estes Drive project due to the urgency of improvements needed on Estes Drive. After speaking with Derry Schmidt at NCDOT, staff will have to get approval from the MPO for the change and resubmit a CMAQ revised application that shows the additional funding and provide the justification as to why the reallocation of funds is necessary. This project will be bought to the TAC next month for the request to make the change.

Bret Martin stated that the Town of Hillsborough (Orange County) has a CMAQ transit project for "The Circulator" bus service. This project was authorized in November 2010 and was scheduled to end November 2013; however, MAP -21 is allowing CMAQ operating assistance projects to be extended for an additional two years and may require a TIP amendment. There is no requirement for any change in the CMAQ application, only a possible TIP amendment.

David Bonk stated that this may be an additional item to be addressed at the TAC meeting next month. David Bonk reminded the committee to review the draft MOU. Felix Nwoko stated it is due by September 15, 2013.

REPORTS FROM STAFF:

Reports from Staff

Maricia Brown reminded the committee about the UPWP Grant training.

Report from the Chair

There was nothing to report from the Chair.

NCDOT Reports

Wally Bowman, Division 5, provided updates on project funding. New projects are to be submitted at the beginning of the year (January) to get a quantitative score. Scoring will take a few months to be completed. Each group will receive the scoring information and have a few months to put their local input points on the regional and the division levels. If a project does not get funded in the statewide tier it can be eligible for funding the regional tier and if it doesn't get funded in the regional tier it can be eligible for funding in the division tier. The list for projects funded in the statewide tier will be released first. The Board of Transportation inquired about a solution to releasing information about the projects getting funded in the regional tier. The MPO's and RPO's in divisions will assign the local points April through the end of July and the DOT will finalize all the scores for all the different categories in August and September. A draft will be developed and released to the various divisions around December, and adopted around July 2015. As a reminder on the division level STPDA funds come out of the division funds which lower the amount of money available for other projects.

Dale McKeel asked Wally Bowman to elaborate on the state budget and funding for small construction projects. Wally Bowman responded that there has been an allocation of funds for small construction projects that is used among the division's seven counties. This was administered through the participation and input from the board members with request from the local municipalities as well as staff input. The amount is from $500,000.00 to 1.5 Million a year. If all the funds are not expended they will carry over; however this carryover allowance may change whereas all funds must be allocated by the end of the year.

Wally Bowman informed the committee that there is another funding source called contingency funds. Based on the budget the amount in this fund will be smaller. These funds are appropriated to the Speaker of the House, the Spear Pro Tem, and Secretary of Transportation. Those funds are used in conjunction with a spot safety project, small construction project, or an

economic development project. To use these funds one would have to contact a local legislator for support and they would write a letter to the House Speaker, and Senate President Pro Tem to get a decision on the those funds.

Kelly Becker updated the committee on the status of Spot Safety funds. Kelly Becker stated that the amount for Spot Safety funds was increased two years ago to $12.1 million; however, she hasn't seen the latest information on these funds. Wally Bowman stated he would research the amount and provide the information to the committee.

Patrick Wilson, Division 7, introduced updates on projects in Chapel Hill-Carrboro area. The deadline to open Columbia Street is August 13, 2013. The Weaver Dairy Road project completion date has been revised to November 30, 2013; however, there has been consideration for a partial acceptance of the roadway. There will be additional information available as developed over the next few meeting. David Bonk asked if the previously announced opening date of July will be pushed back. Patrick Wilson said yes, and that he would find out if the relocation of the southern part is what they will be working on. The roadway can be used but the project will not be completed.

Patrick Wilson stated that he will check to see if there is a grand opening scheduled and get back to the committee.

Patrick Wilson provided information on two projects in the Hillsborough area. The NC-86 Bridge over I-85 in Hillsborough will be closed beginning tonight from 7:00pm to 6:00am to allow work on the bridge deck. The scheduled completion for this project is Saturday at 6:00am. The project on I-85 near I-40 in Orange County the left lane will be closed for pavement and drainage maintenance from 9:00am until 2:00pm.

INFORMATIONAL ITEMS:

NC State Ethics Law Compliance

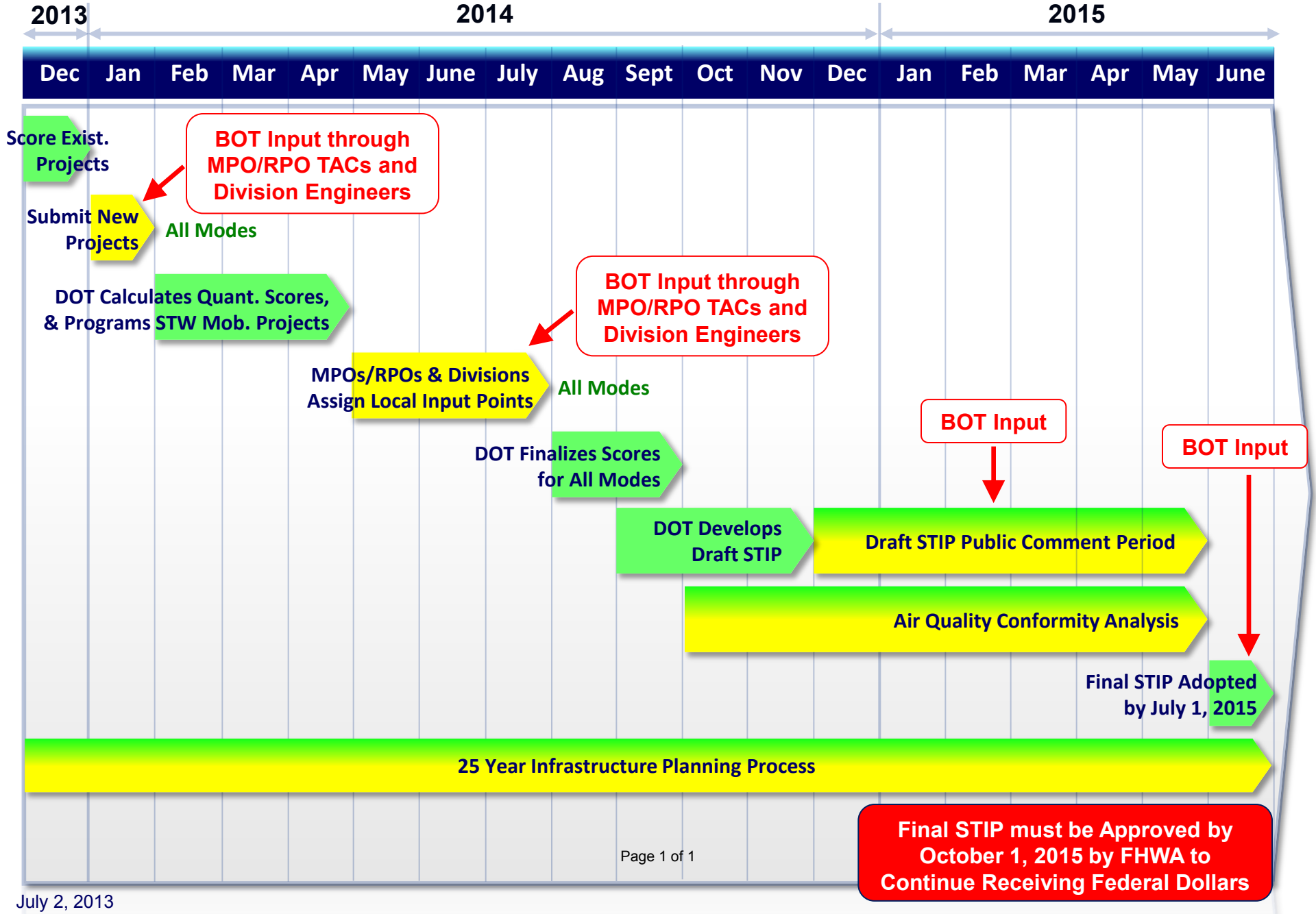
Reminder to the staff about the change in the Ethics Law Compliance.

Adjournment

There being no further business before the Technical Coordinating Committee, the meeting was adjourned at 10:34 a.m.

Prioritization 3.0 Schedule

TCC 8/28/2013 Attachment 6



July 2, 2013

Strategic Transportation Investments

August 7, 2013

Strategic Transportation Investment (STI)

House Bill 817 signed into Law June 26, 2013

Overwhelming support in both House and Senate

Most significant NC transportation legislation since 1989 Highway Trust Fund

Prioritization 3.0 Workgroup charged with providing recommendations to NCDOT on weights and criteria

Prioritization 3.0 Work Group

Work Group members provide input & act as liaisons to respective organizations

Representation:

- **Local Partners** - MPOs, RPOs
- **Advocacy Groups** – Metro Mayors Coalition, Assoc. of County Commissioners, NC League of Municipalities, NC Regional Councils of Gov't
- **Internal NCDOT Staff** – Transportation Planning Branch, Program Development, 5 Non-Hwy Modes, Ports Authority, 3 Division Engineers.
- **FHWA (advisory)**
- **Legislative Research staff (advisory)**

How the STI Works

40% of Funds = $6B	30% of Funds = $4.5B	30% of Funds = $4.5B

Estimated $15B in Funds for SFY 2016-2025

Statewide Mobility

Focus → Address Significant Congestion and Bottlenecks

Eligible Projects
- Statewide type Projects (such as Interstates)

- Selection based on 100% Data
- Projects Programmed prior to Local Input Ranking

Regional Impact

Focus → Improve Connectivity within Regions

Eligible Projects
- Projects Not Selected in Statewide Mobility Category
- Regional Projects

- Selection based on 70% Data & 30% Local Input
- Funding based on population within Region

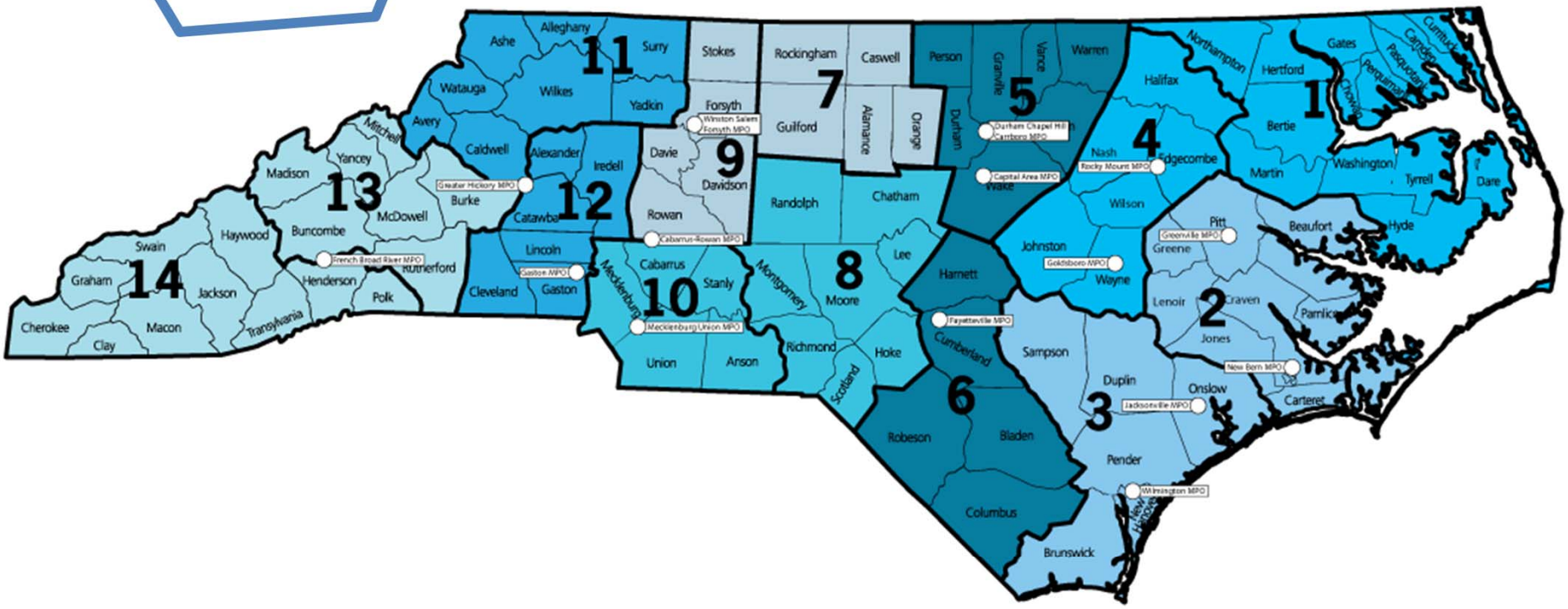
Division Needs

Focus → Address Local Needs

Eligible Projects
- Projects Not Selected in Statewide or Regional Categories
- Division Projects

- Selection based on 50% Data & 50% Local Input
- Funding based on equal share for each Division = ~$34M per yr

regions & divisions



STI Legislation

Combines traditional Equity-eligible funds, Urban Loop funds, Mobility Funds, Powell Bill, and Secondary Roads paving

Funds obligated for projects scheduled for construction by July 1, 2015 are not subject to formula

Bicycle-Pedestrian projects authorized for construction as of Oct. 1, 2013 are not included in limitation on State funding

All capital expenditures, regardless of mode, will be funded from Highway Trust Fund. <u>All modes must compete for the same funds</u>

Local Input will be part of the scoring criteria for all Regional Impact and Division Needs projects

STI Legislation

Projects (regardless of mode) will be scored on a 0-100 point scale

Incentive For Local funding (highway projects only)

- 50% of local commitment of non-State/Federal funds will be returned to local area for other high scoring projects in that area

Operations and Maintenance expenditures will be funded from Highway Fund

Project Cap – No more than 10% of Statewide Mobility funds over 5 years (~$300M) may be assigned to a single project or contiguous projects in the same corridor in a single Division or adjoining Divisions

No more than 10% of Regional Impact funds shall be expenditure on Public Transportation projects

STI Legislation

Projects funded from these categories will be excluded and will be evaluated through separate prioritization processes

- Congestion Mitigation and Air Quality (CMAQ)
- Competitive/Discretionary grants
- Appalachian Development Highway System projects

Funds included in the applicable category (Statewide, Regional, Division) but not subject to prioritization criteria:

- Bridge Replacement
- Interstate Maintenance
- Highway Safety Improvements

Funds included in the computation of Division equal share but will be evaluated through separate prioritization processes:

- STP-DA (if funds used on Regional category eligible project, funds come from Regional)
- Transportation Alternatives
- Rail-highway crossing program

Eligibility Definitions - Highways

	Statewide	Regional	Division
Highway	• Interstates and Future Interstates • Routes on the NHS as of July 1, 2012 • Routes on Department of Defense Strategic Highway Network (STRAHNET) • Appalachian Development Highway System Routes • Uncompleted Intrastate projects • Designated Toll Facilities	• Other US and NC Routes	• All SR Routes

Eligibility Definitions – Non Highways

	Statewide	Regional	Division
Aviation	Large Commercial Service Airports. Funding not to exceed $500K per airport project per year	Other Commercial Service Airports not in Statewide. Funding not to exceed $300K per airport project per year	All Airports without Commercial Service. Funding not to exceed $18.5M for airports within this category
Bicycle-Pedestrian	N/A	N/A	All routes
Public Transportation	N/A	Service spanning two or more counties and serving more than one municipality. Funding amounts not to exceed 10% of regional allocation.	Service not included on Regional. Multimodal terminals and stations serving passenger transit systems
Ferry	N/A	State maintained routes, excluding replacement vessels	Replacement of vessels
Rail	Freight Capacity Service on Class I Railroad Corridors	Rail service spanning two or more counties not included on Statewide	Rail service not included on Statewide or Regional

Highway Project Scoring Overview

	Statewide Mobility	Regional Impact	Division Needs
Eligible Projects:	• Statewide	• Statewide • Regional	• Statewide • Regional • Division
Overall Weights:	100% Quantitative Data	70% Quantitative Data / 30% Local Input	50% Quantitative Data / 50% Local Input
Quant. Criteria	• Benefit-Cost • Congestion • Economic Comp. • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width	• Benefit-cost • Congestion • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width • Accessibility and connectivity to employment centers, tourist destinations, or military installations	• Benefit-cost • Congestion. • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width • Accessibility and connectivity to employment centers, tourist destinations, or military installations
Notes:	Projects Selected Prior to Local Input	Quant. Criteria can be different for each Region	Quant. Criteria can be different for each Division

Highway Scoring Criteria and Weights

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 30% Congestion = 30% Safety = 10% **Total = 70%**	**15%**	**15%**
Division Needs	Benefit/Cost = 20% Congestion = 20% Safety = 10% **Total = 50%**	**25%**	**25%**

Highway Scoring Criteria and Weights – Div 1 & 4

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 20% Congestion = 15% Safety = 15% Lane Width = 10% Shoulder Width = 10% **Total = 70%**	**15%**	**15%**
Division Needs	[Travel Time] Benefit/Cost = 10% Congestion = 10% Safety = 10% Lane Width = 10% Shoulder Width = 10% **Total = 50%**	**25%**	**25%**

Highway Scoring Criteria and Weights – Div 2 & 3

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal (& Freight + Military) = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 20% Safety = 25% Multimodal (& Freight + Military) = 25% **Total = 70%**	**15%**	**15%**
Division Needs	Congestion = 20% Safety = 20% Multimodal (& Freight + Military) = 10% **Total = 50%**	**25%**	**25%**

STI – Non-Highway Criteria

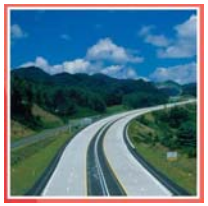
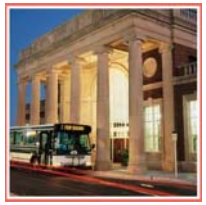
Strategic Statewide, Regional Impact and Division Needs Category's

Separate prioritization processes for each mode

- Must have minimum of 4 quantitative criteria (no menu of criteria like highways)
- Local input is from Division's, MPO's and RPO's
- Criteria based on 100 point scale with no bonus points and not favoring any particular mode of transportation

Normalization – Workgroup Discussion

Definition – Methodology for comparing quantitative scores across all modes together

 vs  vs  vs  vs  vs 

Challenges:

- Different criteria and weights used for evaluating projects in each mode
- No easy solution → conducted review of methodologies across country
- No other state has successfully implemented such a comparison
- Evaluated several potential options including:
  - Qualitative value judgment
  - Weighted benefit/cost
  - Statistical analysis

Normalization Approach

For Prioritization 3.0 Only (Initial Implementation of STI)

- Statewide Mobility (only) – No normalization, scores are stand-alone for comparison (highway, aviation, freight rail)
- Regional Impact & Division Needs – Allocate funds to Highway and Non-Highway modes based on minimum floor or %s

Mode	Workgroup Recommendation	Historical Budgeted	Historical Expenditures
Highway	90% (min.)	93%	96%
Non-Highway	4% (min.)	7%	4%

- Continue research with national experts
- Conduct a statistical analysis of scores by an outside agency after all quantitative scores are completed in 2014. Request a recommendation on how to normalize.
- Incorporate research and analysis findings into Prioritization 4.0

Local Input Points

Use in Regional Impact and Division Needs categories only

# of Points = 1000 points + additional points based on population

Separate Allocation of Points for Regional Impact Category and Division Needs Category

- Point allocation is the same for each

100 point cap for any one project; points can also be donated across Regions/Divisions

MPOs/RPOs need to have a NCDOT approved process for assigning local input points based on combination of quantitative and qualitative data (per S.L. 2012-84)

- Needs to be finalized by May 1, 2014

New Project Submittals (Maximum #)

Highway = minimum of 10; areas receives additional submittal for every 100,000 in population, up to a maximum up 20 new submittals.

- Option to swap up to 5 existing projects in the Prioritization system for 5 new highway projects (in addition to the maximum of new projects)

Bicycle & Pedestrian = 20 (all existing projects in system removed)

- Combined total of both bicycle and pedestrian projects

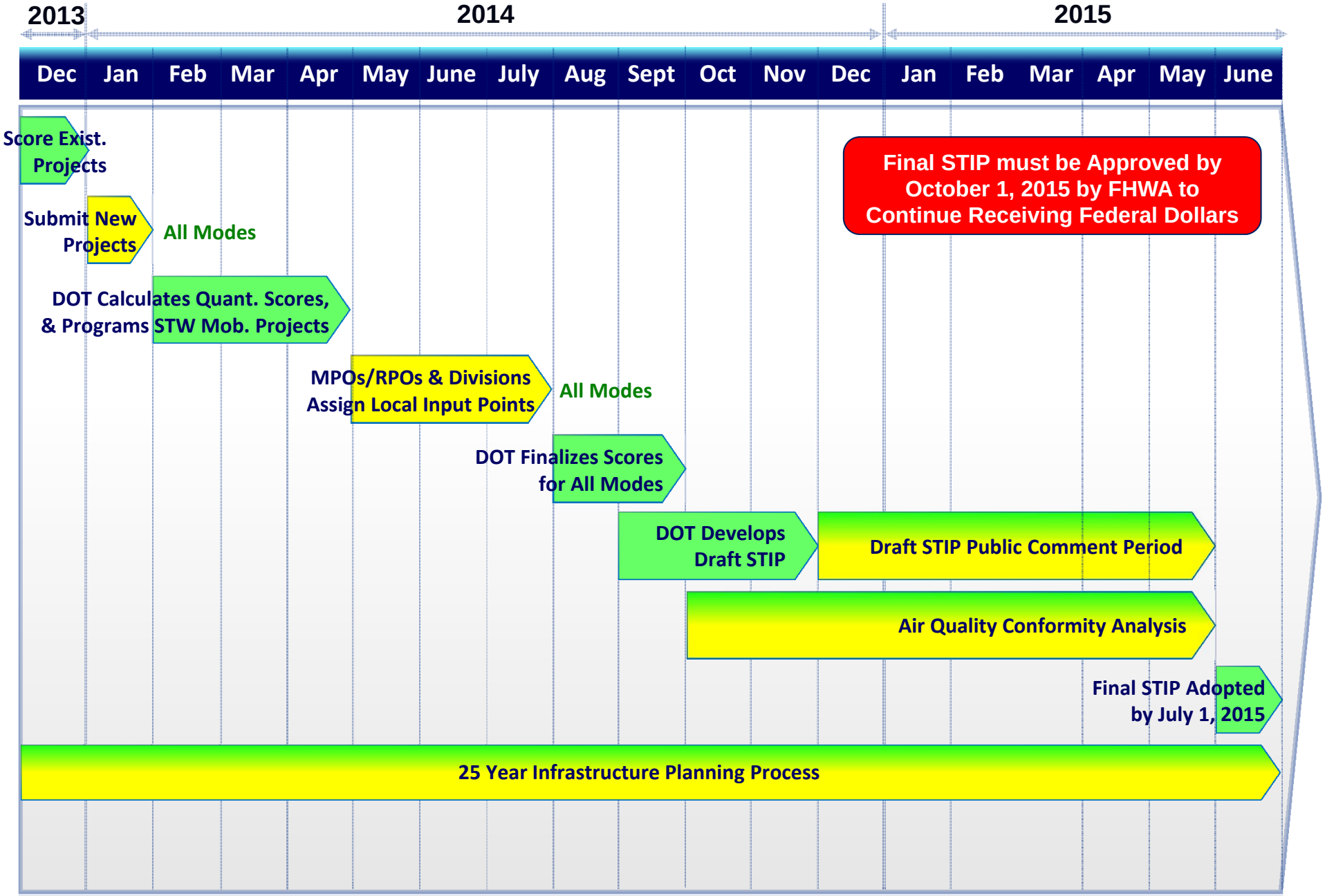
Aviation = No limit

Ferry = 10

Public Trans. = No limit (all existing projects in system removed)

Rail = 5

Prioritization 3.0 Schedule



July 15, 2013

Key Dates

August 7th – BOT approves recommendations to submit to JLTOC

By August 15th – DOT presents recommendations to JLTOC (30 day review period)

October 1 – If JLTOC wishes for additional changes, DOT provides requested changes

BOARD OF TRANSPORTATION RECOMMENDATIONS - PRIORITIZATION 3.0 SCORING CRITERIA, WEIGHTS, AND NORMALIZATION FOR ALL MODES

August 7, 2013

Objective: The Board of Transportation recommends to the Joint Legislative Transportation Oversight Committee the following recommendations resulting from the Strategic Transportation Investments Law signed by Governor McCrory on June 26, 2013.

Highway Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 30% Congestion = 30% Safety = 10% **Total = 70%**	**15%**	**15%**
Division Needs	[Travel Time] Benefit/Cost = 20% Congestion = 20% Safety = 10% **Total = 50%**	**25%**	**25%**

Note: Divisions 1, 2, 3, 4 have approved different criteria and weights for their respective areas

Aviation Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Statewide Mobility	NCDOA Project Rating = 40% FAA Airport Capital Improvement Plan = 40% Local Investment Index = 10% Federal Investment Index = 10% **Total = 100%**	--	--
Regional Impact	NCDOA Project Rating = 40% FAA Airport Capital Improvement Plan = 20% Local Investment Index = 5% Federal Investment Index = 5% **Total = 70%**	**15%**	**15%**
Division Needs	NCDOA Project Rating = 30% FAA Airport Capital Improvement Plan = 10% Local Investment Index = 5% Volume/Demand Index = 5% **Total = 50%**	**25%**	**25%**

Bicycle & Pedestrian Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Division Needs	Access = 10% Constructability = 5% Safety = 15% Demand Density = 10% Benefit/Cost = 10% **Total = 50%**	**25%**	**25%**

Ferry Scoring

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact *(Note: all vessels are excluded from this category)*	Safety [Route Health Index] = 15% Benefit/Cost [Travel Time] = 15% Accessibility/Connectivity = 10% Asset Efficiency = 10% Capacity/Congestion = 20% **Total = 70%**	**15%**	**15%**
Division Needs	Safety [Route Health Index] = 15% Benefit/Cost [Travel Time] = 15% Accessibility/Connectivity = 10% Asset Efficiency = 10% **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Expansion)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	Benefit/Cost = 45% Vehicle Utilization Data = 5% System Safety = 5% Connectivity = 5% System Operational Efficiency = 10% **Total = 70%**	**15%**	**15%**
Division Needs	Benefit/Cost = 25% Vehicle Utilization Data = 5% System Safety = 5% Connectivity = 5% System Operational Efficiency = 10% **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Facilities)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	Age of Facility, Facility Demand, Park & Ride, Bus Shelter = 40% Benefit-Cost = 5% System Operational Efficiency = 5% Facility Capacity = 20% **Total = 70%**	**15%**	**15%**
Division Needs	Age of Facility, Facility Demand, Park & Ride, Bus Shelter = 30% Benefit-Cost = 5% System Operational Efficiency = 5% Facility Capacity = 10% **Total = 50%**	**25%**	**25%**

Public Transit Scoring (Fixed Guideway)

Funding Category	Quantitative Data	Local Input	
		Division Rank	MPO/RPO Rank
Regional Impact	Mobility = 20% Cost Effectiveness = 15% Economic Development = 20% Congestion Relief = 15% **Total = 70%**	**15%**	**15%**
Division Needs	Mobility = 15% Cost Effectiveness = 15% Economic Development = 10% Congestion Relief = 10% **Total = 50%**	**25%**	**25%**

Rail Scoring (Track and Structures)

Funding Category	Quantitative Data			Local Input	
		Freight	Passenger	Division Rank	MPO/RPO Rank
Statewide Mobility (Class I Freight Only)	Benefit/Cost = Econ. Comp. = Capacity/Congestion = Safety = Accessibility = Connectivity = Mobility =	20% 10% 15% 15% 10% 10% 20% **Total = 100%**	--	--	--
Regional Impact (Freight & Passenger)	Benefit/Cost = Capacity/Congestion = Safety = Accessibility = Connectivity = Mobility =	10% 15% 15% 10% 5% 15% **Total = 70%**	10% 25% 15% -- -- 20% **Total = 70%**	**15%**	**15%**
Division Needs (Freight & Passenger)	Benefit/Cost = Capacity/Congestion = Safety = Accessibility = Connectivity = Mobility =	10% 10% 10% 5% 5% 10% **Total = 50%**	10% 15% 10% -- -- 15% **Total = 50%**	**25%**	**25%**

Rail Scoring (Freight Intermodal Facilities / Intercity Passenger Service & Stations)

Funding Category	Quantitative Data			Local Input	
		Freight	Passenger	Division Rank	MPO/RPO Rank
Regional Impact (Intercity Passenger Service Only)	Benefit/Cost = Capacity/Congestion = Connectivity = Mobility =	-- -- -- --	15% 25% 10% 20% **Total = 70%**	**15%**	**15%**
Division Needs (Facilities/ Intercity Passenger Service & Stations)	Benefit/Cost = Capacity/Congestion = Connectivity = Mobility =	10% 15% 10% 15% **Total = 50%**	10% 15% 10% 15% **Total = 50%**	**25%**	**25%**

Normalization – BOT Recommendation

For Prioritization 3.0 Only (Initial Implementation of Strategic Transportation Investments)

- Statewide Mobility (only) – No normalization, scores are stand-alone for comparison (highway, aviation, freight rail)
- Regional Impact & Division Needs – Allocate funds to Highway and Non-Highway modes based on minimum floor or %s

Mode	Board of Transportation Recommendation	Historical Budgeted	Historical Expenditures
Highway	**90% (minimum)**	93%	96%
Non-Highway	**4% (minimum)**	7%	4%

Note: *Continue research with national experts*
Conduct a statistical analysis of scores by an outside agency after all quantitative scores are completed in 2014. Request other normalization recommendations.
Incorporate research and analysis findings into Prioritization 4.0

BOT Recommendations on August 7th

Highway Criteria, Weights, and Measures

Non-Highway Criteria, Weights, and Measures

Normalization Methodology

Other Recommendations?

Prioritization 3.0 / Strategic Transportation Investments

DRAFT - Highway Quantitative Scoring Criteria

July 23, 2013

Highway Project Scoring Overview

	Statewide Mobility	Regional Impact	Division Needs
Eligible Projects:	• Statewide	• Statewide • Regional	• Statewide • Regional • Division
Overall Weights:	100% Quantitative Data	70% Quantitative Data / 30% Local Input	50% Quantitative Data / 50% Local Input
Quant. Criteria	• Benefit-Cost • Congestion • Economic Comp. • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width	• Benefit-cost • Congestion • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width • Accessibility and connectivity to employment centers, tourist destinations, or military installations	• Benefit-cost • Congestion • Safety • Freight • Multimodal • Pavement Condition • Lane Width • Shoulder Width • Accessibility and connectivity to employment centers, tourist destinations, or military installations
Notes:	Projects Selected Prior to Local Input	Quant. Criteria can be different for each Region	Quant. Criteria can be different for each Division

Highway Scoring – Eligible Quantitative Criteria

Criteria	Existing Conditions	Project Benefits (Future Conditions)
- **Congestion** (Volume / Capacity Ratio + AADT)	✓	
- **Benefit/Cost** (Travel Time Savings / Project Cost)		✓
- **Safety Score** (Critical Crash Rates, Density, Severity)	✓	
- **Pavement Score** (Pavement Condition Rating)	✓	
- **Lane Width** (Existing Width vs. Standard Width)	✓	
- **Shoulder Width** (Existing Width vs. Standard Width)	✓	
- **Multimodal** (Military, Transportation Terminals & Trucks)	✓	
- **Economic Competitiveness** (Jobs + Value Added in $)		✓
- **Accessibility / Connectivity** (TBD)	✓	

HIGHWAY Scoring

All projects scored on 0-100 point scale

For projects on new location, existing data comes from a "parallel route"

- Parallel Route defined as the roadway(s) motorists currently use to travel between the beginning and end of the project

All quantitative scores will be calculated automatically by application (SPOT On!ine) – user will be able to see preliminary scores shortly after project entry

Example Projects (Completed or Under Construction)

TIP	Route	From	To	Description	County	Div	Eligibility
R-2248E	I-485	NC 115	I-85 North	Construct Freeway on New Location	Mecklenburg	10	Statewide
I-4744	I-40	SR 1728 (Wade Ave)	I-440/US 1/64	Widen Roadway	Wake	5	Statewide
R-2554BA	US 70 (Goldsboro Bypass)	East of SR 1300 (Salem Church Rd)	East of SR 1556 (Wayne Memorial Dr)	Construct Freeway on New Location	Wayne	4	Statewide
R-4463B	NC 43 Connector	US 70	NC 43/55	Construct Roadway on New Location	Craven	2	Regional
R-2911B	US 70	Iredell County Line	SR 1001 (Old Amity Hill Road)	Widen Roadway	Rowan	9	Regional
R-2519A	US 19E	East of SR 1336 (Jacks Creek Rd)	NC 80	Widen Roadway	Yancey	13	Regional
U-3810	SR 1406 (Piney Green Rd)	NC 24	US 17	Widen Roadway	Onslow	3	Division
U-4909	SR 2643 (Union Cross Rd)	SR 2691 (Wallburg Rd)	SR 2632 (Sedge Garden Rd)	Widen Roadway	Forsyth	9	Division
R-3833A	SR 1100 (Brawley School Rd)	SR 1177 (Chuckwood Rd)	US 21	Widen Roadway	Iredell	12	Division

Note: Values shown for scoring on subsequent slides are based on 2010 data

HIGHWAY – Congestion

Funding Category	Criteria Weight
Statewide Mobility	30%
Regional Impact	30%
Division Needs	20%

Purpose – measure existing level of mobility along roadways by indicating congested locations and bottlenecks

((Existing Vol. / Capacity Ratio x 100) x 60%) + ((Existing Vol. / 1,000) x 40%)

Note: The use of Travel Time Index, which is a comparison of actual congested speeds from GPS devices to ideal travel speed, is continuing to be investigated for use in P3.0. Based on input from NCDOT's traffic engineers, this measure may replace the use of Volume/Capacity ratio in the above equation.

Example Projects – Congestion Score

TIP	Project	Existing Volume	Existing Capacity	Volume / Capacity Ratio	Congestion Score
R-2248E	I-485 New Location	117,000	140,000	0.84	**90.40**
I-4744	I-40 Widening	94,000	70,000	1.34	**97.60**
R-2554BA	US 70 (Goldsboro Bypass)	31,000	60,000	0.52	**43.60**
R-4463B	NC 43 Connector	24,000	40,000	0.60	**45.60**
R-2911B	US 70 Widening	9,000	16,000	0.56	**37.20**
R-2519A	US 19E Widening	14,000	16,000	0.88	**58.40**
U-3810	SR 1406 (Piney Green Rd) Widening	20,000	16,000	1.25	**68.00**
U-4909	SR 2643 (Union Cross Rd) Widening	16,000	16,000	1.00	**66.40**
R-3833A	SR 1100 (Brawley School Rd) Widening	18,000	16,000	1.13	**67.20**

HIGHWAY – [Travel Time] Benefit-Cost

Funding Category	Criteria Weight
Statewide Mobility	30%
Regional Impact	30%
Division Needs	20%

Purpose – measure the expected travel time savings benefits of the project over a 30 year period against the estimated project cost to NCDOT

Travel Time Savings over 30 years in $ / Project Cost to NCDOT

- Travel Time Savings calculated using comparison if project was implemented today then multiplied by 30 yrs
- Project Cost consists of Construction, Right-of-Way, and Utilities costs
- Cost can be lowered if other funds are committed to project by locals

Example Projects – [Travel Time] Benefit-Cost Score

TIP	Project	Travel Time Savings over 30 years ($)	Project Cost	Other Funding	Cost to NCDOT	Benefit/Cost Score
R-2248E	I-485 New Location	$4,859,808,000	$206,836,000	$0	$206,836,000	**23.50**
I-4744	I-40 Widening	$3,502,916,000	$59,910,000	$0	$59,910,000	**58.47**
R-2554BA	US 70 (Goldsboro Bypass)	$2,060,655,000*	$335,731,000*	$0	$335,731,000*	**6.14**
R-4463B	NC 43 Connector	$963,071,000*	$67,415,000*	$0	$67,415,000*	**14.29**
R-2911B	US 70 Widening	$108,246,000	$23,544,000	$0	$23,544,000	**4.60**
R-2519A	US 19E Widening	$457,696,000	$72,288,000	$0	$72,288,000	**6.33**
U-3810	SR 1406 (Piney Green Rd) Widening	$219,185,000	$97,235,000	$0	$97,235,000	**2.25**
U-4909	SR 2643 (Union Cross Rd) Widening	$81,080,000	$90,308,000	$0	$90,308,000	**0.90**
R-3833A	SR 1100 (Brawley School Rd) Widening	$106,009,000	$64,347,000	$0	$64,347,000	**1.65**

*Full benefits of the project are not realized until entire new location roadway is complete. Travel Time Savings and Cost values are based on the entire project.

HIGHWAY – Safety

Funding Category	Criteria Weight
Statewide Mobility	10%
Regional Impact	10%
Division Needs	10%

Purpose – measure existing safety conditions along/at the project

Segments → (Crash Density x 33%) + (Severity Index x 33%) + (Critical Crash Rate x 33%)

Intersections → (Crash Frequency x 50%) + (Severity Index x 50%)

- All data provided by Mobility & Safety Division (3 year moving average)
- Higher scores indicate poorer conditions

Example Projects – Safety Score

TIP	Project	Crash Density	Severity Index	Critical Crash Rate	Safety Score
R-2248E	I-485 New Location	78.80	61.60	71.70	**70.69**
I-4744	I-40 Widening	87.20	48.70	87.20	**74.36**
R-2554BA	US 70 (Goldsboro Bypass)	71.10	67.70	61.40	**66.73**
R-4463B	NC 43 Connector	73.10	56.90	48.80	**59.59**
R-2911B	US 70 Widening	91.50	91.50	33.80	**72.26**
R-2519A	US 19E Widening	58.80	62.70	23.50	**48.33**
U-3810	SR 1406 (Piney Green Rd) Widening	97.50	67.40	74.90	**79.93**
U-4909	SR 2643 (Union Cross Rd) Widening	100.00	81.50	48.10	**76.53**
R-3833A	SR 1100 (Brawley School Rd) Widening	100.00	59.30	55.60	**71.63**

HIGHWAY – Pavement Condition

Funding Category	Criteria Weight
Statewide Mobility	--
Regional Impact	--
Division Needs	--

Purpose – measure the existing pavement condition along the project

100 – Pavement Condition Rating

- Based on 2012 Pavement Condition Survey
- Higher scores indicate poorer pavement condition

Example Projects – Pavement Score

TIP	Project	Pavement Condition Rating	Pavement Score
R-2248E	I-485 New Location	96.96	**3.04**
I-4744	I-40 Widening	100.00	**0.00**
R-2554BA	US 70 (Goldsboro Bypass)	81.34	**18.66**
R-4463B	NC 43 Connector	59.05	**40.95**
R-2911B	US 70 Widening	93.31	**6.69**
R-2519A	US 19E Widening	75.37	**24.63**
U-3810	SR 1406 (Piney Green Rd) Widening	99.59	**0.41**
U-4909	SR 2643 (Union Cross Rd) Widening	95.44	**4.56**
R-3833A	SR 1100 (Brawley School Rd) Widening	100.00	**0.00**

HIGHWAY – Lane Width

Funding Category	Criteria Weight
Statewide Mobility	--
Regional Impact	--
Division Needs	--

Purpose – measure the existing lane width vs. DOT design standard

Existing Lane Width – DOT design standard Lane Width

- Greater the difference, the higher points the project receives
  - 1 ft difference = 25 pts
  - 2 ft difference = 50 pts
  - 3 ft difference = 75 pts
  - 4+ ft difference = 100 pts
- Does NOT mean that project will be constructed to design standard

Example Projects – Lane Width Score

TIP	Project	Existing Lane Width	DOT Design Lane Width	Lane Width Score
R-2248E	I-485 New Location	12	12	**0**
I-4744	I-40 Widening	12	12	**0**
R-2554BA	US 70 (Goldsboro Bypass)	12	12	**0**
R-4463B	NC 43 Connector	12	12	**0**
R-2911B	US 70 Widening	12	12	**0**
R-2519A	US 19E Widening	12	12	**0**
U-3810	SR 1406 (Piney Green Rd) Widening	12	12	**0**
U-4909	SR 2643 (Union Cross Rd) Widening	12	12	**0**
R-3833A	SR 1100 (Brawley School Rd) Widening	10	12	**50**

HIGHWAY – [Paved] Shoulder Width

Funding Category	Criteria Weight
Statewide Mobility	--
Regional Impact	--
Division Needs	--

Purpose – measure the existing paved shoulder width vs. DOT design standard

Existing Paved Shoulder Width – DOT design standard Paved Shoulder Width

- Greater the difference, the higher points the project receives
  - 1 ft difference = 25 pts
  - 2 ft difference = 50 pts
  - 3 ft difference = 75 pts
  - 4+ ft difference = 100 pts
- Does NOT mean that project will be constructed to design standard

Example Projects – [Paved] Shoulder Width Score

TIP	Project	Existing Paved Shoulder Width	DOT Design Paved Shoulder Width	[Paved] Shoulder Width Score
R-2248E	I-485 New Location	10	10	**0**
I-4744	I-40 Widening	10	10	**0**
R-2554BA	US 70 (Goldsboro Bypass)	4	4	**0**
R-4463B	NC 43 Connector	4	4	**0**
R-2911B	US 70 Widening	4	4	**0**
R-2519A	US 19E Widening	4	4	**0**
U-3810	SR 1406 (Piney Green Rd) Widening	2	4	**50**
U-4909	SR 2643 (Union Cross Rd) Widening	2	4	**50**
R-3833A	SR 1100 (Brawley School Rd) Widening	2	4	**50**

HIGHWAY – Multimodal [& Freight + Military]

Funding Category	Criteria Weight
Statewide Mobility	20%
Regional Impact	--
Division Needs	--

Purpose – measure existing congestion along key military and truck routes, and routes that provide connections to transp. terminals

25% - Volume/Capacity Ratio on projects on Non-Interstate STRAHNET Routes

25% - Volume/Capacity Ratio on projects on routes that provide direct connection (property line) to a transportation terminal along a roadway with an access point (airport, seaport, rail depot, ferry terminal, transit terminal, major military base, and freight intermodal terminal - includes air/truck/rail/pipeline terminals)

50% - Truck Volumes / 100

(V/C Ratio [Non-Interstate STRAHNET] x 25%) + (V/C Ratio [Route connecting to Transportation Terminal] x 25%) + (Truck Volumes / 100 x 50%)

Example Projects – Multimodal [& Freight + Military] Score

TIP	Project	Volume / Capacity Ratio	Non-Interstate STRAHNET Route?	Direct Connection to Trans. Terminal?	Truck Volume	Multimodal [& Freight + Military] Score
R-2248E	I-485 New Location	0.84	No	No	12,900	**50.00**
I-4744	I-40 Widening	1.34	No	No	10,300	**50.00**
R-2554BA	US 70 (Goldsboro Bypass)	0.52	Yes	No	3,100	**28.50**
R-4463B	NC 43 Connector	0.60	No	No	2,300	**11.50**
R-2911B	US 70 Widening	0.56	No	No	1,100	**5.50**
R-2519A	US 19E Widening	0.88	No	No	1,400	**7.00**
U-3810	SR 1406 (Piney Green Rd) Widening	1.25	No	Yes	600	**28.00**
U-4909	SR 2643 (Union Cross Rd) Widening	1.00	No	No	500	**2.50**
R-3833A	SR 1100 (Brawley School Rd) Widening	1.13	No	No	500	**2.50**

HIGHWAY – Economic Competitiveness

Funding Category	Criteria Weight
Statewide Mobility	10%
Regional Impact	N/A
Division Needs	N/A

Purpose – measure the economic benefits the transportation project is expected to provide in economic activity (GDP) and jobs over 30 yrs

Score based on Output from TREDIS® (Economic Impact Model)

- Primary inputs are Travel Time Savings, Location, and Freight Traffic
- Output is # of long-term jobs created (50%) + Value added in $ (50%) based on % change in NCDOT Division Economy
  - Includes wages increased, increased productivity
  - Accounts for current economic conditions (includes use of labor statistics)
  - Results based on 30 year forecast using Moody's Analytics data
- Does NOT include contingent (prospective) development
- **Criteria is not intended to evaluate projects for recruiting purposes**

Example Projects – Economic Competitiveness Score

TIP	Project	Travel Time Savings (per yr)	Div	Long-term Employment	% Change in Economic Value Added	Economic Competitiveness Score
R-2248E	I-485 New Location	7,040,533	10	1,641	0.1072%	**100.00**
I-4744	I-40 Widening	5,074,767	5	1,278	0.0959%	**97.93**
R-2554	US 70 (Goldsboro Bypass)	2,995,867	4	971	0.2348%	**98.55**
R-4463B	NC 43 Connector	1,404,233	2	473	0.1175%	**73.65**
R-2911B	US 70 Widening	156,200	9	44	0.0070%	**5.75**
R-2519A	US 19E Widening	665,733	13	218	0.0699%	**45.84**
U-3810	SR 1406 (Piney Green Rd) Widening	328,000	3	87	0.0132%	**10.92**
U-4909	SR 2643 (Union Cross Rd) Widening	121,333	9	32	0.0049%	**4.04**
R-3833A	SR 1100 (Brawley School Rd) Widening	158,633	12	49	0.0102%	**7.56**

HIGHWAY – Accessibility / Connectivity

Funding Category	Criteria Weight
Statewide Mobility	N/A
Regional Impact	--
Division Needs	--

Purpose – measure how to improve connections between rural areas and employment centers, tourist destinations, or military installations (connecting people and places)

3 options proposed:

1. Accessibility / Connectivity Index with rural areas defined as municipalities with population between 2,500 and 20,000 people
2. Accessibility / Connectivity Index with rural areas defined as municipalities with population between 1,500 and 20,000 people (new)
3. Evaluation of projects 20 minutes outside of employment centers (new)

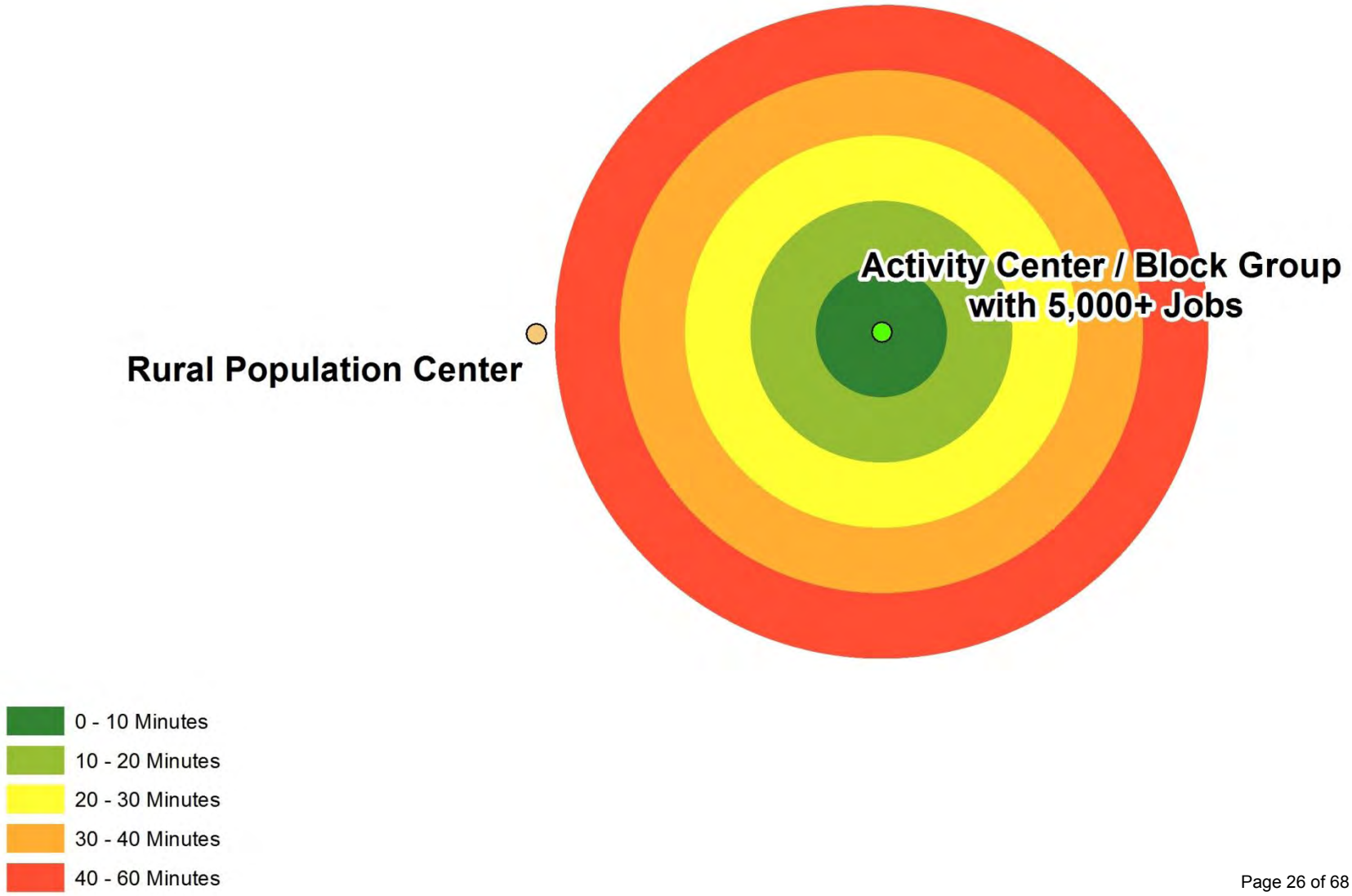
HIGHWAY – Accessibility / Connectivity – con't

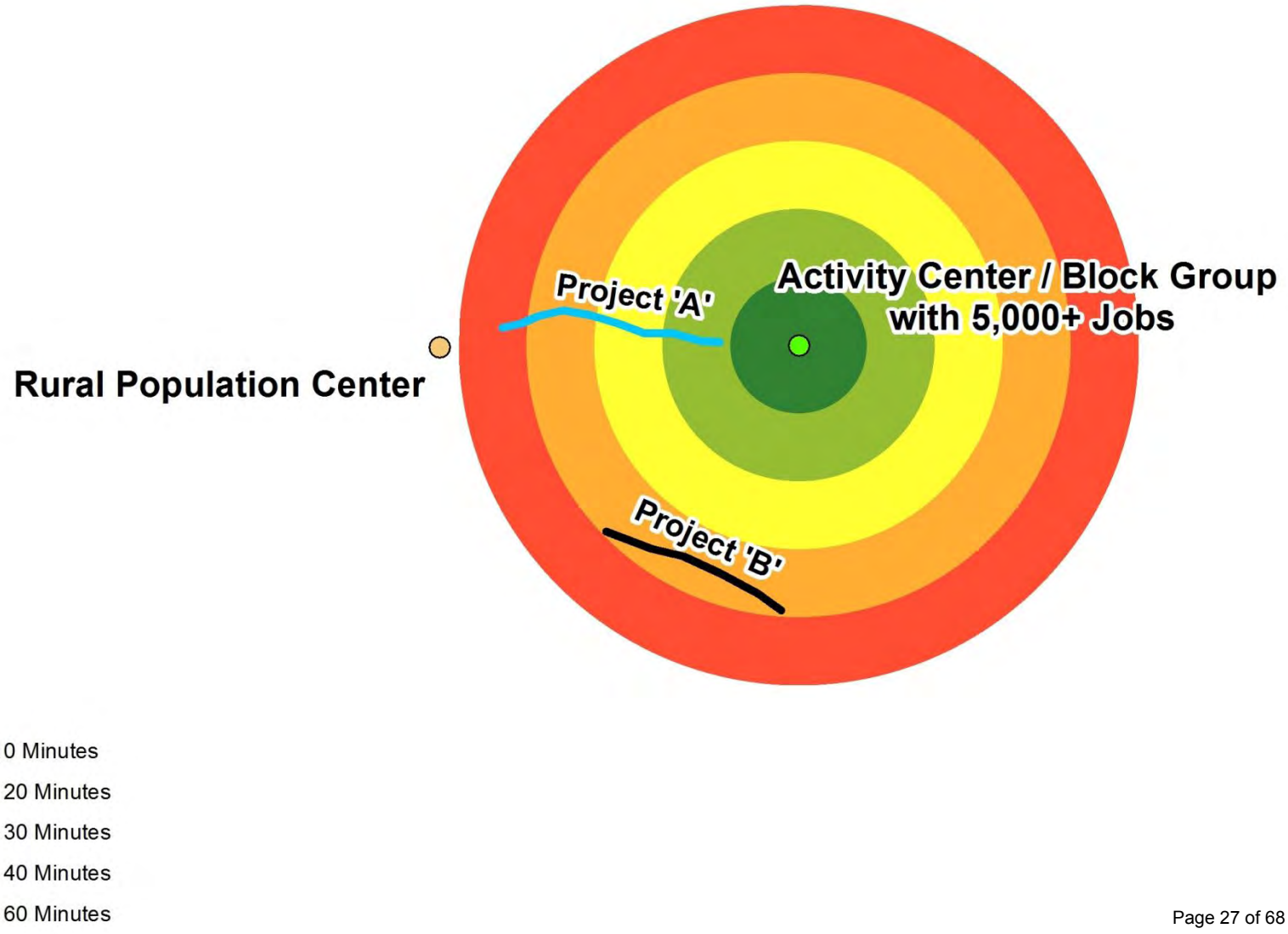
Option 1 – Accessibility / Connectivity Index with rural areas defined as municipalities with population between 2,500 and 20,000 people

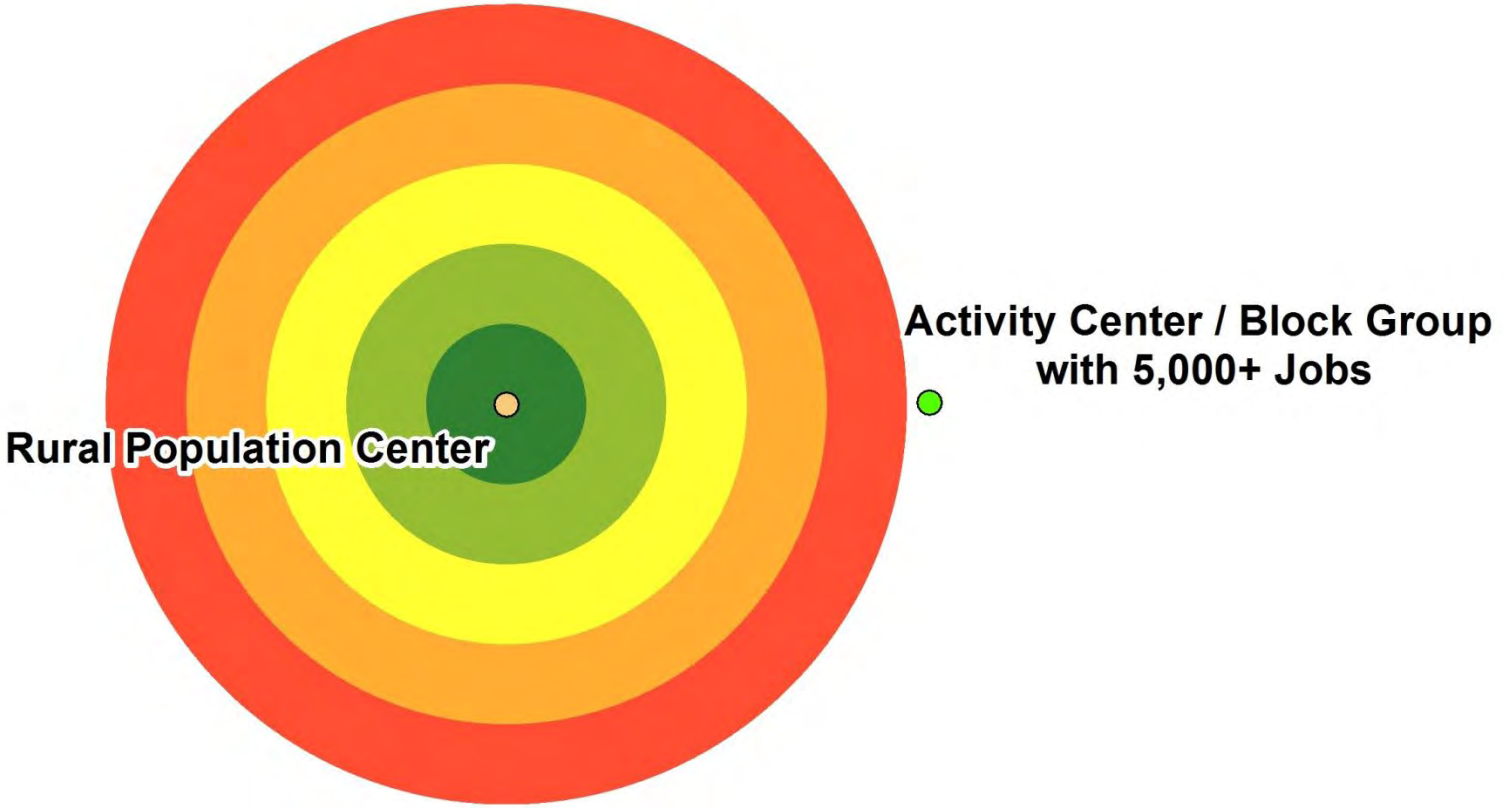
Score based on Accessibility / Connectivity Index Map

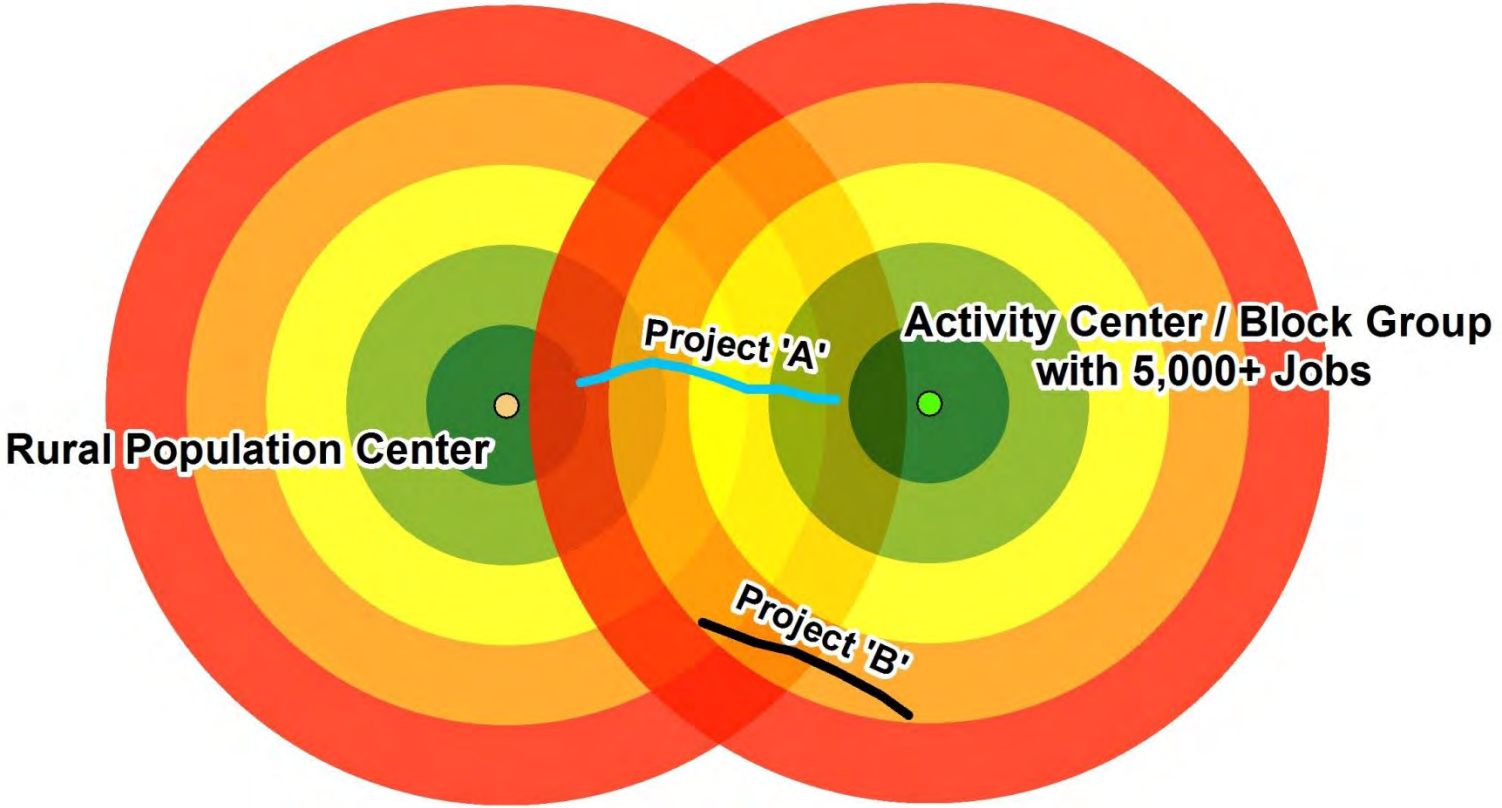
- Activity Center and Census Block Groups with 5,000+ Jobs
  - Activity Centers include cities over 20,000 people, military bases, ports, UNC campuses, trauma centers, top tourist destinations
- Rural Area (Rural Population Center) = Municipality with population between 2,500 and 20,000
- Map illustrates overlap of drive times from Activity Centers/Block Groups and Rural Population Centers


Activity Center / Block Group
with 5,000+ Jobs
Rural Population Center

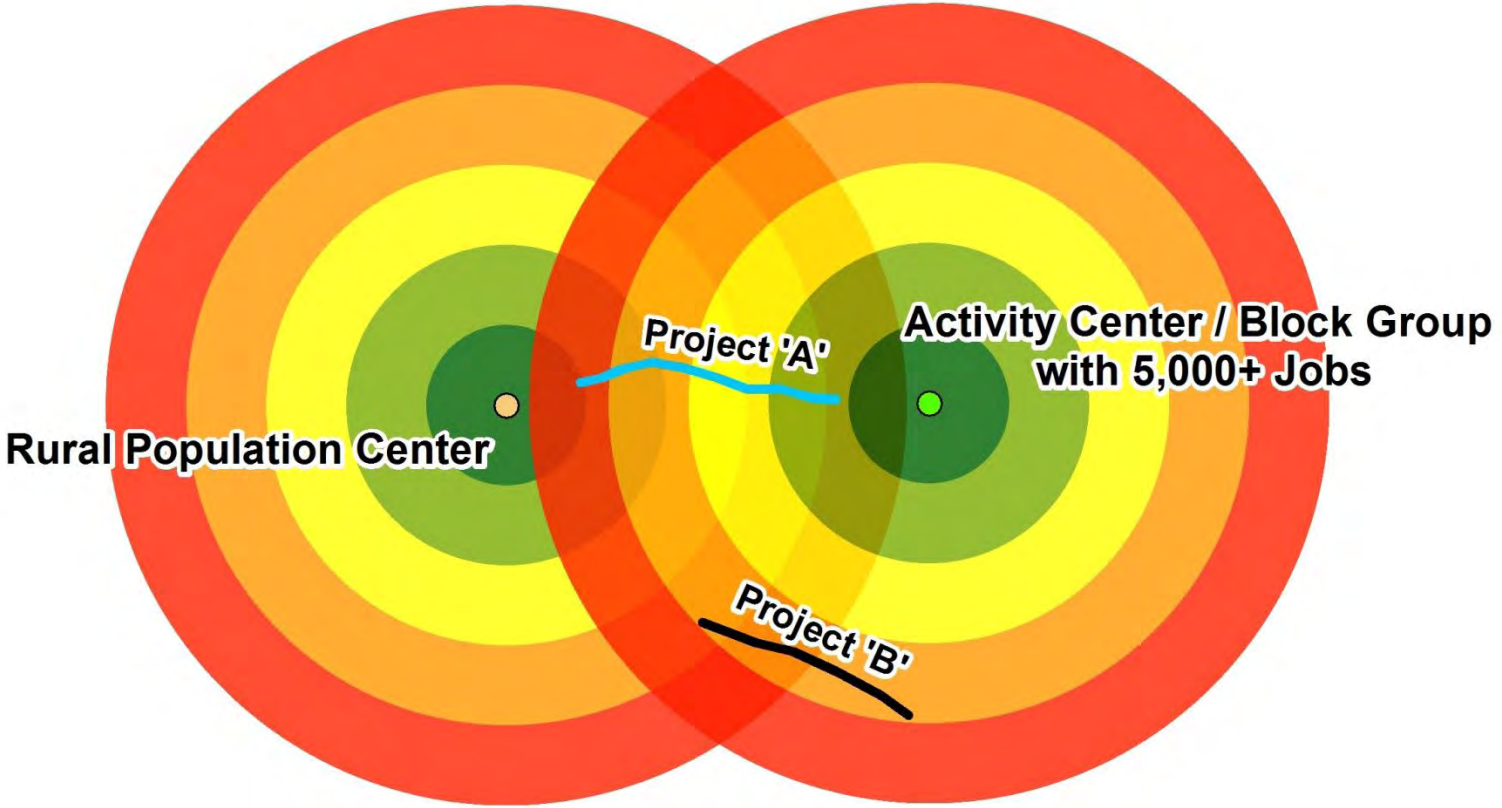

Activity Center / Block Group
with 5,000+ Jobs
Rural Population Center
0 - 10 Minutes
10 - 20 Minutes
20 - 30 Minutes
30 - 40 Minutes
40 - 60 Minutes


Rural Population Center
Project 'A'
Activity Center / Block Group
with 5,000+ Jobs
Project 'B'
0 - 10 Minutes
10 - 20 Minutes
20 - 30 Minutes
30 - 40 Minutes
40 - 60 Minutes

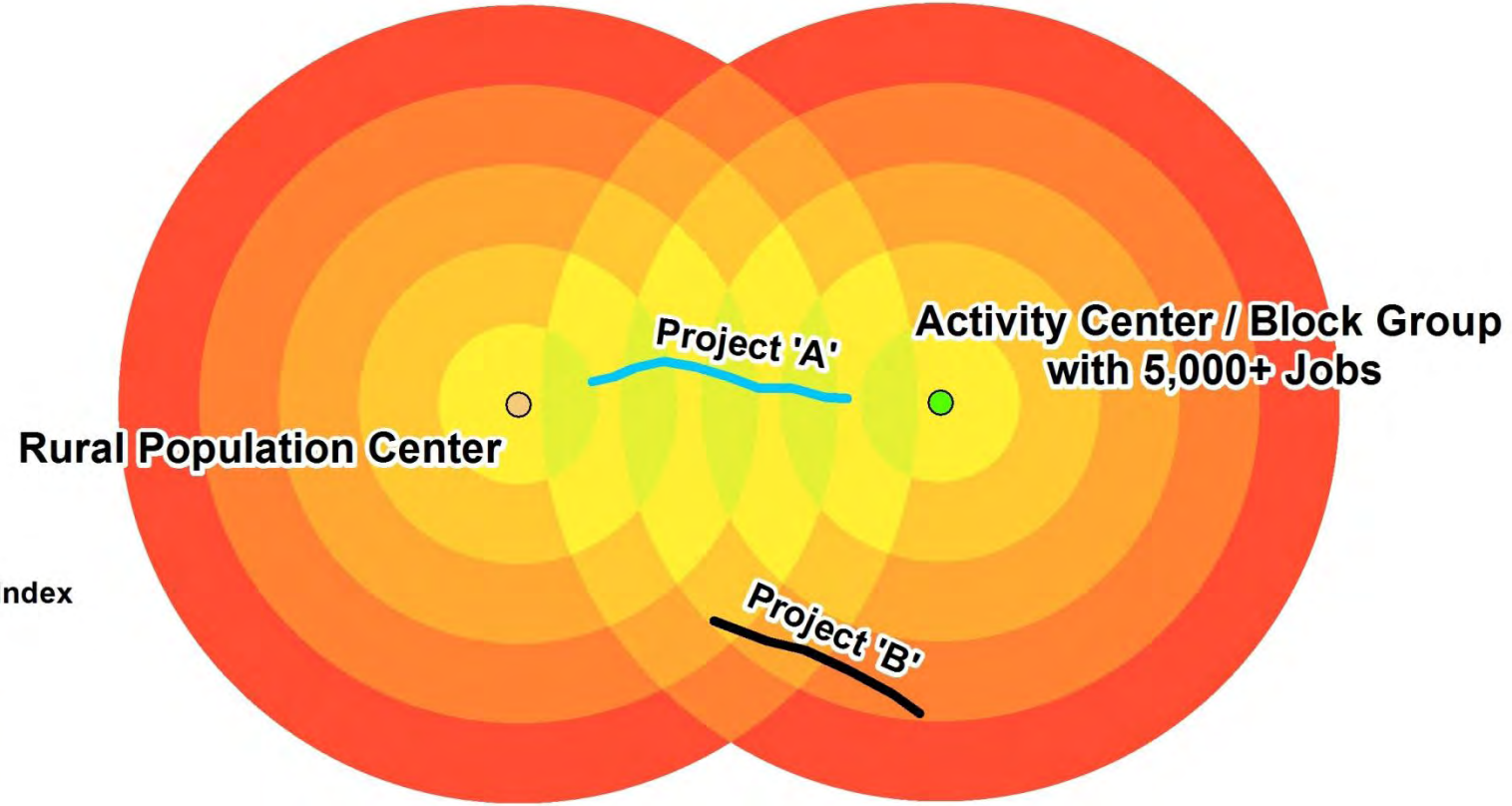

Rural Population Center
Activity Center / Block Group
with 5,000+ Jobs


Rural Population Center
Project 'A'
Activity Center / Block Group
with 5,000+ Jobs
Project 'B'
0 - 10 Minutes
10 - 20 Minutes
20 - 30 Minutes
30 - 40 Minutes
40 - 60 Minutes

Accessibility/Connectivity Criteria Components

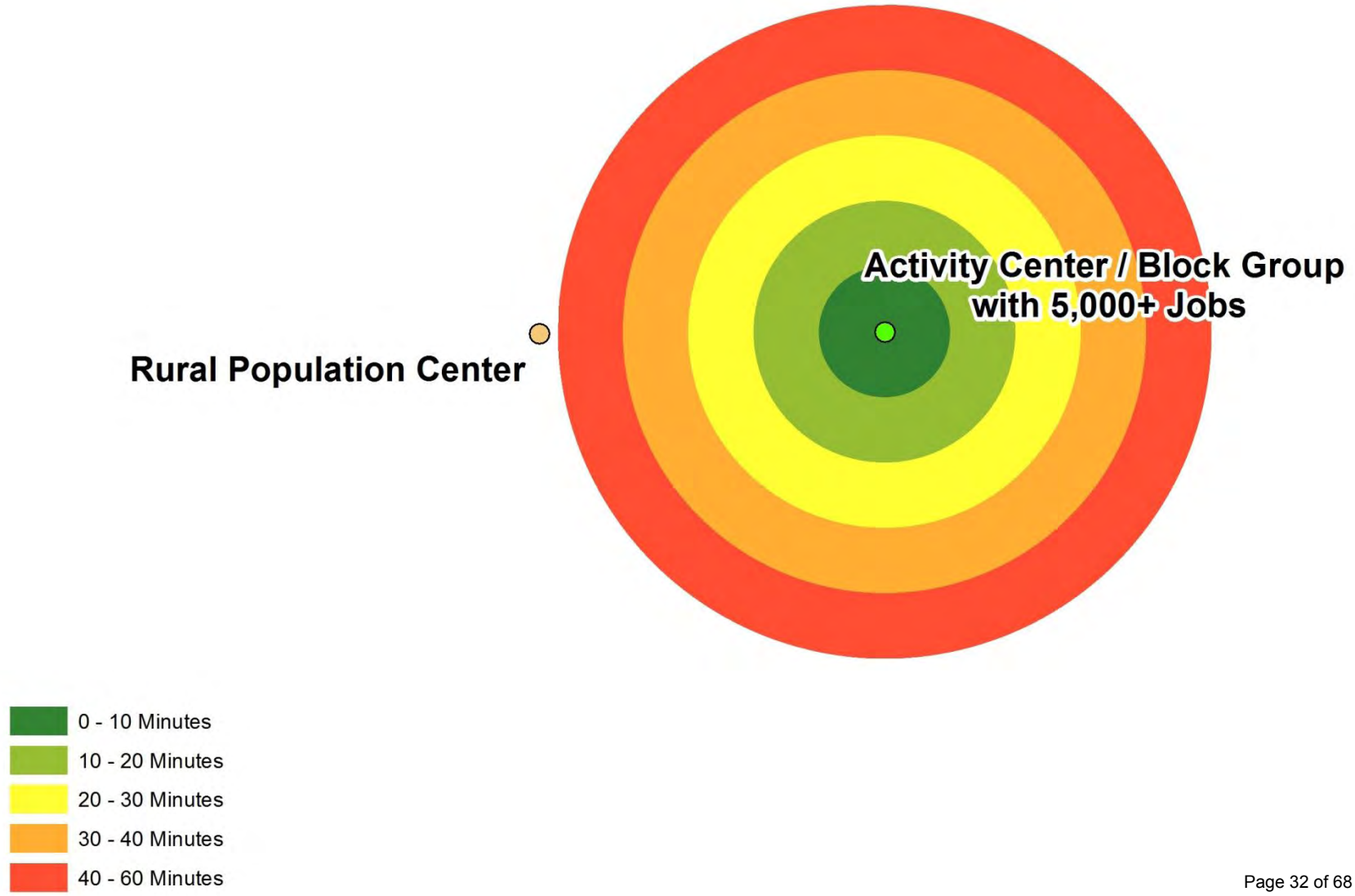


Accessibility/Connectivity Criteria Scoring Overlay

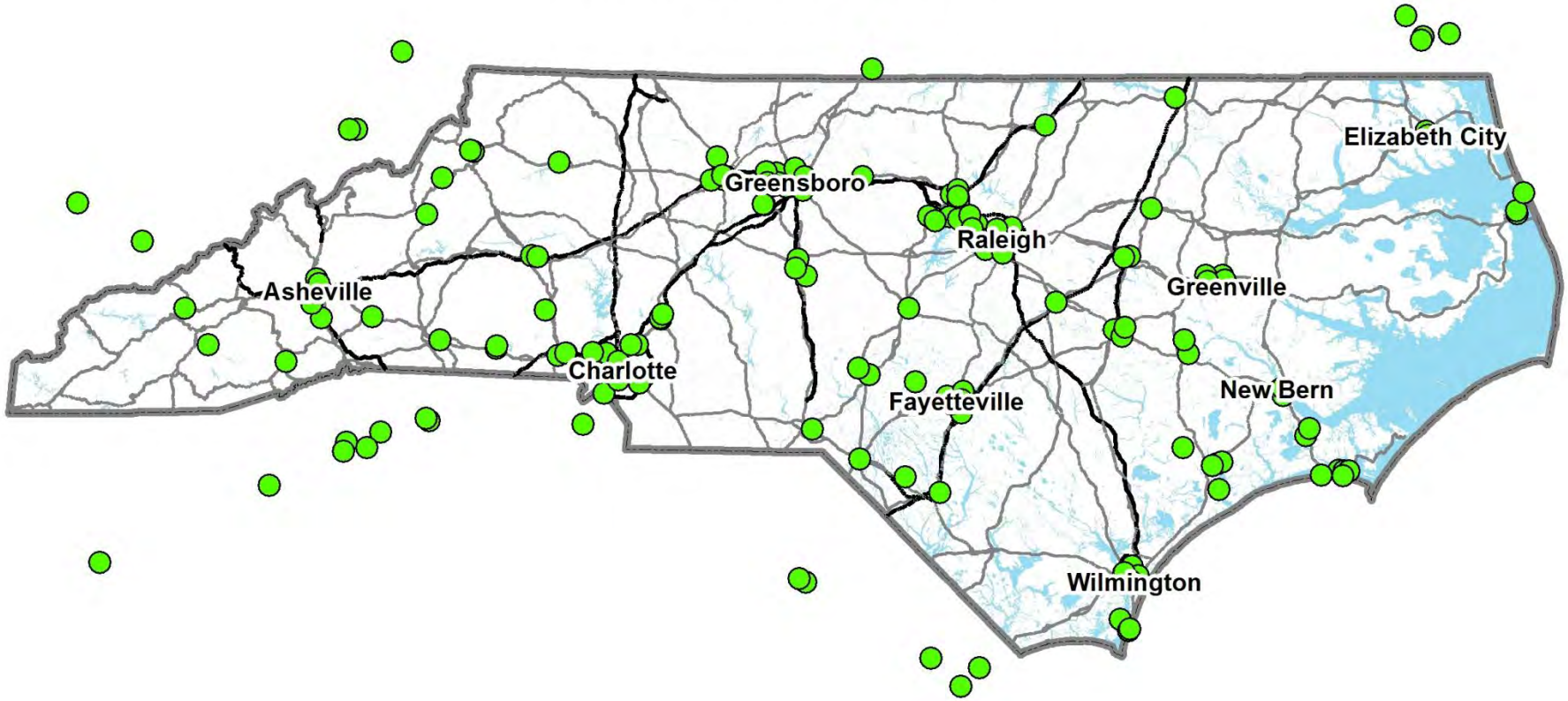


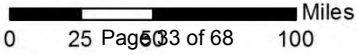
Scoring Index

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10

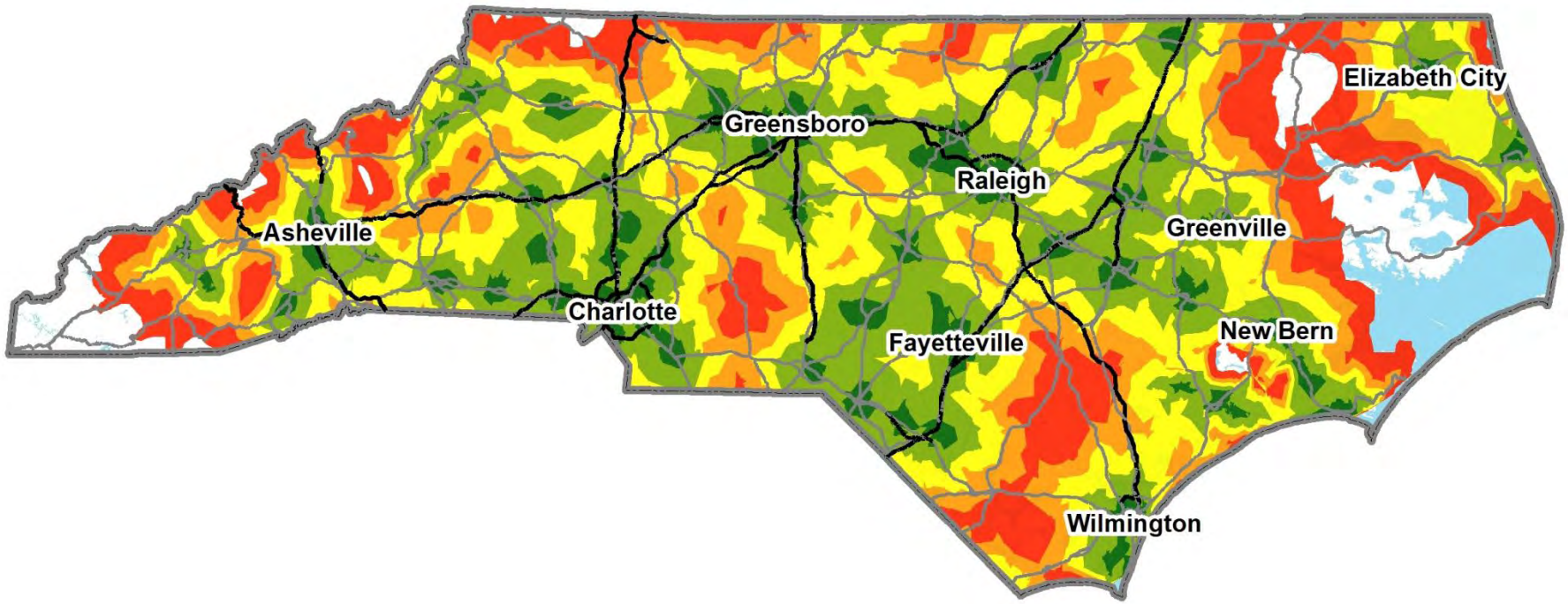

Activity Center / Block Group
with 5,000+ Jobs
Rural Population Center
0 - 10 Minutes
10 - 20 Minutes
20 - 30 Minutes
30 - 40 Minutes
40 - 60 Minutes

Activity Centers and 2010 Census Block Groups with 5,000+ Jobs





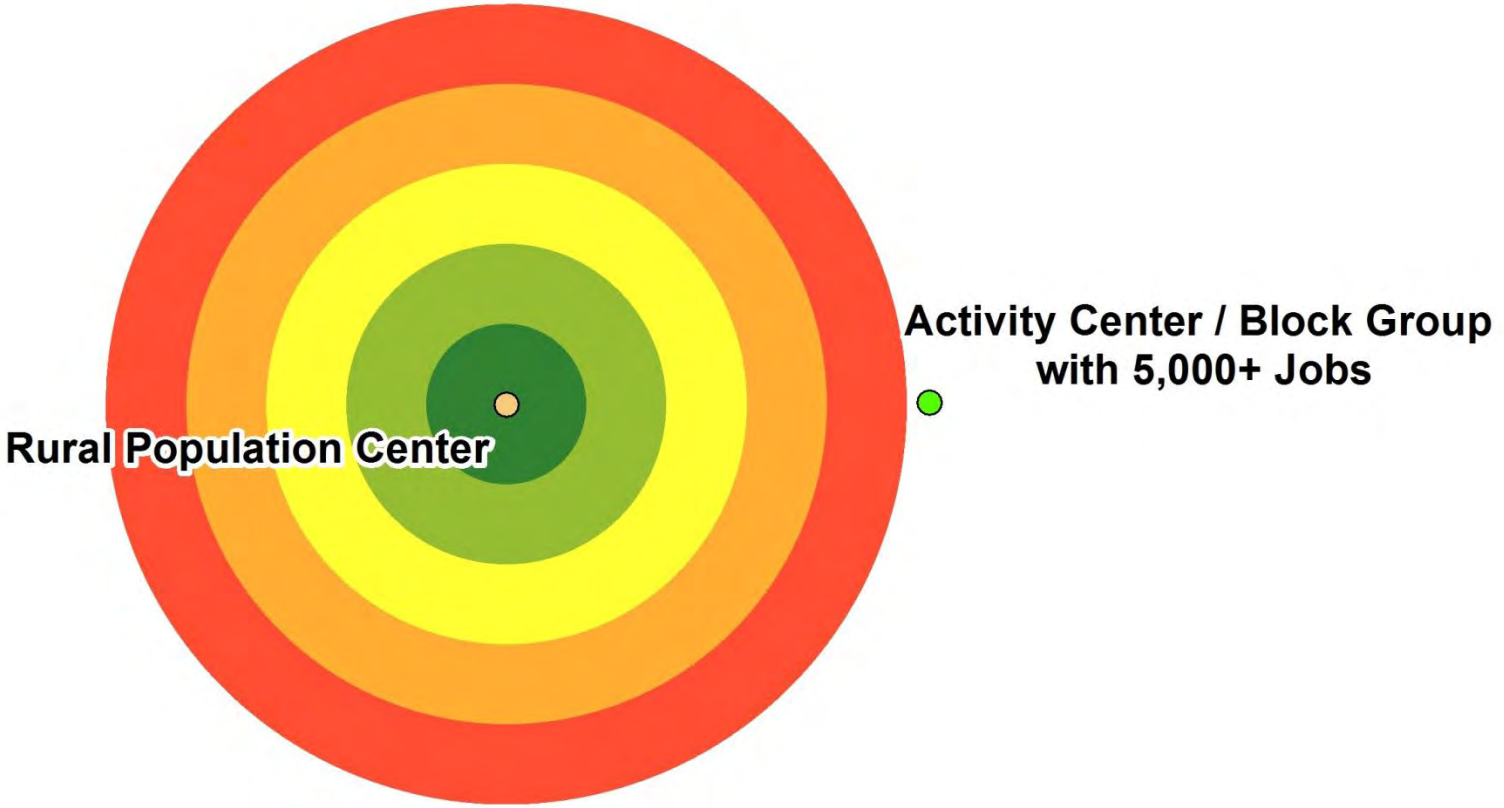
Drivetimes from Activity Centers and Census Block Groups with 5000+ Jobs



- 0 - 10 Minutes
- 10 - 20 Minutes
- 20 - 30 Minutes
- 30 - 40 Minutes
- 40 - 60 Minutes

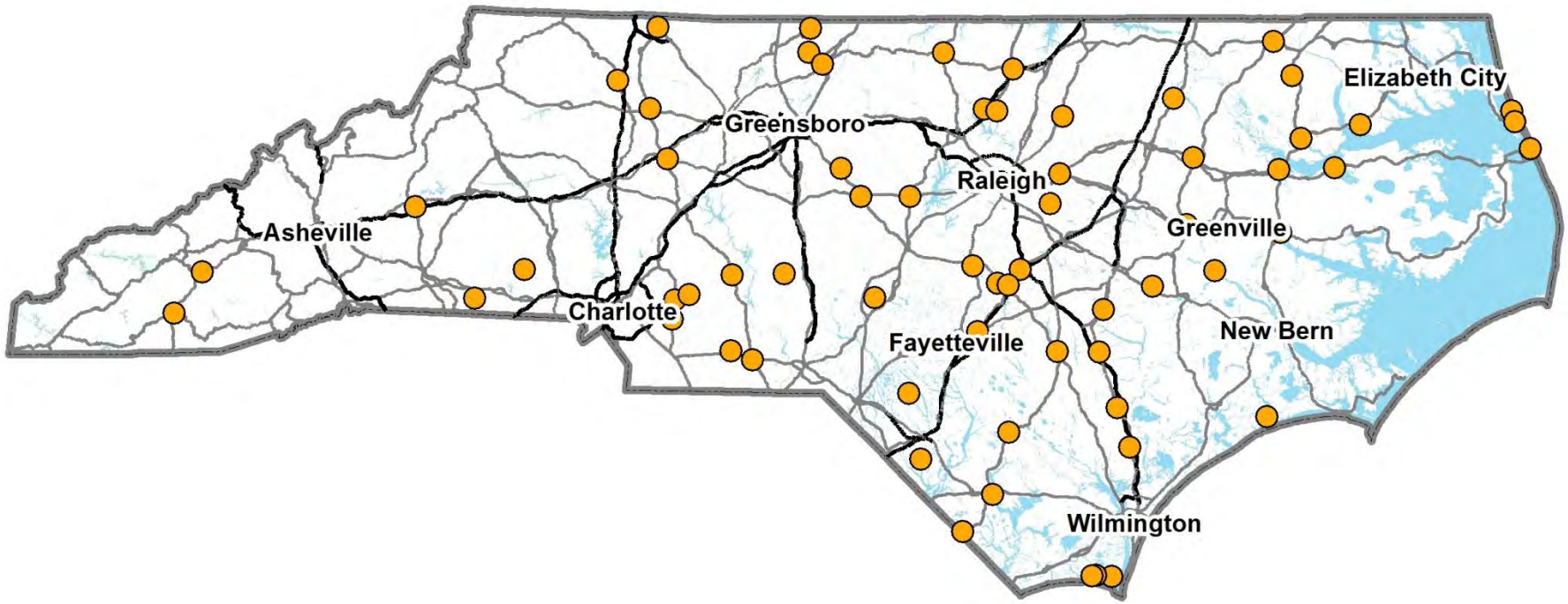
N

0 25 50 100 Miles


Rural Population Center
Activity Center / Block Group
with 5,000+ Jobs

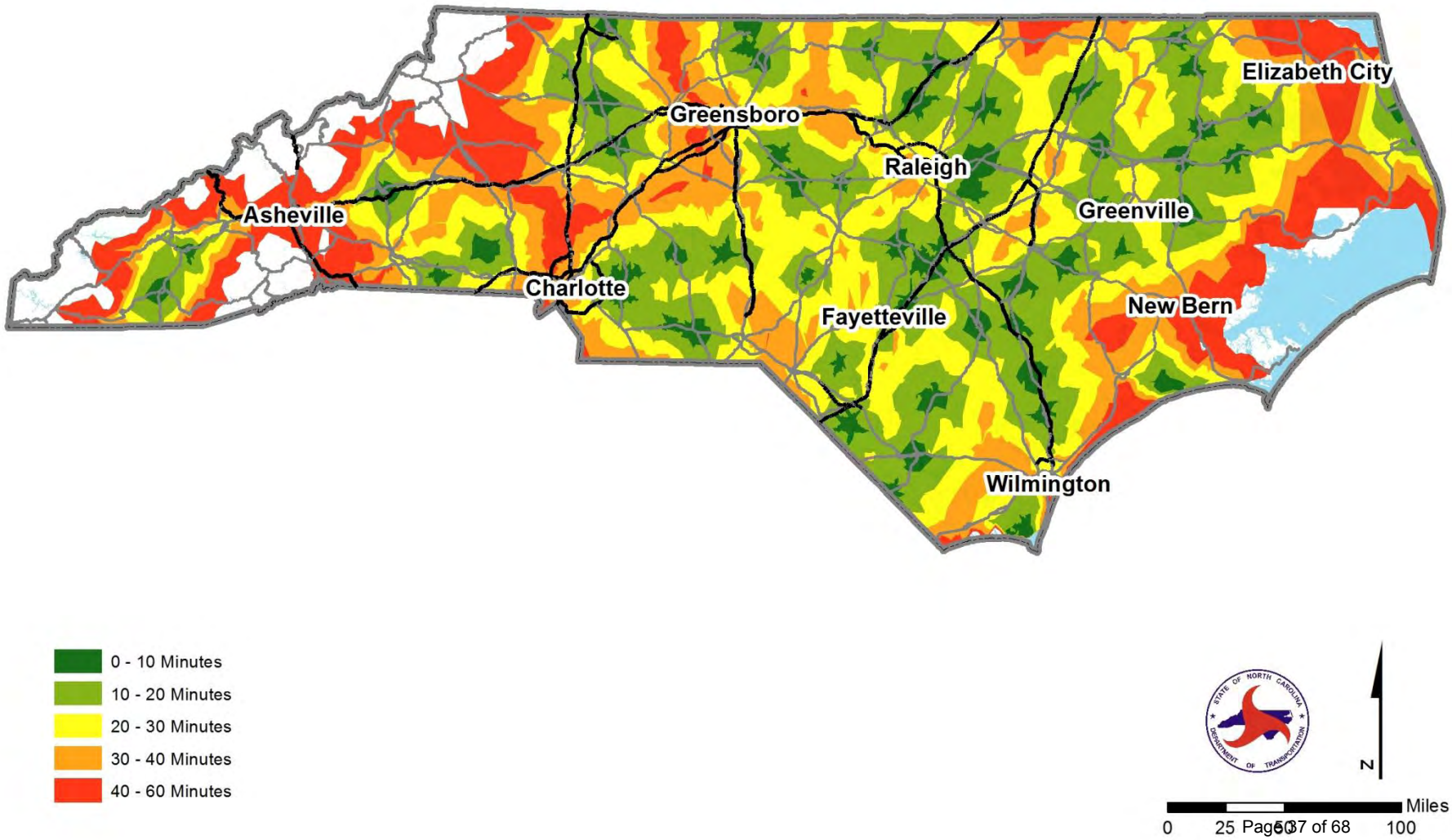
Rural Population Centers

(2,500 to 20,000 people)



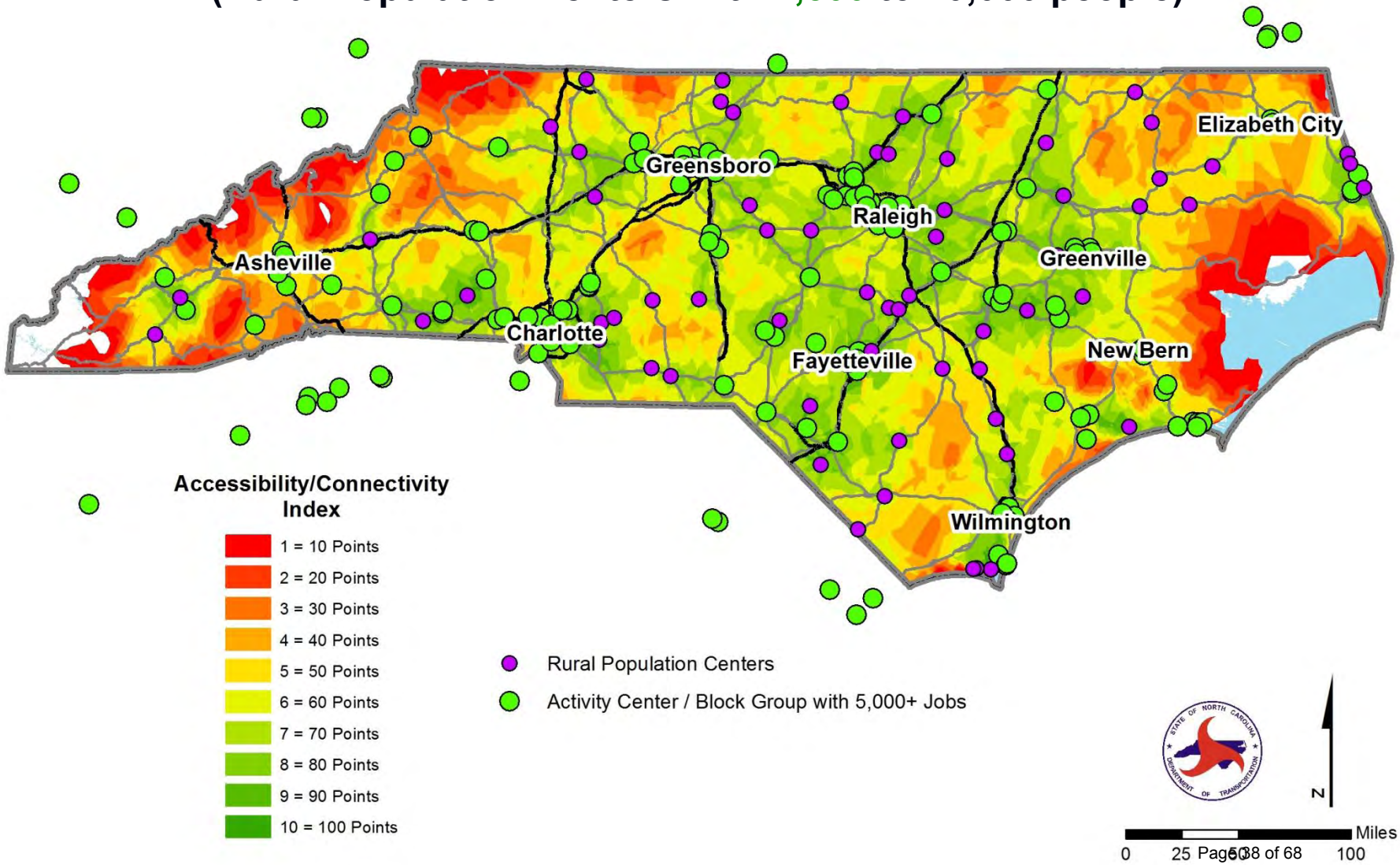
Drivetimes from Rural Population Centers

(2,500 to 20,000 people)



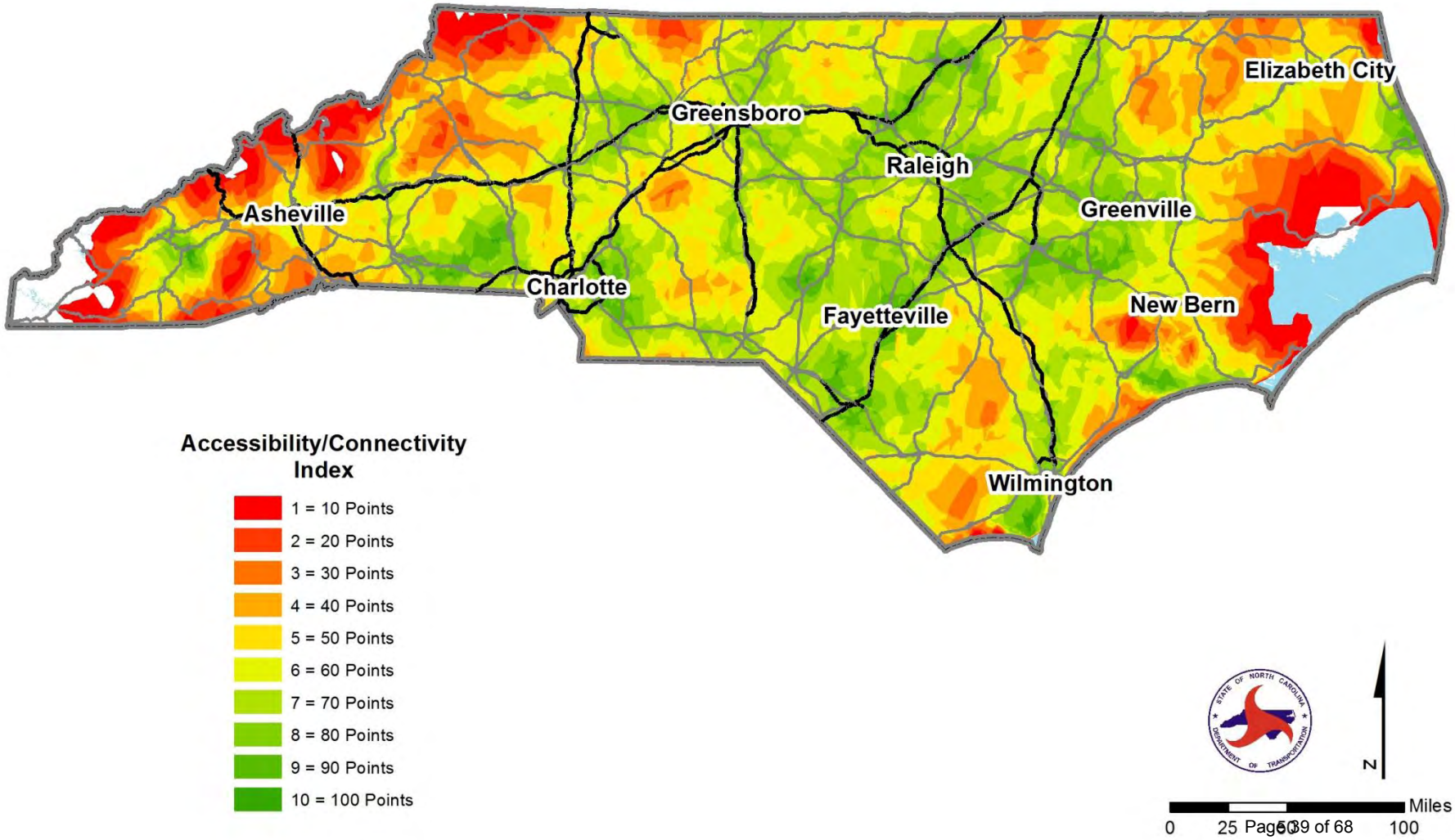
Accessibility/Connectivity Scoring Criteria Scoring Overlay

(Rural Population Centers with 2,500 to 20,000 people)



Accessibility/Connectivity Scoring Criteria Scoring Overlay

(Rural Population Centers with 2,500 to 20,000 people)



HIGHWAY – Accessibility / Connectivity – con't

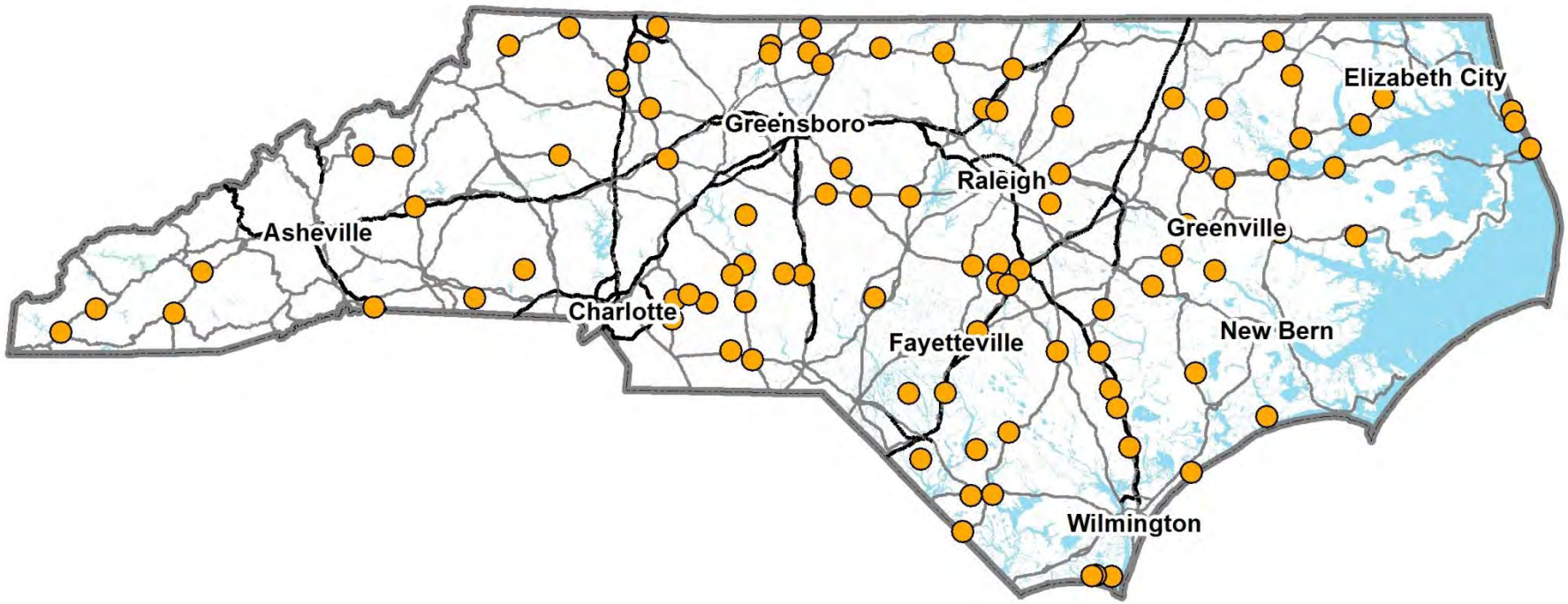
Option 2 – Accessibility / Connectivity Index with rural areas defined as municipalities with population between 1,500 and 20,000 people

Score based on Accessibility / Connectivity Index Map

- Activity Center and Census Block Groups with 5,000+ Jobs
  - Activity Centers includes cities over 20,000 people, military bases, ports, UNC campuses, trauma centers, top tourist destinations
- Rural Area (Rural Population Center) = Municipality with population between 1,500 and 20,000
- Map illustrates overlap of drive times from Activity Centers/Block Groups and Rural Population Centers
- New approach – not previously discussed with Workgroup

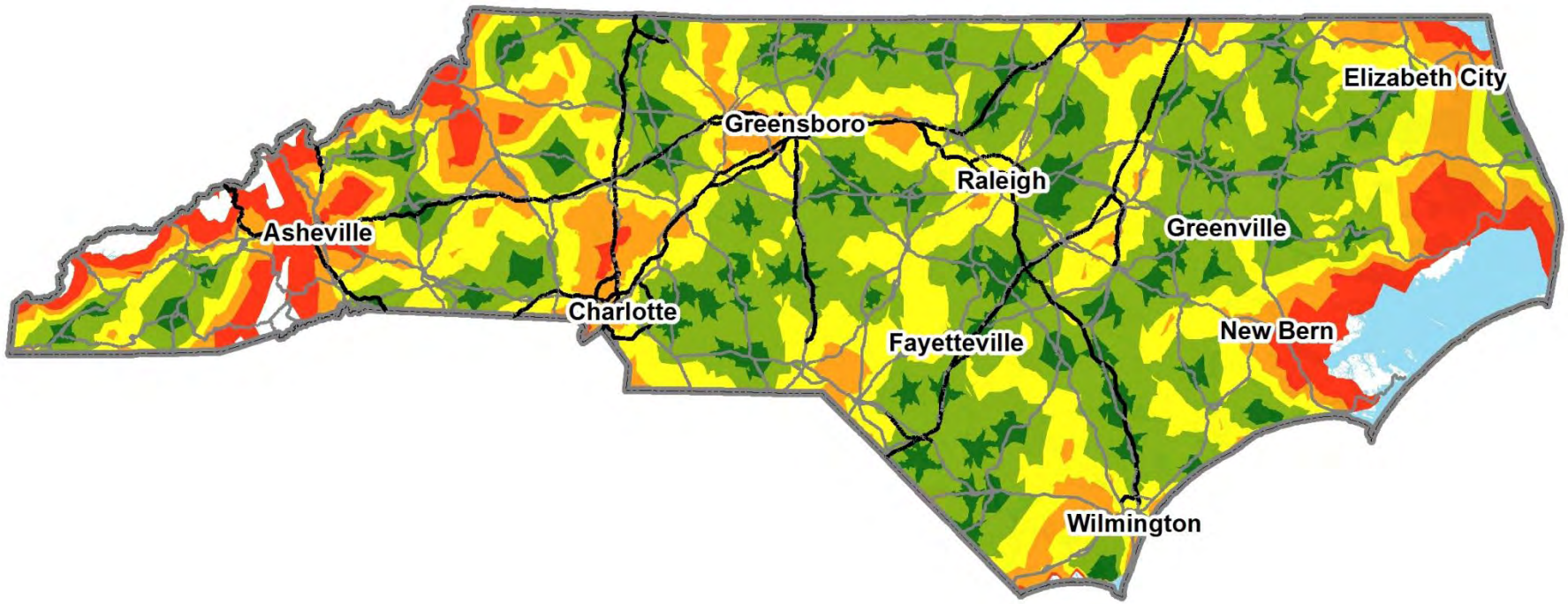
Rural Population Centers

(1,500 to 20,000 people)



Drivetimes from Rural Population Centers

(1,500 to 20,000 people)



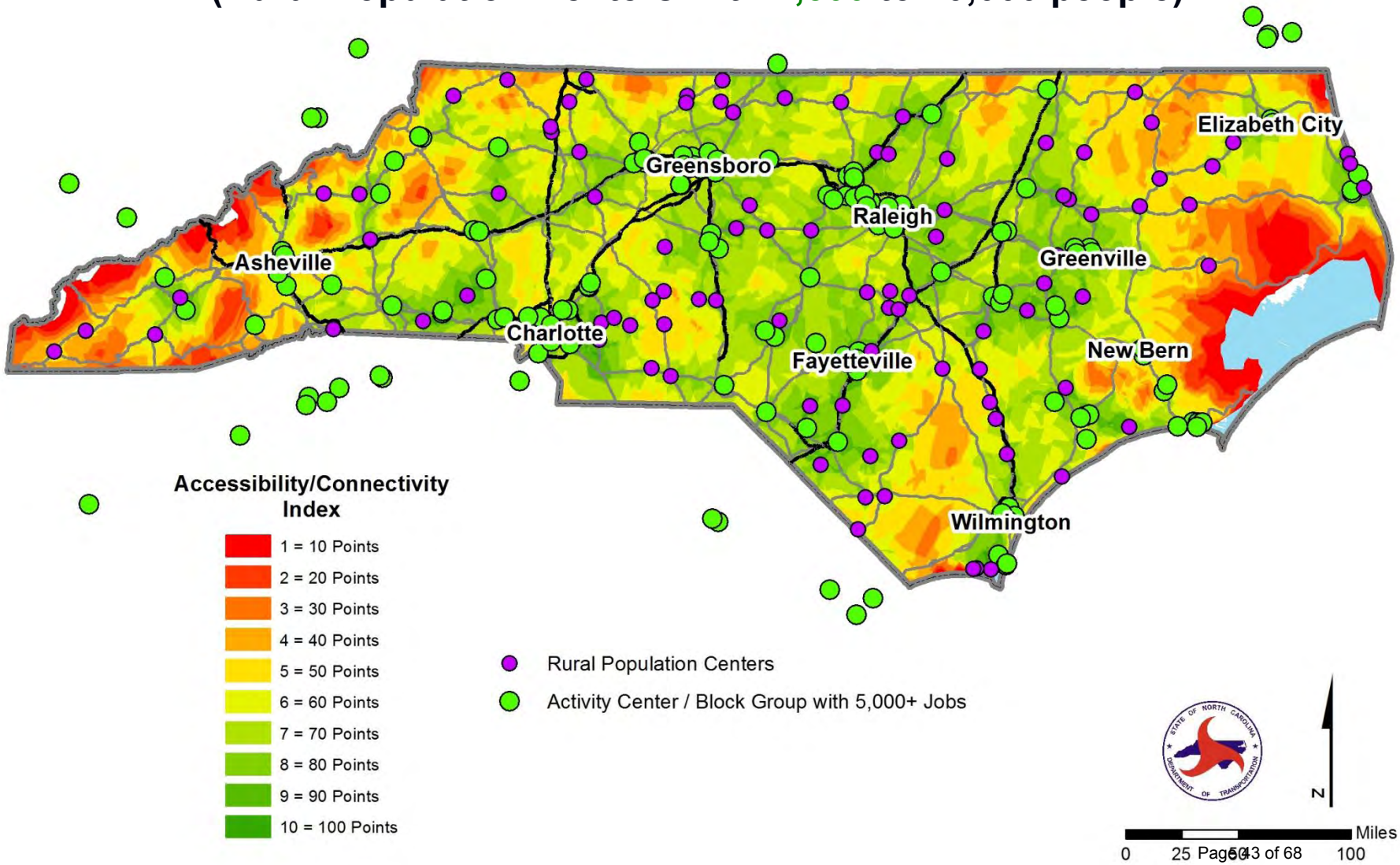
- 0 - 10 Minutes
- 10 - 20 Minutes
- 20 - 30 Minutes
- 30 - 40 Minutes
- 40 - 60 Minutes

N

0 25 50 100 Miles

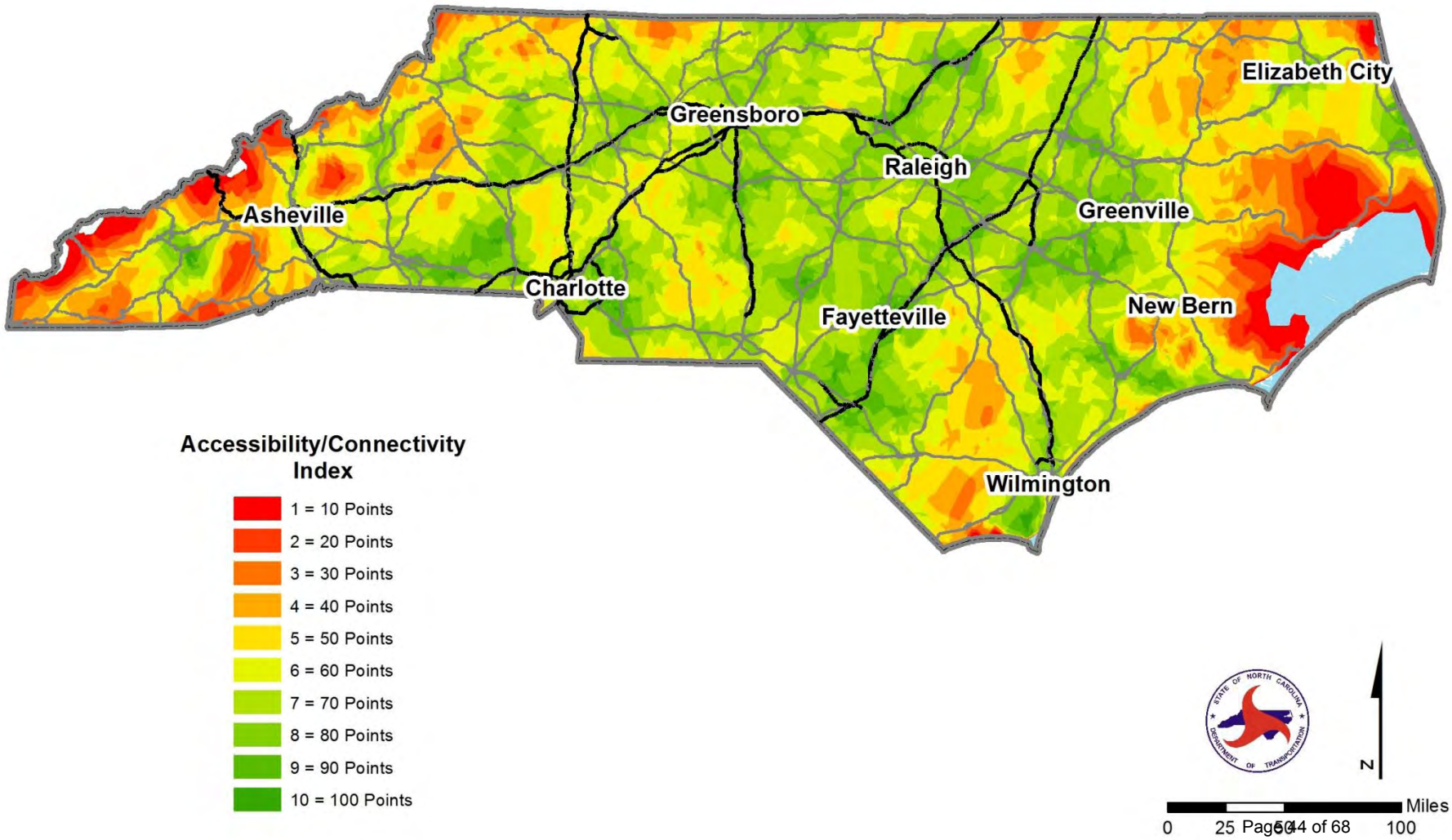
Accessibility/Connectivity Scoring Criteria Scoring Overlay

(Rural Population Centers with 1,500 to 20,000 people)



Accessibility/Connectivity Scoring Criteria Scoring Overlay

(Rural Population Centers with 1,500 to 20,000 people)



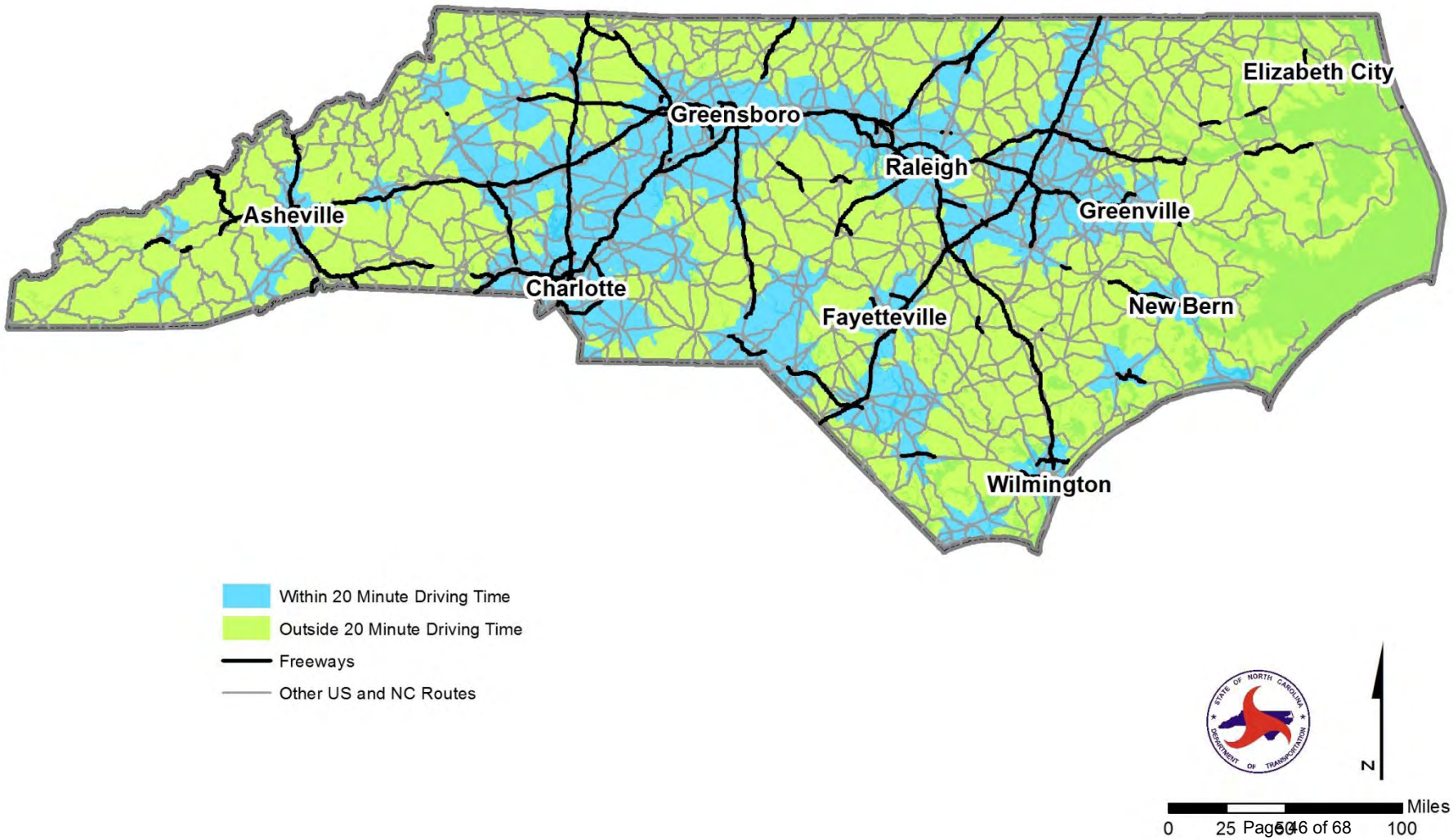
HIGHWAY – Accessibility / Connectivity – con't

<u>Option 3</u> – Evaluation of projects 20 minutes outside of employment centers

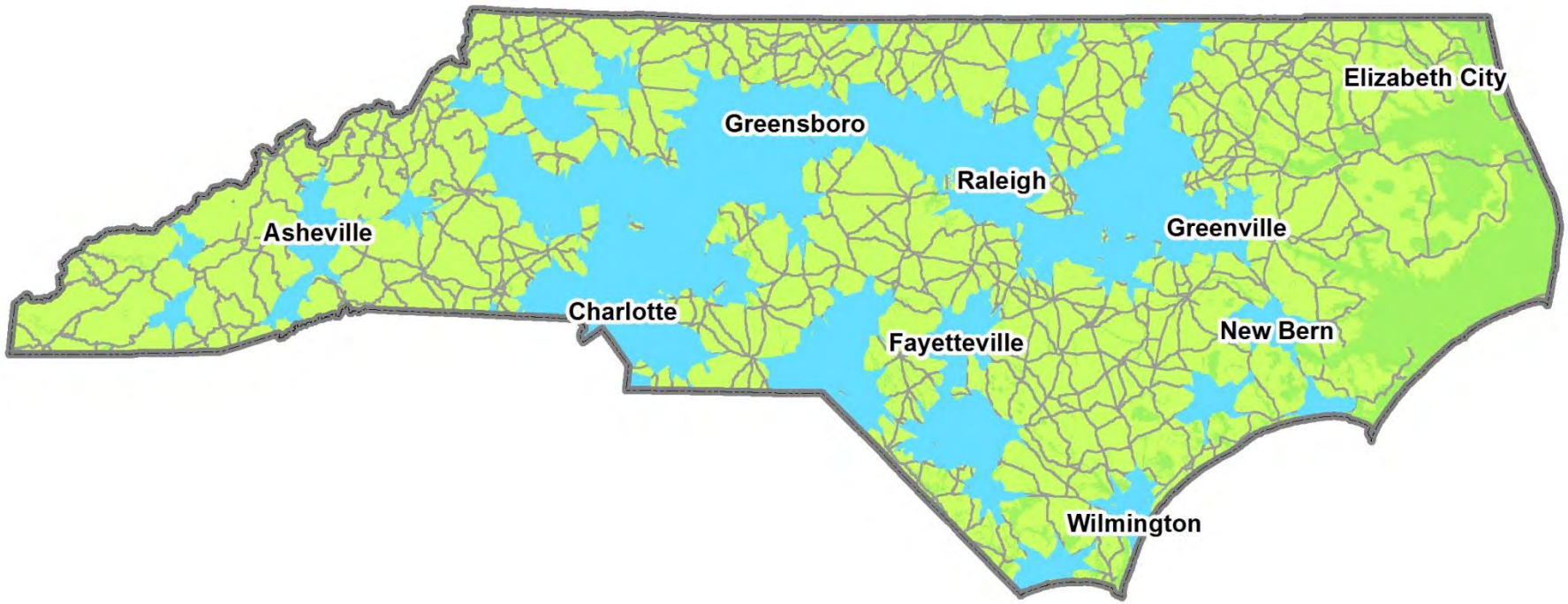
Score based on Existing Volume on eligible roadways → Volume / 200

- Goal is to improve connections between rural areas and employment centers
- Employment centers defined as Census Block Groups with 2,500+ jobs
- Projects within 20 minute drivetime likely to score well based on other criteria
- Existing freeways are not eligible as they already provide a high-level of connectivity
- New approach – not previously discussed with Workgroup

Areas Within and Outside of 20 Minute Drivetimes from Census Block Groups with 2,500+ Jobs



Accessibility / Connectivity Criteria
Eligible Routes



Within 20 Minute Driving Time
Outside 20 Minute Driving Time
Other US and NC Routes

N

0 25 50 100 Miles

Example Projects – Accessibility / Connectivity Score

TIP	Project	Option 1 Score (Rural Center 2,500-20,000 pop.)	Option 2 Score (Rural Center 1,500-20,000 pop.)	Existing Volume	Eligible Route?	Option 3 Score
R-2248E	I-485 New Location	**73.21**	**74.56**	117,000	N	**0**
I-4744	I-40 Widening	**71.99**	**79.96**	94,000	N	**0**
R-2554BA	US 70 (Goldsboro Bypass)	**88.01**	**88.16**	31,000	N	**0**
R-4463B	NC 43 Connector	**57.62**	**63.77**	24,000	N	**0**
R-2911B	US 70 Widening	**63.63**	**66.65**	9,000	N	**0**
R-2519A	US 19E Widening	**26.41**	**66.41**	14,000	Y	**70**
U-3810	SR 1406 (Piney Green Rd) Widening	**84.13**	**88.22**	20,000	N	**0**
U-4909	SR 2643 (Union Cross Rd) Widening	**61.79**	**61.79**	16,000	N	**0**
R-3833A	SR 1100 (Brawley School Rd) Widening	**51.47**	**60.00**	18,000	N	**0**

WG Recommended Highway Scoring Criteria and Weights

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 30% Congestion = 30% Safety = 10% **Total = 70%**	**15%**	**15%**
Division Needs	[Travel Time] Benefit/Cost = 20% Congestion = 20% Safety = 10% **Total = 50%**	**25%**	**25%**

NOTE: FINAL WEIGHTS & PERCENTS SUBJECT TO CHANGE

Rec. Highway Scoring Criteria and Weights – Divisions 1 & 4

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 20% Congestion = 15% Safety = 15% Lane Width = 10% Shoulder Width = 10% **Total = 70%**	**15%**	**15%**
Division Needs	[Travel Time] Benefit/Cost = 10% Congestion = 10% Safety = 10% Lane Width = 10% Shoulder Width = 10% **Total = 50%**	**25%**	**25%**

Rec. Highway Scoring Criteria and Weights – Divisions 2 & 3

Funding Category	QUANTITATIVE Data	LOCAL INPUT Division Rank	LOCAL INPUT MPO/RPO Rank
Statewide Mobility	[Travel Time] Benefit/Cost = 30% Congestion = 30% Economic Competitiveness = 10% Safety = 10% Multimodal [& Freight + Military] = 20% **Total = 100%**	--	--
Regional Impact	[Travel Time] Benefit/Cost = 20% Safety = 25% Multimodal [& Freight + Military] = 25% **Total = 70%**	**15%**	**15%**
Division Needs	Congestion = 20% Safety = 20% Multimodal [& Freight + Military] = 10% **Total = 50%**	**25%**	**25%**

Example Projects – Statewide Mobility Scores – WG Rec.

TIP	Project	Congestion (30%)	[Travel Time] Benefit Cost (30%)	Safety (10%)	Econ. Comp. (10%)	Multimodal [& Freight + Military] (20%)	Total Quant. Score (100%)
R-2248E	I-485 New Location	90.40	23.50	70.69	100.00	50.00	**61.24**
I-4744	I-40 Widening	97.60	58.47	74.36	97.93	50.00	**74.05**
R-2554BA	US 70 (Goldsboro Bypass)	43.60	6.14	66.73	98.55	28.50	**37.15**
R-4463B	NC 43 Connector	--	--	--	--	--	--
R-2911B	US 70 Widening	--	--	--	--	--	--
R-2519A	US 19E Widening	--	--	--	--	--	--
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--	--	--

Example Projects – Statewide Mobility Scores – Alt. A

TIP	Project	Congestion (30%)	[Travel Time] Benefit Cost (25%)	Safety (10%)	Econ. Comp. (15%)	Multimodal [& Freight + Military] (20%)	Total Quant. Score (100%)
R-2248E	I-485 New Location	90.40	23.50	70.69	100.00	50.00	**65.06**
I-4744	I-40 Widening	97.60	58.47	74.36	97.93	50.00	**76.02**
R-2554BA	US 70 (Goldsboro Bypass)	43.60	6.14	66.73	98.55	28.50	**41.77**
R-4463B	NC 43 Connector	--	--	--	--	--	--
R-2911B	US 70 Widening	--	--	--	--	--	--
R-2519A	US 19E Widening	--	--	--	--	--	--
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--	--	--

Example Projects – Statewide Mobility Scores – Alt. B

TIP	Project	Congestion (25%)	[Travel Time] Benefit Cost (25%)	Safety (10%)	Econ. Comp. (20%)	Multimodal [& Freight + Military] (20%)	Total Quant. Score (100%)
R-2248E	I-485 New Location	90.40	23.50	70.69	100.00	50.00	**65.54**
I-4744	I-40 Widening	97.60	58.47	74.36	97.93	50.00	**76.04**
R-2554BA	US 70 (Goldsboro Bypass)	43.60	6.14	66.73	98.55	28.50	**44.52**
R-4463B	NC 43 Connector	--	--	--	--	--	--
R-2911B	US 70 Widening	--	--	--	--	--	--
R-2519A	US 19E Widening	--	--	--	--	--	--
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--	--	--

Example Projects – Statewide Mobility Scores Comparison

TIP	Project	WG Rec. Total Score (Econ. Comp. = 10%)	Alt. A Total Score (Econ. Comp. = 15%)	Alt. B Total Score (Econ. Comp. = 20%)
R-2248E	I-485 New Location	**61.24**	**65.06**	**65.54**
I-4744	I-40 Widening	**74.05**	**76.02**	**76.04**
R-2554BA	US 70 (Goldsboro Bypass)	**37.15**	**41.77**	**44.52**
R-4463B	NC 43 Connector	--	--	--
R-2911B	US 70 Widening	--	--	--
R-2519A	US 19E Widening	--	--	--
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--

Example Projects – Regional Impact Scores – WG Rec.

TIP	Project	Congestion (30%)	[Travel Time] Benefit Cost (30%)	Safety (10%)	Total Quant. Score (70%)
R-2248E	I-485 New Location	90.40	23.50	70.69	**41.24**
I-4744	I-40 Widening	97.60	58.47	74.36	**54.26**
R-2554BA	US 70 (Goldsboro Bypass)	43.60	6.14	66.73	**21.59**
R-4463B	NC 43 Connector	45.60	14.29	59.59	**23.93**
R-2911B	US 70 Widening	37.20	4.60	72.26	**19.77**
R-2519A	US 19E Widening	58.40	6.33	48.33	**24.25**
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--

Example Projects – Division Needs Scores – WG Rec.

TIP	Project	Congestion (20%)	[Travel Time] Benefit Cost (20%)	Safety (10%)	Total Quant. Score (50%)
R-2248E	I-485 New Location	90.40	23.50	70.69	**29.85**
I-4744	I-40 Widening	97.60	58.47	74.36	**38.65**
R-2554BA	US 70 (Goldsboro Bypass)	43.60	6.14	66.73	**16.62**
R-4463B	NC 43 Connector	45.60	14.29	59.59	**17.94**
R-2911B	US 70 Widening	37.20	4.60	72.26	**15.59**
R-2519A	US 19E Widening	58.40	6.33	48.33	**17.78**
U-3810	SR 1406 (Piney Green Rd) Widening	68.00	2.25	79.93	**22.04**
U-4909	SR 2643 (Union Cross Rd) Widening	66.40	0.90	76.53	**21.11**
R-3833A	SR 1100 (Brawley School Rd) Widening	67.20	1.65	71.63	**20.93**








WEIGHTED
CD-0132
NORTH CAROLINA
N.C. PERMANENT

Local Input Points

Use in Regional Impact and Division Needs categories only

Points to allocate to projects <u>across all modes</u> as an MPO/RPO TAC Member and communication with Division Engineer

# of Points = 1000 points + additional points based on population

Separate Allocation of Points for Regional Impact Category and Division Needs Category

- Point allocation is the same for each

100 point cap for any one project; points can also be donated across Regions/Divisions

Example Projects – Local Input Points – Division 15

Example: Division 15 has 500 points to allocate to projects below

			Remaining Points → 500	500
TIP	Project	Eligibility	Regional Impact Local Input Points	Division Needs Local Input Points
R-2248E	I-485 New Location	Statewide	100	0
I-4744	I-40 Widening	Statewide	Funded in Statewide Mobility	
R-2554BA	US 70 (Goldsboro Bypass)	Statewide	100	0
R-4463B	NC 43 Connector	Regional	60	80
R-2911B	US 70 Widening	Regional	40	20
R-2519A	US 19E Widening	Regional	70	50
U-3810	SR 1406 (Piney Green Rd) Widening	Division	--	100
U-4909	SR 2643 (Union Cross Rd) Widening	Division	--	80
R-3833A	SR 1100 (Brawley School Rd) Widening	Division	--	30
	Non-Highway Projects	Regional	130	60
	Non-Highway Projects	Division	--	80

Example Projects – Div. 15 Statewide Mobility Total Scores

TIP	Project	Total Quant. Score (100%)			Total Score (100%)
R-2248E	I-485 New Location	61.24			**61.24**
I-4744	I-40 Widening	74.05			**74.05**
R-2554BA	US 70 (Goldsboro Bypass)	37.15			**37.15**
R-4463B	NC 43 Connector	--	--	--	--
R-2911B	US 70 Widening	--	--	--	--
R-2519A	US 19E Widening	--	--	--	--
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--

Example Projects – Div. 15 Regional Impact Total Scores

TIP	Project	Total Quant. Score (70%)	Division Points (15%)	MPO/RPO Points (15%)	Total Score (100%)
R-2248E	I-485 New Location	41.24	100	100	**58.89**
I-4744	I-40 Widening	**Funded in Statewide Mobility**			
R-2554BA	US 70 (Goldsboro Bypass)	21.59	100	80	**42.11**
R-4463B	NC 43 Connector	23.93	60	90	**39.25**
R-2911B	US 70 Widening	19.77	40	20	**22.84**
R-2519A	US 19E Widening	24.25	70	100	**42.48**
U-3810	SR 1406 (Piney Green Rd) Widening	--	--	--	--
U-4909	SR 2643 (Union Cross Rd) Widening	--	--	--	--
R-3833A	SR 1100 (Brawley School Rd) Widening	--	--	--	--

Example Projects – Div. 15 Division Needs Total Scores

TIP	Project	Total Quant. Score (50%)	Division Points (25%)	MPO/RPO Points (25%)	Total Score (100%)
R-2248E	I-485 New Location	29.85	0	0	**14.93**
I-4744	I-40 Widening	**Funded in Statewide Mobility**			
R-2554BA	US 70 (Goldsboro Bypass)	16.62	0	0	**8.31**
R-4463B	NC 43 Connector	17.94	80	60	**43.97**
R-2911B	US 70 Widening	15.59	20	30	**20.30**
R-2519A	US 19E Widening	17.78	50	20	**26.39**
U-3810	SR 1406 (Piney Green Rd) Widening	22.04	100	100	**61.02**
U-4909	SR 2643 (Union Cross Rd) Widening	21.11	80	70	**48.06**
R-3833A	SR 1100 (Brawley School Rd) Widening	20.93	30	90	**40.47**

Normalization – Workgroup Discussion

Definition – Methodology for comparing quantitative scores across all modes together

Challenges:

- Different criteria and weights used for evaluating projects in each mode
- No easy solution → conducted review of methodologies across country
- No other state has successfully implemented such a comparison
- Evaluated several potential options including:
  - Qualitative value judgment
  - Weighted benefit/cost
  - Statistical analysis

Normalization – WG Recommendation

For Prioritization 3.0 Only (Initial Implementation of STI)

- Statewide Mobility (only) – No normalization, scores are stand-alone for comparison (highway, aviation, freight rail)
- Regional Impact & Division Needs – Allocate funds to Highway and Non-Highway modes based on minimum floor or %s

Mode	Workgroup Recommendation	Historical Budgeted	Historical Expenditures
Highway	90% (min.)	93%	96%
Non-Highway	4% (min.)	7%	4%

- Continue research with national experts
- Conduct a statistical analysis of scores by an outside agency after all quantitative scores are completed in 2014. Request a recommendation on how to normalize.
- Incorporate research and analysis findings into Prioritization 4.0





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N.C. PERMANENT

BOT Recommendations on August 7th

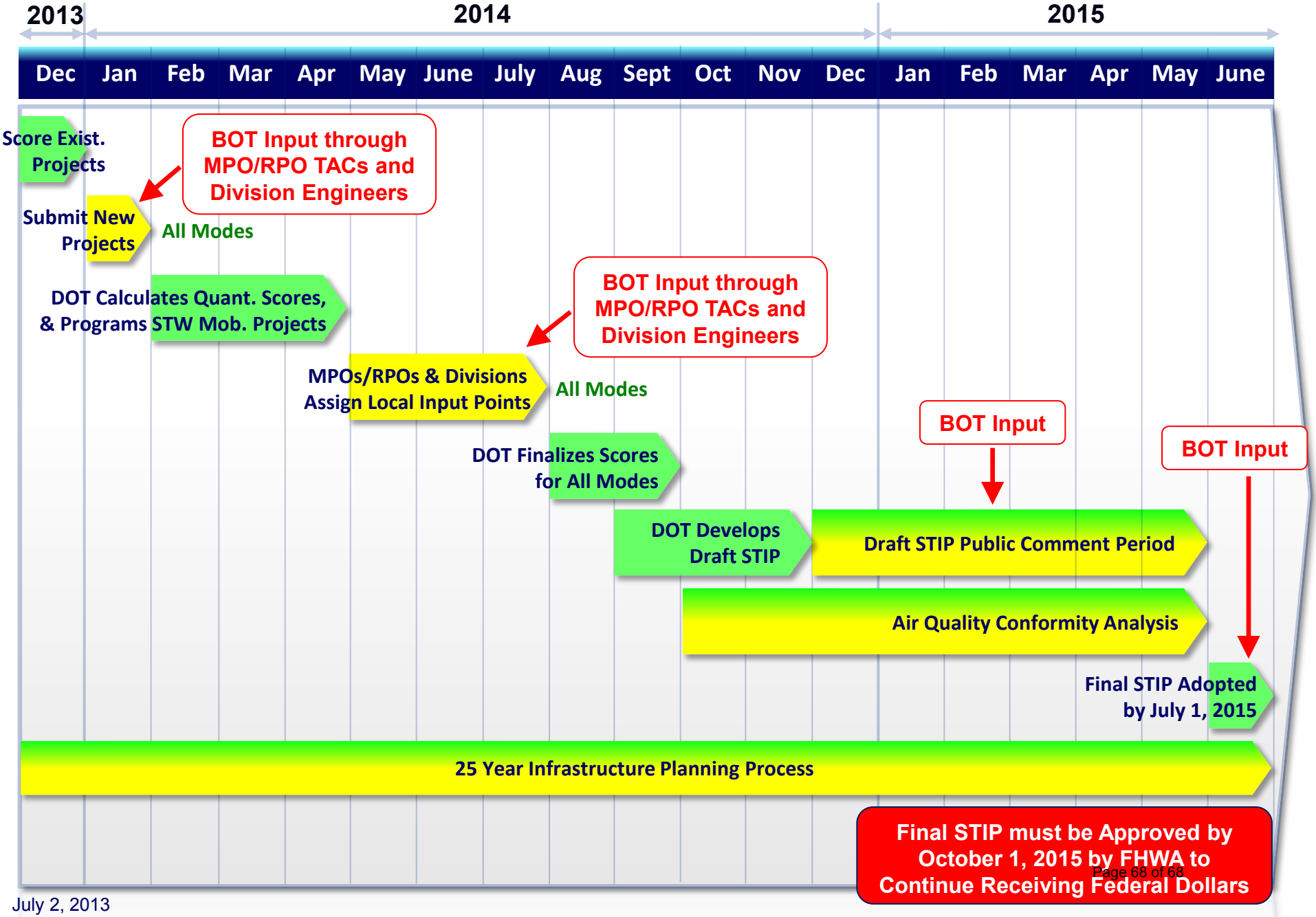
Highway Criteria, Weights, and Measures

Non-Highway Criteria, Weights, and Measures

Normalization Methodology

Other Recommendations?

Prioritization 3.0 Schedule



Prioritization 3.0 / Strategic Transportation Investments

DRAFT – Non-Highway Quantitative Scoring Criteria

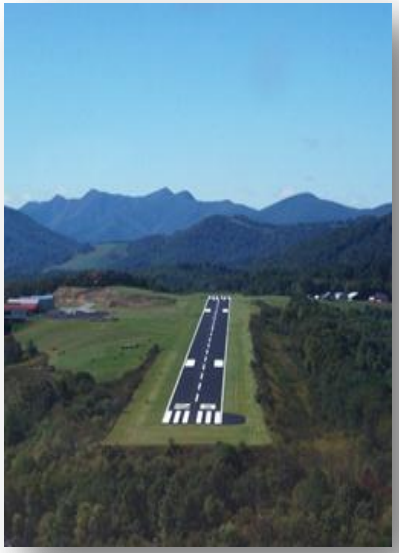
July 23, 2013








Aviation









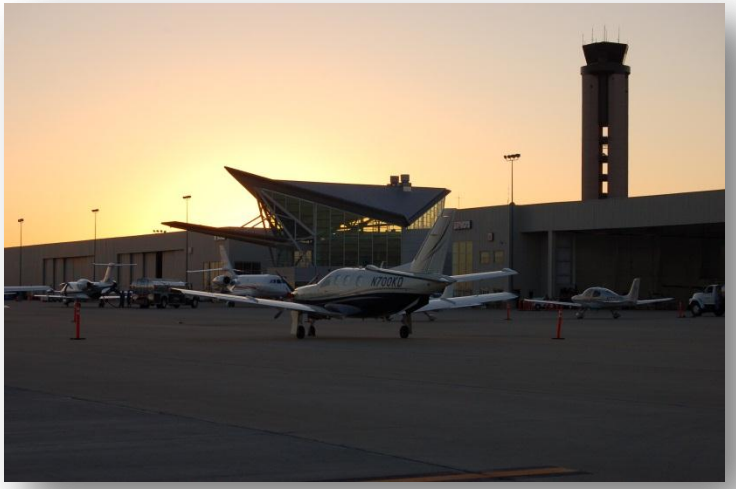
Division of Aviation

- **Enabling Legislation – NC GS 63, Aeronautics**
- **Mission - Promote the economic well being of North Carolina through air transportation system development and improved aviation safety and education.**
- **Airport Section - State System Planning, Airport and Aviation System Development, FAA Block Grant Program, Airport Safety and Maintenance, Automated Weather, and Inspection Programs**

Economic Impacts of NC Airports*

- **Commercial and General Aviation Airports provide more than $25.9 Billion in economic impact each year.**

- **Commercial and General Aviation Airports support over 108,000 jobs throughout NC.**



*** 2012 Economic Contribution of Airports in North Carolina Study**

Strategic Transportation Investments Eligibility - Airports

Statewide Mobility

- **Commercial Service Airports** included in the Federal Aviation Administration's National Plan of Integrated Airport Systems (NPIAS) that provide international passenger service or 375,000 or more enplanements annually, provided that the State's annual financial participation in any single airport project included in this subdivision may not exceed five hundred thousand dollars ($500,000).

Regional Impacts

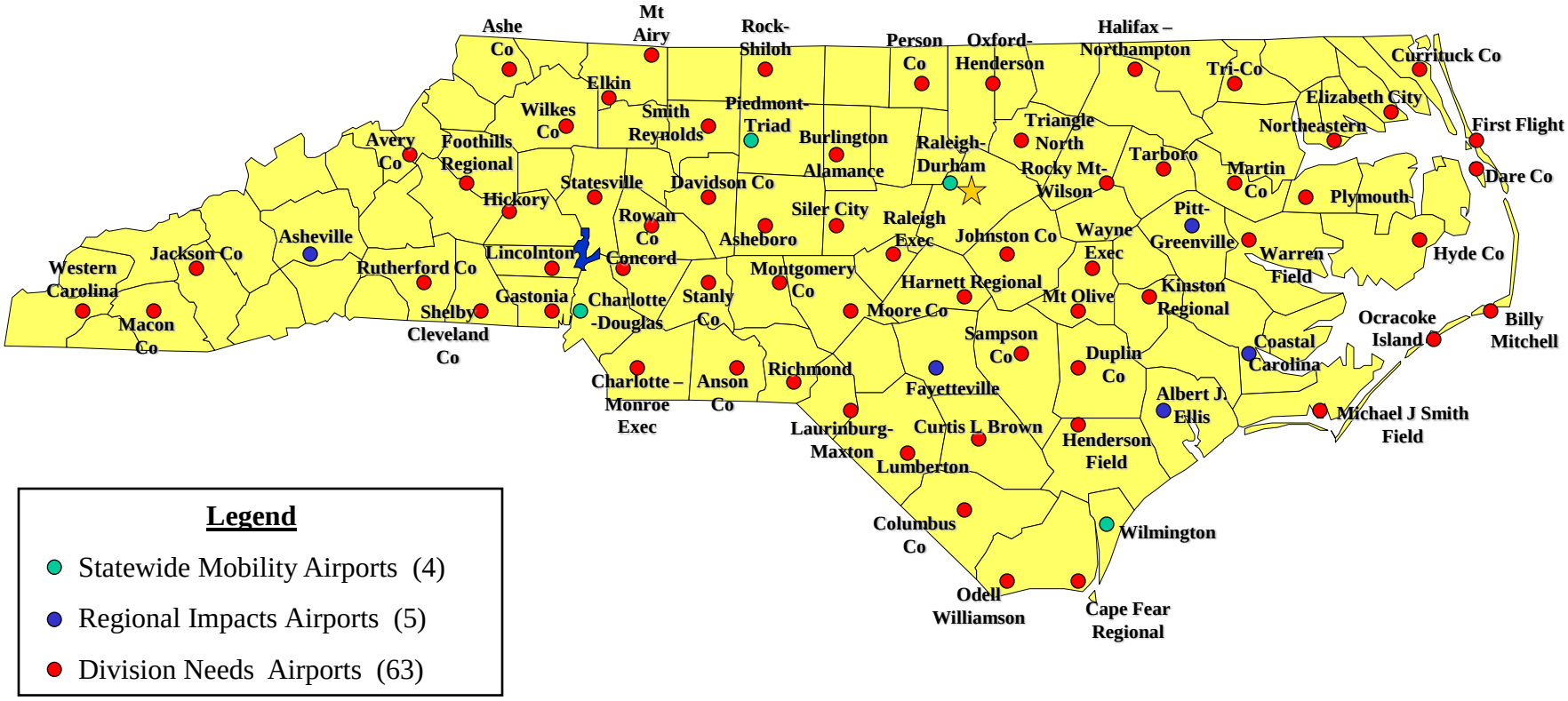
- **Commercial Service Airports** included in the NPIAS that are not included in subdivision (1) of this section, provided that the State's annual financial participation in any single airport project included in this subdivision may not exceed three hundred thousand dollars ($300,000).

Division Needs

- **Airports** included in the NPIAS that are not included in subdivision (1) or (2) of this section, provided that the State's total annual financial participation under this sub-subdivision shall not exceed eighteen million five hundred thousand dollars ($18,500,000).

North Carolina Airports

(72 Publicly Owned / Publicly Operated Airports)



Legend

- Statewide Mobility Airports (4)
- Regional Impacts Airports (5)
- Division Needs Airports (63)

Proposed Aviation Criteria

Criteria	Statewide Mobility	Regional Impacts	Division Needs
	% Wt	% Wt	% Wt
NCDOA Project Rating	40	40	30
FAA ACIP Rating	40	20	10
Local Investment Index	10	5	5
Federal Investment Index	10	5	
Volume / Demand Index			5
	100%	70%	50%

DIVISION OF AVIATION
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

Aviation – NCDOA Project Rating

- **Definition: Projects prioritized and classified within NC Division of Aviation (NCDOA) project categories.**
- **Why use this criteria? Assigns point values based on priority of the project and need of the project.**
- **Source: NC Airport Development Plan, airport's FAA approved Airport Layout Plan, and the NC Airport System Plan.**
- **Scoring based on points assigned to project as evaluated by NCDOA minimum and recommended criteria.**
- **Recommended Weights: 40% Statewide, 40% Regional, 30% Division**

DRAFT

NCDOA Project Points

Master Project Categories	Points
Runway Approach / Safety Area /Protection Zones	23 - 25; 71 -75
Pavement Condition - Airfield	67 – 70
Pavement Construction/Expansion/Modifications - Runway	16 - 22; 61 – 66
Visual Navigational Aids/Other Part 77 Obstructions	58 – 60
Airfield Lighting & Signage – Runway	14 - 15; 55 – 57
Instrument Navigational Aids / Weather Reporting Equip	9 - 13; 50 – 54
Pavement Construction/Expansion/Modifications – Taxiway & Apron	7 - 8; 44 – 49
Terminal Building	6; 41 – 43
Airfield Lighting & Signage – Taxiway & Apron	3 - 5; 35 – 40
Ground Communication	2; 33 - 34
Approach Lighting	1; 31 – 32
Aircraft Rescue & Fire Fighting (ARFF) Equipment	30
Storage Buildings	28 – 29
Wildlife Safety & Security Fencing	27
Aircraft Fuel Facilities	26

Refer to the NC Airport Development Guide Priority System, Numerical Priority Descriptions for actual project priority number.

Aviation – FAA ACIP

- **Definition: Federal Aviation Administration Airport Capital Improvement Plan (ACIP) Rating.**
- **Why use this criteria?: The ACIP Rating serves as the primary planning tool (for the FAA) for systematically identifying, prioritizing, and assigning funds to critical airport development and associated capital needs for the National Airspace System (NAS).**
- **Source: Federal Aviation Regulation (FAR) Order 5100.39, Airport Capital Improvement Plan**
- **Scores adjusted to 75 point scale to match NCDOA Project Rating**
- **Recommended Weights: 40% Statewide, 20% Regional, 10% Division**

FAA Airport Capital Improvement Plan Point Matrix

	NPIAS-ACIP Standard Descriptions, ACIP Codes, and National Priority Ratings	Airport Code			
		A	B	C	D
Category	Project Description	5	4	3	2
Equipment	Acquire Aircraft Rescue and Fire Fighting Vehicle [Part 139 only]	98	95	93	90
Runways	<Apply Friction Course/Groove> Runway	86	84	82	80
Runways	Construct Runway {name} (environmental mitigation)	76	74	72	70
Runways	Rehabilitate Runway {name}	72	70	68	66
Runways	Rehabilitate Runway <Lighting/Electrical Vault>	72	70	68	66
Taxiways	Rehabilitate Taxiway	68	66	64	62
Taxiways	Rehabilitate Taxiway {name} Lighting	68	66	64	62
Apron	Construct {name} (environmental mitigation)	66	64	62	60
Apron	Rehabilitate {name}	62	60	58	56
Apron	Construct {name}	56	54	52	50
Runways	<Construct/Extend/Improve> Runway {name} Safety Area [Non-Primary Airports]	50	48	47	45
Runways	Install Runway Lighting (HIRL, MIRL, TDZ, LAHSO or CL)	50	48	47	45
Runways	<Extend/Widen/Strengthen> Runway {name} [to meet standards]	50	48	47	45
Taxiways	Construct Taxiway {name} [includes relocation]	50	49	47	46
Taxiways	Install Taxiway {name} Lighting (e.g., SMGCS, reflectors, MITL)	47	45	44	42
New Airports	Construct New Airport	44	43	41	40
Equipment	Acquire Aircraft Rescue and Fire Fighting Safety Equipment{describe} [Not part 139]	41	40	38	37
Terminal Development	Expand Terminal Building	40	39	37	35
Terminal Development	Construct Terminal Building	40	38	37	35
New Airports	Acquire [existing] Airport	35	34	32	31
Buildings	Construct/Expand/Improve/Modify/Rehabilitate> {describe} Building	34	32	31	29

Aviation – Local Investment Index

- **Definition: Provides greater points for those projects that have a higher % of local funding sources (i.e. local or public-private funds).**
- **Why use this criteria? Lessens burden on state capital dollars and measures financial commitment of the airport to the project.**
- **Source: Quantified at project request stage by the airport sponsor.**
- **Scoring: Number of points based on % of Local Funds compared to State Funds toward the project. Examples:**

Project Cost	FAA Funds	State Funds	Local Funds	State Share	Points Awarded
$1,000,000	$0	$900,000	$100,000	90%	10
$1,000,000	$0	$800,000	$200,000	80%	20
$4,000,000	$3,300,000	$300,000	$400,000	43%	57
$4,000,000	$3,100,000	$500,000	$400,000	56%	44

- **Recommended Weights: 10% Statewide, 5% Regional, 5% Division**

Aviation – Federal Investment Index

Statewide Mobility and Regional Impact airports only

- **Definition: A measurement of the project's federal funds compared to state funds and provides greater points for projects with higher % of federal funds verses state funds.**
- **Why use this criteria? To prioritize projects with greater return on investment for State funding participation.**
- **How its Measured – Federal participation for the project compared to State participation toward the project cost.**
- **Source: FAA Airport Improvement Program, NCDOA, and the airport Capital Improvement Plan.**
- **Scoring: Range of points depending on ratio of federal to state investment**
- **Recommended Weights: 10% Statewide, 5% Regional**

Aviation – Federal Investment Index Examples

Project Cost	FAA Funds	State Funds	Local Funds	State Share	Points Awarded
$500,000	$0	$450,000	$50,000	100%	0
$1,000,000	$700,000	$200,000	$100,000	22%	78
$4,000,000	$3,300,000	$300,000	$400,000	8%	92
$6,000,000	$4,900,000	$500,000	$600,000	9%	91

Aviation – Volume / Demand Index

Division Needs Airports Only

- **Definition: Index representing traffic (aircraft operations) plus employment density (jobs near the airport).**
- **Why use this criteria? Identifies projects where there is more traffic and in areas with more user demand.**
- **How its Measured: Based aircraft, aircraft operations, recorded Instrument Flight Rule (IFR) operations, and employees within 10 miles or 15 minute average daily drive time of the airport.**
- **Source: NCDOT GIS, FAA Criteria, US Census and NC Airport System Plan**
- **Scoring on a 100 point scale**
  - **Range of points are 20 to 100.**
- **Recommended Weight: 5% Division**

Aviation Project Scoring Examples

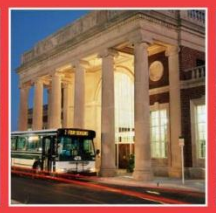
	Project and Airport Info				NCDOA Development Category Criteria			FAA ACIP Criteria (FFA Order 5100.39A)	Local Invest Index		Fed Invest Index		Airport Users Index	Total Score
Fund Eligibility	Project Description	Airport ID	Airport	Cost	NCDOT Development Category	NCDOT Dev. Cat Priority	NCDOA Rating Points	FAA ACIP Model Criteria Points (*Total)	State to Local Investment %	Local Investment Points	State to Federal Investment %	Federal Investment Points	Volume/ Demand Points	Weighted Project Score (per Eligibility Fund)
							(Weighted 40% of Project Score)	(Weighted 40% of Project Score)		(Weighted 10% of Project Score)		(Weighted 10% of Total Score)	n/a	Max Statewide Points = 100
Statewide	TAXIWAY M EXTENSION	GSO	Piedmont-Triad Int'l	$ 12,000,000	PAVEMENT CONSTRUCTION/ EXPANSION	1	48	39	29%	71	4.9%	95	n/a	**51.5**
							(Weighted 40% of Project Score)	(Weighted 20% of Project Score)		(Weighted 5% of Project Score)		(Weighted 5% of Project Score)	n/a	Max Regional Points = 70
Regional	APRON EXPANSION	PGV	Pitt Greenville	$ 1,460,000	AIRCRAFT/ APRON	1	47	34	67%	33	29.6%	70	n/a	**30.8**
							(Weighted 30% of Project Score)	(Weighted 10% of Project Score)		(Weighted 5% of Project Score)		n/a	(Weighted 5% of Project Score)	Max Division Points = 50
Division	LAND FOR RUNWAY PROTECTION ZONE	SUT	Cape Fear Regional Jetport	$ 2,000,000	RUNWAY PROTECTION ZONES	1	71	33	90%	10	n/a	n/a	64	**28.3**

Proposed Aviation Criteria

Criteria	Statewide Mobility	Regional Impacts	Division Needs
	% Wt	% Wt	% Wt
NCDOA Project Rating	40	40	30
FAA ACIP Rating	40	20	10
Local Investment Index	10	5	5
Federal Investment Index	10	5	
Volume / Demand Index			5
	100%	70%	50%

DIVISION OF AVIATION
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION








Rail








NCDOT Rail Division

The mission of the Rail Division is to focus on the safe and efficient movement of people and goods on North Carolina's railroads through freight, passenger and safety programs.

Enabling legislation includes NC G.S. 136-44.36 and G.S. 136-18

Our goals are to:

- Improve safety
- Support a sustainable rail transportation infrastructure
- Meet freight, passenger and intermodal transportation needs
- Support job creation and economic growth

Criteria Development Efforts

- **Research and Development**
  - Contacted - Railroads and other Rail Planning experts
  - Identified available data and economic models
  - Researched project appraisal frameworks internationally
  - Created scoring criteria using:
    - Available data sources: Railroad track charts, Statewide Authoritative Railway and Highway (SARAH) database, ridership & other studies
    - Track Capacity Studies and facility design standards
    - Best engineering judgments
- **Criteria developed**
  - **B/C** and **Economic Competitiveness** (uses Transportation Economic Impact System (TREDIS) - like highway project scoring)
  - **Capacity & Congestion** (determines current percent over capacity)
  - **Mobility** (determines change in capacity or congestion after project)
  - **Safety** (Federal Railroad Administration (FRA) standard crossing risk assessment)
  - **Connectivity** (project connection to strategic corridors or facilities)
  - **Accessibility** (potential for increased job growth by improving access to rail)

Eligible Project Types by Funding Category

Funding Category	Project Types			
	Freight Track & Structures	***Freight Intermodal***	***Passenger Track & Structures***	***Passenger Stations or New Service***
Statewide (100% Criteria Score)	**Class 1** *sidings, double-track, grade separations, new improved access*	**Class 1** *new intermodal*	*Not Eligible*	*Not Eligible*
Regional (70% Criteria Score)	**Adds rail lines crossing county line** *short lines – sidings, track class upgrades*	**Adds rail lines crossing county line** *short line - transload*	**Rail lines crossing a county line** *sidings, double-track, grade separation, curve realignment*	**Rail lines crossing a county line** *new passenger service, station, equipment*
Division (50% Criteria Score)	**Adds RRs in one county** *port railroads – sidings/storage tracks*	**Adds RRs in one county** *short line - transload*	Same as Regional	Same as Regional

Rail: Benefit-Cost

- **Definition**: Benefits associated with emissions savings, fuel savings, travel time savings, & highway-to-rail diversions. B/C value is determined using TREDIS.

- **Scoring:** Total project benefits divided by the project cost to the state.

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**20%**	**10%**	**10%**
Freight Intermodal & Transload	**25%**	**15%**	**10%**
Passenger Track & Structures	N/A	**10%**	**10%**
Passenger Stations & Service	N/A	**15%**	**10%**

Rail: Economic Competitiveness

- **Definition:** High-level relative measure of the anticipated statewide benefits of project improvements. Number of jobs is a TREDIS output.

- **Scoring:** Number of full-time jobs expected in Year 30 after project constructed

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**10%**	N/A	N/A
Freight Intermodal & Transload	**25%**	N/A	N/A
Passenger Track & Structures	N/A	N/A	N/A
Passenger Stations & Service	N/A	N/A	N/A

Rail: Capacity/Congestion

- **Definition:** Percentage that the existing facility is over-capacity.
- **Scoring:** ((Current daily volume/Maximum daily allowable volume) - 1)*100
  - *For a Track & Structures project with multiple rail segments, score is based on the most congested segment*
  - *For a Passenger Station or Service project, capacity % for each project element is multiplied by the element's percentage of project cost, summing all elements.*
  - *Log used to scale scores within the range*
- ***Exception:*** *Grade Separation projects use Highway Capacity Congestion criteria score*

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**15%**	**15%**	**10%**
Freight Intermodal & Transload	**25%**	**25%**	**15%**
Passenger Track & Structures	N/A	**25%**	**15%**
Passenger Stations & Service	N/A	**25%**	**15%**

Rail: Safety

- **Definition:** Consideration of crash potential for railroad/highway at-grade crossings
- **Scoring:** Safety Review Index value (from Rail Division's State Authoritative Rail and Highway - SARAH Database)
  - *For grade separations: multiply by 1 (eliminates risk)*
  - *For at-grade improvements: multiply by 0.5 (reduces risk)*
  - *No credit given if crossing improvements are not part of project*
  - *Log used to scale scores within the range*

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**15%**	**15%**	**10%**
Freight Intermodal & Transload	N/A	N/A	N/A
Passenger Track & Structures	N/A	**15%**	**10%**
Passenger Stations & Service	N/A	N/A	N/A

Rail: Accessibility

- **Definition:** Measures the potential for new or improved accessibility for industries by a freight rail project. Considers project length, National Highway System (NHS) miles within 5 miles of the rail project centerline, and county unemployment rate.

- **Scoring:** (Rail Route Miles + NHS Miles)*(1+Unemployment Rate)
  - *Multiply by 1 if project provides new access. Multiply by 0.5 if project provides improved access. No credit given if neither new nor improved access provided.*

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**10%**	**10%**	**5%**
Freight Intermodal & Transload	N/A	N/A	N/A
Passenger Track & Structures	N/A	N/A	N/A
Passenger Stations & Service	N/A	N/A	N/A

Rail: Mobility

- **Definition:** Measures either the change in percentage of available capacity or travel time savings provided by project (for track projects). Measures daily volumes in relation to catchment area population (for freight intermodal projects and passenger stations/new service projects).
- **Scoring:**
  - *Track (capacity): % change in available capacity for each rail segment, weighted by number of trains per segment*
  - *Track (travel time): Travel time savings*Current daily volume*
    - *For passenger projects, travel time savings is considered for freight & passenger train volumes, and added to automobile travel time savings*
  - *Intermodal & Passenger Station/Service: Projected new daily volume*(1+%population in catchment area)*
  - *Log used to scale scores within the range*

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**20%**	**15%**	**10%**
Freight Intermodal & Transload	**15%**	**20%**	**15%**
Passenger Track & Structures	N/A	**20%**	**15%**
Passenger Stations & Service	N/A	**20%**	**15%**

Rail: Connectivity

- **Definition:** Measures project's connectivity to strategic corridors, intermodal facilities, and stations.
- **Scoring:**
  - ***Freight Track:*** *Mobility score*(25% port + 25% intermodal + 25% transload + 25% military)*
  - ***Freight Intermodal:*** *[Projected new daily volume*(25% port + 25% intermodal + 25% transload + 25% military)]*0.5 + [(Number of NHS facilities in catchment area/(1+Catchment area population)]*0.5*
  - ***Passenger Station/Service:*** *Ridership increase*(25% intercity + 25% parking + 25% commuter + 25% bus)*

Weighted % per Project Type (as recommended by Workgroup):

	Statewide	Regional	Division
Freight Track & Structures	**10%**	**5%**	**5%**
Freight Intermodal & Transload	**10%**	**10%**	**10%**
Passenger Track & Structures	N/A	N/A	N/A
Passenger Stations & Service	N/A	**10%**	**10%**

Rail Project Prioritization Criteria
Track & Structure Projects

		Weighted Score				
		Statewide Freight	Regional		Division	
			Freight	Pax	Freight	Pax
Benefit-Cost	*Emissions* *Highway-to-rail diversion* *Fuel savings* *Travel time savings*	20%	10%	10%	10%	10%
Economic Competitiveness	*Long-term Economic Benefits*	10%	-	-	-	-
Capacity/ Congestion	*Volume-to-Capacity*	15%	15%	25%	10%	15%
Safety	*RR/Hwy crossing incidents*	15%	15%	15%	10%	10%
Accessibility	*New or enhanced accessibility*	10%	10%	-	5%	-
Connectivity	*Multimodal improvement*	10%	5%	-	5%	-
Mobility	*Service improvement*	20%	15%	20%	10%	15%
Total		100%	70%	70%	50%	50%

Rail Project Prioritization Criteria

Intermodal Facilities, Stations, Equipment, New Rail Service

		Weighted Score		
		Statewide Freight	Regional	Division
Benefit-Cost	*Emissions* *Highway-to-rail diversion* *Fuel savings* *Travel time savings*	25%	15%	10%
Economic Competitiveness	*Long-term Economic Benefits*	25%	-	-
Capacity/ Congestion	*Volume-to-Capacity*	25%	25%	15%
Connectivity	*Multimodal improvement*	10%	10%	10%
Mobility	*Service improvement*	15%	20%	15%
Total		100%	70%	50%

NCVA Track Improvements – Regional Category

Project replaces rail and hardens corridor to increase allowable speeds and car weights for 51 miles of track

Criteria	Raw Score	Regional Freight Track & Structures Weights	Score (max 70)
Benefit-Cost	5.67	10%	1
Capacity/Congestion	0	15%	0
Safety	22.4	15%	3
Accessibility	61	10%	6
Connectivity	0	5%	0
Mobility	76.1	15%	11
Total	**n/a**	**70%**	**21**

Note: Raw scores are the same for all funding categories. Final score variations are determined by applying criteria weighting percentages.

Raleigh Union Station Full Cost – Regional Category

New location/expansion of station and associated track

Criteria	Raw Score	Regional Passenger Stations/Service Weights	Score (max 70)
Benefit-Cost	**3.82**	**15%**	**1**
Capacity/Congestion	**85**	**25%**	**21**
Connectivity	**52.24**	**10%**	**5**
Mobility	**81.72**	**20%**	**16**
Total	**n/a**	**70%**	**43**

Note: Raw scores are the same for all funding categories. Final score variations are determined by applying criteria weighting percentages.

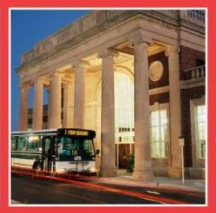
Sugar Creek Road Grade Separation – Regional Category

Construction of highway bridge over Norfolk Southern mainline in Charlotte

Criteria	Raw Score	Regional Passenger Track & Structures Weights	Score (max 70)
Benefit-Cost	**1**	**10%**	**0**
Capacity/Congestion	**43.2**	**25%**	**11**
Safety	**99**	**15%**	**15**
Mobility	**40.53**	**20%**	**8**
Total	**n/a**	**70%**	**34**

Note: Raw scores are the same for all funding categories. Final score variations are determined by applying criteria weighting percentages.








FERRY DIVISION







Proposed Ferry Project Scoring Overview

	Statewide Mobility	Regional Impact	Division Needs
	N/A	State maintained routes, excluding replacement of like-kind vessels	Replacement of vessels
Eligible Projects:	N/A	Regional	Regional Division
Overall Weights:	N/A	**70%** Quantitative Data / 30% Local Input	**50%** Quantitative Data / 50% Local Input
Quant. Criteria:	N/A	• Safety 15% • Benefit-Cost 15% • Accessibility/Connectivity 10% • Asset Efficiency 10% • Capacity/Congestion 20%	• Safety 15% • Benefit-Cost 15% • Accessibility/Connectivity 10% • Asset Efficiency 10%

Ferry Criteria – Safety

- **Definition:** Asset Health Index (AHI) Ratings inclusive of vessels and ramps & gantries
- **Criteria:** Integrity of vessels and ramps & gantries
- **Sources:** Ferry Division (Vessel Health Ratings) and Structures Management (NBIS Reports)
- **Quantitative measurement:** Ferry System Asset Health
- **Scoring Scale:** (0-100)
  The raw score of the asset health index is used to determine this score.

  AHI = 100-[(Avg. Vessel Health Ratings)*50% + (Avg. Ramp & Gantry Ratings)*50%]

  The formula subtracts the average ratings from 100 to provide a final score to accurately reflect where the needs are based on condition.
- **Weighted %:** 15%

Ferry Criteria – Safety
Measurement of Asset Integrity

Route	Ramp & Gantry *	Pro-rata 50%	Vessel Condition *	Pro-rata 50%	Route Integrity Score	Final Score (100-Route Integrity Score)
Hatteras Inlet	48	24	58	29	53	47
Currituck – Knotts Island	63	31.5	45	22.5	54	46
Pamlico River	47	23.5	65	32.5	56	44
Cedar Island – Ocracoke	57	28.5	66	33	61.5	38.5
Cherry Branch - Minnesott	66	33	60	30	63	37
Swan Quarter – Ocracoke	66	33	66	33	66	34
Southport – Ft Fisher	70	35	71	35.5	70.5	29.5
Division Average**						**39.43**

***Average rating converted to 100 point scale**

****Applies to non-route specific projects, ex. Shipyard, Tugs, etc.**

Ferry Criteria – Benefit Cost

- **Definition:** Travel time savings
- **Criteria:** Captures highway hours (i.e. travel time) saved by ferry users when they utilize the ferries instead of having to drive around and take an alternative route
- **Source:** National mapping software
- **Quantitative measurement:** Most likely alternate highway route if ferry route is not utilized
- **Scoring Scale:** (0-100)
  - 1 Point per each 10,000 hours saved, not to exceed 100 Points
- **Weighted %:** 15%

Ferry Criteria – Benefit Cost: Travel Time Savings

Actual Score: Total Hours / 10,000 = 1 Point
Final Score = Actual Score unless Capped at 100*

Route	Main Hwy Rtes	Land Mins	Ferry Mins	Mins Saved	Veh Avg FY08-12	Total Mins	Total Hrs	Actual Score	Final Score
Hatteras Inlet	US264	210	40	170	371,124	63,091,080	1,051,518	105.15	100*
Cherry Branch - Minnesott	NC101-NC306 - US70	69	25	49	249,187	12,210,163	203,503	20.35	20.35
Cedar Island – Ocracoke	NC101-US70-NC55	290	135	155	66,773	10,349,815	172,497	17.25	17.25
Southport – Ft Fisher	NC133 – NC211 - US13	76	35	41	172,041	7,053,681	117,561	11.76	11.76
Pamlico River	US264 - NC99	78	30	48	74,229	3,562,992	59,383	5.94	5.94
Swan Quarter – Ocracoke	US 264	210	150	60	28,376	1,702,560	28,376	2.84	2.84
Currituck – Knotts Island	NC168 - NC615	80	45	35	25,914	906,990	15,117	1.51	1.51
Division Average**									**22.81**

Source: Land Minutes-Mapquest.com
****Applies to non-route specific projects, ex. Shipyard, Tugs, etc.**

Ferry Criteria – Connectivity / Accessibility

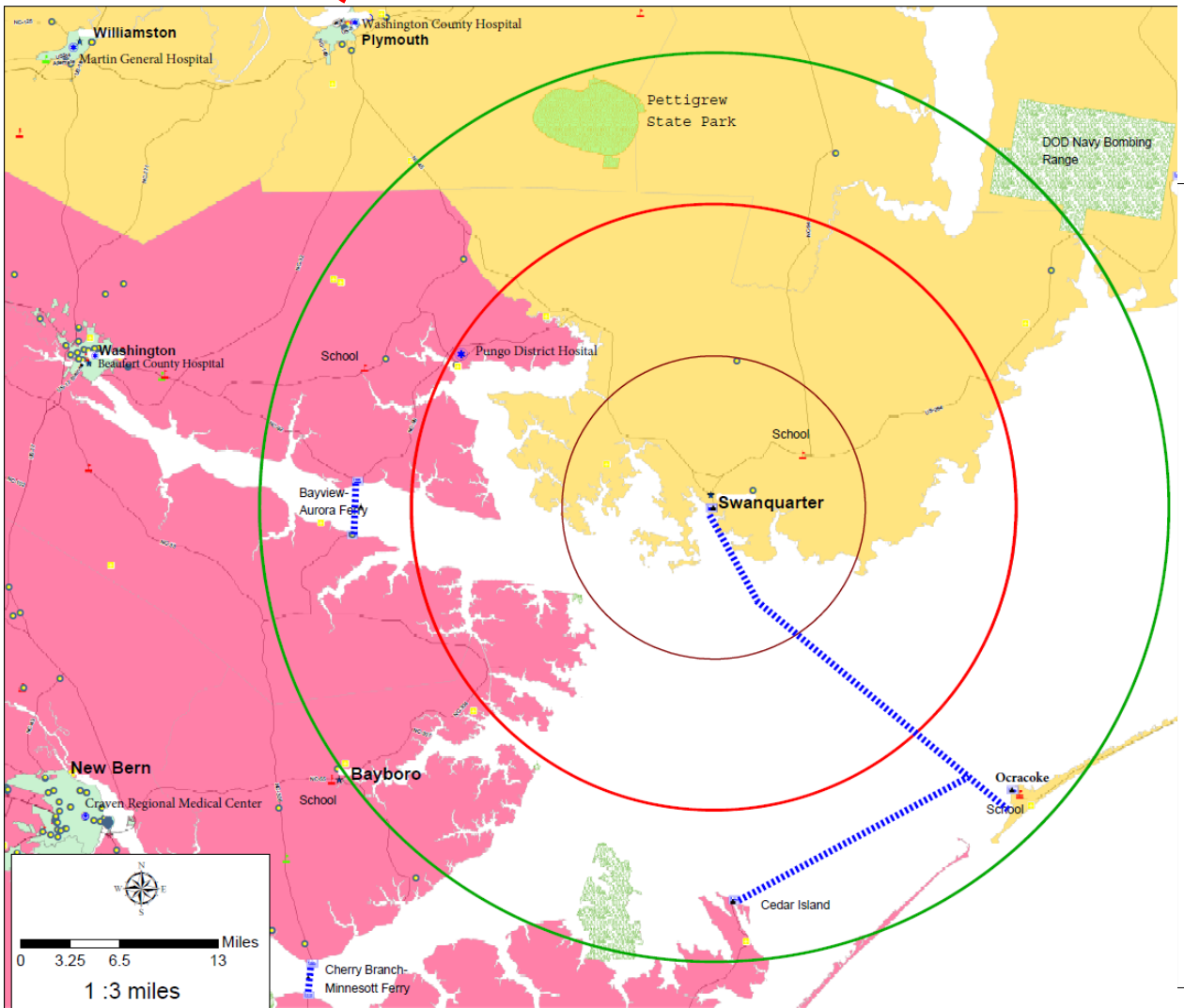
- **Definition:** Accessibility to jobs, services and other points of interest
- **Criteria:** Important destinations within concentric radii (10, 20, & 30 miles) are tallied to determine the impacts of the ferry route in regards to connecting people to their intended destinations
- **Source:** Points of Interest (POI) maps surrounding ferry routes
- **Quantitative measurement:** POI relative to travel area surrounding each route

  Count of points of interest within concentric rings surrounding route
- **Scoring Scale: (0-100)**

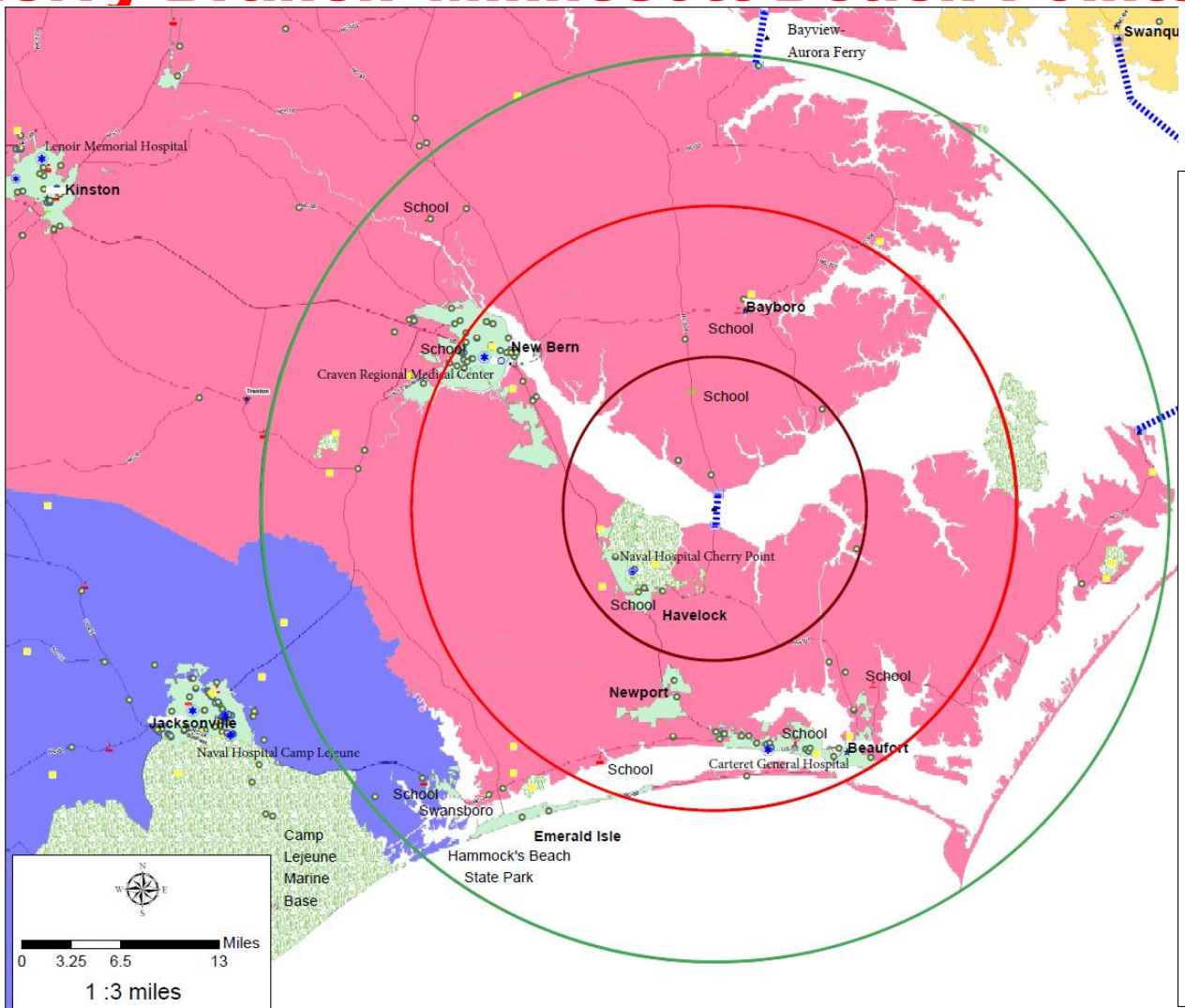
  The number of POI within 3 concentric rings (regions) has been determined and mapped for each ferry route. The number of POIs is then scaled by a multiplying factor (to help produce a score that is reflective of both the number of POI and the proximity of the respective POI. The scaling is as follows:
  -Ring 1 scaled by multiplier of 75%
  -Ring 2 scaled by multiplier of 50%
  -Ring 3 scaled by multiplier of 25%
  The scores for each ring are then added to produce a cumulative score for each respective route.
- **Weighted %: 10%**

Swan Quarter Points of Interest Map

Note: For Large Sound Routes the POI Scores for each terminus were averaged to produce scores for the entire route itself



Cherry Branch–Minnesott Beach Points of Interest



Legend

Buffer Distance (Miles)

- 0.00 - 10.00
- 10.00 - 20.00
- 20.00 - 30.00
- Hospitals
- Airport
- Beach Access Sites, DCM
- Business Location (100 Employees or more)
- Military Installations
- State Park
- High School
- College & Universities
- County Seats
- Ferry Ramps
- Municipalities over 2500

DOT Division

- 1
- 2
- 3
- Major Roads
- National Register Historic Places Point
- National Register Historic Places Boundary

Ferry Criteria – Connectivity and Accessibility

Relative to Jobs, Services, & Other Points of Interest

Route	Route Profile	Ring 1 POI	Ring 2 POI	Ring 3 POI	Total POI	Ring 1 Score	Ring 2 Score	Ring 3 Score	Total Score
Southport - Ft Fisher	Commuter	23	84	105	212	17.25	42.00	26.25	**85.50**
Cherry Branch - Minnesott	Commuter	20	95	48	163	15.00	47.50	12.00	**74.50**
Bayview - Aurora	Commuter	4	28	92	124	3.00	14.00	23.00	**40.00**
Currituck - Knotts Island	Commuter	8	34	21	63	6.00	17.00	5.25	**28.25**
Cedar Island	Mix	6	4	27	37				
Ocracoke	Mix	2	2	14	18				
Swan Quarter	Mix	5	5	22	32				
Swan Quarter - Ocracoke	Mix	4.5	4	21.25	29.25	3.38	2.00	5.31	**10.69**
Cedar Island - Ocracoke	Mix	4	3	20.5	27.5	3.00	1.50	5.13	**9.63**
Hatteras	Tourist	5	5	1	11				
South Dock	Tourist	4	9	6	19				
South Dock - Hatteras	Tourist	4.5	7	3.5	15	3.38	3.50	0.88	**7.75**
Division Average*									**36.62**

Sources: Points of Interest Maps

***Applies to non-route specific projects, ex. Shipyard, Tugs, etc.**

Ferry Criteria – Asset Efficiency

- **Definition:** Cost effectiveness of maintenance versus replacement
- **Criteria:** Maintenance costs at 60% of replacement cost is *critical*
- **Sources:** SAP/BSIP and like purchase histories
- **Quantitative measurement:** (3 year maint. cost) / (pro-rated 3 year replacement cost)
- **Scoring Scale for current maintenance:** (0-100)
  The percentage score of the ratio of the total amount of maintenance expenditures for the respective asset compared to a 3 year pro-rated cost for replacement of the asset.
- **Weighted %:** 10%

- General Note: Nationwide Asset Management guidelines for this ratio are as follows:
  - if less than 40% then asset is not considered for replacement
  - If greater than or equal to 40% but less than 50% then consider for possible replacement
  - If greater than or equal to 50% but less than 60% then replacement is needed
  - If greater than or equal to 60% then replacement is critical to sustaining operations

Ferry Criteria – Asset Efficiency

COST EFFECTIVENESS OF CONTINUED MAINTENANCE VS. REPLACEMENT	
Method:	Comparing three year average of maintenance costs against three year prorated cost of new purchase over for that 3 year period

Asset	Asset Useful Life (AUL)	Cost for Replacement	Per year Replace cost	3 year Replace cost	3 Year Average Maint Cost	Result	Score
River Class Ferry	30	12,000,000	400,000	1,200,000	*695,000*	57.92%	57.92
Sound Class FerryReplacement*	30	16,000,000	533,333	1,600,000	*845,000*	52.81%	52.81
Tug Albemarle Replacement	30	5,000,000	166,667	500,000	*205,000*	41.00%	41.00
Hatteras Ramp/Gantry	30	4,200,000	140,000	420,000	*20,000*	4.76%	4.76

Estimated for illustration

Ferry Criteria – Capacity / Congestion

- **Definition:** Evaluation of traffic left and number of trips
- **Criteria:** Establishes need to enhance capacity and reduce congestion
- **Quantitative measurement:** Based on monthly traffic report
- **Scoring Scale:** (0-100)
  This score is the percentage of the vehicles left behind at each departure as compared to the total number of vehicles carried by the route in a year timeframe.
- **Weighted %:** 20%

Ferry Criteria – Capacity / Congestion

FY 2012 Vehicles Transported and left

Route	Total Vehicles Carried (TVC)	Vehicles Left Behind (VLB)	Yearly Average Percentage (VLB/TVC)*100	Final Score
Hatteras Inlet	264,508	118,447	44.78	44.78
Southport – Ft Fisher	177,499	15,839	8.9	8.90
Swan Quarter – Ocracoke	36,295	738	2.03	2.03
Cedar Island – Ocracoke	60,672	1,099	1.81	1.81
Cherry Branch - Minnesott	231,948	1,762	0.76	0.76
Pamlico River	69,750	239	0.34	0.34
Currituck – Knotts Island	23,593	24	0.10	0.10
Division Average**	**864,265**	**138,148**	**15.98**	**15.98**

****Applies to non-route specific projects, ex. Shipyard, Tugs, etc.**

-- This scoring criteria only applies for projects that are eligible for Regional Impact funds

Ferry Criteria – Scoring Examples

PROJECT	SAFETY			BENEFIT COST			CONNECTIVITY			ASSET EFFICIENCY			DIVISION NEEDS	CAPACITY/ CONGESTION		REGIONAL IMPACTS
	Health Index Rating	Div Pts 15%	Reg Pts 15%	Travel Time Saved 10k hrs/yr	Div Pts 15%	Reg Pts 15%	Points Of Interest Map Index	Div Pts 10%	Reg Pts 10%	3 Year Comparison Maint Cost/New	Div Pts 10%	Reg Pts 10%	MAX 50	Vehicles Left/Carried x 1,000	Reg Pts 20%	MAX 70
Ocracoke: Gantry-Repair/Replace**	39.43	5.91	5.91	22.81	3.42	3.42	10.16	1.02	1.02	0.00	0.00	0.00	10.35	1.92	0.38	10.74
New River Class Vessel: KINNAKEET	47	7.05	7.05	100.00	15.00	15.00	7.75	0.78	0.78	13.57	1.36	1.36	24.18	N/A***	0	N/A***
Southport: Replace Dolphins	29.5	4.43	4.43	11.76	1.76	1.76	85.50	8.55	8.55	24.45	2.45	2.45	17.18	8.90	1.78	18.96
Hatteras Ramps/Gantries-Anticipate Fall '13: EMERGENCY	47	7.05	7.05	100.00	15.00	15.00	7.75	0.78	0.78	4.76	0.48	0.48	23.30	44.78	8.96	32.26
Sound Class Vessel Replacement : CEDAR ISLAND	38.5	5.78	5.78	17.25	2.59	2.59	9.63	0.96	0.96	60.16	6.02	6.02	15.34	N/A***	0	N/A***

*DIV: Division Average for Non-Route Specific Projects

**Ocracoke: uses average of OI-CI and OI-SQ scores

*** N/A means that this project is not eligible for points in this category nor can it compete in this funding arena

FERRY – Needs Recommended Criteria

Criteria	Proposed Weight
DIVISION NEEDS 50%	
Safety (Route Health Index)	15%
Benefit-Cost (Travel Time)	15%
Accessibility/Connectivity	10%
Asset Efficiency	10%
REGIONAL IMPACT 70% (Division plus 'Capacity/Congestion')	
Capacity/Congestion	20%

Public Transportation in North Carolina

Public Transportation Division
Mission Statement

It is the mission of the Public Transportation Division, in partnership with other public and private entities, to support and promote the availability of high quality public transportation services and partnerships throughout the state. Our Division responsibilities include:

- Administer federal and state transportation grant programs;
- Provide safety and training opportunities for transit professionals; and
- Deliver planning and technical assistance to public transportation stakeholders

Enabling Legislation

NC General Statute 136-44.20, Article 2B. Department of Transportation designated agency to administer and fund public transportation programs; authority of political subdivisions.

NC General Statute 145-28.18. Flexible Use of Funds to Leverage Federal Funds for Rural Public Transportation.

NC General Statute 145-28.19. Maximize Leverage of Federal Public Transportation Operating and Capital Funds for Local Public Transportation Systems.

NC General Statute 145-28.20 a-b. Streamline Grant Process and Consolidate Grants for Public Transportation.

PTD – Prioritization Development Process

- **Data Sets (safety recording data, vehicle utilization data, annual trips, service and revenue hours)**

- **Sources/Stakeholders: Federal Transit Administration, National Transit Database, Institute for Transportation Research and Education, NCDOT, Community Transportation Systems, Urban Transit Systems, Metropolitan Planning Organizations, Rural Planning Organizations, and PTD State Management Plan.**

Eligibility Definitions – Strategic Transportation Investments

	Statewide	Regional	Division
Aviation	Large Commercial Service Airports. Funding not to exceed $500K per airport project per year	Other Commercial Service Airports not in Statewide. Funding not to exceed $300K per airport project per year	All Airports without Commercial Service. Funding not to exceed $18.5M for airports within this category
Bicycle-Pedestrian	N/A	N/A	All routes
Public Transportation	N/A	Service spanning two or more counties and serving more than one municipality. Funding amounts not to exceed 10% of regional allocation.	Service not included on Regional. Multimodal terminals and stations serving passenger transit systems.
Ferry	N/A	State maintained routes, excluding replacement vessels	Replacement of vessels
Rail	Freight Capacity Service on Class I Railroad Corridors	Rail service spanning two or more counties not included on Statewide	Rail service not included on Statewide or Regional

Public Transportation Funding through MAP-21

Federal $$$

State Match $$$

5339 – Bus and Bus Facilities
5307 - CMAQ

5311 – Rural Community Transportation
5316 – Job Access Reverse Commute

5310 – Elderly and Disabled Transportation
5317 – New Freedom Program

5309 Fixed Guideway / Extensions (i.e. Bus Rapid Transit and Light Rail)
5337 State of Good Repair

System Service Definitions

Demand Response: A transit mode comprised of passenger cars, vans or small buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. The majority of these trips are scheduled at least 24 hours in advance. Services are open to the general public and to human service clients.

Fixed Route: A transit service in which vehicles run along an established path at preset times.

Note: Fixed Route and Demand Response are available in both urban and rural areas.

Fixed Guideway: System of vehicles that can operate only on its own corridor constructed for that purpose (e.g. commuter rail, light rail).

Expansion Vehicles

Expansion Vehicles

Criteria	Regional – Proposed Weight		Division - Proposed Weight	
	Demand Response	Fixed Route	Demand Response	Fixed Route
Benefit-Cost	45%	45%	25%	25%
Vehicle Utilization Data	5%	5%	5%	5%
System Safety	5%	5%	5%	5%
Connectivity	5%	5%	5%	5%
System Operational Efficiency	10%	10%	10%	10%
	70%	70%	50%	50%

Benefit Cost is reflective of the impacts of the project and therefore weighted at a higher percentage.

Expansion Vehicle Criteria: Benefit Cost

Definition: Benefit Cost will assess the projected ridership for the life of the expansion vehicle relative to the cost of the vehicle to the state.

Measure:
Demand Response - Current annual average trips per vehicle multiplied by the life expectancy of the vehicle and then divided by the amount of state match.
Fixed Route (new route) - Projected ridership for life of the vehicle divided by the state match.
Fixed Route (headway reduction) - Route ridership on the existing route for the life of the vehicle divided by the state match.

Note: Efficiency benefits for hybrid vehicles will be used to adjust the projected cost of the vehicle to the state. Fuel savings average about $65,112 for the life of a hybrid vehicle.
For consideration of an expansion vehicle, all systems must provide ridership projections.

Scoring Scale: Trips per dollar.

Recommended Weight:

- Regional Transit Score –45%
- Divisional Transit Score – 25%

Expansion Vehicle Criteria: Vehicle Utilization Data

Definition: Utilization of vehicles within the transit systems' fleet; higher vehicle utilization ratios indicate a greater need and lower ratios indicate a lesser need for expansion vehicles. This criteria recognizes systems that are maximizing their current assets.

Measure:
Demand Response: Maximum vehicles utilized during the peak hour as identified from the vehicle utilization data collection period divided by the total fleet size. (including spares)
Fixed Route: Number of vehicles operated in maximum service divided by the number of vehicles available for maximum service

Scoring Scale: Vehicle Utilization as reported by National Transit Database or NCDOT Operating Statistics Report.

Recommended Weight:
- Regional Transit Score – 5%
- Divisional Transit Score – 5%

Expansion Vehicle Criteria: System Safety

Definition: Comparing system safety statistics to the national average among comparable systems.

Note: NTD uses rural and urban criteria, therefore, rural terminology replaces demand response and urban terminology replaces fixed route.
Urban systems will use PMT (Million Passenger Miles Traveled). Rural systems will use Million Revenue Miles Traveled.

Measure: (National average reportable incidents/PMT **–** System reported incidents/PMT) + **(**National average reportable injuries/PMT **–** System reported injuries/PMT) + **(**National average reportable fatalities/PMT **–** System reported fatalities/PMT) = Safety Result.

Scoring Scale:
Urban System = Safety Result
Rural System = Safety Result

Recommended Weight
- Regional Transit Score – 5%
- Divisional Transit Score – 5%

Expansion Vehicle Criteria: Connectivity/Accessibility

Definition: Connectivity/Accessibility will measure the connectivity of the proposed expansion of service to vital destinations (medical, employment, retail, education, and other transportation modes).

Measure:
The measure will be the projected increase in ridership weighted according to the types of destinations the expansion of service will serve. (20% per destination: medical, employment, commercial, education, and other transportation terminal/transfer)

Scoring Scale:
(Ridership Increase x Facility Destination) / System Ridership = Weighted % Increase in Ridership

Recommended Weight:

- Regional Transit Score –5%
- Divisional Transit Score – 5%

Expansion Vehicle Criteria: System Operational Efficiency

Definition: To compare the number of trips to the amount of service or revenue hours reported.

Note: Trip information will be obtained from the National Transit Database and ITRE.

Measure: Annual ridership divided by total hours. (Maximum of 100 points)

Scoring Scale:
Demand Response = Trips / Service Hours
Fixed Route = Trips / Revenue Hours

Recommended Weight:
- Regional Transit Score – 10%
- Divisional Transit Score – 10%

Facilities

Facilities

Criteria	Regional - Proposed Weight		Division - Proposed Weight	
	Demand Response	Fixed Route	Demand Response	Fixed Route
Age of Facility Facility Demand Park & Ride Bus Shelter	40%	40%	30%	30%
Benefit Cost	5%	5%	5%	5%
System Operational Efficiency	5%	5%	5%	5%
Facility Capacity	20%	20%	10%	10%
Total	70%	70%	50%	50%

Facilities Criteria: Age of Facilities

(Park & Ride and Bus Shelter excluded)

Definition: Replacement, improvement, or construction of a new facility (Assumes an industry standard of 45 years as useful life); functionally obsolete facilities will be assigned an age of 45.

Measure: Based on feasibility study and the length of time a system has occupied their current facility.

Scoring Scale: Facility Age / Useful Life

Note: The percentage of the useful life will be used as the score for this criteria.

Recommended Weight:

- Regional Transit Score – 40%
- Divisional Transit Score – 30%

Facilities Criteria: Facility Demand

Definition: Measure of capacity or demand for the new or expanded Maintenance & Operations facilities and transit centers.

Measure: Ratio of peak service vehicles to bus bays (transit centers) or maintenance capacity (maintenance facilities). A ratio of 1 would indicate that you are at capacity and anything greater is over capacity. The percentage over capacity is the score.

Scoring Scale: Peak Service / Capacity

Recommended Weight:

- Regional Transit Score – 40%
- Divisional Transit Score – 30%

Facilities Criteria: Park and Ride Demand

Definition: Park and ride lots benefit traditional bus & rail transit. It also benefits Transportation Demand Management (TDM) modes like vanpools and carpools.

Measure: The number of spaces in lot multiplied by the estimated utilization divided by the state match.

Scoring Scale: (Number of Spaces x Utilization) / State Match

Recommended Weight:
Regional Transit Score – 40%
Divisional Transit Score – 30%

Facilities Criteria: Bus Shelter Demand

Definition: Gauges the relative need for bus shelter installation, including equipment, any right of way need, and if needed sidewalk connection to nearest intersection.

Measure: Compare average boarding and alightings of the stops proposed to upgrades to shelters

Note: Specific stops must be identified and bus stop boarding and alighting data provided.

Scoring Scale:
Score = Average Boardings + Average Alightings

Recommended Weight:
- Regional Transit Score – 40%
- Divisional Transit Score – 30%

Facilities Criteria: Benefit Cost

Definition: Examines the benefit (trips) relative to the cost of the project to the state.

Measure: Annual trips provided by the facility divided by the cost of the project to the state.

Scoring Scale: Annual Trips / State Match

Recommended Weight

- Regional Transit Score – 5%
- Divisional Transit Score – 5%

Facility Criteria: System Operational Efficiency

Definition: To compare the number of trips to the amount of service or revenue hours reported.

Measure: Annual ridership divided by total hours. (Maximum of 100 points)

Scoring Scale:
Demand Response = Trips / Service Hour
Fixed Route = Trips / Revenue Hour

Recommended Weight:
- Regional Transit Score – 5%
- Divisional Transit Score – 5%

Facilities Criteria: Facility Capacity - All Types

Definition: Identifies the need for additional usage capacity.

Measure: The difference in the proposed capacity and the current usage compared to the existing design capacity during the peak period.

Scoring Scale:
Facility (Transit & Admin) = ((proposed capacity – current usage)/existing design capacity) x 33%
Park & Ride = ((proposed capacity – current usage)/existing design capacity) x 33%
Shelters = ((proposed capacity – current usage)/existing design capacity) X 33%

Recommended Weight:
- Regional Transit Score – 20%
- Divisional Transit Score – 10%

Fixed Guideway

Division Needs – Fixed Guideway

Criteria	Regional Proposed Weight	Division Proposed Weight
Mobility	20%	15%
Cost Effectiveness	15%	15%
Economic Development	20%	10%
Congestion Relief	15%	10%
Total	70%	50%

Criteria: Mobility

Definition: Measures project usage.

Measure: Estimated Annual Trips

Scoring Scale: 1 point for every 250,000 trips; this coincides with FTA's "High" ranking for 25 million or more trips.

Recommended Weight:

- Regional Transit Score – 20%
- Divisional Transit Score –15%

Criteria: Cost Effectiveness

Definition: Cost per trip over the life of the project to evaluate the project investment.

Measure: Measures the cost effectiveness of the project per trip over the life of the project.

Scoring Scale: 100 points for a cost of $4.00 or less per trip; decreasing by 1 point for each $0.11 increase per trip.

Recommended Weight:

- Regional Transit Score – 15%
- Divisional Transit Score –15%

Criteria: Economic Development

Definition: Growth in Employment and Population within ½ mile of project stations/stops.

Measure: Measures the new employment and population growth in the fixed guideway corridor over 20 years.

Scoring Scale: 1 point per 1,000 new employees and 1 point per 500 new residents.

Recommended Weight:

- Regional Transit Score – 20%
- Divisional Transit Score – 10%

Criteria: Congestion Relief

Definition: measure the expected travel time savings benefits of the project over a 30 year period. The measure listed below is borrowed from the roadway projects and will be replaced with FTA defined criteria once that is released. That will ensure consistency with the rest of the fixed guideway criteria.

Measure: Travel Time Savings
Scoring Scale: 0-100 point scale TBD; Max points = 100 (values over 100 are capped)

Recommended Weight:
- Regional Transit Score –15%
- Divisional Transit Score –10%

Fixed Route Expansion Vehicle – Example

Criteria	Raw Score	Regional Impact		Division Needs	
		Weight	Score	Weight	Score
Benefit- Cost	29.14	45%	**13.11**	25%	**7.29**
Vehicle Utilization	78	5%	**3.9**	5%	**3.9**
System Safety	0.36	5%	**0.02**	5%	**0.02**
Connectivity	2	5%	**0.1**	5%	**0.1**
System Operational Efficiency	26.19	10%	**2.62**	10%	**2.62**
Total		70%	**19.75**	50%	**13.93**

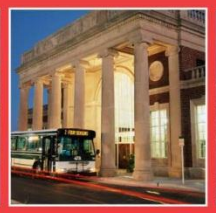
Facility – Example

Criteria	Raw Score	Regional Impact		Division Needs	
		Weight	Score	Weight	Score
Age of Facility **Facility Demand Park & Ride** **Bus Shelter**	55	40%	**22**	30%	**16.5**
Benefit Cost	1.45	5%	**0.07**	5%	**0.07**
System Operational Efficiency	14.72	5%	**0.74**	5%	**0.74**
Facility Capacity	5.28	20%	**1.06**	10%	**0.53**
Total		70%	**23.86**	50%	**17.84**

Fixed Guideway - Example

Criteria	Raw Score	Regional Impact		Division Needs	
		Weight	Score	Weight	Score
Mobility	28	20	**5.6**	15%	**4.2**
Cost Effectiveness	0	15%	**0**	15%	**0**
Economic Development	100	20%	**20**	10%	**10**
Congestion Relief	0.012	15%	**0**	10%	**0**
Total		70%	**25.6**	50%	**14.2**








Bicycle and Pedestrian








Division of Bicycle and Pedestrian Transportation (DBPT)

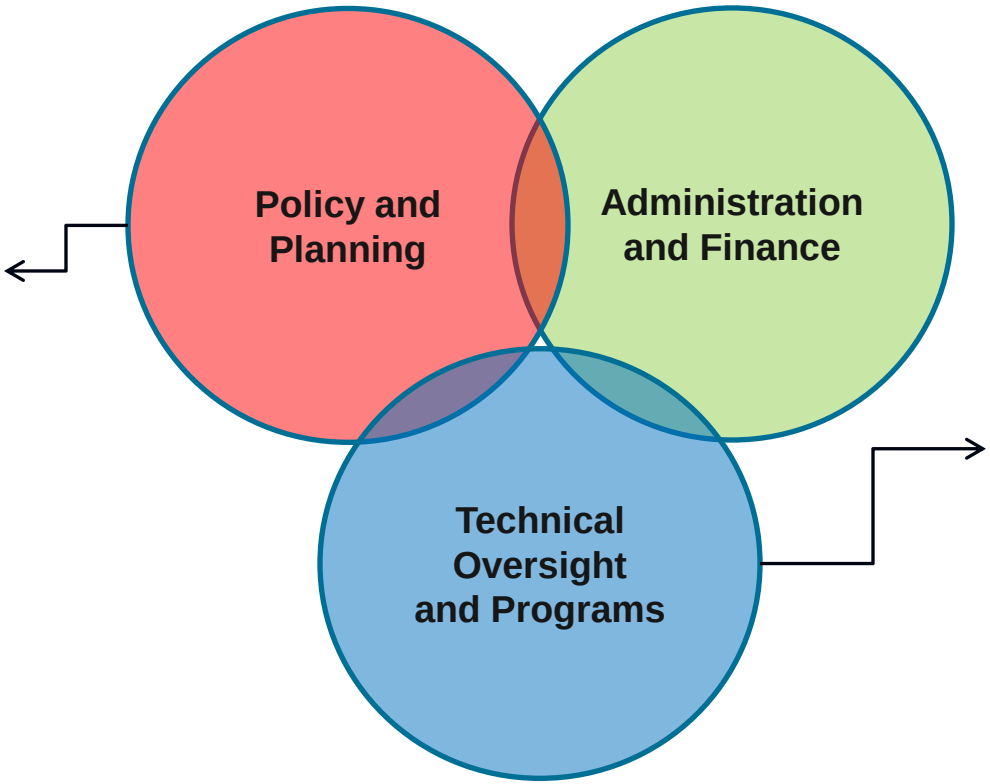
History and Purpose

Created in 1974 by NC General Assembly thru *Bicycle and Bikeway Act*, expanded in 1992 to include pedestrian activities

- Reduce injuries and fatalities
- Create efficient bicycle & pedestrian travel options
- Promote healthy and active lifestyles
- Foster local economic growth

Division of Bicycle and Pedestrian Transportation

- Municipal Plans
- Regional Plans
- Coordination with other units to scope projects
- Coordination with AASHTO, MUTCD, etc



- Manage Enhancement bicycle and pedestrian projects in STIP
- Safe Routes to School
- Access to Transit
- Complete Streets
- Coordination with other state agencies

Bicycle and Pedestrian Prioritization

All future bicycle and pedestrian projects, independent of roadway projects, will require a local match.

- Federal funding typically requires 20% match
- State law prohibits state match for bicycle and pedestrian projects (except for Powell Bill)

Bicycle and projects may only compete at the Divisions Needs level

ROW is not an included project cost to NCDOT

Minimum project cost requirement - $100,000

Plan adoption is used as an initial project screening question

Bicycle and Pedestrian Scoring Criteria

	STI Methodology (Bike/Ped)	MPO/RPO - Common Scoring Criteria	National Study of DOTs
Access	✓	✓	✓
Adopted Plan	□	✓	✓
Benefit-cost	✓		
Connectivity		✓	✓
Demand/Density	✓	✓	✓
Livability / Health			✓
Multimodal			✓
Constructability	✓	✓	
Regional / Multi-jurisdictional		✓	
Safety	✓	✓	✓
Social Equity			✓

Bicycle and Pedestrian – Division Needs

Criteria	Proposed Weight
Safety	15%
Access	10%
Density	10%
Constructability	5%
Benefit-Cost	10%

Bicycle/Pedestrian Criteria – Safety

- **Definition: Projects or improvements where bicycle or pedestrian accommodations are non-existent or inadequate for safety of users**
- **Why use this criteria? To reduce vehicle-bicycle/pedestrian crash rates or improve safety**
- **How its Measured –Crash history and posted speed limits**
- **Source: DBPT 2007-2011 geocoded crash data, NCDOT (Road Characteristics data or Other)**
- **Proposed Scoring Scale (0-100)**

  Bike/Pedestrian Crashes: 50% weight (0-100 pts)

  Posted Speed Limits 50% weight (0-100 pts)

- **Your Recommended Weighted % per Criteria: 15%**

Bicycle/Pedestrian Criteria – Access

- **Definition: Destinations likely to draw or generate high volumes of cyclists or pedestrians**
- **Why use this criteria? To identify projects with most opportunity for mode share**
- **How its Measured – Type of and distance to destination**
- **Source: Destination: Destination Type Local Input**
- **Proposed Scoring Scale (0-100)**

  Destination Type: 50 % weight (0-100pts)

  Primary centers: municipal/transit center, employment center, universities, mixed-use commercial, national/state tourist destinations, high-density residential/multi-family, sports venue (10 pts each, maximum 70 pts)

  Secondary centers: lower-density residential developments, fixed-guideway facilities, minor employment centers, schools, parks, municipal building (5 pts each, maximum 30 pts)

  Distance to Prime Destination: 50% weight (0-100pts)

  Pedestrian – 0 miles (100 pts.) to 0.5 miles (0 pts.) / Bicycle – 0 miles (100 pts.) to 1.5 (0 points)

- **Your Recommended Weighted % per Criteria: 10%**

Bicycle/Pedestrian Criteria – Demand/Density

- **Definition: Areas with significant residential or employment density**
- **Why use this criteria? To support access criteria and identify projects with most user benefit**
- **How its Measured –Persons and Employees per Sq. Mi w/in 1½ mi bicycle, 1/2 mi pedestrian facility**
- **Source: 2010 US Census and Local Employment Dynamics**
- **Proposed Scoring Scale (0-100)**

  Range of points depending on density of residential population or employees

- **Your Recommended Weighted % per Criteria: 10%**

Bicycle/Pedestrian Criteria – Constructability

- **Definition: Readiness of project to be administered and maintained by the local government**
- **Why use this criteria? To identify projects which can be easily and quickly implemented**
- **How its Measured – ROW Acquisition, PE, Environmental Impacts**
- **Source: Local Input and Highway Division Input**
- **Proposed Scoring Scale (0-100)**

  Percentage of ROW Acquired: 50% weight (0-100 pts)

  Preliminary Engineering/Project Design Work Completed: 25% weight (0-100 pts)

  Estimated Environmental Impacts (CE Type I/II, EA, EIS): 25% weight (0-100 pts)

- **Your Recommended Weighted % per Criteria: 5%**

Bicycle/Pedestrian Criteria – Benefit/Cost

- **Definition: Ratio of calculated user benefit divided by NCDOT project cost**
- **Why use this criteria? To evaluate cost-effectiveness**
- **How its Measured – Sum of Access + Demand (Benefits) / Total Cost to NCDOT**
- **Source: Sum of Access and Demand Criteria Scores / Provided Cost**
- **Proposed Scoring Scale (0-100)**

  Calculated Score, normalized on range of 0-100
- **Your Recommended Weighted % per Criteria: 10%**

Bicycle/Pedestrian Example Projects

		Safety				Access				Demand/Density	
		Crashes	Speed Limit			Destination	Distance				
	Project	Weighted Points (50%)	Weighed Points (50%)	Total Points (100 Max)	15% Overall Weight	Weighed Points (50%)	Weighed Points (50%)	Total Points (100 Max)	10% Overall Weight	Total Points (100 Max)	10% Weight
Bike	**Jacksonville** - construct off-road multi-use path along Marine Blvd.	40	10	50	7.5	45	35	80	8.0	53	5.3
Ped	**Burlington** - install sidewalks & improve safety along Front Street	0	10	10	1.5	28	40	68	6.8	80	8.0

Bicycle/Pedestrian Example Projects (cont.)

	Project	Cost Estimate	Constructability: ROW Weighed Points (50%)	Constructability: PE Weighed Points (25%)	Constructability: Env. Doc. Weighed Points (25%)	Constructability: Total Points (100 Max)	Constructability: 5% Overall Weight	Benefit/Cost (Access+Density)/ Cost: B/C Points (100 Max)	Benefit/Cost (Access+Density)/ Cost: 10% Weight	Total Points (50 Max)
Bike	**Jacksonville** - construct off-road multi-use path along Marine Blvd.	$754,303	45	0	25	70	3.5	35	3.5	27.9
Ped	**Burlington** - install sidewalks & improve safety along Front Street	$720,000	3	1	25	29	1.4	41	4.1	21.8

DURHAM-CHAPEL HILL-CARRBORO MPO
METHODOLOGY FOR RANKING
METROPOLITAN TRANSPORATION IMPROVEMENT PROGRAM
PRIORITY PROJECT REQUESTS (FY 2014-2020)

INTRODUCTION

The purpose of the Regional Priority List is to facilitate determination of the region's project priorities to be used in development of a fiscally constrained Transportation Improvement Program (TIP). SAFETEA-LU calls for a TIP development process that documents a methodology for ranking project requests, reflects local and metropolitan goals, and addresses mobility, environmental and air quality goals.

OBJECTIVE

The methodology outlined below is designed to address multi-modal transportation needs and to ensure regional balance through the use of specific technical criteria. The Technical Coordinating Committee (TCC) will use the methodology to develop a draft Regional Priority List. This draft Priority List is to be used as a starting point or a reference base by the Transportation Advisory Committee (TAC) for the approval of a final Regional Priority List.

The TAC may reorder projects at its discretion to promote jurisdictional and geographical balance, or based upon the TAC members' knowledge of the urban area and the policies of their communities. The TCC will make its technical recommendation on a draft Priority List based on the methodology described in this document, and the TAC will then be afforded the opportunity to make any changes it deems appropriate.

METHODOLOGY GOALS

- Produce a program of projects (or project priorities) which satisfies MPO, local and state goals, and addresses SAFETEA-LU policies of system preservation, operational efficiency in the movement of people and goods, multi/inter-modalism, and air quality mandates.

- Be simple enough for project-level analysis without requiring unnecessary data collection.

- Be understandable by the general public.

PROCEDURE FOR RANKING PROJECTS

1) Goal Setting For Regional Priority List

Since the Regional Priority List should be a subset of the DCHC MPO Long Range Transportation Plan (LRTP), the goals for the regional priority list are the same as the DCHC MPO goals and objectives in the 2035 LRTP.

2) Submission of Local Priority Lists

All MPO member jurisdictions and Triangle Transit will submit a local priority list to the MPO. The

DCHC MPO requests that the local jurisdictions apply screening criteria during the development of these lists. The screening criteria are:

a) Regional Goals - How well does the project meet the adopted regional goals? Is the project an element of the current long-range plan? Does it implement community objectives (for the intrastate system, does it meet NCDOT mobility objectives)? Does the project have a broad base of local support?

b) Cost Effectiveness - How much benefit does the project offer compared to the estimated cost?

c) Timing Factor – Is the project needed within the TIP funding cycle? Is timing a critical element for the project (one-time opportunity)? Will the opportunity to do the project be lost if it is not in the current priority cycle?

Local jurisdictions may also elect to use the ranking methodology to create their local priority lists but are not required to do so. The TCC will review local priority lists for adherence to these screening criteria before applying the ranking methodology.

Local jurisdictions shall provide the DCHC MPO a list of projects. The list should be grouped by mode (highway, transit, bicycle, and pedestrian). The local jurisdictions shall provide a short description of the project, including the project limits, name, mileage, and cost. The description should note any essential elements of the project such as bike lanes, sidewalks, transit accommodations, vehicle types, etc.

3) Submission of Projects for the Regional Priority List

For the 2014-2020 TIP, the DCHC MPO will submit projects to NCDOT's Strategic Planning Office of Transportation by July 2011for the application of the NCDOT's quantitative ranking methodology. The MPO is limited to fifteen new highway projects, ten new bicycle projects, ten new pedestrian projects, and an unlimited number of transit projects. Highway, bicycle, and pedestrian projects that were submitted for the 2012-2018 TIP do not need to be resubmitted.

DCHC MPO will combine the local priority lists into a list that the MPO will submit to NCDOT. In the event that more projects are submitted to the MPO than the MPO is allowed submit to NCDOT, the TCC will select projects based on the screening criteria, the air quality horizon year in the LRTP, regional significance, geographic distribution, and local priority.

4) Application of the Ranking Methodology

The NCDOT will apply a quantitative ranking methodology to the MPO's projects and provide the MPO project scores and data. DCHC MPO staff in coordination with local staff will use the project data and collect additional data to apply the MPO ranking methodology. The list of projects will then be presented to the TCC as the draft regional priority list.

The TCC first examines the consistency in which local jurisdictions and MPO staff have responded to the screening criteria and applied the methodology. If the methodology is not applied consistently, the TCC can agree to change some responses for consistency among all projects. The draft Regional Priority List is then forwarded to the TAC, as the TCC's recommended project priorities for the urban area. The TCC will also recommend a distribution of highway ranking points among projects.

5) Approval of Project Rankings and Points

The TAC will release the draft list for public comment and hold a public hearing at a TAC meeting. The TAC may reorder projects at its discretion to promote jurisdictional and geographical balance, or based upon the TAC members' knowledge of the urban area and the policies of their communities. After review and public comment, the TAC will approve the final Regional Priority List including the distribution of highway ranking points.

APPLICATION OF THE METHODOLOGY

1. There are four separate ranking methodologies based on the primary mode of transportation: 1) highway; 2) bicycle; 3) pedestrian; and 4) transit. The four ranking methodologies are independent of each other. Points for different modes are on different scales and are not comparable.

2. Points are weighted and totaled for each project using the four modal ranking methodologies outlined on the last pages of this document.

MODAL RANKING METHODOLOGIES IN DETAIL

Highway

There are nine criteria. All criteria are not applied to all project types and tiers, and the criteria are weighted differently based on the project type and tier.

1. *Congestion* - This category awards points to projects based on the level of congestion and travel demand. For road projects, congestion is measured by the volume to capacity (V/C) ratio and the annual average daily traffic (AADT). For new road facilities in which traffic counts are not available, volumes on a parallel existing facility may be used.

   Data will be collected and provided by NCDOT's SPOT.

2. *Safety* - Safety points are awarded to projects based on the critical crash rate, crash density, and severity.

   Data will be collected and provided by NCDOT's SPOT.

3. *Economic Competitiveness* – Points are awarded based on the output from the TREDIS model.

   Data will be collected and provided by NCDOT's SPOT.

4. *Lane Width* – Points are awarded based on the existing width of the lane versus the standard width

   Data will be collected and provided by NCDOT's SPOT.

5. *Shoulder Width* – Points are awarded based on the existing width of the shoulder versus the standard width.

   Data will be collected and provided by NCDOT's SPOT.

6. *Multi-modal Benefits*– Points are awarded to projects based on if they include multi-modal options (BRT, LRT, BOSS, HOV/HOT), connections (airport, rail depot, transit terminal), or design features (sidewalks, pedestrian crossings, bicycle lanes, wide outside shoulders, bus pullouts, transit prioritization, bus shelters).

   Local jurisdictions are asked to describe the benefits. Data will be collected and provided by NCDOT's SPOT.

7. *Environmental Impacts* - Points are awarded based on the impact on wetlands, streams, water supply watersheds, wildlife habitat, parks, and air quality.

   The MPO will provide local jurisdictions a base map of environmental areas. Local jurisdictions are asked to use the environmental impacts worksheet to assess the impact of projects based on a GIS analysis.

8. *Community Impacts* – Points are awarded based on the impact on neighborhoods, communities, schools, parks, recreation facilities, historic resources, and cemeteries.

   The MPO will provide local jurisdictions a base map of community resources and 2010 population density. Local jurisdictions are asked to use the community impacts worksheet to assess the impact of projects based on a GIS analysis.

9. *Environmental Justice*- Points are awarded based on the impact on low-income and minority populations. This item is designed to penalize projects that may have negative impacts on low income areas or federally recognized disadvantaged groups.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

Pedestrian

There are seven criteria that are weighted differently. All project types and tiers are subject to the same criteria.

1. *Right-of-Way Availability* – This category awards points to projects based on the right-of-way available for the project. Right-of-way should be estimated based on the local jurisdiction's best knowledge of the area and the NCDOT right-of-way database. Extensive research into property deeds is not required.

   Data will be collected and provided by NCDOT's SPOT.

2. *Connectivity* – This category awards points to projects based on the proximity to transit, schools, central business districts, high density residential or commercial areas, parks, and other pedestrian facilities.

   Data will be collected and provided by NCDOT's SPOT.

3. *Pedestrian Crashes* - Points are awarded based on if there have been three or more pedestrian crashes within the last five years.

Data will be collected and provided by NCDOT's SPOT.

4. *Demand/Density* – Points are awarded based on the population density within 0.5 miles of a pedestrian facility.

   Data will be collected and provided by NCDOT's SPOT.

5. *Congestion/Traffic Volume* - This category awards points to projects based on the amount of traffic volume on the roadway. Off-road greenways are based on the parallel or alternate roadways. More points are provided for more congested or higher volume facilities to reflect the safety hazard for pedestrians on larger busier roadways. The traffic counts should be taken from the latest Annual Average Daily Traffic (AADT) maps on the NCDOT website.

   Congestion data will be provided by the MPO. Traffic volume data will be collected and provided by NCDOT's SPOT.

6. *Regional Connectivity – P*oints are awarded to pedestrian only projects based on if the project provides a pedestrian connection to regional and local buses. Project limits that include a bus stop for an existing Triangle Transit regional route receive three points. Project limits that include a station area for a future regional rail receive two points. Project limits that include a bus stop for a local bus route receive one point. Project limits that do not include a bus stop for a transit route receive zero points.

7. *Environmental Justice* - Points are awarded based on the impact on low-income and minority populations. Since pedestrian facilities are perceived as amenities and usually require little right-of-way acquisition, projects that serve low income and minority areas will receive more points.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

Bicycle

There are seven criteria that are weighted differently. All project types and tiers are subject to the same criteria.

1. *Right-of-Way Availability* – This category awards points to projects based on the right-of-way available for the project. Right-of-way should be estimated based on the local jurisdiction's best knowledge of the area and the NCDOT right-of-way database. Extensive research into property deeds is not required.

   Data will be collected and provided by NCDOT's SPOT.

2. *Connectivity* – This category awards points to projects based on the proximity to transit, schools, central business districts, high density residential or commercial areas, parks, and other bicycle facilities.

   Data will be collected and provided by NCDOT's SPOT.

3. *Bicycle Crashes* - Points are awarded based on if there have been three or more bicycle crashes within the last five years.

   Data will be collected and provided by NCDOT's SPOT.

4. *Demand/Density* – Points are awarded based on the population density within 1.5 miles of a bicycle facility.

   Data will be collected and provided by NCDOT's SPOT.

5. *Congestion/Traffic Volume* - This category awards points to projects based on the amount of vehicular congestion as measured by volume/capacity ratios for bicycle projects. Off-road greenways are based on the parallel or alternate roadways. More points are provided for more congested or higher volume facilities to reflect the safety hazard for bicyclists on larger busier roadways. The volume/capacity ratio will be provided by the MPO model.

   Congestion data will be provided by the MPO. Traffic volume data will be collected and provided by NCDOT's SPOT.

6. *Regional Connectivity* – Points are awarded to bicycle based on if the project is a part of the regional routes recognized in the 2035 LRTP or if it provides access to regional or local buses. Projects part of a regional bicycle route that partially exists or project limits that include a bus stop for an existing Triangle Transit regional route receive three points. Projects part of a regional bicycle route that does not currently exist or project limits that include a station area for a future regional rail receive two points. Projects not part of a regional bicycle route that connect to a regional bicycle route or project limits that include a bus stop for a local bus route receive one points. Projects that are not part of a regional bicycle route and do not connect to a regional bicycle route or project limits that do not include a bus stop for a transit route receive zero points.

7. *Environmental Justice* - Points are awarded based on the impact on low-income and minority populations. Since bicycle facilities are perceived as amenities and usually require little right-of-way acquisition, projects that serve low income and minority areas will receive more points.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

Transit

There are seven criteria for transit projects that are weighted differently. All project types and tiers are subject to the same criteria.

1. *State of Good Repair* – This category is designed to award points to projects that are essential to maintaining the current transit service. Projects will receive more points for every percentage decrease in average age of fleet. Facilities receive more points for every percentage increase in surface area of space.

   Data will be collected and provided by NCDOT's SPOT.

2. *Availability* – This category awards points based on the percentage increase in system-wide service hours.

   Data will be collected and provided by NCDOT's SPOT.

3. *Connectivity* – Projects receive points based on connections to taxi stands, bicycle facilities, sidewalk facilities, demand response transit, high density housing within 0.5 miles, mixed use development, and fixed route services.

   Data will be collected and provided by NCDOT's SPOT.

4. *Technology* – Projects receive points based on the percentage increase in funding on information technology.

   Data will be collected and provided by NCDOT's SPOT.

5. *Environmental Impacts* - Points are awarded based on the impact on the natural environment. Since most transit projects use existing roadway facilities and thus do not require construction, projects are assessed based on their relative positive air quality impacts. Transit projects that require construction such as fixed guideway, BRT, and park and ride lots should have points deducted if significant environmental impacts may occur due to construction, including impacts on wetlands, streams, water supply watersheds, and rare species habitats.

   The MPO will provide local jurisdictions a base map of environmental areas. Local jurisdictions are asked to use the environmental impacts worksheet to assess the impact of projects based on project type and a GIS analysis for construction projects.

6. *Community Impacts* – Points are awarded based on the impact on neighborhoods, communities, schools, parks, and recreation facilities. Since transit projects are community amenities and usually require little right-of-way acquisition, projects that serve more dense neighborhoods and community facilities receive more points.

   The MPO will provide local jurisdictions a base map of community resources and 2010 population density. Local jurisdictions are asked to use the community impacts worksheet to assess the impact of projects based on a GIS analysis.

7. *Environmental Justice* - Points are awarded based on the impact on low-income and minority populations. Since transit projects are community amenities and usually require little right-of-way acquisition, projects that serve low income and minority areas will receive more points.

   The MPO will provide local jurisdictions a base map that indicates which Traffic Analysis Zones have a high percentage of minority and low income populations. Local jurisdictions are asked to use the environmental justice worksheet to assess the impact of projects based on a GIS analysis.

OBSERVATIONS

The order of transit priorities could vary significantly from year to year if anticipated funding sources are reduced or eliminated by Congress.

- Mandates (e.g., the American's with Disabilities Act) may take precedence when programming projects from the Regional Priority List in the TIP.

- The fiscal constraints of programming projects in the TIP may result in the programming of less expensive, lower ranked projects.

- Some lower ranking projects may be implemented earlier than a higher ranked, large project due to the time constraints associated with a more complex project (i.e., major investment studies, preparing environmental documents, designing the project, right-of way acquisition, etc.).

- The utility of ranking more than 25 projects is minimal due to the availability of project funds.

		Mobility			Modernization		
Criteria	**Metric**	**% of Score - Statewide Tier**	**% of Score - Regional Tier**	**% of Score - Subregional Tier**	**% of Score - Statewide Tier**	**% of Score - Regional Tier**	**% of Score - Subregional Tier**
Congestion	current volume/capacity + AADT	30%	30%	30%	5%	5%	no SPOT data
Safety	critical crash rates, crash density, severity	20%	20%	25%	15%	15%	20%
Economic Competitiveness	use TREDIS model, input change in VHT, output economic value added based on % change in Division	20%	20%	no SPOT data	no SPOT data	no SPOT data	no SPOT data
Lane Width	existing width vs. standard width	no SPOT data	no SPOT data	no SPOT data	25%	25%	25%
Shoulder Width	existing width vs. standard width	no SPOT data	no SPOT data	no SPOT data	25%	25%	25%
Multi-modal	options, connection, or design features	Bonus Points: 8 for HOV/HOT, BRT, Rail, BOSS; 5 for connection to terminal; 3 for sidewalks, bike lanes, transit facilities, etc.					
Environmental Impacts	Air quality impacts and GIS analysis of wetlands, streams, species habitat, parks, and water supply watershed	10%	10%	15%	10%	10%	10%
Community Impacts	GIS analysis of population density, schools, parks, historic resources, and cemeteries	10%	10%	15%	10%	10%	10%
Environmental Justice	GIS analysis of low-income and minority areas	10%	10%	15%	10%	10%	10%
		100%	100%	100%	100%	100%	100%

Criteria	Metric	% of Score
Right-of-Way Acquired	Amount of right-of-way available	10%
Connectivity	Access to transit, schools, CBD, high density residential or commercial, parks, other bike/ped facilities	20%
Bicycle or Pedestrian Crashes	3 or more bike/ped crashes within last 5 years, variable points if greater than 3	15%
Demand/Density	Population density within 1.5 miles of bicycle facility	15%
Congestion	v/c on roadway	15%
Regional Connectivity	Part of regional bicycle route or connection to Triangle Transit regional route, future rail, or local bus route	15%
Environmental Justice	GIS analysis of benefit to minority and low-income population	10%

100%

Criteria	Metric	% of Score
Right-of-Way Acquired	Amount of right-of-way available	10%
Connectivity	Access to transit, schools, CBD, high density residential or commercial, parks, other bike/ped facilities	20%
Bicycle or Pedestrian Crashes	3 or more bike/ped crashes within last 5 years, variable points if greater than 3	15%
Demand/Density	Population density within 0.5 miles of ped facility	15%
Traffic volume	AADT on roadway	15%
Regional Connectivity	Pedestrian connection to Triangle Transit regional route, future rail, or local bus route	15%
Environmental Justice	GIS analysis of benefit to minority and low-income population	10%

100%

All Tiers and Types		
Criteria	**Metric**	**% of Score**
Availability	One point for every percent increase in system-wide service hours	15%
Connectivity	One point for connection to taxi stand, bicycle facility, sidewalk facility; demand response transit, high density housing within 1/2 mile, mixed use development; two points for connection to fixed route with 1 hour all day headway; three points for connection to fixed route with 30 minute peak headway	15%
Technology	One point for every percent increase in funding spend on information technology	5%
State of Good Repair	One point for every percent decrease in average age of fleet; Facilities: one-tenth of one point for every percent increase in surface area of space	50%
Environmental Impacts	Based on project type, vehicle type, GIS analysis	5%
Community Impacts	Based on density, schools, parks served	5%
Environmental Justice	GIS analysis of benefit to low-income and minority areas	5%
		100%

											highest state score in tier/	
SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	MPO Score	State Score	TAC Approved Points
1144	Statewide	Infrastructure Health	Modernization	U-5304	US015, US501		NC 86 (Columbia Street)	SR 1742 (Ephesus Church Road)	(US 15/501) Fordham Boulevard (NC 86 (Columbia Street)/US 15/501 South to SR 1742 (Ephesus Church Road)) sidewalks, wide-outside lanes, and transit accommodations.	64.251	38.032	100
200	Regional	Infrastructure Health	Modernization		NC086		US 70A	I-40	Add 4' Paved shoulders to accommodate bicycles.	72.016	30.489	100
1013	Regional	Mobility	Capacity		NC054		I-40	Barbee Chapel Road	NC 54 (I-40 west to Barbee Chapel Rd) widen to 6-lane divided,bicycle, pedestrian, and transit facilities.	64.531	30.732	100
632	Regional	Mobility	Capacity	U-5324D	NC054		SR 1106 (Barbee Road)	NC 55	NC 54 (I-40 east to NC 55) widen to multi-lane divided with transit accommodations, bike lanes, and sidewalks. Section D:	64.116	27.286	100
945	Regional	Mobility	Capacity	U-5324C	NC054		SR 1118 (Fayetteville Road)	SR 1106 (Barbee Road)	NC 54 (I-40 east to NC 55) widen to multi-lane divided with transit accommodations, bike lanes, and sidewalks. Section C: SR 1118 (Fayetteville Road) to SR 1106 (Barbee Road).	65.369	26.746	100
375	Regional	Mobility	Capacity	U-5324B	NC054		NC 751	SR 1118 (Fayetteville Road)	NC 54 (I-40 east to NC 55) widen to multi-lane divided with transit accommodations, bike lanes, and sidewalks. Section B: NC 751 to SR 1118 (Fayetteville Road).	63.801	25.707	100
660	Regional	Mobility	Capacity	U-5324A	NC054		I-40	NC 751	NC 54 (I-40 east to NC 55) widen to multi-lane divided with transit accommodations, bike lanes, and sidewalks. Section A: I-40 to NC 751.	56.723	21.901	100
946	Subregional	Infrastructure Health	Modernization		SR1110	Barbee Chapel Road/Farrington	NC 54	SR 1107 (Stagecoach Road)	Construct bike lanes and sidewalks.	85.339	26.044	100
859	Subregional	Infrastructure Health	Modernization		SR1666	Dearborn Drive	SR 1669 (East Club Boulevard)	SR 1004 (Old Oxford Road)	Construct Bicycle Lanes and Sidewalks	82.274	25.762	100
1014	Subregional	Infrastructure Health	Modernization	U-2909	SR1780	Estes Drive	SR 1772 (Greensboro Street)	NC 86	SR 1772 (Greensboro Street) to NC 86. Widen to add bike lanes, sidewalks, and transit accommodations.	82.557	24.653	100
663	Subregional	Mobility	Capacity		SR1118	Fayetteville Road	Woodcroft Pkwy	SR 1171 (Riddle Road)	SR 1118 (Fayetteville Road) (Woodcroft Pkwy to Riddle Road (SR 1171)) widen to 4-lane divided, bikelanes and sidewalks.	65.719	19.901	100
1033	Subregional	Infrastructure Health	Modernization		SR1717	Jack Bennett Road	US 15/501	SR 1721 (Lystra Rd)	Jack Bennett Rd (SR 1717) (US 15/501 to Lystra Rd (SR 1721) safety improvements.	82.742	23.871	50
1036	Subregional	Infrastructure Health	Modernization		SR1158	West Cornwallis Road	SR 1306 (Erwin Road)	SR 1127 (Chapel Hill Road)	Construct Bicycle Lanes and Sidewalks	81.307	24.653	25

											highest state score in tier/	
SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	MPO Score	State Score	TAC Approved Points
997	Subregional	Infrastructure Health	Modernization		SR1009	Old NC 86	SR 1777 (Homestead Road)	SR 1727 (Eubanks Road)	Construct bike lanes and sidewalks and transit accommodations.	81.307	24.653	25
531	Subregional	Infrastructure Health	Modernization		SR1727	Eubanks Road	SR 1009 (Old NC 86)	Rogers Road	Construct bike lanes and sidewalks and transit accommodations.	81.307	24.653	25
655	Subregional	Infrastructure Health	Modernization		SR1008	Mount Carmel Church Road	US 15-501	Chatham County Line	Construct bike lanes.	80.057	24.653	25
649	Subregional	Infrastructure Health	Modernization		068 SR1727	Eubanks Road	SR 1729 (Rogers Road)	NC 86	Construct bicycle lanes, sidewalks, safety and intersection improvements.	80.339	23.544	25
937	Subregional	Infrastructure Health	Modernization		SR1900	Old Mason Farm Road/Finley Golf	NC 54	NC 54/US 15-501 (Fordham Blvd.)	Construct bike lanes and sidewalks.	78.121	22.436	25
1305	Statewide	Infrastructure Health	Modernization		019 US015, 019 US501		400 ft south of SR 1532 (Mann's Chapel Road	North of SR 1919 (Smith Level Road) at the Orange County Line	Construct either 15' wide outside lanes or 6' bicycle lanes.	71.463	34.683	0
652	Statewide	Infrastructure Health	Modernization		032 NC147		East End Connector	US 15/501	Modernization, pavement Rehabilitation and ramp consolidations/interchange upgrades	35.862	12.671	0
408	Statewide	Mobility	Capacity		068 US015	Fordham Boulevard	East Lakeview Drive	Sage Road	Upgrade road to "Superstreet"	58.878	49.924	0
948	Statewide	Mobility	Capacity		068 US015	Fordham Boulevard	SR 1742 (Ephesus Church Road)	SR 1902 (Manning Drive)	Upgrade road to "Superstreet" with possible interchange at Manning Drive	60.356	43.627	0
949	Statewide	Mobility	Capacity		092 I-040		NC 147	Wade Avenue	Construct Managed Lanes	83.201	42.465	0
1100	Statewide	Mobility	Capacity		032 I-040		NC 147	US 15/501	Construct 1 Managed Lane per direction (additional 16ft of pavement - 12ft lanes + 4ft pavement for separation with general purpose lanes)	60.831	42.339	0
1103	Statewide	Mobility	Capacity	I-3306A	I-040		I-85	US 15/501	I-85 in Orange County to NC 147 (Buck Dean Freeway) in Durham County. Add Additional Lanes. Section A: I-85 to US 15/501.	49.014	29.426	0
958	Statewide	Mobility	Capacity	U-2807	US015, US501		I-40	US 15/501	I-40 to US 15/501 Bypass in Durham. Major Corridor Upgrade.	62.572	28.802	0
961	Statewide	Mobility	Capacity		068 NC086		US 70 Bypass	North of NC 57	Widen roadway to four lanes with a median and improve intersections at US 70 Bypass and NC 57 .	57.186	28.738	0
365	Statewide	Mobility	Capacity		032 NC147	Durham Freeway	I-40	East End Connector	Widen roadway to 6 lanes and rehabilitate pavement	56.822	25.192	0

											highest state score in tier/	
SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	MPO Score	State Score	TAC Approved Points
532	Statewide	Mobility	Interchange/Intersection		US015, US501		SR 1742 (Ephesus Church Road)		Intersection Improvements	54.202	24.065	0
953	Statewide	Mobility	Capacity		092 I-540		I-40	US 64 Bypass	Convert Freeway to Tolled Facility and widen to 8 lanes	57.87	21.993	0
1095	Statewide	Mobility	Capacity	I-0305B	I-085		East of SR 1709	Durham County Line	I-40 at Hillsborough to Durham County Line. Widen to Six Lanes and Reconstruct Interchanges and Structures. Section B: East	45.827	21.122	0
658	Statewide	Mobility	Capacity	I-0305A	I-085		SR 1006 near Hillsborough	East of SR 1709	I-40 at Hillsborough to Durham County Line. Widen to Six Lanes and Reconstruct Interchanges and Structures. Section A: SR 1006 near Hillsbourgh to East of SR 1709.	31.773	15.229	0
1131	Regional	Infrastructure Health	Modernization		NC086	Martin Luther King, Jr. Boulevard	I-40	North Street	Construct Bicycle Lanes and Sidewalks	68.895	27.672	0
1143	Regional	Infrastructure Health	Modernization		NC054		US 15/501	SR 1110 (Barbee Chapel Road)	Construct Bicycle Lanes and Sidewalks	65.296	27.133	0
631	Regional	Infrastructure Health	Modernization		NC751	Hope Valley Road	SR 1146 (South Roxboro Road)	Martin Luther King, Jr. Parkway	Construct bike lanes and sidewalks.	66.155	26.932	0
659	Regional	Mobility	Capacity		NC751	Hope Valley Road	South Roxboro Road	NC 54	NC 751 (S. Roxboro Rd. to NC 54) widen to 4-lane, bike lanes, and sidewalks.	58.759	23.521	0
951	Regional	Mobility	Capacity		032 NC751		NC 54	Renaissance Parkway	Widen roadway to four lanes with a median with bicycle, pedestrian and transit facilities as appropriate.	49.251	17.212	0
950	Regional	Mobility	Capacity	U-2405		New Route - Martin Luther	NC 55	Cornwallis Road	NC 55 to Cornwallis Road. Pedestrian, bicycle, and transit facilities.	50.605	16.338	0
952	Regional	Mobility	Capacity		NC751		US 64	Durham County Line	Widen to 4 lanes with bicycle lanes on existing location.	40.588	15.643	0
1162	Regional	Mobility	Capacity		032 NC751		Renaissance Parkway	1118 (Fayetteville Road)	Widen roadway to four lanes with a median and bicycle, pedestrian and transit facilities as appropriate.	37.648	13.147	0
1096	Regional	Mobility	Capacity			I-85/US 70 Connector	US 70		Reconstruct interchange to allow for full movements	46.314	10.528	0
1005	Subregional	Infrastructure Health	Modernization		068 SR1005	Old Greensboro Rd.	SR 2057 (Sturbridge Lane)	Alamance County Line	Add 4-foot paved shoulders	78.807	24.653	0
239	Subregional	Infrastructure Health	Modernization		SR1006, SR1102	Orange Grove Road, Dodsons	I-40	SR 1177 (Dairyland Road)	Add 4' Paved shoulders to accommodate bicycles. This route is designated as North Carolina Bike Route #2.	77.742	23.871	0
654	Subregional	Infrastructure Health	Modernization		068 SR1927	Merritt Mill Road	1010 (Franklin Street)	1919 (South Greensboro Street)	Construct bicycle lanes and sidewalks.	76.307	22.153	0

highest state score in tier/

SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	MPO Score	State Score	TAC Approved Points
1034	Subregional	Infrastructure Health	Modernization		SR1009	Old NC 86	I-40	SR 1727 (Eubanks Road)	Widen outside lanes.	72.557	22.153	0
651	Subregional	Infrastructure Health	Modernization		SR1009	Old NC 86	SR 1009 (Hillsborough Road)	SR 1777 (Homestead Road)	Construct bike lanes and sidewalks and transit accommodations.	74.653	21.327	0
372	Subregional	Infrastructure Health	Modernization	U-3436	SR1148, SR1192	Eno Mountain Road, Mayo Street	SR 1006 (Orange Grove Road)		SR 1148 (Eno Mountain Road) and SR 1192 (Mayo Street) at SR 1006 (Orange Grove Road). Realign Intersection and Make	72.839	21.044	0
1011	Subregional	Infrastructure Health	Modernization		068 SR1104	Dairyland Road	SR 1111 (Union Grove Church Road)	SR 1006 (Orange Grove Road)	Construct 4-foot paved shoulders on Dairyland Road	70.339	21.044	0
326	Subregional	Infrastructure Health	Modernization	U-2805	SR1777	Homestead Road	SR 1009 (Old NC 86)	NC 86	SR 1009 (Old NC 86) to NC 86. Widen to include bicycle lanes, sidewalks, transit accommodations, and safety improvements (design may vary along length).	71.871	19.936	0
10	Subregional	Infrastructure Health	Modernization		SR1669	Club Boulevard	Ambridge Street	SR 1670 (East Geer Street)	Construct Bicycle Lanes and Sidewalks	70.057	19.653	0
1056	Subregional	Infrastructure Health	Modernization		SR1780	Estes Drive	NC 86	Caswell Road	Estes Drive (NC 86 to Caswell Road) widen existing roadway to include two 12-foot travel lanes, four-foot bicycle lanes and sidewalks.	67.557	19.653	0
487	Subregional	Infrastructure Health	Modernization		SR1843	Seawell School Road	SR 1780 (Estes)	SR 1777 (Homestead)	Seawell School Road (Homestead to Estes) bicycle lanes, sidewalks, transit accommodations, and Intersection safety	68.403	18.827	0
555	Subregional	Infrastructure Health	Modernization		SR1734	Erwin Road	US 15/501	NC 751	US 15/501 to NC 751, bike lanes, sidewalks, and safety improvements (design may vary along length).	60.621	17.436	0
7	Subregional	Infrastructure Health	Modernization		SR1102, SR 1977	Sedwick Road	SR 1100 (Grandale Drive)	SR 1945 (South Alston Avenue)	Construct bike lanes and sidewalks.	62.153	16.327	0
558	Subregional	Infrastructure Health	Modernization		SR1721	Lystra Road	US 15/501	SR 1008 (Farrington Point	Safety improvements.	66.653	15.827	0
1018	Subregional	Infrastructure Health	Modernization		086 SR2008	Carmichael Street	US 15/501	Northern Terminus of	Repave and with bicycle accommodations	59.25	15.5	0
1097	Subregional	Infrastructure Health	Modernization		SR1113	Ephesus Church Road/Pope Road	SR 2220 (Old Durham-Chapel Hill Road)	Orange County Line	Construct bike lanes and sidewalks.	58.686	15.218	0
6	Subregional	Infrastructure Health	Modernization		SR1762	Jeremiah Drive	SR 1721 (Lystra Road)	End of Road	Elevate road for flood control.	56.25	12.5	0
641	Subregional	Mobility	Capacity	R-2825	SR1009	South Churton Street	I-40	Eno River	I-40 to Bridge over Southern Railroad. Widen to Multi-Lanes with landscaped median, bicycle lanes, and sidewalks, widen	60.961	18.809	0
527	Subregional	Mobility	Capacity		032 SR1146	S. Roxboro St.	SR 1158 (Cornwallis Rd)	Martin Luther King, Jr. Parkway	Widen existing roadway to multi-lanes and construct on new location multi-lane roadway with bicycle, pedestrian	51.217	18.02	0

highest state score in tier/

SPOTID	Tier	Goal	Improvement Type	TIP #	Route	Route Name	From / Cross Street	To	Description	MPO Score	State Score	TAC Approved Points
647	Subregional	Mobility	Interchange/Intersection		SR1780	Estes Drive	SR 1772 (Greensboro Street)		SR 1780 (Estes Drive)/SR 1772 (Greensboro Street) construct roundabout.	55.115	17.81	0
826	Subregional	Mobility	Capacity		SR1006	New Route - Orange Grove Road	SR 1006 (Orange Grove Road)	US 70A	Orange Grove Road Extension (Orange Grove Road to US 70) with sidewalks and bicycle lanes	63.082	16.673	0
666	Subregional	Mobility	Capacity		SR1004	Old Oxford Highway	29000501 (Roxboro Road)	Hamlin Road	Old Oxford Highway (Roxboro Road to Hamlin Road) expand capacity, bike lanes, and sidewalks.	52.598	15.716	0
653	Subregional	Mobility	Capacity		032 SR1118	Fayetteville Road	Renaissance Parkway	NC 751	Widen roadway to four lanes with a median and bicycle, pedestrian and transit facilities as appropriate.	58.106	15.588	0
366	Subregional	Mobility	Interchange/Intersection		SR1010	Franklin Street/East Main	Merritt Mill Road (SR 1771)/Brewer		Franklin Street/Merritt Mill Road/Brewer Ln/E Main Street Intersection improvements.	52.907	14.638	0
533	Subregional	Mobility	Capacity	R-3438		New Route - Hillsborough Western Bypass	US 70	NC 57	US 70 to NC 57. Two Lanes on New Location.	53.647	11.603	0
534	Subregional	Mobility	Capacity	U-4716D	SR1978	Hopson Street	SR 1999 (Davis Drive)	NC 54 (Miami Blvd)	Widen to multi-lanes.	48.757	10.373	0
947	Subregional	Mobility	Interchange/Intersection		068 SR1771		1008 (Mount Carmel Church	1913 (Bennett Road)	Construct roundabout and related safety improvements at the existing intersection of Mount Carmel Church Road and Bennett	47.574	10.216	0
637	Subregional	Mobility	Capacity		032 SR1940	Glover Road	NC 147	SR 1926 (Angier Avenue)	Convert existing grade separation at NC 147 to an interchange and widen roadway to four lanes with a median and bicycle, pedestrian, and transit facilities asappropriate.	54.428	10.186	0
650	Subregional	Mobility	Capacity	U-2831B		New Route - Briggs Avenue Extension	Riddle Road	SR 1951 (So-Hi Drive)	Riddle Road to SR 1951 (So-Hi Drive). Two Lanes on Multi-Lane Right of Way.	51.742	10.163	0
944	Subregional	Mobility	Capacity			New Route - T.W. Alexander Drive Extension	West of Brier Creek Pkwy	Leesville Road	Extension of TW Alexander Drive (4 lanes new location)	57.337	8.0627	0

SPOT ID	Route Name	From	To	Description	Name and Short Description	Counties	Total Cost (Sum)	State Score	MPO Score	TAC Approved Rank
1493	Rocky Creek Greenway Trail Extension	Current trail terminus at NC 55	Kelly Bryant Bridge over NC 147 (Durham Freeway)	Rocky Creek Trail (NC 55 to Kelly Bryant Bridge) – Shared Use Path	Rocky Creek Greenway Trail Extension - (NC 55 to Kelly Bryant Bridge) – Shared Use Path	Durham	$1,785,000	52	92.8	1
1501	1919 (Greensboro Street)	Weaver Street	Shelton Street	N. Greensboro St. corridor from Weaver St. to Shelton St. – bicycle lanes and pedestrian improvements (paint, median, bicycle signal detection, etc.)	1919 - N. Greensboro St. corridor from Weaver St. to Shelton St. – bicycle lanes and pedestrian improvements (paint, median, bicycle signal detection, etc.)	Orange	TBD - new cost estimate needed to reflect change in scope	52	68.9	2
1524	1008 (Mount Carmel Church Road)	US 15-501	1913 (Bennett Road)	SR 1008 (Mount Carmel Church Rd) (US 15-501 to Bennett Rd) sidewalks and bicycle lanes.	SR 1008 (Mount Carmel Church Rd) (US 15-501 to Bennett Rd) sidewalks and bicycle lanes.	Orange	$375,000	60	65.0	3
1497	Campus to Campus Connector	Broad Street	1843 (Seawell School Road)	Campus to Campus Connector (Broad St. to Seawell School Rd.) - Construct a multi-use	Campus to Campus Connector (Broad St. to Seawell School Rd.) - Construct a multi-use	Orange	$900,000	52	64.7	4
1530	Bolin Creek Greenway Trail Phase IV	Umstead Park	Carolina North	Bolin Creek Phase IV (Umstead Park to Carolina North, follow	Bolin Creek Greenway Trail Phase IV - (from Umstead Park to Carolina North, follow	Orange	$3,100,000	52	61.4	5
2054	Morgan Creek Phase 3 in Chapel Hill	End of Phase 2	Carrboro Town Limits	Morgan Creek Phase II (from the end of Phase I to Carrboro Town line) multi-use path.	Morgan Creek Phase 3 in Chapel Hill - from the end of Phase I to Carrboro Town line	Orange	$3,700,000	35	61.7	6
1498	Horace Williams Greenway	1777 (Homestead Road) and Carolina North	Chapel Watch Village	Horace Williams Greenway: Chapel Watch Village to Homestead Road	Horace Williams Greenway - Chapel Watch Village to Homestead Road	Orange	$3,000,000	56	60.8	7
1500	Morgan Creek Greenway Trail -- Carrboro Section	University Lake	Existing Trail	Morgan Creek Greenway in Carrboro - Construct a multi-use path from University Lake	Morgan Creek Greenway in Carrboro - Construct a multi-use path from University Lake	Orange	$3,120,000	48	58.9	8
1494	Duke Beltline Rail-Trail	1127 (Chapel Hill Street)	Y east of NC 55 (Avondale Drive)	Duke Beltline Trail – Shared Use Path	Duke Beltline Rail-Trail - Shared Use Path	Durham	$2,750,000	42	57.5	9
1522	NC 54 Sidepath	James Street	Anderson Park Entrance	NC 54 Sidepath (James St to Anderson Prk) multi-use path.	NC 54 Sidepath (James St to Anderson Prk) multi-use path.	Orange	$700,000	58	56.7	10
1529	US 15-501 (Fordham Bvoulevard) Overpass / Underpass	1902 (Manning Drive)	Old Mason Farm Road	US 15-501 (Fordham Blvd) pedestrian and bicycle overpass/underpass across	US 15-501 (Fordham Blvd) pedestrian and bicycle overpass/underpass across	Orange	$2,300,000	42	55.0	11
1531	Bolin Creek/Little Creek Greenway Trail	Estes Drive Extension at Chapel Hill Community Center	Pinehurst Drive	Bolin Creek/Little Creek Greenway (Chapel Hill Community Center to	Bolin Creek/Little Creek Greenway Trail (Chapel Hill Community Center to	Orange	$3,200,000	52	54.7	12
1525	1727 (Eubanks Road)	1729 (Rogers Road)	NC 86 (Martin Luther King Boulevard)	SR 1727 (Eubanks Rd) (Rogers Rd to NC 86) bicycle lanes.	SR 1727 (Eubanks Rd) (Rogers Rd to NC 86) bicycle lanes.	Orange	$824,000	54	51.7	13
1492	1103 (Scott King Road)	1118 (Fayetteville Road)	1100 (Grandale Road)	Scott King Road (Fayetteville Rd. to Grandale Rd.) – On-road bicycle facilities	1103 - Scott King Road (Fayetteville Rd. to Grandale Rd.) – On-road bicycle facilities	Durham	$630,000	46	50.6	14

SPOT ID	Route Name	From	To	Description	Name and Short Description	Counties	Total Cost (Sum)	State Score	MPO Score	TAC Approved Rank
1495	NC 751	1307 (Erwin Road)	US 70 Business (Hillsborough Road)	NC 751 (Erwin Rd. Roundabout to Hillsborough Rd./US 70) – On-road bicycle facilities	NC 751 - Erwin Rd. Roundabout to Hillsborough Rd./US 70 – On-road bicycle facilities	Durham, Orange	$860,000	48	49.7	15
1496	1401 (Cole Mill Road)	1404 (Rose of Sharon Road)	Orange County Line	Cole Mill Road (Rose of Sharon Rd. to Orange County line) – On-road bicycle facilities	1401 - Cole Mill Road (Rose of Sharon Rd. to Orange County line) - On-road bicycle facilities	Durham	$725,000	46	43.1	16
1919	SR 1006 (Orange Grove Road)	I-40	SR 1102 (Dodsons Cross Road)	Orange Grove Rd (SR1006), Orange County, Bicycle 4' Paved shoulders	SR 1006 (Orange Grove Road) - Orange County, Bicycle 4' Paved shoulders	Orange	$40,920	50	37.5	17
1499	Dry Creek Trail Phase 1	Perry Creek Road	1734 (Erwin Road)	Dry Creek Trail: Phase 1 Perry Creek Road to Erwin Road	Dry Creek Trail Phase 1 - Perry Creek Road to Erwin Road	Orange	$1,250,000	48	37.5	18
1885	Buckhorn Rd (SR 1114)	US 70	SR 1146 (Old Ten Road)	Buckhorn Rd Bike Lane Widening (SR 1114) 4' Paved Shoulders Tied to ORANGE 1	Buckhorn Rd (SR 1114) - Bike Lane Widening - (SR 1114) - 4' Paved Shoulders - Tied to	Orange	$470,085	35	35.8	19
1905	SR 1102 (Dodsons Cross Road)	SR 1177 (Dairyland Road)	SR 1006 (Orange Grove Road)	Dodson's Crossroads Road; add 4' paved shoulders.	SR 1102 (Dodsons Cross Road) - add 4' paved shoulders.	Orange	$364,320	50	32.5	20

SPOT ID	Route Name	From	To	Description	Name and Short Description	Counties	Total Cost (Sum)	State Score	MPO Score	TAC Approved Rank
1505	US 501 Bypass (Duke Street)	Murray Avenue	US 501 Business (Roxboro Road)	Duke Street (Murray Ave. to Roxboro Rd.) – Sidewalks	US 501 Bypass - Duke Street (Murray Ave. to Roxboro Rd.) – Sidewalks	Durham	$1,150,000	57	85.6	1
1502	NC 54	NC 55	City Limits (Research Triangle Park)	NC 54 (NC 55 to RTP) – Sidewalks	NC 54 (NC 55 to RTP) – Sidewalks	Durham	$380,000	57	83.9	2
1503	US 501 Business (Roxboro Road)	Murray Avenue	Pacific Avenue	Roxboro Road (Pacific Ave. to Murray Ave.) – Sidewalks	US 501 Business - Roxboro Road (Pacific Ave. to Murray Ave.) – Sidewalks	Durham	$350,000	55	83.1	3
1514	1118 (Fayetteville Street)	1158 (Cornwallis Road)	NC 147 (Durham Freeway)	SR 1118 (Fayetteville St) (SR 1158 (W Cornwallis Rd) to NC 147) sidewalks and streetscape enhancements	SR 1118 (Fayetteville St) from SR 1158 (W Cornwallis Rd) to NC 147 sidewalks and streetscape enhancements	Durham	$775,000	57	80.6	4
1520	NC 98 (Holloway Street)	1838 (Junction Road)	1919 (Chandler Road)	NC 98 (Holloway St) (SR 1838 (Junction Rd) to SR 1919 (Chandler Road)) sidewalk and	NC 98 (Holloway St) (SR 1838 (Junction Rd) to SR 1919 (Chandler Road)) sidewalk and	Durham	$810,000	57	78.9	5
1506	1443 (Horton Road)	NC 157 (Guess Road)	US 501 (Roxboro Road)	Horton Road (Guess Rd. to Roxboro Rd.) – Sidewalks	1443 - Horton Road (Guess Rd. to Roxboro Rd.) – Sidewalks	Durham	$525,000	57	77.2	6
1515	1127 (Chapel Hill Street)	1127 (Kent Street)	Buchanan Boulevard	W Chapel Hill Street (Kent St to Buchanan Blvd) sidewalks and streetscape enhancements	1127 - W Chapel Hill Street (Kent St to Buchanan Blvd) sidewalks and streetscape enhancements	Durham	$80,000	52	75.6	7
1517	Main Street	Commerce Street	NC 55 (Alston Avenue)	E Main St (Hood St to NC 55 (Alston Ave)) sidewalks and streetscape enhancements	E Main St from Hood St to NC 55 (Alston Ave) sidewalks and streetscape enhancements	Durham	$150,000	57	70.6	8
1504	Cook Road	1118 (Fayetteville Road), near Hillside High School	Martin Luther King Jr. Parkway	Cook Road (Fayetteville Rd. near Hillside High to Martin Luther King, Jr. Parkway)	Cook Road (Fayetteville Rd. near Hillside High to Martin Luther King, Jr. Parkway)	Durham	$420,000	57	68.9	9
1523	US 15-501 (Fordham Boulevard)	1742 (Ephesus Church Road)	Elliott Road	US 15-501 (Fordham Boulevard) (SR 1742 (Ephesus Church Rd) to Elliott Rd) sidewalks.	US 15-501 (Fordham Boulevard) (SR 1742 (Ephesus Church Rd) to Elliott Rd) sidewalks.	Orange	$175,000	60	68.3	10
1507	1010 (Main Street)	1009 (Hillsborough Road)	1005 (Jones Ferry Road)	W. Main St. – Install improved pedestrian crossings and sidewalks from Hillsborough	1010 - W. Main St. – Install improved pedestrian crossings and sidewalks from	Orange	$132,480	57	67.2	11
1527	1919 (Greensboro Street)	Old Pittsboro Road	1771 (Merritt Mill Road)	SR 1919 (S Greensboro St) (Old Pittsboro Rd to SR 1771 (Merritt Mill Rd)) sidewalk on	SR 1919 (S Greensboro St) from Old Pittsboro Rd to SR 1771 (Merritt Mill Rd) sidewalk	Orange	$635,000	52	62.2	12

SPOT ID	Route Name	From	To	Description	Name and Short Description	Counties	Total Cost (Sum)	State Score	MPO Score	TAC Approved Rank
1519	US 15-501 (Mangum Street)	Broadway Street	Miosha Street	US 15-501 Business (N Mangum St)-Corporation St intersection sidewalks and streetscape enhancements in Old Five Points area	US 15-501 Business (N Mangum St)-Corporation St intersection sidewalks and streetscape enhancements in Old Five Points area	Durham	$80,000	52	60.6	13
1521	Main Street	Gary Street	Driver Street	E Main St (Gary St to S Driver St) sidewalks.	E Main St (Gary St to S Driver St) sidewalks.	Durham	$275,000	52	55.6	14
1511	US 15-501	1532 (Mann's Chapel Road)	N/A	US 15-501 at Mann's Chapel Rd. - Add pedestrian refuge islands, signals, crosswalks	US 15-501 at Mann's Chapel Rd. - Add pedestrian refuge islands, signals, crosswalks	Chatham	$300,000	43	54.2	15
1528	Cleland Drive / Burning Tree Drive	US 15-501	NC 54	Cleland Dr/Burning Tree Dr (Cleland Dr and Burning Tree Dr) sidewalks	Cleland Drive / Burning Tree Drive - sidewalks.	Orange	$440,000	48	50.6	16
1508	1782 (Estes Drive)	1772 (Greensboro Street)	Town Limits	Estes Dr. = Construct a sidewalk on the south side of the road from N Greensboro	1782 - Estes Dr. = Construct a sidewalk on the south side of the road from N Greensboro	Orange	$550,000	42	49.7	17
1509	1009 (Old NC 86)	1777 (Homestead Road)	1727 (Eubanks Road)	Old NC 86 = Construct a sidewalk on the east side of the road from Homestead Rd	1009 - Old NC 86 = Construct a sidewalk on the east side of the road from Homestead Rd	Orange	$520,670	42	36.4	18
1510	1006 (Orange Grove Road)	1221 (New Grady Brown School Road)	Timbers Drive	SR 1006, Orange Grove Road, at Interstate 40: Construct a pedestrian bridge over I-40	SR 1006, Orange Grove Road, at Interstate 40: Construct a pedestrian bridge over I-40	Orange	$1,010,000	32	27.2	19

SPOT ID	GOAL	TIER	Transit Partners and Providers	STIP#	DESCRIPTION	MPO Score	MPO Rank	State Score	TAC Approved Points
1410	health	sub regional	CHAPEL HILL TRANSIT	TA-4748	Replacement Van - Paratransit	62.18	1	27.0	56
1411	health	sub regional	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-5019A	Replacement Van - Paratransit	45.79	2	5.0	56
1400	health	sub regional	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-4923	Replacement Bus - fixed route	41.70	3	26.7	56
1394	health	regional	TRIANGLE TRANSIT	TA-4818	Replacement Bus	40.50	4	3.1	28
1415	health	regional	TRIANGLE TRANSIT	TA-5107	Replacement Van - vanpool	37.50	5	7.9	28
1391	health	sub regional	CHAPEL HILL TRANSIT	TA-4726A	Replacement Bus	35.66	6	19.6	56
1342	mobility	sub regional	DURHAM AREA TRANSIT AUTHORITY / DATA	TA-4755	Expansion Bus	33.41	7	35.4	44
1385	mobility	regional	TRIANGLE TRANSIT	TE-4903A	Fixed Guideway - Raleigh-Rtp-Durham Design Phase 1	30.67	8	5.2	22
1384	mobility	regional	TRIANGLE TRANSIT	TE-4903B	Fixed Guideway - Chapel Hill-Durham Design Phase 1	30.06	9	5.2	44
1344	mobility	regional	TRIANGLE TRANSIT	TA-5123	Expansion Bus	29.49	10	19.6	22
1373	mobility	sub regional	DURHAM AREA TRANSIT AUTHORITY / DATA	TD-5267	Facility - Park & Ride, 2 Lots	24.85	11	12.3	31
1372	mobility	regional	TRIANGLE TRANSIT	TD-4941	Facility - Park & Ride Regional Expansion	22.57	12	4.3	15
1368	mobility	sub regional	CHAPEL HILL TRANSIT	TD-4710	Facility - Park & Ride	22.35	13	17.8	31
1370	mobility	regional	PIEDMONT AUTHORITY FOR REGIONAL TRANSPORTATION	TD-5268	Facility - Park & Ride in Buckhorn Economic Development District in Orange County	18.93	14	11.2	0
1418	mobility	regional	TRIANGLE TRANSIT	TT-5213	Technology - Regional Fare System Upgrade	18.75	15	12.7	15
1383	mobility	sub regional	CHAPEL HILL TRANSIT	TE-5203	Fixed Guideway - Bus Rapid Transit Operational Improvements (plan 2013, con 2014)U-5119	14.84	16	14.3	31
1354	mobility	regional	TRIANGLE TRANSIT	TD-4944	Facility - I-40 Bus Bypass Shoulder Project.	13.01	17	7.3	15

2040 MTP

Schedule

Long-Term Schedule

The 2045 Metropolitan Transportation Plan (MTP) major milestones include:

- July 2014 – Final 2013 Base Year SE Data and networks
- June 2015 – CommunityViz 2.0 completed (ready to produce scenarios)
- May 2016 – Complete Alternatives Analysis
- September 2016 – Draft final plan for review
- November 2016 – Final SE Data forecasts (CommunityViz) and transportation networks
- June 2017 -- Adopt 2045 MTP and approve Air Quality Conformity

The horizon years will be 2025, 2035 and 2045, and the possibility of 2034 for the passenger rail New Starts application process.

Near-Term Schedule – Next Steps

2013 Base Year and Network

Staff and local planners will complete the following steps to develop the 2013 Base Year socioeconomic data:

- October-December 2013 -- Use online Employment Analyst to review and update employment in their jurisdiction. Employment Analyst training is at ITRE, 9am to 12pm, September 12, 17 and 24 (only need to attend one training session). There is an online signup for training.
- January-March 2014 – Based on guidance from staff, local planners will need to geocode new residential units since 2010 Census (April 2010). This is commonly done using CO (certificates of occupancy) data.
- April-June 2014 – Based on guidance from staff, local planners will need to investigate any anomalies in Base Year socioeconomic data, and review the transportation networks and network attributes of the Triangle Regional Model (TRM).

CommunityViz 2.0

In 2014, the CommunityViz Steering Group will work with local planners to update the base year data for CommunityViz, including a review and update of the Development Constraints, Place Type and Development Status using an updated parcel layer.

Page 2 and 3 of this document provide a refresher course on CommunityViz and its process and components, while page 4 is a more detailed description of the steps needed to create an update version – CommunityViz 2.0.

CommunityViz2.0: Scenario Planning in the Research Triangle Region (August 20, 2013 version)

Understanding the Key Elements of the CommunityViz Scenario Analysis Tool and its Refinement for Use in the 2045 Metropolitan Transportation Plan

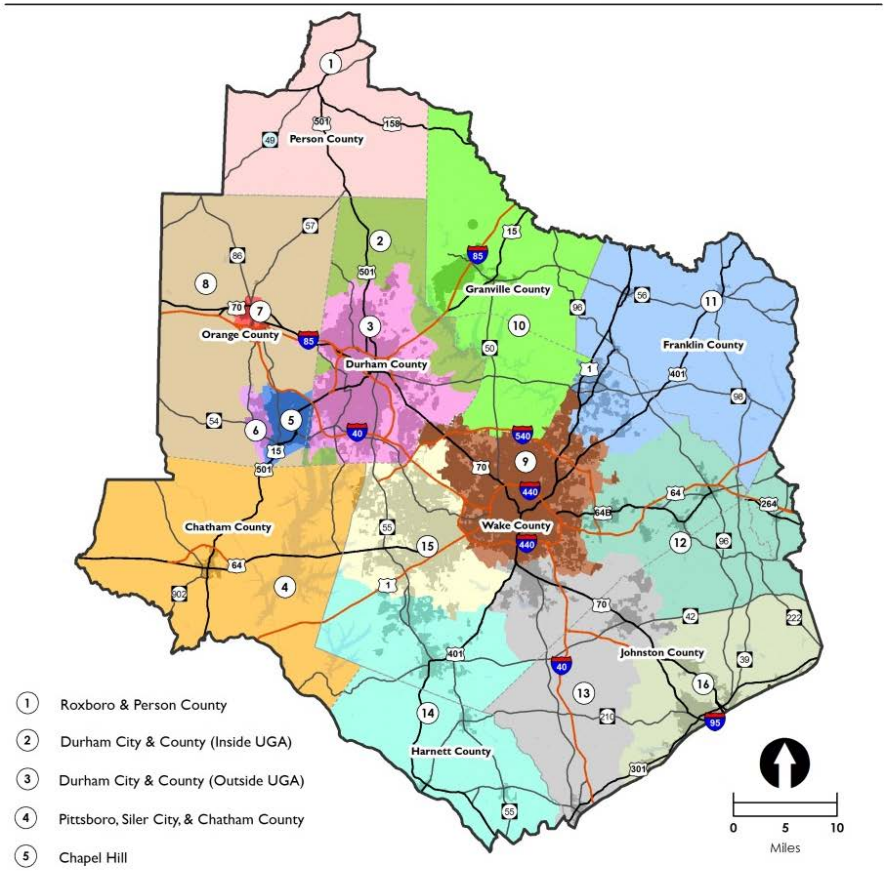
What CommunityViz Is

CommunityViz is a tool that projects where future growth will occur based on assumptions about what makes some locations more attractive than others. It can be used for a small area or an entire region. In the Research Triangle Region, an initial forecast of future growth out to the Year 2040 was used to provide growth forecasts for the region's 2040 Metropolitan Transportation Plan. The model is being refined to create Version 2.0.

The area covered by this forecast is shown to the right. It is the "modeled area" of the region's transportation model, which converts the CommunityViz forecasts into projections of future travel on area roadways and transit routes. It consists of ~3,400 square miles covering all or parts of 10 counties containing about 700,000 parcels of land.

The region is divided into 16 sub-regions (shown at right) to allow more useful reporting of results and to enable the software to work more efficiently. CommunityViz takes information from the land parcels and assigns it to over 100,000 grid cells for analysis. These grid cell data are then translated into the 2,857 "traffic analysis zones" (TAZs) that are used in the new Version 6 of the Triangle Regional Travel Demand Model.

Imagine 2040 - Triangle Region Scenario Planning Initiative
Study Area & Sub-Region Boundaries Map



What CommunityViz Needs

CommunityViz needs five basic things, summarized on the next page:

1. The location of features that constrain development, such as water bodies, wetlands and stream buffers,
2. The type of place each parcel will become (and the intensity of each place type for each jurisdiction),
3. The current development status,
4. The factors that will determine how attractive each parcel is for development, termed land suitability; and
5. The types and amounts of growth that will be allocated, termed "control totals."

THE ELEMENTS OF COMMUNITYVIZ USED TO ALLOCATE GROWTH CONTROL TOTALS	*Development Constraints – Constraints will be reviewed and updated, but are not expected to change significantly* Development constraints are special conditions that restrict the amount of development a parcel or grid cell can receive, even if the underlying parcel or grid cell might be undeveloped and zoned for development. The development constraint used in this version of CommunityViz is a *Resource Conservation* designation, which consists of water bodies, stream buffers, wetlands and permanent conservation areas where development is precluded.
	*Place Types – Place type nomenclature may be refined, but the overall number and categories are not expected to change* Each parcel of land is assigned one of **30** different CommunityViz place types spanning a range of residential, commercial, industrial and mixed-use development possibilities (see Chapter 2 for the complete list). Each place type in each jurisdiction is assigned a density or intensity measure designed to reflect the average value for that jurisdiction. Densities and intensities may be further modified by special conditions such as watershed protection or historic preservation designations. Residential place types include the % of land that is single family vs. multifamily. For mixed use place types, the designation includes the % of land that is residential and % of residential land that is multi-family.
	*Development Status – the treatment of under-developed and re-developable land is expected to be made more flexible* Parcels of land receive one of 4 development status assignments (excluding open space, water & agricultural designations): • developed: already built and can not accept additional growth • committed: additional growth manually assigned • undeveloped: can accept new growth • under-developed (or re-developable): has some development already, but can add more (assumes parcels are 25% developed) or can be re-developed (assumes net growth of 75% of underlying place type capacity).
	*Land Suitability – Suitability factors are to be simplified and refined for Version2.0* Land suitability is a measure of how "attractive" a parcel or grid cell is for new growth, relative to all the other parcels or grid cells in the county. 20 different suitability factors were used, although some might not apply to a particular scenario (e.g. rail stations in a scenario without rail service) and some of the factors might differ by scenario (e.g. short-range vs. long-range sewered areas). A full list of factors, and the weights assigned to each factor in each scenario, is available.
	*Growth Allocation – The allocation method will not change, but will be done in increments; job categories have changed* The final step is to assign new growth to parcels or grid cells based on their relative suitability. Growth is based on control totals that are developed for each county, and for each of the 7 categories of growth that are forecast: single-family residential units, multi-family residential units and 5 categories of jobs: Office, Industrial, Retail, Service-high visitor rate, Service-low visitor rate.

Triangle CommunityViz2

Understanding and Examining Current Development and Future Growth

Framework (August 20, 2013 version)

Durham-Chapel Hill-Carrboro Metropolitan Planning Organization ✦ Capital Area Metropolitan Planning Organization
North Carolina DOT ✦ Triangle Transit ✦ Triangle J Council of Governments

I. Major Products:

1. Inventory of Current ("2013 Base Year") Development (one scenario, with potential for a "2014 Year Committed Development" estimate that TTA can use in New Starts scoring)
2. 2025 "Transportation Program" Year forecast (one scenario)
3. 2034/2035 "Transit Investment" Year forecast (interim scenarios; TTA can use "with" and "without" transit investment scenarios?)
4. 2045 "Transportation Plan" Year forecast (~3 initial scenarios plus one adopted scenario)

II. Inventory and Forecast Components:

1. Land: 2013 parcels by place type and development status (forecasts will add limited "faux parcels" where needed [e.g. university campuses, RTP])
2. Non-residential:
    a. Buildings by square footage (FAR), including any committed development
    b. Jobs by type (jobs per square foot, including vacancy rate)
3. Residential:
    a. Dwelling units by SF and MF, including any committed development
    b. Households by SF and MF (vacancy rate)
    c. Population by SF and MF (occupancy rate)
    d. Group quarters

III. Sources and Methods:

1. 2013 Land: county parcels; start with CommunityViz1.0 (CV1) place type and development status assignments – use ArcGIS Online as platform; use 2013 Orthos when available
2. 2013 Jobs: InfoUSA data used in ArcGIS Online
3. 2013 University group quarters (inc. commercial dorms): based on meeting with universities
4. 2013 multifamily: acquire addresses/# of units/vacancy rates from Karnes Research; check against CV1 parcels with place type = MF and development status = developed; also check against 2010 Census, CTPP and/or latest ACS data for larger geography comparisons?
5. 2013 single family (census definition): combine 2010 census block level counts and 2010-13 COs issued

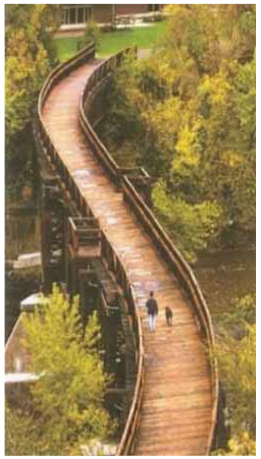
IV. Organization/Communication Structure

1. Steering Group – specific funding sponsor staff responsible for overall direction/decisions
2. Working Group – specific MPO/TJCOG/ITRE staff responsible for completing tasks
    a. ArcGIS On-line technical committee
3. Partner Group – specific people in local government providing inputs and reviewing results

Webinar: August 2013

U.S.Department of Transportation
Federal Highway Administration

Transportation Alternatives Program
Webinar: August 7, 2013



- Introduction: Shari Schaftlein, Director, FHWA Office of Human Environment
- Presenter: Christopher Douwes, Trails and Enhancements Program Manager
- CoPresenter: Shana Baker, Livability Team Leader

Transportation Alternatives Program
Authorized under the Moving Ahead for Progress in the 21st Century Act (MAP-21)

- **Mission:** To improve our Nation's communities through leadership, innovation, and program delivery.
- **Vision:** The Transportation Alternatives Program (TAP) creates safe, accessible, attractive, and environmentally-sensitive communities where people want to live, work, and recreate.

TAP Eligible Projects

The Transportation Alternatives Program consists of:

- Transportation Alternatives Definition
- Recreational Trails Program (RTP)
- Safe Routes to School (SRTS) activities
- Boulevards from Divided Highways

TAP projects are eligible under the Surface Transportation Program (STP).

Funds

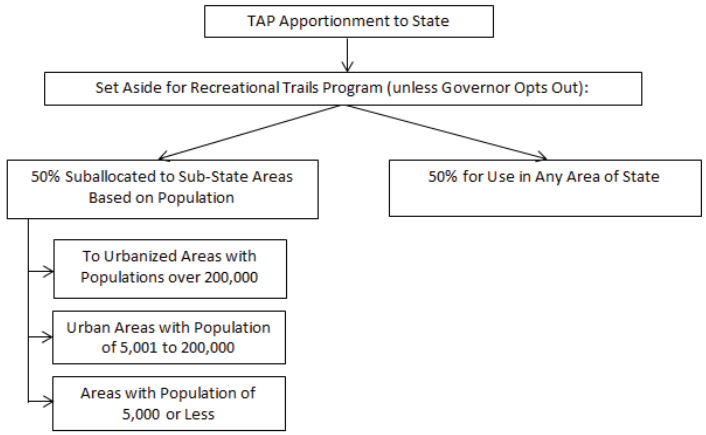
- **How much?** TAP funding is **2%** of MAP-21 funding.
- **How is it funded?** Set-aside from each State's formula programs.
- **Funding levels:** Slightly below the Transportation Enhancement (TE) Activities under SAFETEA-LU:
  - FY 2013: $808,760,000
  - FY 2014: $819,900,000
- FY 2009 for TE, RTP, and SRTS was $1.1 billion.

Federal Share

- In general, Federal share for TAP is the same as the Federal-aid highway program: 80%, with Sliding Scale.
- Flexibility for Federal Land Management Agencies.
  - May use Federal agency funds, Tribal Transportation, and Federal Lands Transportation Program as match for projects that provide access to or within Federal lands.
- In general, donation and credit provisions are the same as the Federal-aid highway program under 23 U.S.C. 323.
- Former TE flexibility provisions were eliminated.
- The RTP set-aside retains RTP match and donation and credit provisions under 23 U.S.C. 206.
- SRTS projects use the TAP provisions.

Suballocation

TAP funds are suballocated by formula.



Transfer of Funds

- States may transfer up to 50% of TAP funds to other FHWA programs.
  - After RTP set-aside.
  - No transfers from funds suballocated by population.
- States may transfer funds from other FHWA programs into TAP.
  - TAP projects are eligible under STP without a transfer.
- States may transfer funds to the Federal Transit Administration (FTA) for TAP-eligible projects.

Competitive Process

- Ultimately: the **State** is responsible.
- States and large MPOs
  - "Shall develop a competitive process to allow eligible entities to submit projects for funding…"
  - States and large MPOs develop their own competitive processes.
  - Examples are available from several sources.
- RTP set-aside: Use RTP provisions and requirements.

Eligible Project Sponsors

- Local governments;
- Regional transportation authorities;
- Transit agencies;
- Natural resource or public land agencies;
  - May include Federal, State, or local public land agencies
- School districts, local education agencies, or schools;
- Tribal governments; and
- Any other local or regional governmental entity with responsibility for oversight of transportation or recreational trails (other than an MPO or a State agency) that the State determines to be eligible…
- *RTP setaside keeps its list of eligible project sponsors.*

Project Sponsors Not Eligible

- State Departments of Transportation
- Metropolitan Planning Organizations
- Nonprofit Organizations (unless they meet one or more eligible entity requirements)

Treatment of Projects

TAP projects "shall be treated as projects on a Federal-aid highway…"

- TAP projects must comply with applicable provisions in Title 23, such as project agreements, authorization to proceed prior to incurring costs, prevailing wage rates (Davis-Bacon), competitive bidding, and other contracting requirements, even for projects not located within the right-of-way of a Federal-aid highway.
- Does not apply to projects conducted under the Recreational Trails Program setaside.
- MAP-21 §1524 Youth Corps provision offers flexibility.

Other Provisions

TAP projects follow the same procedures as other Federal-aid highway projects:

- Planning provisions
- National Environmental Policy Act
- Other environmental requirements.
- Right-of-Way
- Contracting
- Etc.

13

Funding and Administration Questions?

- Purpose
- Funds
- Federal Share /Donations
- Suballocation
- Transfers
- Competitive Process / Project Selection
- Eligible Project Sponsors
- Treatment of Projects
- Planning / Environment / Right-of-Way

14

TAP Project Eligibility

To be eligible under the TAP, a project:

1. Must relate to surface transportation (or recreational trails),
2. Must fit within the TAP definitions,
3. Must be sponsored by one or more eligible entities (defined in the TAP Guidance), and
4. Must be selected through a competitive process (defined in the TAP Guidance).

15

TAP Eligible Projects

The Transportation Alternatives Program consists of:

- Transportation Alternatives Definition
- Recreational Trails Program (RTP)
- Safe Routes to School (SRTS) activities
- Boulevards from Divided Highways

TAP projects are eligible under the Surface Transportation Program (STP).

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Construction, planning, and design of on-road and off-road trail facilities for pedestrians, bicyclists, and other nonmotorized forms of transportation, including:

- Sidewalks,
- Bicycle infrastructure,
- Pedestrian and bicycle signals,
- Traffic calming techniques,
- Lighting and other safety-related infrastructure,
- Transportation projects to achieve compliance with the Americans with Disabilities Act of 1990.

17

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs.

- This category is another aspect of the pedestrian and bicycle category, including access to transit.

18

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other nonmotorized transportation users.

Holmes County Rail-Trail, Ohio →

<- American Tobacco Trail, Durham NC

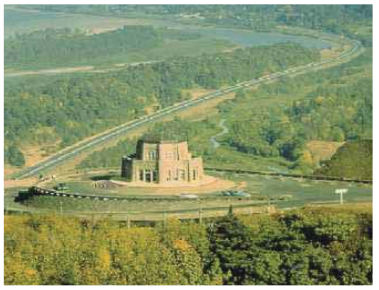
19

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Construction of turnouts, overlooks, and viewing areas.

- Scenic Overlooks defined in 23 CFR 752.6.
- Safety Rest Areas defined in 23 CFR 752.5.



20

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Community improvement activities, including—

The term "including" means "which include but are not limited to".

Community improvement activities may be open to State and local interpretation. However, TAP projects:

1. Must relate to surface transportation (or recreational trails),
2. Must fit within the TAP definitions,
3. Must be sponsored by one or more eligible entities, and
4. Must be selected through a competitive process.

21

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Community improvement activities, which include but are not limited to—

- **Inventory, control, or removal of outdoor advertising;**

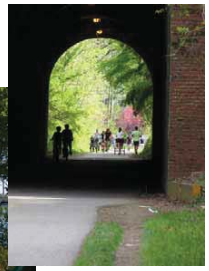
22

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Community improvement activities, which include but are not limited to—

- **Historic preservation and rehabilitation of historic transportation facilities;**
- Examples: bridges, tunnels, historic train or bus stations, ferry terminals, historic roads.



23

Transportation Alternatives Program (TAP)

TAP Project Eligibility

Community improvement activities, which include but are not limited to—

- **Vegetation management practices in transportation rights-of-way to improve roadway safety, prevent against invasive species, and provide erosion control;**
- Projects to manage vegetation to improve sightlines and other safety considerations;
- Establishing living snowfences.
- Removal of invasive species;
- Planting native plants, forbs, or wildflowers to control erosion along transportation corridors.
- *Routine maintenance and operation is not eligible.*

24

TAP Project Eligibility

Community improvement activities, which include but are not limited to—

- **Archaeological activities relating to impacts from implementation of a transportation project eligible under this title.**

25

TAP Project Eligibility

Community improvement activities, which include but are not limited to—

Other:

- Junkyard screening and removal.
- Streetscapes (especially benefiting pedestrians).
- Landscaping related to transportation projects.

TAP Project Eligibility

Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to—

This means **any** environmental mitigation activity.

TAP projects:

1. Must relate to surface transportation (or recreational trails),
2. Must fit within the TAP definitions,
3. Must be sponsored by one or more eligible entities, and
4. Must be selected through a competitive process.

27

TAP Project Eligibility

- **Address stormwater management, control, and water pollution prevention or abatement related to highway construction or due to highway runoff, including activities described in 23 U.S.C. sections 133(b)(11), 328(a), and 329; or**

TAP Project Eligibility

- **Any environmental mitigation activity, including pollution prevention and pollution abatement activities and mitigation to—**
- **reduce vehicle-caused wildlife mortality or to restore and maintain connectivity among terrestrial or aquatic habitats.**

TAP Project Eligibility: TE Activities not Eligible

Transportation Enhancement (TE) Activities that are not eligible under TAP:

- Pedestrian and bicycle safety education, except SRTS.
- Acquisition of scenic or historic easements or sites.
- Scenic and historic highway programs; visitor centers.
- Historic preservation not for transportation facilities.
- Operation of historic transportation facilities.
- Transportation museums.

TAP Project Eligibility: Not Eligible (under TE or TAP)

- State or MPO administrative costs.
- Promotional activities, except SRTS.
- General recreation and park facilities:
  - playground equipment,
  - spray grounds,
  - sports fields,
  - campgrounds,
  - picnic areas and pavilions.
- Routine maintenance and operations.

TAP Project Eligibility: Recreational Trails Program

- For the RTP set-aside, all provisions and requirements remain in effect.
- The RTP represents a portion of the Federal motor fuel excise tax paid by OHV users.
- Funds to develop and maintain recreational trails for all trail uses.
  - Only FHWA program to support routine maintenance
- States solicit and select projects for funding.
- Usually administered through a State resource agency.
- States are encouraged to use Youth Corps.

TAP Project Eligibility: Recreational Trails Program

- Maintain and restore existing trails (and bridges).
- Develop and rehabilitate trailside and trailhead facilities.
- Purchase and lease trail construction and maintenance equipment.
- Construct new trails (limits on Federal lands).
- Acquire easements or property for trails (willing seller only: Condemnation is prohibited).
- Trail assessments for accessibility and maintenance.
- Trail safety and environmental protection education.
- State administrative costs.

TAP Project Eligibility: Safe Routes to School (SRTS)

- No setaside funds for SRTS.
- All eligibilities remain.
- Otherwise: TAP provisions and requirements apply.
- Allocation of funds for Infrastructure and Noninfrastructure activities do not apply (because there is no apportionment).
- Option to have a State SRTS coordinator, not required.

TAP Project Eligibility: Boulevards from Divided Highways

A boulevard is defined as a:

- *Walkable, low-speed (35 mph or less) divided arterial thoroughfare in urban environments designed to carry both through and local traffic, pedestrians and bicyclists. Boulevards may be long corridors, typically four lanes but sometimes wider, serve longer trips and provide pedestrian access to land. Boulevards may be high-ridership transit corridors. Boulevards are primary goods movement and emergency response routes and use vehicular and pedestrian access management techniques. Curb parking is encouraged on boulevards. (ITE)*

Youth Service and Conservation Corps

MAP-21 §1524: Use of Youth Service or Conservation Corps

- Defines qualified youth service or conservation corps.
- Requires the USDOT/FHWA to "…encourage the States and regional transportation planning agencies to enter into contracts and cooperative agreements with qualified youth service or conservation corps … to perform appropriate projects…
- Living allowance or rate of pay (account for prevailing wage rates).
- Exempts contracts and cooperative agreements with Corps from highway program contracting requirements: allows Sole Source.
- §1524 supersedes TAP Treatment of Projects requirement.
- §1524 applies at the *project* level, not the *program* level.

Questions?

Project Sponsors: Contact your State TAP manager.

States: Contact your FHWA Division office.

Future FHWA MAP-21 Webinars:
http://www.fhwa.dot.gov/map21/webinars.cfm

Webinar 2: Panel Discussion of Agencies that Have Implemented TAP
Date: Monday, August 12, 2013
Time: 12:00 p.m. to 1:30 p.m. EST
https://www.nhi.fhwa.dot.gov/resources/webconference/web_conf_learner_reg.aspx?webconfid=26336

Webinar 3: Outreach and Discussion on Program Performance Information
Date: Thursday, August 29, 2013
Time: 12:00 p.m. to 1:30 p.m. EST
https://www.nhi.fhwa.dot.gov/resources/webconference/web_conf_learner_reg.aspx?webconfid=26331

Webinar 4: Final TAP Guidance and Qs & As
Date: Wednesday, August 28, 2013
Time: 12:00 p.m. to 1:30 p.m. EST
https://www.nhi.fhwa.dot.gov/resources/webconference/web_conf_learner_reg.aspx?webconfid=26403

Contact Information

- Guidance and Questions and Answers: www.fhwa.dot.gov/MAP21/
- www.fhwa.dot.gov/environment/transportation_alternatives/
- State TAP Manager contacts: www.ta-clearinghouse.info/stateprofile
- State RTP Administrator contacts: www.fhwa.dot.gov/environment/recreational_trails/rtpstate.cfm
- State SRTS contacts: http://www.saferoutesinfo.org/

National TAP and RTP oversight:
Christopher Douwes
Trails and Enhancements Program Manager
christopher.douwes@dot.gov
202-366-5013

MEMORANDUM

TO: Durham Chapel Hill Carrboro Metropolitian Planning Organization, Technical Coordinating Committee

FROM: David C. Bonk, Long Range and Transportation Planning Manager

SUBJECT: Request Changes to C-5117 and C-5179, Town of Chapel Hill Congestition Mitigation and Air Quality Projects

DATE: August 28, 2013

The Town of Chapel Hill is requesting to reallocate $906,000 in funding from Congestion Mitigation and Air Quality (CMAQ) project C-5177, Martin Luther King Jr. Boulevard/NC86 (Homestead Road to Piney Mountain Road) shared use paths to C-5179, North Estes Drive (Martin Luther King Jr. Boulevard/NC86 – Caswell Drive) transit, bicycle and pedestrian improvements. Enclosed is the amended CMAQ project proposal for North Estes Drive.

The proposed amendment being sought at this time is related to the Central West subarea planning study resulting from the Town's recent adoption of the 2020 Comprehensive Plan.. The Central West citizen's advisory group developing the small area plan for the area that includes Estes Drive has identified bicycle and pedestrian improvements on North Estes Drive as a critical priority. At the same time the Town is about to begin a transit alternatives analysis along Martin Luther King Jr. Blvd. which is expected to require 18 months to complete. The recommendations of the alternatives analysis will determine the scope of future bicycle and pedestrian improvements along this corridor.

The revised total budget for the Estes Drive project is proposed to be $2,338,000, which includes a $467,600 in local match. As noted in the table below, changes to the project include funding for preliminary engineering and design, where previously no funds were allocated, and an increase in construction funds for street improvements. We have made no funding changes at this time to the previous right-of-way allocation.

C-5179: Estes Drive	2009 CMAQ application	2013 CMAQ amendment
Planning, Engineering & Design	$0	$233,800
Right-of-Way (no change)	$207,000	$207,000
Construction	$1,225,000	$1,897,200
Total	$1,432,000	**$2,338,000**

CMAQ PROJECT APPLICATION

FOR NCDOT USE ONLY	
APP ID	STIP ID

IN ORDER TO BE CONSIDERED A COMPLETE APPLICATION PACKAGE, ALL FIELDS MUST BE APPROPRIATELY COMPLETED & REQUIRED ADDITIONAL INFORMATION AS NOTED MUST BE ATTACHED. INCOMPLETE APPLICATIONS WILL BE RETURNED.

GENERAL PROJECT INFORMATION

1 SELECT CMAQ PROJECT TYPE

☐ STATEWIDE ☐ REGIONAL ☑ SUBREGIONAL

2 SELECT MPO/RPO(S)

☐ Burlington-Graham MPO	☐ Hickory MPO	☐ NW Piedmont RPO	☐ Unifour RPO
☐ Cabbarus-Rowan MPO	☐ High Point MPO	☐ Piedmont Triad RPO	☐ Upper Coastal Plain RPO
☐ Capital Area MPO	☐ Kerr-Tar RPO	☐ Rocky Mount MPO	☐ Winston-Salem MPO
☑ Durham-Chappel Hill-Carrboro MPO	☐ Lake Norman RPO	☐ Rocky River RPO	
☐ Gaston MPO	☐ Land of Sky RPO	☐ Southwestern RPO	
☐ Greensboro MPO	☐ Mecklenburg Union MPO	☐ Triangle RPO	

3 PROJECT SPONSOR INFORMATION

Agency : Town of Chapel Hill

Contact Name : David Bonk

Address : 405 Martin Luther King Jr. Blvd. Chapel Hill, NC 27514

Telephone : 919-968-2728

Email Address : dbonk@townofchapelhill.org

4 PROJECT INFORMATION

Title : N. Estes Dr. Bicycle and Pedestrian Improvements

Description : The project will provide needed bicycle and pedestrian facilities along 0.65 miles of the N. Estes Dr. corridor. Improvements include acquiring needed right of way, adding new sidewalks and bicycle lanes, and building street curbs. Please see attached form for more infomation.

Include project details, proposed improvements, purpose, need, how it will provide service, who are the primary stake holders & where it will operate & serve. Attach a sketch design plan of the proposed project which shows the general location.

PROJECT COSTS & DELIVERY SCHEDULE

5 APPLICABLE PROJECT PHASES, FUNDING & YEARS

- CMAQ projects are awarded by Federal Fiscal Years (FFY). FFY run from October 1st of the prior year through September 30th of the next year. For example, FFY 2016 runs from October 1, 2015 through September 30, 2016.
- Cost estimates should reflect anticipated inflation compounded annually at 5% from the current calendar year.
- Minimum 20% match is required for most projects. See 23 U.S.C. §120 paragraph (c) for listing of safety projects that may be funded at up to 100% Federal share.
- In the case of purchasing alternative fueled vehicles (AFV) for general governmental use, CMAQ funding is limited to the cost difference between standard and AFV vehicles. For example, a 2011 Ford Escape lists for $27,000 and a 2011 Ford Escape Hybrid lists for $33,000. The total CMAQ-eligible funding for purchase of this AFV would be: $33,000 - $27,000 = $6,000 (subject to local match).

☐ **Check box if this project is not typical 80/20 split**

Phases(s)	CMAQ $	Matching $	Total $	FFY 2016	FFY 2017
☑ Planning, Engineering & Design	$187,040.00	$46,760.00	$233,800.00	☑	☐
☑ Right-of-Way	$166,000.00	$41,000.00	$207,000.00	☑	☑
☑ Construction	$1,517,760.00	$379,440.00	$1,897,200.00	☐	☑
☐ Transit Operation				☐	☐
☐ Transit Implementation				☐	☐
☐ Non-transit Implementation				☐	☐
Project Total	$1,870,800.00	$467,200.00	$2,338,000.00		

6 ANTICIPATED PROJECT MILESTONE DATES

- Milestone dates must coordinate with funding schedule in Section 5.
- Planning & environmental document; plans, specifications & estimate package; and right of way certification must be complete prior to let date.

	Month/Year
• Planning & Environmental document to be complete:	Oct 1, 2013
• Plans, Specifications & Estimate package to be complete:	Oct 1, 2014
• Right-of-Way acquisition to begin:	Oct 1, 2014
• Anticipated let date (opening of bids):	Oct 1, 2015
• Anticipated completion date of project (including project close-out & reimbursement of all eligible expenses):	Oct 1, 2016

7 LIST THE SOURCE(S) OF MATCHING FUNDS:

Town of Chapel Hill

8 TRANSIT START-UP INFORMATION

Operation assistance under CMAQ is intended to help start up viable new transportation services that will benefit air quality and eventually cover their own costs. This funding is limited to three years. Other funding sources should supplement & ultimately replace CMAQ funds for operation assistance. Briefly describe how funding will be secured to continue the program after year three. (ATTACH ADDITIONAL SHEET(S) IF NEEDED)

GENERAL PROJECT INFORMATION

9 SELECT NC NONATTAINMENT/MAINTENANCE COUNTY(IES):

☐ Cabarrus	☐ Davidson	☐ Edgecombe	☐ Gaston	☐ Haywood*	☐ Lincoln	☑ orange	☐ Swain*
☐ Catawba	☐ Davie	☐ Forsyth	☐ Granville	☐ Iredell*	☐ Mecklenburg	☐ Person	☐ Union
☐ Chatham*	☐ Durham	☐ Franklin	☐ Guilford	☐ Johnston	☐ Nash	☐ Rowan	☐ Wake

*Indicates partial county AQ designation

10 SELECT CMAQ-ELIGIBLE IMPROVEMENT TYPE (check all that apply):

☑ Transportation Control Measures	☐ Extreme Low-Temperature Cold Start Programs
☐ Alternative Fuels	☐ Congestion Relief & Traffic Flow Improvements
☐ Transit Improvements	☑ Bicycle/Pedestrian Facilities & Programs
☐ Transportation Management Associations	☐ Carpooling & Vanpooling
☐ Freight/Intermodal	☐ Diesel Engine Retrofits
☐ Idle Reduction	☐ Training
☐ Travel Demand Management	☐ Public Education & Outreach Activities
☐ I/M Programs	☐ Experimental Pilot Projects

11 IF TRANSPORTATION CONTROL METHOD, CHECK THE ALLOWABLE TYPE(S):

☑ Programs/ordinances to facilitate non-automobile travel, provision/utilization of mass transit & general reduction of the need for SOV travel, as part of transportation planning & development efforts of a locality, including programs & ordinances applicable to new shopping centers, special events & other centers of vehicle activity

☑ Programs for improved public transit

☐ Restriction of certain roads or lanes to, or construction of such roads or lanes for use by, passenger buses or HOV

- ☐ Employer-based transportation management plans, including incentives
- ☐ Trip-reduction ordinances
- ☑ Traffic flow improvement programs that reduce emissions
- ☐ Fringe & transportation corridor parking facilities serving multiple-occupancy vehicle programs or transit services
- ☐ Multiple-occupancy vehicle programs or transit service
- ☐ Programs to limit/restrict vehicle use in downtown areas/other areas of emission concentration during peak periods
- ☐ Programs for the provision of all forms of high-occupancy, shared-ride services
- ☐ Programs to limit portions of road surfaces/certain sections of metro area to the use of non-motorized vehicles or pedestrian
- ☑ Programs for secure bicycle storage facilities & other facilities, including bicycle lanes in both public & private areas
- ☐ Programs to control extended idling of vehicles
- ☐ Reducing emissions from extreme cold-start conditions
- ☐ Employer-sponsored programs to permit flexible work schedules
- ☐ Public Education & Outreach Activities

12 IF TRANSIT IMPROVEMENT, SPECIFY HOW SERVICE WILL BE IMPROVED:

- ☑ New facilities associated with a service increase
- ☐ New vehicles used to expand the transit fleet
- ☐ Operating assistance for new service (limit three years)
- ☐ Fare subsidies as part of program to limit exceedances of NAAQS

13 EMISSIONS REDUCTION CRITERIA

QUANTATIVE analysis of air quality impacts is required for most project types. **QUALITATIVE** analysis is only allowable when it is not possible to accurately quantify emissions benefits, such as public education, marketing & other outreach efforts, which can include advertising alternatives to SOV travel, employer outreach & public education campaigns. The qualitative analysis should be based on a reasoned & logical determination that the project/program will decrease emissions & contribute to attainment or maintenance of NAAQS. The primary benefit of these activities enhanced communication & outreach that is expected to influence travel behavior & air quality.

- **Indicate the type of analysis completed:** ☑ **QUANTITATIVE** ☐ **QUALITATIVE**
- **Describe the method used to estimate the emissions reduction and show calculations: (ATTACH ADDITIONAL SHEET(S) IF NEEDED)**

Bicycle and pedestrian improvements along N. Estes Dr. will result in a 5% increase in ridership for Chapel Hill Transit's G bus route. These ridership increases are to be expected based on improvements made to transit accessibility in the immediate vicinity of the bicycle and pedestrian infrastructure upgrades. With N. Estes Dr. serving as a major east-west corridor for the Town, the bike lanes and sidewalks will improve transit ridership by providing better accessibility to major activity centers including Carolina North, Downtown Chapel Hill, and the University Mall. An assumption is made of an average trip length of 4.55 miles based on 2008 annual figures provided by Chapel Hill Transit. With the assumption that 90% of new transit trips will replace single occupancy vehicle trips along N. Estes Dr, we expect an average weekday decrease of 212 vehicle miles traveled.

The location of the bicycle and pedestrian infrastructure upgrades along N. Estes Dr. will serve to provide necessary access to the Carolina North development. As outlined in the 2009 draft of the Transportation Impact Analysis (TIA), an expected 1,613 walking and biking trips will be generated in the surrounding area. These trip generation rates derive from the 2015 constrained parking scenario and assume a complete sidewalk and bicycle lane network, thus making the completion of the proposed bicycle and pedestrian facilities along N. Estes Dr. a priority to accommodate these individuals. Utilizing trip distributions from the TIA report, approximately 34% of incoming bicycle and pedestrian trips will access the development along N. Estes Dr, which accounts solely for those trips entering and exiting the site. An average bicycle and pedestrian trip length of 1.5 miles is assumed based on the distance from Carolina North to major activity centers to the west (the Franklin St. corridor) along N. Estes Dr. With an estimated 548 bicycle and pedestrian trips traveling to Carolina North along N. Estes Dr., an assumption of 1.1 occupants per car, and an average trip length of 1.5 miles, it is expected that the bicycle and pedestrian infrastructure improvements will result in an average weekday decrease of 747 vehicle miles traveled.

Estes Hills Elementary School and Guy Phillips Middle School are both located along N. Estes Dr. in the immediate area of the proposed bicycle and pedestrian infrastructure improvements. With 1,250 students, teachers, and staff at the school sites, bicycle and pedestrian trips accounted for 2.5% of the total trips (ITE standard). This would account for 63 one-way trips, with an assumption of an additional 38 one-way "other" trips generated due to residential, recreational, and church trips made in the surrounding area. With 101 total trips, an assumption of 1.1 occupants per car, and an average trip length of 1.5 miles, an average weekday decrease of 138 vehicle miles traveled will occur. In addition, the promotion of biking and walking trips to both schools will decrease SOV trips, which will help alleviate congestion along N. Estes Dr. and facilitate traffic flow movement between Franklin St. and MLK Jr. Blvd. Based on annual

figures with 251 service days assumed, the N. Estes Dr. bicycle and pedestrian infrastructure improvements decrease a cumulative 2,854 kg of NOX, VOC, and CO annually.

For QUANTATIVE analyses, list the expected daily emissions BEFORE and AFTER project implementation:

Pollutant	Daily Emissions Before (kg)	Daily Emission After (kg)	Daily Emissions Reduction (kg)
Carbon Monoxide (CO)			7.23
Volatile Organic Compounds (VOC)			0.34
Oxides of Nitrogen (NOx)			0.25
Total			7.82

14 MISCELLANEOUS

• For construction of trails, has the Department of Interior been contacted?	☐ Yes	☐ No	☑ N/A
• Is the fare/fee subsidy program part of a broad program to reduce emissions?	☐ Yes	☐ No	☑ N/A
• Will the ITS project conform to the National ITS architecture?	☐ Yes	☐ No	☑ N/A

15 SUPPORTING INFORMATION CHECK LIST

Check supporting information included as attachment(s) to this application:

- ☑ MPO/RPO Support Resolution (Required for SUBREGIONAL proposals)
- ☑ Additional project description and/or details
- ☑ Map of general project location
- ☑ Complete emissions calculations
- ☐ Any assumptions used
- ☐ Other, please specify:

16 MPO/RPO PRIORITY INFORMATION

This project has been prioritized by the MPO/RPO and received the following ranking among all CMAQ requests (UNRANKED APPLICATIONS WILL NOT BE PROCESSED): 6 out of 14

17 SUBMIT APPLICATION

- **SAVE APPLICATION AND ALL ATTACHMENTS IN A SINGLE PDF DOCUMENT**
- **ENTER APPROPRIATE PROPOSAL DETAILS AND UPLOAD PDF APPLICATION IN PARTNER CONNECT BY OCTOBER 31, 2011**

Project Description

The project will provide needed bicycle and pedestrian facilities along N. Estes Dr. The proposed improvements are located between MLK Jr. Blvd. to the west and Guy Phillips Middle School (starting at the school's bus driveway, at approximately 544 N. Estes Dr.) to the east. Presently, there is a lack of adequate bicycle and pedestrian facilities along this route. The absence of sidewalks hinders pedestrian and transit use at specific locations, causing concerns for proper access and safety. An informal walkway exists along the south side of the corridor, from MLK Jr. Blvd. to Caswell Rd., however it is not properly maintained nor ADA compliant. The corridor is also absent a dedicated bicycle lane or wide shoulders for bicycles, which forces bicyclists to share the two lane road with automobiles.

The project is proposing 5 ft. wide sidewalks, 4 ft. wide bicycle lanes, and proper curbing on both sides of the corridor between MLK Jr. Blvd. and Guy Phillips Middle School. The bicycle lanes, sidewalks, and curbing will extend along the 0.65 mile corridor and will add 1.3 miles of bicycle lanes, sidewalks, and curbing (please see attached map). The project will also replace some existing sidewalk on the south side of the street from Caswell Rd. to Guy Phillips Middle School to accommodate the needed right of way for bike lanes.

The proposed project sits adjacent to the new Carolina North development, at the corner of MLK Jr. Blvd. and N. Estes Dr. As a result, the building of these paths will better serve Carolina North, which will generate additional bicycle and pedestrian trips. Therefore, it is essential that both user groups gain the necessary access improvements in the vicinity surrounding the Carolina North site.

By completing the proper pedestrian and bicycling facilities, people will shift modes and use alternative transportation instead of single occupancy vehicles. With the improvements made along the corridor, there will be an expected increase in transit, bicycle, and pedestrian use. People are more willing to use alternative transportation if the options are attractive, easily accessible, and contiguous with surrounding sidewalks and pathways. The building of these facilities will help promote overall pedestrian and bicyclist connectivity. The proposed improvements made along N. Estes Dr. will decrease vehicle emissions, improve transit accessibility, and result in an increase in transit ridership. In addition, since this project is adjacent to an elementary and middle school, biking and walking to school will be encouraged rather than driving.

Project Costs

N. Estes Dr. Sidewalk and Bike Lane			
	Cost per mile	Quantity/Length	Price
5' Sidewalk	265,000	1.3	344,500
4' Bike Lanes	220,000	1.3	286,000
Curbing	132,000	1.3	171,600
Residential Right of Way Acres	155,000	1.1	170,500
Pathway Demolition Costs/Soil Grading	316,800*	0.65	205,920
		Project Cost	1,178,520
		Project Cost + Inflation	1,432,498
		20% Local Match	286,500
		CMAQ Funding	1,145,998
		Net Emission Reduction	2,854
		Benefit/Cost Ratio	1.99

*Cost estimate for sidewalk removal costs per square foot comes from http://www.mtc.ca.gov/planning/bicyclespedestrians/Ped_Districts/04-Generic-Cost-Estimating-Tool.pdf

Legend	
N Estes Dr Sidewalks	
N Estes Dr Bike Lanes	
Future Carolina North Site	

Summerlin Dr
Seminole Dr
Shadylawn Rd
Boulder Ln
Ellen Pl
Falls Rd
Forest Hill Rd
Eastwood Rd
Shadylawn Rd Ext
Windsor Pl
Windsor Circle
Ashley Forest Dr
Oosting Dr
Mendel Dr
Crow Hollow
Municipal Dr
Piney Mountain Rd
Shadowood Dr
Woodshire Ln
Huntington Dr
Wellington Dr
Kensington Dr
86
1780
1750
Woodleaf Dr
Northhaven Dr
Estes Dr Ext
1843
Airport Dr
Martin Luther King Jr Blvd
Caswell Rd
Surry Rd
Curtis Rd
N Elliott R
Clayto
Justice Std
Barclay
Wyrick St
Branch St
Ward St
Powell St
Hartig St
Bolton Pl
Maple Dr
Mt Bolus Rd
Cedar St
Halifax Rd
Granville Rd
Severin St
Sparrow Trail
Bolinwood Dr
Winding Way
Burlage Circle
Wesley Dr
Wesley Ct
Bradley Rd
Reade Rd
Burris Pl
Umstead Dr
Weiner St
730 m
© 2009 Tele Atlas
©2009 Google

Methodology:

N. Estes Dr. Bicycle/Pedestrian Infrastructure Improvement Emissions Reductions:

Bicycle and pedestrian improvements along N. Estes Dr. will result in a 5% increase in ridership for Chapel Hill Transit's G bus route. These ridership increases are to be expected based on improvements made to transit accessibility in the immediate vicinity of the bicycle and pedestrian infrastructure upgrades. With N. Estes Dr. serving as a major east-west corridor for the Town, the bike lanes and sidewalks will improve transit ridership by providing better accessibility to major activity centers including Carolina North, Downtown Chapel Hill, and the University Mall. An assumption is made of an average trip length of 4.55 miles based on 2008 annual figures provided by Chapel Hill Transit. With the assumption that 90% of new transit trips will replace single occupancy vehicle trips along N. Estes Dr, we expect an average weekday decrease of 212 vehicle miles traveled.

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*** N. Estes Dr. Bicycle/Pedestrian Infrastructure Improvement Emissions Reductions***

1 - Weekday VMT reduction due to transit ridership increase resulting from bicycle/pedestrian improvements along N. Estes Dr.

	Avg. Daily Riders	New Daily Riders	Avg. Pax Trip Length	VMT Reduction
Current G ridership	1036	-	4.55	
5% increase	1088	52	4.55	212

Number of Weekdays (with Transit Service) Annually

251

Pollutant	LDGV (g/mi)
NOX	0.335
VOC	0.446
CO	9.583

	Annual NOX Reduction (kg)	Annual VOC Reduction (kg)	Annual CO Reduction (kg)
	18	24	510

**Mobile6 data used for LDGV*

**Assuming no increased service*

**assuming 90% of new transit trips replace a SOV trip. 4.55 miles was the average passenger trip length for Chapel Hill Transit in 2008.*

**assuming 5% ridership growth on Chapel Hill Transit route G operating on Estes Dr.*

2 - Weekday VMT reduction with N. Estes Dr. bicycle/pedestrian improvements made surrounding 2015 Carolina North site development

Pollutant	LDGV (g/mi)	Annual LDGV Reduction (kg)
NOX	0.335	62.811495
VOC	0.446	83.623662
CO	9.583	1796.783751

**assuming 34% of walk/bike/other trips to Carolina North utilizing N. Estes Dr.*

**assuming 1.5 miles average trip length*

**assuming walk/bike/other trips = (1613*.34) = 548 trips*

**assuming 251 service days per year*

**assuming 548 trips/1.1 occupants per car * 1.5 average trip length = 747 vehicle miles traveled*

3 - Reduction of emissions associated with modal shift for school trips along N. Estes Dr.

Pollutant	LDGV (g/mi)	Annual LDGV Reduction (kg)
NOX	0.335	11.60373
VOC	0.446	15.448548
CO	9.583	331.935954

**assuming school trips = 1250 students/faculty/staff at Estes Hills Elementary school and Guy Phillips Middle School*
x 2.5% bike and ped mode share = 63 one way trips

**assuming other trips (residential, park, church) = 38 one-way trips*

**assuming average trip length = 1.5 miles (total length of N. Estes Dr.)*

**assuming 101 riders/1.1 occupants per car * 1.5 miles average trip length = 138 vehicle miles traveled*

**assuming 251 service days per year*

Total N. Estes Dr. Bicycle/Pedestrian Infrastructure Improvement Emissions Reductions

Pollutant	Total Reduction (kg)	Net Total (kg)
NOX	**92**	
VOC	**123**	**2,854**
CO	**2,639**	

RESOLUTION TO MODIFY THE 2012-2018 TRANSPORTATION IMPROVEMENT PROGRAM FOR THE DURHAM-CHAPEL HILL-CARRBORO METROPOLITAN PLANNING AREA

AMENDMENT #11
September 11, 2013

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

WHEREAS, the Metropolitan Transportation Improvement Program (MTIP) 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 Transportation Advisory Committee (TAC); 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 MTIP have been modified in accordance with certain provisions of the SAFETEA-LU Federal Transportation Act and guidance provided by the State; and

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

WHEREAS, the North Carolina Department of Transportation and the Transportation Advisory Committee have determined it to be in the best interest of the Urban Area to amend the FY 2012-2018 Metropolitan Transportation Improvement Program as described in the attached sheets; and

WHEREAS, there has been no change in the MTIP project schedule or project design concept and scope with regard to the air quality conformity finding made by the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee on May 8, 2013; and

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

BE IT THEREFORE RESOLVED that the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization Transportation Advisory Committee hereby amends the FY 2012-2018 Metropolitan Transportation Improvement Program of the Durham-Chapel Hill-Carrboro Urban Area, as approved by the TAC on September 14, 2011, and as described in the "Attachments to Resolution for Amendment #11 to DCHC 2012-2018 MTIP" provided here on this, the 11th day of September, 2013.

_____
Ellen Reckhow, TAC Chair

Durham County, North Carolina

I certify that Ellen Reckhow personally appeared before me this day acknowledging to me that she signed the forgoing document.

Date: September 11, 2013

_____
Frederick Brian Rhodes, Notary Public
My commission expires: May 10, 2015

REVISIONS TO THE 2012-2020 STIP

HIGHWAY PROGRAM

STIP ADDITIONS

STATEWIDE

* W-5517	VARIOUS, SAFETY MANAGEMENT PROGRAM,	ENGINEERING	FY 2013 -	$11,000,000	(HSIP)
STATEWIDE	PROJECT IDENTIFICATION, ANALYSIS AND		FY 2016 -	$5,500,000	(HSIP)
PROJ. CATEGORY	PRELIMINARY ENGINEERING.		FY 2017 -	$5,500,000	(HSIP)
STATEWIDE	***ADD PRELIMINARY ENGINEERING IN FY 13, 16, 17, 18, 19, AND 20 NOT PREVIOUSLY PROGRAMMED.***		FY 2018 -	$5,500,000	(HSIP)
			FY 2019 -	$5,500,000	(HSIP)
			FY 2020 -	$5,500,000	(HSIP)
				$38,500,000	

STIP MODIFICATIONS

DIVISION 7

C-5177	NC 86 (MARTIN LUTHER KING, JR. BOULEVARD), MLK,	RIGHT-OF-WAY	FY 2014 -	$180,000	(CMAQ)
ORANGE	JR. SHARED PATHWAY IN CHAPEL HILL. CONSTRUCT		FY 2014 -	$45,000	(C)
PROJ. CATEGORY	PATHWAY ALONG MLK, JR. BOULEVARD, SR 1777	CONSTRUCTION	FY 2014 -	$545,000	(CMAQ)
EXEMPT	(HOMESTEAD ROAD) TO PINEY MOUNTAIN ROAD.		FY 2014 -	$136,000	(C)
	DELAY RIGHT-OF-WAY FROM FY 13 TO FY 14 TO ALLOW TOWN ADDITIONAL TIME FOR PLANNING AND DESIGN.			$906,000	

*** INDICATES FEDERAL AMENDMENT**

MEMORANDUM

To: Transportation Advisory Committee (TAC)
DCHC MPO

From: DCHC MPO Lead Planning Agency

Date: August 14, 2013

Subject: **Lead Planning Agency (LPA) Staff Report**

This memorandum provides a summary status of tasks for projects in the FY 2013-2014 Unified Planning Work Program.

- Indicates that task is ongoing and not complete.
- ✓ Indicates that task is complete.

FY 2013-2014 Unified Planning Work Program (UPWP) – Projects

Comprehensive Transportation Plan (CTP)
- ✓ Draft CTP –December 2012
- CTP Report and Maps – December 2013
- MPO Adopt CTP – June 2014
- NCDOT BOT – December 2014

MPO Community Viz. Scenarios Planning and Visualization -2.0
- ✓ Funding for local Community Viz 2.0 preparatory work – July 2013
- Work Plan for Community Viz 2.0 – 2014
- Community Viz 2.0 completed – 2015

Update of the MPO Public Involvement Policy
- Update of the MPO Public Involvement to reflect Map 21

MPO Title VI/Environmental Justice (EJ)/Limited English Proficiency (LEP) Plan
- Update of Title VI/ LEP/EJ plans

SE Data Update – Employment /Housing/Population Verification
- 2013 Base Year Population and Employment – January 2014
- SE Data Forecasts – 2014

Base Year Data Collection (Traffic/Travel Time/Crash/Transit)

GIS Online/Data Management

MPO Congestion Management Process CMP

MPO Website Update

Triangle Regional Model Update

Map-21 Performance Measurement

Contract Number: C201994 **Route:** NC-147
Physical Division: 5 **County:** Durham
Administrative Division: 15 **TIP Number:** U-4763B
Length: 4.2 miles **Federal Aid Number:** TIFIA-540(2)
Resident Engineer: D. Brian Harrington, PE **RE Phone Number:** (919)836-4873
Location Description: TRIANGLE PARKWAY FROM NC-540 IN WAKE CO TO I-40 IN DURHAM CO
Type of Work: GRADING, DRAINAGE, PAVING, SIGNALS, TOLL FACILITIES & STRS.
Contractor Name: S. T. WOOTEN CORPORATION
Contract Amount: $137,446,000.00 **Cost Overrun/Underrun:**
Availability Date: 9/19/2008 **Letting Date:** 8/5/2008
Completion Date: 7/1/2011 **Work Began:** 8/3/2009
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202436 **Route:** US-70, SR-1322
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** B-3638, R-5164F
Length: 1.233 miles **Federal Aid Number:** BRSTP-70B(2)
Resident Engineer: Mark W. Luther, PE **RE Phone Number:** (919)220-4680
Location Description: BRIDGE OVER CAMPUS DR AND APPROACHES ON US-70 BUS AND US-70 BUS (MAIN ST) FROM NINTH ST TO BUCHANAN ST.
Type of Work: GRADING, DRAINAGE, PAVING, SIGNALS AND STRUCTURE.
Contractor Name: DEVERE CONSTRUCTION COMPANY, INC
Contract Amount: $1,969,734.20 **Cost Overrun/Underrun:** 5.31%
Availability Date: 7/30/2012 **Letting Date:** 6/19/2012
Completion Date: 3/18/2014 **Work Began:** 9/17/2012
Revised Completion Date: **Estimated Completion:** 3/18/2014
Last Estimate Thru: 6/30/2013 **Scheduled Progress:** 48%
Last Estimate Paid: 7/9/2013 **Actual Progress:** 42.49%

Contract Number: C202507 **Route:** I-540
Physical Division: 5 **County:** Durham
Administrative Division: 15 **TIP Number:** R-2635, U-4763B
Length: 18.8 miles **Federal Aid Number:** TIFIA-540(2)
Resident Engineer: George C. Gibson, PE **RE Phone Number:** (919)836-4873
Location Description: NC-540 FROM NC-55 NEAR APEX TO NC-54 NEAR RTP AND NC-147 FROM I-40 TO NC-540.
Type of Work: DESIGN-BUILD LANDSCAPING.
Contractor Name: SOUTHERN GARDEN, INC.
Contract Amount: $4,800,000.00 **Cost Overrun/Underrun:**
Availability Date: 8/15/2011 **Letting Date:** 4/21/2011
Completion Date: 7/1/2015 **Work Began:** 8/15/2011
Revised Completion Date: **Estimated Completion:**
Last Estimate Thru: **Scheduled Progress:**
Last Estimate Paid: **Actual Progress:**

Contract Number: C202875 **Route:** I-540
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:** I-5307, I-5310
Length: 17.133 miles **Federal Aid Number:** IM-0540(23)
Resident Engineer: Michelle H. Gaddy **RE Phone Number:** (919)840-0914
Location Description: I-540 FROM I-40 OVERPASS TO TRIANGLE TOWN BLVD, AND TRIANGLE TOWN BLVD FROM I-540 TO NEW ASPHALT PAVEMENT JOINT.
Type of Work: MILLING, RESURFACING, SHOULDER RECONST, AND STR REHAB.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $8,384,157.45 **Cost Overrun/Underrun:** -3.82%
Availability Date: 2/27/2012 **Letting Date:** 1/17/2012
Completion Date: 11/15/2012 **Work Began:** 2/27/2012
Revised Completion Date: 4/4/2013 **Estimated Completion:** 6/30/2013
Last Estimate Thru: 6/22/2013 **Scheduled Progress:** 100%
Last Estimate Paid: 6/27/2013 **Actual Progress:** 98.14%

Contract Number: C202995 **Route:** NC-56, NC-96, US-15 US-158, SR-1103, SR-1127 SR-1135, SR-1192, SR-1671 SR-1675
Physical Division: 5 **County:** Durham
Administrative Division: 5 **TIP Number:**

Length: 0 miles
Federal Aid Number:
Resident Engineer: Mark W. Luther, PE
RE Phone Number: (919)220-4680
Location Description: BRG# 195 SR-1675, 16 US-15, 35 US-158, 43 SR-1103, 44 NC-96, 45 NC-56, 50 SR-1127, 54 SR-1135, 57 SR-1192 & 193 SR-1671.
Type of Work: BRIDGE PRESERVATION
Contractor Name: NHM CONSTRUCTORS, LLC
Contract Amount: $3,034,500.45
Cost Overrun/Underrun: 3.47%
Availability Date: 10/1/2012
Letting Date: 4/17/2012
Completion Date: 7/21/2013
Work Began: 10/1/2012
Revised Completion Date:
Estimated Completion: 8/21/2013
Last Estimate Thru: 7/15/2013
Scheduled Progress: 95%
Last Estimate Paid: 7/19/2013
Actual Progress: 81.8%

Contract Number: C203117
Route: SR-1005, SR-1008, SR-1630 SR-1631, SR-1834, SR-1945 SR-2000, SR-2002, SR-2005 SR-2010, SR-2015, SR-2100 SR-2162, SR-2217, SR-2232 SR-2234, SR-2329, SR-2349 SR-2406, SR-3015, SR-3099 SR-3555
Physical Division: 5
County: Durham
Administrative Division: 5
TIP Number:
Length: 32.362 miles
Federal Aid Number:
Resident Engineer: Chad D. Hinnant
RE Phone Number: (919)733-9499
Location Description: 23 SECTIONS OF SECONDARY ROADS.
Type of Work: WIDENING, MILLING, RESURFACING, AND SHOULDER GRADING.
Contractor Name: THE LANE CONSTRUCTION CORP
Contract Amount: $5,803,217.05
Cost Overrun/Underrun: 1%
Availability Date: 8/27/2012
Letting Date: 7/17/2012
Completion Date: 5/31/2013
Work Began: 9/4/2012
Revised Completion Date:
Estimated Completion: 7/15/2013
Last Estimate Thru: 6/30/2013
Scheduled Progress: 100%
Last Estimate Paid: 7/9/2013
Actual Progress: 100%

Contract Number: C203128
Route: SR-1978
Physical Division: 5
County: Durham
Administrative Division: 5
TIP Number: U-4716, U-4716A, U-4716B U-4716C
Length: 4.203 miles
Federal Aid Number: FRA-FR-HSR-0006-10-01-00
Resident Engineer: Michelle H. Gaddy
RE Phone Number: (919)840-0914
Location Description: CLEGG PASSING SIDING & HOPSON RD GRADE SEPARATION AND CLOSING OF AT-GRADE RR CROSSINGS.
Type of Work: GRADING, DRAINAGE, PAVING, STRUCTURE & TRACKBED.
Contractor Name: FSC II LLC DBA FRED SMITH COMPANY
Contract Amount: $10,900,447.15
Cost Overrun/Underrun: 0.75%
Availability Date: 12/31/2012
Letting Date: 11/20/2012
Completion Date: 12/28/2015
Work Began: 1/30/2013
Revised Completion Date:
Estimated Completion: 12/28/2015
Last Estimate Thru: 7/7/2013
Scheduled Progress: 34.35%
Last Estimate Paid: 7/16/2013
Actual Progress: 24.66%

Contract Number: C203188
Route: US-158, SR-1318, SR-1333 SR-1336, SR-1504, SR-1542 SR-1556, SR-1605, SR-1729 SR-1737
Physical Division: 5
County: Durham
Administrative Division: 5
TIP Number:
Length: 30.21 miles
Federal Aid Number:
Resident Engineer: Mark W. Luther, PE
RE Phone Number: (919)220-4680
Location Description: US-158 FROM OLD DURHAM RD TO SR-1576, AND 10 SECTIONS OF SECONDARY ROADS.
Type of Work: MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.
Contractor Name: CAROLINA SUNROCK LLC
Contract Amount: $3,899,875.03
Cost Overrun/Underrun: 6.32%
Availability Date: 3/11/2013
Letting Date: 11/20/2012
Completion Date: 8/12/2013
Work Began: 3/18/2013
Revised Completion Date:
Estimated Completion: 8/12/2013
Last Estimate Thru: 6/30/2013
Scheduled Progress: 82%
Last Estimate Paid: 7/9/2013
Actual Progress: 86.04%

Contract Number:	C203220	**Route:**	NC-54, US-70, SR-1002 SR-1101, SR-1445, SR-1451 SR-1453, SR-1628, SR-1670 SR-1940, SR-1954, SR-2028
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	
Length:	21.88 miles	**Federal Aid Number:**	
Resident Engineer:	Michelle H. Gaddy	**RE Phone Number:**	(919)840-0914
Location Description:	US-70 FROM SR-1815 TO SR-1959, NC-54 FROM I-40 TO ORANGE COUNTY LINE AND 11 SECTIONS OF SECONDARY ROADS.		
Type of Work:	MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.		
Contractor Name:	CAROLINA SUNROCK LLC		
Contract Amount:	$4,789,367.50	**Cost Overrun/Underrun:**	
Availability Date:	3/18/2013	**Letting Date:**	12/18/2012
Completion Date:	10/18/2013	**Work Began:**	7/12/2013
Revised Completion Date:		**Estimated Completion:**	
Last Estimate Thru:		**Scheduled Progress:**	
Last Estimate Paid:		**Actual Progress:**	

Contract Number:	C203273	**Route:**	
Physical Division:	5	**County:**	Durham
Administrative Division:	5	**TIP Number:**	
Length:	1.189 miles	**Federal Aid Number:**	
Resident Engineer:	E. Boyd Tharrington, PE	**RE Phone Number:**	(919)562-7000
Location Description:	REPLACEMENT OF 4 BRIDGES IN DURHAM CO, 3 BRIDGES IN GRANVILLE CO AND 1 BRIDGE IN VANCE CO.		
Type of Work:	DESIGN BUILD.		
Contractor Name:	FSC II LLC DBA FRED SMITH COMPANY		
Contract Amount:	$8,800,000.00	**Cost Overrun/Underrun:**	0%
Availability Date:	4/29/2013	**Letting Date:**	3/19/2013
Completion Date:	9/30/2016	**Work Began:**	4/29/2013
Revised Completion Date:		**Estimated Completion:**	9/30/2016
Last Estimate Thru:	5/31/2013	**Scheduled Progress:**	2.36%
Last Estimate Paid:	7/17/2013	**Actual Progress:**	2.36%

Let (B)	TIP Sub No.	Div	County	Let Type	Description TCC 8/28/2013 Attachment 15
07/13	U-4726HL	5	DURHAM	NON - DOT LET (Local)	DURHAM - SIDEWALK ON BARBEE STREET BETWEEN THE EXISTING SIDEWALK AT PEARSONTOWN ELEMENTARY SCHOOL AND ORINDO DRIVE; ANDSIDEWALK IN FORMER FAYETTEVILLE STREET RIGHT OF WAY TO CONNECT THE DURHAM AREA TRANSIT AUTHORITY (DATA) ADMINISTRATIVEOFFICES WITH GEER STREET
07/13	Z-5400EC	5	DURHAM	NON - DOT LET (Rail)	RAILWAY-HIGHWAY GRADE CROSSING SAFETY PROJECT AT THE INTERSECTION OF SR 1171 (RIDDLE ROAD) AND THE CSX TRANSPORTATION TRACKS; CROSSING #845 864H IN DURHAM
04/14	U-0071	5	DURHAM	Raleigh Letting (LET)	DURHAM - EAST END CONNECTOR FROM NC 147 (BUCK DEAN FREEWAY)TO NORTH OF NC 98
06/14	W-5205N	5	DURHAM	Division POC Let (DPOC)	US 15/501 (UNIVERSITY DRIVE) AT SUMMIT STREET/FORESTWOOD DRIVE
09/14	C-4928	5	DURHAM	NON - DOT LET (Congestion Mitigation)	DURHAM - MORREENE ROAD FROM NEAL ROAD TO ERWIN ROAD
09/14	C-5178	5	DURHAM	NON - DOT LET (Congestion Mitigation)	DURHAM - CAMPUS WALK AVENUE, MORREENE ROAD TO LASALLE STREET AND LASALLE STREET, KANGAROO DRIVE TO ERWIN ROAD CONSTRUCTSIDEWALKS
09/14	EB-4707A	5	DURHAM	Division Design Raleigh Let (DDRL)	DURHAM/CHAPEL HILL FROM US 15/501 IN ORANGE COUNTY TO SR 1113 (POPE ROAD) IN DURHAM COUNTY BICYCLE, PEDESTRIAN AND TRANSIT IMPROVEMENTS
09/14	EB-4707B	5	DURHAM	Division Design Raleigh Let (DDRL)	DURHAM/CHAPEL HILL - SR 2220 (OLD DURHAM CHAPEL HILL ROAD) FROM SR 1113 (POPE ROAD) TO SR 1116 (GARRETT ROAD)
09/14	U-4724	5	DURHAM	NON - DOT LET (Bicycle and Pedestrian)	DURHAM - CORNWALLIS RD FROM SOUTH ROXBORO RD TO UNIVERSITY DR
01/15	EB-5514	5	DURHAM	NON - DOT LET (Bicycle and Pedestrian)	NC 751 /SR 1183-2220/ NON-SYSTEM (UNIVERSITY DRIVE) FROM SR1116 (GARRETT ROAD) TO SR 1158 (CORNWALLIS ROAD)
04/15	U-3308	5	DURHAM	Raleigh Letting (LET)	DURHAM - NC 55 (ALSTON AVENUE) FROM NC 147 (I. L. "BUCK" DEAN FREEWAY) TO US 70 BUSINESS - NC 98 (HOLLOWAY STREET)
06/15	U-5517	5	DURHAM	Raleigh Letting (LET)	NC 54 FROM SR 1110 (FARRINGTON ROAD) TO I-40 EASTBOUND ENTRANCE RAMP IN DURHAM
09/15	C-5182	5	DURHAM	NON - DOT LET (Congestion Mitigation)	DURHAM - HOPE VALLEY ROAD CONSTRUCT SIDEWALKS AND BIKE LANES BETWEEN MARTIN LUTHER KING, JR. BOULEVARD PARKWAY AND US 15-501 BUSINESS
09/15	C-5183A	5	DURHAM	NON - DOT LET (Congestion Mitigation)	DURHAM - CONSTRUCT SIDEWALKS
09/15	C-5183B	5	DURHAM	NON - DOT LET (Congestion Mitigation)	DURHAM - CONSTRUCT SIDEWALKS
11/15	U-5516	5	DURHAM	Raleigh Letting (LET)	FROM US 501 (ROXBORO ROAD) TO SR 1448 (LATTA ROAD) / SR 1639 (INFINITY ROAD) IN DURHAM
08/16	I-5331	5	DURHAM	Division POC Let (DPOC)	INTERSTATE PREVENTATIVE MAINTENANCE (IMPM) I-85 FROM NORTH OF MP 183 TO THE GRANVILLE COUNTY LINE
03/17	I-5334	5	DURHAM	Division Design Raleigh Let (DDRL)	I-85 FROM SOUTH OF US 15-501 TO NORTH OF US 70
06/17	B-4943	5	DURHAM	Raleigh Letting (LET)	RELPACE BRIDGE 20 OVER DIAL CREEK ON SR 1616
07/14	N/A	5	DURHAM	Division POC Let (DPOC)	Barbee Rd at Herndon Rd - RBT
10/14	SS-4905BI	5	DURHAM	Division POC Let (DPOC)	SR 1004 (Old Oxford Road) at SR 1648 (Danube Lane)
05/15	SS-4905BM	5	DURHAM	Division POC Let (DPOC)	Carver St. (SR 1407) at Broad St./Kenan Rd. - Mini-Roundabout

NCDOT DIV 7 ACTIVE PROJECTS LOCATED IN DCHCMPO

TIP/WBS #	Description	Let/Start Date	Completion Date	Contractor	Status	Cost	Comments
U-0624 C203175 34762.3.4	Widening , Grading, Drainage, Paving & Signals on NC 86 (S. Columbia St,) From SR -1906 (Purefoy Rd) to SR 1902 (Manning Dr) in **Chapel Hill.**	10/16/2012	12/28/2014	Triangle Grading and Paving	46%Complete 28% Schedule	$4,565,147	TIP
U-2803 C203028 34860.3.1	Widening of SR 1919 (Smith Level Road) from Rock Haven Road to Bridge # 88 over Morgan Creek in **Carrboro**	12/18/2012	5/14/2015	Yates Construction	23% Complete 22% Schedule	$4,946,197	TIP
U-3306 C202266 34913.3.ST1	Grading, Drainage, Paving, Signals, Curb, and Gutter and Retaining Walls on SR 1733 (Weaver Dairy Road) From NC 86 to Old Sterling Road in **Chapel Hill**	7/20/2010	Anticipated 11/30/13	Yates Construction	91% Complete 100% Schedule	$9,584,886	ARRA / TIP
W-5318 C203193	Geometric Improvement, Paved Shoulders, Resurfacing and Rumble Strips on NC 86 from NC 57 to Caswell Co. line	2/19/2013	10/31//13	Carolina Sunrock	Contract Awarded; Start July 15	$4,750,000	High Hazard Safety
43745	Installation of a traffic signal on SR 1750 (Estes Drive) at Library Drive (non system) in **Chapel Hill**		4/1/13	NCDOT forces	**Complete except Ped. Movements - provided by comp. of SW project 3607.3.09**	$75,000	Small Construction Funds

NCDOT DIV 7 FUTURE PROJECTS LOCATED IN DCHCMPO

TIP/WBS #	Description	Let/Start Date	Completion Date		Status	Cost	Comments
I-5312	Mill & Resurface I-85 from east of I-40 to the Durham County Line.	10/15/2013	5/13/16		Contract documents pending	$4,300,000	TIP
W-5207 E 45337.1.5	Installation of a roundabout on SR 1734 (Erwin Rd.) and SR 1791 (Mt. Moriah Rd.) near **Chapel Hill**	10/17/2013	TBD		R/W acquisition in progress	$450,000	High Hazard Safety
W-5207 I 45337.1.9	Funds for preliminary engineering on SR 1005 (Jones Ferry Road) and Davie Street) in **Carrboro**	Fall 2013	TBD		Design in progress addressing town comments	$50,000	High Hazard Safety
SS -4907 V 42423.3 42423.1	Realign intersection of SR 1005 (Old Greensboro Rd.) @ SR 1951 (White Cross Rd.)	6/15/2014	TBD		Alternate Design in progress	$198,000	Spot Safety-State

NCDOT DIV 7 FUTURE PROJECTS LOCATED IN DCHCMPO

TIP/WBS #	Description	Let/Start Date	Completion Date		Status	Cost	Comments
SS-4907 AP 43640.1.1 43640.2.1 43640.3.1	SS-4907AP - Orange - NC 86 (Martin Luther King Jr., Blvd.) and SR 1750 (Estes Drive) in **Chapel Hill.** Improve sight distance by cutting back the bank in the northeast quadrant of the intersection. Cyclists cannot see the cars at the stop bar and the motorists cannot see the cyclists.	9/1/2013	10/1/2013		District Design / NCDOT Work Forces Start Sep 1	$25,600	Spot Safety
43687	Town of Carrboro - Radius improvements, high visibility crosswalks and pedestrian refuge island at the intersection of SR 1009 (Hillsborough Road), James Street (non system) & Quail Roost Drive (non system) in **Carrboro.**	7/22/2013	8/15/2013		District Design / Construction Summer 2013 by NCDOT Work Forces July 22	$40,000	Small Construction Funds

ACTIVE NCDOT PROJECTS IN DCHCMPO

Map #	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Contractor	Comments
	W-5208G/ 4 5338.3.7	SR-1717 (Jack Bennett Rd), Chatham Co. Realign horizontal curve	**April 2014**	Not Available	Awaiting plans from DDC; RW is being acquired	$803K	Not Available	Let date revised from 6/13 to 4/14
	C-5176	American Tobacco Trail (Chatham Co.) - New Hope Church Road Trail Head Park & Ride Lot	September 2013	Not Available	Funding agreement between NCDOT & Town of Cary has been signed; Project on schedule to be let in September	$1,192,000	Not Available	Congestion Mitigation & Air Quality Project administered by the Town of Cary.

SURFACE TREATMENT PROJECTS IN DCHCMPO

Map#	TIP/WBS #	Description	Let Date	Completion Date	Status	Cost	Comments
SURFACE TREATMENT							
RESURFACING							
24	8CR.019XXX	SR 1730 Wake Rd/Grandale Dr From Durham County Line to Wake County Line (0.494 miles) - Asphalt Surface Course	Expected July Letting	11/1/13	No Report	Not Available	Patch resurfacing