GoTriangle
Board of Trustees
Wed, February 27, 2019 12:00 pm-2:30 pm

I. Call to Order and Adoption of Agenda

ACTION REQUESTED: Adopt agenda with any changes requested.
(1 minute Ellen Reckhow)

II. Recognition

A. Introduction of New Hires
(1 minute Jeff Mann)

B. Announcement of Promotions
(1 minute Jeff Mann)

III. Public Comment
The public comment period is held to give citizens an opportunity to speak on any item. The session is no more than thirty minutes long and speakers are limited to no more than three minutes each. Speakers are required to sign up in advance with the Clerk to the Board.
(Ellen Reckhow)

IV. Consent Agenda
Items listed on the consent agenda are considered as a single motion. At the request of any Board member, or member of the public, items may be removed from the consent agenda and acted on by a separate motion. Items pulled from the consent agenda will be placed at the beginning of the general business agenda for discussion and action. Any Board member wishing to remove an item from the consent agenda should advise staff in advance.

ACTION REQUESTED: Approve consent agenda.
(1 minute Ellen Reckhow)

A. Minutes

ACTION REQUESTED: Approve draft minutes from January 17, 2019.

B. Minutes

ACTION REQUESTED: Approve draft minutes from January 23, 2019.

C. Regional Fare Study – Information and Setting a Public Hearing Date

ACTION REQUESTED: Receive the Fare Study Recommendations and set a public hearing date related to the proposed fare change for March 27, 2019.

Wake-Durham Fare Integration Study

D. Wake Transit FY 2019 Q3 Proposed Amendment

ACTION REQUESTED: Approve Wake Transit FY19 Q3 amendments and Ordinances 2019 0002 (Capital) and 2019 0003 (Operating).

O 2019 0002 (Capital)

O 2019 0003 (Operating)

Wake Transit Q3 Amendment

E. Commuter Rail System Level Guidelines and Evaluation Report

ACTION REQUESTED: Approve Commuter Rail System Level Guidelines and Evaluation Report.

CRT System Level Guidelines & Evaluation

F. Wake Transit Concurrence Process for Major Transit Projects

ACTION REQUESTED: Adopt the Wake Transit Concurrence Process.
(15 minutes Shelley Blake, Brett Martin)

Concurrence Process

V. General Business Agenda

Items listed on the general business agenda are for discussion and possible action. Such designation means that the Board intends to discuss the general subject area of that agenda item before making any motion concerning that item.

A. Items Removed from the Consent Agenda

ACTION REQUESTED: Discuss and take action on any items removed from the consent agenda.
(1 minute Ellen Reckhow)

B. Operations & Finance Committee Report
(5 minutes Sig Hutchinson)

C. Planning & Legislative Committee Report
(5 minutes Michael Parker)

VI. Other Business

A. General Manager's Report
(5 minutes Jeff Mann)

Contracts

1. Transit Operations Report

(5 minutes Patrick Stephens)

2. D-O LRT Project Update
(15 minutes John Tallmadge)

3. Wake Transit Update
(5 minutes Stephen Schlossberg & Patrick McDonough)

4. Communications Update
(5 minutes Mike Charbonneau)

B. Chair's Report
(5 minutes Ellen Reckhow)

C. Board Member Reports

1. CAMPO Executive Board Representative
(5 minutes Will Allen III)

2. DCHC MPO Board Representative
(5 minutes Ellen Reckhow)

3. Regional Transportation Alliance (RTA) Rep.
(5 minutes Will Allen III)

4. Chatham-Orange Task Force

(5 minutes Michael Parker)

VII. Closed Sessions

A. Railroad Negotiations

Enter into Closed Session pursuant to NCGS §143-318.11.(3) to consult with an attorney employed or retained by the public body in order to preserve the attorney-client privilege between the attorney and the public body, which privilege is hereby acknowledged; and NCGS §143-318.11.(5) to establish, or to instruct the public body's staff or negotiating agents concerning the position to be taken by or on behalf of the public body in negotiating (i) the price and other material terms of a contract or proposed contract for the acquisition of real property by purchase, option, exchange, or lease.
(30 minutes Shelley Blake)

B. ROMF Litigation

Enter into Closed Session pursuant to NCGS § 143-318.11.(5) to establish, or to instruct the public body's staff or negotiating agents concerning the position to be taken by or on behalf of the public body in negotiating (i) the price and other material terms of a contract or proposed contract for the acquisition of real property by purchase, option, exchange, or lease.
(30 minutes Shelley Blake)

VIII. Adjournment

(Ellen Reckhow)

GoTriangle Board of Trustees
Meeting Minutes
January 17, 2019
Raleigh Union Station, 510 W. Martin Street, Conference Room A300

Board Members Present:

Will Allen III
Sig Hutchinson
Wendy Jacobs (arr. 12:45 p.m.)
Valerie Jordan
Mark Marcoplos
Michael Parker
Ellen Reckhow, Chair
Steve Schewel (arr. 12:45 p.m.)
Russ Stephenson

Board Members Absent:

Vivian Jones (excused)
Andy Perkins
Jennifer Robinson (excused)
Nina Szlosberg-Landis (excused)

Chair Ellen Reckhow officially called the meeting to order at 12:45 p.m.

I. Adoption of Agenda

Action: On motion by Parker and second by Allen the agenda was adopted. The motion was carried unanimously.

Jacobs and Schewel arrived.

II. FY19-24 Strategic Plan and 2019 Business Plan

Jeff Mann's presentation and scorecard of FY19 initiatives are attached and hereby made a part of these minutes. He highlighted on-going and incomplete initiatives as well as initiatives scheduled for FY20. He noted a trip planned to Charlotte in May (date to be determined).

III. D-O LRT Project Update

John Tallmadge's presentation is attached and hereby made a part of these minutes, including an updated FFGA timeline.

IV. Adjournment

Action: Chair Reckhow adjourned the meeting at 2:35 p.m.

_____
Ellen Reckhow, Chair

Attest:

_____
Michelle C. Dawson, CMC
Clerk to the Board

GoTriangle Board of Trustees
Meeting Minutes
January 23, 2019

Board Room, The Plaza, 4600 Emperor Blvd., Suite 100
Durham, NC

Board Members Present:

Will Allen III
Sig Hutchinson
Wendy Jacobs
Vivian Jones
Valerie Jordan
Mark Marcoplos
Michael Parker
Ellen Reckhow
Jennifer Robinson, Chair
Russ Stephenson

Board Members Absent:

Steve Schewel (excused)
Andy Perkins
Nina Szlosberg-Landis (excused)

Chair Ellen Reckhow officially called the meeting to order at 12:05 p.m.

I. Adoption of Agenda

Hutchinson requested the addition of an action item, Fare Free Rides for Federal Employees Impacted by the Federal Government Shutdown, to the Operations & Finance Committee report. Allen requested that the Wake Transit Public Engagement Policy be moved to the consent agenda.

Action: On motion by Parker and second by Stephenson the agenda was adopted with the changes as requested. The motion was carried unanimously.

II. Recognition

A. Introduction of New Hires

President and CEO Mann announced the hiring of Bus Operators Tonya Gardner and Komla Klati; Paratransit Operator Niya Greene and Customer Information Associates K-Andre Harris and Quincy Taborn.

B. Announcement of Promotions

None.

C. Presentation of Service Awards

President/CEO Mann announced the following achievements:

- George Hodgin, Maintenance Supervisor - 15 years
- Sylvester Goodwin, Director of EEO & DBE – 15 years

III. Public Comment

Chair Reckhow recognized John Morris, who requested that D-O LRT project working group meetings be open to the public.

IV. Consent Agenda

Action: On motion by Allen and second by Hutchinson the consent agenda was approved. The motion was carried unanimously.

The following consent agenda items were approved:

- December 19, 2018 – Regular Session Minutes and
- Wake Transit Public Engagement Policy.

V. Presentations

A. Fiscal Year 2018 Audit Report

The presentation by Scott Duda, of Cherry Bekaert, is attached and hereby made a part of these minutes.

Duda highlighted that as the agency continues to grow, the accounting function needs to grow as well. He stated that considering the number of certified public accountants on staff and folks with separate designations like governmental accounting. Additionally, the internal audit function should be considered.

VI. General Business Agenda

A. Items Removed from Consent Agenda

None.

B. Operations & Finance Committee Report

1. Hillsborough Train Station Funding Agreement

Committee Chair Sig Hutchinson presented a recommendation to authorize the President/CEO to execute an agreement between the Town of Hillsborough, NCDOT and GoTriangle for preliminary engineering, construction funding and maintenance agreement for the Hillsborough Train Station. He stated that NCDOT will contribute $7.38 million; GoTriangle from the tax district, $686,000; and the Town, $34,000 for a total of $8.1 million. The Town of Hillsborough is project lead.

Action: On motion by Hutchinson and second by Parker the Board authorized the President/CEO to execute the Preliminary Engineering, Construction Funding and Maintenance Agreement for the Hillsborough Train Station. The motion was carried unanimously.

2. Vehicle Purchase Authorization

Hutchinson presented the recommendation to approve the purchase of two electric Proterra buses for $2,080,225, which includes a Federal grant of $943,000 and $50,000 from Duke Progress Energy. The Wake Transit Plan will contribute $832,000 and GoTriangle, $254,000. He added that the cost differential of the electric bus versus a diesel is about $500,000; however the operating cost savings over the 12 year life of the electric bus ranges from $200,000-$400,000. Hutchinson said the buses are expected to be delivered by September.

Action: On motion by Hutchinson and second by Parker the Board authorized the President/CEO to execute a contract for the purchase of two (2) battery electric Proterra buses, with a maximum dollar amount of $2,080,225. The motion was carried unanimously.

3. FY19 Durham/Orange Operating Fund Budget Amendment

This budget ordinance amendment for the Triangle Tax District – Durham/ Orange Operating Fund is a carry-over from FY18 budget to cover expenses paid in FY19: City of Durham for transit services ($28,805), DCHC MPO Durham County staff working group administrator expenses ($9,880) and DCHC MPO Orange County staff working group administer expenses ($9,880).

Action: On motion by Hutchinson and second by Stephenson the Board adopted Budget Amendment 2019 0001 GoTriangle Fiscal Year 2019 Triangle Tax District – Durham/Orange Operating Fund Budget Ordinance Amendment. The motion was carried unanimously.

4. Fare Free Rides for Federal Employees Impacted by the Federal Government Shutdown

This recommendation by Board member Szlosberg-Landis is to provide fare free service for Federal employees impacted by the Federal shutdown.

Action: On motion by Hutchinson and second by Robinson the Board approved fare free rides for Federal employees impacted by the Federal government shutdown. The motion was carried unanimously.

C. Planning & Legislative Committee Report

No report.

VI. Other Business

A. Items Removed from Consent Agenda

None.

B. General Manager's Report

A list of contracts approved by the President and CEO is attached and hereby made a part of these minutes.

Mann highlighted the following items:

- The Federal government shutdown includes the capital investment grant office within FTA. It is impossible to speculate what the impact might be to the D-O LRT project.
- An RFQ was issued today for development of the Raleigh Union Station bus facility. Respondents will be considered for a short list that will receive a RFP later this year.
- An RFP for commuter rail pre-planning work is being developed. This will take us from the MIS study which will be completed in February to the project development phase for the Wake Durham commuter rail project. It will include additional ridership modeling, high level capacity analysis and high level cost estimating and environmental screening.

  Parker asked if the Board would receive an analysis of the impact the commuter rail project will have on GoTriangle's management structure, staffing, physical facilities, and such. Mann responded affirmatively and said a Wake Transit project director, environmental planner and a rail design engineer are being sought. Once the project is in project development the Board will receive a project management plan.

- GoTriangle has received an APTA adwheel award for the hurricane relief bus effort.

1. Transit Operations Report

Patrick Stephens stated that GoTriangle will receive seven new buses in September: two electric from Proterra and five diesel from Gillig. He said this is the beginning of a level buying program to replace 1/12th of the fleet every year, rather than a large order of 15 or more at a time, along with the refurbishment of some buses. This process will help with budget projections and help us maintain an average fleet age around 6 years. Stephens said the new buses will include monitors that will tie into operations to provide passengers with information, but also promotion space for the marketing team and potential future advertising.

Stephens reported that the demonstration hydrogen electric bus has been delayed. Staff continues to look into alternatives to fossil fuels which includes evaluating our facility and what infrastructure it can support.

Hutchinson asked about the cost of operations for diesel, electric and CNG buses. Stephens stated that he could provide that information.

2. Durham-Orange Light Rail Transit Program Update
Katharine Eggleston was available to answer questions.

3. Wake Transit Update
Patrick McDonough reported that GoRaleigh is in the middle of consultant selection for its first BRT corridor. The core technical team continues to meet for commuter rail.

Steven Schlossberg reported that the recommended FY20 Draft Wake Work Plan will be released on January 28 and the public comment period will go until February 28.

4. Communications Update
No report.

D. General Counsel's Report
General Counsel Shelley Blake noted again that all but three agreements for the D-O LRT project have been signed. She stated that she is working on a concurrence process for Wake Transit which should come to the Board next month for approval.

Jacobs asked for a list of all the agreements for the D-O LRT project.

E. Chair's Report
Chair Reckhow noted the release of the GoTriangle FY18 annual report and commended staff. She also reminded Board members of the RTA annual meeting tomorrow, with seven Board members attending. Reckhow added that the Special Tax Board also meets tomorrow at 2 p.m. for its required annual January meeting.

F. Board Member Reports

1. CAMPO Executive Board Representative
Will Allen III said there was a presentation on the Wake 10-year Operating and Capital Bus Plans and the Wake Transit Annual Report. Additionally the group approved the Wake Transit Public Engagement Policy and the Commuter Rail Transit Cost Share Agreement Amendment.

2. DCHC MPO Board Representative
Ellen Reckhow stated that GoTriangle staff presented its FY18 annual report and an overview of the TOD Guidebook.

3. Regional Transportation Alliance (RTA) Representative
No report.

VII. Adjournment
Action: Chair Reckhow adjourned the meeting at 1:25 p.m.

_____
Ellen Reckhow, Chair

Attest:

_____
Michelle C. Dawson, CMC
Clerk to the Board

Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees

FROM: Regional Services Development

DATE: February 13, 2019

SUBJECT: **Regional Fare Study – Information and Setting a Public Hearing Date**

Strategic Objective or Initiative Supported

Action Requested

Staff requests the Board of Trustees receive the Fare Study Recommendations as information and set a public hearing date related to the proposed fare change, for March 27th.

Background and Purpose

As part of the Wake Transit Bus Plan, GoTriangle, GoRaleigh, GoCary, and GoDurham participated in a regional fare study to evaluate existing conditions and fare trends, research peer agencies and their fare policies, evaluate opportunities for a standardized fare structure for the region, develop a series of fare scenarios to understand ridership and revenue impacts, and draft a preferred recommendation.

Agencies identified the following goals for the Fare Study:

- Improve Pass Distribution and Sales
- Balance Revenue and Ridership Goals
- Improve Passenger Experience
- Improve Regional Coordination
- Make Transit an Affordable Option
- Explore New Fare Technologies

Fare Scenarios

The study tested ridership and revenue impacts of the following scenarios, respectively:

1. Region-Wide Flat Fare
2. Region-Wide Tiered Fare
3. Optimize to Increase Ridership
4. Maximize Farebox Recovery
5. Align Discount Fare Policies
6. Offer Fare Capping
7. Offer Low-Income Fare Category
8. Offer Low-Income Fare Category with General Fare Increase

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Peer Agencies

Based on agency size, demographics, and regional coordination, six transit areas/agencies were chosen as peers for the Fare Study: Seattle, Portland, Denver, Phoenix, Boston, and Charlotte. In most cases, peer agencies offered fewer pass types, had fewer discount categories, and had a wider pass distribution network than Triangle transit providers.

Final Recommendations

Based on the peer study and fare scenario impact testing, the final recommendation includes:

1. A two-tiered region-wide fare structure
2. Consistent region-wide discount and pass categories
3. Region-wise discount ID
4. Establish pass sales agreement and discount guidelines
5. Implement fare-capping technology with mobile ticketing and/or smart card technology

Public Outreach

Staff will be coordinating public outreach on the fare recommendations with proposed service changes planned for August 2019 implementation. Staff asks that the Board of Trustees schedule a federal- mandated public hearing for March 27th. This date allows for the hearing to be during the public outreach period and any comments counted with other public feedback.

Attachments

- Attachment B, Fare Study Final Report

Staff Contact(s)

- Mary Kate Morookian, 919-485-7549, mmorookian@gotriangle.org

Fare Integration Study

GoCary, GoDurham, GoRaleigh, and GoTriangle

Final Report

November 2018

NELSON NYGAARD

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Executive Summary

The Wake and Durham County Fare Integration Study provides a comprehensive review of the current fare system and policies for four agencies operating in the region—GoCary, GoDurham, GoRaleigh, and GoTriangle. Across the region, opportunities exist for more common fare purchase and collection procedures, as well as standardization of some fare policies among the different providers. Analysis as part of this planning effort was conducted to help the region better understand how various policy and fare changes will impact the ridership and revenue of individual agencies and the region as a whole.

This study included a comprehensive evaluation of the existing fare structure, pricing and policies, a review of peer agencies and fare-related best practices, and input from stakeholders through a series of Fare Working Group[1] meetings held from April through October 2018.

Study Goals

The Fare Integration Study includes a review of the existing fare policies in Wake and Durham County, fare structures currently in place at peer agencies, best practices for fare structures, bulk pass programs, low-income programs, potential impacts of modeled fare scenarios, and fare and policy recommendations. The overall goals of the Fare Integration Study include:

- **Improve Pass Distribution and Sales.** Pass options, pricing, and discounts on pass products impact pass sales. Aligning fares and pass pricing and making all passes consistently available at the same locations would simplify the passenger experience.
- **Balance Revenue and Ridership Goals.** There is general agreement between agencies that increasing ridership is a priority of adjusting fares and integrating service; however, balancing revenue and ensuring financial sustainability also remain important.
- **Improve Passenger Experience.** Consistent fare pricing, discount policies, and fare media availability improves the passenger experience and makes the process as intuitive and seamless as possible.
- **Improve Regional Coordination.** Improve cooperation between agencies while maintaining a degree of autonomy.
- **Make Transit an Affordable Option.** Investigate feasibility of fare capping, low-income fares, and additional reduced fare categories.
- **Explore New Fare Technologies.** Pursue regional approach to smartcards and mobile ticketing to help understand the fare structure needs for adopting new technologies.

[1] The Fare Working Group was comprised of representatives from GoCary, GoDurham, GoRaleigh, GoTriangle, Wake County, City of Raleigh, and the Capital Area Metropolitan Planning Organization (CAMPO).

Existing Conditions and Background

The analysis of existing conditions reviews the existing fare structure and policies for GoTriangle, GoDurham, GoRaleigh, and GoCary to assess discrepancies between agency policies and identify potential opportunities for regional coordination and policy integration. This analysis also summarizes trends for farebox revenue within the region from 2011 to 2016, as well as fare media usage to determine opportunities for modifications to fare policies and structure. Key findings include the following:

- **Base fare pricing is inconsistent.** Regional and Express service is priced in two tiers ($2.25 and $3.00), while local service is priced at a single tier for each agency. Each local service provider charges a different base fare—$1.00, $1.25, or $1.50. Simplifying the fare structure and aligning fares would simplify the customer experience.
- **There is an opportunity to align regional discount policies.** All of the agencies in the region offer the same discount for youth riders; however, discount policies for seniors and people with disabilities vary. Aligning these policies and pursuing a regional discount ID accepted by all service providers would improve the customer experience.
- **The pass distribution network is inconsistent.** Pass availability is limited in the existing pass distribution network. Pass availability varies by type of pass and by agency, which may be confusing for passengers.

Peer Review and Best Practices

The peer review and best practices analysis presents a comparison of the Wake-Durham region's fare structure and policies—including pass distribution network, base fares, pass multipliers, discount policies, farebox recovery rate, average cost per trip, average fare paid per trip, and average subsidy per trip—with peer agencies around the country. This chapter also assesses best practices for several policies and fare technologies, including electronic smartcards, fare capping, low-income fare programs, bulk pass programs, transfer policies, and fare free service. Key findings include the following:

- **Wake-Durham local fares are less expensive than peer agencies.** Local fares in the Wake-Durham region are between $0.50 and $1.75 less expensive than peer agency fares. Express fares are generally consistent with peer agencies.
- **Pass multipliers are consistent with peer agencies.** There is some variability between peer agency pass multipliers, but Wake-Durham agency multipliers are within the acceptable range of peer agencies.
- **Peer agency pass distribution networks are more robust and consistent.** The Wake-Durham region would benefit from improving the pass distribution network to align with peer agencies.
- **Mobile ticketing can be a cost-effective technology improvement that has the potential to be implemented quickly.** Implementing mobile ticketing can be less costly than electronic smartcards and can accommodate fare capping and incorporating other discount programs. Peer agencies have invested in mobile ticketing infrastructure.
- **Fare capping can improve equity and reduce upfront costs for low-income passengers.** Incorporating fare capping through mobile ticketing and/or smartcards is a

method for reducing high out-of-pocket payments required for low-income riders to purchase monthly pass products.

- **Low-income fare categories can improve equity and increase the affordability of transit for vulnerable populations.** However, low-tech strategies can be burdensome to the passenger, and high-tech strategies may be expensive or burdensome to the agency. The pros and cons of such a program should be considered before implementing.
- **Expanding pass programs can increase transit ridership and revenue for the agency.** As more passengers have expanded options for cost effective use of the transit system, ridership potential increases.

Fare Recommendations

Fare and policy recommendations for GoCary, GoDurham, GoRaleigh, and GoTriangle are based on findings from the existing conditions analysis, peer review and best practices, fare modeling, and refining concepts with the Fare Working Group. The first phase of implementation is anticipated to occur in Summer 2019, with additional recommendations anticipated for implementation in early 2020.

- **Phase 1: Fare structure, discount policies, and pricing should be aligned across the region.** Beginning in the Summer of 2019, it is recommended that the region implement a tiered fare structure ($1.25/$2.50) with consistent discount policies.
- **Phase 2: Fare capping, smartcards, and mobile ticketing should be pursued in early 2020.** After the fare structure and discount policies are aligned, the region should pursue the implementation and integration of mobile ticketing, fare capping, and smartcards.

The recommended fare structure is provided in Figure ES-1, and Figure ES-2 provides a summary of recommendations developed as part of the Fare Integration Study.

Figure ES-1 Recommended Regional Fare Structure

Fares/Multipliers	Local	Regional/ Express
Base	$1.25	$2.50
Day Pass	$2.50	$5.00
7-Day Pass	$12.00	$24.00
31-Day Pass	$40.00	$80.00
Base Discount	$0.60	$1.25
Discount Day Pass	$1.25	$2.50
Discount 7-Day Pass	$6.00	$12.00
Discount 31-Day Pass	$20.00	$40.00

Figure ES-2 Fare Recommendations Summary

Type	Recommendation
Fare Structure Recommendations (Implementation in Summer 2019)	▪ Implement two-tiered region-wide fare structure with a local base fare of $1.25 and regional/express base fare of $2.50 ▪ Offer consistent discounts/categories – Youth 12 and Under – Free – Youth 13 to 18 – Free with Youth GoPass, otherwise 50% discount – Seniors 65+ – Free – People with Disabilities – 50% discount ▪ Offer $2.50/$5.00 paratransit base fare ▪ Provide consistent products/discounts – Offer 15% discount for Day Pass bundles – Continue to offer Value Cards – Eliminate GoDurham 5-Day Pass – Sell only Day Passes on-board
Near-Term Fare Policies (Implementation in Summer 2019)	▪ Establish pass sales agreement and discount guidelines ▪ Pursue new sales partnerships ▪ Expand GoPass program ▪ Establish guidelines for fare adjustments ▪ Implement region-wide discount ID
Mid-Term Fare Policies (Implementation in Early 2020)	▪ Pursue mobile ticketing ▪ Pursue fare capping ▪ Consider implementation of smartcards

1 Introduction

The Wake and Durham County Fare Integration Study provides a comprehensive review of the current fare system and policies for four agencies operating in the region—GoCary, GoDurham, GoRaleigh, and GoTriangle. Across the region, opportunities exist for more common fare purchase and collection procedures, as well as standardization of some fares among different providers. Analysis as part of this planning effort was conducted to help the region better understand how policy and fare changes will impact the ridership and revenue of individual agencies and the region as a whole.

This study included a comprehensive evaluation of the existing fare structure, pricing, and policies, a review of peer agencies and fare-related best practices, and input from stakeholders through a series of Fare Working Group[1] meetings. This report provides recommendations for fare pricing and structure, fare policy changes, and fare-related technology for the four agencies.

Key recommendations from the study include: adjustments to base fare and pass pricing, aligning regional fares and discount policies, offering a new technology options, offering fare capping on daily and monthly products, establishing new policies, and expanding the GoPass program to employers of all sizes in the region.

STUDY GOALS

The Fare Integration Study includes a review of the existing fare policies in Wake and Durham County, fare structures currently in place at peer agencies, best practices for fare structures, pass programs, low-income programs, potential impacts of modeled fare scenarios, and fare and policy recommendations. The overall goals of the fare integration study include:

- **Improve Pass Distribution and Sales.** Pass options, pricing, and discounts on pass products impact pass sales. Aligning fares and pass pricing and making all passes consistently available at the same locations would simplify the passenger experience.
- **Balance Revenue and Ridership Goals.** There is general agreement between agencies that increasing ridership is a priority of adjusting fares and integrating service; however, balancing revenue and ensuring financial sustainability also remain important.
- **Improve Passenger Experience.** Consistent of fare pricing, discount policies, and fare media availability improves the passenger experience and make the process as intuitive and seamless as possible.
- **Improve Regional Coordination.** Improve cooperation between agencies while maintaining a degree of autonomy.

[1] The Fare Working Group was comprised of representatives from GoCary, GoDurham, GoRaleigh, GoTriangle, Wake County, City of Raleigh, and the Capital Area Metropolitan Planning Organization (CAMPO). The work group met monthly from April through October 2018.

- **Make Transit an Affordable Option.** Investigate feasibility of fare capping, low-income fares, and additional reduced fare categories.
- **Explore New Fare Technologies.** Regional approach to smartcards and mobile ticketing to help understand the fare structure needs for adopting new technologies.

Figure 1-1 Fare Integration Study Goals

REPORT ORGANIZATION

The report is organized into four chapters in addition to this Introduction—existing conditions and background, peer agency findings, fare scenarios, and recommendations.

- **Chapter 02 Existing Conditions and Background.** This chapter highlights the regional pass distribution network, fare policies, pricing, fare structure, and revenue and ridership trends.
- **Chapter 03 Peer Review and Best Practices.** This chapter provides an overview of each peer agency's key information and current fare structure and policies. Performance indicators are compared for the region and each peer agency. This chapter also explores best practices and lessons learned for low-income fare programs, fare capping, pass programs, and fare free transit service.
- **Chapter 04 Fare Scenarios.** This chapter summarizes the eight fare scenarios that were modeled and highlights the associated ridership and revenue impacts.
- **Chapter 05 Recommendations.** This chapter builds on the fare scenarios and peer agency findings by identifying priority outcomes and combining scenarios into a single preferred recommendation. There is additional discussion of policy recommendations for consideration and incorporation by the agencies.

2 Existing Conditions and Background

This chapter reviews the existing fare structure and policies for GoCary, GoDurham, GoRaleigh, and GoTriangle to assess discrepancies between agencies and identify potential opportunities for regional coordination and policy integration. This chapter also summarizes trends for farebox revenue within the region from 2011 to 2016, as well as fare media usage to determine opportunities for modifications to fare policies and structure.

KEY FINDINGS

Fare Structure and Pricing

- **Base fare pricing is inconsistent.** Regional and Express service is priced in two tiers ($2.25 and $3.00), while local service is priced at a single tier for each agency. Each local service provider charges a different base fare—$1.00, $1.25, or $1.50. Simplifying the fare structure and aligning fares would simplify the customer experience.
- **Fare pass multipliers are relatively consistent.** Pass multipliers for day passes, 7-day passes, and 31-day passes, as a function of base fare price, are relatively consistent between the four agencies. Day passes are consistent at 2x, 7-day passes range from 7x to 10x, and 31-day passes range from 34x to 36x.
- **There is an opportunity to align regional discount policies.** All of the agencies in the region offer the same discount for youth riders; however, discount policies for seniors and people with disabilities vary. Aligning these policies and pursuing a regional discount ID accepted by all service providers would improve the customer experience.
- **The pass distribution network is inconsistent.** Pass availability is limited in the existing pass distribution network. Pass availability varies by type of pass and by agency.

Revenue Trends

- **Farebox recovery rate in the region is decreasing.** During the period of 2011 to 2016, farebox recovery rates in the region have generally been decreasing, and all agencies are currently at recovery rate under 20%. Falling farebox recovery rates can indicate an opportunity to look at fare adjustments.
- **Subsidy per trip in the region is increasing.** Related to operating costs per trip and fares paid per trip, the average subsidy per trip in the region has generally increased from 2011 to 2016. This also may be indicative of a need to adjust fare pricing and policies.
- **Passes are used more frequently than cash fares.** Fares are paid in cash for fewer than 25% of trips in the region and are most common on GoDurham routes. Express passes are also used much less frequently than regional or local passes.

FARE STRUCTURE AND PRICING

Fare Structure

Fare structures are similar across the agencies; however, there are key differences in fare pricing and pass multipliers, as shown in Figure 2-1 and Figure 2-2. One key structural difference is that GoTriangle service is priced in two tiered categories for regional and express service, while GoDurham, GoRaleigh, and GoCary only offer one tier of local service, although the base price for local service is different for each of these agencies. Each agency offers cash fares, local and regional day-passes, local and regional 7-day passes, local and regional 31-day passes, and stored value cards. Each agency also offers discount fares for a number of fare categories. GoDurham is unique in also offering 5-day passes.

Pricing

Base fares range from as low as $1.00 for GoDurham service to as high as $3.00 for GoTriangle Express service. Local service is priced at $1.00, $1.25, and $1.50 for GoDurham, GoRaleigh, and GoCary, respectively. GoTriangle Regional and Express service are more expensive than local service, priced at $2.25 and $3.00, respectively.

Pass multipliers are the number of single trips that a rider must purchase in order to “break even” on the cost of a given pass product. For example, a day pass with a 2x multiplier means that a passenger would need to ride transit twice in a day to break even. Pass multipliers can be adjusted to make passes more attractive fare options for riders or to raise additional revenue for the agency.

Pass multipliers for day passes and 31-day passes are generally consistent across the agencies, with day-passes at 2x and 31-day passes between 34x and 36x; however, 7-day passes range from roughly 7x for GoTriangle, 10x for GoRaleigh and GoCary, and 12x for GoDurham. These differences present an opportunity to make pass multipliers consistent across the region.

Figure 2-1 Agency Fare Structures

	GoRALEIGH		GoCARY		GoTRIANGLE Regional		GoTRIANGLE Express		GoDURHAM	
	Full Fare	Reduced Fare	Full Fare	Reduced Fare	Full Fare	Reduced Fare	Full Fare	Reduced Fare	Full Fare	Reduced Fare
Cash Fare	**$1.25**	$0.60	**$1.50**	$0.75	**$2.25**	$1.00	**$3.00**	$1.25	**$1.00**	$0.50
Local Day Pass	**$2.50**	$1.25	**$3.00**	$1.50	**N/A**	N/A	**N/A**	N/A	**$2.00**	$1.00
Regional Day Pass	**$4.50**	$2.00	**$4.50**	$2.00	**$4.50**	$2.00	**$6.00**	$2.50	**$4.50**	$2.00
Local 7-Day Pass	**$12.00**	$6.00	**$14.50**	$7.25	**N/A**	N/A	**N/A**	N/A	**$12.00**	$7.00
Regional 7-Day Pass	**$16.50**	$7.50	**$16.50**	$7.50	**$16.50**	$7.50	**$22.00**	$9.25	**$16.50**	$7.50
Local 31-Day Pass	**$45.00**	$22.50	**$54.00**	$27.00	**N/A**	N/A	**N/A**	N/A	**$36.00**	$18.00
Regional 31-Day Pass	**$76.50**	$34.00	**$76.50**	$34.00	**$76.50**	$34.00	**$102.00**	$42.50	**$76.50**	$34.00
$25 Stored Value Card* Sold in $50, $25, and $13.50 increments	**$20.00**	$20.00	**$20.00**	$20.00	**$20.00**	$20.00	**$20.00**	$20.00	**$20.00**	$20.00

Regional Passes: allow riders to travel on all routes across all providers with the exception of GoTriangle Express Routes.
Express Passes: allow riders to travel on all routes across all providers without exception.

Figure 2-2 Agency Pass Multipliers

	GoRALEIGH		GoCARY		GoTRIANGLE Regional		GoTRIANGLE Express		GoDURHAM	
	Full	Reduced	**Full**	Reduced	**Full**	Reduced	**Full**	Reduced	**Full**	Reduced
Base Fare	**$1.25**	$0.60	**$1.50**	$0.75	**$2.25**	$1.00	**$3.00**	$1.25	**$1.00**	$0.50
Day Pass Multiplier	**2**	2.1	**2**	2	**2**	2	**2**	2	**2**	2
7-Day Pass Multiplier	**9.6**	10	**9.6**	9.6	**7.3**	7.5	**7.3**	7.4	**12**	14
31-Day Pass Multiplier	**36**	37.5	**36**	36	**34**	34	**34**	34	**36**	36

Discount Policies

Discount policies also vary between the agencies, as shown in Figure 2-3. Generally, there is an opportunity to standardize discount policies by aligning discounts offered for students/youth, seniors, and people with disabilities.

There is also an opportunity to standardize discount ID policies between the agencies, especially for seniors and people with disabilities. Existing policies are described further below. Recent implementation of the Youth GoPass program has created a standard ID policy for riders age 13-18 across all agencies.

Youth

All Wake-Durham agencies currently offer free service for children and youth ages 18 and younger. Children 0-12 ride free with no pass or ID required. Youth age 13-18 are able to ride free with a Youth GoPass but are charged a fare if they do not have one. This is a recent policy change that was implemented in Summer 2018.

Seniors

GoRaleigh and GoDurham both offer free service for seniors age 65 and older. GoTriangle offers a 58% discount for seniors age 65 and older, while GoCary offers a 50% discount for seniors age 60 and older. Integrating senior policy in terms of the discount provided and the age group considered under the discount policy would enhance interagency cooperation and the rider experience, particularly for seniors transferring between agencies.

Existing ID policies for seniors include the following:

- GoRaleigh riders must present GoRaleigh ID
- GoCary accepts GoCary Door to Door ID or valid government ID
- GoTriangle accepts discount ID issued by GoTriangle, GoCary, GoDurham, or GoRaleigh or Medicare ID
- GoDurham riders must present GoDurham ID or government-issued photo ID

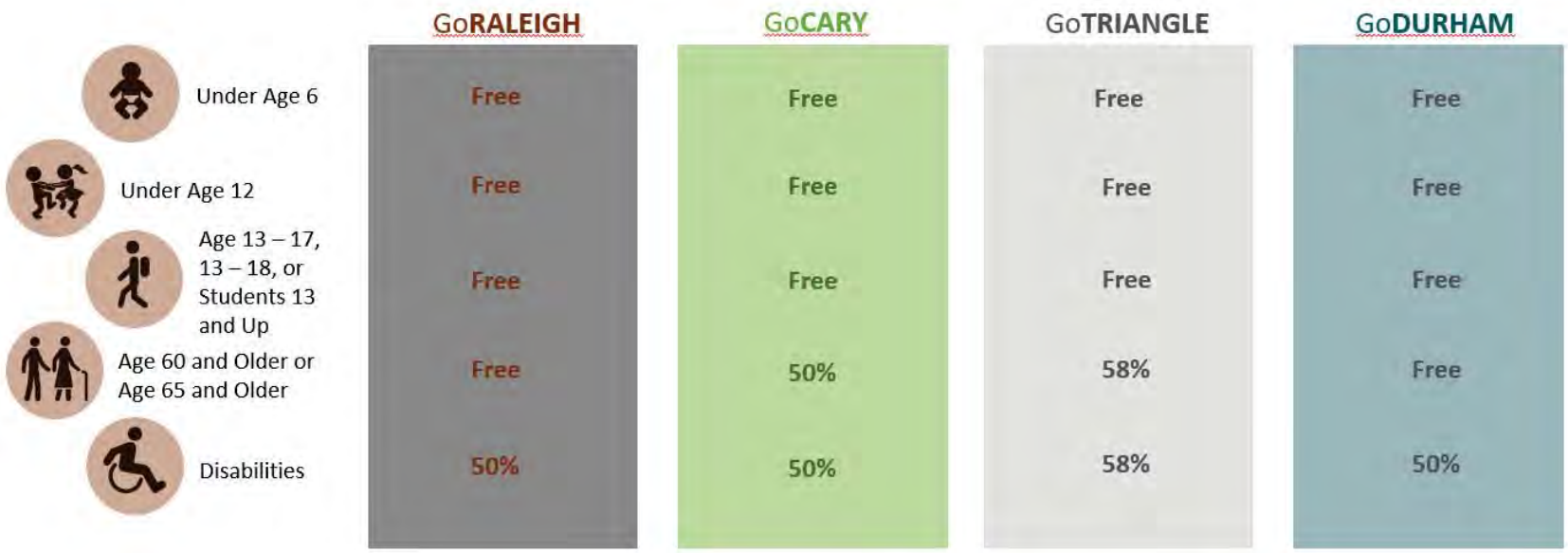
Disabilities

All agencies offer a 50% discount for passengers with disabilities except GoTriangle, which offers a 58% discount. This policy is generally consistent among the agencies. GoTriangle's discount percentage is currently set to round their discount fares to the nearest quarter. This percentage should be reevaluated whenever base fares for the agency are altered.

Existing ID policies for people with disabilities include the following:

- GoRaleigh riders must present GoRaleigh ID
- GoCary accepts GoCary Door to Door ID or valid government ID
- GoTriangle accepts discount ID issued by GoTriangle, GoCary, GoDurham, or GoRaleigh; Braille Institute ID card; Veterans Health ID card; or proof of ADA eligibility from another transit system
- GoDurham accepts GoDurham ID or Medicare card

Figure 2-3 Fare Discounts Available



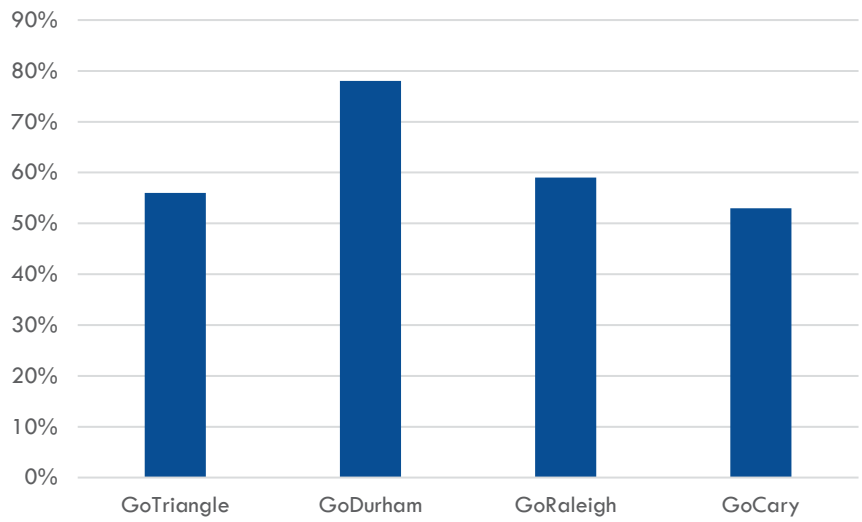
Transfers

There is significant potential to make transfer policies more consistent among the Wake-Durham agencies. Currently, riders using an express pass can transfer between local, regional, or express bus, as well as across providers for free. Riders using a regional pass can transfer between local and regional buses—regardless of provider—for free, but cannot transfer to an express bus without paying an upcharge.

Using local passes or cash payments, GoDurham, GoCary, and GoRaleigh do not offer any free local transfers. All one-way bus boardings for these agencies require full fare payment.

In the Wake-Durham region, many one-way trips require a transfer, and this may become more prevalent in the future as the network is modified, creating a financial burden for some riders. Currently, more than 50% of trips for each agency require a transfer to complete their trip, as shown in Figure 2-4. In the future, an alternative approach to consider instead of offering transfers is to create a two-hour pass policy that allows unlimited use of the transit network for that amount of time.

Figure 2-4 One-Way Trips Requiring More than One Bus



Fare Policies

Unique fare policies between the agencies can add confusion for customers. Policies should be made consistent for all agencies if possible. These policies include:

- GoRaleigh offers 15% bundle discount on six or more Day Passes.
- Prepaid Value Cards are available to purchase one way fares and day passes at a 20% discount and are accepted at the fareboxes of all four agencies.
- GoRaleigh and GoDurham have free fares for seniors but charge ADA-eligible riders half price.
- GoCary issues change cards at the farebox that expire after one year; GoRaleigh issues change cards that work across regional agencies.
- All GoCary passes sold on board are activated immediately.

- GoTriangle currently offers transfers to other GoTriangle regional routes with a transfer card issued on board and express routes with a $0.75 upcharge; GoTriangle is also seeking to eliminate transfers but has not yet done so.
- GoDurham, GoCary, and GoRaleigh do not offer free local transfers.
- GoWake Access fares are only paid onboard.

General discounts offered for making upfront purchases would be more effective if they were consistent across all agencies. For example, a 15% discount for purchasing at least six day passes and a 20% discount for purchasing value cards worth $13.50, $25, or $50 could be made available at all regional agencies to encourage additional ridership.

Pass Distribution

The existing pass distribution network, shown in Figure 2-5, varies by pass type and agency, presenting challenges for passengers. The pass distribution network is generally inconsistent among the agencies. All four agencies offer day passes onboard their vehicles; however, GoCary is unique in also offering 7-day passes and 31-day passes onboard.

GoTriangle is the only agency that allows riders to purchase passes online. Almost every pass option in the region is available in a transit or government building with the exception of GoCary, which only offers the 31-day pass in transit or government buildings. GoRaleigh is the only agency to offer passes at ticket vending machines (TVMs) or third-party retail locations. All GoRaleigh pass options are available at TVMs, while only 7-day passes and 31-day passes are available at third-party retail locations, including select Harris Teeter locations in Raleigh.

There is opportunity to develop a consistent, regional pass distribution network which offers the same passes at the same locations for all agencies in the Wake-Durham region. Such a distribution network would enhance the customer experience by allowing for purchase of all pass types in a greater variety of locations.

Figure 2-5 Existing Pass Distribution Network

Agency	Fare Type	Onboard	Online	Transit/ Government Building	In Stores	TVM
GoRaleigh	Day Pass	✓		✓		✓
	7-Day Pass			✓	✓	✓
	31-Day Pass			✓	✓	✓
GoCary	Day Pass	✓				
	7-Day Pass	✓				
	31-Day Pass	✓		✓		
GoTriangle	Day Pass	✓	✓	✓		
	7-Day Pass		✓	✓		
	31-Day Pass		✓	✓		
GoDurham	Day Pass	✓		✓		
	7-Day Pass			✓		
	31-Day Pass			✓		

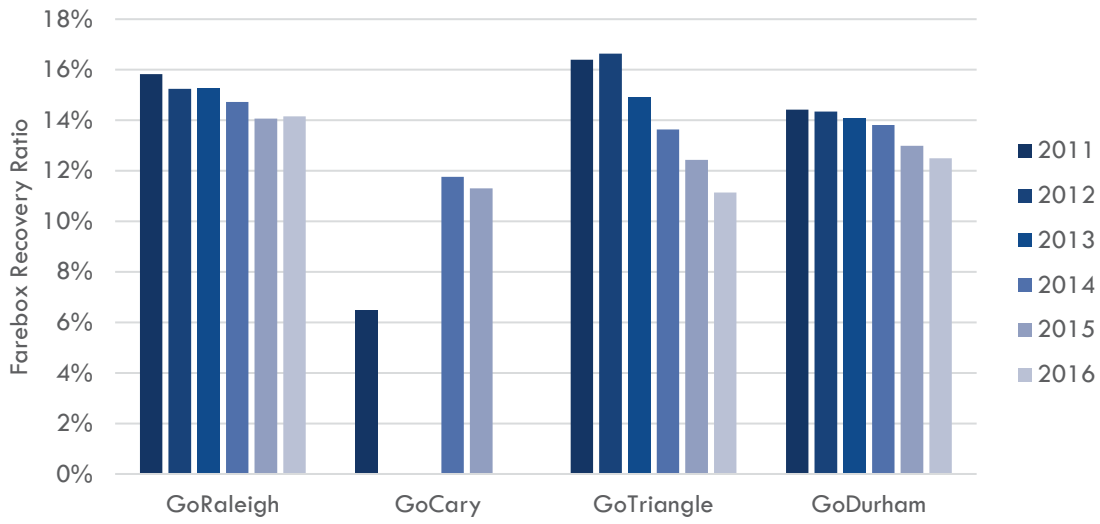
REVENUE TRENDS

Farebox Recovery Rate

Farebox recovery is a measure of the percentage of agency operating funds that come from fare-paying customers. Currently, there are no farebox recovery goals established for any of the agencies in the Wake-Durham region. Farebox recovery rates for each agency from 2011 to 2016 are shown in Figure 2-6.

In general, farebox recovery rates have been declining across the agencies since 2011.[1] The average farebox recovery for the four agencies is below 20%. While increasing ridership is a goal of this fare study, it is also imperative to balance this with farebox recovery to ensure agency financial sustainability.

Figure 2-6 Farebox Recovery Rate Trends (2011-2016)



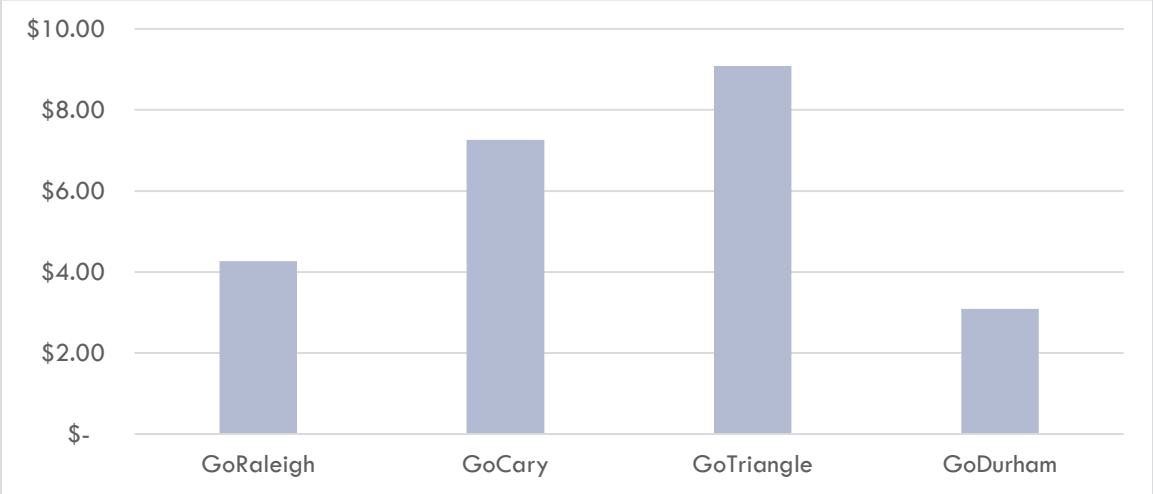
Operating Cost per Trip

Operating cost per trip is a metric used to determine the average operating cost to the agency for each passenger trip in the system. The average operating cost per trip for the four agencies in 2016 is shown in Figure 2-7. Average operating cost per trip ranges from $3.09 for GoDurham service to $9.09 for GoTriangle service.

GoTriangle provides regional service over a larger area than the other agencies, resulting in a higher operating cost per trip. The operating cost per trip for GoCary ($7.26) is relatively high compared to the other local services, likely due to GoCary's smaller size.

[1] Data was not available for GoCary in 2012 or 2013

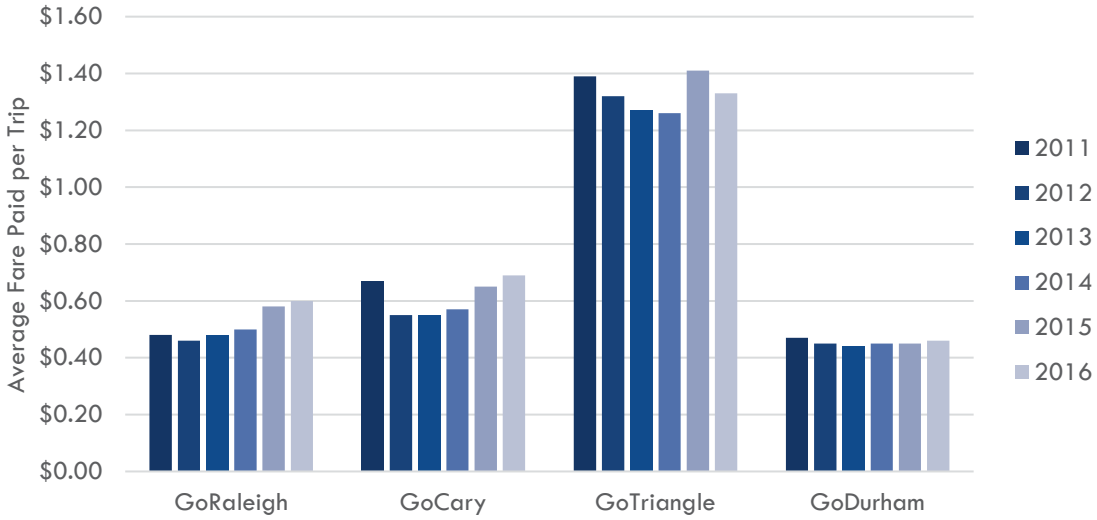
Figure 2-7 Average Operating Cost per Trip (2016)



Fares Paid per Trip

Due to discount policies, fare pass discounts, and fare evasion, the full base fare for service is not always paid for every trip—instead, the actual fare paid per trip is often lower. Figure 2-8 shows the average fares paid per trip for each agency between 2011 and 2016. Average fares paid per trip generally follow the same pattern as the listed base fares for each agency—GoDurham has the lowest fares paid, followed by GoRaleigh, GoCary, and GoTriangle with the highest. Average fares paid range from a low of $0.44 for GoDurham to $1.41 for GoTriangle. The fares paid per trip vary from year to year, but fluctuations are relatively small (within $0.15 per trip).

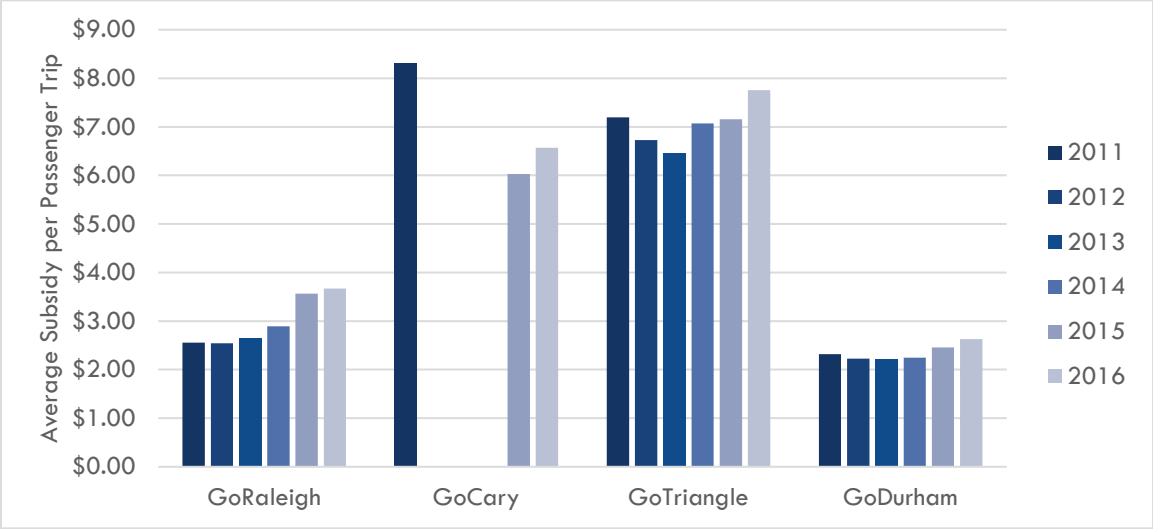
Figure 2-8 Average Fares Paid per Trip (2011-2016)



Subsidy per Trip

By subtracting the average cost per trip by the average fare paid per trip, it is possible to calculate the average subsidy per trip. In general, the average subsidy per trip, shown in Figure 2-9, ranged from a low of $2.63 per trip for GoDurham to a high of $7.76 per trip for GoTriangle. GoTriangle subsidies have increased since 2013, growing by more than $1.00 in a three-year period. GoCary had an average subsidy per trip of $8.32 in 2011, but that number decreased to $6.57 in 2016.

Figure 2-9 Average Subsidy per Trip (2011-2016)



Fare Media

The fare media used at regional agencies is shown in Figure 2-10. In general, all four agencies primarily rely on passes for the bulk of their fare media. Passes are used for 75% of GoDurham riders, 70% of GoCary riders, 77% of GoTriangle riders, and 64% of GoRaleigh riders.

Cash payments account for less than 25% of boardings across the agencies, with 24% of GoDurham riders, 19% of GoCary riders, 14% of GoTriangle riders, and 8% of GoRaleigh riders paying cash.

The type of passes used for each agency are shown in Figure 2-11. Generally, Express Passes are not widely used, accounting for less than 5% of all pass usage. GoTriangle (64%) and GoDurham (22%) have higher GoPass usage than the other agencies. GoTriangle (32%) and GoCary (31%) also have higher Regional Pass usage than the other agencies. The majority of pass use for GoDurham (73%), GoRaleigh (90%), and GoCary (63%) are local passes.

This indicates that changes to Express Passes are unlikely to have large impacts, while changes to Regional Passes are likely to have a greater impact for GoTriangle and GoCary. Similarly, changes to the GoPass structure will have greater impacts to GoTriangle and GoDurham. Changes to local passes will likely have a significant impact for all local service agencies.

Figure 2-10 Fare Media Used by Agency

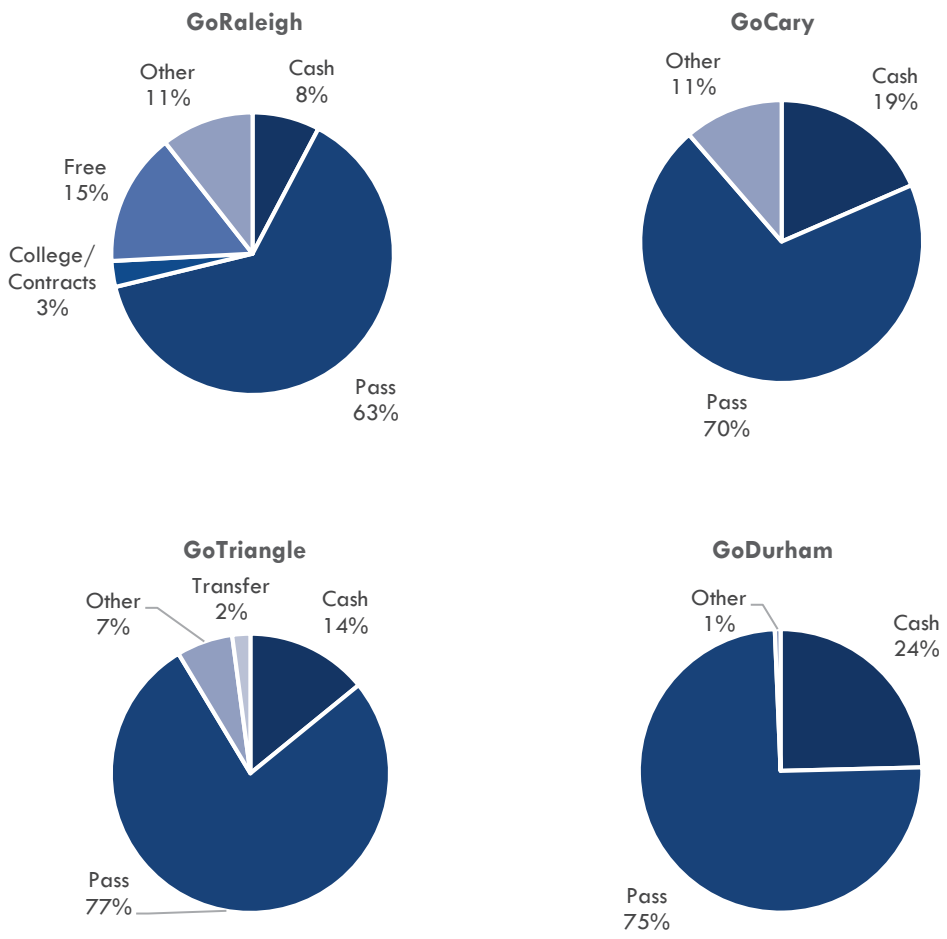
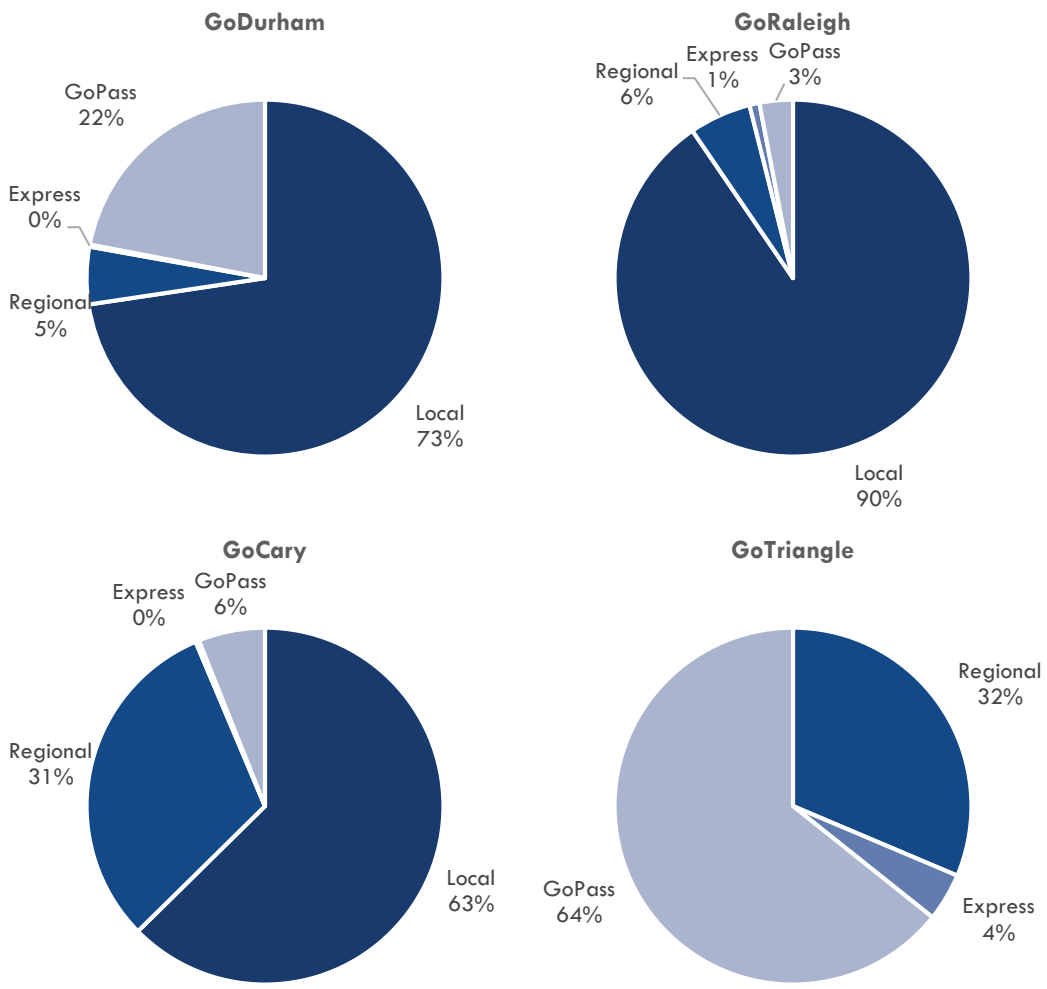


Figure 2-11 Pass Type by Agency

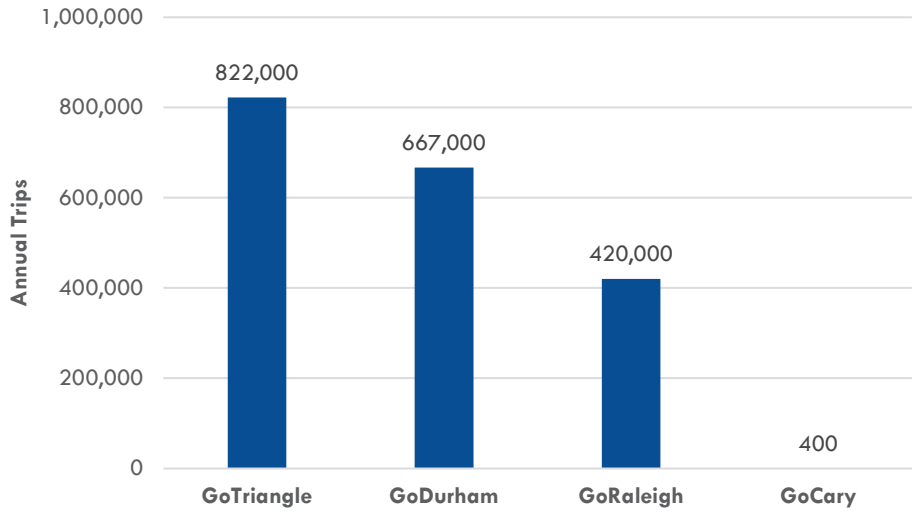


GOPASS PROGRAM

In the Wake-Durham region, the GoPass Program is available through numerous employers and universities. GoPass use varies by agency and passenger demographics. The annual GoPass use for each agency in the region is shown in Figure 2-12. Generally, GoPasses are used by commuters employed by universities and government agencies. Eligible employees have the option of purchasing or using an employer-provided GoPass, and employers participating in the GoPass program are billed by the transit agency based on pass usage.

In this section, GoPass use is analyzed in greater detail for each agency, with the exception of GoCary. GoPass use for GoCary is sufficiently small that detailed data from the agency was not available.

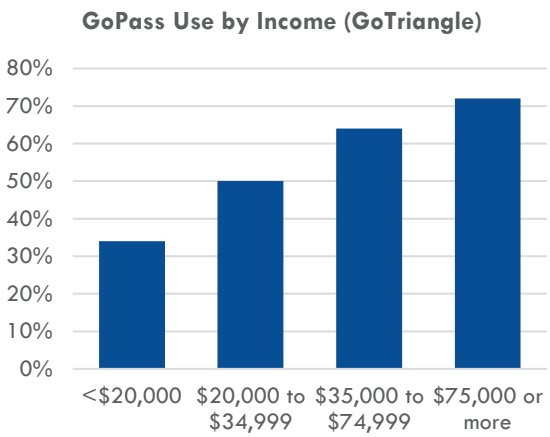
Figure 2-12 Annual GoPass Use by Agency



GoTriangle

The majority of GoTriangle riders (53%) use a GoPass. Additionally, 85% of GoPass use on GoTriangle routes is by riders affiliated with a university. Higher incomes are also correlated with higher GoPass use, indicating that high-income commuters are more likely to have access to the program.

Figure 2-13 GoPass Use by Income and by University Affiliation for GoTriangle Riders

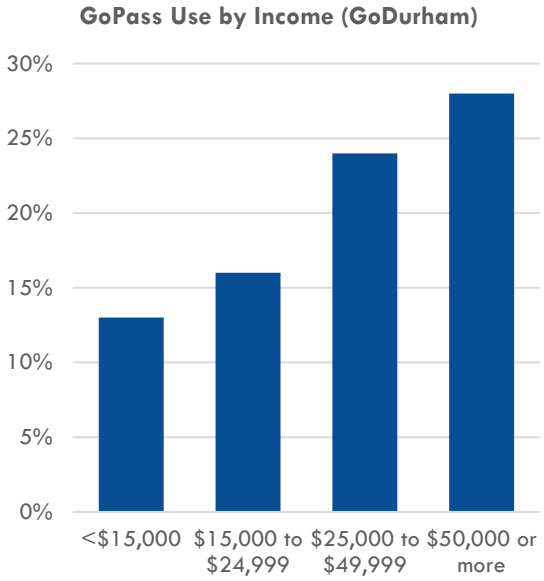


Universities	Express	Regional	% of Total
Duke University	72,000	106,000	22%
Durham Tech	1,800	25,000	3%
NC State	38,000	56,000	11%
NCCU	500	5,000	0.6%
UNC-Chapel Hill	56,000	335,000	48%
Total	168,000	527,000	85%

GoDurham

GoPass use is significantly lower for GoDurham than for GoTriangle, with only 16% of GoDurham riders utilizing GoPass. The majority of GoPass use on GoDurham routes is by university-affiliated riders, accounting for 94% of all GoPass use for the agency. Higher incomes are also correlated with higher GoPass use, but less significantly than for GoTriangle.

Figure 2-14 GoPass Use by Income and by University Affiliation for GoDurham Riders



Universities	Annual Pass Use	% of Total
Duke University	289,000	41%
Durham Tech	284,000	40%
NC State	3,000	0.5%
NCCU	60,000	8%
UNC-Chapel Hill	31,000	4%
Total	667,000	94%

GoRaleigh

GoPass use for GoRaleigh is similar to GoDurham, with 14% of GoRaleigh riders utilizing GoPass. Similar to GoDurham and GoTriangle, GoPass use for GoRaleigh is primarily through university-affiliated riders; however, there is also a large share of government employees using GoPass on GoRaleigh service. Income data was not available for GoRaleigh for inclusion in this analysis.

Figure 2-15 GoPass Use by Organization/Employer Affiliation for GoRaleigh Riders

Organization	Annual Pass Use	% of Total
NC State	184,000	44%
Wake Tech	78,000	19%
State Gov.	55,000	13%
Shaw Univ.	32,000	8%
City of Raleigh	20,000	5%
Total	369,000	89%

3 Peer Review and Best Practices

This chapter presents a comparison of the Wake-Durham region's fare structure and policies—including pass distribution network, base fares, pass multipliers, discount policies, farebox recovery rate, average cost per trip, average fare paid per trip, and average subsidy per trip—with peer agencies around the country. This chapter also assesses best practices for several policies and fare technologies, including electronic smartcards, fare capping, low-income fare programs, pass programs, transfer policies, and fare free service. These topics expand beyond the listed peer agencies and regions to explore relevant case studies for applicable policies and programs.

KEY FINDINGS

Fare Structure

- **Wake-Durham local fares are less expensive than peer agencies.** Local fares in the Wake-Durham region are between $0.50 and $1.75 less expensive than peer agency fares. Express fares are generally consistent with peer agencies.
- **Pass multipliers are consistent with peer agencies.** There is some variability between peer agency pass multipliers, but Wake-Durham agency multipliers are within the acceptable range of peer agencies.
- **Peer agency pass distribution networks are more robust and consistent.** The Wake-Durham region would benefit from improving the pass distribution network to align with peer agencies.
- **The Wake-Durham region offers more free service categories than peer agencies.** Discount categories are relatively similar between the peer agencies, but Wake-Durham agencies provide free service to youth under 18, while most peers offer discounted service to youth under 18 and free service to children under 6 only.

Revenue Trends

- **The Wake-Durham region has lower farebox recovery rates than peer agencies.** Lower fares and more free service categories in the region are a likely contributing factor to this trend.
- **GoTriangle and GoCary have higher average costs and average subsidy per trip.** GoDurham and GoRaleigh are comparable to peer agencies, but GoTriangle and GoCary have higher average costs and average subsidy per trip.

Policies and Programs

- **Mobile ticketing can be a cost-effective technology improvement that has the potential to be implemented quickly.** Implementing mobile ticketing can be less

costly than electronic smartcards and can accommodate fare capping and incorporating other discount programs. Peer agencies have invested in mobile ticketing infrastructure.

- **Fare capping can improve equity and reduce upfront costs for low-income passengers.** Incorporating fare capping through a mobile ticketing flash pass or smartcard provide methods for reducing out of pocket payments required for low-income riders.
- **Low-income fare categories can improve equity and increase the affordability of transit for vulnerable populations.** However, low-tech strategies can be burdensome to the passenger, and high-tech strategies may be expensive or burdensome to the agency. The pros and cons of such a program should be considered before implementing.
- **Expanding bulk pass programs can increase transit ridership and revenue for the agency.** As more passengers have expanded options for cost-effective use of the transit system, ridership potential increases.
- **Fare free operation can be transformative for a transit agency but requires creative funding partnerships.** Fare free systems typically experience significant ridership growth after eliminating fares. Replacing lost fare revenue while meeting growing ridership demand may be challenging without establishing supportive financial partnerships.

INTRODUCTION

Peer reviews are a useful technique to understand the "state of the practice" with regard to fare levels, structures, and policies. The purpose of this peer review is to provide current and accurate information about fare structures and policies at other comparable transit agencies. The peer agencies were selected based on various attributes, including service area, service population, operating characteristics, implementation of innovative fare policies and/or technology, and feedback from the Fare Working Group. The six agencies/regions in this peer review are:

- **Seattle, WA** (King County Metro and Sound Transit)
- **Portland, OR** (TriMet)
- **Phoenix, AZ** (Valley Metro)
- **Denver, CO** (RTD)
- **Charlotte, NC** (CATS)
- **Boston, MA** (MBTA)

These peer regions are shown in Figure 3-1. Data for this peer review was collected from the most recently available data from the National Transit Database (NTD, 2016), agency websites, and other agency-related materials.

Figure 3-1 Map of Peer Agencies

FARE STRUCTURE

Fares by Service Type

Fares by service type for each of the peer agencies are shown in Figure 3-1. In general, local service for peer agencies is more expensive than in the Wake-Durham region. Peer agency base fares vary from $2.00 to $2.75, compared to $1.00 to $1.50 in the Wake-Durham region. Express service fares are in line with fares in other peer agencies, which range from $2.50 in Portland to $5.00 in Boston. Commuter/regional fares in Wake-Durham are on the low side compared to peers, which are generally in the $4.00 to $7.00 range. Trip length and fares for demand response service are also in line with peer agencies.

Other findings from peer agency fare structures include:

- Portland offers a flat fare across all modes.
- Phoenix and Charlotte charge the same fare for light rail and local bus.
- Seattle charges the same fare for Bus Rapid Transit (BRT) and local bus.
- Denver and Boston offer discounts for using a smartcard compared to cash and magnetic tickets.
- Wake-Durham premiums are 50% to 300% for local versus regional/express service.
  - Phoenix and Denver charge a 62.5% and 73% premium for regional service.
  - Boston charges a 150%-250% premium for express service.
- Zone-based and peak fares are not common.

Figure 3-2 Peer Agency Base Fares by Service Type

Region	Local Fare	Express	Commuter/ Regional	BRT/Rapid Bus	LRT	Demand Response
Wake/Durham (Multiple)	$1.00-$1.50	$3.00 (GoTriangle)	$2.25 (GoTriangle)	N/A	N/A	$2.50 (Access)
Seattle (Multiple)	$2.75 (Metro)	$2.75-$3.75 (ST)	$1.75-$5.75 (Sounder)	$2.75 (Metro)	$2.25-$3.25 (ST)	$1.75 (Access)
Portland (TriMet)	$2.50	$2.50	$2.50	N/A	$2.50	$2.50 (LIFT)
Phoenix (Valley Metro)	$2.00	$3.25	$3.25	$3.25	$2.00	$1.00-$4.00
Denver (RTD)	$2.35-$2.60 (Pass-Cash)	N/A	$4.25-$4.50 (Pass-Cash)	N/A	$2.35-$4.50 (Pass-Cash)	$2.60 (Call-n-Ride)
Boston (MBTA)	$1.70-$2.00 (Pass-Cash)	$4.00-$5.00 (Pass-Cash)	$5.25-$7.00 (Pass-Cash)	$1.70-$2.00 (Pass-Cash)	$2.25-$2.75 (Pass-Cash)	$3.15-$5.25 (RIDE)
Charlotte (CATS)	$2.20	$3.00	$4.40	N/A	$2.20	$3.50 (STS)

Pass Multipliers

As described in Chapter 2, pass multipliers are the number of single trips that a rider must purchase in order to break even on the cost of a given pass product. For example, a day pass with a 2x multiplier means that a passenger would need to ride transit twice in a day to break even. Pass multipliers can be adjusted to make them more attractive fare options for riders or to raise additional revenue for the agency.

Pass multipliers for peer agencies are shown in Figure 3-3. Agencies in Wake and Durham County are generally in line with other peer agencies in terms of pass multipliers for local bus service.

- **Day pass** multipliers for peer agencies are relatively consistent, between 2 and 2.9, and are in line with Wake-Durham's multiplier of 2.
- **7-day pass** multipliers for peer agencies range from 9.6 to 12.3. The Wake-Durham region is again in line with peer agencies, with multipliers varying from 9.6 to 12.
- **Monthly passes** in peer agencies have the most variability of all pass multipliers, ranging between 27.5 in Boston and 40 in Portland. Wake-Durham monthly passes are set with a multiplier of 36, placing it in line with peers, though toward the higher end.

Figure 3-3 Peer Agency Local Bus Fare Pass Multipliers

Region	Cash Fare	Day Pass	10-Ride Pass	7-Day Pass	Monthly Bus Pass
Wake/Durham (Multiple)	$1.00-$1.50	2	N/A	9.6 - 12	36
Seattle (Multiple)	$2.75	2.3 - 2.9	N/A	N/A	36
Portland (TriMet)	$2.50	2	N/A	N/A	40
Phoenix (Valley Metro)	$2.00	2	N/A	10	32
Denver (RTD)	$2.60	2	N/A	N/A	38
Boston (MBTA)	$2.00	N/A	N/A	10.6	27.5
Charlotte (CATS)	$2.50	N/A	13.6% discount	12.3	35.2

Pass Distribution

Peer agencies have a wider distribution network than the Wake-Durham agencies. All pass types are available online, in transit/government agency buildings, at social service provides, and in third party retail stores. Additionally, there are fewer pass products available onboard transit vehicles, with day passes being the only available fare media for purchase. The peer pass distribution network is summarized in Figure 3-4.

Figure 3-4 Peer Agency Pass Distribution Network

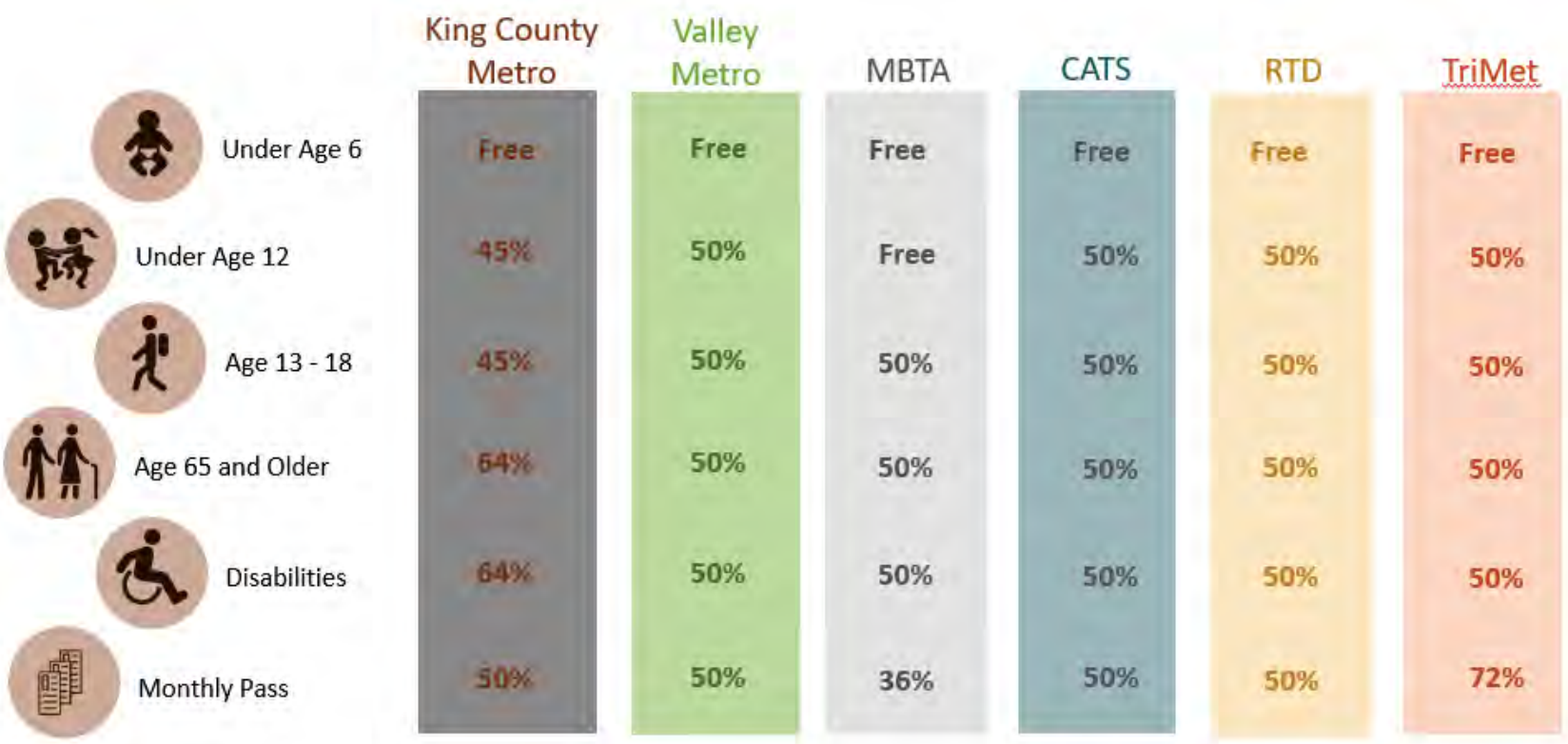
Agency	Fare Type	Onboard	Online	Transit/ Government Building	Social Services	In Stores	TVM
King County Metro	Day Pass		✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓
TriMet	Day Pass	✓	✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓
Valley Metro	Day Pass	✓	✓	✓	✓	✓	✓
	7-Day Pass		✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓
RTD	Day Pass	✓	✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓
CATS	7-Day Pass		✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓
MBTA	7-Day Pass		✓	✓	✓	✓	✓
	31-Day Pass		✓	✓	✓	✓	✓

Discount Policies

Peer agency discount policies as of Spring 2018 are shown in Figure 3-5. Discounts are generally consistent among the peer agencies; however, the Wake-Durham region offers more free services than the peer agencies. Boston offers free service to children under 12, while other peers offer free service only to children under 6. All agencies in Wake/Durham offer free service to children and youth ages 18 and under. Additionally, GoDurham and GoRaleigh offer free service to seniors over 65, and GoCary offers a 50% discount for seniors over 60.

Peer agencies also offer additional discount categories not offered in the Wake/Durham region, including free fare to active-duty military in Boston and Denver and a 45% discount for low-income adults in Seattle.

Figure 3-5 Peer Agency Discount Policies



Additional Notes:
MBTA: Free fare also applies to active-duty military, police officers, and firefighters
RTD: Active-duty military also ride free
King County Metro: Low income adults pay 55% of standard fare

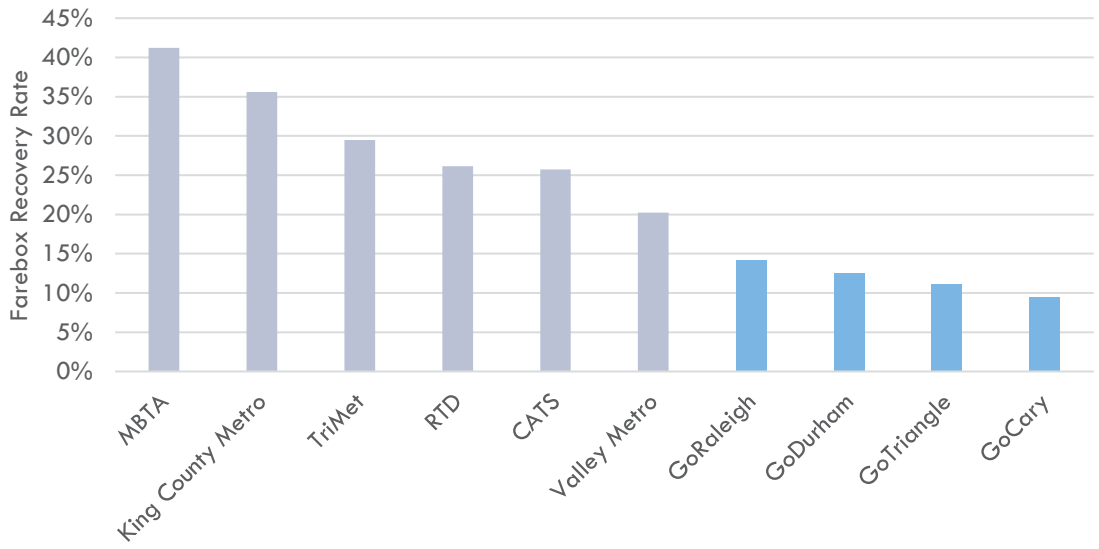
REVENUE TRENDS

Revenue trends between the Wake-Durham region and other peer agencies—with indicators such as farebox recovery rate, average operating cost, average fare paid per trip, and average subsidy per passenger—may indicate a need for updated fare policies to improve competitiveness and stay in line with the financial sustainability of peers. This section highlights revenue trends at peer agencies.

Farebox Recovery

Farebox recovery rates for peer agencies are shown in Figure 3-6. Peer agencies generally have a higher farebox recovery rate than agencies in the Wake-Durham region. All of the peer agencies have a recovery rate of at least 20%, with Boston recovering more than 40%. The highest farebox recovery rate in the Wake-Durham region is 14.2% for GoRaleigh, with a low of 9.5% for GoCary. This suggests that there is room to improve the farebox recovery rate in the region to become more competitive with peer agencies.

Figure 3-6 Farebox Recovery Rate for Peer Agencies (2016)

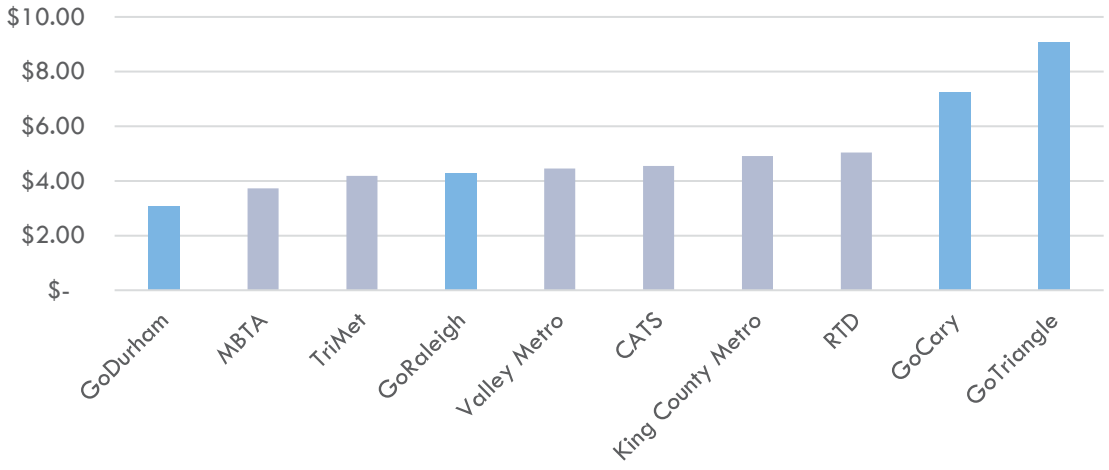


Source: NTD

Average Operating Cost per Trip

The average operating cost per trip varies among the peer agencies and is shown in Figure 3-7. Among peer agencies, GoDurham has the lowest average operating cost, GoRaleigh is about average, and GoCary and GoTriangle have highest operating costs per trip. Peer agency operating costs per trip range between $3.72 in Boston to $5.04 in Denver. The $3.09 and $4.27 cost per trip for GoDurham and GoRaleigh, respectively, are in line with peers; however, the $7.26 and $9.09 cost per trip for GoCary and GoTriangle respectively are significantly higher than other peer agencies.

Figure 3-7 Average Operating Cost per Trip for Peer Agencies (2016)

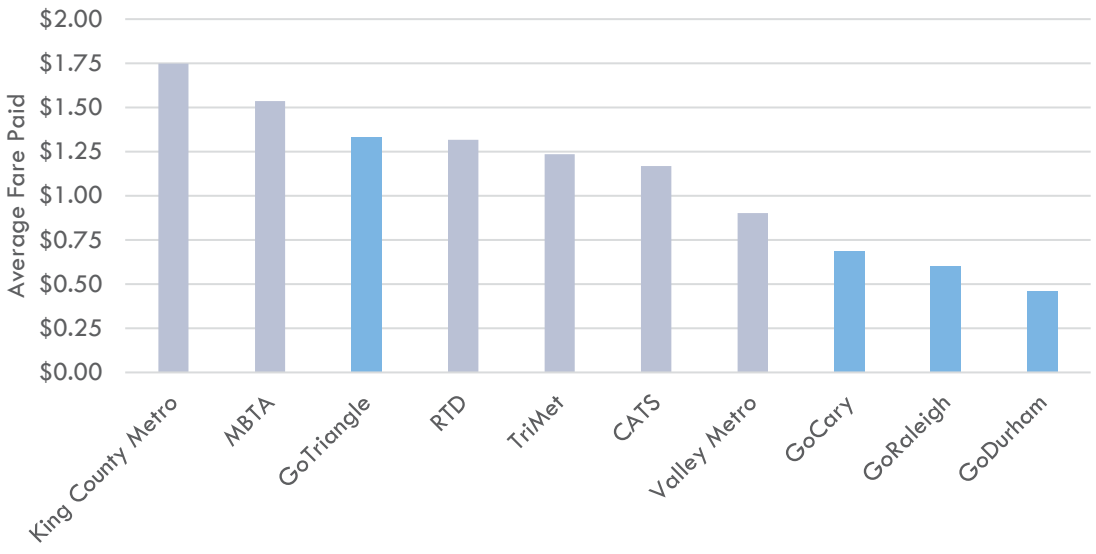


Source: NTD

Average Fare Paid per Trip

The average fare paid per trip for peer agencies is shown in Figure 3-8. In general, peer agencies have higher average fares paid per trip than agencies in the Wake/Durham region, with the exception of GoTriangle. Average fares paid for peer agencies range from $0.90 for Phoenix to $1.75 for Seattle. GoTriangle is in line with peers at $1.33; however, GoCary, GoRaleigh, and GoDurham have lower fares paid, ranging from $0.46 to $0.69. This difference is likely due to lower base fares and more generous discount policies in the Wake-Durham region and suggests that altering the fare structure could improve financial competitiveness.

Figure 3-8 Average Fare Paid per Trip for Peer Agencies (2016)



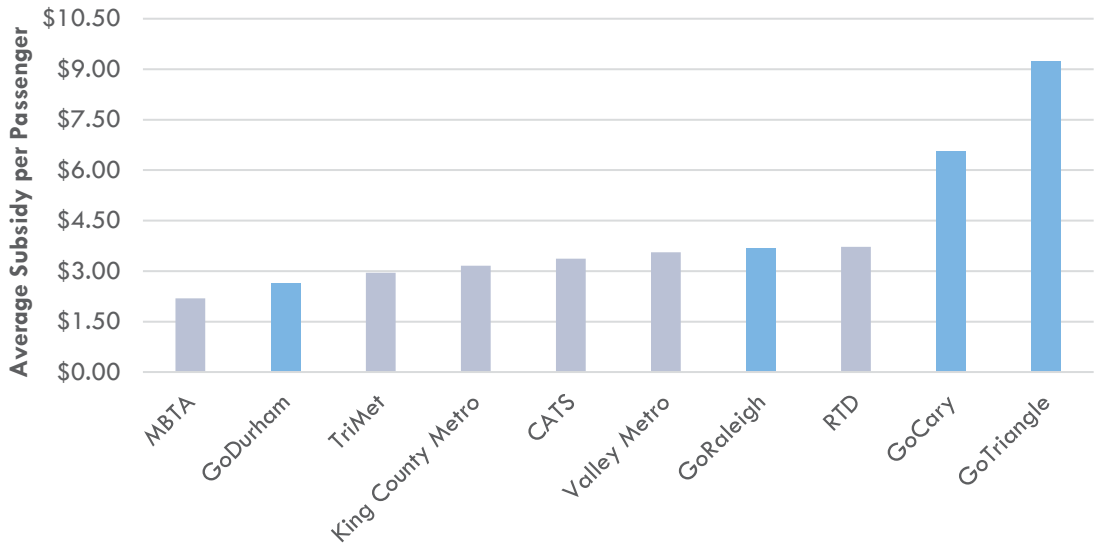
Source: NTD

Average Subsidy per Passenger

The average subsidy per passenger for peer agencies is shown in Figure 3-9. The average subsidy per passenger follows a similar trend as the average operating cost per trip for peer agencies. GoDurham and GoRaleigh are in line with peer agency subsidies; however, GoCary and GoTriangle have higher subsidies per passenger than the other agencies.

Peer agency subsidies range from $2.19 for Boston to $3.72 for Denver. GoDurham and GoRaleigh are both in line with this range, with subsidies of $2.63 and $3.67, respectively. GoCary and GoTriangle have significantly higher subsidies than peer agencies at $6.57 and $9.22, respectively.

Figure 3-9 Average Subsidy per Passenger for Peer Agencies (2016)



Source: NTD

PEER AGENCY POLICIES AND PROGRAMS

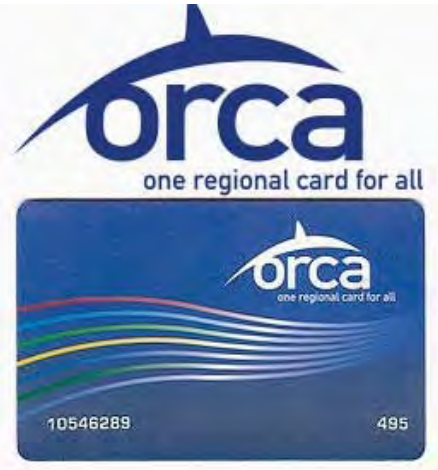
In addition to fare structures, discount policies, and revenue trends, unique policies and programs at peer agencies were also evaluated. These policies include the use of technology and unique fare categories, including electronic smartcards, mobile ticketing, regional policy integration, fare capping, low-income fare programs, pass programs, and fare free service.

Electronic Smart Cards and Mobile Ticketing

Advances in fare payment technology, including mobile payment systems and electronic smartcards, are moving riders away from cash payments. General trends in the transit industry support fare incentives for passengers to move to pass products instead of cash. Reducing the use of cash on transit vehicles has numerous benefits, included decreased dwell time, reduced potential for conflicts with operators, and simpler accounting procedures. It also raises potential equity considerations as disadvantaged rider populations may be more reliant on cash fares. This section discusses peer fare media offerings and approaches to reducing cash payments through pricing and other incentives and disincentives.

TriMet, RTD, King County Metro, and MBTA all currently use smartcard systems and mobile ticketing. Valley Metro has a smartcard called the Platinum Pass that is available to employers only; however, they are looking into an expansion to make the pass available to the general public. CATS is planning to introduce smart cards in 2018-2019.

King County Metro



King County Metro currently offers cash, paper tickets, mobile tickets, and smartcard (ORCA) fare media options. More than 30% of King County Metro riders pay fares with cash. The agency is planning to conduct studies on cash fare payments and farebox replacement or elimination, potentially looking at commuter routes with high smartcard usage for possible cashless routes. The agency is also interested investigating if a more attractive low-income fare or program could increase smartcard usage.

The ORCA Program provides seamless transfers between seven different transit agencies in the region. The ORCA Program greatly improves the customer experience, but the fare reconciliation process is complicated for the agencies. Through the shared smartcard, revenue is transferred between agencies based on proportional ridership data, with revenue being allocated based on the cash fare if each leg of the trip were taken independently.

Best practices and lessons learned from the ORCA Program include:

- Standardizing fares across service types is recommended.
- Standardizing the fare change process at a regional level is helpful to facilitate a coordinated process.
- Use an open system if possible; closed-loop systems make it difficult to designate new passenger or fare types.
- Significant coordination is needed between partner agencies to deliver a quality product.

King County Metro is preparing for the next generation of ORCA cards and ticket vending machines in the upcoming years, and they are hoping to expand the card's abilities and increase the retail distribution network.

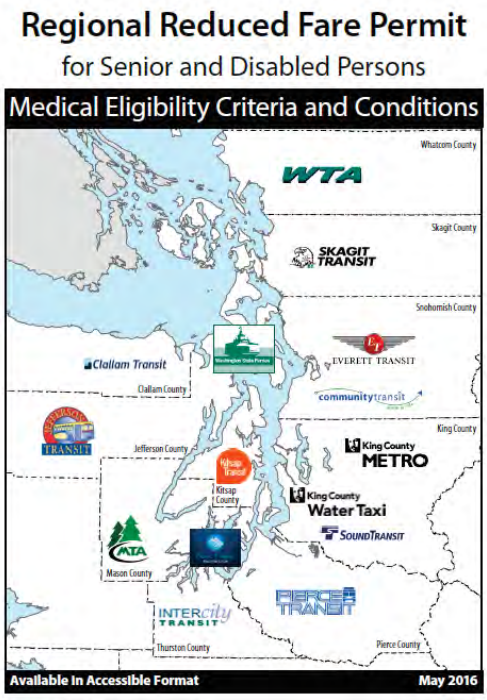
TriMet

TriMet offers cash, mobile ticketing, smartcards (Hop Fastpass) and mobile payment systems (Apple or Android) fare media options. The agency began phasing out paper tickets in mid-2018 and are replacing ticket vending machines with Hop stations, which allow customers to load funds onto their Hop card. TriMet also offers employer and school pass programs, which are being moved to the Hop card.

TriMet has about 30%-35% cash fare riders and is using a phased approach to increasing non-cash fare payments. With new technology and smartcard options, the agency is trying to address

the two main groups using cash: those who are paying cash because it's more convenient and don't ride frequently, or those who can only afford one fare at a time. There is no surcharge for cash use, but the agency thinks that riders understand the benefit of lost card protection, card replacement, and pass earnings, which will incentivize them to move away from cash fares.

TriMet's current challenge is marketing the variety of options and programs to various markets. The agency is hopeful that all types of riders will see the benefits of using smartcards over cash or paper media. As the Wake-Durham regional agencies begin making long-term policy decisions, a cost-benefit analysis should be conducted regarding smartcards, mobile ticketing, and required farebox upgrades.



Regional Discount Policies and Smart Cards

Standardized discount policies and ID throughout the region improve the customer experience and facilitate regional integration. The Puget Sound Regional Reduced Fare Permit (RRFP) offers a best practice example for a reduced fare program for seniors and people with disabilities in the Puget Sound, WA region. RRFP entitles senior riders aged 65 and older, riders with a disability, and Medicare cardholders to reduced fares on 13 different transit agencies throughout the region.

Fare Capping

Fare capping is an emerging trend for some of the peer agencies in which individual trips are tracked and fares are capped after reaching certain thresholds (i.e., two trips in a day or 30 trips in a month). Benefits of fare capping include increased affordability of passes, increased fare equity, and increased simplicity. Fare capping is particularly beneficial for low-income riders who may not have the cash on hand to purchase a 31-day pass and end up paying more in cash fares over the course of the month. Fare capping can be introduced through electronic smartcards, which track fare payments through an internal database, or through mobile ticketing, which tracks fare payments and automatically provides riders a pass once the payment threshold has been reached.

TriMet introduced fare capping in conjunction with a new electronic smart card in 2018, and King County Metro is exploring fare capping as a part of the next generation of ORCA cards. Additionally, agencies in the San Francisco Bay Area offer a similar day pass accumulator program on Clipper cards.

Key considerations for fare capping include:

- Programs require the use of an electronic fare collection system (smart cards or mobile ticketing) capable of tracking paid trips.
- It can be difficult to implement a fare cap in systems with multiple service types (e.g., local and regional).
- There is potential for revenue loss on daily or monthly passes.

Low-Income Fare Programs

Low-income fare programs are currently being used by King County Metro, TriMet, and the San Francisco Municipal Transportation Agency (SFMTA) to provide discounted service for eligible adults making up to 200% of the federal poverty level. Low-income programs may be "high-tech," requiring electronic smartcards and upgraded farebox infrastructure to verify rider identity and maintain discounts, or "low-tech," which are more commonly photo ID cards to prevent fraud combined with magnetic swipe card technology. Low-tech options are cheaper and faster to implement but require greater administrative costs, while high-tech options could require costly upgrades to farebox infrastructure and may not be feasible in the short-term.

High-Tech Options

ORCA Lift

The ORCA Lift program in the Puget Sound region requires in-person verification with proof of income. ORCA Lift riders receive ORCA cards that look and work just like a regular ORCA card, but that contains the low-income rider designation within the internal system database. These ORCA cards can be obtained from more than 40 different locations and are valid for two years before participants must reapply. While riders are permitted to have multiple ORCA cards, only one ORCA Lift card may be registered to a single person at any given time to prevent fraud. If someone attempts to register two ORCA Lift cards, the first card is automatically deactivated.

Promoting low-income programs through engagement with social service providers and community groups has been effective for marketing the ORCA Lift program. Social service agencies were involved with structuring the program from the outset and helped make recommendations to the agency about the program structure. These agencies also provide income verification services and help enroll qualifying riders who are applying for other benefits. In King County, for example, the Department of Social and Health Services (DSHS) offered ORCA Lift applications to applicants for EBT services, which resulted in increased enrollment. DSHS is planning to increase their role in Pierce and Snohomish Counties as well.

Cardholders pay $1.50 for most one-way trips or may purchase discounted monthly passes for $54 (regularly $99). Fare value and passes can be renewed online, similar to other ORCA pass products.

Not everyone who is eligible uses the program, but ridership is expected to increase as a result of the program. Out of the approximately 160,000 riders eligible for the ORCA Lift program, there were 60,000 participants as of March 2018. Additional funding may be necessary to offset revenue loss associated with these programs. The ORCA Lift program costs were offset by a fare increase for the general public.

TriMet Low-Income Hop Pass

TriMet's program is relatively new and has not yet released enrollment data, but during the planning phase, the agency projected 45,000 users out of 120,000 eligible riders and an annual

ridership increase of 1-2% (2 million trips). The program is funded by a state transportation package that provides $12.5 million annually through a payroll tax increase.

After in-person income verification, Low-Income Hop Pass program participants receive a special Hop card with their photo on the front in order to discourage fraud. This Hop card is valid for two years before participants must reapply. Program participants have multiple fare options including $1.25 for a single ride, $2.50 for a day pass, and $28 for a 31-day pass. These fares represent a discount between 50% and 72% compared to standard base fares.

Low-Tech Options

SFMTA Lifeline Pass

The Lifeline Pass is a low-income pass program implemented in San Francisco in 2005 to reduce the impacts of planned fare increases on low-income riders. Any San Francisco County resident at or below 200% of the federal poverty line is eligible for the program. Applicants must submit government-issued identification, proof of income eligibility, and proof of residency to the San Francisco Human Services Agency to verify eligibility every two years.

The Lifeline Pass is not a smartcard; instead, it is a photo ID that requires monthly validation stickers that cost $38 per month (50% of a regular monthly pass). Participants use their card as a flash pass to board the vehicle and don't pay any additional fare. Riders have to purchase their validation stickers every month in person at one of eight locations throughout the city of San Francisco. This validation sticker component is more burdensome to the user than smartcard-based programs.

Out of approximately 159,000 eligible riders, 45,000 have enrolled in Lifeline and 20,000 were actively purchasing passes in 2017.

Dallas Area Rapid Transit TANF Program

Dallas Area Rapid Transit (DART) offers a low-income monthly pass for TANF recipients using magnetic swipe card technology. This program requires riders to purchase monthly passes at the transit center or select pass outlet locations. TANF recipients are able to use their benefits to directly purchase the transit pass at a reduced rate. Using TANF benefits to purchase transit passes serves as an income verification process. This program provides less flexibility than other low-income programs since participants are limited to monthly passes and cannot receive a discounted day pass or single ride fare.

Pinellas Suncoast Transit Authority Transportation Disadvantaged Program

Pinellas Suncoast Transit Authority (PSTA) in Pinellas County, FL, offers a low-tech low-income fare program for residents of Pinellas County with a documented household income not exceeding 150% of the poverty level as one component of the agency's Transportation Disadvantaged (TD)

Program. The TD program is state-funded and paid for through vehicle registration fees. The TD Program does not offer a reduced fare cash option—instead, qualified riders can purchase 10-day passes for $5 per month (regularly $50) and 31-day unlimited passes for $11 per month (regularly $70).

Applicants for the TD Program self-certify their residency and lack of alternative transportation options, but are required to verify their income level with acceptable documentation. The program currently requires passengers to certify their income annually. Passes are sold at PSTA vending locations only, not through any other agreements or third-party retail locations. Passengers must show government-issued photo ID to receive their pass. Administrative staff access a database which includes name, date of birth, address, and phone number to verify the passenger's identity and eligibility.

The annual TD Program budget for reduced passes is approximately $350,000 at 150% of the poverty level. Previously, the program used 200% as the poverty level threshold, but it caused the program to exceed available budget, so the poverty level was adjusted down. The program requires approximately 1.5 FTEs dedicated to handling eligibility verification and database management.

The TD Program had a negative impact on PSTA's farebox recovery, but meets the agency's goal of allowing those who need it most to be able to use the service more often. The in-person pass purchasing process is burdensome for users but is necessary until there is a more streamlined ID verification or high-tech system in place.

PASS PROGRAMS

In recent years, growing numbers of transit agencies have teamed with universities, employers, or residential neighborhoods to provide bulk transit passes. These passes typically provide unlimited rides on local or regional transit providers for low monthly fees, often absorbed entirely by the employer, school, or developers.

A bulk pass program provides a participating organization free or deeply discounted transit rides for a financial guarantee. These programs are slightly different than pass sales since they often assume that 100% of an organization's members are eligible for the program whether or not they regularly use public transportation. The benefit to major institutions is that a well-designed program provides a simple, packaged solution to help solve transportation access issues to their organization. These types of programs can be implemented in different ways, but the most common financial contribution approaches include the following:

- Contribution determined by current employees, residential units, students, etc. as reported by the participating organization
- Contribution determined by ridership

- Annual fixed fee (same price, regardless of institution size or usage)

Bulk transit passes provide multiple benefits, as discussed in Figure 3-10. While pass programs tend to be affiliated with bus service, in most cases they are part of a broader multi-modal transportation strategy that includes improved bike programs, car share programs, carpooling/vanpooling strategies, and often, increased parking rates.

Figure 3-10 Bulk Pass Program Benefits

Beneficiary	Bulk Pass Benefit
Transit Riders	Free access to transit
	Rewards existing riders, attracts new ones
	For employees who drive, making existing transit free can effectively create convenient park-and-ride shuttles to existing underused remote parking areas
Transit Agencies	Provides a stable source of income
	Increases transit ridership, helping to meet agency ridership goals
	Can help improve cost recovery, reduce agency subsidy, and/or fund service improvements
Communities	Reduces traffic congestion and increases transit ridership
	Reduces existing, unmet, and future growth in parking demand
Developers	Bulk pass programs can benefit developers if implemented concurrently with reduced parking requirements, which consequently lower construction costs
	Providing free cost transit passes for large developments provides an amenity that can help attract renters or home buyers as part of a lifestyle marketing campaign appealing to those seeking a "new urban lifestyle"
Employees/ Employers	Reduces demand for parking on-site
	Provides a tax-advantaged transportation benefit that can help recruit and retain employees

Source: City of Pasadena Traffic Reduction Strategies Study, 2007

RTD EcoPass (Denver, CO)

Denver RTD's Business EcoPass provides unlimited usage of RTD services and is an annual transit pass purchased by a company and its employees or a collection of residences. Companies purchase the EcoPass for all full-time employees with an option to include part-time employees. Transit service levels are also accounted for through a tiered pricing structure (Figure 3-11). Pricing for businesses is determined by two factors—location of the business (and corresponding level of service for that area) and total number of full-time employees or total number of full/part-time employees on the payroll. Contract minimum rates apply for businesses with a per-person rate that equals less than the contract minimum. The resulting discount per employee per year ranges from 71% to 97% off the retail price.[1]

Additionally, Boulder County offers a multi-year EcoPass discount (60% off of the first year's purchase price, 30% off of the second year's contract price) to all businesses and neighborhoods

[1] Calculated based on July 2018 Valupass pricing of $1,881 for regional/airport service.

signing up for their initial EcoPass contract. EcoPass is tax deductible to employers and tax free to employees.

As of Summer 2018, RTD is currently investigating making changes to the existing EcoPass program to charge per use. If updated policies are implemented, employers would continue to be grouped by location and number of employees, but fees per EcoPass use would be charged based on tier categories. RTD is still considering fees per tier, level of discounts provided, and potential adjustments to tier size as part of the revised program structure.

Figure 3-11 Denver RTD Business EcoPass Pricing Structure (2016)

Cost per Employee per Year (2016)							
Service Level Area	Number of Employees	Contract Minimum Per Year	1-24 Employees	25-249 Employees	250-999 Employees	1,000-1,999 Employees	2,000+ Employees
A: Outer Suburban	1-10 11-20 21+	$1,150 $2,300 $3,448	$98	$85	$75	$64	$60
B: Major Transit Centers	1-10 11-20 21+	$2,108 $4,215 $6,322	$209	$189	$173	$160	$151
C:Downtown Denver CBD	1-10 11-20 21+	$2,874 $5,748 $8,621	$532	$493	$470	$459	$434
D: DIA and home businesses	1-10 11-20 21+	$2,874 $5,748 $8,621	$544	$522	$483	$470	$445

Source: Denver RTD

FARE FREE SYSTEMS

The majority of public transit systems charge a fare for passengers to access the system; however, some agencies provide fare free, or prepaid, service with no fare charged at the point of access. Fare free transit service is generally funded by other means than collected fares, including partnerships with local universities, non-profit organizations, or community groups, which can make up lost farebox revenue.

Transitioning to fare free service can be a transformative way to increase public transit use, with potential benefits including:

- Increasing ridership between 30-40%[2]
- Improving speed and reliability
- Reducing administrative costs
- Eliminating cost to maintain and upgrade fareboxes
- Reducing fare disputes
- Environmental benefits including carbon reduction and reduced parking requirements

[2] According to experiences from systems include Chapel Hill Transit and Mountain Line (Missoula, MT)

Case Study: Chapel Hill Transit

Chapel Hill Transit (CHT) serves as a local case study to identify potential impacts and best practices for transitioning to fare free service in the Wake-Durham region. Key impacts to the CHT system include a significant increase in ridership and demand for service, an increase in service to accommodate new ridership demand, and the need to offset operating cost increases with revenue other than fares.

Ridership and Operations Trends

After eliminating fares in 2002, ridership on CHT doubled over the next 10 years. To accommodate increased ridership demand, CHT has increased service by 28% between 2002 and 2015. As CHT revenue hours increased, the cost per revenue hour of providing service has also continued to increase—76% between 2002 and 2015. These increased operating costs appear to be primarily driven by inflationary changes, as well as the cost of fuel and employee benefits.

A key consideration before transition to fare free service is the associated increased demand for paratransit service. Legally, 100% of paratransit demand must be met and fare free paratransit is attractive to the rider but costly for the agency. After moving to a fare free system, Chapel Hill Transit experienced a 20% increase in demand response ridership, though overall demand response ridership is currently declining.

These trends are shown in Figure 3-12 through Figure 3-15.

Figure 3-12 Chapel Hill Transit Fare Free Ridership Impacts

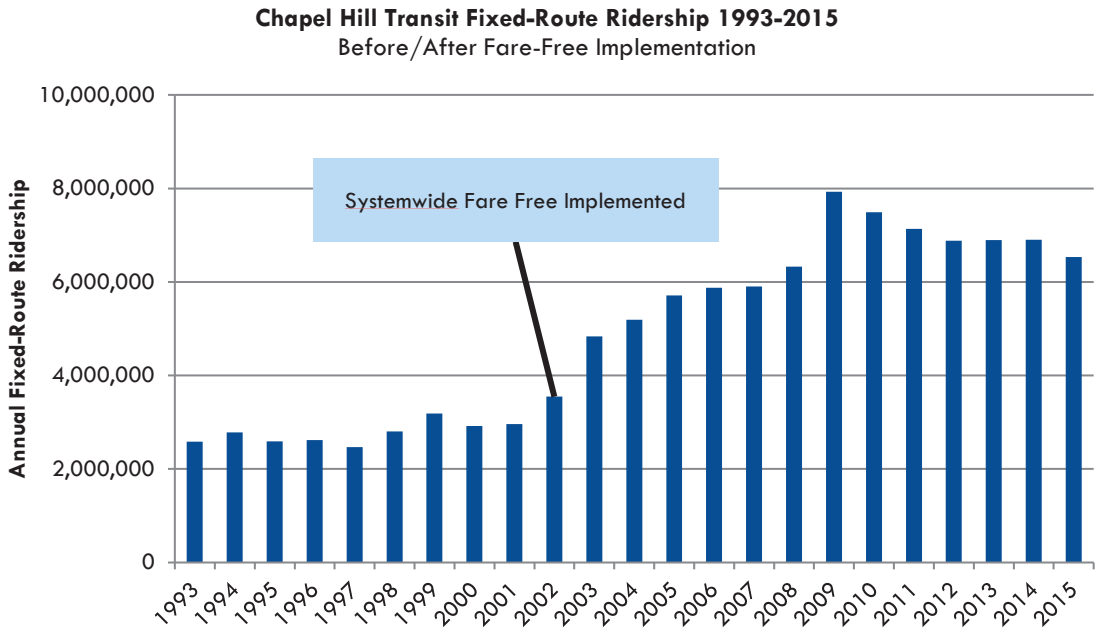


Figure 3-13 Chapel Hill Transit Demand Response Ridership Trends

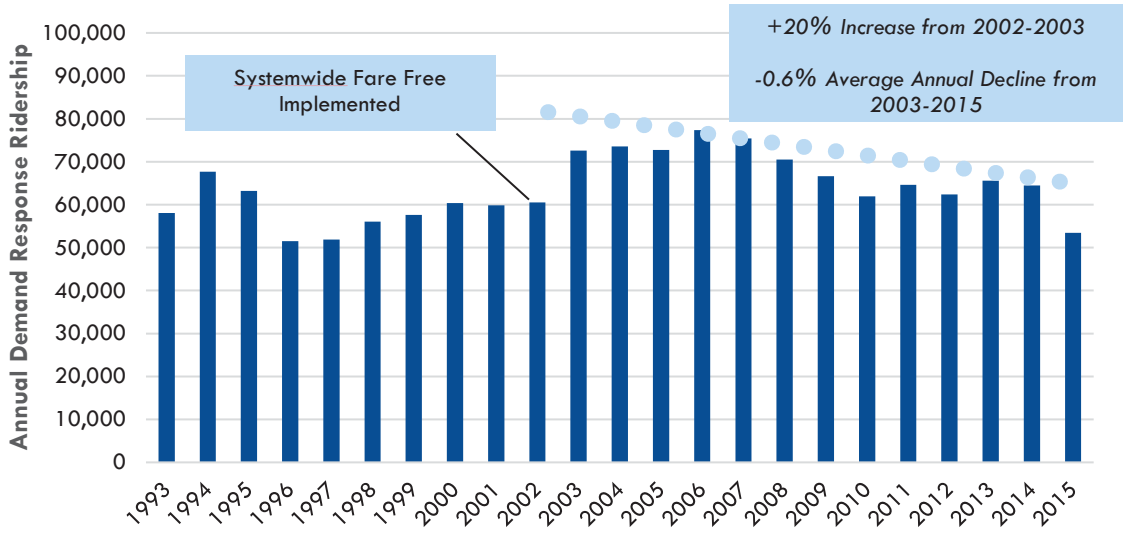


Figure 3-14 Chapel Hill Transit Revenue Hours Trends

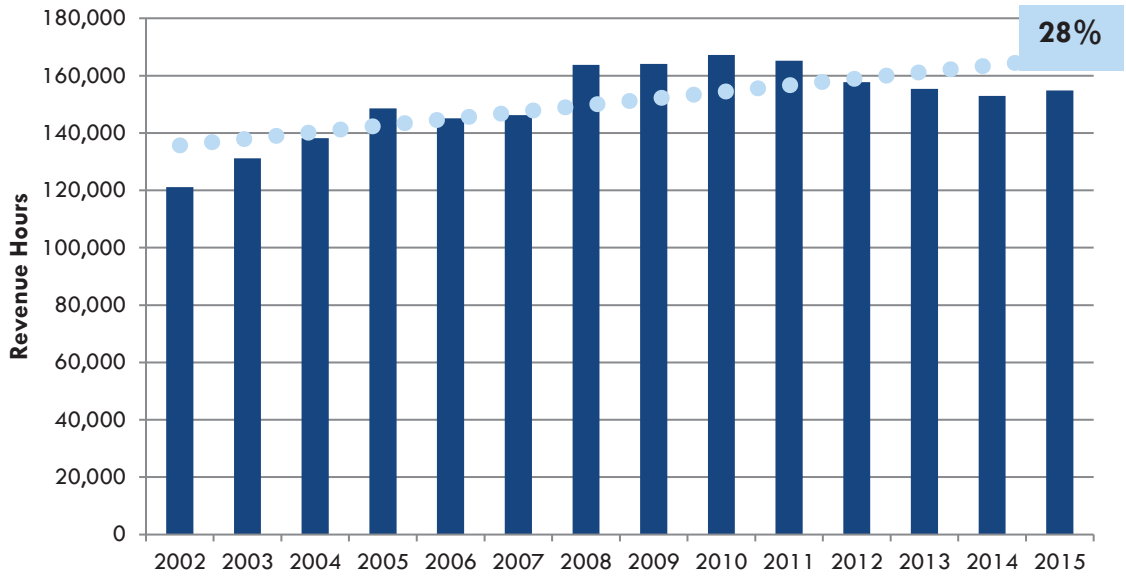
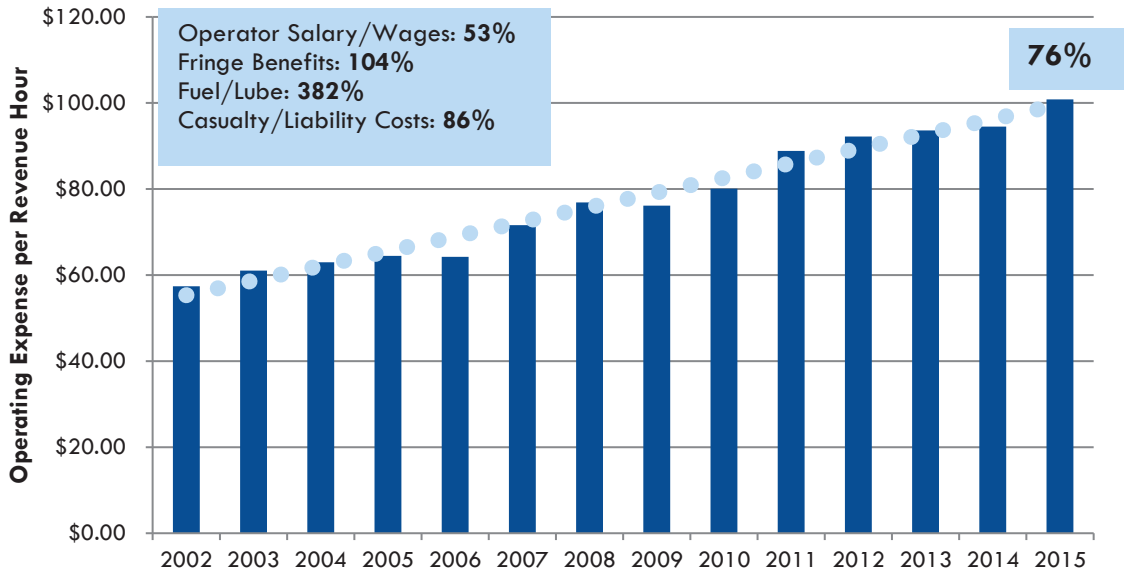


Figure 3-15 Chapel Hill Transit Cost per Revenue Hour Trends



Funding Trends

After eliminating fares, federal formula funding for CHT increased before leveling off in 2011 and has been relatively flat since. While federal funding has been consistent, state funding for CHT service declined 26% between 2007 and 2015. CHT has made up for this decrease in state funding with partner contributions from UNC-Chapel Hill, the Town of Chapel Hill, and the Town of Carrboro. These funding trends are shown in Figure 3-16 through Figure 3-18.

Figure 3-16 Chapel Hill Transit Federal Formula Funding Trends

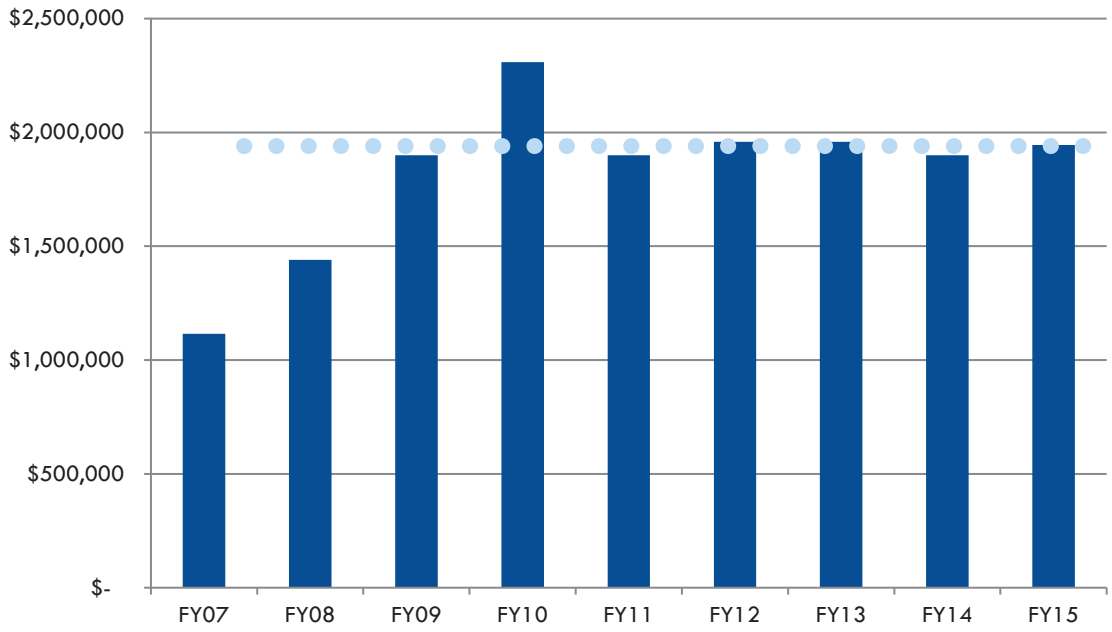


Figure 3-17 Chapel Hill Transit State Funding Trends

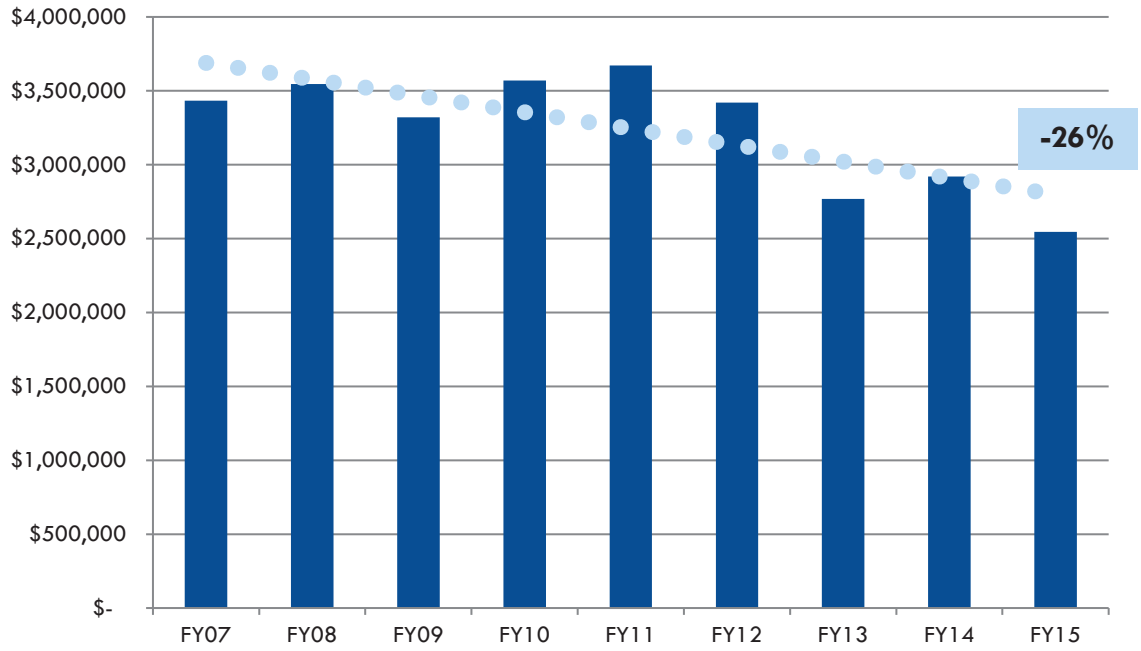
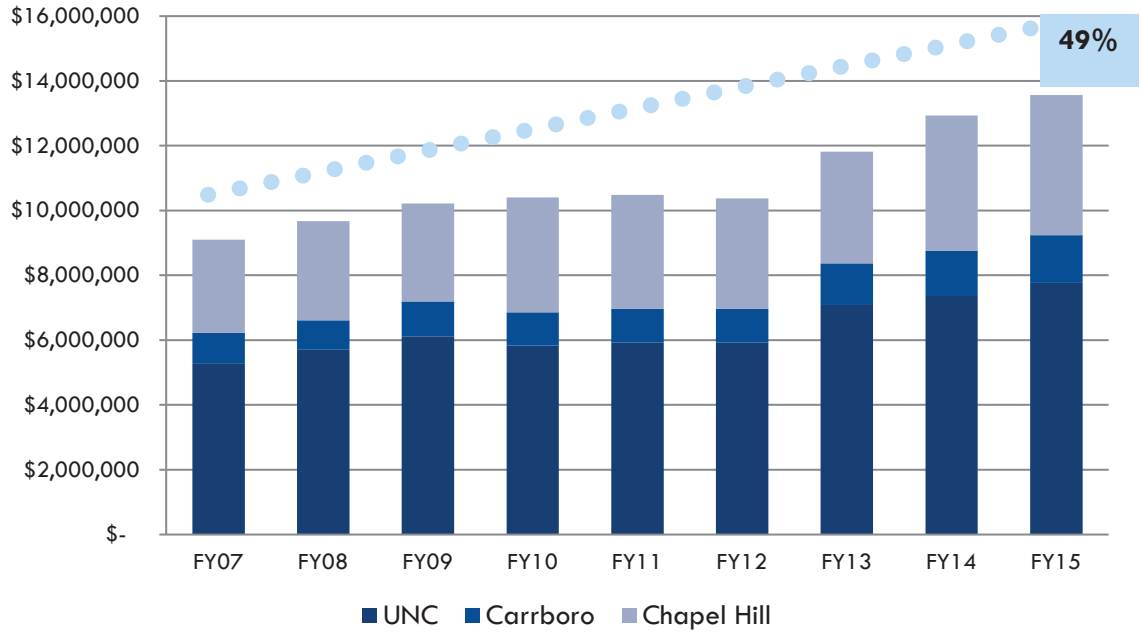


Figure 3-18 Chapel Hill Transit Partner Funding Trends



Fare Free Best Practices and Lessons Learned

There are numerous costs and benefits associated with providing fare free service. Potential benefits include increased ridership, simplified administration, and travel time/dwell time savings. After eliminating fares, CHT experienced significant ridership growth and adjusted their service accordingly. This growth has stabilized and remained steady since 2010; however, the impacts of growth and expansion are still being felt as CHT continues to increase service and the operating cost per revenue hour continues to increase. These cost increases largely reflect inflation but are still important considerations for transit agencies before implementing fare free service.

As costs generally increased, the funding mechanism used to provide the service also fundamentally changed. Federal funding remained relatively consistent, while state funding declined significantly. This funding gap was bridged through the partnership between CHT, UNC-Chapel Hill, the Town of Chapel Hill, and the Town of Carrboro to provide increased funding for service.

Local partnerships are imperative for ensuring adequate funding to both maintain the existing level of service and gradually increase service to meet expected increases in ridership demand.

4 Fare Scenarios

This chapter presents a summary of the fare scenarios that were modeled and evaluated to assess ridership and revenue impacts. Scenarios were identified based on potential to address the study goals and approved by the Fare Working Group.

FARE MODEL DEVELOPMENT

The fare model developed for this project is based on existing ridership and revenue data (FY 2017) and assumptions on average fare per passenger for each fare product. This information is then used as a baseline to understand order of magnitude changes to fare revenues and ridership as a result of pricing or structural changes.

Consumption of transit, like other goods and services, reacts to cost. Significant research over time has examined the sensitivity of transit ridership to fare increases. In transit, the standard measurement of sensitivity to fare changes means that for every 10% increase in fares, ridership will decrease by 3% (and vice-versa).

As such, elasticity factors are common in fare modeling, as they define the price sensitivity of riders to fare changes. An elastic factor suggests a larger change in ridership relative to a fare change. An inelastic factor suggests a relatively small change in ridership relative to a fare change. The model accounts for two elasticity factors[1]:

- A relatively inelastic factor (-0.33), which is consistent with industry standards for regular fares
- A "reduced" elasticity factor (-0.21) to account for observations associated with student, elderly, and disabled patrons

Using these elasticity factors, ridership changes (on a fare product basis) are determined from the proposed fare increase or decrease. A new average fare for each fare product is also calculated from the percentage change in the fare product price. Finally, multiplying the new ridership estimate by the new average fare produces a revenue estimate for that fare product.

It should be cautioned that any estimation model is an approximation based on a set of assumptions and is highly dependent on accurate data inputs to ensure quality outputs. The fare model bases ridership and revenue changes strictly on price variation. Qualitative factors such as customer simplicity or other factors are not considered here, but are certainly factors in reality that influence ridership and revenue levels. Based on the perceived simplicity gains, it is likely that ridership benefits in each scenario are understated. As a result, the findings from this analysis are simply estimates but offer a valuable means to compare different scenarios against one another.

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[1] Source: TCRP Report 95, Chapter 12, *Transit Pricing and Fares*.

KEY FINDINGS

- **Tiered fares may align regional fare structures and increase revenue for the region with limited impacts to ridership.** Aligning fares throughout the region, a stated goal of the study, would result in an expected revenue increase of 3.5% and ridership decrease of 2.0%.
- **Low-income programs may be costly.** Implementing a low-income program with an eligibility threshold of 200% of the regional poverty line would result in an expected revenue loss of 6.7% with a ridership increase of 1.2%.
- **Fare capping may improve fare equity without a significant revenue decrease.** Implementing a fare capping policy resulted in a small ridership increase of 0.2% and revenue decrease of 1.9%. This option may improve fare equity and affordability with a smaller revenue loss than a low-income program.

FARE SCENARIOS

Eight fare scenarios were developed and modeled to test impacts of fare structure and discount policy changes to the region as a whole and to individual agencies. Identifying the individual impacts of a specific change allows for informed decision-making about the likely effects of implementing new fare policies, as well as helping agencies better plan for the associated changes in ridership and revenue. The fare scenarios that were modeled and analyzed in the study include:

1. Region-Wide Flat Fare
2. Region-Wide Tiered Fares
3. Optimize Fares to Increase Ridership
4. Maximize Farebox Recovery
5. Align Discount Fare Policies
6. Offer Fare Capping
7. Offer Low-Income Fare Category
8. Offer Low-Income Fare Category with General Fare Increase

Scenario 1: Region-Wide Flat Fare

The goal of the region-wide flat fare scenario is to provide a simplified fare structure in which all four agencies in the region charge the same flat rate fare, regardless of service type. In this scenario, multiple base fare levels were tested in Scenario 1a ($1.00), Scenario 1b ($1.25), and Scenario 1c ($1.50). Pass multipliers for all three scenario iterations were left constant, with day passes at 2x, 5-day passes at 8x, 7-day passes at 10x, and 31-day passes at 32x. The simplified fare structure in Scenario 1 would bolster a regional transit system approach.

The three pricing levels in Scenario 1 result in large swings between ridership and revenue, shown in Figure 4-1. Scenario 1b ($1.25) is the most balanced result of the three options, with small reductions in ridership and revenue (less than 2%). The agency-specific impacts of a region-wide flat fare set at $1.25 are shown in Figure 4-2. There are significant revenue impacts for GoTriangle and GoCary, with decreases of 17.0% and 9.2% respectively, as both agencies would have to reduce their fares substantially in this scenario. GoDurham would have a revenue increase of 9.1% accompanied by a ridership decrease of 4.8%.

While a region-wide flat fare would simplify the customer experience and improve a regional approach to transit, the steep financial impacts to GoTriangle and GoCary may be prohibitive for this approach.

Figure 4-1 Region-Wide Flat Fare Ridership and Revenue Impacts

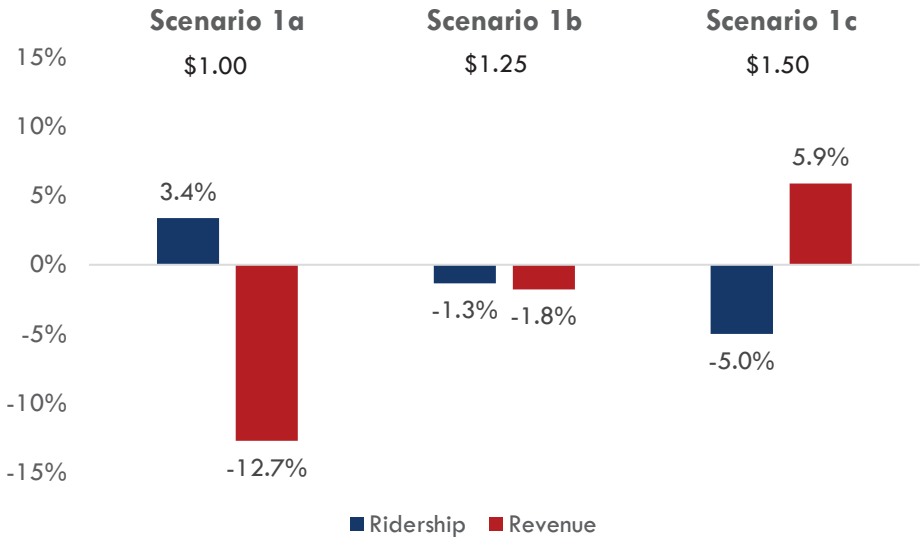
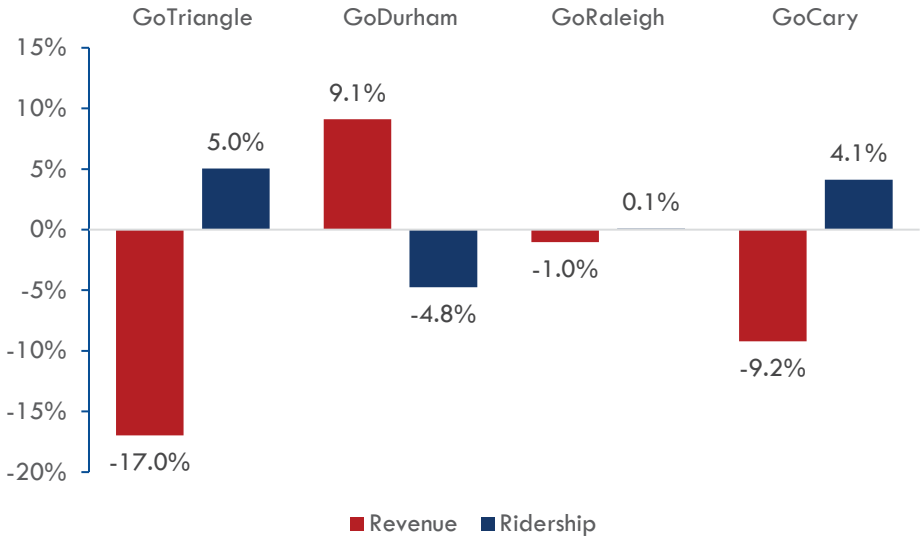


Figure 4-2 Region-Wide Flat Fare - $1.25 Ridership and Revenue Impacts for Agencies



Scenario 2: Region-Wide Tiered Fare

A region-wide tiered fare would simplify the regional fare structure, while allowing regional and express service offered by GoTriangle to continue charging a higher rate than local service. In this scenario, GoDurham, GoRaleigh, and GoCary are considered local services, and all GoTriangle services are considered regional/express. In this scenario, multiple fare tiers were tested in Scenario 2a ($1.25/$2.50), Scenario 2b ($1.50/$3.00), Scenario 2c ($1.00/$2.50), and Scenario 2d ($1.00/$3.00). The ridership and revenue impacts of the four tiered alternatives in Scenario 2 are shown in Figure 4-3. Scenario 2a is the most balanced of these alternatives, with a slight decrease in ridership (2.0%) and increase in revenue (3.5%).

The agency-specific ridership and revenue impacts for a region-wide tiered fare set at $1.25 for local service and $2.50 for regional/express service are shown in Figure 4-4. This fare structure would have small impacts for GoTriangle and GoRaleigh, but much more significant impacts for GoDurham and GoCary. GoDurham would be projected to increase revenue by 10.5% and decrease ridership by 4.4%, while GoCary is expected to decrease revenue by 15.6% and increase ridership by 2.2%. While this is a large percent decrease in revenue for GoCary, it accounts for an annual loss of approximately $26,000. The 10.5% increase in revenue for GoDurham accounts for approximately $278,000, more than ten times as much.

Figure 4-3 Region-Wide Tiered Fare Ridership and Revenue Impacts

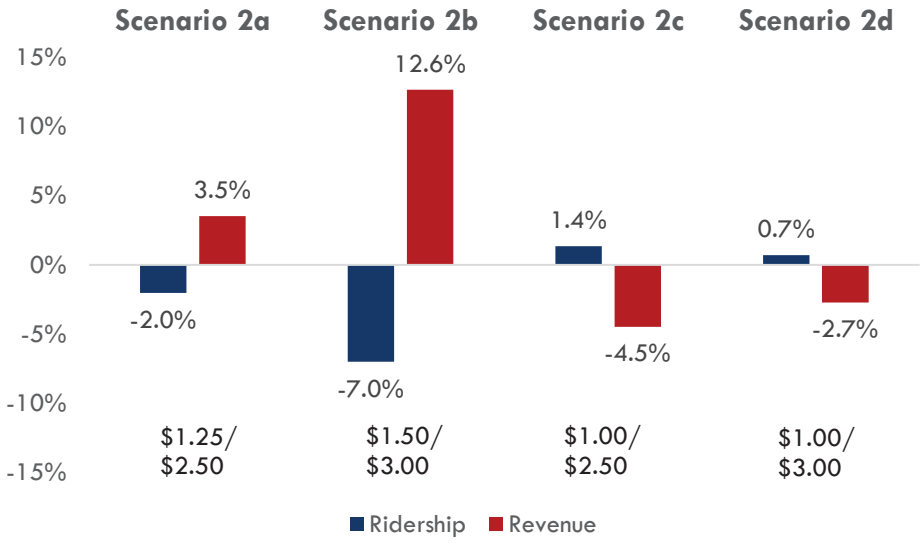
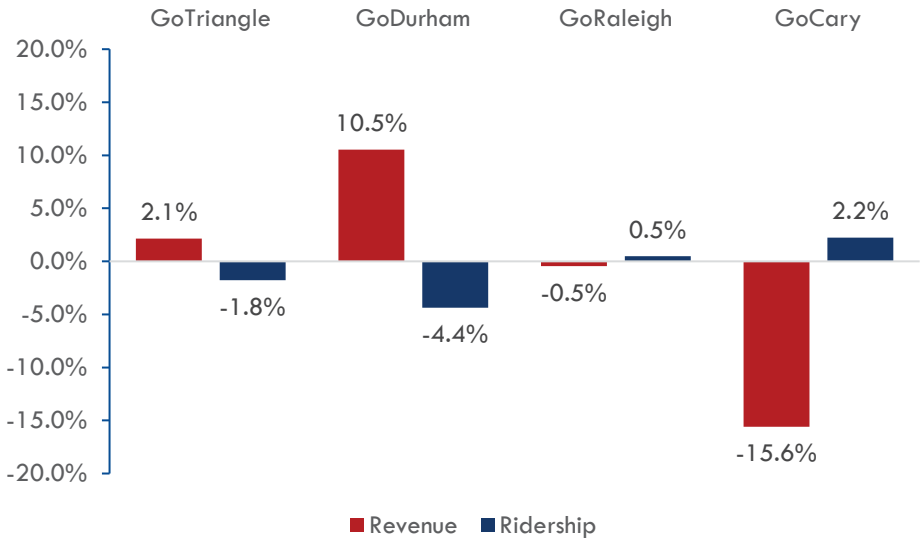


Figure 4-4 Region-Wide Tiered Fare $1.25/$2.50 Ridership and Revenue Impacts for Agencies



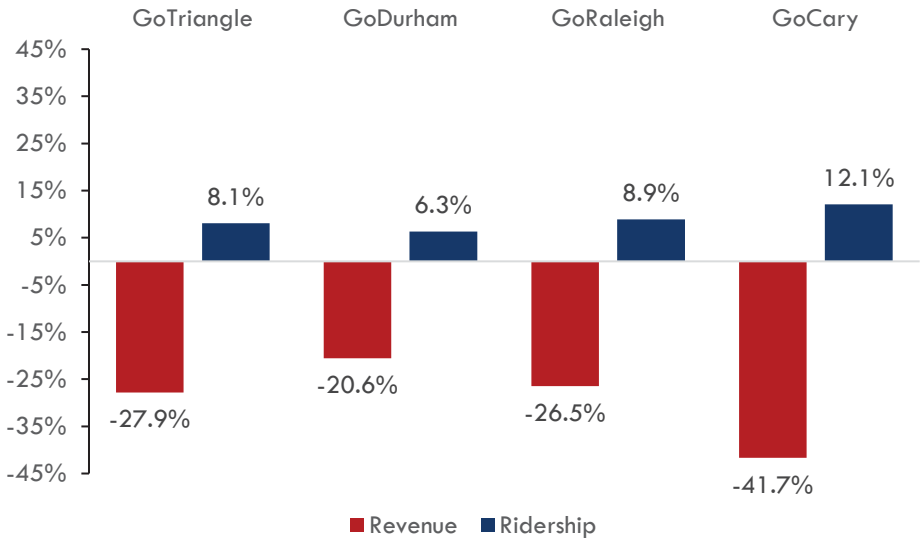
Scenario 3: Optimize Fares to Increase Ridership

This scenario takes an iterative approach to adjusting fares and pass multipliers until prices are such that ridership is maximized and no longer increases with subsequent decreases in fare price. This scenario also assumes that fares would not be reduced so low as to provide fare free service and that pass multipliers must remain within peer agency best practices. Ultimately, the optimized fare rate was established as a region-wide flat fare of $0.75, with a discount fare rate of $0.25 and pass multipliers of 2x for day passes, 4x for 5-day passes, 10x for 7-day passes, and 32x for monthly passes.

The agency-specific ridership and revenue impacts for Scenario 3 are shown in Figure 4-5. These impacts show large decreases in revenue and increases in ridership for all four agencies. Ridership increases range from 6.3% for GoDurham to 12.1% for GoCary. Revenue decreases range from 20.6% for GoDurham to 41.7% for GoCary.

This scenario is not intended to be a potential approach for new fare pricing; instead, it identifies the potential maximum ridership increase related to fare changes for each agency.

Figure 4-5 Optimized to Increase Ridership, Revenue and Ridership Impacts for Agencies



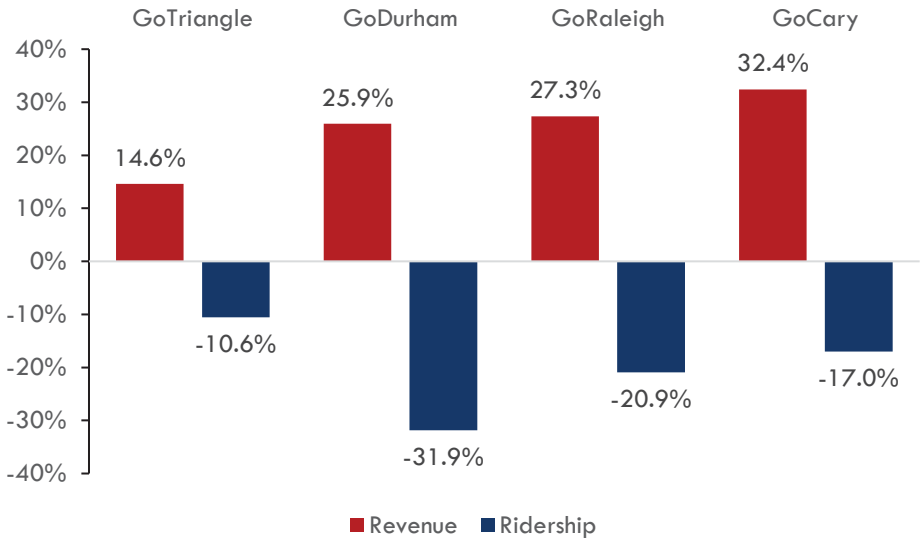
Scenario 4: Maximize Farebox Recovery

Similar to Scenario 3, this scenario takes an iterative approach to adjusting fares and pass multipliers until prices are such that farebox recovery rate is maximized and no longer increases with subsequent increases in fare price. The maximized fare for this scenario was established as a region-wide tiered fare charging $2.25 for local service and $4.00 for regional/express service, with discounted fares set at 50% of the base fare. Pass multipliers also remained within the range of peer agency best practices, 2x for day passes, 8x for 5-day passes, 10x for 7-day passes, and 36x for monthly passes.

The agency-specific ridership and revenue impacts for Scenario 4 are shown in Figure 4-6. These impacts show large increases in revenue and large decreases in ridership for all four agencies. Ridership decreases range from 10.6% for GoTriangle to 31.9% for GoDurham. Revenue increases range from 14.6% for GoTriangle to 32.4% for GoCary.

This scenario is not intended to be a potential approach for new fare pricing; instead, it identifies the potential maximum revenue increase related to fare changes for each agency.

Figure 4-6 Maximized Farebox Recovery Ridership and Revenue Impacts for Agencies



Scenario 5: Align Regional Discount Fare Policies

This scenario assumes that all existing base fares and pass multipliers remain consistent with existing conditions, but discount policies will be aligned for the agencies. Discount categories for the agencies analyzed in this scenario include:

- Seniors (aged 65 and older)
- Youth (aged 18 and younger)
- People with disabilities

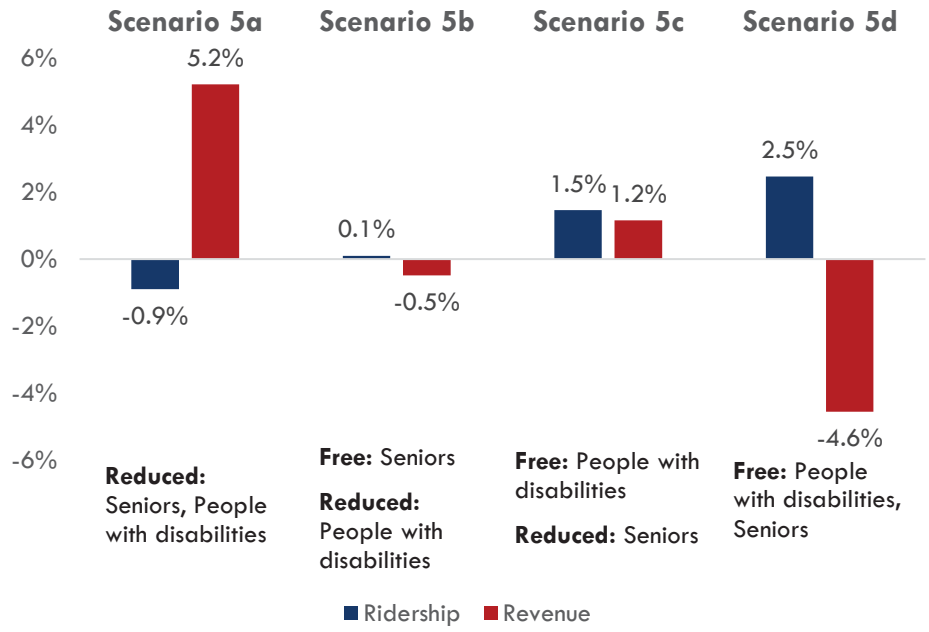
Youth fares were recently made free for all agencies in the region through the Youth GoPass program, and these scenario alternatives assume this policy would continue. The existing category for seniors in GoCary is set at age 60 and older, and this scenario would separate out those aged 60-64 and only apply the senior discount to those aged 65 and older.

This scenario tests four different alternatives for aligning discount policies, including Scenario 5a (Reduced: Seniors, People with Disabilities), Scenario 5b (Free: Seniors; Reduced: People with Disabilities), Scenario 5c (Free: People with Disabilities; Reduced: Seniors), Scenario 5d (Free: Seniors, People with Disabilities). Ridership and revenue impacts for these alternative discount policies are shown in Figure 4-7.

The results of these scenario alternatives present a range of ridership and revenue impacts, all of which may be feasible discount policies. Ridership impacts range from a 0.9% decrease in Scenario 5a to a 2.5% increase in Scenario 5d. Revenue impacts range from a 4.6% decrease in Scenario 5d to a 5.2% increase in Scenario 5a. Scenario 5b and Scenario 5c have more balanced impacts than the other two alternatives.

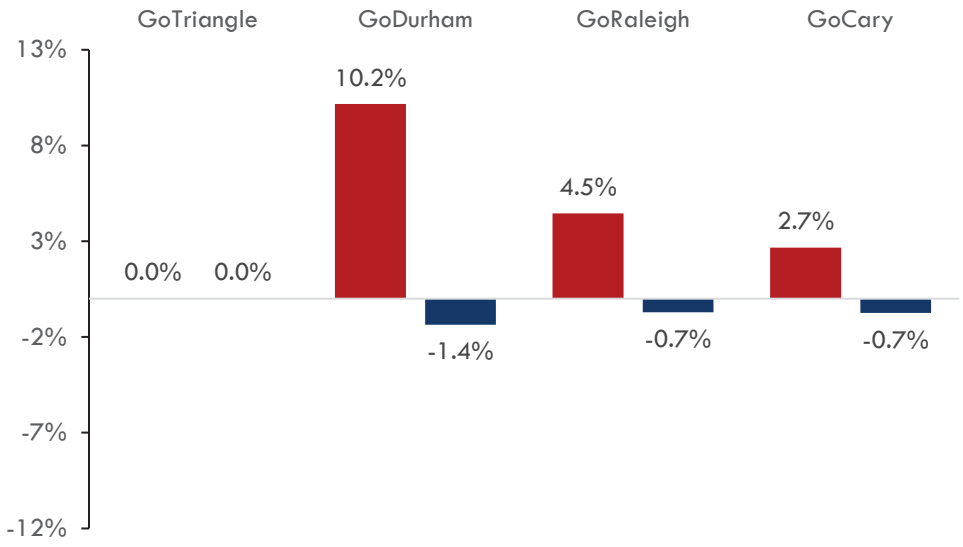
Agency-specific ridership and revenue impacts for these scenario alternatives are shown below in Figure 4-8 through Figure 4-11.

Figure 4-7 Align Regional Discount Policies Ridership and Revenue Impacts



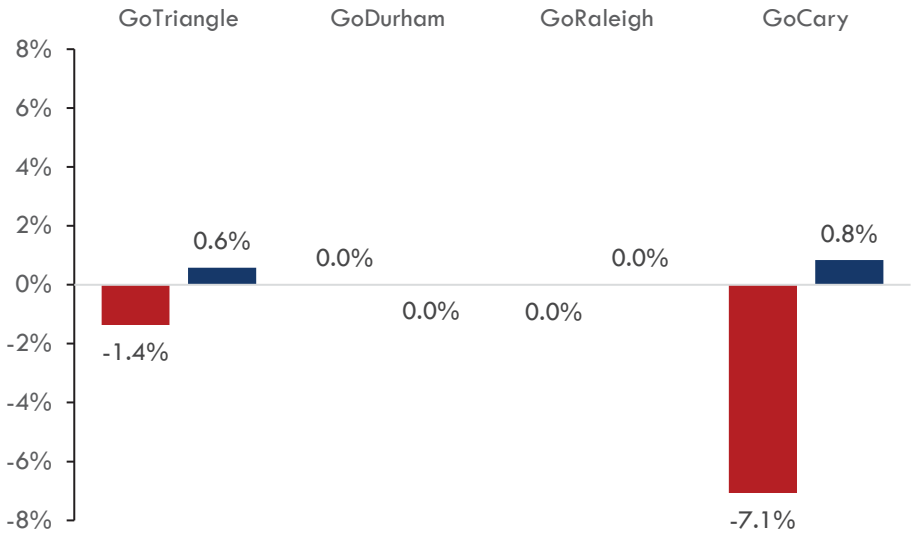
There is no change to ridership or revenue for GoTriangle in Scenario 5a, but there are significant revenue increases and small ridership decreases for the other agencies. GoDurham and GoRaleigh currently offer free service to seniors over aged 65, so instituting a fare on this discount category accounts for this increase in revenue and decrease in ridership (Figure 4-8). GoCary currently provides a discounted fare for seniors aged 60 and older. Altering this category to include only seniors aged 65 and older provides a small increase in revenue and decrease in ridership.

Figure 4-8 Scenario 5a Agency-Specific Ridership and Revenue Impacts



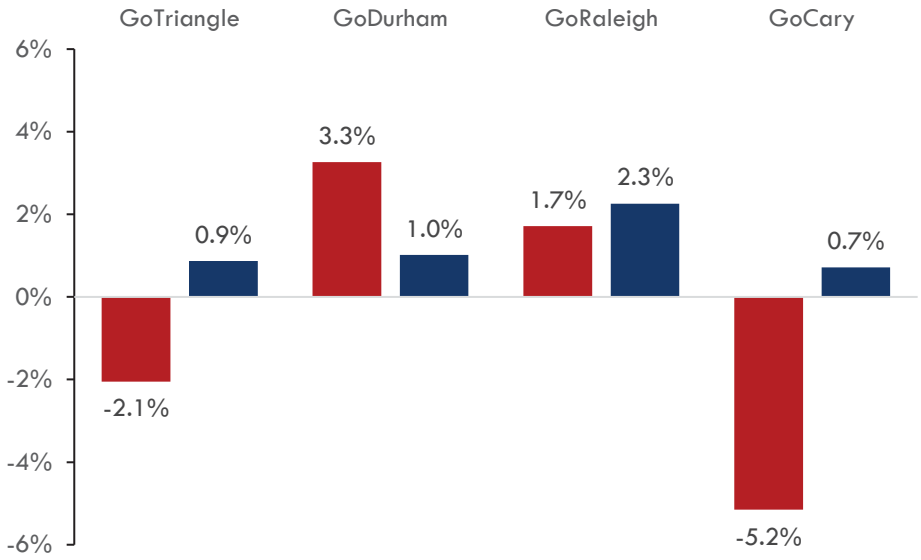
Providing free service to seniors and discounted service to people with disabilities results in no ridership or revenue changes for GoDurham or GoRaleigh (Figure 4-9). Providing free service for seniors results in a small increase in ridership for GoTriangle and GoCary, but a decrease in revenue. The 1.4% decrease in revenue for GoTriangle equates to approximately $27,000 annually, while the 7.1% decrease in revenue for GoCary would be approximately $12,000 annually.

Figure 4-9 Scenario 5b Agency-Specific Ridership and Revenue Impacts



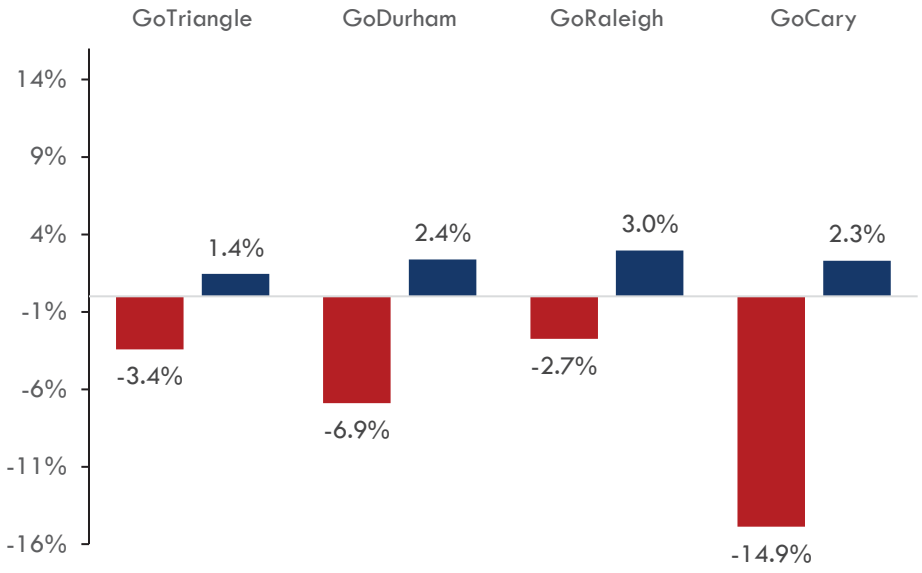
Providing free service for people with disabilities but charging a discounted fare for seniors results in a small overall increase in ridership and revenue—1.5% and 1.2%, respectively (Figure 4-10). At the agency level, ridership would increase for all four agencies; however, revenue impacts would be mixed. Revenue for GoDurham and GoRaleigh would increase by 3.3% and 1.7% respectively, while revenue for GoTriangle and GoCary would decrease by 2.1% and 5.2%.

Figure 4-10 Scenario 5c Agency-Specific Ridership and Revenue Impacts



Providing free service for all discount categories (youth, seniors, and people with disabilities) results in varying levels of increased ridership and decreased revenues for each agency (Figure 4-11). Overall, there would be a 2.5% increase in ridership and a 4.6% decrease in revenue across the region. Ridership increases range from 1.4% for GoTriangle to 3.0% for GoRaleigh, while revenue decreases range from 2.7% for GoRaleigh to 14.9% for GoCary. While this alternative has the largest ridership increase, it also comes with the largest revenue decrease. These priorities must be weighed and taken into account while developing and implementing new fare structures and discount policies.

Figure 4-11 Scenario 5d Agency-Specific Ridership and Revenue Impacts

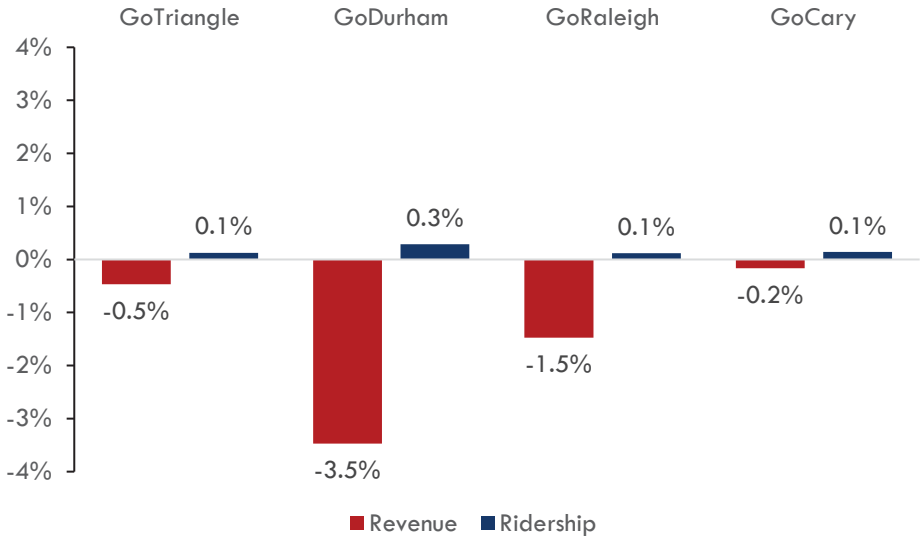


Scenario 6: Offer Fare Capping

Fare capping is an emerging trend to make transit an affordable option and reduce the fare burden for cash riders. Fare capping works by allowing transit riders to pay for trips with smartcards cards or mobile ticket as they ride on a per-trip basis, but will stop charging them after reaching specific thresholds. In this scenario, fare capping would occur after two trips in a single day and 32 trips in a single month. Investing in fare capping policy requires implementing an electronic fare collection system such as smartcards and/or mobile ticketing.

Ridership and revenue impacts for individual agencies are shown in Figure 4-12. Overall, fare capping would result in a 1.9% decrease in revenue and a 0.2% increase in ridership across the region. The largest impacts of fare capping would be for GoDurham, which would experience a 3.5% decrease in revenue and a 0.3% increase in ridership.

Figure 4-12 Fare Capping Agency Specific Ridership and Revenue Impacts



Scenario 7: Offer a Low-Income Fare Category

Offering a low-income fare category is another method for making transit a more affordable transportation option. This scenario analyzes the impacts of offering a discount to eligible adults making up to 200%, 150%, and 100% of the federal poverty level. This scenario assumes that 35% of eligible riders would actually use the low-income fare program—the observed usage rate for the ORCA Lift low-income fare program in Seattle, WA and in line with the projected usage rate for TriMet in Portland, OR.

Offering a low-income discount program with a threshold at 200% of the federal poverty line has the largest impacts to ridership and revenue and is the current industry standard, although 150% of the federal poverty line is also being used. These thresholds coincide with eligibility for a number of other public benefit programs and may reduce administrative costs through streamlined income verification.

Agency-specific impacts of a low-income fare category at 200% of the federal poverty line are shown in Figure 4-14. Ridership increases for the program range between 0.7% for GoTriangle and 1.6% for GoCary; conversely, revenue decreases range between 4% for GoTriangle and 9.4% for GoCary. While this is a large percent difference for GoCary, the 9.4% decrease in revenue equates to approximately $16,000 while the 4% decrease for GoTriangle is equal to approximately $78,000.

Figure 4-13 Low-Income Fare Category Ridership and Revenue Impacts

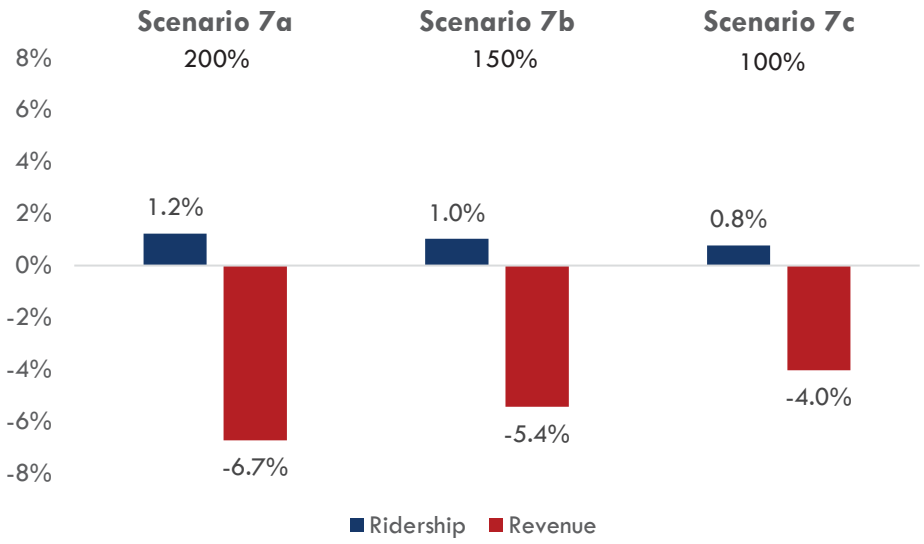
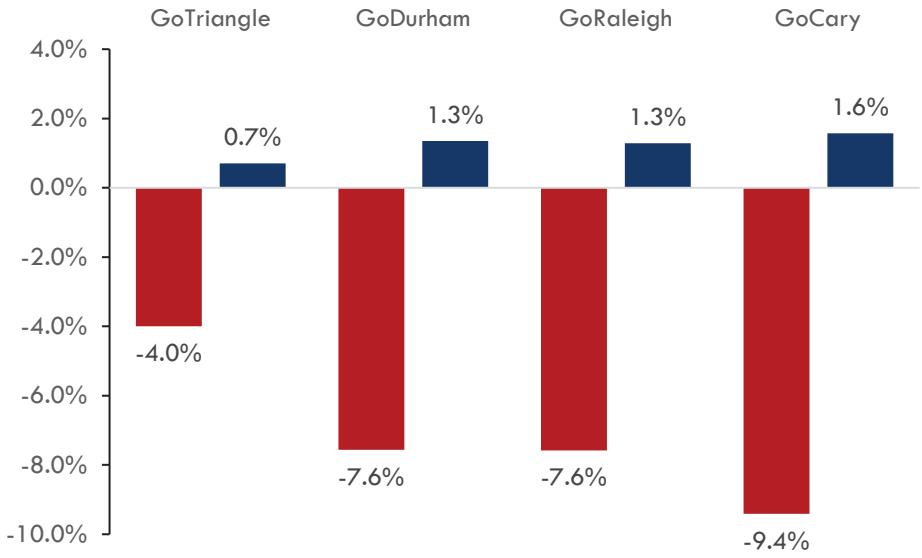


Figure 4-14 Low-Income Fare Category at 200% of the Federal Poverty Line Impacts

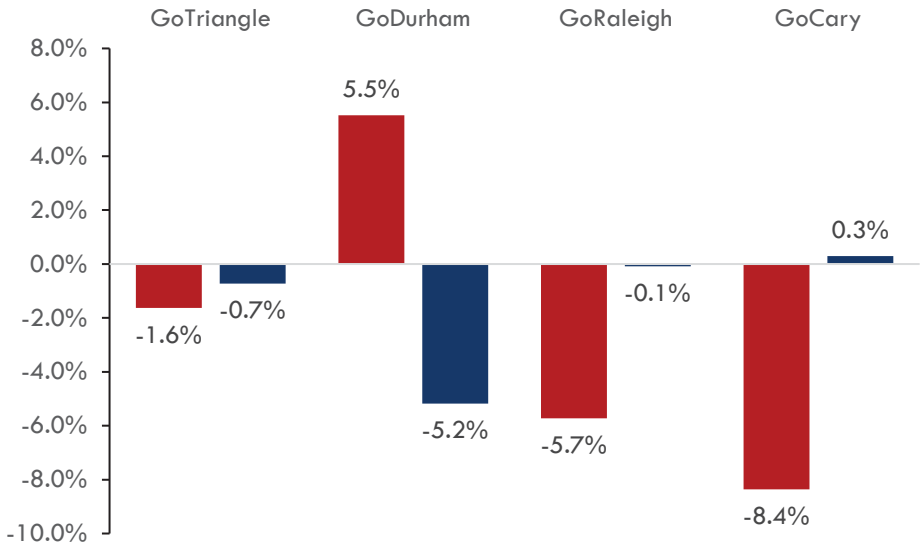


Scenario 8: Offer a Low-Income Fare Category and a General Fare Increase

Pairing a low-income fare category with a general fare increase can help offset some lost revenue, but would also reduce ridership. Building from Scenario 7a, which would establish a low-income fare category at 200% of the federal poverty line, Scenario 8 would increase all base fares by $0.25 and provide 50% discounts for low-income passengers.

Overall, Scenario 8 would result in a 2.5% decrease in ridership and a 1% decrease in revenue. Agency-specific ridership and revenue impacts are shown in Figure 4-15. GoDurham is the only agency with a revenue increase in this scenario. The ridership impacts for GoTriangle, GoRaleigh, and GoCary are generally small; however, GoDurham ridership is projected to decrease by 5.2%.

Figure 4-15 Ridership and Revenue Impacts For a Low-Income Fare Category and General Fare Increase



INITIAL FARE SCENARIO RESULTS

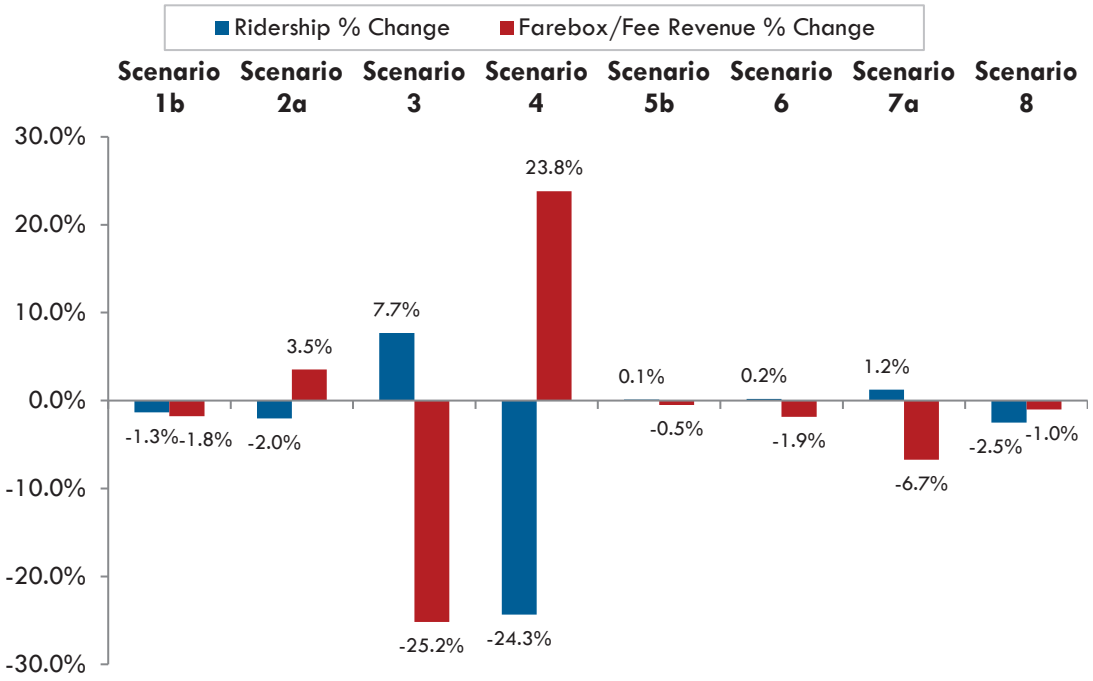
The relative ridership and revenue changes region-wide for each scenario are shown in Figure 4-16 and Figure 4-17. The fare structure and resulting ridership and revenue impacts for each scenario are described in further detail below.

- Scenario 1b, which proposes charging all passengers the same flat fare of $1.25 and a discounted rate of $0.50, regardless of local, regional, or express service type, resulted in small ridership and revenue decreases (less than 2% each).
- Scenario 2a, which proposes a tiered fare structure in which fares for regional and express service are set at $2.50 and local fares are aligned at $1.25, resulted in a relatively small ridership decrease of 2% and a 3.5% revenue increase.
- Scenario 3 reduced fares to maximize ridership and resulted in a 7.7% increase in ridership with a 25.2% revenue loss. This scenario represents the theoretical maximum ridership increase.
- Scenario 4 increased fares to maximize farebox recovery and resulted in a revenue increase of 23.8% with a 24.3% revenue loss. This scenario represents the theoretical maximum revenue increase.
- Scenario 5b, which aligned regional discount policies in order to provide free service to youth under the age of 18 and seniors over the age of 65 and discounted service to people with disabilities, resulted in very small changes to ridership (0.1% increase) and revenue (0.5% decrease).
- Scenario 6 offers fare capping after passengers purchase two trips in one day and 32 trips in one month. This scenario resulted in a small ridership increase of 0.2% and a revenue decrease of 1.9%.
- Scenario 7a established a low-income fare category set at 200% of the federal poverty line and had the largest revenue decrease, aside from scenario 3. In this scenario, ridership is expected to increase by 1.2% and revenue is expected to decrease by 6.7%.
- Scenario 8 expands on Scenario 7a by coupling the low-income fare program with a general fare increase to offset revenue loss. This scenario assumes the low-income program is set at 200% of the federal poverty line and each agency's base fare is increased by $0.25. This scenario resulted in small ridership and revenue decreases—2.5% and 1%, respectively.

Figure 4-16 Initial Fare Scenarios Ridership and Revenue Change

	Change in Ridership	Ridership % Change	Change in Revenue	Revenue % Change
1. Region-Wide Flat Fare	-154,000	-1.3%	-$141,000	-1.8%
2a. Region-Wide Tiered Fares	-234,000	-2.0%	$279,000	3.5%
3. Optimize Fares to Increase Ridership	887,000	7.7%	-$1,994,000	-25.2%
4. Maximize Farebox Recovery	-2,815,000	-24.3%	$1,887,000	23.8%
5b. Align Discount Fare Policies	11,000	0.1%	-$39,000	-0.5%
6. Offer Fare Capping	23,000	0.2%	-$147,000	-1.9%
7a. Offer Low-Income Fare Category	143,000	1.2%	-$533,000	-6.7%
8 Offer Low-Income Fare Category with General Fare Increase	-289,000	-2.5%	-$81,000	-1.0%

Figure 4-17 Initial Fare Scenarios Ridership and Revenue Percent Change



5 Recommendations

This chapter culminates the findings from the existing conditions analysis, peer review and best practices, and fare modeling effort to establish a set of fare policy, pricing, and product recommendations for the Wake-Durham region. The following fare recommendations incorporate results from reviewing national best practices, evaluation of fare scenarios, and refining concepts with the Fare Working Group.

The recommendations in this section are divided into two categories:

- **Fare Structure Recommendations**: Recommendations to specific fare products offered to the riding public and pricing of those products.
- **Fare Policy Recommendations:** Recommendations related to internally-adopted policies or procedures such as fare collection, as well as revised or new fare policies such as fare capping, mobile ticketing, and pass sales.

Additionally, it is anticipated that recommendations from this study will be implemented in two phases:

- **Phase 1: Fare structure, discount policies, and pricing should be aligned across the region.** Beginning in the Summer of 2019, it is recommended that the region implement a tiered fare structure ($1.25/$2.50) with consistent discount policies.
- **Phase 2: Fare capping, smartcards, and mobile ticketing should be pursued in early 2020.** After the fare structure and discount policies are aligned, the region should pursue the implementation and integration of mobile ticketing, fare capping, and smartcards.

FARE STRUCTURE RECOMMENDATIONS

The recommended fare structure is provided in Figure 5-1. The recommended fare structure takes into account experience across the transit industry, fare study goals, as well as fare pricing at peer agencies. To improve regional coordination between the four agencies, it is recommended that fares, pass options, and discount policies are all made consistent. The recommended approach would be to establish a tiered regional fare structure with aligned discount policies, consistent pass options, and fare capping.

The recommended fare structure and discount policies are proposed for implementation in Summer 2019. The recommended fare structure incorporates the following:

- **Discount Policies:**
  - Youth 12 and Under – Free
  - Youth 13 to 18 – Free with Youth Go Pass, otherwise 50% discount
  - Seniors 65 and Older – Free
  - People with disabilities – 50% discount
- **Pass Options:**
  - Day Pass
  - 7-Day Pass
  - 31-Day Pass
- **Paratransit:**
  - Fare twice base fare ($2.50/$5.00)
  - Offer 11-ticket booklet for the price of 10 ($25.00/$50.00)
- **Fare Capping (to be implemented in early 2020):**
  - Fares would be capped after purchasing two rides in one day and 32 rides in one month

To improve consistency throughout the regional agencies, it is recommended that GoDurham eliminate 5-day passes, all agencies adopt a 15% discount for day pass bundles, and all agencies continue allowing magnetic stored value cards as an additional fare media option for passengers.

Figure 5-1 Recommended Regional Fare Structure

Fares/Multipliers	Local	Regional/ Express
Base	$1.25	$2.50
Day Pass	$2.50	$5.00
7-Day Pass	$12.00	$24.00
31-Day Pass	$40.00	$80.00
Base Discount	$0.60	$1.25
Discount Day Pass	$1.25	$2.50
Discount 7-Day Pass	$6.00	$12.00
Discount 31-Day Pass	$20.00	$40.00

Ridership and Revenue Impacts

As discussed in Chapter 4, consumption of transit—like other goods and services—reacts to cost. Significant research over time has examined the sensitivity of transit ridership to fare increases. In transit, the standard measurement of sensitivity to fare changes means that for every 10% increase in fares, ridership will decrease by 3% (and vice-versa). As such, elasticity factors are common in fare modeling and can help determine anticipated ridership and revenue changes from the proposed fare increase or decrease, and the fare modeling effort conducted as part of this study helped identify anticipated impacts of the suggested fare structure.

The ridership and revenue impacts for each agency are shown in Figure 5-2 and Figure 5-3.[1] Region-wide, the recommended scenario would reduce ridership by approximately 240,000 passengers (2.1%) and increase revenue by approximately $94,000 (1.2%).

- Impacts to GoTriangle are relatively small, with ridership decreasing by 9,000 passengers (0.6%) and revenue decreasing by $11,000 (0.6%).
- Impacts to GoDurham are much larger, including a ridership decrease of 247,000 (4.7%) and a revenue increase of $192,000 (7.3%) as a result of an increase to the existing base fare.
- GoRaleigh ridership would increase by 11,000 (0.2%) passengers and revenue would decrease by $55,000 (1.7%).
- The impacts to GoCary are significant as a percentage, but the absolute numbers appear less severe. Ridership would increase by 5,000 (2.5%) and revenue would decrease by $31,000 (18.6%).

The farebox recovery rate for each agency is shown in Figure 5-4. Region-wide, the recommended scenario would have a small impact on farebox recovery rates, increasing by 0.2%; however, there are more significant impacts for individual agencies. GoDurham is the only agency to improve farebox recovery, increasing from 15.9% to 17.1%. GoTriangle's farebox recovery rate would decrease very slightly (0.1%), GoRaleigh would decrease by 0.3%, and GoCary would have a more significant decrease (1.7%).

[1] Since the Youth GoPass was implemented prior to completion of this study, no impacts were assumed related to this fare product.

Figure 5-2 Total Ridership and Revenue Impacts of Recommended Fare Structure

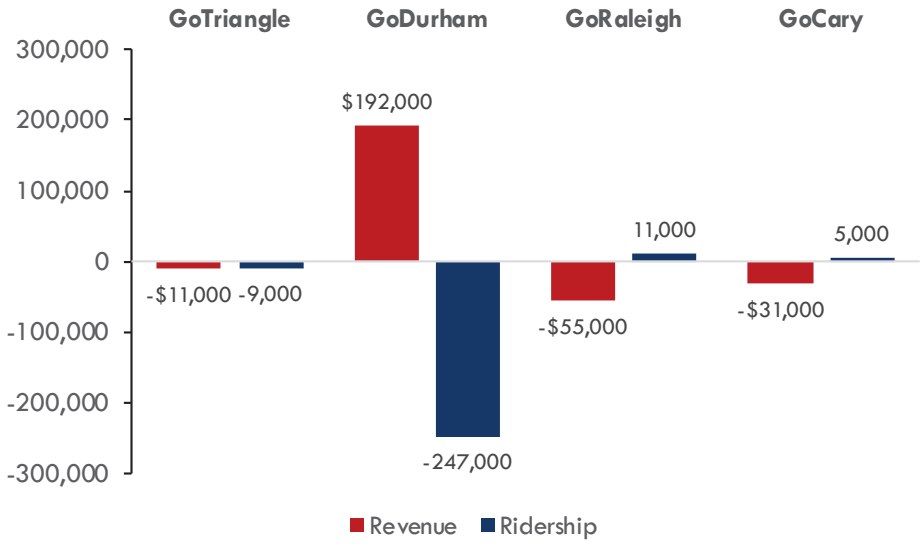


Figure 5-3 Percent Ridership and Revenue Impacts of Recommended Fare Structure

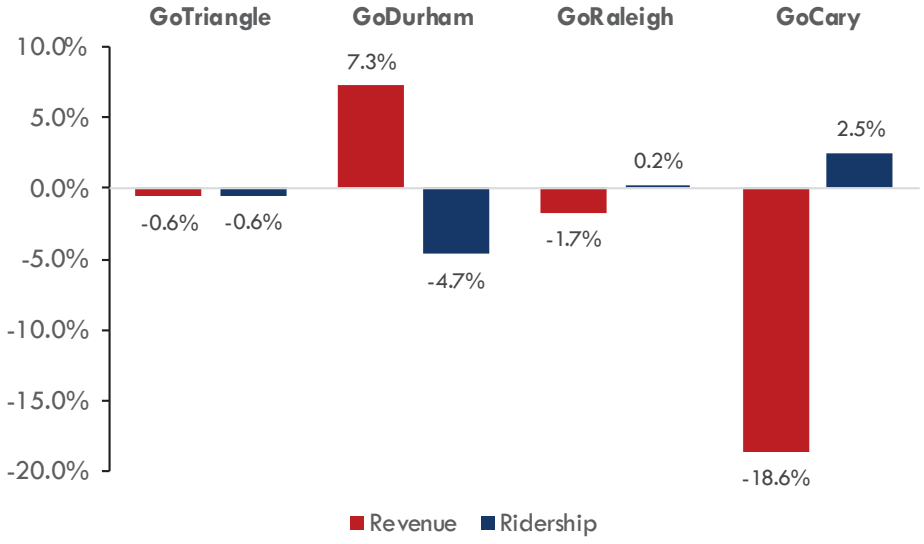
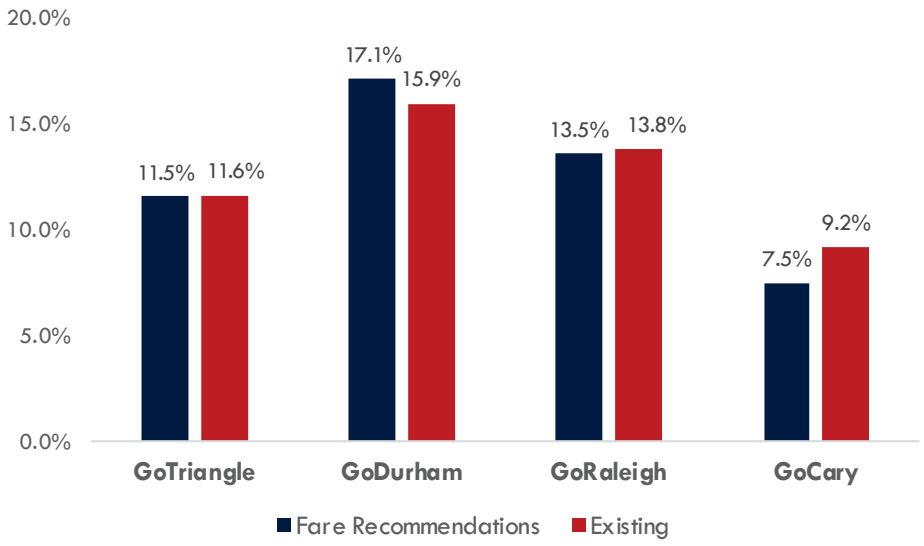


Figure 5-4 Farebox Recovery Rate Impacts of Recommended Fare Structure



POLICY RECOMMENDATIONS

Phase 1 Policy Recommendations

In conjunction with fare structure recommendations, several policy recommendations are also suggested for implementation in summer 2019.

Establish Pass Sales Agreement and Standardized Discount Policies

There is an opportunity to formalize and expand third-party retail sales of passes by establishing pass sales agreements. This would allow the agencies to standardize retailer and social service agency discount policies region-wide. It is also recommended that all pass types be made available in all locations, with the exception of day passes, which would be the only pass offered onboard. Improving availability of passes improves the rider experience, raises visibility of the agencies, and further facilitates regional integration.

Expand GoPass Program

There are several opportunities to expand and improve the GoPass program including:

- Expand GoPass program to employers of any size
- Offer neighborhood pass option for passengers without an employer GoPass
- Consider implementing tiered pricing structure based on employer/neighborhood size

It is recommended that the cost of the GoPass program be based on the number of trips taken by pass holders and the pre-determined cost per trip. Agreements should be formalized with a contract to ensure that agencies are adequately reimbursed for ridership. At the same time, the partner entity can be confident that they benefit from the relationship through improved access to service for employees and discounted rates associated with a pre-paid fare. Agencies should consider the following in developing pricing structures and contracts:

- **Discounted per trip rates:** Programs like GoPass almost always offer a discounted trip rate. The amount of the discount must balance the benefit of a large, bulk purchase with the actual cost of providing the service.
- **Actual trips taken by bulk pass holders:** The number of trips taken together with the fare determines the cost of the program, and thus agreement on how the number of trips taken is measured is critical. Depending on the type of fare collection system used by a transit agency, pass usage may be easily measured at the farebox. In other cases, trip levels can be measured through surveys.
- **Escalation rates:** Programs like GoPass are nearly always effective in increasing transit ridership. Consequently, program costs can increase substantially over time. Transit agencies and universities often negotiate escalation rates to ensure program cost increases are manageable for end users, especially in the early years of the program. Contracts should allow for periodic adjustment of pricing according to changes in ridership, operating cost, and level of service provided.
- **Program marketing:** For these types of programs to be successful, they must be successfully marketed. Marketing should capitalize on the cost benefits to riders and the environmental benefits associated with the program and should include information about how to use transit and/or other transportation programs.

Establish Formal Guidelines for Fare Adjustments

Several factors need to be considered when raising fares, ranging from how fares are perceived by the transit-riding public, whether they are in line with peer agencies, to what is the appropriate ratio between passenger fares and operating costs. In the future, the Wake-Durham region should consider a transparent fare increase policy that enables more regular fare increases to stay in line with inflation and other revenue related trends.

The following guidelines are provided for each agency's consideration:

- On an annual basis, the average fare, subsidy per passenger, and farebox recovery ratio should be reviewed when developing the annual operating budget. If all three ratios are declining and costs to operate the service are increasing, consider a fare adjustment.
- The local consumer price index should be monitored; if increases are greater than 5% in any given year, consider increasing fares to keep pace with inflation.
- Monitor and track use of all passes and if there is a significant drop in sales with any fare product, consider a fare adjustment for that product. Similar to underperforming routes, underperforming fare products should be evaluated for adjustments or elimination.
- For all future fare increases, pass product prices should be rounded to the nearest dollar. Single-ride prices and/or day pass products should be rounded to the nearest quarter.
- Across-the-board fare increases are simple and transparent, but will often create disproportionate impacts. These types of fare increases should be avoided unless supported by evidence that the strategy meets specific goals at the time of evaluation.
- Services that offer a competitive time or comfort advantage over vehicle or transit alternatives should be priced at a higher level to differentiate the product.

These guidelines assume that service levels would remain constant. Fare increases paired with service level increases may be warranted assuming support exists for both. Fare increases paired with service cuts should be avoided when possible.

Establish Region-wide Discount ID

Along with aligning regional discount policies, standardizing acceptable discount IDs would facilitate additional regional integration. Each agency is currently issuing some form of discount ID; however, this policy recommends developing and issuing one standardized ID that would be accepted by all agencies. Additional policies could be established for accepting other forms of ID (e.g., Medicare card).

Phase 2 Policy Recommendations

Additional policy recommendations are suggested for implementation in early 2020, after the short-term recommendations are in effect, as well as to allow each agency adequate time for procurement of fare technology and farebox upgrades.

Pursue Mobile Ticketing

Mobile ticketing (payment using a smartphone) offers an increase in customer convenience over paper or smartcard payment, as well as potential operational savings. Smartphone payments eliminate the need for customers to procure and carry a physical fare payment media, may reduce delay in fare payment (by reducing cash in the system), and reduce the volume of passes that must be processed by the farebox (potentially lowering maintenance costs).

In this day and age of nearly ubiquitous smartphone adoption, mobile ticketing can make booking and paying for transit a seamless experience for many riders and help lower the barrier of entry for new transit users. However, while digital options like mobile ticketing are an easy option for some riders, it can be intimidating or a non-option for others. Thus, it is recommended that agencies in the Wake-Durham region continue to offer traditional ticketing options to accommodate all riders—particularly those with disabilities, older adults, and low-income residents without smartphones.

Pursue Fare Capping

As discussed in Chapter 3, fare capping is an emerging trend with benefits including increased affordability of passes, increased fare equity, and increased simplicity. Fare capping is particularly beneficial for low-income riders who may not have the cash on hand to purchase a 31-day pass and end up paying more in cash fares over the course of the month. Fare capping can be introduced through electronic smartcards, which track fare payments through an internal database, or through mobile ticketing, which tracks fare payments and automatically provides riders a pass once the payment threshold has been reached.

Implementing fare capping in conjunction with mobile ticketing and/or smartcards is recommended to improve the affordability of transit service for riders.

Consider Implementation of Smartcards

Investing in smartcard infrastructure is costly, but improves the customer experience and available pass options. Transitioning to smartcards would require upgrading the farebox infrastructure on buses throughout the region and ensuring regional coordination on fare products and accounting to accommodate interagency transfers. While mobile ticketing could provide a number of these benefits at a reduced cost, electronic smart cards are common among peer agencies and should continue to be explored for implementation in early 2020 to provide additional rider benefits and maintain regional competitiveness.

FARE RECOMMENDATIONS SUMMARY

Fare recommendations for GoCary, GoDurham, GoRaleigh, and GoTriangle are comprised of fare structure changes and policy recommendations. The first phase of implementation is anticipated to occur in Summer 2019, with additional recommendations anticipated for implementation in early 2020. Figure 5-5 provides a summary of recommendations developed as part of the Fare Integration Study.

Figure 5-5 Fare Recommendations Summary

Type	Recommendation
Fare Structure Recommendations (Implementation in Summer 2019)	▪ Implement two-tiered region-wide fare structure with a local base fare of $1.25 and regional/express base fare of $2.50 ▪ Offer consistent discounts/categories – Youth 12 and Under – Free – Youth 13 to 18 – Free with Youth GoPass, otherwise 50% discount – Seniors 65+ – Free – People with Disabilities – 50% discount ▪ Offer $2.50/$5.00 paratransit base fare ▪ Provide consistent products/discounts – Offer 15% discount for Day Pass bundles – Continue to offer Value Cards – Eliminate GoDurham 5-Day Pass – Sell only Day Passes on-board
Phase 1 Policy Recommendations (Implementation in Summer 2019)	▪ Establish pass sales agreement and discount guidelines ▪ Pursue new sales partnerships ▪ Expand GoPass program ▪ Establish guidelines for fare adjustments ▪ Implement region-wide discount ID
Phase 2 Policy Recommendations (Implementation in Early 2020)	▪ Pursue mobile ticketing ▪ Pursue fare capping ▪ Consider implementation of smartcards

Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees

FROM: Finance & Administrative Services

DATE: February 13, 2019

SUBJECT: **Wake Transit FY 2019 Q3 Proposed Amendment**

Strategic Objective or Initiative Supported

Implement the wake transit plan with transit planning advisory committee.

Action Requested

Staff requests that the Board approve the Wake Transit FY19 Q3 amendments.

Background and Purpose

Four (4) amendments have been submitted for approval. Three (3) major amendments and one (1) minor amendment. The amendments are listed below:

Major Amendment – 3 Amendments

1. Commuter Rail Environmental Planner
2. Commuter Rail Manager of Rail Design
3. Multi-Year Bus Service Implementation Plan and Community Funding Area Program Management Plan

Minor Amendment – 1 Amendment

4. Sunday Service (TO004-A)

As a part of the packet presented with this memorandum, the committee will find:

- Memorandum from TPAC Administrator
- Proposed FY 2019 Q3 Amendment List
- Detailed Individual Project Amendment Request
- TPAC Budget & Finance committee Disposition Memo & Table Summary

PO Box 13787
Research Triangle Park, NC 27709
P: 919.485.7510 | F: 919.485.7547

www.gotriangle.org

Financial Impact

The proposed amendments, if approved, will increase the FY19 Wake Transit Work Plan by $352,000 compared to the FY19 adopted budget.

Attachments

- Ordinance 2019 0002 (Capital)
- Ordinance 2019 0003 (Operating)
- TPAC FY 2019 Q3 Amendment Packet

Staff Contacts

- Steven Schlossberg, (919) 485-7590, sschlossberg@gotriangle.org
- Saundra Freeman, (919) 485-7415, sfreeman@gotriangle.org

2019 0002

GOTRIANGLE
FISCAL YEAR 2019
TRIANGLE TAX DISTRICT - WAKE CAPITAL FUND BUDGET ORDINANCE AMENDMENT

BE IT ORDAINED by the Research Triangle Regional Public Transportation Authority Board of Trustees, that pursuant to section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following project ordinance is hereby adopted:

Section 1. It is estimated that the following revenues will be available in the **Triangle Tax District - Wake Capital Fund** for the fiscal year beginning July 1, 2018, and ending June 30, 2019:

	Original	Amended
Transfer from Wake Operating	$82,933,570	$ 82,631,520
Total	**$ 82,933,570**	**$ 82,631,520**

Section 2. The following amounts hereby are appropriated in the **Triangle Tax District - Wake Capital Fund** for the fiscal year beginning July 1, 2018, and ending June 30, 2019:

Capital Planning	Original	Amended
GoTriangle	$ 597,333	$ 597,333
City of Raleigh	350,000	350,000
Commuter Rail Transit	0	0
GoTriangle	333,333	333,333
Reserve	1,363,038	1,363,038
Bus Rapid Transit	0	0
City of Raleigh	2,955,545	2,955,545
Bus Infrastructure	0	0
GoTriangle	2,930,624	2,930,624
City of Raleigh	1,905,000	1,905,000
Town of Cary	3,316,000	3,316,000
Bus Acquisition	0	0
GoTriangle	5,000,000	5,000,000
City of Raleigh	13,642,136	13,642,136
Reserve	1,200,000	1,200,000
Allocation to Wake Capital Fund Balance	49,340,561	49,038,511
Total	**$ 82,933,570**	**$ 82,631,520**

Section 3. The GoTriangle General Manager, or his or her designee, is hereby authorized to transfer funds within appropriations under the following conditions:

A) No transfer may be made that changes the adopted allocations to fund balance.
B) All budget transfers will be reported to the Transit Planning Advisory Committee.
C) All increases to an appropriation, and all transfers between appropriations, must be reviewed by the Transit Planning Advisory Committee and approved by the CAMPO and GoTriangle governing boards.

Section 4: Triangle Tax District – Wake Capital Funds are appropriated pursuant to section 13.2 of Chapter 159 of the General Statutes of North Carolina; therefore, appropriations do not lapse at the end of the fiscal year and are available for duration of the project unless subsequently recommended for reallocation by the Transit Planning Advisory Committee and approved by the CAMPO and GoTriangle governing boards, or as specified in Section 5.

Section 5: GoTriangle Finance Department has authority to close projects and/or programs and reduce appropriations upon notification of project completion by the project sponsor. When actual revenues are available in projects to be closed or which are substantially complete, GoTriangle Finance may transfer savings to Triangle Tax District Wake Capital fund balance. These funds will be then available for future appropriations which require recommendation by the Transit Planning Advisory Committee and approval by the CAMPO and GoTriangle governing boards. This section applies to current and prior year appropriations. A list of project closeouts shall be provided quarterly to the Transit Planning Advisory Committee.

Section 6. Copies of the Budget Ordinance shall be furnished to the Clerk, to the Board of Trustees, to the Finance Officer, and to the Budget Officer of this Authority to be kept on file for their direction in the disbursement of funds. Copies shall also be furnished to representatives of the Agencies under Section 2. The Budget Ordinance shall be entered into the Board minutes.

ADOPTED THIS 27th DAY OF FEBRUARY 2019.

_____
Ellen Reckhow, Board of Trustees Chair

ATTEST:

_____
Michelle C. Dawson, Clerk to the Board

2019 0003

GOTRIANGLE
FISCAL YEAR 2019
TRIANGLE TAX DISTRICT -- WAKE OPERATING FUND BUDGET ORDINANCE AMENDMENT

BE IT ORDAINED by the Research Triangle Regional Public Transportation Authority Board of Trustees:

Section 1. It is estimated that the following revenues will be available in the **Triangle Tax District - Wake Operating Fund** for the fiscal year beginning July 1, 2018, and ending June 30, 2019:

Article 43 ½ Cent Local Option Sales Tax	$ 86,684,000
Vehicle Rental Tax	4,147,000
$7.00 Vehicle Registration Tax	6,197,000
$3.00 Vehicle Registration Tax (Transfer from Wake Tax District)	2,604,000
Farebox	942,000
Total	**$100,574,000**

Section 2. The following amounts hereby are appropriated in the **Triangle Tax District - Wake Operating Fund** for the fiscal year beginning July 1, 2018, and ending June 30, 2019:

	Original	**Amended**
Tax District Administration (GoTriangle)	$ 411,094	$ 411,094
Transit Plan Administration		
GoTriangle	1,739,983	2,042,033
Capital Area Metropolitan Planning Organization (CAMPO)	553,750	553,750
City of Raleigh	966,250	966,250
Town of Cary	597,379	597,379
Bus Operations		
GoTriangle	2,226,419	2,226,419
City of Raleigh	7,477,875	7,477,875
Town of Cary	1,549,546	1,549,546
Wake County	283,280	283,280
Town of Wendell	4,200	4,200
Town of Zebulon	5,654	5,654
Allocation to Wake Operating Fund Balance	1,825,000	1,825,000
Transfer to Triangle Tax District – Wake Capital	82,933,570	82,631,520
Total	**$100,574,000**	**$100,574,000**

Section 3. The GoTriangle President and CEO, or his or her designee, is hereby authorized to transfer funds within appropriations under the following conditions:

A) No transfer may be made that changes the adopted allocations to fund balance.
B) All budget transfers will be reported to the Transit Planning Advisory Committee.
C) All increases to an appropriation, and all transfers between appropriations, must be reviewed by the Transit Planning Advisory Committee and approved by the CAMPO and GoTriangle governing boards.

Section 4. Triangle Tax District Wake Operating funds encumbered as of June 30, 2018, by GoTriangle as the Tax District Administrator are hereby appropriated to this budget.

Section 5. Copies of the Budget Ordinance shall be furnished to the Clerk, to the Board of Trustees, to the Finance Officer, and to the Budget Officer of this Authority to be kept on file for their direction in the disbursement of funds. Copies shall also be furnished to representatives of the Agencies under Section 2. The Budget Ordinance shall be entered into the Board minutes.

ADOPTED THIS 27th DAY OF FEBRUARY 2019.

_____
Ellen Reckhow, Board of Trustees Chair

ATTEST:

_____
Michelle C. Dawson, Clerk to the Board

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT
WAKE COUNTY

From: Bret Martin, Wake Transit Program Manager, Capital Area MPO

To: Wake County Transit Planning Advisory Committee (TPAC)

Date: 1/14/2019

Re: Summary of Requested FY 2019, 3rd Quarter Work Plan Amendments

Four (4) amendments to the Fiscal Year (FY) 2019 Wake Transit Work Plan have been submitted for consideration of approval in the 3rd quarter of FY 2019. The four (4) amendment requests were each reviewed by CAMPO staff to determine their appropriate amendment type classifications (major versus minor) as outlined in the Wake Transit Work Plan Amendment Policy. Technical information related to the requests' portrayals as amendments were also reviewed.

There was one (1) Major Amendment requests submitted involving Projects TO002-G and TO002-K (Multi-Year Bus Service Implementation Plan and Community Funding Area Program Management Plan). There were two (2) Major Amendment requests for two new staffing projects. Reasons for these amendments based on criteria outlined in the adopted amendment policy are:

- Amendment requests as proposed would require a change in budgeted reserves or fund balance (all requested Major Amendments);
- Amendment request involves a significant change in scope for the project (Amendment request for Projects TO002-G AND TO002-K); and
- Amendment request is a project requested to be added to the Work Plan (Amendment requests for two staffing projects).

There was one (1) Minor Amendment submitted involving Project TO004-A (GoCary Sunday Service on All Routes, Expanded Paratransit & Holiday Hours). The reason for the amendment, based on criteria outlined in the adopted amendment policy, is the amendment request involves a change in scope that does rise to the level of being a Major Amendment.

Both amendment requests were released for public comment on December 19, 2018. The public comment period closed for the Minor Amendment on January 2, 2019. The public comment period for the Major Amendment closes on January 18, 2019. No public comments were received for the Minor Amendment request, and no public comments have been received to date for the Major Amendment request.

Attached to this memorandum are the following:

- Proposed FY 2019 Q3 Amendment List
- Completed Amendment Request Forms
- Joint Budget & Finance/Planning and Prioritization Subcommittees Disposition Memo and Voting Record

These requested amendments will be considered for recommendation of approval to the Wake Transit governing boards by the TPAC at its January 22nd meeting.

FY 2019, Quarter 3, Requested Wake Transit Work Plan Amendments

Requested Major Amendments

Project ID #	Agency	Project Title	FY18 Original Funding Allocation	FY19 Original Funding Allocation	FY19 Requested Funding Allocation	FY19 Funding Impact	Reason for Major/Minor Amendment Status
Transit Plan Administration							
TBD	GoTriangle	FTE for Commuter Rail Environmental Planner	$ -	$ -	$ 75,000.00	$ 75,000.00	1) Project requested to be added to the Work Plan AND 2) Requires a change in budgeted reserves or fund balance
TBD	GoTriangle	FTE for Manager of Commuter Rail Design	$ -	$ -	$ 75,000.00	$ 75,000.00	1) Project requested to be added to the Work Plan AND 2) Requires a change in budgeted reserves or fund balance
TO002-G and TO002-K (FY 2018 Work Plan projects)	GoTriangle/ CAMPO	Multi-Year Bus Service Implementation Plan (TO002-G) and Community Funding Area Program Management Plan (TO002-K)	$ 1,467,000.00	$ 500,000.00	$ 702,000.00	$ 202,000.00	1) Requires a change in budgeted reserves or fund balance **AND** 2) Is a significant change in scope of a project

Requested Minor Amendment

Bus Operations							
TO004-A	Town of Cary	Sunday Service All Routes, Expanded Paratransit & Holiday Hours	$ 476,182.00	$ 575,285.00	$ 575,285.00	$ -	Any change that does not meet any of the criteria of a major amendment - Project scope change does not rise to the level of being significant. Project scope changing from Sunday service on all GoCary routes in existence in FY 2018, which originally included Routes 1 and 2 (Maynard Loop routes), to Sunday Service on all GoCary routes with a new Crossroads Plaza route replacing Routes 1 and 2.

FY 2019 Original Funding Allocation Amount for Project TO002-G is amount encumbered from FY 2018 to carry over to FY 2019
Distributed for Public Comment - 12/19/2018
Major Amendment - Public Comments Accepted through January 18, 2019
Minor Amendment - Public Comments Accepted through January 2, 2019
Submit all comments to Bret Martin, Wake Transit Program Manager - Bret.Martin@campo-nc.us or 919-996-4410

Wake Transit Project ID #
TBD

FY 2019
Wake Transit Work Plan
Project Amendment Request Form
Operating and/or Capital

FY START DATE
1/1/2019

Type of Amendment **Minor** ☐ **Major** ☑

Minor amendment – Required when there is:
Less than a 20% change to budget appropriations for projects equal to or over $500,000.
Less than $100,000 to a budget ordinance appropriation for projects less than $500,000.
Any change that does not meet any criteria of a major amendment.

Major amendment - Required when there is:
A project requested to be added to the Work Plan
A project requested to be removed from the Work Plan
A cardinal change in scope as defined by the Federal Transit Administration
A transfer between budget ordinance appropriations that requests or requires equal to or more than a 20% change to a budget appropriation for projects equal to or over $500,000
A transfer between budget ordinance appropriations that requests or requires equal to or more than a $100,000 change to a budget appropriation for projects less than $500,000
Any change that requires a change in budgeted reserves or fund balance

New/Amended Project Name	Requesting Agency	Project Contact	Estimated Operating Cost	
TBD	GoTriangle	Jeff Mann	Base Year	$ 75,000
		jmann@gotriangle.org	Recurring	$ 958,161
Estimated Start Date	**Estimated Completion**	**Notes**	**Estimated Capital Cost**	
1/1/2019	6/30/2019	Requested position is associated with the Project Management Approach Document for the Greater Triangle Commuter Rail	Base Year	$ -
			Cumulative	$ -

Project Description	Enter below a summary of the project amendment and impact on approved plan.

In preparation for the Project Development application and movement into the New Starts program with a Commuter Rail project the project team must complete the NEPA process within 24 months. To accomplish this goal, an Environmental Planner dedicated to Commuter Rail will be needed. This position will report to the current GoTriangle lead Environmental Planner. Recruitment for this position should take place in early 2019 to meet the desired deadlines.

1. Enter Wake Transit Project ID(s) to Increase

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
NEW	Commuter Rail Environmental Planner	Transit Plan Administration	$ 75,000	$ 150,000	The Greater Triangle Commuter Rail Project - Project Management Approach highlighted three (3) positions that are critical for the early stages of the Commuter Rail. The CRT Environmental Planner is included as one of the three positions.
TOTAL			**$ 75,000**	**$ 150,000**	

2. Wake Transit Project ID(s) to Reduce

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
			$ -		
TOTAL			**$ -**	**$ -**	

3. Impact on Transit Plan Project Costs

From above, indicate whether amounts impact operating or capital budgets in Wake Transit Plan.	Estimated Operating Cost	Current Year	$ -
		Recurring	$ -
	Estimated Capital Cost	Base Year	$ -
		Cumulative	$ -

Project Justification / Business Case	Provide responses to ***EACH*** of the questions below. Answer the questions as fully as possible. Enter Non-Applicable (N/A) as appropriate.

4. Is this New/Amended project Operating, Capital or Both? **Operating** ☑ **Capital** ☐ **Both** ☐

5. What is the timeframe for the request? Are you requesting a full year of funds or a partial year to be annualized in future fiscal years?

Partial Funds for FY19 and Full funds for future years

6. What is the expected outcome(s) if this request is funded? What is the alternative if the request is not funded?

Requested funds will allow the Commuter Rail project to proceed towards meeting the deadlines and goals outlined in the program management plan.

7. List below the Key Performance Indicators (deliverables) while this project is in progress. These performance measures will be reported quarterly. Are these the same measures as currently being reported?

a) Status of Hire

8. List any other relevant information not addressed.

9. Please enter estimated appropriations to support expenses identified above. Enter FY 2018 and the estimated annualized cost in FY 2019 using the 2.5% growth factor, if applicable. The spreadsheet will calculate 2020 and beyond by 2.5%. If your project is not expected to have recurring costs in FY 2020 and/or beyond, delete the calculation(s) in columns E-H.

Cost Break Down of Project Request							
OPERATING COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Growth Factors		**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**
Salary & Fringes	75,000	150,000	153,750	157,594	161,534	165,572	169,711
Contracts			-	-	-	-	-
Bus Operations:							
Estimated Hours			-	-	-	-	-
Cost per Hour			-	-	-	-	-
Estimated Operating Cost	-	-	-	-	-	-	-
Bus Leases			-	-	-	-	-
Park & Ride Lease			-	-	-	-	-
Other			-	-	-	-	-
Other			-	-	-	-	-
Subtotal: Bus Operations	-	-	-	-	-	-	-
Other: Administrative	-	-	-	-	-	-	-
Other: Database Hosting			-	-	-	-	-
Other: Supplies and Materials			-	-	-	-	-
TOTAL OPERATING COSTS	**75,000**	**150,000**	**153,750**	**157,594**	**161,534**	**165,572**	**169,711**

10. Please enter estimated appropriations to support contractual commitments and other expenses related to proposed capital projects identified above.

CAPITAL COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Design and/or Construction	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-
Land - Right of Way	-	-	-	-	-	-	-
TOTAL CAPITAL COSTS	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Assumptions for Costs and Revenues Above:

11. Please state any assumption(s) used to calculate the capital and operating dollars and revenues shown above.

The above FY19 assumes half-year hire of Salary, Benefits and Expenses.

Wake Transit Project ID #
TBD

FY 2019
Wake Transit Work Plan
Project Amendment Request Form
Operating and/or Capital

FY START DATE
1/1/2019

Type of Amendment **Minor** ☐ **Major** ☑

Minor amendment – Required when there is:
Less than a 20% change to budget appropriations for projects equal to or over $500,000.
Less than $100,000 to a budget ordinance appropriation for projects less than $500,000.
Any change that does not meet any criteria of a major amendment.

Major amendment - Required when there is:
A project requested to be added to the Work Plan
A project requested to be removed from the Work Plan
A cardinal change in scope as defined by the Federal Transit Administration
A transfer between budget ordinance appropriations that requests or requires equal to or more than a 20% change to a budget appropriation for projects equal to or over $500,000
A transfer between budget ordinance appropriations that requests or requires equal to or more than a $100,000 change to a budget appropriation for projects less than $500,000
Any change that requires a change in budgeted reserves or fund balance

New/Amended Project Name	Requesting Agency	Project Contact	Estimated Operating Cost	
TBD	GoTriangle	Jeff Mann	Base Year	$ 75,000
		jmann@gotriangle.org	Recurring	$ 958,161
Estimated Start Date	**Estimated Completion**	**Notes**	**Estimated Capital Cost**	
1/1/2019	6/30/2019	Requested position is associated with the Project Management Approach Document for the Greater Triangle Commuter Rail	Base Year	$ -
			Cumulative	$ -

Project Description **Enter below a summary of the project amendment and impact on approved plan.**

In preparation for entering Project Development, the Manager of Rail Design in consultation and collaboration with the project team, will manage the day-to-day work of the consultant team to progress the overall design, including establishing the technical working groups that will assist in moving the project forward. Recruitment for this position should take place in early 2019 to meet the desired deadlines.

1. Enter Wake Transit Project ID(s) to Increase

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
NEW	Commuter Rail Manager of Rail Design	Transit Plan Administration	$ 75,000	$ 150,000	The Greater Triangle Commuter Rail Project - Project Management Approach highlighted three (3) positions that are critical for the early stages of the Commuter Rail. The CRT Design Manager is included as one of the three positions.
TOTAL			**$ 75,000**	**$ 150,000**	

2. Wake Transit Project ID(s) to Reduce

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
				$ -	
TOTAL			**$ -**	**$ -**	

3. Impact on Transit Plan Project Costs

From above, indicate whether amounts impact operating or capital budgets in Wake Transit Plan.	**Estimated Operating Cost**	Current Year	$ 75,000
		Recurring	$ 150,000
	Estimated Capital Cost	Base Year	$ -
		Cumulative	$ -

Project Justification / Business Case	Provide responses to ***EACH*** of the questions below. Answer the questions as fully as possible. Enter Non-Applicable (N/A) as appropriate.

4. Is this New/Amended project Operating, Capital or Both? **Operating** ☑ **Capital** ☐ **Both** ☐

5. What is the timeframe for the request? Are you requesting a full year of funds or a partial year to be annualized in future fiscal years?

Partial Funds for FY19 and Full funds for future years

6. What is the expected outcome(s) if this request is funded? What is the alternative if the request is not funded?

Requested funds will allow the Commuter Rail project to proceed towards meeting the deadlines and goals outlined in the program management plan.

7. List below the Key Performance Indicators (deliverables) while this project is in progress. These performance measures will be reported quarterly. Are these the same measures as currently being reported?

a) Status of Hire

8. List any other relevant information not addressed.

9. Please enter estimated appropriations to support expenses identified above. Enter FY 2018 and the estimated annualized cost in FY 2019 using the 2.5% growth factor, if applicable. The spreadsheet will calculate 2020 and beyond by 2.5%. If your project is not expected to have recurring costs in FY 2020 and/or beyond, delete the calculation(s) in columns E-H.

Cost Break Down of Project Request							
OPERATING COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Growth Factors		**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**
Salary & Fringes (Design Manager)	75,000	150,000	153,750	157,594	161,534	165,572	169,711
Bus Operations:							
Estimated Hours			-	-	-	-	-
Cost per Hour			-	-	-	-	-
Estimated Operating Cost	-	-	-	-	-	-	-
Bus Leases			-	-	-	-	-
Park & Ride Lease			-	-	-	-	-
Other			-	-	-	-	-
Other			-	-	-	-	-
Subtotal: Bus Operations	-	-	-	-	-	-	-
Other: Administrative	-	-	-	-	-	-	-
Other: Database Hosting			-	-	-	-	-
Other: Supplies and Materials			-	-	-	-	-
TOTAL OPERATING COSTS	**75,000**	**150,000**	**153,750**	**157,594**	**161,534**	**165,572**	**169,711**

10. Please enter estimated appropriations to support contractual commitments and other expenses related to proposed capital projects identified above.

CAPITAL COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Design and/or Construction	-	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-
Land - Right of Way	-	-	-	-	-	-	-
TOTAL CAPITAL COSTS	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Assumptions for Costs and Revenues Above:

11. Please state any assumption(s) used to calculate the capital and operating dollars and revenues shown above.

The above FY19 assumes half-year hire of Salary, Benefits and Expenses.

Wake Transit Project ID #
TO002-G and TO002-K (FY 2018 Work Plan Projects)

FY 2019
Wake Transit Work Plan
Project Amendment Request Form
Operating and/or Capital

FY START DATE
7/1/2018

Type of Amendment **Minor** ☐ **Major** ☑

Minor amendment – Required when there is:
A transfer of funds between budget ordinance appropriations but requires less than a 20% change to a project appropriation for projects equal to or greater than $500,000
A transfer of funds between budget ordinance appropriations bus requires less than a $100,000 change to a project appropriation for projects less than $500,000
Any change that does not meet any criteria of a major amendment

Major amendment - Required when there is:
A project requested to be added to the Work Plan
A project requested to be removed from the Work Plan
Significant changes in scope of funded project
A transfer between budget ordinance appropriations that requires equal to or greater than a 20% change to a project appropriation for projects greater than $500,000
A transfer between budget ordinance appropriations that requires equal to or greater than a $100,000 change to a project appropriation for projects less than $500,000
Any change that requires a change in budgeted reserves or fund balance

New/Amended Project Name	Requesting Agency	Project Contact	Estimated Operating Cost	
Multi-Year Bus Service Imeplementation Plan and Community Funding Area Program Management Plan	GoTriangle/CAMPO	Steve Schlossberg, GoTriangle; Bret Martin, CAMPO	Base Year	$ 702,000
		Sschlossberg@gotriangle.org ; bret.martin@campo-nc.us	Recurring	$ -
Estimated Start Date	**Estimated Completion**	**Notes**	**Estimated Capital Cost**	
07/01/2017	06/30/2019		Base Year	$ -
			Cumulative	$ -

Project Description **Enter below a summary of the project amendment and impact on approved plan.**

The requested amendment to two projects included in the FY 2018 Work Plan, for which funding was encumbered to carry over as an appropriation in the FY 2019 Work Plan, can be described as follows: 1) Projects TO002-G ($1,292K) and TO002-K ($175K) for a total of $1,467K should be collapsed into a single line and single project, with the respective scopes of each included as authorized scope for the new single project; 2) Expand scope of new single project to include expenditures for the Wake Transit implementation staffing plan and Wake Transit implementation public engagement policy; and 3) Add $202,000 that should have been encumbered with the $500,000 that was originally encumbered from FY 2018 to FY 2019 for Project TO002-G to bring the total amount of funds appropriated to the new single project to $702,000. The total project cost is expected to actualize at approximately $1,200K compared to an original budget of $1,467K.

1. Enter Wake Transit Project ID(s) to Increase

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
TO002-G	Multi-Year Bus Service Implementation Plan	Transit Plan Admin	$ 702,000	$ -	Requesting increase to amount originally encumbered from FY 2018 to FY 2019. The increase does not require additional funding beyond the amount originally budgeted for the impacted projects. However, it does require an increase above what was encumbered from FY 2018 to FY 2019 for TO002-G.
TOTAL			**$ 702,000**	**$ -**	

2. Wake Transit Project ID(s) to Reduce

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
TOTAL			**$ -**	**$ -**	

3. Impact on Transit Plan Project Costs

From above, indicate whether amounts impact operating or capital budgets in Wake Transit Plan.	**Estimated Operating Cost**	Current Year	$ 702,000
		Recurring	$ -
	Estimated Capital Cost	Base Year	$ -
		Cumulative	$ -

Project Justification / Business Case	Provide responses to ***EACH*** of the questions below. Answer the questions as fully as possible. Enter Non-Applicable (N/A) as appropriate.

4. Is this New/Amended project Operating, Capital or Both? **Operating** ☑ **Capital** ☐ **Both** ☐

5. What is the timeframe for the request? Are you requesting a full year of funds or a partial year to be annualized in future fiscal years?

This request applies to FY 2019 only. The project cost does not recur after FY 2019.

6. What is the expected outcome(s) if this request is funded? What is the alternative if the request is not funded?

The expected outcome is that we will be able to finish paying the consultant responsible for producing the range of on-call transit planning services ordered by the TPAC and contracted by GoTriangle, CAMPO and the City of Raleigh, including the Wake Bus Plan, Community Funding Area Program Management Plan, Staffing Plan, and Public Engagement Policy. If the request is not funded, CAMPO, GoTriangle and City of Raleigh will not be able to meet their contract liability to the consultant. The scope of work for the new project needs to be expanded to include all of the services originally ordered by the TPAC and the three noted clients.

7. List below the Key Performance Indicators (deliverables) while this project is in progress. These performance measures will be reported quarterly. Are these the same measures as currently being reported?

a)	Same as project TO002-G
b)	
c)	

8. List any other relevant information not addressed.

9. Please enter estimated appropriations to support expenses identified above. Enter FY 2018 and the estimated annualized cost in FY 2019 using the 2.5% growth factor, if applicable. The spreadsheet will calculate 2020 and beyond by 2.5%. If your project is not expected to have recurring costs in FY 2020 and/or beyond, delete the calculation(s) in columns E-H.

Cost Break Down of Project Request							
OPERATING COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Growth Factors		**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**
Salary & Fringes			-	-	-	-	-
Contracts	702,000		-	-	-	-	-
Bus Operations:							
Estimated Hours			-	-	-	-	-
Cost per Hour			-	-	-	-	-
Estimated Operating Cost	-	-	-	-	-	-	-
Bus Leases			-	-	-	-	-
Park & Ride Lease			-	-	-	-	-
Other			-	-	-	-	-
Other			-	-	-	-	-
Subtotal: Bus Operations	-	-	-	-	-	-	-
Other: Administrative							
Other: Database Hosting			-	-	-	-	-
Other: Supplies and Materials			-	-	-	-	-
TOTAL OPERATING COSTS	**702,000**	**-**	**-**	**-**	**-**	**-**	**-**

10. Please enter estimated appropriations to support contractual commitments and other expenses related to proposed capital projects identified above.

CAPITAL COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Design/NEPA	$ -	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-
Land - Right of Way	-	-	-	-	-	-	-
TOTAL CAPITAL COSTS	-	-	-	-	-	-	-

Assumptions for Costs and Revenues Above:

11. Please state any assumption(s) used to calculate the capital and operating dollars and revenues shown above.

The additional $202,000 above what was originally encumbered was calculated based on projected remaining contract liability to the consultant. The original $500,000 encumbured was a portion of unspent funds and the desire at the time was to proactively free up operating expense and return to fund balance. The calculation was an estimate at the time and after conversations with the consultant, $702,000 should have been encumbered (compared to $500,000).

Wake Transit Project ID #
TO004-A

FY 2019
Wake Transit Work Plan
Project Amendment Request Form
Operating and/or Capital

FY START DATE
7/1/2018

Type of Amendment **Minor** ☑ **Major** ☐

Minor amendment – Required when there is:
Less than a 20% change to budget appropriations for projects equal to or over $500,000.
Less than $100,000 to a budget ordinance appropriation for projects less than $500,000.
Any change that does not meet any criteria of a major amendment.

Major amendment - Required when there is:
A project requested to be added to the Work Plan
A project requested to be removed from the Work Plan
A cardinal change in scope as defined by the Federal Transit Administration
A transfer between budget ordinance appropriations that requests or requires equal to or more than a 20% change to a budget appropriation for projects equal to or over $500,000
A transfer between budget ordinance appropriations that requests or requires equal to or more than a $100,000 change to a budget appropriation for projects less than $500,000
Any change that requires a change in budgeted reserves or fund balance

New/Amended Project Name	Requesting Agency	Project Contact	Estimated Operating Cost	
Sunday Service	GoCary	Kevin Wyrauch	Base Year	$ -
		kevin.wyrauch@townofcary.org	Recurring	$ -
Estimated Start Date	**Estimated Completion**	**Notes**	**Estimated Capital Cost**	
05/01/2019	01/01/2027	Geographic change of GoCary Route 1 and 2 alignment	Base Year	$ -
			Cumulative	$ -

Project Description **Enter below a summary of the project amendment and impact on approved plan.**

Included in the FY19 Adopted Wake Transit Work Plan is $575,285 for Sunday service on all six GoCary routes. Recommended service adjustments identified in the Western Wake Comprehensive Operations Analysis include modifying the current GoCary Routes 1 and 2 to provide more direct service to Crossroads Plaza. This geographic re-alignment includes a reduction of service along certain segments of Maynard Rd.

1. Enter Wake Transit Project ID(s) to Increase

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
TOTAL			$ -	$ -	

2. Wake Transit Project ID(s) to Reduce

Project ID	Project	Appropriation Category	Amount	Recurring Amount	Notes
TOTAL			$ -	$ -	

3. Impact on Transit Plan Project Costs

From above, indicate whether amounts impact operating or capital budgets in Wake Transit Plan.	**Estimated Operating Cost**	Current Year	$ -
		Recurring	$ -
	Estimated Capital Cost	Base Year	$ -
		Cumulative	$ -

Project Justification / Business Case **Provide responses to *EACH* of the questions below. Answer the questions as fully as possible. Enter Non-Applicable (N/A) as appropriate.**

4. Is this New/Amended project Operating, Capital or Both? **Operating** ☑ **Capital** ☐ **Both** ☐

5. What is the timeframe for the request? Are you requesting a full year of funds or a partial year to be annualized in future fiscal years?

Partial year to be annualized in future fiscal years.

6. What is the expected outcome(s) if this request is funded? What is the alternative if the request is not funded?

The scope change will allow GoCary to implement recommended changes identified in the Western Wake Comprehensive Operations Analysis. Failure to amend the project scope will result in continued operation of inefficient service with an impact to overall system performance metrics.

7. List below the Key Performance Indicators (deliverables) while this project is in progress. These performance measures will be reported quarterly. Are these the same measures as currently being reported?

a)

b)

c)

8. List any other relevant information not addressed.

N/A

9. Please enter estimated appropriations to support expenses identified above. Enter FY 2018 and the estimated annualized cost in FY 2019 using the 2.5% growth factor, if applicable. The spreadsheet will calculate 2020 and beyond by 2.5%. If your project is not expected to have recurring costs in FY 2020 and/or beyond, delete the calculation(s) in columns E-H.

Cost Break Down of Project Request							
OPERATING COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Growth Factors		**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**	**2.50%**
Salary & Fringes			-	-	-	-	-
Contracts			-	-	-	-	-
Bus Operations:							
Estimated Hours			-	-	-	-	-
Cost per Hour			-	-	-	-	-
Estimated Operating Cost	-	-	-	-	-	-	-
Bus Leases			-	-	-	-	-
Park & Ride Lease			-	-	-	-	-
Other			-	-	-	-	-
Other			-	-	-	-	-
Subtotal: Bus Operations	-	-	-	-	-	-	-
Other: Administrative							
Other: Database Hosting			-	-	-	-	-
Other: Supplies and Materials			-	-	-	-	-
TOTAL OPERATING COSTS	**-**	**-**	**-**	**-**	**-**	**-**	**-**

10. Please enter estimated appropriations to support contractual commitments and other expenses related to proposed capital projects identified above.

CAPITAL COSTS	**FY19**	**FY20**	**FY21**	**FY22**	**FY23**	**FY24**	**FY25**
Design/NEPA	$ -	-	-	-	-	-	-
Equipment	-	-	-	-	-	-	-
Land - Right of Way	-	-	-	-	-	-	-
TOTAL CAPITAL COSTS	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Assumptions for Costs and Revenues Above:

11. Please state any assumption(s) used to calculate the capital and operating dollars and revenues shown above.

Costs are consistent with FY19 Adopted Wake Transit Work Plan.

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

Wake County Transit Planning Advisory Committee

Joint Meeting of the Budget and Finance/Planning and Prioritization Subcommittees

Voting Record for Work Plan Amendment Requests
Projects TO002-G, TO002-K, TO004-A, and Two Projects Requested to be Added

Following is the voting record from the joint January 3, 2019, meeting of the Budget & Finance and Planning & Prioritization Subcommittees, where the requested amendments to the FY 2019 Work Plan were reviewed.

Voting Member Agencies in Attendance for Planning & Prioritization Subcommittee:

CAMPO
City of Raleigh
Town of Cary
Wake County
GoTriangle
Town of Rolesville
Town of Garner
Town of Fuquay-Varina

Voting Member Agencies in Attendance for Budget and Finance Subcommittee:

CAMPO
City of Raleigh
GoTriangle
Wake County
Town of Cary
Town of Rolesville
Town of Garner
Town of Fuquay-Varina

Amendment Requests Reviewed:

- **Major Amendment** – Multi-Year Bus Service Implementation Plan (TO002-G) and Community Funding Area Program Management Plan (TO002-K)
- **Major Amendment** – New Project: FTE for Commuter Rail Environmental Planner
- **Major Amendment** – New Project: FTE for Manager of Commuter Rail Design
- **Minor Amendment** – Sunday Service on All Routes, Expanded Paratransit & Holiday Hours

The amendment requests reviewed were unanimously recommended by both subcommittees. It was noted by Budget and Finance Subcommittee that the amendment request for the Commuter Rail-related FTEs would need to be cost allocated between Wake and Durham Counties. It was also noted by the Planning and Prioritization Subcommittee that an approval of an amendment request for staffing related to a Commuter Rail project does not pre-suppose the outcome of what any additional pre-project development planning work yields for next steps associated with Commuter Rail implementation.

January 3, 2019

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

Wake County Transit Planning Advisory Committee
Budget Finance and Planning Prioritization Subcommittees

Joint is osition for F 2019 3 Work Plan Amendment Request
Projects TO002-G, TO002-K, TO004-A, and Two Projects Requested to be Added

Per the Wake Transit Work Plan Amendment Policy, the TPAC Budget & Finance and Planning & Prioritization Subcommittees are tasked with jointly reviewing the quarterly Work Plan draft amendment list and amendment request forms when a Major Amendment request is submitted. The subcommittees consider appropriateness of changes in scope and, if applicable, financial choices and trade-offs associated with proposed amendments, creating a disposition for TPAC consideration.

Upon review of the disposition and related amendment request, the TPAC will make recommendations to the GoTriangle Board of Trustees and CAMPO Executive Board for approval or disapproval of requested amendments to the Work Plan.

Amendments Reviewed:

Major Amendment – Multi-Year Bus Service Implementation Plan (TO002-G) and Community Funding Area Program Management Plan (TO002-K)

The requested amendment to the two (2) projects included in the FY 2018 Work Plan, for which funding was encumbered to carry over as an appropriation in the FY 2019 Work Plan, can be described as follows: 1) Projects TO002-G ($1,292K) and TO002-K ($175K) for a total of $1,467K should be collapsed into a single line and single project, with the respective scopes of each included as authorized scope for the new single project; 2) Expand scope of new single project to include expenditures for the Wake Transit Implementation Staffing Plan and Wake Transit Implementation Public Engagement Policy; and 3) Add $202,000 that should have been encumbered with the $500,000 that was originally encumbered from FY 2018 to FY 2019 for Project TO002-G to bring the total amount of funds appropriated to the new single project to $702,000. The total project cost is expected to actualize at approximately $1,200K compared to an original budget of $1,467K.

There is a one-time financial impact from transferring $202,000 in funds held by the tax district in reserve to the project sponsor. However, this requested transfer is a result of an underestimation of funding that should have been encumbered to carry over from FY 2018 to FY 2019. With the requested transfer, the total project cost is still less than the original FY 2018 appropriation for the impacted projects. No scope issues have been identified with this amendment request as the request only expands scope to capture all of the contracted planning activities under the on-call transit planning services program deployed by GoTriangle, CAMPO, and the City of Raleigh.

Major Amendment – New Project: FTE for Commuter Rail Environmental Planner

In preparation for a Commuter Rail Project Development application and movement into the Federal Transit Administration New Starts program, GoTriangle must complete the National Environmental Policy Act (NEPA) process within 24 months from the time an application is submitted to the FTA. To accomplish this goal, an Environmental Planner dedicated to Commuter Rail will be needed. This position will report

to the current GoTriangle lead Environmental Planner. Recruitment for this position should take place in early 2019 to meet the desired deadlines. Six months of funding is requested for FY 2019.

The total FY 2019 cost of the FTE is $75,000. However, the cost of the FTE would be split between Wake County (67% share) and Durham County (33% share) for a total FY 2019 impact to Wake Transit funds of $50,025. This would result in an FY 2019 annualized recurring impact of $100,050 held by the tax district in reserve being transferred to the project sponsor. The financial model includes a line for other operating costs that anticipates staffing and other operating items that have not yet been appropriated. The position is accommodated within the model. No scope issues have been identified with this amendment request. It was noted by the Planning and Prioritization Subcommittee that the approval of an amendment request for staffing related to a Commuter Rail project does not pre-suppose the outcome of what any additional pre-project development planning work yields for next steps associated with Commuter Rail implementation.

Major Amendment – New Project: FTE for Manager of Commuter Rail Design

In preparation for entering Project Development for a Commuter Rail project, the Manager of Rail Design, in consultation and collaboration with a GoTriangle project team, will manage the day-to-day work of a consultant team to progress the overall design, including establishing the technical working groups that will assist in moving the project forward. Recruitment for this position should take place in early 2019 to meet the desired deadlines. Six months of funding is requested for FY 2019.

The total FY 2019 cost of the FTE is $75,000. However, the cost of the FTE would be split between Wake County (67% share) and Durham County (33% share) for a total FY 2019 impact to Wake Transit funds of $50,025. This would result in an FY 2019 annualized recurring impact of $100,050 held by the tax district in reserve being transferred to the project sponsor. The financial model includes a line for other operating costs that anticipates staffing and other operating items that have not yet been appropriated. The position is accommodated within the model. No scope issues have been identified with this amendment request. It was noted by the Planning and Prioritization Subcommittee that the approval of an amendment request for staffing related to a Commuter Rail project does not pre-suppose the outcome of what any additional pre-project development planning work yields for next steps associated with Commuter Rail implementation.

Minor Amendment – Sunday Service on All Routes, Expanded Paratransit & Holiday Hours

The FY 2019 Adopted Wake Transit Work Plan includes $575,285 for Sunday service on all six GoCary routes. Recommended service adjustments identified in the Western Wake Comprehensive Operations Analysis include modifying the current GoCary Routes 1 and 2 to provide more direct service to Crossroads Plaza. This geographic re-alignment includes a reduction of service along certain segments of Maynard Road. These service changes are not considered significant changes in the project scope and fall under a minor amendment: a change that does not meet any of the criteria for a major amendment.

This amendment request has no financial impact. There were no scope issues identified with this amendment request.

Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees Planning & Legislative Committee

FROM: Regional Services Development, Planning and TOD Group

DATE: January 14, 2019

SUBJECT: **Commuter Rail System Level Guidelines and Evaluation Report**

Strategic Objective or Initiative Supported

1.1 Increase number of customers served with sustainable transportation services

Action Requested

Staff requests that the GoTriangle Planning and Legislative Committee recommend the Commuter Rail System Level Guidelines and Evaluation Report to the full GoTriangle Board for approval.

Background and Purpose

When the Major Investment Study for Commuter Rail began, the Core Technical Team recommended that several deliverables proceed to the Governing Boards for Wake Transit (CAMPO Board and GoTriangle Board) for approval.

The attached report includes the following deliverables as part of the Commuter Rail Major Investment Study Process:

- Problem Identification for the Commuter Rail corridor
- Commuter Rail Design Guidelines and Performance Targets
- Commuter Rail Evaluation Framework

This report has been through several iterations with the Core Technical Team and as of the date of this memo, has been recommended for the TPAC to approve it and forward to the Governing Boards at their January 22, 2019 meeting. Future deliverables will apply the evaluation framework to potential operating scenarios for Commuter Rail in the Wake-Durham corridor.

Financial Impact

None

Attachments

- CRT System Level Guidelines & Evaluation Report

Staff Contact(s)

- Patrick McDonough, 919-485-7455, pmcdonough@gotriangle.org

Major Investment Study (MIS)

Commuter Rail Transit System Level Guidelines and Evaluation

Wake Transit Plan

Durham County Transit Plan

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

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Introduction

The purpose of this document is to identify the existing and future transportation problems in the Triangle Region and provide guidelines for design of the Commuter Rail Transit (CRT) system, including stations and performance targets for operations and how these targets will be evaluated. Each of these tasks is a unique standalone item; however, the tasks are combined in this single report for the purposes of review and comment by the Major Investment Study (MIS) technical committees. The tasks documented in this report are:

- System Transportation Problem Identification,
- Design Guidelines and Performance Targets, and
- Evaluation Framework.

The *Commuter Rail Existing Conditions* report provided information and data that are used as input in the development of the System Transportation Problem Identification. The CRT Design Guidelines and Performance Targets were developed based on the *Commuter Rail Peer Review* report, which reviewed 11 peer systems across the United States representing different investment strategies and service levels.

The values from the peer systems provide targets or a benchmark for the reasonableness of MIS results. In this report, the terms guidelines, benchmarks, minimums, and maximums are used for both the definition of the proposed commuter rail service alternatives and the performance measures that will be used to evaluate the range of alternative service plans and station locations. As the project moves into the next phase of project development, including preliminary engineering and the required environmental studies, more specific design guidelines and standards will be developed that further define the project. At this phase of the study, these guidelines and performance measures should only be considered in evaluating the relative differences between the commuter rail alternatives and laying the foundation for advancing the project to the project development phase. The guidelines and performance measures should be revisited at each phase of the advancement of the project through project development, construction, and operations.

1 System Transportation Problem Identification: CRT Corridor

Three overarching challenges will affect mobility and accessibility either now or in the future within the CRT corridor defined in the Wake County Transit Plan and the Durham County Transit Plan. Implementation of CRT is intended to help address these challenges. This section describes the three challenges and documents specific issues within the CRT corridor.

1.1 CHALLENGE ONE: ADDRESS EXISTING AND PROJECTED FUTURE GROWTH AND TRAVEL DEMAND

The Triangle[1] is growing at a rapid pace and is projected to continue growing rapidly decades into the future. Home to 1.7 million people in 2013, the Triangle Region is expected to reach up to 2.9 million in 2045, as noted in the 2045 Metropolitan Transportation Plan (MTP)[2]. This region is also home to major universities and their associated medical centers, Research Triangle Park (RTP), and the North Carolina State Government. According to the outputs of the Triangle Regional Model (TRM),[3] between 2013 and 2045, population in Wake County is projected to grow by 72% (689,000), while population in Durham County is expected to increase by 66% (190,000). The projected population growth in these two counties would account for 76% of the total regional population growth. The Region's economic position is forecasted to remain robust through 2045 with the addition of approximately 430,000 jobs. The largest job growth is expected to occur in Wake County, adding 284,000 jobs (that is, 66% of the Region's total employment growth), followed by Durham County with an addition of 93,500 new jobs (22% of the total employment growth). The remainder of the model region accounts for 12% of the total employment growth, with the majority of the remaining employment growth in Orange County.

The rapid population and economic growth within the Triangle Region will be coupled with large cross-county commuting flows in the region and a steady increase in highway congestion. The 2045 MTP estimated that 82,000 people commuting each day will cross the boundaries of Wake, Durham, and Orange Counties. The *Commuter Rail Existing Conditions Report* has identified some major travel patterns between sub-districts within the CRT corridor: Chapel Hill-Durham-North Durham, Cary-Research Triangle Park-Durham, Raleigh-Cary, Raleigh-Garner-Clayton, and Raleigh-Neuse-Wake Forest. The most heavily traveled roadway in this corridor is the section of I-40 near the Wake County-Durham County line. According to the *Wake Transit Plan*, a trip between Durham and Raleigh during the PM peak hour using NC 147 and I-40 will typically take between 35 minutes to 1 hour and 20 minutes, with today's traffic. As documented in the Commuter Rail Existing Conditions Report, the Average Annual Daily Traffic (AADT) along these major roadway corridors is expected to grow at an annual rate from 0.92% to 2.91%.

Infrastructure investments in the CRT corridor can offer long-term benefits. High quality transit services encourage people who value transit to locate closer to good transit services, which will lead to lower car ownership, higher density, and a reduction in parking requirements. The 2045 MTP stated that about one-quarter to one-third of households today would prefer to live in a compact, walkable neighborhood with a mix of activities where they can be effectively served by transit. This would suggest that by 2045, as many as one million Triangle residents would select a compact, walkable, mixed-use neighborhood if that option is available to them.

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[1] The Triangle Region is defined as the Capital Area Metropolitan Planning Organization (CAMPO), which covers all of Wake county and portions of Franklin, Granville, Harnett, and Johnston Counties; and 2) the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO), which covers all of Durham County and parts of Orange and Chatham Counties.

[2] CAMPO and DCHC MPO coordinated to develop the 2045 MTP for the Triangle region.

[3] The regional population and employment numbers reported are outputs from the TRM study area.

1.2 CHALLENGE TWO: IMPROVE TRANSIT SERVICE AND CUSTOMER EXPERIENCE

Bus transit is a vital form of transportation in the Triangle Region. Riders rely on buses to get to their daily destinations including work, school, shopping, and medical appointments. According to the 2015 regional on-board transit survey, 41% of all bus riders belong to zero-car households, 39% of riders earned less than $15,000 (in 2014), and 78% of riders earned less than 150% of the federal poverty level.

Currently, eight regional bus routes[4] serve all or part of the CRT corridor, attracting 3,300 daily boardings on average. The average on-time performance for these bus routes is 83%, with the Route 305 (Lake Pine-Cary-Raleigh) being the lowest (71%), DRX (Durham-Raleigh Express) being 78%, and Route 700 being the highest (96%). With low on-time performance, customers are not able to rely on transit to get them where they need to go in the amount of time expected. An investment in CRT infrastructure could help improve transit service quality in the form of speed and reliability. The commuter rail is envisioned to provide more reliable "45 minutes or better" service for travelers between Durham and Garner at peak times, while bypassing congestion and other motorist delays. Such improvements would help retain and increase satisfaction of existing riders and provide choice and opportunities to attract new riders.

1.3 CHALLENGE THREE: SUPPORT LOCAL PLANNING EFFORTS TO PRESERVE AND ENHANCE THE QUALITY OF LIFE IN THE REGION

Cities and towns, universities, MPOs, counties, the State, and other organizations across the region are all planning for projected growth within the Triangle region. Recognizing the limitations of finite space and resources, these local, regional, and state plans depend on transit investments to help realize their desired outcomes. Anticipating greater demand for transit, a variety of premium transit planning efforts will provide dedicated high-capacity transit corridors in Wake County, Durham County, and Orange County. The Wake-Durham Commuter Rail is envisioned as a key investment of Wake Transit Plan's Big Move 1 – Connect Regionally. The other transit services in the 2045 CAMPO-DCHC MPO coordinated MTP include Light Rail Transit (LRT), Bus Rapid Transit (BRT), and increasing bus service frequency and coverage. The LRT connecting Durham and Chapel Hill is projected to provide more than 26,000 trips a day when complete in 2028.[5]

These plans are built around priorities such as economic development and social equity, focusing growth in specific areas, conserving resources, protecting the environment, increasing affordable housing, and improving multimodal access to opportunities across the region. Providing high-quality transit services would help increase the "fit" between the transit system and the population, leading to increased ridership growth and housing, offices, and retail environments that provide the full range of lifestyle options the market demands.

The City of Raleigh 2030 Comprehensive Plan has land use policies that recommend compact land use patterns to improve transportation networks and undertake studies and plans for growth centers and transit station areas (rail or bus transfer nodes). A major investment in high capacity transit systems like commuter rail transit (CRT) can provide the infrastructure to support this land use policy. In the Cary 2040

[4] GoTriangle Bus routes that serve the CRT corridor include Routes 100, 105, 300, 301, 305, and 700; the Durham-Raleigh Express (DRX); and the Chapel Hill-Raleigh Express (CRX).

[5] Durham County Transit Plan, Progress Report FY2017

Community Plan, support was identified for transportation choices that will allow workers to drive, walk, bike, take the bus, or even possibly ride regional rail to destinations. The Cary plan also sets the stage for regional transit improvements and transit oriented development that will support future transit ridership. The Durham Comprehensive Plan has specific policies directed at rail investment plans including regional rail through policies to invest in implementing the plans that designate compact neighborhoods around proposed regional rail transit stations and the reservation of right-of-way along designated transit corridors.

Enhanced transit investments support the comprehensive land use policies of the communities in the corridor and can also help the Wake-Durham region remain competitive in a global economy by making it easier for employees to get to their jobs, thus helping businesses attract and retain talent.

1.4 CONCLUSION

This section summarizes the challenges faced by residents and commuters located with proximity of the proposed CRT corridor. The Triangle Region's population is growing at a rapid pace and is projected to continue growing rapidly decades into the future. While this growth will bring innovation and new opportunities into the area, the Region must strategically plan for this growth to preserve and enhance the quality of life for current and future residents. The CRT investments called for in the Wake County Transit Plan and Durham County Transit Plan are part of this larger strategic planning effort, aiming to provide price competitive, reliable transportation solutions that will provide a congestion-free alternative, connect regionally, and provide reliable access to jobs.

2 CRT Design Guidelines and Performance Targets

2.1 INTRODUCTION

The 37-mile CRT is proposed to operate between Garner, Downtown Raleigh, NC State University, Cary, Morrisville, RTP and Durham within the existing North Carolina Railroad Company (NCRR) corridor. Norfolk Southern (NSR) operates on the NCRR corridor through a NCRR/NSR Trackage Rights Agreement and a NCRR/NSR Operating and Maintenance Agreement. The segment of the corridor between downtown Raleigh and downtown Cary is shared by NS and CSX; trains in this segment are dispatched by CSX. Freight and Amtrak intercity passenger rail services exist in the Wake-Durham corridor and operate throughout the day.

The proposed CRT will operate on shared tracks with both freight and intercity passenger rail service. Consequently, any commuter rail vehicles must comply with the Federal Railroad Administration's (FRA) crash worthiness standards to operate in this corridor. In addition, temporal separation[6] will not be an option for the Wake-Durham CRT service as the existing freight and intercity passenger rail services operate throughout the day. Therefore, the CRT stations must be planned and designed to allow for both services to operate without being impeded.

Commuter rail operations and the provision of service vary by peer system and often reflect features and circumstances that are unique to the rail corridor, ownership, types of rolling stock operating on the line, and the transit agency size and resources. The CRT design guidelines and performance targets were developed following a peer agency review (see *Commuter Rail Peer Review Report*), and a review of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, North Carolina Railroad Company (NCRR) Criteria & Guidelines for Engineering & Construction, Norfolk Southern Passenger Station Requirements, Transit Capacity and Quality of Service Manual, and other agency guidelines including VRE System-Wide Service Standards and Policies. The CRT design guidelines are consistent with the AREMA, NCRR Criteria & Guidelines for Engineering & Construction, and Norfolk Southern Passenger Station Requirements. The performance targets are largely informed by the systems included in the peer review report.

Within the *Peer Review Report*, 11 systems across the United States were selected to represent different investment strategies and service levels, and their applicability to the Wake-Durham Commuter Rail Project was explored. The purpose of this section is to offer a range of design guidelines, not to set a universal standard for the system. The values from the peer systems provide a benchmark for the reasonableness of the MIS results. These peers may have some components that are applicable to Wake-Durham CRT and others that might not; accordingly, the peer review simply establishes criteria for initial evaluation and is not intended to state final design criteria or standards. They can be revisited if needed to adjust to targets that are more reasonable and feasible based on tradeoffs elected during the project development.

The performance measures for the CRT peer systems were pulled from standard National Transit Database (NTD) reports for 2016, the most recent year available. Measures include operating expenses per vehicle

[6] Temporal separation is defined as the separation of the operation of conventional freight/commuter rail trains and equipment that does not comply with Federal Railroad Administration crashworthiness standards at distinct periods of the day and with established procedures to ensure strict observation of the defined operating window.

revenue mile, operating expenses per passenger boarding, farebox recovery, and passenger boardings per vehicle revenue hour. An appendix to this document shows how these numbers are pulled from the NTD reports. In these reports, the term *vehicle* is used for rail as well as other modes (bus). For commuter rail systems, a vehicle is the same as a passenger or coach car. Multiple passenger cars make up a single train. Take the Virginia Railway Express (VRE) as an example – if a single train has four coach or passenger cars, then 60 passenger boardings/vehicle (passenger coach) revenue hour will be equivalent to 240 passengers per train per revenue hour. Table 1 provides a summary of key features for the peer CRT systems reviewed in the *Commuter Rail Peer Review Report*.

| Peer CRT System Core Elements

mmuter Rail System	Number of Round Trips Per Day	Peak (Off Peak) Headway	System Miles	Number of Stations	Average Station Spacing (in Miles)	Operating Expenses[1] per Vehicle (Passenger Coach) Revenue Mile[2] (in 2016 dollar)	Operating Expenses per Passenger Boarding (in 2016 dollar)	Farebox Recovery[3]
A-Train (Denton, TX)	30	22 min (40 – 60 min)	21	6	4.2	$19.8	$23.4	6%
MetroRail (Austin, TX)	18	30-40 min (1 hour)	32	9	4.0	$77.3	$28.6	9%
SunRail (Orlando, FL)	18	30 min (1-2 hour)	32	12	2.9	$48.1	$34.3	6%
Music City Star (Nashville, TN)	6	45 min (No Service)	33	6	6.6	$25.6	$18.6	17%
Tri-Rail (Miami, FL)	25	20-40 min (1 hour)	71	18	4.2	$25.0	$21.2	15%
nia Railway Express Washington, DC)	8 (Manassas Line)/ 8 (Fredericksburg Line)	30 min (Limited Off Peak)	35 (Manassas Line) / 54 (Fredericksburg Line)	10 (Manassas Line) / 13 (Fredericksburg Line)	3.9 (Manassas Line)/ 4.5 (Fredericksburg Line)	$30.5	$16.1	54%
ity Railway Express las-Fort Worth, TX)	32 trains to Dallas/31 trains to Fort Worth	30 min (1 hour)	36	10	4.0	$24.0	$13.6	32%
Northstar Minneapolis, MN)	12	30 min (No Service)	40	7	6.7	$31.0	$23.5	14%
Coaster (San Diego, CA)	11 to San Diego/12 from San Diego	30-40 min (1-3 hour)	41	8	5.9	$12.2	$10.8	41%
FrontRunner alt Lake City, UT)	31	30 min (1 hour)	89	17	5.6	$8.4	$10.0	15%
sity of Colorado A Line (Denver, CO)[4]	72	15 min (30 min)	23	8	3.3	$28.1	$10.8	12%
er System Average	**25**	**30 min (1 hour)**	**46**	**11**	**4.7**	**$30.0**	**$19.2**	**20%**

[1] Operating expenses are the expenses associated with the operation of the transit agency, and classified by function or activity, and the goods and services purchased. The basic functions and object classes are provided in the *Glossary of Terms* at the end of this report. Source: National Transit Database (NTD) Glossary, https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

[2] Federal Transit Administration - NTD Transit Agency Profiles. Retrieved from https://www.transit.dot.gov/ntd/transit-agency-profiles. Vehicle is equivalent to a passenger car or coach, and multiple passenger cars make up a single train.

[3] Farebox recovery is calculated by dividing the Commuter Rail expenses by the Commuter Rail Fare Revenue, as reported in the NTD Transit Agency Profile.

[4] University of Colorado A Line was opened in April 2016, and B line was opened in July 2016, so the 2016 NTD report only covers the partial year and is for both lines.

2.2 INFRASTRUCTURE DESIGN GUIDELINES

Infrastructure design guidelines set the benchmark components and features for construction and operation of CRT service. The guidelines were developed following a review of national peer system practices (refer to the *Commuter Rail Peer Review Report*), American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering, North Carolina Railroad Company (NCRR) Criteria & Guidelines for Engineering & Construction, Norfolk Southern Passenger Station Requirements, Transit Capacity and Quality of Service Manual, and other agency guidelines including VRE System-Wide Service Standards and Policies.

The purpose of setting these guidelines in this document is to achieve the desired objectives and components of the proposed CRT, including connecting the region and supporting local planning efforts to preserve and enhance the quality of life in the region. The peer review simply establishes criteria for initial evaluation and is not intended to be the final design criteria or standards. They can be revisited if needed, to adjust to targets that are more reasonable and feasible based on tradeoffs elected.

Station Spacing

While there are no fixed requirements for station spacing, general rules of thumb are seeking to balance speed and access:

a. Longer spacing allows higher running speeds, improving its competitiveness with auto commuting;

b. Closer spacing increases overall accessibility and reduces the travel distance between stations and potential trip origins/destinations.

As noted in AREMA Chapter 11, "Station spacing should be sufficiently close to capture the available ridership without imposing large travel time penalties associated with an excessive number of station stops." The average station spacing for the peer systems, which is documented in the *Commuter Rail Peer Review Report* and also shown in Table 1, ranges between 2.9 and 6.7 miles.

In areas of moderate to high density and more activity generators, closer station spacing is warranted to provide access to destinations. In low-density areas, speed is prioritized to ensure that CRT service provides a compelling alternative to driving. Stops may be spaced farther apart than the guideline if there are no connections or destinations that warrant service. Based on

existing land use, moderate- to high-density areas are defined as having 10 or more people and jobs per acre; low-density areas are defined as having fewer than 10 people and jobs per acre. Figure 1 and 2 show the existing and projected 2045 population and employment densities, based on the TRM outputs.

To achieve the appropriate balance between speed and accessibility, CRT stations are assumed to be spaced between 2 and 5 miles apart, as prescribed in the *Wake Transit Plan*. The general CRT station spacing guideline is shown in Table 2.

Table 2 | Station Spacing Guideline (in miles)

Average Station Spacing in Miles	CRT Service	Peer Review
Medium to High Density Areas	2	The station spacing ranges between 2.9 and 6.7 miles for the peer CRT systems, with an average of 4.7 miles (Table 1).
Low Density Areas	5	

Figure 1 | Station Spacing Guideline Based on Existing Population and Employment Density

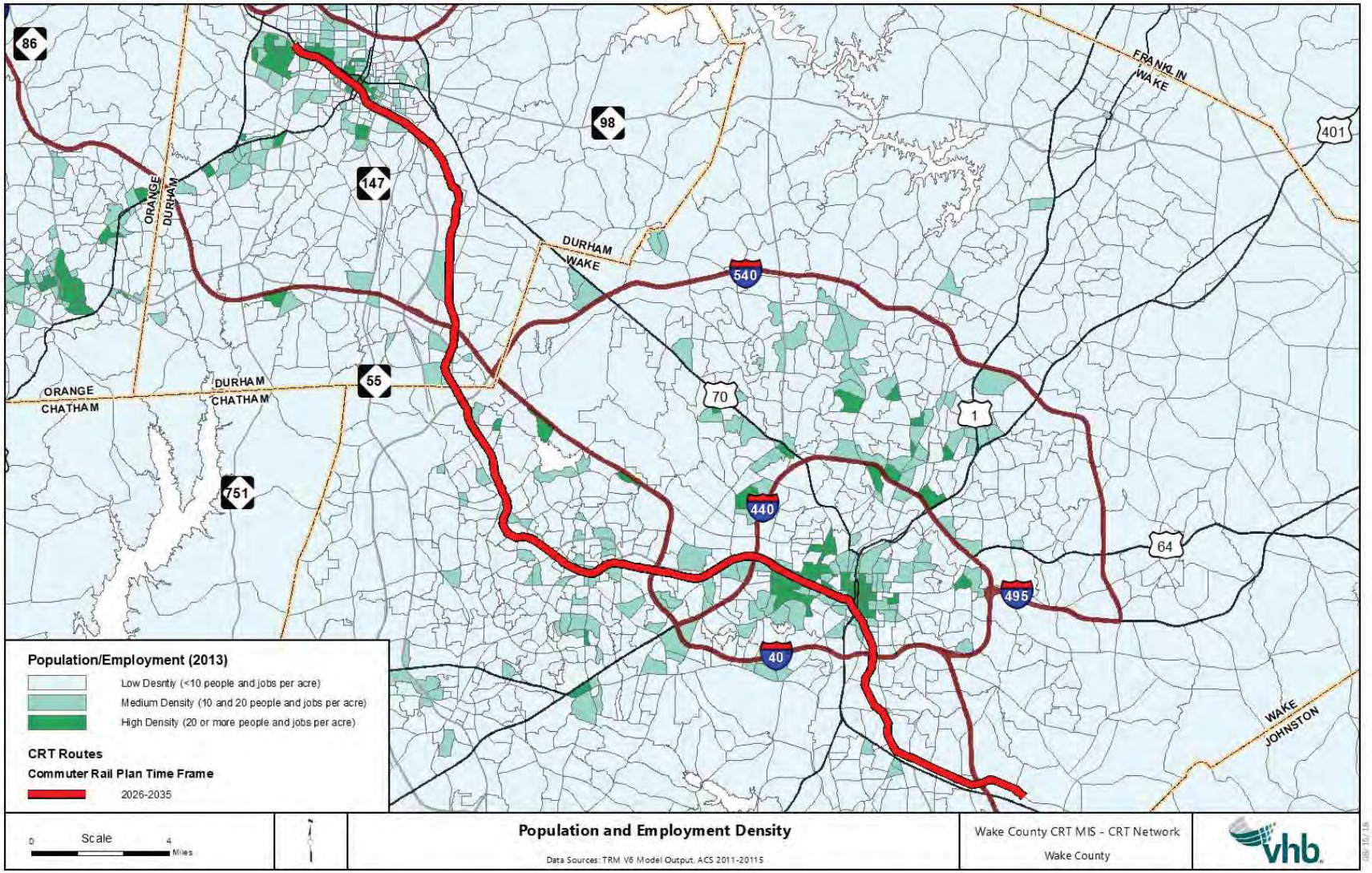
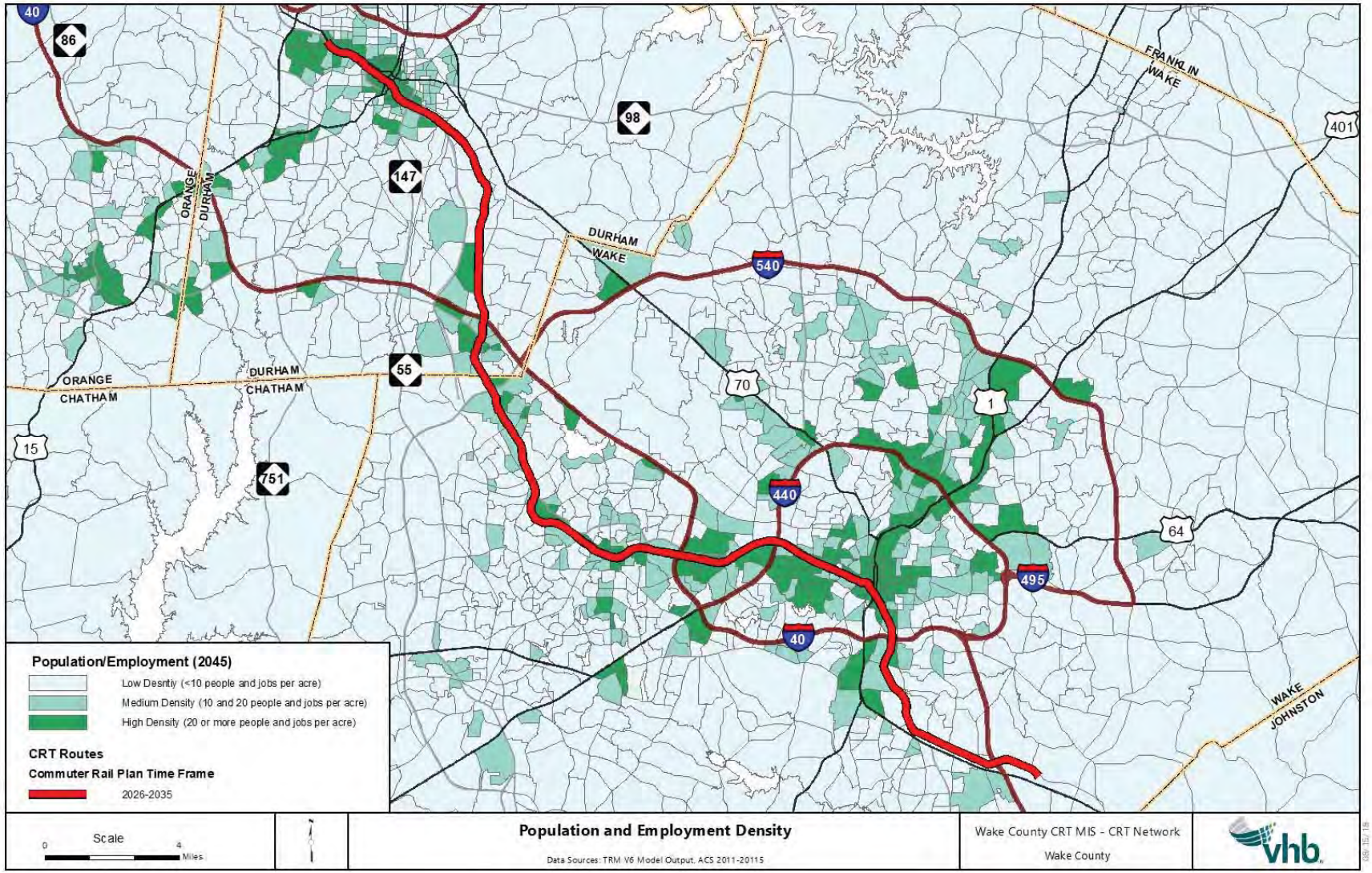


Figure 2 | Station Spacing Guideline Based on 2045 Population and Employment Density



CRT Station Design and Amenities

CRT stations, defined as stops within the CRT infrastructure, are an integral part of the passenger experience. Their design and amenities can impact the attractiveness of the service as well as the speed of service. The commuter rail station can be an enhanced platform, a building dedicated as the station, or part of a mixed-use building. Pedestrian accessibility, weather protection, and security are important considerations for station design (see Figure 3).

Figure 3 | CRT Station Example

VRE Rolling Road Station (Burke, VA)

All CRT stations are recommended to include the following features:

- **Platform:** Passenger access to commuter rail trains can be from high- or low-level platforms. It is not possible to provide high-level platforms on tracks that are shared with freight trains, as freight cars cannot operate adjacent to the high-level platforms. Given the shared freight and passenger rail service in the corridor, low-platform stations are the likely standard for any new commuter rail stations. Stations must meet the NCRR Criteria & Guidelines for Engineering and Construction and Norfolk Southern Passenger Station Requirements, as well as any accessibility requirements outlined by the FRA and AREMA Manual for Railway Engineering. The 2011 DOT Platform Rule requires full-length, level-boarding platforms (where the platform surface is level with the floor of the train cars) in new and substantially reconstructed commuter and Amtrak stations where no track passing through the station and adjacent to the platforms is shared with existing freight rail operations.

- **Ticket Vending Machines (TVMs):** Every station should require fare payment prior to boarding the vehicle. Every station should be equipped with appropriate technology for customers to purchase tickets for CRT service using cash or debit/credit card. In addition, a pass validator should be included for customers with passes or stored-value cards.
- **Real-time passenger information systems:** Audio and digital announcements of train arrivals, departures, and track information should be provided at stations. Having access to real-time information reduces passengers' anxiety during wait time.
- **Schedule and route information:** Stations should include maps and schedules for CRT service, displayed in an easy-to-read format and kept up to date with schedule or service changes that may occur.
- **Enhanced comfort:** Stations should include platform canopy to provide protection from sun and rain. Stations should provide appropriate and sufficient seating. Stations should be well lit to promote safety and security. Waste and recycling receptacles should also be provided.
- **Park-and-ride facility:** As distance from the trip origin to transit service increases, more passengers use automobiles as an access mode. Throughout the country, the automobile is the primary access mode for commuter rail, making park-and-ride facilities necessary. The size of a park-and-ride facility depends on factors such as estimated parking demand, bus service frequencies, street system capacity, availability of reasonably priced land, and environmental constraints. Estimated parking demand is a function of the station type (for example, terminus stations typically draw from a larger catchment area than other stations along the line), the overall service population (population and employment in an area), density of uses adjacent to the station, proximity of special generators, and walkability. Park-and-ride lots should not be located at major commuter destinations such as North Carolina State University, downtown Raleigh, or Durham.
- **Bicycle parking:** Stations should be equipped with bicycle parking.
- **Special pavement markings:** Station should include surface area striping and pavement markings to identify directional paths for station functions. Special pavement markings, which may include pavement texture and/or color changes, should be used to indicate areas of special concern, including tactile warning strips of distinct color and/or texture from the platform surface marking the boarding edge of platforms.
- **Americans with Disabilities Act (ADA) accessibility:** As stated in AMTRAK Engineering Station Standard Design Practices (SDP), all spaces used by passengers and employees as well as access to and from those spaces, Public Right of Ways, parking lots, platforms, and other related locations shall comply with the ADA standards for Transportation Facilities, effective 11/29/2006 (2006 DOTAS), which can be found: http://www.access-board.gov/ada-aba/ada-standards-dot.cfm.

2.3 SERVICE DESIGN GUIDELINES

This section summarizes the service design guidelines for CRT, including definitions for span, frequency, and train loadings. The service design guidelines were developed following a review of national best practices (refer to the *Commuter Rail Peer Review Repor*t), and service design guidelines from other agencies including VRE System-Wide Service Standards and Policies. The service guidelines below represent the minimum levels of each service item. Higher levels of service in terms of service periods and frequency of service throughout the day will be evaluated

in the CRT alternative analysis. The peer review simply establishes criteria for initial evaluation and is not intended to state final design criteria or standards. They can be revisited, if needed, to adjust to targets that are more reasonable and feasible based on tradeoffs elected.

Minimum Span of Service

The span of service guidelines establishes the required base span of service for CRT. The span of service depends on the amount of activity, and consequently the need or demand for transit service. The guidelines reflect the *shortest* period of time that CRT service should operate.

The recommended minimum spans of service are shown in Table 3.

Table 3 | Minimum Span of Service

Weekdays	CRT Service	Peer Review Example
AM Peak	6:00 to 10:00 AM	VRE Manassas Line (5:00 AM to 6:30 PM); VRE Fredericksburg Line (5:00 to 9:00 AM and 3:00 to 8:30 PM); MBTA Weekday (7:00 AM to 10:00 PM) and Saturday (8:00 AM to 6:30 PM)
PM Peak	3:00 to 7:00 PM	

Minimum Service Frequency

Service frequency measures the number of trains within a certain period (typically 1 hour) traveling in the same direction on a given line or combination of lines. It is a general indicator of the level of service provided along a line or route. Service frequencies are often set to ensure there are enough trains on the route to accommodate passenger volumes while not exceeding recommended loading guidelines. Service frequency could have a significant impact on CRT ridership. Observed headway elasticities range from -0.7 to -0.9 for headways greater than 50 minutes (that is, a 1% increase in headway results in a 0.7 to 0.9% decrease in ridership), and from -0.4 to -0.6 at shorter headways (TCQSM, 2017).

Most of the commuter rail systems reviewed in the *Commuter Rail Peer Review Report* operate with 30-minute peak period headways. The *Wake Transit Plan* proposed that CRT service operates up to eight trips each way in each direction during the peak period, with one to two trips during the midday and evening hours. Recommended minimum frequencies for CRT service are shown in Table 4. The recommended CRT service frequency is subject to change, upon commuter demand, the operating windows and slots allowed in any potential future operating contract with its host railroads (NS, CSX, and NCRR).

Table 4 | Minimum Service Frequency

Weekdays	CRT Service	Peer Review Example
AM Peak (6:00 to 10:00 AM)	One train per hour per direction	A-Train headway (22 min); MetroRail/ SunRail/Trinity Railway Express/VRE (30 min) (Table 1)
PM Peak (3:00 to 7:00 PM)	One train per hour per direction	

Train Loadings

Train load or load factor is expressed as the number of passengers per train or the ratio of passengers to the number of seats on a train at its maximum load point. It is used to determine the extent of likely overcrowding, to assign equipment (for example, number / type of rail cars), and to make subsequent adjustments by lengthening or shortening trains.

Up to 100% seated load is often used as a service standard for commuter rail and commuter bus services, where passengers may be on the vehicle for long periods (TCQSM, 2017). VRE's standard is to not exceed the total number of seats available, plus allow no more than 15 standees per coach for the midweek average on any single train traveling in the peak direction and hour.[7]

The recommended maximum loading on CRT service is shown in Table 5.

Table 5 | Train Loading Maximum

	CRT Service	Peer Review Example
Peak	100%	Up to 100% seated load (TCQSM, 2017); 111% (VRE), allowing no more than 15 standees per coach
Off-Peak	100%	

[7] VRE System-Wide Service Standards and Policies, 2018. https://www.vre.org/about/board/board-agenda-minutes/2018/February/9e-attachment-vre-system-standards-and-policies-final-pdf/.

2.4 PERFORMANCE TARGETS

Performance measures consist of a set of focused metrics that capture the critical aspects of service productivity, efficiency, effectiveness, reliability, and speed; at the same time, these performance measures can be easily reproduced and communicated. As the CRT project moves closer to implementation, targets may need to be adjusted to targets that are more reasonable and feasible based on tradeoffs elected. Generally, CRT service should meet performance targets related to productivity after 24 months of operation, which would allow time for the rider market to mature. Performance targets for on-time performance and average operating speed are expected to be met at the time of service opening. One thing to note about the Operating Expenses per Vehicle (passenger coach) Revenue Mile, and Passenger Boardings per Vehicle (passenger coach) Revenue Hour is that a vehicle is the same as a passenger car or coach. Multiple passenger cars make up a single train.

On-Time Performance

On-Time Performance (OTP) evaluates how closely a route matches its published schedule. Measuring on-time performance provides information on whether a customer can count on a train being there as scheduled. To precisely measure on-time performance, a definition of on-time must be established. The recommended definition of on-time is that trains shall arrive at their final destination at or within 5 minutes of their scheduled arrival time, and no revenue train is allowed to leave an intermediate station before it is scheduled to depart, unless noted otherwise on passenger timetables.

Commuter rail OTP is measured as the percentage of on-time trains divided by the total scheduled revenue trains. Trains cancelled or annulled due to force majeure events (for example, flooded right-of-way, government shutdowns, etc.) are excluded from the calculation of OTP.

The benchmark for on-time performance is shown in Table 6, which is subject to change based on negotiations with the railroads.

Table 6 | On-Time Performance

On-Time Performance	CRT Service	Peer Review Example (2016 Observed OTP)
% of trips arriving at or within 5 minutes of scheduled time at their destination	95%	SunRail (96%); VRE (90%); MBTA (93.8%); SEPTA (90%)

Average Operating Speed

A number of design, environmental, planning, and regulatory elements influence the average operating speed. Commuter rail ridership and performance is dependent on being reliable and competitive from a travel time perspective. National experience shows that the CRT speeds of successful systems are over 30 miles per hour.

The target for the average operating speed is 35 miles per hour to provide a significant enhancement to travel time for passengers (Table 7), as guided by the national average CRT speeds.

Table 7 | Average Operating Speed

Average Operating Speed	CRT Service	Peer Review Example
Average operating speed (in mph)	35	National average CRT speed: 32 (2017 APTA fact book)

Passenger Boardings per Vehicle (Passenger Coach) Revenue Hour

One common and reliable way to track transit service productivity is the number of passenger boardings for each hour of active service, or passenger boardings per revenue service hour of each passenger coach. As guided by the peer agencies, the CRT benchmark for passenger boardings per vehicle revenue hour of each passenger coach is 45 boardings per vehicle revenue hour (see Table 8).

Table 8 | Passenger Boardings per Vehicle (Passenger Coach) Revenue Hour

Boarding per Vehicle (Passenger Coach) Revenue Hour	CRT Service	Peer Review Example
Boardings/ vehicle (passenger coach) revenue hour	45	Boardings/vehicle (passenger coach) revenue hour for the peer CRT systems range between 21 and 64, with an average of 44 (Table 1)

Operating Expenses per Vehicle (Passenger Coach) Revenue Mile

Operating expenses per vehicle (passenger coach) revenue mile is a commonly used measure of service efficiency. Operating expenses[8] are the expenses associated with the operation of the service, including salaries, wages, benefits, materials and supplies, as well as purchased transportation and others operating expenses. The basic functions and object classes are provided in the Glossary of Terms.

The benchmark for operating expense per vehicle (passenger coach) revenue mile for CRT service is $30 or less (in 2016 dollars), based on the reviewed peer agencies' operating expenses (see Table 9).

[8] National Transit Database (NTD) Glossary, https://www.transit.dot.gov/ntd/national-transit-database-ntd-glossary.

Table 9 | Operating Expenses per Vehicle (Passenger Coach) Revenue Mile

Operating Expense per Vehicle (Passenger Coach) Revenue Mile	CRT Service	Peer Review Example
Operating expenses/vehicle (passenger coach) revenue mile	$30	The operating expenses/revenue mile for the peer CRT systems range between $8.4 and $77.4, with an average of $30.0 (Table 1)

Operating Expenses per Passenger Boarding

The operating expenses per passenger boarding reflects the cost of serving each passenger boarding. It is calculated by dividing operating expenses by the total number of passenger boardings. The benchmark operating cost per passenger boarding on CRT service is $20 or less (in 2016 dollars) shown in Table 10. The operating expense target or benchmark should be adjusted for cost escalation in the future year of implementation.

Table 10 | Operating Expenses per Boarding

Operating Expense per Passenger Boarding	CRT Service	Peer Review Example
Operating expenses/boarding	$20	The operating expenses per boarding for the peer CRT systems range between $10.0 and $34.3, with an average of $19.2 (Table 1)

Farebox Recovery

Farebox recovery is the percentage of operating expenses recovered by farebox revenues. The benchmark for farebox recovery target is shown in Table 11.

Table 11 | Farebox Recovery

Farebox Recovery Ratio	CRT Service	Peer Review Example
Fares as a proportion of operating expenses	15%	The farebox recovery ratio for the peer CRT systems range between 6% and 53%, with an average of 20% (Table 1);[9] *Wake Transit Plan* assumes farebox revenue of 20% of operating expenses.

[9] Farebox recovery in the NTD Transit Agency Profile is reported per agency, which may combine the farebox recovery rates for all modes of transit applicable to the agency.

3 CRT Evaluation Framework

3.1 OVERVIEW

The proposed 37-mile CRT will operate on shared tracks with freight and Amtrak trains in the NCRR corridor with no temporal separation. The *Wake Transit Plan* envisioned up to eight trips each way in each direction during the peak period, with one to two trips during the midday and evening hours. As part of the Major Investment Study (MIS), the CRT service defined by the *Wake Transit Plan* and *Durham Transit Plan* will be further refined into specific service hours/frequencies and station locations.

Some of the metrics in the Evaluation Framework are based on data points that factored into the FTA Capital Investment Grant (CIG) funding criteria. The CIG criteria ensure that projects prioritized as part of the MIS process have characteristics that are required for federal funding. Not all measures described below are a part of the FTA funding process, and instead are intended to ensure that the proposed projects integrate into the existing transit system in the region.

The evaluation framework will be applied to understand the relative performance of different scenarios of operating plans and station locations, and their ability to meet the community's goals. The evaluation metrics shown in Table 12 were developed to allow potential CRT service scenarios to be compared to one another in order to identify which alternative has the potential to be most successful, and advance to the project development phase. Data sources for the evaluation metrics are a combination of publicly available data sets and projections that will be developed as part of the MIS process. The Census American Community Survey (ACS) and TRM model outputs will be used to evaluate demographic and employment characteristics of the areas surrounding the CRT corridor. The MIS will produce CRT station-to-station travel times and speed estimates. These estimates, along with frequency of service, will be used to prepare the ridership estimates used to compare predicted performance of potential CRT operating and station scenarios.

It is important to note that the evaluation framework developed for the MIS is designed to serve as a decision-making aid in understanding potential operating scenarios and potential station areas. The mix of quantitative and qualitative metrics in the framework will allow additional potential scenarios to be compared to each other and to communicate the relative merit of each scenario. However, additional evaluation must be integrated in a future project development study with community and stakeholder input, to ultimately identify a set of preferred operating plans and station locations.

Table 12 | Evaluation Framework

Category	Prioritization Metric	Evaluation Methodology	Data Source
Speed & Travel Time Competitiveness	Transit speed improvement	Calculate the change in average speed in the corridor by comparing existing bus speeds to anticipated CRT speed. Example output: 1.3 mph improvement	Existing bus speeds operating in mixed traffic and projected CRT speeds to be developed as part of the MIS based on station spacing, dwell time, and rail running times.
	Travel time competitiveness with automobile	This measure compares CRT travel time to automobile travel times. Example output: 1.1	Congested peak period auto travel times from TRM V6 and the real travel times on roadways. CRT speeds based on station spacing, dwell times, and rail running times. One-way transit travel trip times are averaged.
Connectivity	Connections to frequent transit	Determine the number of planned routes that will operate at least every 15 minutes that can provide a transfer opportunity at the CRT stations[10] Example output: 5 frequent transit routes connecting	*Wake County Transit Plan* and *Durham County Transit Plan* network shapefile.
	Ease of Access*	Calculate the intersection density within ½ mile† of the corridor, excluding interstates and ramps.	Road network shapefile

[10] One-half mile is considered a reasonable walking distance to transit stations. Guerra, Erick, Cervero, Robert, and Tischler, Daniel. The Half Mile Circle: Does it Best Represent Transit Station Catchments? UC Berkley Center for Future Urban transport, 2011: https://escholarship.org/uc/item/68r764df

* These metrics are based on inputs to the FTA CIG evaluation process.

† All calculations of half-mile buffers will be completed using the road network to measure distance rather than straight-line distance. This will more accurately capture what is within one-half mile of the corridor, an acceptable walking distance to premium transit.

Category	Prioritization Metric	Evaluation Methodology	Data Source
Equity	Affordable housing access*	Calculate the ratio of legally binding affordability restricted housing units to all housing units within ½ mile† of each station location. Example output: 21% affordable units	TJCOG (http://www.preservationdatabase.org/) Recent 5-year ACS (block group)
	Minority access	Calculate the ratio of minority residents to all residents living within ½ mile† of station. Definition of minority will be consistent with TRM definition. Example output: 36% minority residents	Recent 5-year ACS data (block group)
	Low-income households	Calculate the ratio of low-income households within ½ mile of station.	Recent 5-year ACS data (block group)
	Transit dependent access*	Calculate the ratio of zero vehicle households to all households located within ½ mile† of station Example output: 15% zero vehicle households	Recent 5-year ACS data (block group)
Ridership	Vehicle (Passenger Coach) Boardings/Revenue Hour*	Calculate the CRT vehicle boardings per revenue hour Example output: 45 vehicle boardings/revenue hour	TRM v6 ridership model output or STOPS model and CRT service operating plan. The number of vehicles or passenger coaches per train will be assumed to be two vehicles per train for purposes of this analysis.

* These metrics are based on inputs to the FTA CIG evaluation process.

† All calculations of half-mile buffers will be completed using the road network to measure distance rather than straight-line distance. This will more accurately capture what is within one-half mile of the corridor, an acceptable walking distance to premium transit.

Category	Prioritization Metric	Evaluation Methodology	Data Source
Transit Supportive Land Use	Total People + Jobs served*	Calculate the total number of residents and jobs within ½ mile† of stations. Example output: 110,800 people + jobs	2045 projections from TRM v6
	Concentration of People + Jobs*	Calculate the number of residents and jobs within ½† mile of stations divided by the ½ mile network buffer around the stations. Example output: 17,100 people + jobs per square mile	2045 projections from TRM v6
Sustainability	Environmental impact	Quantitative assessment of potential negative impacts on existing features due to construction of CRT infrastructure. Example output: The sum of potential impacts created by CRT infrastructure	GIS layer of EMS stations, fire stations, hospitals, libraries, parks, police departments, schools, cemeteries, places of worship, utility lines, waterways/floodplains, wetlands, biodiversity & wildlife habitat, hazardous waste sites, water resources & water supplies, historic properties, and public open spaces.
Regional Access	Parking opportunities	A preliminary, qualitative evaluation of constrained land uses or usable space surrounding each station that could be potentially used to provide parking.	This is not a measurement of parking demand at stations. This evaluation could be conducted during a later project development phase.

* These metrics are based on inputs to the FTA CIG evaluation process.

† All calculations of half-mile buffers will be completed using the road network to measure distance rather than straight-line distance. This will more accurately capture what is within one-half mile of the corridor, an acceptable walking distance to premium transit.

Category	Prioritization Metric	Evaluation Methodology	Data Source
	Typical parking cost	Calculate the CBD typical cost per day near stations.	TRM v6 parking inventory data

3.2 EXPLANATION OF METRICS

Speed improvement

Travel time savings is a primary feature of successful CRT systems in the U.S. By measuring the difference in average operating speed between existing bus service operating in mixed traffic and proposed CRT service, this metric indicates the potential travel time savings that riders would experience. A larger change in travel time savings will be considered a positive characteristic of a potential CRT corridor.

Travel time competitiveness with automobile

This metric compares transit travel time to automobile travel times, by scenario. A low score indicates a scenario is not competitive with auto travel. A medium score indicates a scenario is mostly competitive with car travel. A high score indicates travel by rail transit is almost equal to the same route by car.

Connections to frequent transit

CRT functions best if the investment will create and strengthen connections and access to other transit routes. In particular, connections to frequent routes (defined as those that operate at least every 15 minutes) are important because riders experience minimal wait times when transferring. This metric will indicate the degree to which a potential CRT corridor will integrate with the planned frequent network.

Ease of access

Most commuter rail will either begin and/or end their trip as pedestrians, walking some distance to or from the train station. Ridership on CRT is likely to be higher in places that people can easily and conveniently access the station from the surrounding neighborhood. Intersection density is a common way to measure the density of the road network surrounding the corridor and therefore the number of pedestrian as well as bicycle connections. Areas where the street network is made of small blocks are easier for pedestrians and bicyclists to traverse because destinations can be accessed without out-of-direction travel. Areas with large blocks and circuitous roadways are less accessible because they often do not provide a direct path to a destination.

Affordable housing access

Locating CRT near affordable housing units can have significant long-term benefits for residents, lowering their transportation costs and connecting them to greater regional job accessibility. The FTA *Guidelines for Land Use and Economic Development Effects* refer to "legally binding affordability restricted housing" as units with a lien, deed of trust, or other legal instrument attached to a property and/or housing structure that restricts the cost of the housing units to be affordable to renters and/or owners with incomes below 60% of the area median income for a defined period of time.

Minority access

Wake County is committed to investing in a way that ensures regional equity and access to opportunities. Investment in CRT should ensure that service design and operations practices do not result in discrimination on the basis of race, color, or national origin, as required by Federal law, as described in FTA Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients", which became effective October 1, 2012. Minority access will measure the ratio of minority households in the CRT corridor.

Low-income access

Low-income households are defined per Census guidelines based on household size and reported income, which includes: 1) household size of fewer than four people and household income of less than $15,000; 2) household size between four and six people and household income of less than $25,000; or 3) household size of seven or more people and household income under $35,000.

Transit dependent access

CRT can particularly benefit households that do not have regular access to a vehicle by providing a reliable and fast connection to the region. Zero-vehicle households also often align with households with low income and are more likely to use transit. The FTA uses the ratio of zero-vehicle households in a corridor to evaluate eligibility for potential CRT funding.

Vehicle (Passenger Coach) Boardings per Revenue Hour

This measure will reflect both the ridership estimates and the levels of service provided, giving a good comparative metric between the multiple service operating scenarios. TRM v6 ridership model output or STOPS model will be used for the ridership estimates.

Total people + jobs served

The number of people living and working along transit corridors can indicate potential ridership levels and likelihood of sustaining the investment over time. Total population and employment indicates the degree to which transit supportive land uses are in place.

Concentration of people + jobs served

By developing land at higher residential densities and a higher percentage of mix of uses, more origins and destinations become located within walking, bicycle and transit proximity. While the total number of people and jobs is important to understand the scale of the impact of a potential CRT corridor, this metric ensures that shorter corridors with dense development are considered positively, even if the total number of people and jobs may not be as high as a longer, less dense corridor.

Environmental impact

Based on a high-level review of the natural and built entities within the CRT corridor, this metric will indicate the degree to which construction of CRT could potentially impact the environment. It is important to understand the likelihood of an environmental impact because of the effect it may have on ability of a project to move forward, the need for mitigations, or the timeline for construction.

Regional access

Regional access will be evaluated through parking opportunities and parking cost. Parking opportunities would be a preliminary, qualitative evaluation of available land uses or usable space surrounding each station that could be used to provide parking. Parking cost will calculate the CBD typical cost near stations.

4 Glossary of Terms

- **Guideline**: a general rule, principle, or piece of advice. A guideline is a statement by which to determine a course of action. A guideline aims to streamline particular processes according to a set routine or sound practice. By definition, following a guideline is never mandatory. Guidelines are not binding and are not enforced.
- **Benchmark**: a standard or point of reference against which things may be compared or assessed. Benchmarking is comparing one's business processes and performance metrics to industry bests and best practices from other companies. In project management benchmarking can also support the selection, planning and delivery of projects. Dimensions typically measured are quality, time and cost.
- A **standard** sets the minimum investment required to achieve the desired characteristics of CRT.
- A **measure** is a reference point against which performance is evaluated. Measures are evaluated against a target.
- **Target**: a goal to be achieved. A target is the defined value set for individual measures. For example, the target for the on-time performance is 90%.
- **Commuter Rail** is an electric- or diesel-propelled railway for urban passenger travel on the general railroad system between a central city and adjacent cities and suburbs.
- **CRT infrastructure** is defined as the 37 miles with which CRT-related infrastructure improvements will be implemented according to the *Wake Transit Plan*. CRT infrastructure includes stations and tracks that will be shared with both freight and intercity passenger rail service throughout the day.
- **CRT service (Example):** It is envisioned to operate up to eight trips each way in each direction during the peak period, with one to two trips during the midday and evening hours in the *Wake Transit Plan*.
- **Vehicle**: For commuter rail systems, a vehicle is the same as a passenger or coach car. Multiple passenger cars make up a single train.
- **Operating Expenses:**[12] The expenses associated with the operation of the transit agency and goods and services purchased for system operation. It is the sum of either the functions or the object classes listed below:

  An **Operating Expense Function** is an activity performed or cost center of a transit agency. The four basic functions are:

  Vehicle Operations, which includes all activities associated with the subcategories of the vehicle operations function: transportation administration and support; revenue vehicle operation; ticketing and fare collection; and system security.
  Vehicle Maintenance, which includes all activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles.

[12] APTA Fact Book Glossary, https://www.apta.com/resources/statistics/Documents/FactBook/APTA-Fact-Book-Glossary.pdf

Non-Vehicle Maintenance, which includes all activities associated with facility maintenance, including: maintenance of vehicle movement control systems; fare collection and counting equipment; structures, tunnels and subways; roadway and track; passenger stations, operating station buildings, grounds and equipment; communication systems; general administration buildings, grounds and equipment; and electric power facilities.

General Administration, which includes all activities associated with the general administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning.

An **Operating Expense Object Class** is a grouping of expenses on the basis of goods and services purchased. Nine Object Classes are reported as follows:

Salaries and Wages are the pay and allowances due employees in exchange for the labor services they render on behalf of the transit agency. The allowances include payments direct to the employee arising from the performance of a piece of work.

Fringe Benefits are the payments or accruals to others (insurance companies, governments, etc.) on behalf of an employee and payments and accruals direct to an employee arising from something other than a piece of work.

Employee Compensation is the sum of "Salaries and Wages" and "Fringe Benefits."

Services include the labor and other work provided by outside organizations for fees and related expenses. Services include management service fees, advertising fees, professional and technical services, temporary help, contract maintenance services, custodial services and security services.

Materials and Supplies are the tangible products obtained from outside suppliers or manufactured internally. These materials and supplies include tires, fuel and lubricants. Freight, purchase discounts, cash discounts, sales and excise taxes (except on fuel and lubricants) are included in the cost of the material or supply.

Utilities include the payments made to various utilities for utilization of their resources (for example, electric, gas, water, telephone, etc.). Utilities include propulsion power purchased from an outside utility company and used for propelling electrically driven vehicles, and other utilities such as electrical power for purposes other than for electrically driven vehicles, water and sewer, gas, garbage collection, and telephone.

Casualty and Liability Costs are the cost elements covering protection of the transit agency from loss through insurance programs, compensation of others for their losses due to acts for which the transit agency is liable, and recognition of the cost of a miscellaneous category of corporate losses.

Purchased Transportation is transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. Purchased transportation does not include franchising, licensing operation, management services, cooperative agreements or private conventional bus service.

Other Operating Expense is the sum of taxes, miscellaneous expenses, and expense transfers.

5 Appendix – Sample NTD Report (Virginia Railway Express, 2016)

http://www.vre.org/
1500 King Street
Suite 202
Alexandria, VA 22314-2730

Virginia Railway Express

2016 Annual Agency Profile

CEO: Mr. Doug Allen

General Information

Urbanized Area Statistics - 2010 Census
Washington, DC-VA-MD
1,322 **Square Miles**
4,586,770 **Population**
8 **Pop. Rank out of 498 UZAs**

Other UZAs Served
0 Virginia Non-UZA, 231 Fredericksburg, VA

Service Area Statistics
730 **Square Miles**
2,238,365 **Population**

Service Consumption
145,777,038 **Annual Passenger Miles (PMT)**
4,352,814 **Annual Unlinked Trips (UPT)**
17,713 **Average Weekday Unlinked Trips**
6,938 **Average Saturday Unlinked Trips**
0 **Average Sunday Unlinked Trips**

Service Supplied
2,289,083 **Annual Vehicle Revenue Miles (VRM)**
71,671 **Annual Vehicle Revenue Hours (VRH)**
97 **Vehicles Operated in Maximum Service (VOMS)**
120 **Vehicles Available for Maximum Service (VAMS)**

Database Information
NTDID: 30073
Reporter Type: Full Reporter

Financial Information

Sources of Operating Funds Expended

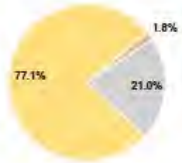
Fare Revenues	$37,696,913	52.6%
Local Funds	$16,971,472	23.7%
State Funds	$16,572,077	23.1%
Federal Assistance	$0	0.0%
Other Funds	$403,370	0.6%
Total Operating Funds Expended	$71,643,832	100.0%

Operating Funding Sources

Sources of Capital Funds Expended

Fare Revenues	$0	0.0%
Local Funds	$851,661	1.8%
State Funds	$9,826,428	21.0%
Federal Assistance	$36,042,993	77.1%
Other Funds	$0	0.0%
Total Capital Funds Expended	$46,721,082	100.0%

Capital Funding Sources



Modal Characteristics

Modal Overview

Mode	Vehicles Operated in Maximum Service: Directly Operated	Vehicles Operated in Maximum Service: Purchased Transportation
Commuter Rail	-	97
Total	-	97

Uses of Capital Funds

Mode	Revenue Vehicles	Systems and Guideways	Facilities and Stations	Other	Total
Commuter Rail	$24,549,525	$17,059,304	$5,112,253	$0	$46,721,082
Total	$24,549,525	$17,059,304	$5,112,253	$0	$46,721,082

Table 1 Column 9, Farebox Recovery (CR) = $37,696,913 / $69,874,827 = 54%

Summary of Operating Expenses (OE)

Salary, Wages, Benefits	$6,102,600	8.7%
Materials and Supplies	$3,211,518	4.6%
Purchased Transportation	$23,384,826	33.5%
Other Operating Expenses	$37,175,883	53.2%
Total Operating Expenses	$69,874,827	100.0%
Reconciling OE Cash Expenditures	$1,769,005	
Purchased Transportation (Reported Separately)	$0	

Operation Characteristics

Mode	Operating Expenses	Fare Revenues	Uses of Capital Funds	Annual Passenger Miles	Annual Unlinked Trips	Annual Vehicle Revenue Miles	Annual Vehicle Revenue Hours	Fixed Guideway Directional Route Miles	Vehicles Available for Maximum Service	Vehicles Operated in Maximum Service	Percent Spare Vehicles	Average Fleet Age in Years[a]
Commuter Rail	$69,874,827	$37,696,913	$46,721,082	145,777,038	4,352,814	2,289,083	71,671	173.6	120	97	19.2%	12.5
Total	$69,874,827	$37,696,913	$46,721,082	145,777,038	4,352,814	2,289,083	71,671	173.6	120	97	19.2%	

Performance Measures

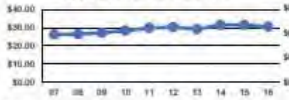
Service Efficiency

Mode	Operating Expenses per Vehicle Revenue Mile	Operating Expenses per Vehicle Revenue Hour
Commuter Rail	*Table 1, Column 7* $30.53	$974.94
Total	$30.53	$974.94

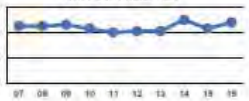
Service Effectiveness

Mode	Operating Expenses per Passenger Mile	Operating Expenses per Unlinked Passenger Trip	Unlinked Trips per Vehicle Revenue Mile	Unlinked Trips per Vehicle Revenue Hour
Commuter Rail	$0.48	*Table 1, Column 8* $16.05	1.9	*Table 1, Column 10* 60.7
Total	$0.48	$16.05	1.9	60.7

Operating Expense per Vehicle Revenue Mile: Commuter Rail



Operating Expense per Passenger Mile: Commuter Rail



Unlinked Passenger Trip per Vehicle Revenue Mile: Commuter Rail

Notes:
[a]Demand Response - Taxi (DT) and non-dedicated fleets do not report fleet age data.

Connecting all points of the Triangle

MEMORANDUM

TO: GoTriangle Board of Trustees

FROM: Shelley Blake, General Counsel

DATE: February 15, 2019

SUBJECT: **Wake Transit Concurrence Process for Major Transit Projects**

Strategic Objective or Initiative Supported

Action Requested

Staff requests that the Committee recommend Board adoption of the Wake Transit Concurrence Process.

Background and Purpose

Agencies that implement major capital projects have the responsibility of determining whether actions that are critical to those projects, as well as any impacts or interests of other agencies, are in compliance with those agencies' laws, policies, and regulations. Project Sponsors coordinate individually with other agencies, which is difficult to balance competing agencies' mandates, policies, laws, or regulations. The Wake Transit Concurrence Framework is modeled after the North Carolina Department of Transportation (NCDOT) 'Merger Process,' which sets out to achieve the same goals for projects NCDOT is responsible for implementing.

Attachment 1 further details roles and responsibilities of organizations involved in the process, projects that would be subject to the process, illustrative/common Concurrence Points for major capital projects, and a dispute resolution process. There are two documents associated with the Concurrence Framework in Attachment 1. The first is the policy document for the Concurrence Process that will be considered for approval. The second is a Practitioner Guide that is intended to be used as an administrative tool. The Concurrence Process was recommended for approval by the TPAC at its January 22nd regular meeting and will be considered for approval in February, prior to our Board meeting, by the CAMPO Executive Board. CAMPO staff will provide more information on the Concurrence Process at the Board of Trustees' February 27th meeting.

Financial Impact

Unknown

Attachments

- Wake Transit Concurrence Process

Staff Contact(s)

- Shelley Blake, 919-485-7561, sblake@gotriangle.org

Attachment 1

Wake Transit Concurrence Process

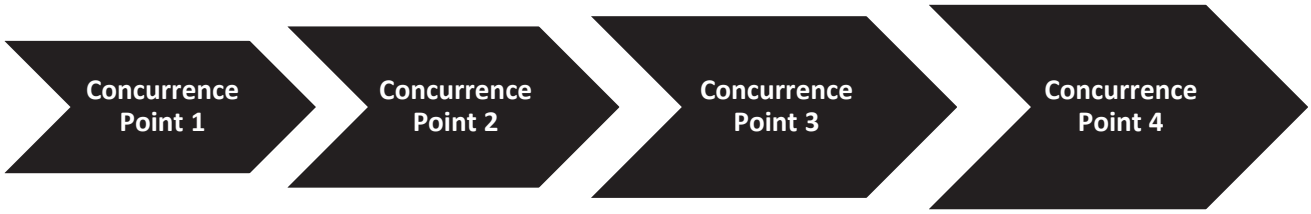
GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

Background and Introduction

Concurrence is a process in which Sponsors of major Wake Transit *Capital Projects*[1] may, with respect to such Projects, verify compliance with: **Laws, regulations, and policies enacted and/or enforced by agencies having regulatory authority over a resource or interest[2] that may be substantially impacted by the project.** The Concurrence Process arises at key project milestones throughout: (1) Project development[3] and permitting and, if applicable to the project, (2) Final design, right-of-way/land acquisition, construction, or other subsequent phases. These milestones, or points, are known as Concurrence Points.

Concurrence Points are distinct to the nature and magnitude of impacts anticipated for each project. Specific sequential Concurrence Points are identified in a project-specific Concurrence Plan. Concurrence Points cumulatively build over the course of project development and subsequent phases such that Concurrence at prior milestones informs the trajectory of project implementation that leads to future milestones. It is anticipated that Project Sponsor actions, and project trajectories, will be informed and improved by the Concurrence Process.

Figure 1: Sequential/Cumulative Nature of Concurrence Process



Concurrence signifies that an agency does not object to a Project Sponsor-proposed action or project implementation approach at a Concurrence Point. More particularly, it signifies that the agency does not object to the proposed action in light of impacts to resources or interests over which the agency has regulatory authority. Concurrence further signifies that the agencies will abide by their Concurrence unless there is a profound changed condition upon which the proposed action was based. Non-Concurrence signifies an objection based upon an agency's finding: (1) That the proposed action or approach to project implementation is in conflict with the laws, regulations, or policies under its jurisdiction; (2) That the proposed action or approach to project implementation has substantial negative impacts on a resource or interest over which the

[1] The Concurrence Process arises under provisions of the Transit Governance Interlocal Agreement ("ILA") of May 18, 2016. Terms used and defined in the ILA appear in italics.

[2] Applicable resources or other potentially impacted interests may include, but are not necessarily limited to, jurisdiction over land use and supporting infrastructure, natural and human environmental resources, cultural resources, or impacted facility maintenance responsibility.

[3] Project Development (PD) is the general term used to describe the advanced planning, preliminary architectural/engineering design, and applicable environmental compliance necessary to implement *Capital Projects*. Concurrence Points will coincide with key project milestones referenced in federal environmental compliance documents (i.e., National Environmental Protection Act [NEPA] process).

agency has regulatory authority; or (3) That information provided is not adequate for Concurrence.

The Concurrence Process **does not** establish a project-level steering committee or working group. It **does not** provide a platform for expression of opinions or positions. It **does not** authorize a project or an *Implementation Element* of a project. It **does not** authorize financing for a project. The Concurrence Process is an inter-agency verification of compliance process, involving only the agencies having regulatory responsibility as previously noted. Further, the Concurrence Process is not legally binding upon the agencies which are involved. For example, an environmental permitting agency may concur on a given matter, but that Concurrence does not bind the agency to ultimately issue a permit.

VALUE OF THE CONCURRENCE PROCESS

The Concurrence Process is a mechanism that streamlines and expedites the process of securing verification that proposed actions at key project milestones are consistent with the laws, policies and regulations of other agencies. Without the Concurrence Process, the Project Sponsor would be forced to coordinate with other agencies on an individual basis. It would accordingly be difficult to balance the various agencies' mandates, policies, laws, or regulations.

A major goal of the Concurrence Process is to bring order to what can easily be an unwieldy and excessively time-consuming process. Agencies having regulatory jurisdiction over an impacted resource or interest are much better positioned to provide guidance to a Project Sponsor if they have knowledge of and understand the nature of other agencies' interests in the project. Accordingly, the involved agencies may collaboratively react to proposed actions or approaches to project implementation at key project milestones so that compromise-based choices can be made (**Figure 2**).

Figure 2: Project Sponsor Verifying Compliance with Agencies as a Team

The Concurrence Process is substantially similar to the North Carolina Department of Transportation's (NCDOT's) Merger Process. The NCDOT Merger Process streamlines verification

of compliance associated with environmental permitting and project development, which is required for major transportation projects. The Merger Process has allowed projects to move more quickly through these required processes. A similar framework for major Wake Transit *Capital Projects* is likely to have similar benefits.

RELATIONSHIP TO WAKE TRANSIT WORK PLAN

Under the Wake Transit Governance Interlocal Agreement (*Governance ILA*), investments which will be made with Wake Transit Tax Revenues are determined through the adoption of the annual *Wake Transit Work Plan.* The annual *Wake Transit Work Plan* prescribes funding, general scope details, designation of each Project Sponsor, and year of implementation for a range of project *Implementation Elements*.

The annual *Wake Transit Work Plan* does not address all project-level details for each *Implementation Element*, nor does the *Wake Transit Work Plan* govern or inform all decisions to be made throughout the execution of each *Implementation Element*. The Concurrence Process informs decision making that is internal to an individual project or *Implementation Element* that has been authorized and funded in a *Wake Transit Work Plan* and for which an operating or capital funding agreement has been executed. The Concurrence Process should facilitate completion of *Implementation Elements*, so that the *Wake Transit Work Plan* may authorize subsequent phases or elements of major *Capital Projects*. This Concurrence Process is developed pursuant to Section 3.03 of the *Governance ILA* as a detailed strategy for major *Capital Projects*.

Concurrence Roles and Responsibilities

The group of agencies involved in the Concurrence Process for each applicable project is known as the Concurrence Team. The Concurrence Team is composed of a Project Sponsor, Cooperating Agencies, and Participating Agencies. The composition of agencies on each Concurrence Team will vary, depending on the project's geographic location and scope. The determination of the composition of a Concurrence Team and its progression through the Concurrence Process is facilitated and staffed by a Concurrence Administrator, in support of and in cooperation with the Project Sponsor. The Capital Area Metropolitan Planning Organization (CAMPO) will serve as the Concurrence Administrator for the Concurrence Process.

Each role on the Concurrence Team has a defined set of responsibilities in moving the Concurrence Process forward, and in satisfying National Environmental Protection Act (NEPA) compliance requirements:

Concurrence Team Role	Responsibilities
Project Sponsor	Role assigned through adoption of *Wake Transit Work Plan*
	Initiates project and takes responsibility for its implementation
	Identifies Cooperating Agencies and Participating Agencies with Concurrence Administrator
	Identifies necessary project Concurrence Points with Concurrence Administrator and Cooperating Agencies

	Leads project through Concurrence Points and proposes project-level actions or implementation approaches at corresponding key milestones
Cooperating Agency	Federal, state, or local agency with legal jurisdiction over aspects of project implementation or with respect to resources the project can reasonably be anticipated to impact
	Develops information and/or prepares analyses related to verification of proposed actions' compliance or noncompliance with regulations, policies, or laws under its jurisdiction
	Has capability of voting on Concurrence or Non-Concurrence in response to proposed actions at key project milestones
Participating Agency	Is invited to Concurrence Meetings and may provide input throughout the Concurrence Process
	Does not have legal jurisdiction over aspects of project implementation or with respect to resources the project can reasonably be anticipated to impact
	Does not have capability of voting on Concurrence or Non-Concurrence in response to proposed actions at key project milestones

COMMUTER RAIL CONCURRENCE TEAM

In addition to the regularly-appointed members of a Concurrence Team, commuter rail projects subject to the Concurrence Process should also have the following agencies as Cooperating Agency members: (1) The North Carolina Railroad Company; (2) Impacted freight rail operators; (3) The North Carolina Department of Transportation; (4) Any metropolitan planning organizations (MPOs) or rural transportation planning organizations (RPOs) with impacted jurisdiction; and (5) Any county governments with impacted jurisdiction.

EXECUTIVE TRANSIT TEAM

An Executive Transit Team will be formed to resolve disputes in the event of Non-Concurrence by a Cooperating Agency, or in the event the Project Sponsor and the Concurrence Administrator are unable to agree on the composition of the Concurrence Team. In contrast with Concurrence Team composition, the Executive Transit Team should be composed of officials, principals or executives, as applicable, from the Cooperating Agencies and the Wake Transit Governance ILA parties. More information on the Executive Transit Team's role is provided in **Section 5: Dispute Resolution Process** of the **Concurrence Practitioner Guide**.

CONCURRENCE PLANS AND MEETINGS

After the initial composition of the Concurrence Team is identified, the Project Sponsor will coordinate with the Concurrence Administrator and Cooperating Agencies to develop a project-specific Concurrence Plan that identifies Concurrence Points, a tentative schedule, Concurrence Team and Executive Transit Team (as described in **Section 5** of the **Concurrence Practitioner Guide**), and the responsibilities of each member. The Project Sponsor will serve as the Chair of the project Concurrence Team and will lead Concurrence Meetings. Further and more specific

information related to Concurrence Team roles and responsibilities is provided in **Appendix B** of the **Concurrence Practitioner Guide**.

Projects Subject to the Concurrence Process

At a minimum, the following *Capital Project* types utilizing Wake Transit funds are subject to the Concurrence Process.

1. Fixed guideway projects (e.g. bus rapid transit [BRT], commuter rail transit [CRT], or light rail transit [LRT])
2. Shared park-and-ride facilities (P&R)
3. Shared bus transit centers
4. Shared maintenance facilities
5. Infill and additional fixed guideway stations

In addition to the project types identified above, the Project Sponsor and the Concurrence Administrator will use the following screening criteria to identify any additional major *Capital Projects* that will follow the Concurrence Process:

- Facilities exceeding $1,000,000 in total cost that are proposed to be shared by other organizations or transit agencies that are not the Project Sponsor;
- Facilities exceeding $1,000,000 in total cost that will traverse or impact other jurisdictions beyond that of the Project Sponsor; or
- Facilities that have the potential to present significant impacts to the legal, regulatory, or policy interests of other public agencies.

Only major *Capital Projects* utilizing Wake Transit funds are subject to the Concurrence Process. Smaller capital, operations, and systems infrastructure projects **will not be** subject to the Concurrence Process. A listing of project types that are not subject to the process is provided in **Section 3** of the **Concurrence Practitioner Guide**.

Concurrence Points

Concurrence Points are defining points in the Concurrence Process at which Project Sponsors propose, and the Concurrence Team considers, actions or project implementation approaches at key project milestones. Concurrence implies that each Cooperating Agency concurs with proposed actions at these defining points in the project, and in so doing, pledges to abide by the Concurrence, unless there is a profound change in conditions. When appropriate, multiple Concurrence Points may be addressed at a single Concurrence Meeting, or a Concurrence Point that is common to two or more projects may be addressed at a single Concurrence Meeting of both/all applicable Concurrence Teams.

COMMON CONCURRENCE POINTS

The following are typical Concurrence Points for major *Capital Projects*. Some Concurrence Points identified here may not apply to a particular project, or additional Concurrence Points may be identified as determined by the Project Sponsor, Concurrence Administrator, and Cooperating

Agencies. As previously mentioned, Concurrence is sequential and must be considered in proper order. Further information on the meaning of these common Concurrence Points is provided in **Section 4** of the **Concurrence Practitioner Guide**.

Concurrence Point 1: Purpose and Need

Concurrence Point 2: Identify Study Alternatives Carried Forward

Concurrence Point 3: Alternatives Screening Process

Concurrence Point 4: Avoidance and Environmental Minimization

Concurrence Point 5: Locally Preferred Alternative (LPA) Recommendation

Concurrence Point 6: National Environmental Protection Act (NEPA) Assessment

Concurrence Point 7: LEDPA Recommendation

Concurrence Point 8: Additional Federal Process-Related decisions

Concurrence Point 9: Agreement with Jurisdictions for Additional Decision Points

Further Concurrence Points: As Needed

Additional Concurrence Points may be necessary as each project works through the project development process or subsequent phases, but these have not been identified here. It is the responsibility of the Project Sponsor and Cooperating Agencies to identify other necessary Concurrence Points after the selection of a least environmentally damaging preferred alternative.

The completion of the Concurrence Process for applicable *Capital Projects* will be a requirement of project-level agreements. All Concurrence Points must achieve full Concurrence before a subsequent project phase may be funded in the *Wake Transit Work Plan*.

CONCURRENCE DOCUMENTATION

After discussion and an opportunity for the Project Sponsor to provide any requested information, each Cooperating Agency member will vote to: Concur or Non-Concur. The Cooperating Agency Concurrence Team representative, as well as the respective Executive Transit Team members, are authorized to execute Concurrence Forms for major capital transit projects. Concurrence from all Cooperating Agencies shall be obtained before a Project Sponsor may proceed to a subsequent Concurrence Point. **Accordingly, Concurrence must be unanimous among Cooperating Agencies on a Concurrence Team.**

If an agency decides to Non-Concur, the agency should provide written justification for its decision to all Cooperating Agency members. The Project Sponsor and Cooperating Agencies are encouraged to attempt to resolve issues that cause Non-Concurrence as much as possible before

or when Non-Concurrence is rendered. A vote of Non-Concurrence should not be entered based on a lack of information without affording the Project Sponsor a reasonable opportunity to provide the requested information.

RE-EVALUATION OF CONCURRENCE POINTS

Having concurred at a particular Concurrence Point, a Concurrence Team member will not request to revisit previous Concurrence Points unless there is new substantial information that warrants a reevaluation. Examples of such instances warranting reevaluation might include, but are not limited to:

- A change in the assumptions on which the project purpose or need was based;
- Significant changes to project elements (these would need to be defined by Project Sponsor and agreed to by Cooperating Agencies);
- A change in regulatory authority that extends regulatory jurisdiction to include an area or resource that was not previously regulated;
- Discovery of an impact, resource, or additional information that was not previously identified or did not previously exist; or
- Discovery of engineering limitations.

CONCURRENCE LIMITATIONS

The Concurrence Process is not a mechanism for making substantial changes to *Implementation Elements* or deviating from the approved *Wake Transit Plan* or *Wake Transit Work Plan*. If alternative *Implementation Elements* (or details of such *Elements*) deviate from the scope or budget set forth for the *Implementation Element* in an annual *Wake Transit Work Plan* as a result of the Concurrence Process, or which are otherwise inconsistent with the *Wake Transit Plan* or *Wake Transit Work Plan*, then such matters will be subject to the adopted policies and processes for amending the *Wake Transit Plan* and *Wake Transit Work Plan*. Further, nothing herein abrogates any rights or remedies of Wake County, GoTriangle or CAMPO under the Wake Transit Governance ILA.

Dispute Resolution Process

It is recognized that there may be instances at which the Concurrence Team cannot reach Concurrence due to conflicting policies, regulations, or laws. If Concurrence Team members of one or more agencies cannot concur, the general following guidance for dispute resolution applies.

DISPUTE RESOLUTION PROCEDURE

The Executive Transit Team will be convened in the event of Non-Concurrence by a Cooperating Agency, or in the event the Project Sponsor and the Concurrence Administrator are unable to agree on the composition of the Concurrence Team. Executive Transit Team members must be formally notified of a Non-Concurrence event and provided with a written explanation for the Non-Concurrence by the non-concurring party. Any Cooperating Agency or Executive Transit Team Member may initiate the dispute resolution process by providing a written request to the Project Sponsor responsible for the project, with a copy to the Concurrence Administrator. The

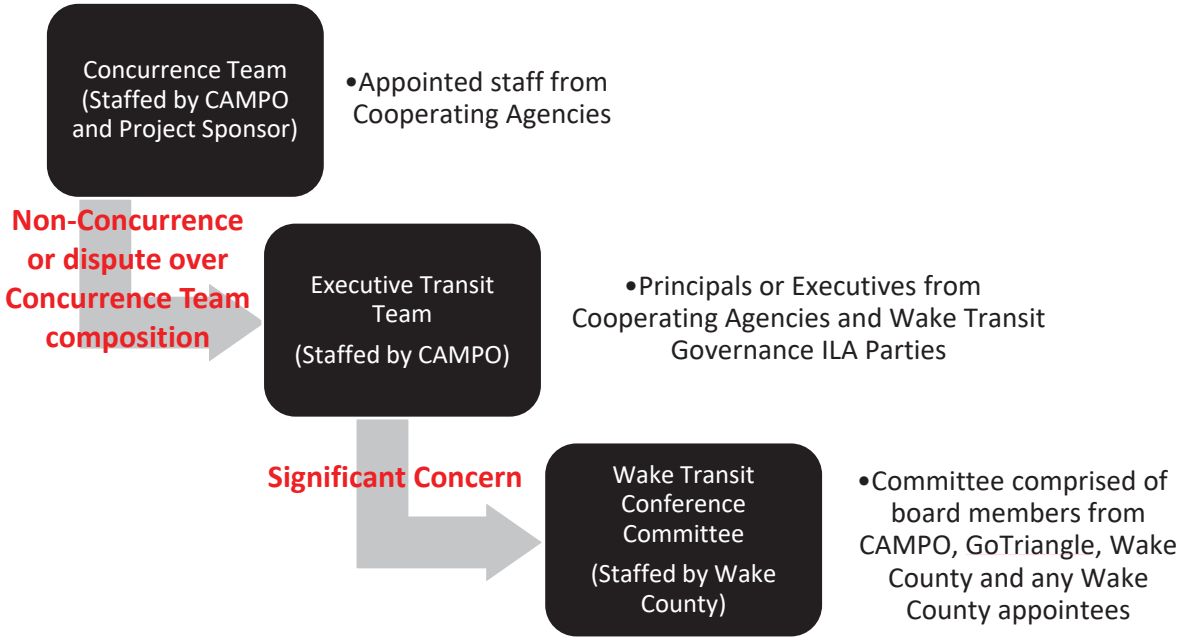
written request should state the specific reasons for the request to initiate the dispute resolution process.

CAMPO is responsible for administering the dispute resolution process. CAMPO will coordinate a tentative Executive Transit Team meeting to be held within 30 days from the date of Non-Concurrence or the request to initiate the dispute resolution process or as soon as possible otherwise. This date will be coordinated with all parties. Executive-level management and Concurrence Team members from the non-concurring agency or agency requesting to initiate the dispute resolution process will be invited to present information for the Executive Transit Team to consider. All Concurrence Team members may attend. It is expected that the Executive Transit Team will be able to reach a decision on Concurrence at the meeting or shortly thereafter. If the Executive Transit Team determines that additional information is needed, a decision on Concurrence will be delayed until the information is obtained.

After the Executive Transit Team makes a decision on Concurrence, authorized agency representatives will sign the Concurrence Form that implements that Concurrence decision. Final decisions shall not result in a violation of applicable laws, rules, or regulations. Should the Executive Transit Team not resolve the dispute, CAMPO, GoTriangle or Wake County may list a *Significant Concern* if it qualifies under the definition of *'Significant Concern'* in Section 2.33 of the Wake Transit Governance ILA. In this case, the administration of that process will be deferred to Wake County, and the procedures of Article X of the Governance ILA will be followed.

The dispute resolution process is depicted in **Figure 3**. Further information on the dispute resolution process is provided in **Section 5** of the **Concurrence Practitioner Guide**.

Figure 3: Concurrence Dispute Resolution Process



Wake Transit Concurrence Process

Practitioner Guide

GO FORWARD
A COMMUNITY INVESTMENT IN TRANSIT

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1 Background and Introduction

WHAT IS THE CONCURRENCE PROCESS?

The Concurrence Process is a structured process for Project Sponsors of major Wake Transit capital projects to follow that streamlines the verification of compliance with laws, regulations, and policies enacted and/or enforced by other agencies having jurisdiction over a resource or interest that may be substantially impacted by the project. This verification is conveyed in response to actions or implementation approaches proposed by the Project Sponsor at key project milestones throughout the project development[1] and permitting processes, and if deemed applicable to the project, final design, right-of-way/land acquisition, construction, or other subsequent phases of defined major capital projects. The points at which this verification is sought by Project Sponsors proposing these key project milestone actions are known as Concurrence Points. Applicable resources or other potentially impacted interests may include, but are not necessarily limited to, land use and supporting infrastructure, natural and human environmental resources, cultural resources, or impacted facility maintenance responsibility.

Specific Concurrence Points associated with the Concurrence Process are distinct to the nature and magnitude of anticipated impacts associated with each project. Specific Concurrence Points are outlined for each project in a project-specific Concurrence Plan and are sequential in order. Concurrence Points cumulatively build on one another over the course of project development or other applicable phases such that proposed Project Sponsor actions informed by verification from other agencies earlier in the process inform the trajectory of subsequent actions at key project milestones and associated Concurrence Points (**Figure1**). Inherent to the Concurrence Process is that the Concurrence Points involved will coincide with actions at key project milestones that are made throughout the development of federal environmental compliance documents (i.e., National Environmental Protection Act [NEPA] process).

Figure 1: Sequential/Cumulative Nature of Concurrence Process

[1] Project Development (PD) is the general term used to describe the advanced planning, preliminary architectural/engineering, and applicable environmental compliance necessary to implement capital projects.

Concurrence signifies that an organization from which verification is necessary does not object to a Project Sponsor-proposed action or implementation approach at a key project milestone's corresponding Concurrence Point and pledges to abide by its Concurrence unless there is a profound changed condition upon which the action was based. More particularly, the agency does not object to the proposed action based on the laws, regulations, or policies of its program or agency over which it has jurisdiction. If an organization does not concur, it is an indication from that organization that the proposed action or approach violates or could violate the laws, regulations, or policies under its jurisdiction, or it is an indication that information provided by the Project Sponsor for the proposed action is not adequate for verification. A successful Concurrence Process for applicable projects assumes that best efforts are made by all parties to consider viable modifications to alternatives that would allow non-concurring parties to concur. More information on the actions taken by parties at project Concurrence Points is provided in **Section 4: Concurrence Point Overview**.

What the Concurrence Process is Not

The Concurrence Process is not designed to facilitate a project-level technical steering committee or working group that offers a platform for other agencies to inform the Project Sponsor on their agencies' opinions related to project planning methodology, project priorities, or philosophical interests. It is inherent to the concept of concurrence that organizations providing verification of compliance at Concurrence Points possess a legally institutionalized project-level policy, law, or regulation related to a resource or interest that could substantially be impacted by the project. The Concurrence Process does not authorize organizations or stakeholders without this level of standing to assert a need for verification.

While the Concurrence Process is designed for Project Sponsors to secure verification of compliance on proposed actions at key project milestones from agencies having regulatory standing in a resource that may be impacted, a signification of Concurrence by those agencies does not mean that the agency is legally bound by that signification of concurrence. For instance, a permitting agency (e.g., U.S. Army Corps of Engineers) may participate in the Concurrence Process for a project and concur on a Concurrence Point that corresponds to an action proposed by the Project Sponsor. Concurrence provided by an authorized person on the permitting agency's staff is a good faith effort made by that staff member through her or his administrative capacity to verify that the proposed project-level action is in compliance with the regulations, policies, or laws over which the agency has jurisdiction, or that the action's impacts to resources under its jurisdiction have been negotiated with other interests or mitigated to an acceptable level. However, this good faith effort to verify that the Project Sponsor's proposed action is in compliance with its regulations **does not** automatically bind the permitting agency to issue a necessary permit that relies on its original signification of verification. Significations of Concurrence at Concurrence Points covered by the Concurrence Process do not automatically result in final legally binding decisions on projects. Their intent is to provide a much higher level of confidence to a Project Sponsor that it can rely on those significations of Concurrence in moving forward with proposed actions or approaches to project implementation at key project milestones.

CONCURRENCE PROCESS GOALS

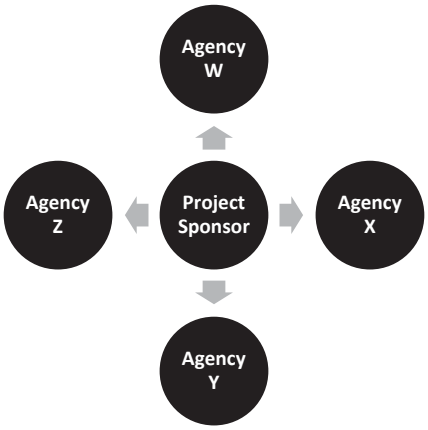
The Concurrence Process is designed to ensure coordinated, transparent, and productive verification of compliance for major Wake Transit capital projects. By requiring documented Concurrence of the actions proposed by Project Sponsors at key milestones during the planning phases for major capital projects, the Concurrence Process ensures all concurring parties:

1. Are aware of and consent to the trajectory of the project and its potential impacts prior to its implementation;
2. Have an opportunity to collaborate on the project, provide input, and share resources, if appropriate; and
3. Agree to a timeline for project development and implementation that is predictable and reliable.

Value of the Concurrence Framework

The Concurrence Process is a mechanism that streamlines and expedites a Project Sponsor's process of securing verification that its proposed actions or approaches to implementation at key project milestones are legal from other agencies having a regulatory interest in a project. Agencies that implement major capital projects have the responsibility of determining whether actions that are critical to the trajectory of those projects, as well as any impacts to regulated resources or interests of other agencies that may be associated with those actions, are in compliance with those agencies' laws, policies and regulations. Left to a framework in which Project Sponsor agencies coordinate individually with other agencies, it is very difficult to balance any competing organizations' mandates, policies, laws or regulations (**Figure 2**).

Figure 2: Project Sponsor Verifying Compliance with Agencies Individually



A major goal of the Concurrence Process is to bring order to what can easily be an unwieldy and excessively time-consuming process of securing verification of compliance from multiple agencies that may have competing interests or solutions for addressing regulatory issues with projects. Agencies having a regulatory interest in a resource that may be impacted by a project are much

better positioned to provide guidance to a Project Sponsor on a feasible path forward if they have knowledge of and understand the nature of any other competing interests in the project. The Concurrence Process is designed to bring together all agencies having regulatory jurisdiction in a resource or interest that may be impacted by a project to collaboratively react to proposed actions or implementation approaches at key project milestones so that compromise-based choices can be made that offer a feasible path forward (**Figure 3**).

Figure 3: Project Sponsor Verifying Compliance with Agencies as a Team

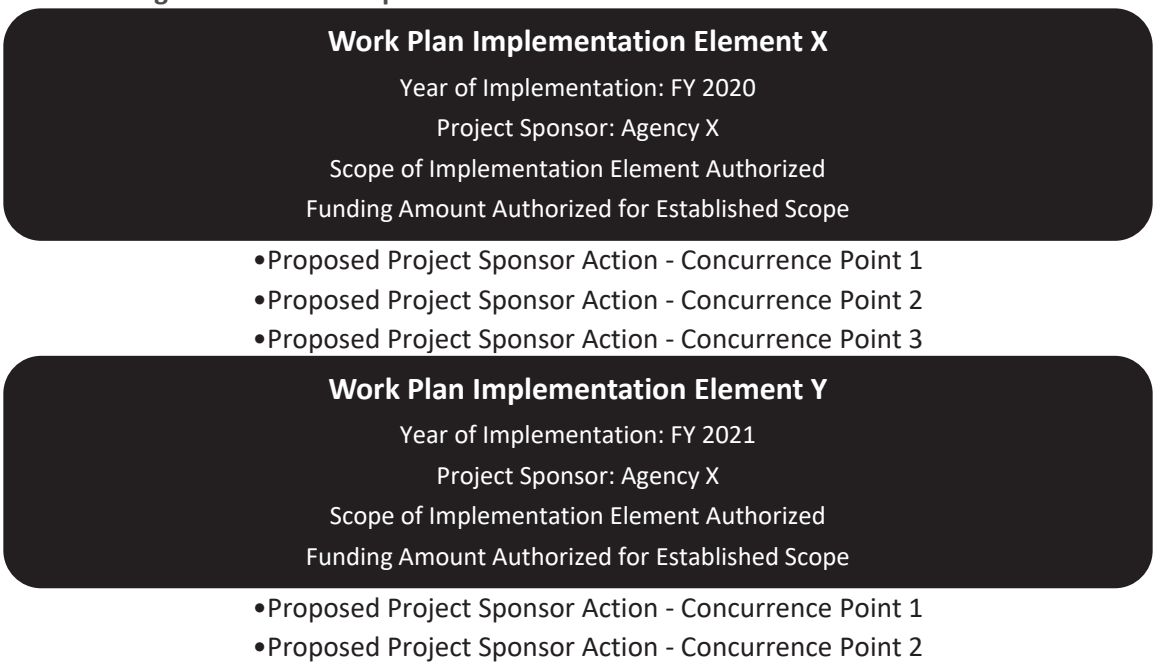
The Concurrence Process for major Wake Transit capital projects is substantially similar to the North Carolina Department of Transportation's (NCDOT's) Merger Process, which combines and streamlines verification of compliance associated with environmental permitting processes and project development that must be achieved for major transportation projects. NCDOT's implementation of this approach has allowed projects to move more quickly through these required processes. Facilitating the same type of process for major Wake Transit capital projects is likely to have the same benefit, which is particularly valuable for implementing applicable projects within the timeframe outlined in the Wake Transit Plan.

RELATIONSHIP TO WAKE TRANSIT WORK PLAN

The primary deliverable prescribed by the Wake Transit Governance Interlocal Agreement (Governance ILA) that details which investments will be made with Wake Transit Tax Revenues is the annual Wake Transit Work Plan. The annual Wake Transit Work Plan prescribes funding, general scope details, Project Sponsor, and year of implementation for a range of implementation elements. An implementation element is a single project, logical grouping of projects, or a specific phase or element of a larger project that is tracked as a separate unit in an annual Wake Transit Work Plan.

The annual Wake Transit Work Plan does not address all project-level details for each implementation element, nor does the Wake Transit Work Plan govern or inform all decisions to be made throughout the execution of each Implementation Element. The Concurrence Process facilitates a verification of compliance process at key project milestones that are internal to an individual project or implementation element for which funding and general scope details have been authorized in an annual Wake Transit Work Plan. For many projects, the Concurrence Process should facilitate completion of implementation elements so that the Wake Transit Work Plan may authorize a subsequent phase or implementation element associated with the project to proceed. The Concurrence Process is developed pursuant to Section 3.03 of the Governance ILA as a detailed strategy for major capital projects.

Figure 4: Relationship of Concurrence Process to Wake Transit Work Plan



CONCURRENCE LIMITATIONS

The Concurrence Process is not a mechanism for making substantial changes to Implementation Elements or deviating from the approved Wake Transit Plan or Wake Transit Work Plan. If alternative Implementation Elements (or details of such Elements) deviate from the scope or budget set forth for the Implementation Element in an annual Wake Transit Work Plan as a result of the Concurrence Process, or which are otherwise inconsistent with the Wake Transit Plan or Wake Transit Work Plan, then such matters will be subject to the adopted policies and processes for amending the Wake Transit Plan and Wake Transit Work Plan. Further, nothing herein abrogates any rights or remedies of Wake County, GoTriangle or CAMPO under the Wake Transit Governance ILA.

COMPONENTS OF CONCURRENCE PROCESS

This document defines the following key components of the Concurrence Process:

1. Parties involved and the roles and responsibilities of each;
2. Types of Wake Transit-related projects subject to the process;
3. Illustrative "Concurrence Points" at which concurrence must be officially documented; and
4. The dispute resolution process.

2 Concurrence Team Members, Roles, and Responsibilities

The group of agencies that will be involved in the Concurrence Process for each applicable project is known as the Concurrence Team. The Concurrence Team is composed of a Project Sponsor, Cooperating Agencies and Participating Agencies. The composition of agencies on each project's Concurrence Team will vary depending on the specific project's geographic location and scope. The determination of a Concurrence Team's initial composition and its progression through a Concurrence Process is facilitated and staffed by a Concurrence Administrator in cooperation with the Project Sponsor. The Capital Area Metropolitan Planning Organization (CAMPO) will act as the Concurrence Administrator for the Concurrence Process.

Each role on a Concurrence Team, as well as the Concurrence Administrator, has a defined set of responsibilities in moving the Concurrence Process forward and satisfying federal National Environmental Protection Act (NEPA) compliance requirements. The roles of Cooperating Agency and Participating Agency within the Concurrence Process are consistent with the roles of other impacted agencies that Project Sponsors are required to identify, and with which they are required to coordinate, for major federally funded projects under the Council for Environmental Quality's federal regulations. The Federal Transit Administration's (FTA) guidance/standard operating procedures on Agency Roles and Government-to-Government Coordination is provided as **Appendix A** to this document.

- The ***Project Sponsor*** is the agency that is initiating the project and taking primary responsibility for its implementation.
    - It is the responsibility of the Project Sponsor to coordinate with the Concurrence Administrator to identify Concurrence Team members and their roles for each project, as well as necessary Concurrence Points for the applicable project-level Concurrence Process.
    - The Project Sponsor is assigned through the adoption of annual Wake Transit Work Plans[2], and the Project Sponsor will always be a Cooperating Agency.
    - The Project Sponsor leads an applicable project through the progression of Concurrence Points and proposes project-level actions or implementation approaches at key project milestones for verification of compliance by Cooperating Agencies.
- A ***Cooperating Agency*** is a Federal, state or local agency which has policy, regulatory, or legal jurisdiction over aspects of project implementation or with respect to resources the project can reasonably be anticipated to substantially impact. In these roles, Cooperating Agencies may have special expertise with respect to any project-impacting issues that

[2] For the Bus Rapid Transit and Commuter Rail Transit projects in the Wake Transit Plan, separate discrete action by the CAMPO Executive Board has been prescribed to designate Project Sponsors for those projects.

should be resolved during the project development or subsequent project implementation phases or which should be addressed in the environmental compliance document.

  - Cooperating Agencies have policy, regulatory, or legal jurisdiction with respect to resources or other potentially impacted interests that include, but are not necessarily limited to, land use and supporting infrastructure planning, natural and human environmental resources, cultural resources, or impacted facility maintenance responsibility.

  - They may develop information and prepare analyses related to verification of proposed project actions' compliance or noncompliance with regulations, policies, or laws under their jurisdiction, which may be used for applicable sections of project development documents.

  - Cooperating Agencies have the capability of voting on Concurrence or Non-Concurrence.

- A ***Participating Agency*** is a Federal, state or local agency that may have an interest in the project, but the project is not reasonably anticipated to substantially impact resources or interests within or covered by its regulatory jurisdiction.

  - Participating Agencies may provide input to the Concurrence Process.

  - They **do not** have policy, regulatory, or legal jurisdiction with respect to resources or other interests that are reasonably anticipated to be substantially impacted by the applicable project.

  - Participating Agencies do not have the capability of voting on Concurrence or Non-Concurrence.

Table 1 illustrates the typical responsibilities of agency roles through the Concurrence Process, as well as potential federal, state, or local agencies likely to participate in the Concurrence Process for major Wake Transit capital projects.

Table 1 Typical Agency Roles for Concurrence Process

Project Sponsor (Lead Agency)	Cooperating Agency	Participating Agenc
g or having taken primary responsibility for facilitating mplementation decisions and environmental compliance through adopted Wake Transit Work Plans s project-specific Concurrence Process, membership, schedule and Concurrence Points with Concurrence rator	• Anticipated to have policy, regulatory, or legal jurisdiction with respect to resources or other potentially impacted interests • May develop information and prepare analysis related to validation of proposed project actions' compliance or noncompliance with regulations for applicable sections of project development documents • Has the capability of voting on Concurrence or Non-Concurrence	• Federal, state, tribal, regional, and local g may have an interest in the project • Provide review and input on potentially af covered by their jurisdiction • Do not have capability of voting on Concu Concurrence
sor - TBD per project by adopted Wake Transit Work Plans	Project Sponsor, and any other municipality or local agency, county, MPO, or RPO with jurisdiction reasonably anticipated to be substantially impacted by the project	Any Federal, state or local agency that may ha project (e.g., municipalities, RPOs, MPOs, or c applicable project does not traverse or impact
funded by a Federal agency (e.g., FTA), the Federal agency e funding will serve as a 'federal lead agency' for the project	NCDOT, FHWA – Federal Highway Administration (e.g., for any BUILD-funded projects), US Army Corps of Engineers (e.g., for projects crossing navigable waters of the U.S.), US Fish and Wildlife Service, North Carolina Department of Natural and Cultural Resources, etc.	<u>US Departments</u> Army Corps of Engineers, Environmental Protection Agency, Fish and Wildlife Service, National Park Servic <u>NC Departments</u> Environmental Quality, Natural and Cultural Resources, Wildlife Resources Commission, etc.

CONCURRENCE TEAM MEMBERSHIP

Each Cooperating Agency will develop or defer to existing protocol to determine which office or individual of each agency will participate but will need to ensure that appointed representatives that serve on Concurrence Teams have the authority to provide verification of compliance at Concurrence Points or to represent the respective agency's interests. The Project Sponsor will be responsible for coordinating with the Concurrence Administrator to identify appropriate Cooperating and Participating Agencies for individual projects in an early stage of project scoping, preferably three (3) to six (6) months in advance of adoption of the annual Wake Transit Work Plan that appropriates funding to the planning, feasibility, and/or project development phases of the applicable project. They will also document justification of recommendations for the inclusion of Concurrence Team members for each applicable project.

Unless they intentionally opt out of participation in the Concurrence Process, Cooperating Agencies are required members of any major transit capital project Concurrence Team to which they are invited. In addition, the Project Sponsor may recommend inclusion of specific Participating Agencies to the Concurrence Team, when appropriate. It is recognized that many statutes and regulations must be met in order to achieve CConcurrence. Therefore, North Carolina state resource agencies (e.g., North Carolina Department of Environmental and Natural Resources) will be invited to participate as a Cooperating Agency only if the project under consideration affects the land, resources, or infrastructure under their respective jurisdictions. If an agency's jurisdiction is not directly impacted, it can join the Concurrence Team as a Participating Agency or it can decline to participate in the Concurrence Process.

In addition to determining regular membership on a project's Concurrence Team, an Executive Transit Team composed of principals or executives from the Cooperating Agencies and the parties to the Wake Transit Governance Interlocal Agreement (i.e., GoTriangle, CAMPO, and Wake County) will be formed to resolve disputes in the event of Non-Concurrence, or in the event that the Project Sponsor and the Concurrence Administrator are unable to agree on composition of the Concurrence Team. More information on the Executive Transit Team's role is provided in **Section 5: Dispute Resolution Process** of this document.

Commuter Rail Concurrence Team

In addition to the regularly-appointed members of a Concurrence Team, commuter rail projects subject to the Concurrence Process should also include the following agencies as Cooperating Agency members: (1) The North Carolina Railroad Company; (2) Impacted freight rail operators; (3) North Carolina Department of Transportation; (4) Any other MPOs or rural transportation planning organizations with impacted jurisdiction; and (5) County governments with impacted jurisdiction.

CONCURRENCE PLANS AND MEETINGS

For each major capital transit project, after the initial composition of the Concurrence Team is identified, the Project Sponsor will coordinate with the Concurrence Administrator and Cooperating Agencies to develop a project-specific Concurrence Plan that identifies project-

specific Concurrence Points, a tentative schedule, Concurrence Team and Executive Transit Team membership, and the responsibilities of each member. A distinct Concurrence Plan will be developed for each applicable project. The Project Sponsor serves as the Chair of the project Concurrence Team and leads Concurrence Meetings for agencies to present and share information on their ability to verify compliance with regulations, policies, or laws under their jurisdiction. Specific information related to Concurrence Team roles and responsibilities is provided in **Appendix B** to this document.

3 Projects Subject to the Concurrence Process

At a minimum, the following capital project types utilizing Wake Transit funds are subject to the Concurrence Process:

1. Fixed Guideway Projects (e.g. bus rapid transit [BRT], commuter rail transit [CRT], or light rail transit [LRT])
2. Shared park-and-ride facilities (P&R)
3. Shared bus transit centers
4. Shared maintenance facilities
5. Infill and additional fixed guideway stations

In addition to the project types identified above, the Project Sponsor and the Concurrence Administrator will use additional screening criteria described below to identify any additional major capital projects that will follow the Concurrence Process.

GUIDANCE FOR APPLICABILITY DETERMINATION

The need for detailed alternative analysis studies to avoid or minimize impacts to important resources and to evaluate the potential conflicts between resources should determine the basis for applying the Concurrence Process to projects. In addition, the process could be triggered by potential projects involving:

- Facilities exceeding $1,000,000 in total cost that are proposed to be shared by other organizations or transit agencies that are not the Project Sponsor;
- Facilities exceeding $1,000,000 in total cost that will traverse or impact other jurisdictions beyond that of the Project Sponsor; or
- Facilities that have the potential to present significant impacts to the legal, regulatory, or policy interests of other public organizations/agencies.

Projects Not Subject to the Concurrence Process

Only major transit capital projects utilizing Wake Transit funds are subject to the Concurrence Process. The following types of capital, operations, and systems infrastructure projects will not be subject to the Concurrence Process:

Transit Service and Operations Projects

- Implementation of new transit (non-BRT or –CRT) routes
- Substantial changes to existing transit (non-BRT or-CRT) routes

Small Capital Projects

- Improvements to existing bus stops or to existing non-shared passenger-facing bus facilities

- Development of new bus stops
- Leasing park-and-ride facilities
- Vehicle procurement and vehicle leasing

Technology/Systems Projects

- Implementing new fare collection system
- Implementing new automatic vehicle location (AVL) system
- Implementing new scheduling system
- Implementing new dispatching system
- Implementing new customer information system
- Implementing new intra-agency system (i.e. accounting system)

It is important for involved agencies and municipalities to cooperate and coordinate regionally on the above types of projects. However, their relatively small scale and impacts render them poorly suited for the Concurrence Process.

4 Concurrence Point Overview

Concurrence Points at which Project Sponsors propose project-level actions or approaches to implementation at key project milestones, and for which verification of compliance is sought from Cooperating Agencies, are defining points in the Concurrence Process. Concurrence implies that each appointed representative from a Cooperating Agency agrees to proposed actions at these defining points in the project development process, and possibly beyond, and in doing so pledges to abide by a signification of concurrence made unless there is a profound change in conditions. As previously mentioned, these Concurrence Points are established in a Concurrence Plan developed by the Project Sponsor in cooperation with the Concurrence Administrator with input from the identified Cooperating Agencies.

When appropriate, multiple Concurrence Points may be addressed at a single Concurrence Meeting, or a Concurrence Point that is common to two or more projects may be addressed at a single Concurrence Meeting of both/all applicable Concurrence Teams. When developing Concurrence Meeting agendas that include multiple Concurrence Points or participation by more than one Concurrence Team, the Project Sponsors leading the respective teams will coordinate with the Concurrence Administrator (CAMPO) to ensure that all required Cooperating Agency members are engaged for Concurrence Points that exclusively apply to them based on the concurrence track for each discrete project.

Concurrence Process Concurrence Points

Following are common Concurrence Points for major capital projects. Some Concurrence Points identified here may not apply, or, contrarily, additional Concurrence Points may be built into the process as determined by the Project Sponsor, Concurrence Administrator, and Cooperating Agencies during the development of the project's Concurrence Plan.

As previously mentioned, Concurrence is sequential and must be achieved in proper order. As an example, it is not possible to have agreement on alternatives selected for detailed study (Concurrence Point 2) without first achieving concurrence on purpose and need (Concurrence Point 1).

Concurrence Point 1: Purpose and Need

The foundation upon which justification of the project is established.

Concurrence Point 2: Identify Study Alternatives Carried Forward

Alternatives which satisfy the purpose and need for the project. These alternatives will be studied and evaluated in sufficient detail to ensure good transportation and impact mitigation or avoidance decision-making.

Concurrence Point 3: Alternatives Screening Process

If alternatives are screened out (i.e. alternatives are eliminated) prior to the LPA recommendation, the appropriate participants must be informed and concur.

Concurrence Point 4: Avoidance and Environmental Minimization
A detailed, interdisciplinary and interagency review to optimize the design and benefits of the project while reducing potential impacts to both the human and natural environments.

Concurrence Point 5: LPA Recommendation
Final recommendation for locally preferred alternative.

Concurrence Point 6: NEPA Assessment
A detailed, interdisciplinary and interagency review of required NEPA assessment.

Concurrence Point 7: LEDPA Recommendation
Final approval for the alternative selected as the "least environmentally damaging practicable alternative."

Concurrence Point 8: Additional Federal Process-Related decisions
Depending on alternative or corridor, additional federally required documentation may be necessary. If this is the case, an additional Concurrence Point may be added.

Concurrence Point 9: Agreement with Jurisdictions for Additional Decision Points
Additional subsequent Concurrence Points that address the final design, construction, and system integration phases of a project life cycle are further memorialized in an agreement(s) between the project sponsor and impacted jurisdiction(s).

Further Decision Points: As Needed
Additional Concurrence Points may be necessary as each project works through the project development process or subsequent phases, but these have not been identified here. It is the responsibility of the Project Sponsor and Cooperating Agencies to identify other necessary decision points beyond the selection of a least environmentally damaging preferred alternative.

The completion of the Concurrence Process/Plan for applicable capital projects in accordance with this framework will be a requirement set forth in project-level agreements for applicable projects that tie to the annual Wake Transit Work Plan that funds the subject project or subject project phase. All Concurrence Points must achieve full Concurrenc before a subsequent project phase may be funded in the annual Wake Transit Work Plan.

CONCURRENCE DOCUMENTATION

Each agency should enter discussion on proposed decisions at Concurrence Points with a solution-oriented attitude. After sufficient discussion and an opportunity for the Project Sponsor to provide requested information, each involved Cooperating Agency will either Concur or Non-Concur. Cooperating Agency representatives on a Concurrence Team and their respective Executive Transit Team members are authorized to execute Concurrence Forms. Executive Transit Team member signatures are required only in the event of Non-Concurrence at a Concurrence Point. Concurrence from Cooperating Agencies shall be obtained before a Project Sponsor can

proceed to a subsequent Concurrence Point in the Concurrence Process. Accordingly, Concurrence must be unanimous among Cooperating Agencies on a Concurrence Team.

If an organization decides to Non-Concur, that organization is responsible for documenting its reasons in writing and providing that documentation to all involved parties within five (5) business days of the respective Concurrence Meeting at which a Project Sponsor's proposed action was presented for Concurrence. The Project Sponsor and Cooperating Agencies are encouraged to attempt to resolve issues that cause Non-Concurrence as much as possible before or at the moment an indication of Non-Concurrence is rendered. Non-Concurrence should not be utilized based on a lack of information without affording the Project Sponsor a reasonable opportunity to provide the requested information.

If a Cooperating Agency is completely disinterested in a Project Sponsor-proposed action at a Concurrence Point, or if a Cooperating Agency is no longer engaged in the Concurrence Process for a particular project, it may abstain from signifying Concurrence or Non-Concurrence. Similar to Concurrence, abstention means that a Cooperating Agency does not actively object to a proposed action, but the agency will not sign off on the Concurrence Point with an indication of Concurrence. In this case, the Concurrence Process may continue, and the abstaining Cooperating Agency is agreeing not to revisit the Concurrence Point unless there is a profound changed condition upon which the decision to abstain or to refrain from involvement at the Concurrence Point was based.

Re-evaluation of Concurrence Points

Having concurred at a particular Concurrence Point, a Concurrence Team member will not request to revisit previous Concurrence Points unless there is new substantial information that warrants a reevaluation. Examples of such instances warranting reevaluation might include, but are not limited to:

- A change in the assumptions on which the project purpose or need was based;
- Significant changes to project elements (these would need to be defined by Project Sponsor and agreed to by Cooperating Agencies);
- A change in regulatory authority that extends regulatory jurisdiction to include an area or resource that was not previously regulated;
- Discovery of an impact, resource, or additional information that was not previously identified or did not previously exist; or
- Discovery of engineering limitations.

Staffing changes are not sufficient reason to revisit a previous Concurrence Point, and newly involved agency staff will abide by significations of Concurrence made by previous staff and the Concurrence Team. A request to revisit a previous Concurrence Point will be provided in writing to the Concurrence Administrator (CAMPO) and will include supporting documentation. CAMPO will respond to the request by email with cc's to the entire Concurrence Team.

5 Dispute Resolution Process

Concurrence at critical identified points in the project development and permitting process, as well as in any applicable subsequent phases, is the key to the success of the Concurrence Process. However, it is recognized that there may be instances at which the Concurrence Team cannot reach Concurrence due to conflicting policy, regulatory approaches, or laws. If the Concurrence Team members of an agency or agencies cannot concur, the following guidance for dispute resolution will be initiated.

CAMPO, as the Concurrence Administrator, is the neutral transportation planning facilitator for the region and will administer this process. Should this process ultimately require the listing of a Significant Concern (if qualifying) in the event that the Executive Transit Team cannot resolve the dispute, Wake County will administer that process per the Wake Transit Governance Interlocal Agreement (ILA). A Significant Concern may be listed if the subject project is unable to proceed as prescribed in the Wake Transit Work Plan and the first level of dispute resolution prescribed in this document fails to resolve the dispute. The first level of dispute resolution is to the Executive Transit Team. In the event that the Executive Transit Team cannot resolve the issue, then the Wake Transit Governance ILA Article X provisions could be enacted.

Executive Transit Team

As previously mentioned in this document, the Executive Transit Team is composed of principals or executives from the Project Sponsor, Cooperating Agencies, and the parties to the Wake Transit Governance Interlocal Agreement (i.e., GoTriangle, CAMPO, and Wake County). If the Concurrence Team members of an agency or agencies cannot Concur, the Executive Transit Team must follow the following dispute resolution guidance.

Dispute Resolution Guidance

This dispute resolution guidance is intended to apply to the full spectrum of conflicts and unresolved issues that arise during the development, design, and permitting of major capital Wake Transit projects. The guidance also provides the specific procedures for elevation to upper management in those cases in which concurrence at Concurrence Points cannot be reached by the Concurrence Teams. It is understood that every effort will be taken to resolve issues at the Concurrence Team level. Should there be instances of non-concurrence during the Concurrence Process, the following elevation process should be initiated.

The Executive Transit Team will be convened in the event of Non-Concurrence by a Cooperating Agency on any Concurrence Point addressed by the Concurrence Team, or in the event the Project Sponsor and the Concurrence Administrator are unable to agree on the composition of the Concurrence Team. Executive Transit Team members must be formally notified of a Non-Concurrence event and provided with a written explanation for the Non-Concurrence by the Non-Concurring party. Any Cooperating Agency or Executive Transit Team member may initiate the process by providing a written request to the Project Sponsor responsible for the project, with a copy to the Concurrence Administrator, providing the specific reason for the request.

Upon receiving the written request, the Project Sponsor will send an e-mail notice to the Executive Transit Team Members and all Concurrence Team members. The e-mail notification should

identify and briefly describe the project involved, actions taken to date, the Concurrence Point at which agreement cannot be reached, and the reason for the request. Concurrence Team members and meeting participants are responsible for keeping their respective chains of command informed.

CAMPO will coordinate a tentative Executive Transit Team meeting to be held within 30 days from the date of the e-mail notice or as soon as possible thereafter. This date will be coordinated with all parties and will be e-mailed to the Executive Transit Team and all Concurrence Team members. In advance of the Executive Transit Team meeting, the parties in dispute will attempt to resolve the issue by elevating the problem up their respective chains of command. If resolution is achieved, it will be documented by signing an agreement or the Concurrence Form, and the Project Sponsor and Concurrence Administrator will ensure that the Executive Transit Team meeting is canceled. In the event that the conflict cannot be resolved by the 21st day of the 30-day time period, the Project Sponsor will ensure the Executive Transit Team receives written briefs from the agencies involved to support their respective positions. The Project Sponsor will be responsible for assuring that this information is provided to the Executive Transit Team no later than five (5) days prior to the scheduled Executive Transit Team meeting.

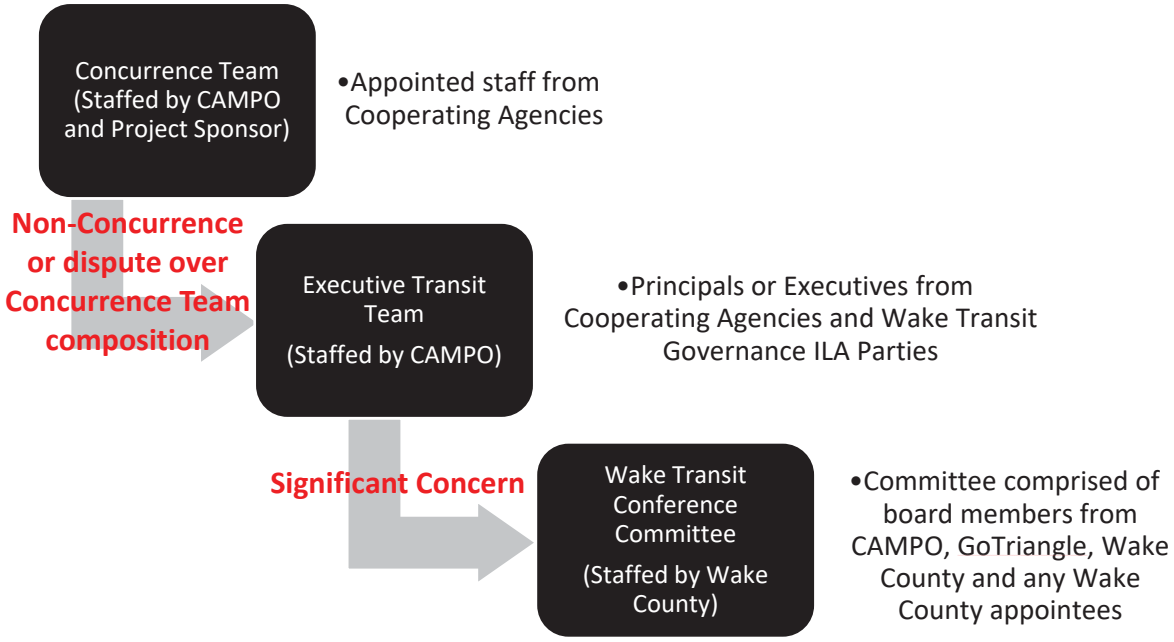
Executive-level management and Concurrence Team members from the Non-Concurring agency will be invited to present information for the Executive Transit Team to consider. All Concurrence Team members may attend. It is expected that the Executive Transit Team will be able to reach a decision on Concurrence at the meeting or shortly thereafter. If the Executive Transit Team determines that additional information is needed, a decision on concurrence will be delayed until the information is obtained for the Executive Transit Team’s use.

After the Executive Transit Team makes a decision on Concurrence, either Executive Transit Team members or Concurrence Team members will sign the Concurrence Form that implements the signification of Concurrence. Final decisions shall not result in a violation of applicable laws, rules, or regulations.

It is understood that an agency's participation in this dispute resolution process does not preclude other dispute resolution or options available by regulation to that agency. It is also understood that nothing in this agreement diminishes any North Carolina State Department’s roles and responsibilities to make decisions regarding permit requirements, permit issuance, certifications or approvals. Should the Executive Transit Team not resolve a dispute, CAMPO, GoTriangle or Wake County may list a Significant Concern if the inability to resolve the dispute qualifies as a ‘Significant Concern’ in Section 2.33 of Wake Transit Governance ILA. In this case, the administration of that process will be deferred to Wake County.

The dispute resolution process is depicted in **Figure 5**.

Figure 5: Concurrence Process Dispute Resolution Process



APPENDIX A

Title: Agency Roles and Government-to-Government Coordination
Date: August 2016
SOP No.: 20
Issued by the Office of Planning and Environment (TPE)

1. Purpose

The Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 CFR parts 1500-1508) and FTA's environmental regulations (23 CFR part 771) and guidance emphasize the importance of early and effective coordination with Federal, State, and local agencies in the preparation of environmental impact statements (EISs). This SOP discusses the roles and responsibilities of various agencies in the environmental review process.

2. Applicability/Scope

The environmental review process for EISs includes three types of formal agency roles: lead agency, cooperating agency, and participating agency. This document addresses factors for determining how FTA participates in the environmental review process (i.e., as a lead, co-lead, cooperating, or participating agency), and how FTA Regional staff, in coordination with project sponsors, identify Federal, State, or local agencies to participate in the environmental review process as a co-lead, cooperating, or participating agencies. Throughout the SOPs, agency roles are discussed further as they relate to the specific milestone or document type.

For EAs, depending on impacts, early and effective coordination with other entities can also be important.

3. Responsibilities

FTA Regional staff should work closely with the project sponsor to define roles and responsibilities for agency coordination at the beginning of the environmental review process. It is recommended that FTA Regional staff conduct initial coordination with other Federal agencies and certain State agencies, such as the State Historic Preservation Office, to help ensure FTA involvement and engagement in the process. Follow-up coordination with Federal agencies on technical matters, such as to fulfill a permit or process, and other coordination with State and local agencies may be handled by the project sponsor.

FTA Regional staff are responsible for communications with Federally-recognized Indian tribes under government-to-government consultation.

4. Standard Procedures

4.1. Define FTA's role in the process. After determining that a project is eligible for and will likely receive FTA funding, the FTA Regional office determines FTA's role in the environmental review process. This should be done in coordination with the project sponsor and any other co-lead agencies, and may include discussions with other

Federal, State, and local agencies.[1] For more information on lead, cooperating, and participating agencies, review the SAFETEA-LU Environmental Review Process Final Guidance (2006).

- **Lead agency.** For projects that involve FTA funding only, FTA is the Federal lead agency for the project. The project sponsor that will be the direct recipient of FTA funding will be a joint lead agency with FTA. For projects that involve several Federal funding sources, FTA will determine its role in coordination with the other Federal agencies providing funding.

  A project sponsor may request that the Secretary of DOT designate an operating administration or secretarial office within DOT to serve as the Federal lead agency for the project. This process is described in 23 U.S.C. § 139(e)(4), but FTA recommends project sponsors contact FTA prior to requesting the Secretary's determination because FTA may be able to make the determination.

- **Joint lead Federal agency.** For projects that require both FTA and another Federal agency to take a Federal action, FTA and the other agency may choose to serve as joint lead Federal agencies or, preferably , one agency may choose to serve as a cooperating agency (see below). Often a project with joint lead Federal agencies is a multimodal project and the other Federal agency involved is another Department of Transportation (DOT) modal administration. This approach is not normally encouraged because it can complicate decisionmaking related to the environmental review process, but if it is pursued, the roles and responsibilities of the agencies should be clearly defined and documented in order to facilitate decisionmaking. FTA's decision on its role in the environmental review process depends on the relative magnitude of the transit elements of the multimodal project and the timing of FTA funding for the project.

- **Cooperating agency.** For projects that have multiple Federal funding sources or approvals, and for which FTA either has special expertise or expects to fund/approve a transit component, FTA may participate in the review process as a cooperating or participating agency (note these roles apply to EIS projects, specifically). FTA should expect to serve in these roles when the FTA action is minimal or, in some cases, undetermined. Note, cooperating agencies are also considered participating agencies so references to participating agencies in 23 U.S.C. § 139 include cooperating agencies.

  Cooperating agencies have a higher degree of authority, responsibility, and involvement in the environmental review process. The two main advantages to participating in the environmental review process as a cooperating agency

[1] If, at the project outset, it appears that the project will need Federal permits or approvals, FTA/project sponsor should coordinate with the Federal agency with jurisdiction by law over those permits or approvals when discussing agency roles. This will help set the foundation for a single NEPA/environmental document (23 U.S.C. § 139(d)(8)), to the maximum extent practicable.

instead of a participating agency are: (1) a non-DOT cooperating agency may adopt without recirculating the EIS of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied[2] (40 CFR 1506.3); and (2) lead agencies may share the administrative draft environmental document for review and comment with all or select cooperating agencies prior to publishing the documents for public review and comment.

- **Participating agency.** If the lead agency expects FTA will have an interest in the project, FTA will likely be invited to participate in the environmental review process. If FTA is invited to participate pursuant to 23 U.S.C. § 139 or Title 41 of the FAST Act and the FTA Regional office determines FTA does not have an interest in the project, FTA must decline the invitation in writing and specify the reasons found in the applicable statutory provision.

4.2. Identifying cooperating and participating agencies. The SAFETEA-LU Environmental Review Process Final Guidance (2006) provides detailed guidance on whom and how to invite agencies to participate in FTA's environmental review process as cooperating and participating agencies. However, there are aspects not covered by the SAFETEA-LU Guidance, noted below, due to recent reauthorization.

- **Lead agency roles.**
    - The lead agencies must establish the project coordination plan no later than 90 days after EIS NOI publication (23 U.S.C. § 139(g)(1)(A)), and seek concurrence from all participating agencies on the schedule included in the coordination plan (23 U.S.C. § 139(g)(1)(B));
    - The lead agencies must identify participating agencies no later than 45 days after publication of the Notice of Intent (23 U.S.C. § 139(d)(2));
    - The lead agencies must develop the environmental checklist discussed at 23 U.S.C. § 139(e)(5) in consultation with the participating agencies and when the lead agencies determine that a checklist would be appropriate;
    - The lead agencies must consider and respond to comments from participating agencies on matters within those agencies' special expertise or jurisdiction (23 U.S.C. § 139(c));
    - FTA or the Secretary of DOT must respond in writing to EIS "review of application"/project notification requests within 45 days of receipt (23 U.S.C. § 139(e)(3)); and
    - FTA must identify the participating agencies not participating in the development of the purpose and need and range of alternatives on the Federal Infrastructure Permitting Dashboard (23 U.S.C. § 139(o)(1)(A)(ii)). FTA policy is to request written notice from the participating agency stating it will not participate in the development of the purpose and need and range of alternatives in order for FTA to include the agency on the Dashboard under the 23 U.S.C. § 139(o) provision.

[2] Adoption of environmental documents within DOT is governed by the process set out in 49 U.S.C. § 304a.

- **Participating agency roles.**

  - Participating agencies must provide comments within their special expertise/jurisdiction and use the environmental review process to address any environmental issues of concern to their agency (23 U.S.C. § 139(d)(9));
  - Participating agency concurrence is required on the project schedule to be included in the coordination plan (23 U.S.C. § 139(g)(1));[3] and
  - Participating agencies must comply with the schedule within the coordination plan even if they decline to participate in the development of the purpose and need and the range of alternatives (23 U.S.C. § 139(f)(4)(A)).

4.3. Communicating responsibilities to participating and cooperating agencies. Once FTA and the project sponsor have invited the cooperating and participating agencies using the standard invitation letter template (Attachment B to the SAFETEA-LU Environmental Review Process Final Guidance (2006)), discussions regarding roles and responsibilities will occur. FTA and the project sponsor may choose to draft the roles and responsibilities and present them, along with the draft project schedule, in the coordination plan and request review and comment, and/or FTA and the project sponsor may hold an agency coordination meeting (in person or via tele-conference) to discuss roles and responsibilities. Ultimately, the lead agency(s) will memorialize the roles and responsibilities of the lead agencies, cooperating and participating agencies, tribes, and the public in the EIS coordination plan.

In addition to the responsibilities of being a participating agency, cooperating agencies (Federal agencies required to make an approval or take an action for a project) may be given additional responsibilities for reviewing or preparing sections of the EIS. FTA and the project sponsor would outline these responsibilities in the coordination plan.

4.4. Government-to-government consultation. The United States has a unique legal and political relationship with Indian tribal governments, established through and confirmed by the Constitution of the United States, treaties, statutes, executive orders, and judicial decisions.[4] As part of the project development and environmental review process, FTA Regional staff shall make a reasonable and good faith effort to identify Indian tribes that may have an interest in a project. Out of deference to Federally-recognized Indian tribes, FTA Regional staff should not contact these governments using the generic participating agency template letters and instead draft correspondence recognizing their sovereignty and potential interests. Correspondence must come from FTA staff. If other communication arrangements are made for the course of the project, FTA Regional staff should include it in the coordination plan.

[3] FTA will assume concurrence of participating agencies if no objections are received within 30 days of distribution of the schedule.

[4] Executive Order 13175: Consultation and Coordination with Indian Tribes; Presidential Memorandum on Tribal Consultation (November 5, 2009).

4.5. Documenting agency coordination. All agency coordination, whether conducted by FTA or the project sponsor, should be documented and saved in the project file. Any correspondence containing decisions, determinations, findings, or agreements should be appended to the EIS.

5. References

- Efficient environmental reviews for project decisionmaking, 23 U.S.C. § 139
- CEQ regulations implementing NEPA, 40 CFR Sections 1501.7 and 1508.25
- SAFETEA-LU Environmental Review Process Final Guidance (2006)
- Executive Order 13175: Consultation and Coordination with Indian Tribes
- Presidential Memorandum on Tribal Consultation (2009)

APPROVAL: _____

Christopher S. Van Wyk
Director, Office of Environmental Programs

DATE: 8/11/2016

APPENDIX B

CONCURRENCE TEAM ROLES AND RESPONSIBILITIES

This section establishes more specific roles and responsibilities for parties involved in the Concurrence Process and establishes the expectations or norms for facilitating the process. It addresses the following topics:

- Roles and responsibilities of participants at different phases of the Concurrence Process;
- Work standards and rules for each phase of the Concurrence Process;
- Expected conduct and relationships among participants (e.g. respecting an agency's expertise or jurisdiction); and
- Detailed steps and timeframes for elevating issues, disputes, or non-concurrence associated with a Concurrence Point.

Project Sponsor

Throughout project development and any applicable subsequent phases of project implementation, the Project Sponsor is responsible for developing and evaluating the benefits and impacts of a limited number of project alternatives while also ensuring that a reasonable range of alternatives is evaluated. Throughout the project development process, the Project Sponsor will propose certain actions or implementation approaches that impact the trajectory of project alternatives at Concurrence Points that correspond to key milestones laid out in a project's Concurrence Plan. These proposed actions or approaches are then shared with Cooperating Agencies on the Concurrence Team for their verification of compliance with any laws, regulations, or policies related to resources or interests under their jurisdiction.

In facilitating this process, the Project Sponsor serves as the Chair of the Project Concurrence Team and leads Concurrence Meetings, ensuring all necessary documentation, materials, etc. are prepared two weeks prior to the meeting. The Project Sponsor is responsible for compiling all Concurrence Meeting materials and providing the complete record of Concurrence to the Concurrence Administrator, which is responsible for collection, storage and maintenance of all records related to Wake Transit Concurrence Points.

Cooperating Agencies

Concurrence Team participants from Cooperating Agencies will be responsible for ensuring they are empowered by their agencies to verify project-level actions proposed by the Project Sponsor at key project milestones. Concurrence Team participants from Cooperating Agencies are responsible for providing verification of compliance based on their respective agency's authorities or policies. For each major capital transit project subject to the process, Cooperating Agency members participating on Concurrence Teams shall commit to:

- Work in a collaborative problem-solving spirit;
- Assist the Project Sponsor in satisfying all applicable federal, state and local regulations, policies, and laws;
- Represent only their own agency;
- Develop project-specific Concurrence Plan that identifies a tentative schedule and Concurrence Points;

- Verify compliance with actions proposed by the Project Sponsor based on the authority with respect to the project under the purview of their agency;
- Either concur or non-concur with actions proposed by the Project Sponsor;
- Review all materials prior to meetings in order to contribute effectively to all discussions;
- Notify the Concurrence Administrator (with a "cc" to the Project Sponsor) of any changes in their agency's Concurrence Team membership; and
- Notify the rest of the Concurrence Team via e-mail when participation is no longer desired and/or warranted.

Participating Agencies

Participating Agency members participating in Concurrence Team meetings may provide information or input to the team but do not participate in written concurrence.

Concurrence Administrator

The Concurrence Administrator (CAMPO) is a neutral party that provides structure to interactions so the Concurrence Team is able to function effectively to verify compliance with Project Sponsor's proposed actions. The Concurrence Administrator coordinates with Project Sponsors to identify necessary participation from Cooperating or Participating Agencies, identifies projects that will be subject to the Concurrence Process, schedules Concurrence Meetings, distributes materials for Concurrence Meetings, and invites Cooperating and Participating Agencies to participate in Concurrence Meetings. It is responsible for keeping mailing lists for Concurrence participants, updating them on a specified basis by project, and ensuring this information is made available on the CAMPO website. The Concurrence Administrator also serves as moderator and recorder on the Concurrence Team and shall take (or appoint a designee to take) minutes for all Concurrence Meetings. The Recorder is preferably someone who is not a Concurrence Team member or who is not actively involved in the meeting discussion. If the team members of an agency or agencies cannot concur, CAMPO must administer the first level of the Concurrence dispute resolution process discussed in Section 5 of the Concurrence Process document.

In special cases, the Project Sponsor may take on the role of distributing materials, scheduling meetings, and sending invitations to meetings to keep processes on their prescribed timeline only if the Concurrence Administrator is unable to execute its responsibilities within the timelines prescribed and when authorized to do so by the Concurrence Administrator. Project Sponsors may not supplant any other role of the Concurrence Administrator.

Executive Transit Team

The Executive Transit Team is composed of principals or executives from the member Cooperating Agencies and the Wake Transit Governance ILA parties. Members of the Executive Transit Team have signatory authority within their respective agencies to provide sign off on concurrence forms when consensus is reached on a Concurrence Point. As final approvers for Concurrence Points in the event of non-concurrence within the Concurrence Team, they will also function as a moderating body for any barriers to Concurrence caused by disputes between agencies. If the team members of an agency or agencies cannot concur, the Executive Transit Team must follow

the approved dispute resolution guidance (explained in Section 5 of the Concurrence Process document) for dispute resolution.

CONCURRENCE MEETINGS

General Concurrence Meeting expectations and responsibilities of Concurrence Team members are illustrated **in Table 1.** The coordination between the Concurrence Team members should generally be a formal meeting so that all data can be reviewed in a structured setting. The Project Sponsor is responsible for coordinating with Concurrence Team members to identify and invite appropriate technical experts (e.g. transportation planners, civil engineers, etc.) to Concurrence Meetings based on the nature of the project. They are also responsible for consulting with the Cooperating Agencies on whether sufficient information exists to warrant scheduling a Concurrence Meeting. After establishing the need to hold a meeting, the Project Sponsor is responsible for submitting a Concurrence Meeting request to the Concurrence Administrator, who schedules the formal meeting. The Project Sponsor is responsible for setting up all Concurrence Team Meetings.

If any of the Cooperating Agencies represented on the Concurrence Team are not able to attend and do not have a prepared substitute, then the Concurrence Meeting may be postponed, at the discretion of the Project Sponsor.

Table 1 Concurrence Team Meeting Responsibilities

oject Sponsor (Chair)	Cooperating Agency	Participating Agency	Concurren
h Cooperating Agencies to determine Concurrence Meetings ence Team meetings ponses to information requests from nd Participating Agencies -date list of Concurrence Team Concurrence Administrator	• Attendance at all Concurrence Meetings • Make or respond to (as appropriate) official requests for additional information • Express Concurrence, Non-Concurrence, support, concerns or reservations on any issues under the purview or authority of the Cooperating Agency with respect to the proposed actions or approaches of the Project Sponsor • Identify appointees to Executive Transit Team	Attendance at Concurrence Meetings when appropriate or requested by Project Sponsor	• Scheduling of formal Co • Distribution of meeting weeks in advance of me • Notifications to meeting • Identify appointees to E
h Cooperating Agencies to set eeting agenda ting information packets and submit to dministrator for distribution h Concurrence Administrator in event ed for postponement ed attendance by technical experts, as	• Ensure capability to receive and print electronic meeting packets • Notify Concurrence Administrator and Project Sponsor if meeting packet is not received at least two (2) weeks in advance of meeting date • Review information packet prior to meeting and notify Project Sponsor/meeting attendees of substantial concerns or questions	• Ensure capability to receive and print electronic meeting packets • Review information packet prior to meeting and notify Project Sponsor/meeting attendees of substantial concerns or questions	• Distribute Concurrence advance of meeting dat • Identify a Recorder to ta
ting materials can be easily ed by all meeting attendees on time, actively promote participation, ution of agenda items and minimize scussions ion items and next steps	• Arrive on time and bring meeting information packet to Concurrence Meeting	• Bring meeting information packet to Concurrence meeting	• Take notes to prepare m
nses to requests for information g minutes and distribute to eam nce Form and distribute to Concurrence	• Develop responses to requests for information • Provide comments and/or signature to Concurrence Form	• Develop responses to requests for information	• Provide draft meeting m

Pre-Meeting Activities

Concurrence Daily Agenda

The Concurrence Daily Agenda is a list of items to be discussed on a particular day (not to be confused with a Project-Specific Agenda, which outlines what is expected to be accomplished during a particular Concurrence Meeting).

The Concurrence Administrator is responsible for distributing the Concurrence Daily Agenda three (3) weeks in advance of the meeting date. This will enable Concurrence Team members to have three (3) weeks' notice of when their Concurrence Team will meet. The Concurrence Daily Agenda will also be posted on the CAMPO website.

Information Packets

The Project Sponsor is responsible for assembling the Concurrence Meeting information packet, with all relevant materials including, but not limited to: meeting agenda, information packet, contextual background or supporting exhibits for agenda items, summary of any relevant public input comments, and responses to information requests from previous meetings (if applicable). Information packets will be provided to the Concurrence Administrator for distribution to Concurrence Team members at least two (2) weeks in advance of the meeting.

The Concurrence Administrator is responsible for sending out meeting packets. Packets will be provided electronically and will be posted to the CAMPO website.

Concurrence Team Members will receive information packets in electronic format and are responsible for ensuring that they have the capability to receive and print packets distributed to them electronically. It is their responsibility to notify the Concurrence Administrator (with a "cc" to Project Sponsor) in a timely manner prior to a Concurrence Meeting if the packet is not received by two (2) weeks in advance of the meeting.

Requests for Information and Technical Coordination

Concurrence Team members may request additional information in advance of Concurrence Meetings. Such requests will be via email and sent to the Project Sponsor. Such requests will be sent preferably at least one (1) week prior to the Concurrence Meeting. Additional information will be provided to all Concurrence Team Members.

Requests for additional information shall be as specific as possible. An agency shall specify in its comments whether it needs additional information to fulfill other applicable environmental reviews or consultation requirements and what information it needs. In particular, it shall specify any additional information it needs to comment adequately on the analysis of substantial, site-specific effects associated with the granting or approving by that agency of necessary State or Federal permits, licenses, other requirements, or ultimate concurrence.

If requests for additional information by Concurrence Team Members are made, the Project Sponsor is responsible for determining if the information can/will be provided and whether the meeting needs to be postponed or can occur as scheduled. Factors to be considered in obtaining the information are cost, the benefit of the information to a proposed project action at key project milestones, and any associated

project delay. If disagreements arise on additional information requests, the Concurrence Team can elevate the decision to the Executive Transit Team for review.

If a Concurrence Team member has concerns regarding predictive methodology (e.g. ridership projections), or other technical matters, appropriate support staff will be utilized to address concerns. Alternative methodologies may be proposed.

A Concurrence Team member objecting to or expressing reservations about a proposed approach or solution on grounds of environmental impacts or policies, laws, or regulations under their purview shall work collaboratively with the Cooperating Agencies to determine the avoidance and minimization measures considered necessary to allow the agency to grant or approve applicable permits, licenses, related requirements, or ultimate concurrence.

Project Changes and Meeting Changes

The Project Sponsor is responsible for notifying the Cooperating Agencies of any new information that supersedes the information packet that has already been distributed to Concurrence Meeting attendees. The Concurrence Team members are responsible for explaining and justifying requested project changes based on their requirements and agency permitting/reviewing authorities. The Project Sponsor is responsible for quantifying the cost associated with requested project changes. The Project Sponsor and Concurrence Team members should acknowledge that verification of compliance at certain Concurrence Points do not supersede decisions that must be made through other established processes, such as changes to a project that would increase the project's budgeted or programmed amount being subject to the decision-making processes tied to the development of annual Wake Transit Work Plans or amendments thereto.

For substantial information changes to packets, the Project Sponsor is responsible for notifying the Concurrence Team as soon as information is known to determine whether to reschedule the meeting. The Project Sponsor (after consulting with the Concurrence Administrator) is responsible for making the decision to postpone the meeting. The Concurrence Administrator is responsible for notifying Concurrence Team members of a meeting postponement through the normal e-mail process.

Concurrence Meeting Participation

Representation and Attendance

Concurrence Team members are strongly encouraged to attend Concurrence Meetings onsite. Video-conferencing is an option; however, attendance in person is preferred. Notification of attendance via video-conference should be submitted to the Project Sponsor and Concurrence Administrator at least one (1) week in advance of the meeting, if possible.

Represented parties are responsible for ensuring meeting attendance. Should a Concurrence Team member not be able to attend a Concurrence Meeting in person or via video-conference and this is known in advance, the Concurrence Team member is responsible for notifying the other Concurrence Team members and will do one of the following:

- Send a substitute with decision-making authority, providing the name of the substitute to the Project Sponsor before the meeting; or

- Send a substitute without decision-making authority and submit any input related to the project to the Project Sponsor via email within two (2) weeks of the meeting; or
- Contact the Project Sponsor to obtain updates on the project following the meeting. The Concurrence Team Member shall submit any input related to the project to the Project Sponsor via email within two (2) weeks of the meeting.

Conducting Meetings

The Project Sponsor is responsible for ensuring that it understands the details of what will be discussed at meetings in advance and will inform and involve appropriate staff members at the Concurrence Meetings to ensure that technical issues (e.g. safety, feasibility of construction, etc.) can be addressed. The Project Sponsor will often use consultants who will assist in developing, delivering, and sharing various planning, design, environmental information, etc. The role of the consultants within the Concurrence Meetings will be to present and to share the technical information with the Concurrence Team. The Project Sponsor will be responsible for coordinating with the consultant and explaining the consultant's role to the Concurrence Team for each project. The Project Sponsor will retain all other responsibilities as defined within this document. Concurrence Meeting participants will abide by the "Public Service Code of Conduct."

The purpose and objective of the meeting will be clearly stated by the Project Sponsor on the agenda sheet. This information is provided, via the information packet, to the Concurrence Administrator by the Project Sponsor prior to distribution of the meeting agendas. Informational meetings are acceptable and will be noted as such on the agenda.

The Project Sponsor is responsible for ensuring that technical information is presented in a clear manner. Such information will be easy to understand and easy to view by all Concurrence Team members. Concurrence Team members who object to or express reservations about a proposed project-level action or approach on grounds of environmental impacts or laws, regulations, or policies under their authority will work collaboratively with the Concurrence Team to determine the avoidance and minimization measures considered necessary to allow the agency to grant or approve applicable permits, licenses, related requirements, or ultimate concurrence.

Meeting Conclusion

At the conclusion of each Concurrence Meeting, the Project Sponsor is responsible for informing the Concurrence Team of the action items resulting from discussion (i.e., additional information needed for concurrence or next concurrence point), as well as tentative schedule for the next steps/concurrence point.

Post-Meeting Activities

Concurrence

If verification of compliance at a Concurrence Point discussed during the meeting is able to reach a consensus resolution based on input from all Cooperating Agencies at the meeting, the Recorder will document the Concurrence Point and resolution verbiage in a Concurrence Form for circulation and final acceptance by Cooperating Agencies after the meeting. Concurrence Team members who did not attend

the Concurrence Meeting shall submit notice that a verification of compliance will be made within two (2) business days following a Concurrence Meeting, and any verification of compliance related to the project shall be sent to the Recorder via email within two (2) weeks of the meeting. The Project Sponsor will pursue signing of the Concurrence Form from Concurrence Team members who did not attend the Concurrence Meeting.

Concurrence Forms may be signed electronically. Concurrence Team members from Cooperating Agencies are able to sign (implement) the Concurrence Form for any concurrence item that does not get elevated to the dispute resolution process. In the event of non-concurrence and elevation to the dispute resolution process, signature from all Executive Transit Team members is required to implement the proposed action or approach at the corresponding project milestone. In the event that a Concurrence Team member is unavailable to sign a Concurrence Form, the Executive Transit Team member of the affected Cooperating Agency may also provide signature. The form should be signed and passed along to the Project Sponsor within three (3) business days from receipt.

Non-concurrence

Issues of non-concurrence will be documented, and the dispute resolution process will be initiated. If an organization decides to non-concur, that organization will indicate such by a statement on the Concurrence Form and will sign the statement. The organization is responsible for documenting its reasons via email to all Concurrence Team Members within five (5) business days of the Concurrence Meeting.

Initiation of the dispute resolution process is appropriate when the team cannot concur (see Section 5). Any Concurrence Team member from a Cooperating Agency can initiate the dispute resolution process. The dispute resolution process will begin in a timely manner.

Meeting Record

The Recorder is responsible for providing draft meeting minutes via email to the Concurrence Team within two (2) weeks of the Concurrence Meeting. Concurrence Team members will provide comments on the draft minutes via email within two (2) weeks of receipt. The Project Sponsor will prepare the final meeting minutes and submit via email to Concurrence Team members within one (1) week after receiving Concurrence Team members' comments. Project Sponsors may proceed with facilitation of subsequent project Concurrence Points once concurrence is reached regardless of the status of minutes from Concurrence Meetings.

The Project Sponsor will provide the Concurrence Administrator (CAMPO) with:

- Final meeting records (notes/minutes, maps, information packets, etc.);
- Concurrence Forms (signed); and
- Any other pertinent information/data, summary or otherwise, needed to document how concurrence was reached and the process followed.

Concurrence Team Members are responsible for not revisiting Concurrence Points unless new, substantial information is brought to light.

Concurrence Meeting Activity Deadlines and Timeframes

Any deadlines or timeframes prescribed in this policy for Concurrence Meetings may be modified at the request of the Project Sponsor to expedite Concurrence Meeting activities for certain projects that may not need as much lead or preparation time. If a Project Sponsor requests any modifications to the deadlines or timeframes prescribed in this policy for Concurrence Meetings, all Cooperating Agencies identified for the applicable project must agree to the requested modifications.

GoTriangle Board of Trustees
Operations & Finance Committee Meeting Minutes
January 23, 2019
Board Room, The Plaza, 4600 Emperor Blvd., Suite 100
Durham, NC

Committee Members Present:

Sig Hutchinson, Committee Chair	Mark Marcoplos
Vivian Jones	Ellen Reckhow

Committee Members Absent:

Steve Schewel (excused)	Andy Perkins Jr.
Valerie Jordan	

Other Board Members Present:

Will Allen III	Russ Stephenson

Committee Chair Sig Hutchinson called the meeting to order at 10:39 a.m.

I. Adoption of Agenda

Action: On motion by Jones and second by Reckhow the agenda was adopted, adding Fare Free Rides for Federal Employees Impacted by the Federal Government Shutdown. The motion was carried unanimously.

II. Approval of Minutes

Action: On motion by Reckhow and second by Marcoplos the Committee approved the minutes of the December 19, 2018, meeting. The motion was carried unanimously.

III. Hillsborough Train Station Funding Agreement

President/CEO Jeff Mann explained that GoTriangle is a participant of this project as tax district administrator and will provide reimbursement from tax district funds. The Town of Hillsborough will lead project implementation, with assistance from the NCDOT Rail Division. The State is providing $7.38 million; the tax district, $686,000; and the Town of Hillsborough, $34,000. Cost overruns will be covered by the Town of Hillsborough.

Action: On motion by Reckhow and second by Marcoplos the Committee voted to recommend that the Board authorize the President/CEO to execute the Preliminary Engineering, Construction Funding and Maintenance Agreement for the Hillsborough Train Station. The motion was carried unanimously.

IV. Fare Free Rides for Federal Employees Impacted by the Federal Government Shutdown

President/CEO Mann stated that a request had been made to provide free fares to Federal employees required to work during the Federal government shutdown who are not covered under an existing GoPass agreement.

Action: On motion by Jones and second by Reckhow the Board approved fare free rides for Federal employees impacted by the Federal government shutdown. The motion was carried unanimously.

IV. Vehicle Purchase Authorization

Brian McLean presented a request to purchase two battery electric Proterra buses as part of the Federal Low or No Emission grant. The full cost is $2,080,225 with $943,000 in grant funds; Wake County Transit Plan, $832,290; GoTriangle, $254,935; and Duke Progress Energy, $50,000.

Reckhow asked the cost differential of a diesel bus. Mann responded $450,000-$500,000 for a Gillig, with a fully-equipped electric bus almost $1 million. He added that over a 12-years life, the electric bus will save approximately $200,000-$400,000 over a diesel bus.

Pat Stevens noted that when the battery needs upgrading, a longer battery life is expected and the insurance purchased will allow us to get the newer technology.

Reckhow asked the battery range in miles. McLean responded 180 miles. Mann stated that the batteries would charge overnight during off-peak, lower rate hours.

Action: On motion by Jones and second by Reckhow the Committee voted to recommend that the Board authorize the President/CEO to execute a contract for the purchase of two (2) battery electric Proterra buses, with a maximum dollar amount of $2,080,225. The motion was carried unanimously.

V. FY19 Durham/Orange Operating Fund Budget Amendment

Jennifer Keep requested three budget amendments for the Triangle Tax District – Durham/Orange Operating Fund. She explained that at the end of FY18 the partner organizations estimate their year-end expenses. In these three cases the estimates were below actuals for the City of Durham transit services (by $28,805), DCHC MPO Durham County staff working group administrator expenses ($9,880) and DCHC MPO Orange County staff working group administer expenses ($9,880). She stated that the amounts would be carried over from the FY18 budget to FY19 to cover expenses paid in FY19.

Action: On motion by Reckhow and second by Marcoplos the Committee voted to recommend that the Board adopt *Budget Amendment 2019 0001 GoTriangle Fiscal Year 2019 Triangle Tax District – Durham/Orange Operating Fund Budget Ordinance Amendment*. The motion was carried unanimously.

VI. Regional Fare Study

Mary-Kate Morookian's presentation is attached and hereby made a part of these minutes. She presented the following recommendations and requested that the Committee recommend the Board set a public hearing for March 27, 2019, on the Fare Integration Study recommendations for summer 2019.

- Two-tiered region-wide fare structure (local, regional)
- Consistent region-wide discount and pass categories
  Discount categories:
  - Youth 12 and under – free
  - Youth 13-18 – free with Youth GoPass (otherwise 50% discount)
  - Seniors 65 and older – free
  - People with disabilities – 50% discount

  Pass categories:
  - Day pass
  - 7-day pass
  - 31-day pass
- Region-wide discount ID
- Establish pass sales agreement and discount guidelines
- Implement fare-capping technology (early 2020) with mobile ticketing and/or smart card technology

Action: On motion by Jones and second by Reckhow the Committee voted to recommend that the Board set a public hearing for March 27, 2019, on the Fare Integration Study Recommendations. The motion was carried unanimously.

VII. Wake Transit FY19 Q3 Budget Amendment

Steven Schlossberg presented four budget amendments for Wake Transit:

- Commuter Rail Environmental Planner (66.7% Wake Transit) –$50,025 first year, $100,050 following year
- Manager of Commuter Rail Design (66.7% Wake Transit) –$50,025 first year, $100,050 following year
- Multi-year Bus Service Implementation Plan and the Community Funding Area Program Management Plan – expanded scope requires additional $202,000 to finish the project, for $702,000, which is under the budget of $1.5 million
- Town of Cary Sunday service – modification of two current routes, no financial impact

Action: On motion by Jones and second by Reckhow the Committee voted to recommend Board approval of Wake Transit FY19 Q3 budget amendment. The motion was carried unanimously.

VIII. FY18 Annual Bus Service Performance Report Follow-Up

Matthew Frazier's presentation is attached and hereby made a part of these minutes.

IX. Adjournment

Action: On motion by Marcoplos the meeting was adjourned at 11:43 a.m.

_____
Sig Hutchinson, Committee Chair

Attest:

_____
Michelle C. Dawson, CMC
Clerk to the Board of Trustees

GoTriangle Board of Trustees
Planning & Legislative Committee Meeting Minutes
January 23, 2019
Board Room, The Plaza, 4600 Emperor Blvd., Suite 100
Durham, NC

Committee Members Present:

Will Allen III
Wendy Jacobs
Michael Parker, Committee Chair
Ellen Reckhow
Jennifer Robinson
Russ Stephenson

Committee Members Absent:

Nina Szlosberg-Landis (excused)

Committee Chair Michael Parker called the meeting to order at 1:36 p.m.

I. Adoption of Agenda

Action: On motion by Allen and second by Stephenson the agenda was adopted. The motion was carried unanimously.

II. Approval of Minutes

Action: On motion by Allen and second by Stephenson the minutes of the December 19, 2018, meeting were approved. The motion was carried unanimously.

III. Commuter Rail Transit Level Guidelines & Evaluation

Patrick McDonough's presentation is attached and hereby made a part of these minutes. He stated that the guidelines have been presented to TPAC and will be voted on next month. He added that these commuter rail transit level guidelines are equivalent to the evaluation framework previously adopted for BRT.

McDonough said that the Virginia Railway Express (VRE) emerged as the most comparable system in the peer review.

The following performance targets have been set:

- On-Time Performance 95% (National Average 90% - 96%)
- Average Operating Speed 35 mph (National Average 32 mph)
- Passenger Boardings Per Vehicle Revenue Hour 45 passengers (Peer range 21-64 per hour)
- Operating Expense Per Vehicle Revenue Mile (per car, not train) $30 (National Average $30)
- Operating Expense Per Passenger Boarding $20 (National Average $19.20)
- Farebox Recovery 15% (Peer average 20%)

Minimum service has been established as one train per hour per direction (4-0-4-0 in each direction), with the morning peak from 6-10:00 a.m. and the evening peak, 3-7:00 p.m. Two greater frequency service scenarios also are being explored in the ridership work along with three sets stations: 16, 12 and 10 to determine what is more important in terms of attracting ridership - more station access or faster travel times.

Action: On motion by Robinson and second by Stephenson the Committee voted to recommend Board approval of the Commuter Rail Transit Level Guidelines & Evaluation. The motion was carried unanimously.

IV. Adjournment

Action: Chair Parker adjourned the meeting at 2:31 p.m.

_____
Michael Parker, Committee Chair

Attest:

_____
Michelle C. Dawson, CMC
Clerk to the Board of Trustees

CONTRACT WORK ORDERS FOR JANUARY 2019
(< $100K)

Contract #	Contractor (or subject if no contractor listed)	Contract Amount	Subject	Comments	President & CEO (Jeff Mann) Date Executed	General Counsel (Shelley Blake) Date Executed
16-015	Professional Services for Land Use Planning for Transit-Oriented Development.	-	Amendment	Amendment extends the Term of the contract through December 14, 2018, to match up with the end of the period performance of the TOD grant.	1/14/19	1/11/19
16-040	Task Order 6 Appraisal Services	$11, 500		Task Order 6 is to appraise multiple parcels.	1/14/19	1/11/19
16-045	Amendment One to Task Order 1	$49,226		Amendment One to Statement of Work Task Order 1 is to add tasks. The compensation of the new task shall not exceed the contract amount. Contractor shall complete performance no later than October 31, 2019.	1/28/19	1/23/19
16-045	Amendment Two to Task Order 1	$24,991		Amendment Two to Statement of Work Task Order 1 is to add tasks. The compensation of the new task shall not exceed the contract amount.	1/28/19	1/23/19
17-076	GoPass/NC SECU	-		Provides for GoPass Agreement with NC SECU. Payment is based on 55% of each recorded boardings. Term of agreement: 7/1/2017 to 6/30/2020.	1/14/19	1/14/19
18-024	Cooperative Agreement with Duke Energy for the Completion and Implementation of the DO-LRT	-		Agreement describes major roles and responsibilities applicable for GoT and Duke Energy in connection with the successful construction and implementation of the D-O LRT and sets forth a framework for the parties' collaboration on the D-O LRT from the Engineering Phase through construction and startup and establishes the parties' agreements on certain business issues relevant to the Project. No funding is obligated in the document. Term of agreement is from date of execution through final execution of a Construction Agreement.	1/28/19	1/23/19
18-036	Donation Agreement for Property Interests	N/A		UNC-CH agrees to transfer and convey to GoT certain property interests, as identified by this agreement, for purposes of designing, constructing, operating and maintaining a light rail transit system and for ancillary uses directly related to light rail. Agreement does not have a dollar value.	1/16/19	1/16/19
18-064	Donation Agreement for Property Interests	N/A		County of Durham agrees to transfer and convey to GoT certain property interests, as identified by the agreement, for purposes of designing, constructing, operating and maintaining a light rail transit system and for ancillary uses directly related to light rail. Agreement does not have a dollar value.	1/14/19	1/14/19
18-118	Snow Removal Services	-		Provides for On-Call Snow Removal Services. Term of agreement is for one (1) year with two (2) one-year extension options. Contractor shall be compensated pursuant to labor rates in Exhibit B.	1/14/19	1/11/19
19-002	Facility Entry Agreement	N/A		Provides for access to the PNC property for training. No cost is associated with this service.	1/28/19	1/23/19

CONTRACT WORK ORDERS FOR JANUARY 2019
(< $100K)

Contract #	Contractor (or subject if no contractor listed)	Contract Amount	Subject	Comments	President & CEO (Jeff Mann) Date Executed	General Counsel (Shelley Blake) Date Executed
19-004	KL2 Connects, LLC	$99,500	Executive Recruitment	Provides for Executive Recruitment with KL2 Connects, LLC. Total compensation is for contract amount and will expire 90 days after effective date.	1/22/19	1/18/19
19-006	Sidewalk Pedestrian Connectivity Funding for NCDOT Aviation Parkway TIP#1-5506	$2,808		Provides for pedestrian pathway improvements on an NCDOT project. This is a lump sum reimbursement. Terms of agreement: January 23, 2019 – January 23, 2020.	1/23/19	1/23/19
19-008	Pest Management Program	$127		Provides for Pest Management at location: 200-210 South West St., Raleigh, NC. Term of agreement will be month-to-month until either party cancels. Monthly cost is $127.	2/1/19	1/31/19