



Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Meeting Agenda Board of Aldermen



Tuesday, September 24, 2019

7:00 PM

Board Chambers - Room 110

7:00-7:10

A. POETRY READING, RESOLUTIONS, PROCLAMATIONS, AND ACKNOWLEDGEMENTS

1. [19-298](#) Diaper Needs Awareness Week Proclamation

7:10-7:20

B. ANNOUNCEMENT OF UPCOMING MEETINGS

7:20-7:30

C. REQUESTS FROM VISITORS AND SPEAKERS FROM THE FLOOR

7:30-7:40

D. CONSENT AGENDA

1. [19-302](#) Approval of Minutes from September 10, 2019
2. [19-259](#) Proposed Amendment to the Town Code - creation of a four-way stop at the intersection of Shelton Street and Elm Street/Francis Shetley Bikeway
PURPOSE: The purpose of this item is to provide an amendment to the Town Code to change the existing two-way stop at Shelton Street and Elm Street to a four-way stop
Attachments: [Attachment A - Town Code Amendment four-way stop on Shelton at Elm](#)
3. [19-260](#) Proposed Amendment to the Town Code - establishing a speed limit on Laughing Bird Lane
PURPOSE: The purpose of this agenda item is to provide a Town Code amendment establishing a specific speed limit on Laughing Bird Lane.
Attachments: [Attachment A - Town Code Amendment for Laughing Bird Lane](#)
4. [19-299](#) A Resolution Providing Authorization to Submit a Grant to the NC

Volkswagen Mitigation Settlement Program

PURPOSE: The purpose of this item is request authorization from the Board to submit a grant to the NC Volkswagen Mitigation Settlement Program.

Attachments: [Attachment A - Resolution Providing Authorization To Submit Grant](#)

5. [19-303](#)

Request to Make Appointments to the Recreation and Parks Commission

PURPOSE: The purpose of this agenda item is for the Board of Aldermen to make appointments to the Recreation and Parks Commission.

Attachments: [Attachment A - Appointment Resolution](#)
[Attachment B - Recreation and Parks Commission Chair Form and Application](#)

E. OTHER MATTERS

7:40-7:55

1. [19-301](#)

Annual Update from OWASA Representatives

PURPOSE: The purpose of this item is to receive an annual update from the Town's appointees on the OWASA Board of Directors.

Attachments: [Attachment A - OWASA Quarterly Report August 2019 CBOA](#)

7:55-8:30

2. [19-182](#)

Discussion of public use and maintenance of private streets as it relates to the Whispering Hills HOA

PURPOSE: The purpose of this agenda item is to provide the Board of Aldermen with an update on the issues identified by the Whispering Hills HOA, staff assessment of current conditions, collected data, and potential next steps.

Attachments: [Attachment A - Resolution Private Streets](#)
[Attachment B - Whispering Hills Agenda Item 1-25-94](#)
[Attachment C - Carrboro BOA Minutes 1-25-94](#)
[Attachment D - Existing Street Maintenance](#)

F. PUBLIC HEARING

8:30-9:00

1. [19-295](#)

Public Hearing for Jones Creek Greenway (C-5181) 60-Percent Design

PURPOSE: The purpose of this agenda item is to provide an update on the status of the Jones Creek Greenway at 60-percent design and to receive comments from the Board and members of the public.

Attachments: [Attachment A - Resoution](#)
[Attachment B - 2019.09.20.JonesCreek-60percent](#)
[Attachment C - JonesCreekMeetingMap](#)

G. OTHER MATTERS

9:00-9:45

1. [19-292](#) Update on Request for a Paid Parking and Enforcement Study
PURPOSE: The purpose of the item is to update the Board on results of an RFP process to allow for discussion on moving forward.

Attachments: [Attachment 1 - Town of Carrboro Paid Parking RFP](#)

9:45-10:00

2. [19-297](#) Update on Transportation Projects Anticipated to be Submitted by the DCHC MPO for Ranking in the Prioritization Process for SPOT 6.0
PURPOSE: The purpose of this agenda item is to provide the Board with an update on the status of Town transportation projects identified for submittal for SPOT 6.0, the current prioritization schedule, and NCDOT's recently adopted Complete Streets Implementation Guide.

Attachments: [Resolution A](#)
[Attachment B- P6-0-Updated Schedule](#)
[Attachment C - Complete Streets Evaluation-final-report](#)
[Attachment D- F 2019-09-11 \(19-175\) NCDOT Complete Streets Policy and Implementation Guide](#)

H. MATTERS BY BOARD MEMBERS

I. CLOSED SESSION - NCGS 143-318.11 - Attorney/Client Privilege



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Agenda Item Abstract

File Number:19-298

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

Diaper Needs Awareness Week Proclamation



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Approval of Minutes from September 10, 2019



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Agenda Item Abstract

File Number:19-259

Agenda Date: 9/24/2019

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In Control: Board of Aldermen

Version: 1

TITLE:

Proposed Amendment to the Town Code - creation of a four-way stop at the intersection of Shelton Street and Elm Street/Francis Shetley Bikeway

PURPOSE: The purpose of this item is to provide an amendment to the Town Code to change the existing two-way stop at Shelton Street and Elm Street to a four-way stop

DEPARTMENT: Planning, Public Works

CONTACT INFORMATION: Zachary Hallock, 919-918-7329, zhallock@townofcarrboro.org; Trish McGuire, 919-918-7327, pmcguire@townofcarrboro.org; Joe Guckavan, 919-918-7427, jguckavan@townofcarrboro.org; Tina Moon, 919-918-7325, cmoon@townofcarrboro.org

INFORMATION: The proposed change was identified based on the current ongoing bicycle plan update, comments from citizens, and recommendations relating to bicycle boulevards. The conversion of the current two-way stop sign (where only Elm Street and the Francis Shetley bikeway approaches are stop controlled, whereas Shelton Street is not) to a four-way stop will put all users at the same priority. People traveling along the bikeway or on Elm Street will no longer be forced to wait for a gap in vehicle traffic along Shelton Street, which can be particularly intense during Carrboro Elementary drop-off and pick-up times. The four-way stop control will increase safety, reduce delays along Elm Street and the Francis Shetley bikeway but will increase delay along Shelton Street.

FISCAL & STAFF IMPACT: There will be impacts associated with staff time to install the stop signs and enforce traffic behavior.

RECOMMENDATION: Staff recommends the Board consider the proposed Town Code amendment [Attachment A].

AN ORDINANCE AMENDING THE TOWN CODE TO CREATE A FOUR-WAY STOP ON
SHELTON STREET AT ELM STREET AND THE FRANCIS SHETLEY BIKEWAY

Draft 9/24/2019

THE CARRBORO BOARD OF ALDERMEN ORDAINS:

Section 1 Article IV, of Chapter 6, Section 6-4, subsection a of the Carrboro Town Code (Stop Signs Required at certain intersections) is amended to remove the following:

~~Elm Street — Shelton Street~~

Section 1 Article IV, of Chapter 6, Section 6-4, subsection b of the Carrboro Town Code (Stop Signs Required at certain intersections, 4-way stop) is amended to include the following:

Elm Street Shelton Street

Section 2. All provisions of any town ordinance in conflict with this ordinance are repealed.

Section 3. This ordinance shall become effective upon adoption.



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301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number:19-260

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Proposed Amendment to the Town Code - establishing a speed limit on Laughing Bird Lane

PURPOSE: The purpose of this agenda item is to provide a Town Code amendment establishing a specific speed limit on Laughing Bird Lane.

DEPARTMENT: Planning, Police

CONTACT INFORMATION: Zachary Hallock, 919-918-7329, zhallock@townofcarrboro.org; Trish McGuire, 919-918-7327, pmcguire@townofcarrboro.org; Tina Moon, 919-918-7325, cmoon@townofcarrboro.org; Walter Horton, 919-918-7408, whorton@townofcarrboro.org

INFORMATION: Town staff received comments from a resident living along Laughing Bird Lane indicating speeding traffic. Laughing Bird Lane is an unpaved street which connects to W Poplar Ave, it provides access to approximately 10 residences. There is currently no established speed limit for this street, other than the town-wide speed limit of 35 MPH and there are no speed limit signs posted along its length.

This change would allow placement of signs indicating and enforcement of a 25 MPH speed limit, which is consistent with other residential areas in town.

FISCAL & STAFF IMPACT: There will be minor impacts associated with staff time to install signage and enforce traffic behavior.

RECOMMENDATION: Staff recommends that the Board consider the proposed town code amendment [Attachment A].

AN ORDINANCE AMENDING THE TOWN CODE TO ADD A TWENTY-FIVE MILE PER
HOUR SPEED LIMIT ON LAUGHING BIRD LANE

Draft 9/24/2019

THE CARRBORO BOARD OF ALDERMEN ORDAINS:

Section 1 Article III, of Chapter 6, Section 6-15, Subsection (b)(4) of the Carrboro Town Code (established speed limit of Twenty-five (25) miles per hour) is amended to include the following:

Laughing Bird Lane

Section 2. All provisions of any town ordinance in conflict with this ordinance are repealed.

Section 3. This ordinance shall become effective upon adoption.



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Agenda Item Abstract

File Number:19-299

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

A Resolution Providing Authorization to Submit a Grant to the NC Volkswagen Mitigation Settlement Program

PURPOSE: The purpose of this item is request authorization from the Board to submit a grant to the NC Volkswagen Mitigation Settlement Program.

DEPARTMENT: Planning Department

CONTACT INFORMATION: Laura Janway, Environmental Planner, ljanway@townofcarrboro.org, (919) 918-7326; Patricia McGuire, Planning Director, pmcguire@townofcarrboro.org, (919) 918-7327

INFORMATION: The North Carolina Division of Air Quality (NCDAQ) in the North Carolina Department of Environmental Quality (NCDEQ) is soliciting proposal applications for participation in Phase 1 of the NC Volkswagen Mitigation Settlement Program, which was designed to achieve significant reductions in NOx emissions from mobile diesel sources. The grant is a reimbursement program which covers up to 100% of the replacement cost of a vehicle for government use. The grant is contingent on procurement and delivery of new vehicles no later than two years from the date of a signed executed contract with NCDEQ. Grant funding can only be used for purchases made after the date of the signed contract and will not apply to the Town's recent vehicle purchases. Existing vehicles to be replaced must be rendered permanently inoperable. Grant awards will be announced in Fall 2019/Winter 2020.

In addition to NOx emissions reductions, projects will be evaluated on the following criteria:

- Cost-effectiveness
- Project location
- Environmental justice
- Additional emissions reductions beyond NOx emissions
- Sustainability
- Timeliness
- Useful life of vehicle to be replaced

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Town staff have identified an opportunity to reduce greenhouse gas emissions and air pollutant emissions in Carrboro through this funding source by replacing one or more vehicles from the municipal fleet. Staff have been exploring replacements with newer, more efficient diesel models as well as compressed natural gas (CNG) models as part of a pilot project for a renewable biogas-to-vehicle fuel collaboration between Orange Water and Sewer Authority (OWASA) and the Town. Vehicles considered for replacement include refuse trucks and other Class 4-8 diesel vehicles listed on the FY20-FY24 Vehicle Replacement Schedule.

The project supports Section 2.C of the municipal Energy and Climate Protection Plan (ECP), which was developed as a step in supporting the Town in reducing greenhouse gas emissions. The ECP recommends replacing vehicles in a timely manner to reduce operational and life cycle costs, as well as exploring alternative fuels for vehicles. Vehicle fuel is responsible for approximately 45% of the Town's total municipal sector emissions. Increased vehicle efficiency has the potential to provide positive fiscal impacts such as reduced operating costs and life cycle costs. This project also supports the recommendation in the Community Climate Action Plan to reduce vehicle emissions in Carrboro 50% by 2025.

FISCAL & STAFF IMPACT: This funding source may fund government projects up to 100% for vehicle replacement. The submitted proposal will request 100% reimbursement for one or more vehicles from the Town's municipal fleet.

RECOMMENDATION: Staff recommends the Board consider the attached resolution and authorize staff to further pursue a grant from the NC Volkswagen Mitigation Settlement Program.

A RESOLUTION PROVIDING AUTHORIZATION TO SUBMIT A GRANT THROUGH
THE NC VOLKSWAGEN MITIGATION SETTLEMENT PROGRAM

WHEREAS, the Board of Aldermen has committed to pursuing greenhouse gas emissions reductions in Carrboro's Community Climate Action Plan and Energy and Climate Protection Plan; and

WHEREAS, The North Carolina Division of Air Quality (NCDAQ) in the North Carolina Department of Environmental Quality (NCDEQ) is soliciting proposal applications for participation in Phase 1 of the NC Volkswagen Mitigation Settlement Program; and

WHEREAS, on December 4th, 2018, the Board of Aldermen authorized Town staff to submit a proposal to the NC Volkswagen Mitigation Settlement Program to fund Level 2 electric vehicle charging stations in the Town of Carrboro; and

WHEREAS, NCDEQ has not yet released the Request for Proposals for Level 2 charging stations; and

WHEREAS, in the interim, Town staff have identified an additional opportunity to reduce greenhouse gas emissions and air pollutant emissions in Carrboro through this funding source; and

WHEREAS, NCDEQ may fund up to 100% of the cost of the replacement or repower of a vehicle for government projects through Phase 1 of the Diesel Bus and Vehicle Program; and

WHEREAS, Town staff have identified the opportunity to replace one or more of the Town's diesel vehicles with newer, more efficient models; and

NOW, THEREFORE, BE IT RESOLVED by the Carrboro Board of Aldermen that the Board authorizes Town staff to submit a proposal to the NC Volkswagen Mitigation Settlement Program.

This the 24th day of September in 2019.



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Version: 1

TITLE:

Request to Make Appointments to the Recreation and Parks Commission

PURPOSE: The purpose of this agenda item is for the Board of Aldermen to make appointments to the Recreation and Parks Commission.

DEPARTMENT: Town Clerk

CONTACT INFORMATION: Cathy Dorando, 919-918-7309

INFORMATION: The Recreation and Parks Commission currently has five seats available for appointment. Tamara Sanders is the chair of the Recreation and Parks Commission and provided the chair form for the Board's review. The Commission has been unable to meet due to lack of members to constitute a quorum. In lieu of applicants attending a meeting, the chair contacted them and discussed the requirements.

Becki Cleveland is a current member and requested to be reappointed.

All applicant and chair information is attached.

FISCAL & STAFF IMPACT: N/A

RECOMMENDATION: It is recommended that the Mayor and Board adopt the attached resolution.

ATTACHMENT A

**A RESOLUTION MAKING APPOINTMENTS TO THE
RECREATION AND PARKS COMMISSION**

THE BOARD OF ALDERMEN HEREBY APPOINTS THE FOLLOWING APPLICANT(S)
TO THE RECREATION AND PARKS COMMISSION:

Appointee	Term Expiration
Becki Cleveland	2/2022
Chris Colvin	2/2022
Brian Payst	2/2022

Section 2. This resolution shall become effective upon adoption.

Advisory Board Chair Recommendation Form

Advisory Board Name	Recreation & Parks Commission
Your Name	Tamara Sanders
Applicant Name	Chris Colvin
Outstanding Qualifications	He's an outdoor recreation planner, and has worked for both the Forest and Park Services
How applicant compliments current board composition:	His professional experience in recreation programs within the national park service and us forest service have provided a base of relevant experience.
Other comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>

Advisory Board Chair Recommendation Form

Advisory Board Name	Recreation & Parks Commission
Your Name	Tamara Sanders
Applicant Name	Brian Payst
Outstanding Qualifications	Brian has served on boards for organizations within the outdoor recreation realm for the past 10 years. He's also committed to environmental sustainability and through working with the non-profit organizations, he has a good understanding of policy structure.
How applicant compliments current board composition:	Brian is a wee older than most of us on the commission at the moment and he has some good experience working on long-term projects with the Carolina Climbers' Coalition.
Other comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>
Other Comments:	<i>Field not completed.</i>
Applicant Name	<i>Field not completed.</i>
Outstanding Qualifications:	<i>Field not completed.</i>

Advisory Board Chair Applicant Summary and Contact Form

Advisory Board Name:	Recreation & Parks
Your Name	Tamara Sanders
Your Seat Title	commission chair
Applicant Name:	Brian Payst
Date of last contact with applicant	9/3/2019
Summary of Qualifications:	Board Member - Carolina Climbers Coalition for 10 years with a variety of roles, including 5 years as President NC Coordinator for The Access Fund for 8 years Member of Triangle Off-Road Cyclists "[He has] done some policy work in recent years and has become interested in those aspects of planning and land use management. [He's] also interested in environmental issues, particularly ones where local change can contribute to a healthier and more sustainable world."
Advisory Board Chair reconfirmed applicant's interest in serving by phone or email:	Yes
If no, briefly explain	<i>Field not completed.</i>
Applicant attended advisory board meeting prior to BOA review:	No
If yes, date of advisory board meeting:	<i>Field not completed.</i>
Applicant has demonstrated a clear understanding of the time commitment, roles, and responsibilities of serving on the advisory board:	Yes

If no, briefly explain:

Field not completed.

In addition to your comments above, please check other qualities that the applicant offers that would help the Advisory Board meet its goals for community representation. Please note that candidates who do not meet any of these qualities are still eligible for appointment. Please communicate any urgent needs and priorities for Advisory Board composition to your Board of Aldermen Liaison.

Occupation, experience or special skills, Previous public service or community involvement

If other, please explain:

(Just an FYI- Brian was not able to attend a meeting prior to my recommendation because our commission does not currently have enough members to meet a quorum.)

[Print](#)**Advisory Board Application - Submission #4232**

Date Submitted: 8/30/2019

First Name*

Chris

Last Name*

Colvin

Date*

8/30/2019

Select today's date

Address1*

201 E Poplar Ave

Address2**City***

Carrboro

State

NC

Zip*

27510

Is this address located within the corporate limits of the Town of Carrboro?*

Yes

Please select Yes or No.

Is this address located within the Town's ETJ, Planning Jurisdiction, or Northern Transition Area?*

Planning Jurisdiction

Telephone*

5102925530

Please enter your primary contact phone number.

Email Address*

christopher.colvin@gmail.com

Enter your primary email address.

Date of Birth*

3/13/1983

Please enter your Month/Day/Year of Birth

Race*

White

Please enter your race.

Sex*

Male

Please enter your sex.

Occupation*Outdoor Recreation
PlannerPlease enter your
occupation.**Are you a registered
Orange County Voter?***

Yes ▼

Please answer Yes or No

**Length of Residence in
Orange County***

1 year

How long have you been a
resident of Orange
County?**Length of Residence in
the Town of Carrboro***

1 year

How long have you been a
resident of the Town of
Carrboro?**I wish to be considered for appointment to the following committee/board(s) (Select no more than two (2)):***☐ Affordable Housing Advisory Commission☐ Northern Transition Area Advisory Committee☐ Animal Control Board of Appeals☐ OWASA Board of Directors☐ Appearance Commission/NPDC☐ Planning Board☐ Arts Committee☒ Recreation and Parks Commission☐ Board of Adjustment☐ Safe Routes to School Implementation Committee☐ Economic Sustainability Commission☐ Stormwater Advisory Commission☐ Environmental Advisory Board☐ Tourism Development Authority*☐ Human Services Commission☐ Transportation Advisory Board☐ Greenways Commission

Please note that membership is limited to one advisory board at a time. You shall not be considered for appointment to another board unless you resign before filing an application or you are in the last six months of your current term.

Other (advisory board not listed):Please indicate by typing the advisory board that you are
applying for.**Advisory Board Preference***

Recreation and Parks

If you are applying for membership on more than one
advisory board, please indicate your preference by typing
your first choice. Please limit your selection to two
boards).***Employer/Self Employed**

US Forest Service

Please enter your employment information. This is a
requirement for application for the Tourism Development
Authority.**Number of Years Employed***

1 year Forest Service, 6 years Park Service

Enter the number of years you have been employed at the
organization listed to the left.*** Provide examples of how you are involved in the promotion of travel and tourism in the Town of Carrboro.******Required only for the Tourism Development Authority Application.****

Community Activities/Organizational Memberships*

Carrboro Bicycle plan committee, Triangle Land Conservancy member, Interior Credit Union Board member

Please enter the requested information.

Experience to Aid You in Working on Advisory Boards*

Professional and volunteer experience in recreation, parks, land management and conservation. Volunteer experience on boards and committees.

Reasons You Wish to be Appointed*

As a relatively new resident of Carrboro, I would like to be more involved in improving the quality of life in our community. After a very positive experience participating in the bicycle planning process, I look forward to contributing to a wider range of recreation and parks efforts. My professional experience in recreation programs within the national park service and us forest service have provided a base of relevant experience.

Have you ever served on any Town of Carrboro Committee or Board?*

Yes ▼

If yes, which one(s)?

Bicycle plan

Are you currently serving on a Town Board or Committee?*

☒ Yes

☐ No

If yes, are you applying for a third consecutive term?*

☐ Yes

☒ No

If yes, please describe how you meet one, or more, of the following exceptions noted below. *

N/a

After completing two full terms, a member must take off one year before applying for re-appointment to the same advisory board. However, a board member may apply to serve on another advisory board if he/she desires. The Board of Aldermen may make exceptions to this rule under the following circumstances: 1. To retain diversity on an advisory board; 2. A lack of applicants.

[Print](#)**Advisory Board Application - Submission #4227**

Date Submitted: 8/26/2019

First Name*

Brian

Last Name*

Payst

Date*

8/26/2019

Select today's date

Address1*

206 Cates Farm Rd

Address2**City***

Chapel Hill

State

NC

Zip*

27516

Is this address located within the corporate limits of the Town of Carrboro?*

Yes



Please select Yes or No.

Is this address located within the Town's ETJ, Planning Jurisdiction, or Northern Transition Area?*

No

**Telephone***

9199239600

Please enter your primary contact phone number.

Email Address*

bpayst@gmail.com

Enter your primary email address.

Date of Birth*

8/19/1968

Please enter your Month/Day/Year of Birth

Race*

White

Please enter your race.

Sex*

Male

Please enter your sex.

Occupation*

IT Director

Please enter your occupation.

Are you a registered Orange County Voter?*

Yes

Please answer Yes or No

Length of Residence in Orange County*

7 years

How long have you been a resident of Orange County?

Length of Residence in the Town of Carrboro*

7 years

How long have you been a resident of the Town of Carrboro?

I wish to be considered for appointment to the following committee/board(s) (Select no more than two (2)):

- | | |
|--|---|
| <input type="checkbox"/> Affordable Housing Advisory Commission | <input type="checkbox"/> Northern Transition Area Advisory Committee |
| <input type="checkbox"/> Animal Control Board of Appeals | <input type="checkbox"/> OWASA Board of Directors |
| <input type="checkbox"/> Appearance Commission/NPDC | <input type="checkbox"/> Planning Board |
| <input type="checkbox"/> Arts Committee | <input checked="" type="checkbox"/> Recreation and Parks Commission |
| <input type="checkbox"/> Board of Adjustment | <input type="checkbox"/> Safe Routes to School Implementation Committee |
| <input type="checkbox"/> Economic Sustainability Commission | <input type="checkbox"/> Stormwater Advisory Commission |
| <input checked="" type="checkbox"/> Environmental Advisory Board | <input type="checkbox"/> Tourism Development Authority* |
| <input type="checkbox"/> Human Services Commission | <input type="checkbox"/> Transportation Advisory Board |
| <input type="checkbox"/> Greenways Commission | |

Please note that membership is limited to one advisory board at a time. You shall not be considered for appointment to another board unless you resign before filing an application or you are in the last six months of your current term.

Other (advisory board not listed):

Please indicate by typing the advisory board that you are applying for.

Advisory Board Preference*

Recreation and Parks Commission

If you are applying for membership on more than one advisory board, please indicate your preference by typing your first choice. Please limit your selection to two boards).

***Employer/Self Employed**

The Nature Conservancy

Please enter your employment information. This is a requirement for application for the Tourism Development Authority.

Number of Years Employed*

15

Enter the number of years you have been employed at the organization listed to the left.

* Provide examples of how you are involved in the promotion of travel and tourism in the Town of Carrboro.

While I have not been directly involved in promoting travel and tourism in Carrboro, I have been working on outdoor recreation issues, including economic benefits, for over 10 years.

Required only for the Tourism Development Authority Application.

Community Activities/Organizational Memberships*

Board Member - Carolina Climbers Coalition for 10 years with a variety of roles, including 5 years as President
 NC Coordinator for The Access Fund for 8 years
 Member of Triangle Off-Road Cyclists

Please enter the requested information.

Experience to Aid You in Working on Advisory Boards*

I have been on a non-profit board for over 10 years and led that organization through a number of complex issues with a diverse constituency. I am employed by a global non-profit and have a lot of experience working. I also have a masters degree in environmental science from a department which also included regional planning.

Reasons You Wish to be Appointed*

I have been working at a state level on recreational issue with the Carolina Climbers Coalition and I am interested in participating in something closer to home. As a Carrboro resident, I use the parks and open spaces on a regular basis and I am invested in the community. I have done some policy work in recent years and have become interested in those aspects of planning and land use management. I'm also interested in environmental issues, particularly ones where local change can contribute to a healthier and more sustainable world. I'd like to contribute to my community and give some of my time to help make Carrboro the best place it can be.

Have you ever served on any Town of Carrboro Committee or Board?*

No ▼

If yes, which one(s)?

Are you currently serving on a Town Board or Committee?*

☐ Yes

☒ No

If yes, are you applying for a third consecutive term?*

☐ Yes

☒ No

If yes, please describe how you meet one, or more, of the following exceptions noted below. *

none

After completing two full terms, a member must take off one year before applying for re-appointment to the same advisory board. However, a board member may apply to serve on another advisory board if he/she desires. The Board of Aldermen may make exceptions to this rule under the following circumstances: 1. To retain diversity on an advisory board; 2. A lack of applicants.



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TITLE:

Annual Update from OWASA Representatives

PURPOSE: The purpose of this item is to receive an annual update from the Town's appointees on the OWASA Board of Directors.

DEPARTMENT: N/A

CONTACT INFORMATION: N/A

INFORMATION: Robert Morgan and Yinka Ayankoya will be at the meeting to provide an update to the Board of Aldermen. Information is attached for review.

FISCAL & STAFF IMPACT:

RECOMMENDATION:



Orange Water and Sewer Authority

OWASA is Carrboro-Chapel Hill's not-for-profit public service agency delivering high quality water, wastewater, and reclaimed water services.

August 29, 2019

Mayor Pam Hemminger
Town of Chapel Hill
405 Martin Luther King Jr. Blvd
Chapel Hill, NC 27514

Mayor Lydia Lavelle
Town of Carrboro
301 West Main Street
Carrboro, NC 27510

Chair Penny Rich
Orange County Board of
Commissioners
Post Office Box 8181
Hillsborough, NC 27278

Dear Mayor Hemminger, Mayor Lavelle and Chair Rich:

We are pleased to submit this report on our services, projects and initiatives from May through August 2019. This report includes information on the following items:

1. Agua Vista Web Portal
2. Historic Rogers Road area project completion
3. 10 years of reclaimed water with UNC
4. Forest management program
5. Water quality report card
6. Wastewater report card
7. Rogerson Drive wastewater pipe repair
8. PFAS monitoring
9. Long-range water supply plan
10. 2020 budget and rate information
11. Infrastructure investment
12. Executive Director Search

1. Agua Vista Web Portal

With our meter upgrade project complete, OWASA made its [Agua Vista Web Portal](#) available to all customers in March 2019. Over 28% of OWASA's eligible account holders are now registered for the portal. We continue to encourage more customer to register. Once registered for Agua Vista, customers can set up alerts for leaks and bill forecasts, view hourly water use information, and receive customized water conservation tips.

Even if customers are not yet registered, Agua Vista proactively emails account holders when their water use is indicative of a leak. Over the past five months, Agua Vista has provided customers with notifications of over 3,000 potential leaks ranging from 2 gallons per day to nearly 200,000 gallons per day.



OWASA staff are working with the Towns' and University staff to help ensure that Agua Vista is an effective tool for leak identification and water conservation within their organizations. In addition, we are working with social service agencies across the community to promote Agua Vista as a resource for low-income customers to save money by saving water. We appreciated our partnership earlier this year with the Towns on the Mayors Save Water Challenge to promote Agua Vista as a tool for advancing water conservation.

2. Historic Rogers Road area project completion

The Historic Rogers Road Area Sewer Extension Project was approved and funded jointly by three local governments: Orange County, Town of Carrboro, and Town of Chapel Hill. Beginning September 2017, OWASA provided project management services to oversee the construction of 18,000 feet of sewer pipes in the community. We are pleased to report the installation of the sewer and all associated street restoration is complete.

The Rogers Road sewer extension project team hosted a public meeting in June to provide information about how to connect to the system and public funding assistance programs currently available. The newly constructed sewer system was inspected and certified for public use in July. Property owners in the area are able to begin the process for connecting to the new public sewer system upon request. We wish to express our thanks to the local community and partners for their patience and collaboration throughout the construction process.

3. 10 years of reclaimed water with UNC

OWASA and the University of North Carolina (UNC) at Chapel Hill partnered to develop a [reclaimed water](#) system which began operation in 2009. The system provides UNC with reclaimed water (instead of treated drinking water) to meet university demands for water that is not for human consumption in chiller plants to cool buildings, to irrigate athletic fields on campus, and in some buildings for flushing toilets.

Last year, UNC used an average of 800,000 gallons of reclaimed water a day. That's nearly one million gallons less raw water each day that OWASA needs to source from University Lake and Cane Creek Reservoir. Since 2009, the 2.1 billion gallons of reclaimed water has been used by UNC, which equates to the size of University Lake about five-times over.

UNC pays OWASA the full cost to operate and maintain the reclaimed water system. This enables OWASA to cost-effectively meet UNC's non-drinking water requirements, while freeing up the community's drinking water supply and treatment capacity to meet other essential needs. Overall, the use of reclaimed water decreases the energy used in the community's water treatment process and lowers both OWASA's and UNC's greenhouse gas emissions.

4. Forest management program

OWASA owns approximately 2,400 acres of forested lands to protect watersheds and meet potential future utility needs. The majority of OWASA's forested land was purchased to protect Cane Creek Reservoir, our main water source.

Approximately 1,900 acres of OWASA's forested lands have not been managed; some of these forested stands are poor quality, damaged, and may pose a wildfire risk. On [January 10, 2019](#), the Board supported a new incremental approach to forest management and a subsequent Community Engagement Plan. On June 20, 2019, OWASA hosted a [community meeting](#) to hear feedback about its proposed forest management program which included draft guiding principles. Forty-one (41) community members participated, as well as representatives from professional agencies, moderators, and OWASA Board Members and staff.

On [August 22, 2019](#), the Board approved the Vision Statement and revised Guiding Principles for forest management:

Vision Statement: Protect water quality now and for future generations by following science-based principles to manage our forest lands so they are healthy, diverse, resilient, and sustainable.

Guiding Principles:

- *Protect Water Quality, OWASA's Highest Priority*
- *Improve Ecological Health of Forested Land*
- *Reduce the Risk of Wildfire*
- *Improve Wildlife Habitat and Species Diversity*
- *Sustainably Manage OWASA's Resources*
- *Engage the Community and Partner Agencies*
- *Minimize Adverse Impacts on Neighbors and Surrounding Community*

The Board authorized staff to develop a process to prioritize our forest land needing active management. Staff's draft process to prioritize forest land for active management will be reviewed by the Board of Directors at a future meeting.

5. Water quality report card

In 2018, OWASA treated approximately 2.5 billion gallons of water serving 83,300 people in Carrboro-Chapel Hill. OWASA routinely monitors for over 150 contaminants, or substances, in the community's drinking water. We are pleased to share that throughout 2018 OWASA met or surpassed all Federal and State standards for drinking water quality, as documented in OWASA's [Water Quality Report Card](#).

The Report Card is a snapshot of OWASA's water quality and provides information about local water sources, what OWASA's water contains, and how it compares to regulatory standards. It was mailed to all OWASA account holders and is available for viewing on owasa.org. Community members can also request a printed copy by contacting 919-968-4421 or info@owasa.org.

6. Wastewater quality report card

From July 2018 to June 2019 (Fiscal Year 2019), OWASA treated about 3 billion gallons of wastewater for the Carrboro-Chapel Hill community. In August, we published our annual [Wastewater Quality Report Card](#) and are pleased to share that we met or surpassed all Federal and State standards for our biosolids and wastewater effluent. In Fiscal Year 2019, we experienced three sewer overflow events due to high volumes of water entering our wastewater system during Hurricane Florence, a blockage in a wastewater pipe, and a pipe failure.

The Report Card is a snapshot of OWASA's wastewater treatment process. It includes tips on how community members can help protect the wastewater system and information on how OWASA maintains the system. It was mailed to all OWASA account holders and is available for viewing on owasa.org. Community members can also request a printed copy by contacting 919-968-4421 or info@owasa.org.

7. Rogerson Drive wastewater pipe repair

On April 12, 2019, OWASA responded to a wastewater overflow due to a pipe break at Rogerson Drive (near Raleigh Road) in Chapel Hill. This pipe is critically important as it delivers about half of the community's wastewater to the Mason Farm Wastewater Treatment Plant.

To ensure reliable service now and in the future, OWASA determined it was necessary to replace about 1,200 feet of pipe, to include new pipe under Raleigh Road and a redundant underground crossing.

OWASA provides [weekly updates](#) on the work which is expected to be complete later this fall.

8. PFAS monitoring

OWASA's treated drinking water is safe and meets all Federal and State regulations and established health advisory levels.

Per- and polyfluoroalkyl substances (PFAS) are considered an emerging contaminant – unregulated chemicals being detected in trace amounts. They are man-made chemicals that include PFOA, PFOS, and GenX. PFAS increases resistance to water and stains, and can be found

in everyday products such as clothing and cookware. As these products are washed or degrade, PFAS can enter wastewater systems and travel onward to lakes and rivers.

OWASA implemented quarterly PFAS testing of our treated drinking water and a raw water source, Cane Creek Reservoir. The summed level of two PFAS (PFOS and PFOA) in our May 2019 sample of treated drinking water was 20.6 ppt (parts per trillion). This result is consistent with our 2018 results and means the levels we have detected in our treated drinking water samples are far below the EPA's non-regulatory Health Advisory Level of 70 ppt for PFOS and PFOA combined (a ppt is comparable to a grain of sand in an Olympic swimming pool).

Our second quarter samples were collected at the same time the NC PFAST Network collected a sample from Cane Creek Reservoir as part of the statewide initiative to sample all raw water sources; our results are consistent with their findings. Our results are also consistent with studies showing powder activated carbon, which is used in our drinking water treatment process, is successful in the removal of some but not all PFAS in treated drinking water.

PFAS is also present in wastewater. Treated effluent – the treated wastewater that gets recycled into clean water for return to local waterways – as well as biosolids application have been identified as conveyers of PFAS to the environment. Wastewater treatment plants are not producers of PFAS; they are conveyors of PFAS that enter the community's wastewater stream, for example, from household products or direct discharges from industries (no industries in OWASA's service area). OWASA, along with other utilities, is collaborating with NC PFAST Network to perform PFAS testing.

To help address industrial discharges of PFAS into wastewater systems, the North Carolina Division of Water Resources (DWR) is requiring 25 utilities with pretreatment programs in the Cape Fear River Basin to sample their wastewater influent for PFAS. Depending on these results, utilities will be required to identify potential sources of PFAS in their wastewater collections system and work with them to reduce/eliminate these compounds in their wastewater discharges.

Although OWASA is not required to participate in this program, because we do not have any significant industrial users in our service area and therefore no pretreatment program, we have begun proactively monitoring our wastewater influent for these compounds for four consecutive months this summer. We will evaluate these results before deciding on our next steps.

OWASA supports ongoing research for water quality and will continue to share monitoring results and action plans with the community. We will post [updated PFAS information](#) as it becomes available on our website. Together with community partners, we also plan to host a public education series on water quality this year, which will include information and community conversations on PFAS.

9. Long-range water supply plan

OWASA recently completed its raw water demand projections for its Long-Range Water Supply Plan (LRWSP) update. The projections indicate that under most circumstances, OWASA will have enough water in its local reservoirs (Cane Creek Reservoir, University Lake, and Quarry Reservoir) to meet our 2070 water demands. However, we want to ensure we are prepared given uncertainty in our estimated supply and estimated demands, a changing climate, and potential operational emergencies at one of our reservoirs.

OWASA has an allocation of five percent of the water supply pool of Jordan Lake (approximately five million gallons per day), for use during severe drought or operational emergencies. OWASA does not have facilities to access its Jordan Lake supply, but treated drinking water is available via regional interconnections and mutual aid agreements with the Town of Cary and City of Durham.

We will keep the community informed about this update which we expect to complete in 2020.

10. 2020 budget and rate information

On June 13, 2019, the Board of Directors approved OWASA's Annual Operating and Capital Improvements Program Budgets for July 2019 through June 2020 (Fiscal Year 2020), and the [Schedule of Rates, Fees and Charges](#) effective on or after October 1, 2019. The Annual Budget includes projected operating revenues which are based on a 5% increase in OWASA's monthly water and sewer rates. A 5% increase in monthly water and sewer rates will increase the average OWASA family's bill by \$3.60 per month. The increase will help provide funding for Fiscal Year 2020 expenditures, including \$26.4 million to replace and repair aging water and wastewater infrastructure.

11. Infrastructure investment

OWASA maintains 750 miles of water and wastewater pipes, a water treatment plant, a wastewater treatment plant, pump stations, and other infrastructure. Meeting the community's needs and increasing system resiliency requires ongoing rehabilitation of the water, wastewater, and reclaimed water systems. Capital investments, including debt payments for capital projects, account for about half of our costs. In the last fiscal year, we invested about \$17.3 million to renew, replace and improve infrastructure. Our five-year Capital Improvements Program (CIP) can be viewed [here](#).

Key accomplishments include:

- Completed electrical, ventilation, and roofing rehabilitation and improvements at a pump station at the Mason Farm Wastewater Treatment Plant (WWTP)
- Rehabilitated the biosolids dewatering press and influent bar screens at the WWTP

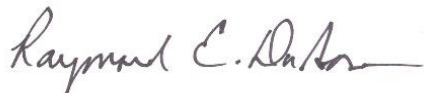
- Replaced the flashboards at the University Lake reservoir, used to increase the lake's water storage capacity
- Began construction of pumping system improvements at the University Lake reservoir
- Began replacement of the water main on Manning Drive between Ridge Road and Fordham Boulevard
- Began a \$6.5 million construction project to upgrade the solids thickening facilities and rehabilitate the plant headworks structure at the WWTP
- Awarded an additional \$8 million in other construction work, including the replacement or rehabilitation of about 2.5 miles of water and sewer mains
- Received approval from the State Water Infrastructure Authority for nearly \$9 million in low-interest loan funding for three CIP projects

12. Executive Director Search

Ed Kerwin, OWASA's Executive Director since 1996, announced his plans to retire in June 2020. The Board of Directors will use a consultant to provide executive search and assessment services.

We would be happy to provide you more detailed information on the items above or other topics of interest as desired. Please feel free to contact Ed Kerwin, Executive Director (ekerwin@owasa.org or 919-537-4211), or me.

Sincerely,



Raymond E. DuBose, Chair
OWASA Board of Directors

cc: Mr. David Andrews, Carrboro Town Manager
Ms. Bonnie Hammersley, Orange County Manager
Mr. Maurice Jones, Chapel Hill Town Manager
OWASA Board of Directors
Ed Kerwin, OWASA Executive Director



Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number:19-182

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Discussion of public use and maintenance of private streets as it relates to the Whispering Hills HOA

PURPOSE: The purpose of this agenda item is to provide the Board of Aldermen with an update on the issues identified by the Whispering Hills HOA, staff assessment of current conditions, collected data, and potential next steps.

DEPARTMENT: Planning, Public Works

CONTACT INFORMATION: Zachary Hallock, 919-918-7329, zhallock@townofcarrboro.org; Trish McGuire, 919-918-7327, pmcguire@townofcarrboro.org; Joe Guckavan, 919-918-7427, jguckavan@townofcarrboro.org; Tina Moon, 919-918-7325, cmoon@townofcarrboro.org

INFORMATION: This issue was previously presented to the Board of Aldermen on January 25, 1994, where the Board referred the issue back to the HOA to petition its members and conduct their own traffic counts. The agenda item and associated staff reports from this meeting has been included as Attachment B. The minutes from that meeting can be found as Attachment C.

In the spring of 2018, Town staff were informed of the issue related to maintenance and upkeep of Lantern Way by the Whispering Hills HOA. They make the argument that due to the fact that Daffodil Lane, S Peak Street, and Lantern Way form a connected route between Old Pittsboro Road and King Street, which public traffic is utilizing their streets as an alternate route to avoid any one of: traffic congestion in Downtown, traffic congestion along NC Hwy 54, or construction delay caused by the S Greensboro roundabout project.

Staff met with the HOA representatives on October 26, 2018 and began assessing what could be done to meet the concerns of residents. Traffic counts along King Street and Daffodil Lane were collected in February 2019 and April 2019, in order to assess the current conditions of traffic volumes along the streets internal to the Whispering Hills development. The traffic counts collected in April indicate that about 100 trips (out of a total of around 380 trips) entering at either King St or S Peak St are not turning off of Lantern Way. It cannot be assumed that these are traveling through, as they may be otherwise ending somewhere along Lantern Way. The counts collected in February 2019 show that on average, approximately 170 vehicles travel through the King Street entrance and 595 vehicles travel through the Daffodil Lane entrance each day. Furthermore, a street such as Lantern Way which serves less than 100 residences and sees a daily volume of less than 800 vehicles, conforms to the existing standards for a subcollector street as defined by the Town's Land Use Ordinance. The

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

HOA has expressed interest in a solution which addresses their concerns with increasing maintenance costs associated with upkeep on a private street which they claim is carrying vehicle traffic for the general public.

The street section for consideration is a portion of South Peak Drive and Lantern Way, between Daffodil Lane and King Street, approximate 830 linear feet of roadway with the typical section having a pavement width of roughly 18 feet. Staff review of these existing roadway conditions show that the street width and available right of way is too narrow to bring the street up to the Town's current subcollector street standards. However, the width is wide enough to meet the standards for North Carolina Powell Bill funding.

Staff have identified three potential options to address this issue moving forward:

- 1) Defer to the previous decision made by the Board in 1994
- 2) Direct the HOA to develop a cost estimate to bring the street up to standard, and consider accepting the street once this has occurred
- 3) Direct Town staff to develop a cost estimate for current and future maintenance of the street, and consider a cost sharing agreement with the HOA for all current and future maintenance

FISCAL & STAFF IMPACT: There is no impact associated with receiving the report, but

RECOMMENDATION: Staff recommends that the Board receive the report, discuss the issue, and consider the resolution [Attachment A] to direct staff on how to address the street maintenance issues raised by the Whispering Hills HOA.

AN ORDINANCE AMENDING THE TOWN CODE TO CREATE A FOUR-WAY STOP ON
SHELTON STREET AT ELM STREET AND THE FRANCIS SHETLEY BIKEWAY

Draft 9/24/2019

THE CARRBORO BOARD OF ALDERMEN ORDAINS:

Section 1 Article IV, of Chapter 6, Section 6-4, subsection a of the Carrboro Town Code (Stop Signs Required at certain intersections) is amended to remove the following:

~~Elm Street — Shelton Street~~

Section 1 Article IV, of Chapter 6, Section 6-4, subsection b of the Carrboro Town Code (Stop Signs Required at certain intersections, 4-way stop) is amended to include the following:

Elm Street Shelton Street

Section 2. All provisions of any town ordinance in conflict with this ordinance are repealed.

Section 3. This ordinance shall become effective upon adoption.

The staff, however, does state that if the Board wishes to amend the Whispering Hills CUP to eliminate an access point, the Board would require a recordable document to be executed by all property owners within the subdivision.

ANALYSIS

Mr. Mike Murray of the Whispering Hills Homeowners Association addressed the Mayor and the Board of Aldermen requesting that the Town either accept the roads within Whispering Hills subdivision, or that Lantern Way at its terminus with King Street be closed to through-traffic.

There is no current policy that addressed this request; however, two options could be considered to address the Whispering Hills problem: (1) do not accept the streets, and (2) amend the existing Whispering Hills CUP to eliminate an access point. Both options were considered by the administration. The staff's conclusion not to accept the streets comes as a result of an on-site investigation of the Whispering Hills subdivision. The staff of both the planning and public works departments note that the pavement widths of the streets is only eighteen (18) feet and that no stormwater system exists. The streets also have speed bumps; and existing signs within the subdivision do not meet the Manual for Uniform Traffic Control Device's Standards. The streets within the Whispering Hills subdivision do not meet Town's standards as written in Section 15-216, subsection (a) of the Carrboro Land Use Ordinance. The current width of the streets, the lack of a stormwater system, and the existence of speed bumps are contrary to street functions as listed with the Carrboro Land Use Ordinance; in which streets carry motor vehicle traffic, allow on-street parking in some cases, and serve as an important link in the Town's drainage system. Furthermore, the driveway entrances within the subdivision do not conform to the Town's specifications written in Section 15-213, subsection (c)(with reference to Appendix C); and Section 15-294, subsection (d) of the Carrboro Land Use Ordinance. Finally, the staff has noted that the Whispering Hills subdivision's general design requirements for vehicle accommodations under Section 15-295 does not meet Town standards. If the Town does not accept the streets, the Town would not incur any expenses to bring the roads to public standards; however, emergency service vehicles could face many hindrances (i.e. traversing speed bumps and/or tight curves) if streets remained in their current condition within the subdivision.

The staff's consideration of option two required a thorough review of the final plat. The final plat recorded within the deed book shows two points of access to public streets. The roadway system and points of access are private rights given to each property owner within the subdivision. The elimination of an access point will require each property owner to sign a recordable document giving up their individual right to that particular access point. The elimination of the King Street/Lantern Way intersection could be done by removing the current pavement at the intersection and replacing it with turfstone or a similar surface. Breakaway bollards would also be placed at the intersection to deter public access, yet allow emergency vehicles the opportunity to access the subdivision. The Lantern Way/Old Pittsboro Road intersection would be the only point of access for vehicles entering or leaving the subdivision; and that point of access can be hazardous under adverse weather conditions. The Carrboro Police Department considered option two as acceptable. The Carrboro Fire Department, however, believes that removing the current pavement at the King Street/Lantern Way intersection and replacing it with a turfstone or similar surface could hinder emergency service vehicle movement (particularly during adverse weather conditions). The Fire department also noted that closing the Whispering Hill's entrance at Kings Street and Lantern Way would greatly increase response time in fire emergencies at this location. Finally, the Fire Department indicated that they would not drive a fire fighting apparatus through any type of barricade.

The staff would like to bring to the Board's attention the recommendations from the advisory boards to include two entrances to the Whispering Hills subdivision. The Appearance Commission recommended that the staff coordinate with the developer in an effort to reduce the traffic impact on King Street. The TAB required that the Homeowners Association provide a paved street connecting the subdivision to Old Pittsboro Road if suitable easements become available. The staff noted that the provision of another point of access to the development would encourage additional cross connector traffic between South Greensboro Street and Jones Ferry; but the additional traffic would be limited because the route would be very circuitous.

Option one is viable and should be considered by the Board. Option two would require the King Street/Lantern Way entrance to be redesigned to allow a turn-around for emergency service vehicles.

RECOMMENDATION

The staff recommends that the Board of Aldermen not accept the streets within the Whispering Hills subdivision into the Town due to the streets not meeting public road standards. The staff recommends that both access points remain open; however, if the Board of Aldermen wishes to amend the existing Whispering Hills CUP to eliminate an access point, then the Board should require a recordable document to be executed by all property owners with the Whispering Hills subdivision relinquishing their right-of-access to King Street from Lantern Way and that a design for street closure be submitted for review and approval.

ACTION REQUESTED

To adopt by motion the administration's recommendation.

MEMORANDUM

TO: Kenneth Withrow
FROM: Ben Callahan
RE: Whispering Hills requests
DATE: January 19, 1994

The Police Department does not have any serious concerns with the proposal to install baffles on the roads in the Whispering Hills subdivision. Such installation would not impede the Department's ability to patrol and otherwise provide services to the neighborhood any more than the currently installed speed bumps do.

Should the neighborhood or Town elect to install a barricade at the King Street entrance, it is possible that Officers would patrol the area less frequently. Furthermore, if the neighborhood does not provide a turn-around near the barricade, it is possible that Officers would not patrol the upper section of the neighborhood since exit from this area would be difficult and inconvenient.

Regardless of what decisions are made concerning these streets, the Department will continue to provide services to the area, as Officers will be expected to patrol the neighborhood as often as possible. We cannot predict, however, how barricades or other traffic control devices might impact patrol patterns.



TOWN OF CARRBORO

NORTH CAROLINA

MEMORANDUM

TO: Mr. Kenneth W. Withrow, Transportation Planner

FROM: Wayne Lacock, Interim Fire Chief (WL)

SUBJECT: Closing Access to Whispering Hills at King Street & Lantern Way

DATE: January 20, 1994

Closing the entrance of the Whispering Hills subdivision at King Street and Lantern Way would greatly increase response time in fire emergencies at this location. Due to the layout of fire hydrants and the existence of narrow streets with no turn around capability for a fire apparatus, this would in some cases greatly delay establishing a water supply for fire suppression. Temporary emergency access are not usable in many cases due to poor maintenance and an unstable travel surface in certain weather conditions. We would not drive a fire apparatus through any type of breakaway barricade.

(THIS IS THE TAB'S RECOMMENDATION ON THE CONDITIONAL USE PERMIT FOR THE WHISPERING HILLS SUBDIVISION ISSUED IN 1984)

TAB RECOMMENDATIONS

Date of Meeting: February 2, 1984

Subject: Whispering Hills/Conditional Use Permit Request

RECOMMENDATION:

The TAB recommends that the application be approved subject to the following conditions:

The permit should attach the following requirements to the granting of the permit:

- 1) The Homeowners Association shall be required to provide a paved street connecting the development to Old Pittsboro Road if suitable easements become available.
- 2) An internal sidewalk system should be constructed by which pedestrians can walk between building structures to the end of the project without walking in the driveway.
- 3) The internal sidewalk system should be constructed of materials other than concrete.
- 4) The staff shall work with the developer and residents in a continued effort to ameliorate the impact of traffic on children's safety on King Street.

APPLICABLE
REGULATIONS:

Carrboro Land Use Ordinance Sections:

- 15-49 Application to be Complete
- 15-54 Special Use Permits and Conditional Use Permits
- 15-55 Burden of Presenting Evidence
- 15-57 Recommendations on Conditional Use Permits
- 15-58 Board Action on Conditional Use Permits
- 15-59 Additional Requirements on Conditional Use Permits

SPECIAL
INFORMATION:

The Appearance Commission has recommended that the staff continue to coordinate with the developer in an effort to reduce the traffic impact on King Street. The staff takes the position that the present plans will result in the least amount of impact on King Street because the additional traffic will be limited to that generated by the proposed development. Provision of another point of access to the development would encourage additional cross connector traffic between South Greensboro Street and Jones Ferry Road; however, this additional traffic would be limited because the route would be very circuitous.

The two possible connections that have been explored are as follows:

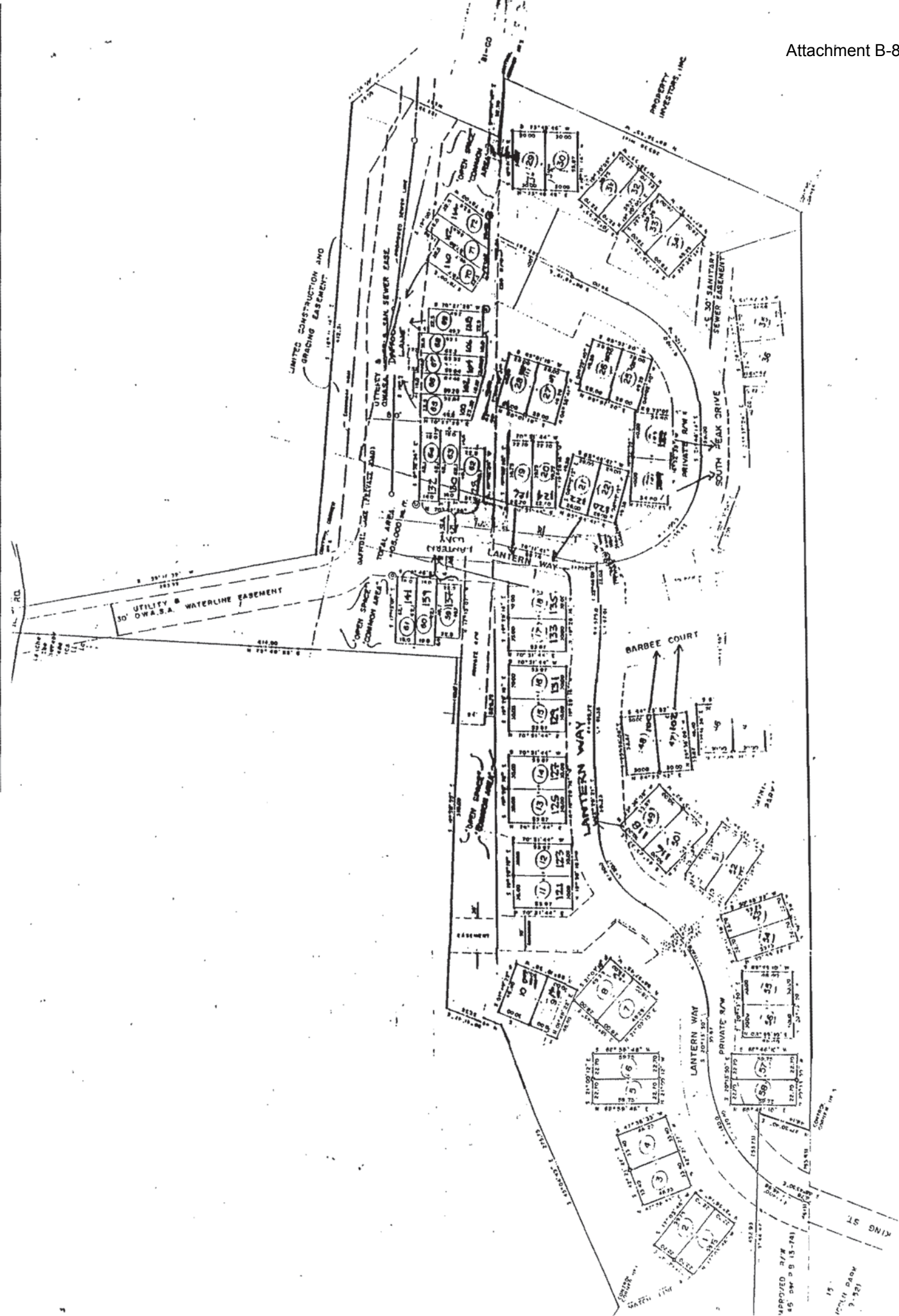
1. To the east via the Rocky Brook Trailer Park Road to Old Pittsboro Road. The landowner between the proposed development and Rocky Brook Trailer Park is unwilling to allow development of the property for any purpose.
2. To the south across the Rocky Brook Trailer Park to Highway 54 Bypass. This connection is problematic for two reasons: 1) excessive elevation changes, and 2) N.C. DOT will not permit a driveway connection onto a ramp at road interchanges. Further, the staff would discourage additional connections to Highway 54 Bypass.

ANALYSIS:

The application, as submitted, is complete.

RECOMMENDATIONS:

The Administration recommends approval of a Conditional Use Permit for the Whispering Hills development proposal.



A regular meeting of the Carrboro Board of Aldermen was held on Tuesday, January 25, 1994 at 7:30 p.m. in the Town Hall Board Room.

Present and presiding:

Mayor	Eleanor Kinnaird
Aldermen	Michael Nelson
	Randy Marshall
	Hank Anderson
	Frances Shetley
	Jay Bryan
Town Manager	Robert W. Morgan
Town Clerk	Sarah C. Williamson
Town Attorney	Michael B. Brough

Absent:
Alderman Jacquelyn Gist

APPROVAL OF MINUTES OF PREVIOUS MEETING

MOTION WAS MADE BY JAY BRYAN AND SECONDED BY RANDY MARSHALL THAT THE MINUTES OF JANUARY 18, 1994 BE APPROVED WITH CORRECTIONS. VOTE: AFFIRMATIVE ALL

ACCEPTANCE OF STREETS - WHISPERING HILLS SUBDIVISION

Kenneth Withrow, the town's Transportation Planner, stated that on December 7, 1993, Mike Murray, President of the Whispering Hills Homeowners Association, addressed the Mayor and Board of Aldermen requesting that the town either accept the roads within the Whispering Hills Subdivision or that Lantern Way at its terminus with King Street be closed to through traffic. The Board requested that the town staff review Mr. Murray's request and report back to it as quickly as possible. Mr. Withrow stated that the town staff recommended that Mr. Murray's request for the town's acceptance of the streets be denied due to the fact that the streets do not meet public road standards.

Paul Verderber, President of the Whispering Hills Subdivision, stated that no vote had been taken by the Homeowners Association regarding the request that town accept the roads or that Lantern Way be closed to through traffic. Mr. Verderber stated that Lantern Way is 24 feet wide and South Peak Drive is 18 feet wide. Mr. Verderber stated that most of the homeowners are in favor of the closure of Lantern Way for security purposes.

It was the consensus of the Board to refer this request back to the Whispering Hills Homeowners Association to petition all the property owners of the development to determine their interest in closing Lantern Way at its terminus with King Street, that the Homeowners Association meet with the town staff to determine the costs of any improvements needed for the town to consider accepting the streets, and that the Homeowners Association conduct a traffic count to determine the destination of cars traveling through their subdivision.

REQUEST FROM PINEY MOUNTAIN SUBDIVISION

Mr. Morgan stated that the Piney Mountain Subdivision has a failing community low-pressure pipe sewerage disposal system. They have requested that OWASA permit the City of Durham to serve a pressurized sewer line to the subdivision. The Piney Mountain Homeowners Association is requesting approval of this connection with the City of Durham from the Town of Carrboro, Orange County and the Town of Chapel Hill. Mr. Morgan recommended that the Board adopt a resolution supporting the extension of public sewer service to the Piney Mountain neighborhood.

John Marsh, a resident of the Piney Mountain neighborhood, stated that there are 58 home sites in the neighborhood and 34 are built out. Mr. Marsh stated that they are in an emergency situation and will work with all parties involved on the ownership of the sewer system. Mr. Marsh stated they the homeowners have already spent in excess of \$65,000 just getting to the current point in resolving the situation.

The following resolution was introduced by Alderman Randy Marshall and duly seconded by Alderman Hank Anderson.

A RESOLUTION SUPPORTING THE EXTENSION OF PUBLIC SEWER SERVICE
TO THE PINEY MOUNTAIN NEIGHBORHOOD

Resolution No. 36/93-94

WHEREAS, information from the Orange County Health Department indicates that the Piney Mountain neighborhood present low-pressure pipe system is failing; and

WHEREAS, soils in the majority of the drainfield area for the Piney Mountain wastewater system are unsuitable for subsurface wastewater absorption; and

WHEREAS, no other community wastewater systems appear to be feasible for this neighborhood.

NOW, THEREFORE, THE BOARD OF ALDERMEN OF ALDERMEN OF THE TOWN OF CARRBORO RESOLVES:

Section 1. The Board agrees in principle with the construction of a pump station and force main sewer that connects with the City of Durham sewer system designed to accommodate wastewater only from the currently approved lots in the Piney Mountain Subdivision.

Section 2. The Board requests the City Council of Durham and the Board of Directors of the Orange Water and Sewer Authority to take action to enable a connection of a sewer from the Piney Mountain neighborhood to the City of Durham wastewater system at the expense of the Piney Mountain property owners with the following conditions:

- a. The pump station and force main from the Piney Mountain neighborhood should be designed at a size sufficient to accommodate wastewater only from the currently approved lots in the Piney Mountain Subdivision.
- b. The service area boundary between OWASA and the City of Durham is not changed, the rural buffer is preserved and the decision in this case is based solely on providing a remedy for a public emergency as outlined herein.
- c. There should be an agreement among parties including the Piney Mountain neighborhood association, City of Durham, OWASA, Orange County and the Towns of Chapel Hill and Carrboro that no additional lots or tracts shall be connected to the pump station and force main without the approval of all the above-named governing bodies; and concurrence among the parties to the Joint Planning Agreement regarding the extension of sewer service to the Piney Mountain neighborhood.

Section 3. This resolution shall become effective upon adoption.

The foregoing resolution having been submitted to a vote, received the following vote and was duly adopted this 25th day of January, 1994:

Ayes: Michael Nelson, Randy Marshall, Hank Anderson, Eleanor Kinnaird, Jacquelyn Gist.

Noes: Frances Shetley, Jay Bryan

Absent or Excused: None

PROPOSAL FOR SPACE NEEDS FOR TOWN HALL

James Harris, the town's Community and Economic Development Officer, stated that the police department, other Town Hall departments, and the Friends for a Carrboro Library have identified a need for additional space for operations and proposed programs. On November 16, 1993 the Board of Aldermen requested that the administration develop a Request for Proposals for architectural services to address the space needs of the police department. An alternate bid to determine the space needs of all town departments at Town Hall would be requested.

MOTION WAS MADE BY JAY BRYAN AND SECONDED BY RANDY MARSHALL THAT THE MANAGER BE AUTHORIZED TO ISSUE REQUESTS FOR PROPOSALS FOR AN ARCHITECT TO STUDY THE SPACE NEEDS OF THE POLICE DEPARTMENT WITH AN ALTERNATE BID REQUEST TO COVER THE SPACE NEEDS OF ALL TOWN DEPARTMENTS; THAT A SIX-MEMBER COMMITTEE BE ESTABLISHED TO REVIEW THE RFP'S FOR SERVICE AND SELECTION OF AN ARCHITECT TO BE RECOMMENDED TO THE FULL BOARD TO CONSIST OF TWO ALDERMEN, THE PUBLIC WORKS DIRECTOR, THE COMMUNITY AND ECONOMIC DEVELOPMENT OFFICER, POLICE CHIEF, AND

THE CHAIR OF THE APPEARANCE COMMISSION. VOTE: AFFIRMATIVE FIVE, NEGATIVE TWO (NELSON, KINNAIRD)

Mayor Kinnaird and Alderman Shetley volunteered to serve on the selection committee.

OPEN SPACE ZONING ORDINANCE REVIEW

The Board continued its discussion of open space zoning concepts and how they compare with existing development options in the Town of Carrboro. This matter was requested by the Board at its 1993 Planning Retreat.

It was the consensus of the Board to direct the town staff and Town Attorney to prepare a draft ordinance amendment increasing the open space provisions of the Land Use Ordinance to 50%. The Board requested that the town staff notify the Planning Board and Small Area Planning Work Group that the Board has directed the town staff to prepare this amendment.

PRELIMINARY STATUS REPORT: DESIGNING A PROCESS FOR COMPREHENSIVE QUALITY GROWTH AND COMMUNITY BUILDING STRATEGY

Alderman Bryan, the town's representative on The Shaping Orange County's Growth Steering Committee, presented a preliminary status report on designing a process for comprehensive quality growth and community building strategy.

The Board received the report.

CANCELLATION OF FEBRUARY 15TH BOARD MEETING

The administration requested that the Board cancel its meeting scheduled for February 15, 1994 as this meeting follows the Planning Retreat scheduled for February 13th and 14th.

MOTION WAS MADE BY RANDY MARSHALL AND SECONDED BY MICHAEL NELSON THAT THE FEBRUARY 15TH BOARD MEETING BE CANCELED. VOTE: AFFIRMATIVE ALL

STATUS OF POST OFFICE

Alderman Nelson requested a status report on the new post office construction.

SIGNAGE ON JONES FERRY ROAD

Alderman Bryan requested that the town staff check with NCDOT concerning the installation of signage to indicate lanes on the newly constructed portion of Jones Ferry Road.

COALITION FOR PUBLIC TRANSPORTATION

Alderman Shetley requested that a discussion of the Coalition for Public Transportation be scheduled and that Bill Hollman be invited to attend the meeting.

APPOINTMENT TO ORANGE COUNTY EMERGENCY FAMILY SUPPORT AND SHELTER TASK FORCE

Mayor Kinnaird requested that James Harris serve as the town's representative on the Orange County Emergency Family Support and Shelter Task Force. In addition, the Board requested that Alderman Gist be asked to serve on this Task Force.

MOTION WAS MADE BY RANDY MARSHALL AND SECONDED BY MICHAEL NELSON THAT THE MEETING BE ADJOURNED AT 10:43 P.M. VOTE: AFFIRMATIVE ALL

Town Clerk

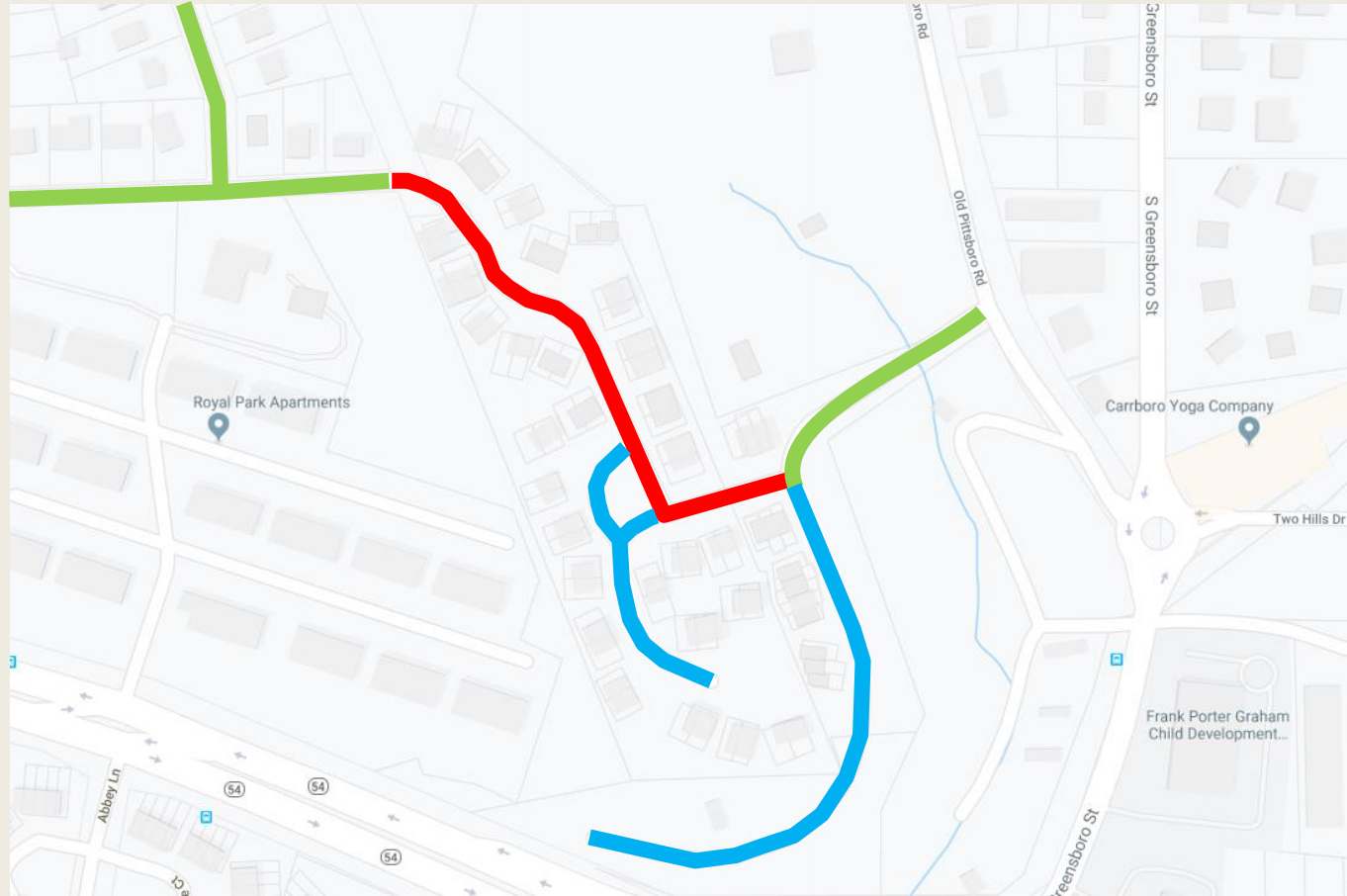


Mayor

Existing Conditions

Attachment D-1 of 1

- Publicly Maintained
- Privately Maintained, Interconnected
- Privately Maintained, Non-connected





Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number:19-295

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Public Hearing for Jones Creek Greenway (C-5181) 60-Percent Design

PURPOSE: The purpose of this agenda item is to provide an update on the status of the Jones Creek Greenway at 60-percent design and to receive comments from the Board and members of the public.

DEPARTMENT: Planning

CONTACT INFORMATION: Patricia McGuire - 919-918-7327; Christina Moon - 919-918-7325; Zachary Hallock - 919-918-7329

INFORMATION: This item provides the Board with a fourth update on the Jones Creek Greenway project, now at 60-percent design, and an opportunity to receive public comment. An informal drop-in session was held at the RENA Community Center prior to the Board meeting. The Jones Creek Greenway is a short segment of the Bolin Creek Greenway system that, when finished, will complete the connection from the northern end of Lake Hogan Farms Road to the existing southern end of Orange County's Jones Creek Greenway and on to the Morris Grove Elementary School.

At the April 9th and May 7th Board of Aldermen meetings, the Board received a presentation from the Wetherill Engineering on the greenway at 15-percent and 30-percent design, respectively, and provided an opportunity for public comment. Staff provided short updates at the June 21st and September 10th meetings; the September updated included images of the existing sections of the County's Jones Creek Greenway to help provide a sense of what the new segment will look like five to ten years after construction.

Greenway projects typically include check-in points at key intervals in the design process-usually 30-percent and 60-percent completion. At 60-percent completion, the consultants shift their focus to preparing for permit approvals from appropriate state and federal agencies. Staff will continue to keep the Board apprised on the status of the project but does not anticipate seeking additional public comment, in order to keep the project on schedule.

Staff has reached out to the Institute for Transportation Research and Education (ITRE) to obtain the specifications for installing a bike-ped counter along the multi-use path to obtain accurate user data for the greenway.

FISCAL & STAFF IMPACT: The anticipated total cost of the project is \$850,250: 80% (\$680,200) to

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

be funded by federal Congestion Mitigation Air Quality Improvement (CMAQ) funds and the remaining 20% (\$170,050) through local match. The use of CMAQ funds includes a Greenhouse Gas emission analysis before and after completion.

RECOMMENDATION: Staff recommends that the Board receive the presentation from Wetherill Engineering, offer feedback and receive public comment to help inform the design for the Jones Creek Greenway.

A RESOLUTION RECEIVING PUBLIC COMMENT ON THE JONES CREEK GREENWAY
AT 60-PERCENT DESIGN

WHEREAS, the Board of Aldermen has made it a policy to hold public hearings on Town projects; and

WHEREAS, the Board of Aldermen has received a presentation on the 30-percent design for the Jones Creek Greenway; and

WHEREAS, the Board has held a public hearing to receive citizen comment on the Jones Creek Greenway at this milestone.

NOW, THEREFORE, BE IT RESOLVED by the Carrboro Board of Aldermen that the Board makes the following comments:

This the 24th day of September in 2019.



301 W. MAIN ST.
CARRBORO, NC 27510
919-918-7325
CONTACT:
TINA MOON
PLANNING ADMINISTRATOR

JONES CREEK
GREENWAY
TIP #C-5181

PLANS PREPARED BY:


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Raleigh, N.C. 27606
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REVISIONS:	
NO.	DATE

WEI PROJECT NO.:

19336.01

SCALE:

1

TOWN OF CARRBORO PROJECT #: 55033
NCDOT TIP # C-5181

TOWN OF CARRBORO
NORTH CAROLINA

JONES CREEK GREENWAY

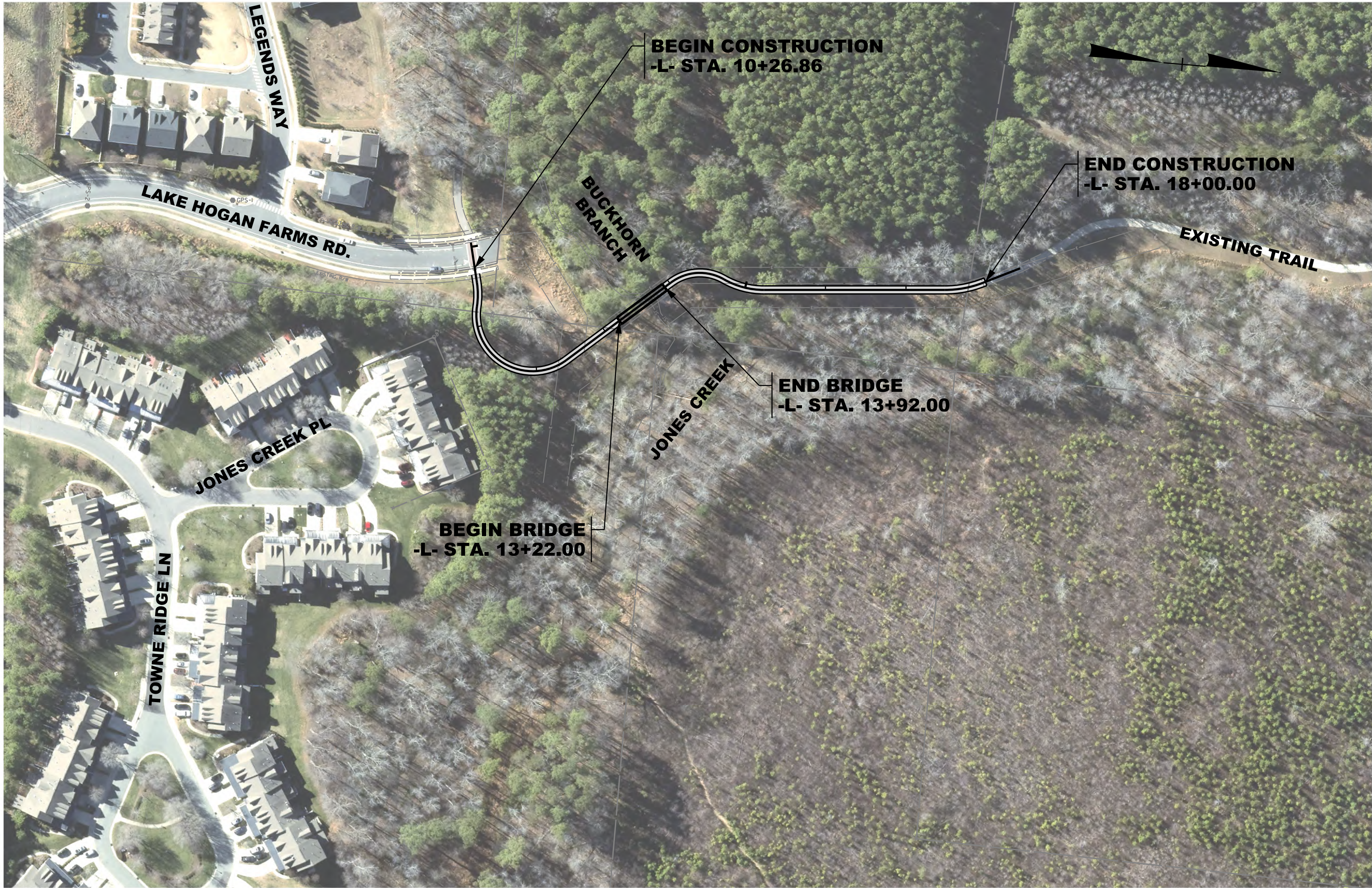
LOCATION:
FROM LAKE HOGAN FARMS ROAD TO EXISTING TRAIL

TYPE OF WORK:
GRADING, PAVING, STRUCTURE, DRAINAGE, & EROSION CONTROL

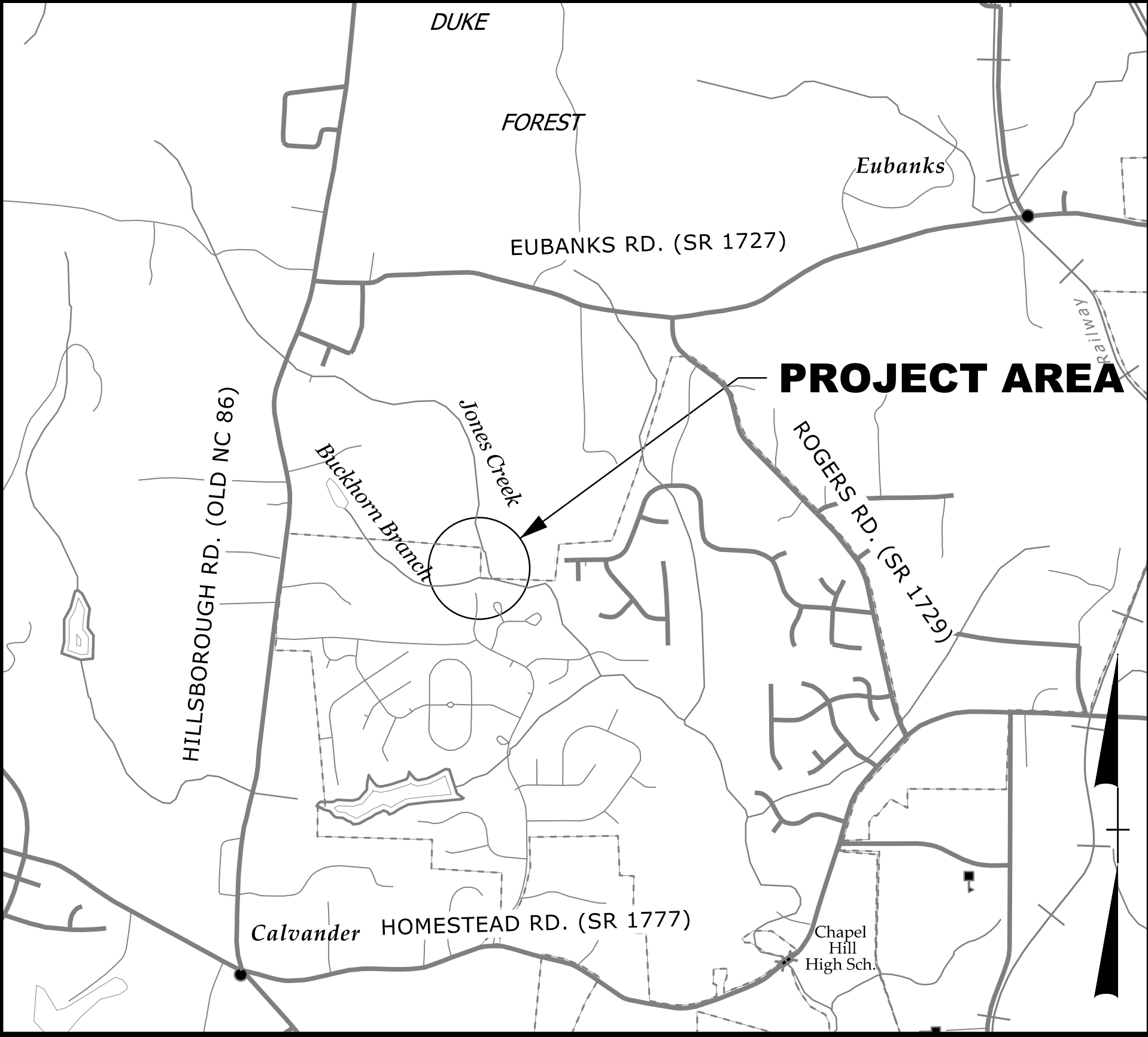
60% PRELIMINARY PLANS

INDEX OF SHEETS

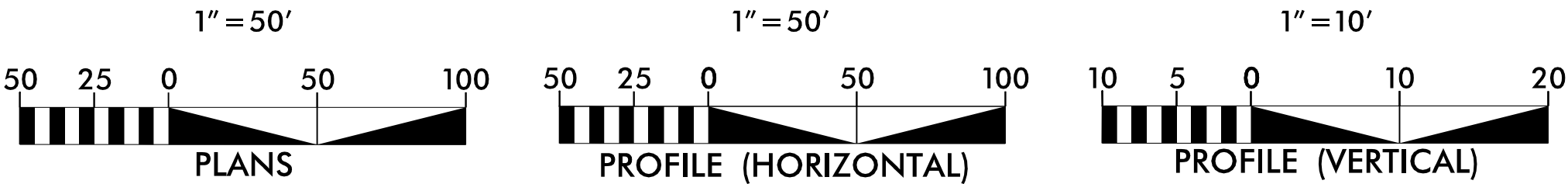
1	TITLE
1A	SYMBOLGY SHEET
2	TYPICAL SECTIONS
4	PLAN AND PROFILE SHEET
X-1 - X-3	CROSS SECTIONS



VICINITY MAP



GRAPHIC SCALES



PROJECT LENGTH

LENGTH OF ASPHALT TRAIL =	703.14 FEET
LENGTH OF BRIDGE =	70.00 FEET
LENGTH OF PROJECT =	773.14 FEET



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DATE: SEPTEMBER 20, 2019

REVISIONS:	
NO.	DATE

WEI PROJECT NO.:

19336.01

SCALE: NTS

1A

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Computed Property Corner	✕
Property Monument	□ ECM
Parcel/Sequence Number	②3
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	-○-
Proposed Chain Link Fence	-□-
Proposed Barbed Wire Fence	-◇-
Existing Wetland Boundary	---WLB---
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
Existing Historic Property Boundary	-HPB-
Known Contamination Area: Soil	☠-S-☠
Potential Contamination Area: Soil	☹-S-☹
Known Contamination Area: Water	☠-W-☠
Potential Contamination Area: Water	☹-W-☹
Contaminated Site: Known or Potential	☠☹
Gas Pump Vent or U/G Tank Cap	○
Sign	○ ○ ○
Well	○ W
Small Mine	✕
Foundation	▭
Area Outline	▭
Cemetery	▭ +
Building	▭ +
School	▭ +
Church	▭ +
Dam	▭ +
HYDROLOGY:	
Stream or Body of Water	~~~~~
Hydro, Pool or Reservoir	▭ ---
Jurisdictional Stream	---JS---
Buffer Zone 1	---BZ 1---
Buffer Zone 2	---BZ 2---
Flow Arrow	←
Disappearing Stream	→
Spring	○ ~
Wetland	~ +
Proposed Lateral, Tail, Head Ditch	~ ← FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ CSX TRANSPORTATION MILEPOST 35
Switch	□ SWITCH
RR Abandoned	---+---
RR Dismantled	-----

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

RIGHT OF WAY & PROJECT CONTROL:

Secondary Horiz and Vert Control Point	◆
Primary Horiz Control Point	○
Primary Horiz and Vert Control Point	●
Exist Permanent Easment Pin and Cap	◇
New Permanent Easement Pin and Cap	◆
Vertical Benchmark	⊠
Existing Right of Way Marker	△
Existing Right of Way Line	-----
New Right of Way Line	-----
New Right of Way Line with Pin and Cap	○ R/W
New Right of Way Line with Concrete or Granite R/W Marker	○ R/W
New Control of Access Line with Concrete C/A Marker	○ C/A
Existing Control of Access	○ C/A
New Control of Access	○ C/A
Existing Easement Line	---E---
New Temporary Construction Easement	---E---
New Temporary Drainage Easement	---TDE---
New Permanent Drainage Easement	---PDE---
New Permanent Drainage / Utility Easement	---DUE---
New Permanent Utility Easement	---PUE---
New Temporary Utility Easement	---TUE---
New Aerial Utility Easement	---AUE---

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	---C---
Proposed Slope Stakes Fill	---F---
Proposed Curb Ramp	---CR---
Existing Metal Guardrail	---T---
Proposed Guardrail	---T---
Existing Cable Guiderail	---T---
Proposed Cable Guiderail	---T---
Equality Symbol	⊕
Pavement Removal	▨

VEGETATION:

Single Tree	☼
Single Shrub	☼

Hedge	~~~~~
Woods Line	~~~~~
Orchard	☼☼☼☼
Vineyard	▭ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	▭ CONC
Bridge Wing Wall, Head Wall and End Wall	▭ CONC WW
MINOR:	
Head and End Wall	▭ CONC HW
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	Ⓢ
Storm Sewer	---S---

UTILITIES:

POWER:	
Existing Power Pole	●
Proposed Power Pole	○
Existing Joint Use Pole	●
Proposed Joint Use Pole	○
Power Manhole	Ⓢ
Power Line Tower	⊠
Power Transformer	⊠
U/G Power Cable Hand Hole	○
H-Frame Pole	●
U/G Power Line LOS B (S.U.E.*)	---P---
U/G Power Line LOS C (S.U.E.*)	---P---
U/G Power Line LOS D (S.U.E.*)	---P---

TELEPHONE:

Existing Telephone Pole	●
Proposed Telephone Pole	○
Telephone Manhole	Ⓢ
Telephone Pedestal	Ⓢ
Telephone Cell Tower	Ⓢ
U/G Telephone Cable Hand Hole	○
U/G Telephone Cable LOS B (S.U.E.*)	---T---
U/G Telephone Cable LOS C (S.U.E.*)	---T---
U/G Telephone Cable LOS D (S.U.E.*)	---T---
U/G Telephone Conduit LOS B (S.U.E.*)	---TC---
U/G Telephone Conduit LOS C (S.U.E.*)	---TC---
U/G Telephone Conduit LOS D (S.U.E.*)	---TC---
U/G Fiber Optics Cable LOS B (S.U.E.*)	---TFO---
U/G Fiber Optics Cable LOS C (S.U.E.*)	---TFO---
U/G Fiber Optics Cable LOS D (S.U.E.*)	---TFO---

WATER:

Water Manhole	Ⓢ
Water Meter	○
Water Valve	⊗
Water Hydrant	Ⓢ
U/G Water Line LOS B (S.U.E.*)	---W---
U/G Water Line LOS C (S.U.E.*)	---W---
U/G Water Line LOS D (S.U.E.*)	---W---
Above Ground Water Line	---A/G Water---

TV:

TV Pedestal	Ⓢ
TV Tower	⊗
U/G TV Cable Hand Hole	○
U/G TV Cable LOS B (S.U.E.*)	---TV---
U/G TV Cable LOS C (S.U.E.*)	---TV---
U/G TV Cable LOS D (S.U.E.*)	---TV---
U/G Fiber Optic Cable LOS B (S.U.E.*)	---TVFO---
U/G Fiber Optic Cable LOS C (S.U.E.*)	---TVFO---
U/G Fiber Optic Cable LOS D (S.U.E.*)	---TVFO---

GAS:

Gas Valve	◇
Gas Meter	Ⓢ
U/G Gas Line LOS B (S.U.E.*)	---G---
U/G Gas Line LOS C (S.U.E.*)	---G---
U/G Gas Line LOS D (S.U.E.*)	---G---
Above Ground Gas Line	---A/G Gas---

SANITARY SEWER:

Sanitary Sewer Manhole	Ⓢ
Sanitary Sewer Cleanout	Ⓢ
U/G Sanitary Sewer Line	---SS---
Above Ground Sanitary Sewer	---A/G Sanitary Sewer---
SS Forced Main Line LOS B (S.U.E.*)	---fss---
SS Forced Main Line LOS C (S.U.E.*)	---fss---
SS Forced Main Line LOS D (S.U.E.*)	---fss---

MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	Ⓢ
Utility Unknown U/G Line LOS B (S.U.E.*)	---TUL---
U/G Tank; Water, Gas, Oil	▭
Underground Storage Tank, Approx. Loc.	Ⓢ
A/G Tank; Water, Gas, Oil	▭
Geoenvironmental Boring	Ⓢ
U/G Test Hole LOS A (S.U.E.*)	Ⓢ
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

301 W. MAIN ST.
CARRBORO, NC 27510
919-918-7325
CONTACT:
TINA MOON
PLANNING ADMINISTRATOR

JONES CREEK
GREENWAY
TIP #C-5181

PLANS PREPARED BY:

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Raleigh, N.C. 27606
License No. F-0377
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Fax: 919 851 8107

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DATE:SEPTEMBER 20, 2019

REVISIONS:	
NO.	DATE

WEI PROJECT NO.:

19336.01

SCALE: NTS

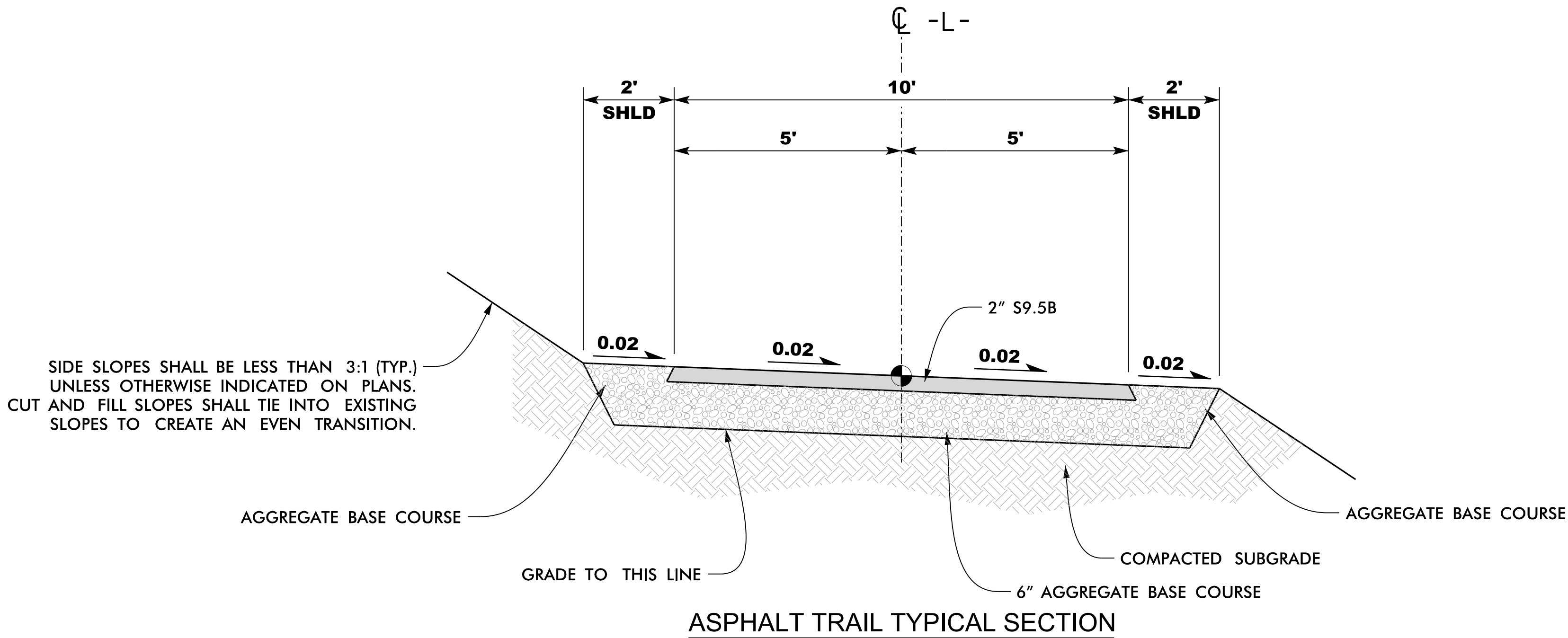
NOTES:

CROSS SLOPE DIRECTION VARIES. SEE PLAN VIEW AND CROSS SECTIONS FOR DIRECTION OF SLOPE

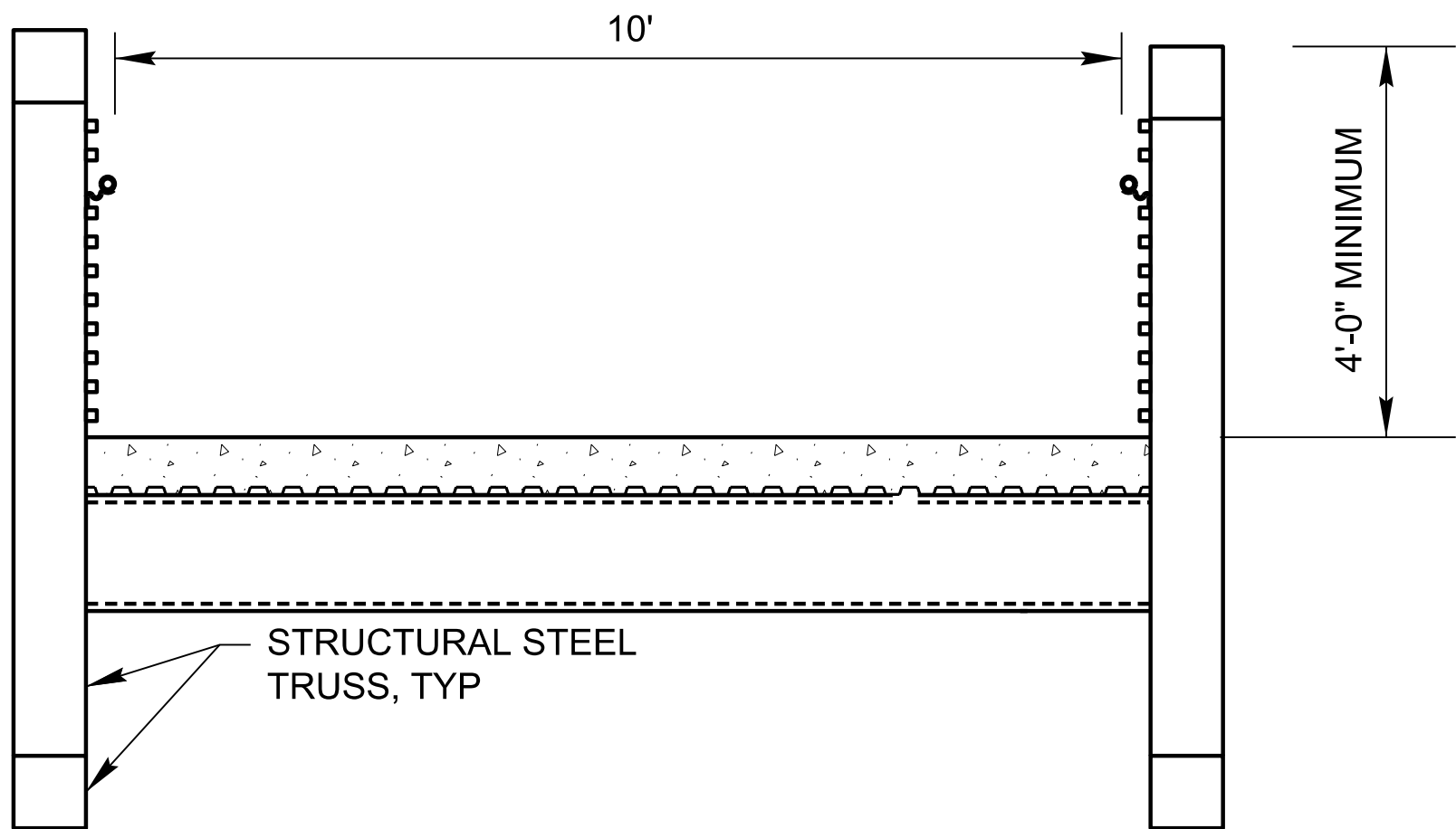
TRANSITION CROSS SLOPE AS SHOWN ON PLANS. TRANSITION INCREMENT SHALL BE 10'.

2' SHOULDER MATCHES THE CROSS SLOPE OF TRAIL.

CONTRACTOR RESPONSIBLE FOR REESTABLISHING ALL SLOPES DISTURBED BY CONSTRUCTION.



CHAIN	BEGIN STATION	END STATION
-L-	(TIE TO PROPOSED CURB RAMP) 10+35.00	13+22.00 (BEGIN BRIDGE)
-L1-	(END BRIDGE) 13+92.00	18+00.00 (TIE TO EXISTING TRAIL)



BRIDGE TYPICAL SECTION

CHAIN	BEGIN STATION	END STATION
-L-	13+22.00	13+92.00



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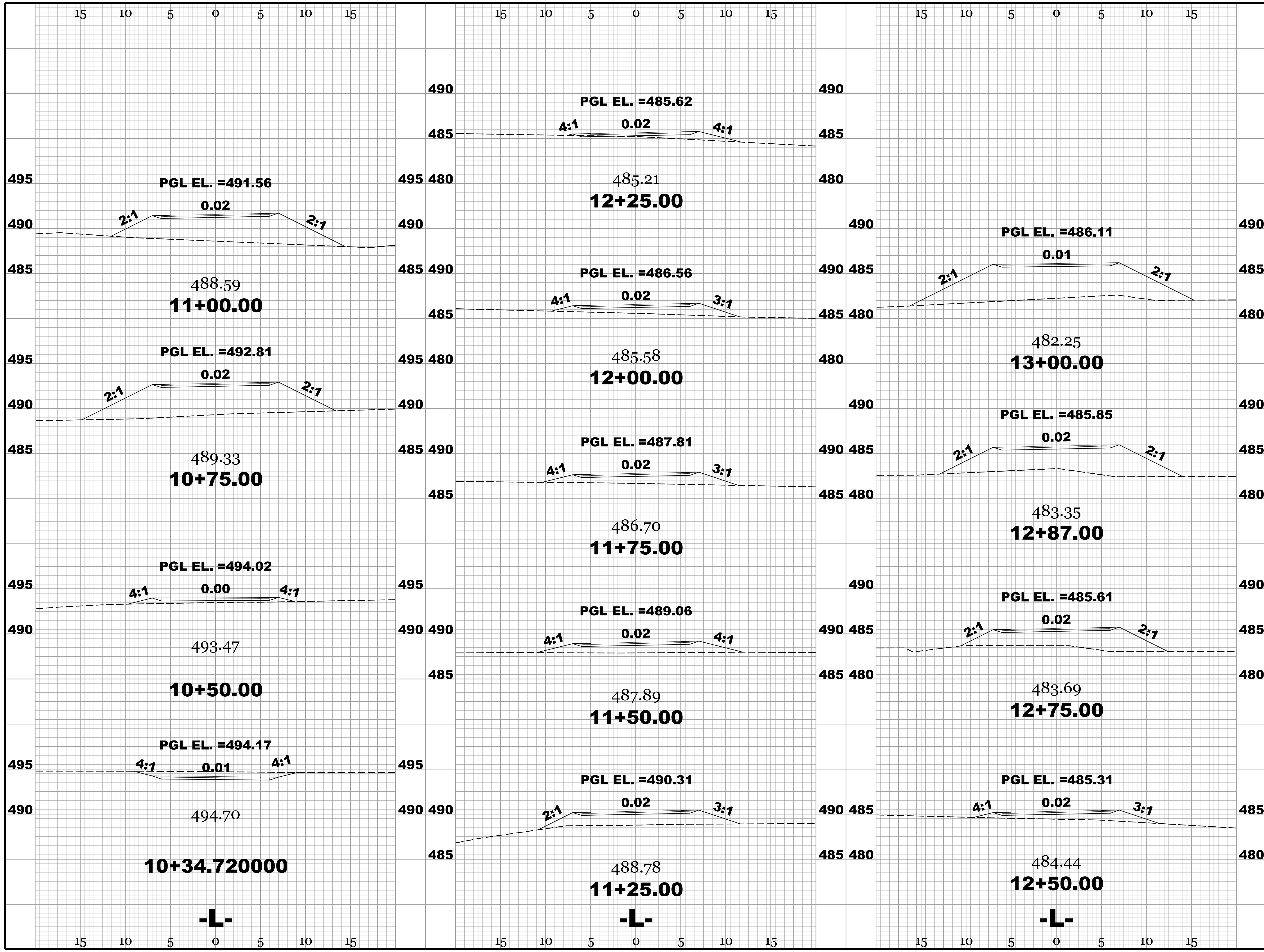
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NO.	DATE

WEI PROJECT NO.:

19336.01

SCALE:


X-1





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15+00.00

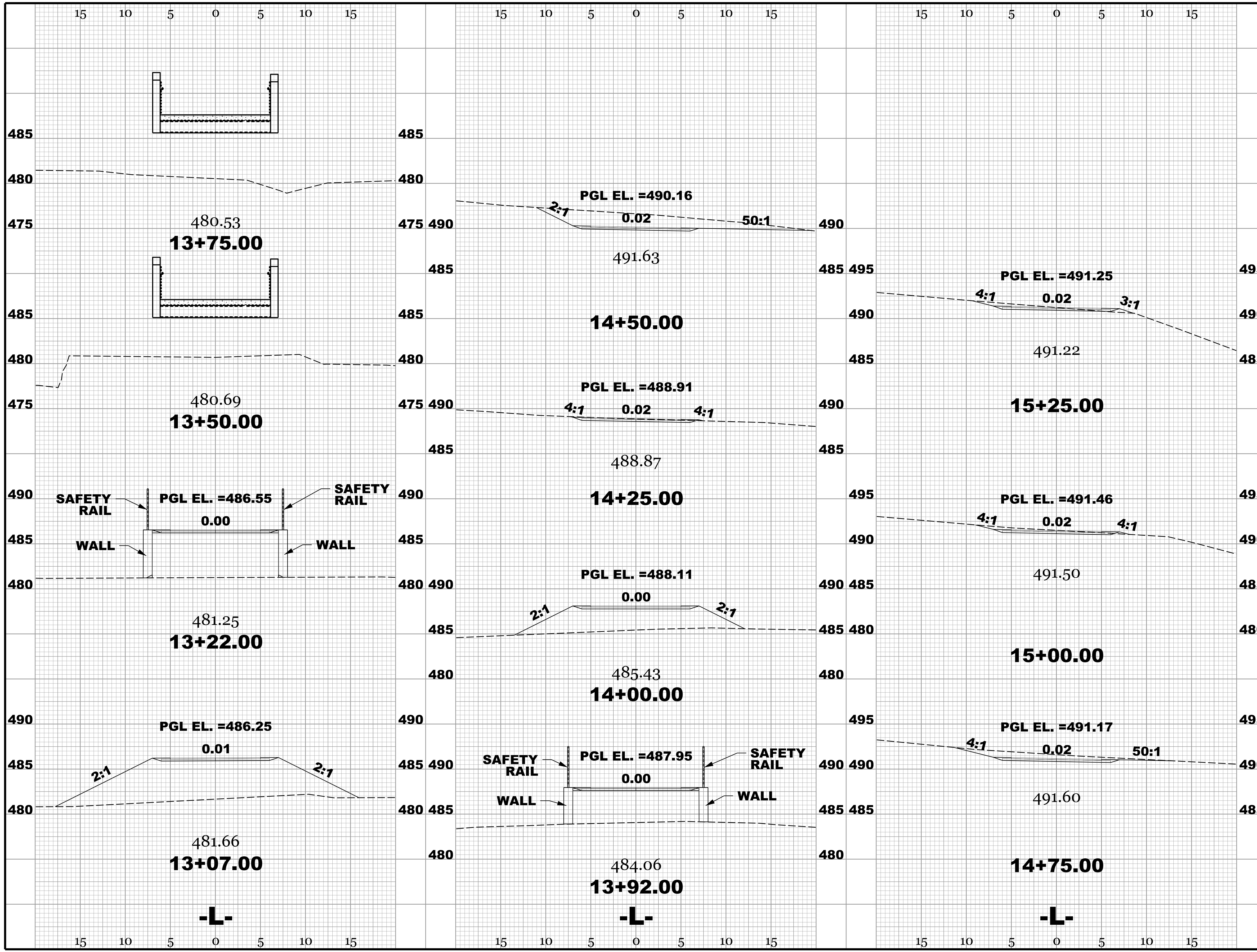
14+75.00

14+50.00

13+50.00

13+25.00

13+07.00



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DATE: SEPTEMBER 20, 2019
REVISIONS:
NO. DATE

WEI PROJECT NO.:
19336.01

SCALE:
X-2



301 W. MAIN ST.
CARRBORO, NC 27510
919-918-7325
CONTACT:
TINA MOON
PLANNING ADMINISTRATOR

JONES CREEK
GREENWAY
TIP #C-5181

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SIGNATURES COMPLETED

DATE: SEPTEMBER 20, 2019

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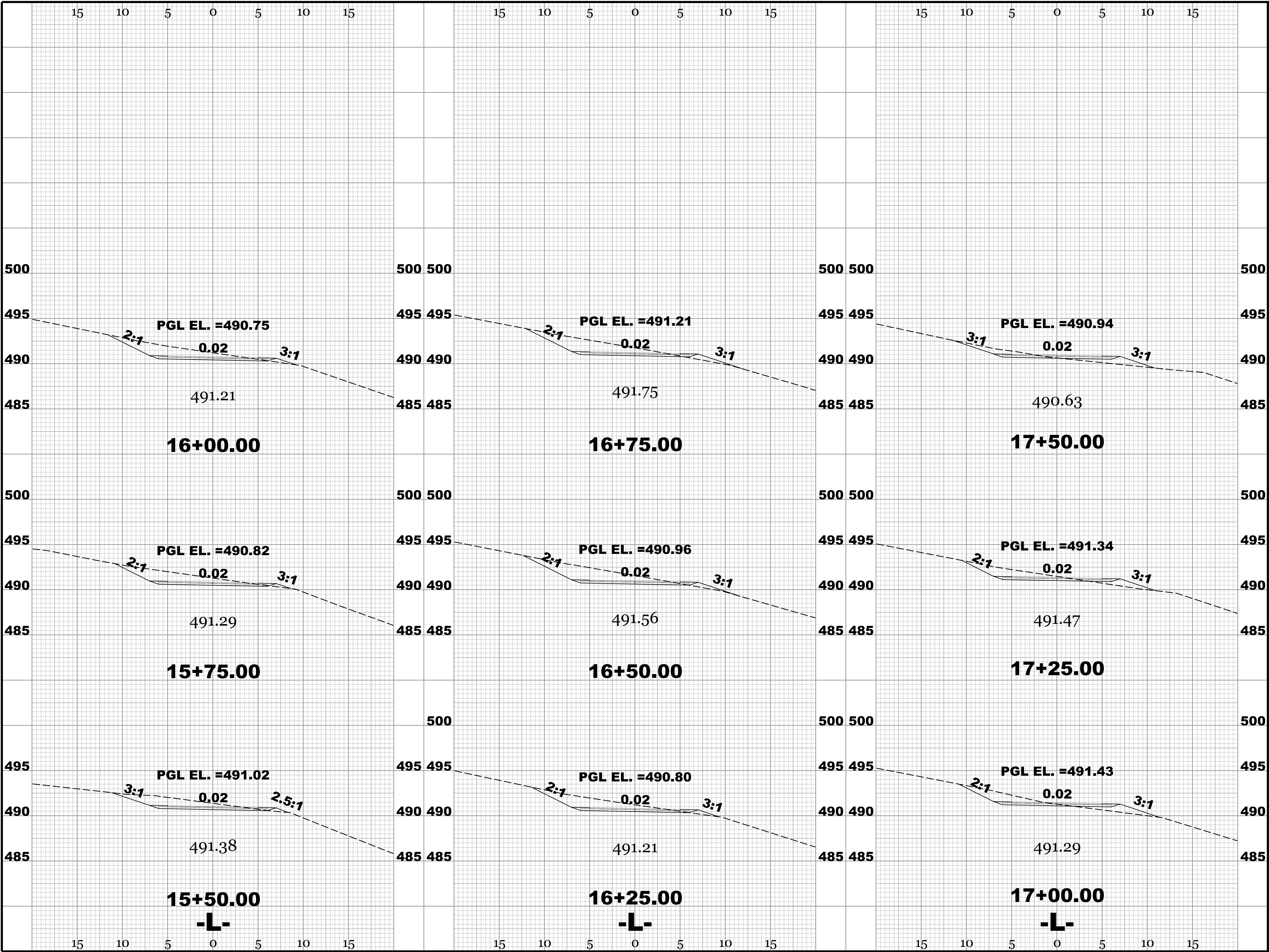
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WEI PROJECT NO.:

19336.01

SCALE:

X-3





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CARRBORO, NC 27510
919-918-7325
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DATE: SEPTEMBER 20, 2019

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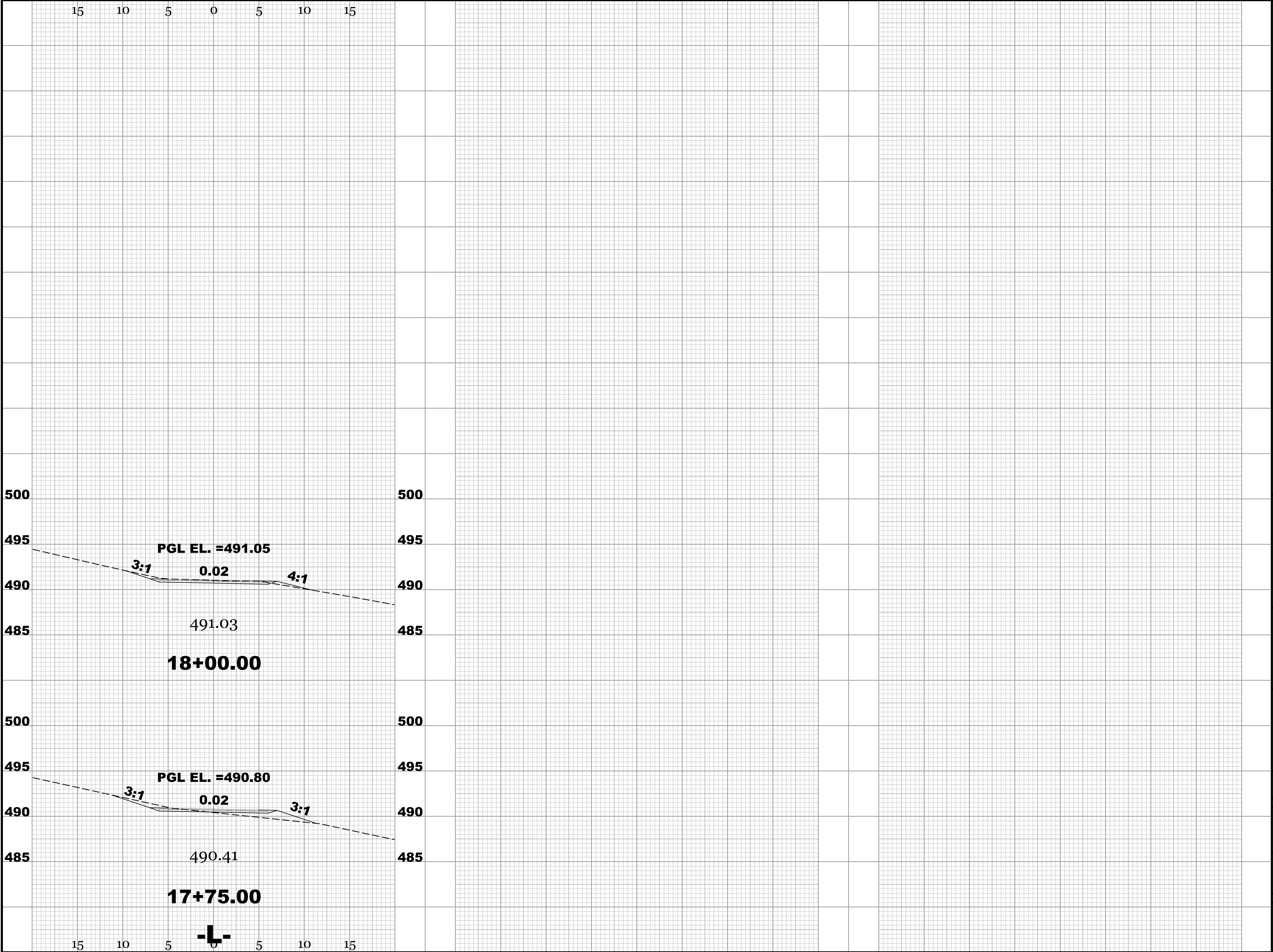
NO.	DATE

WEI PROJECT NO.:

19336.01

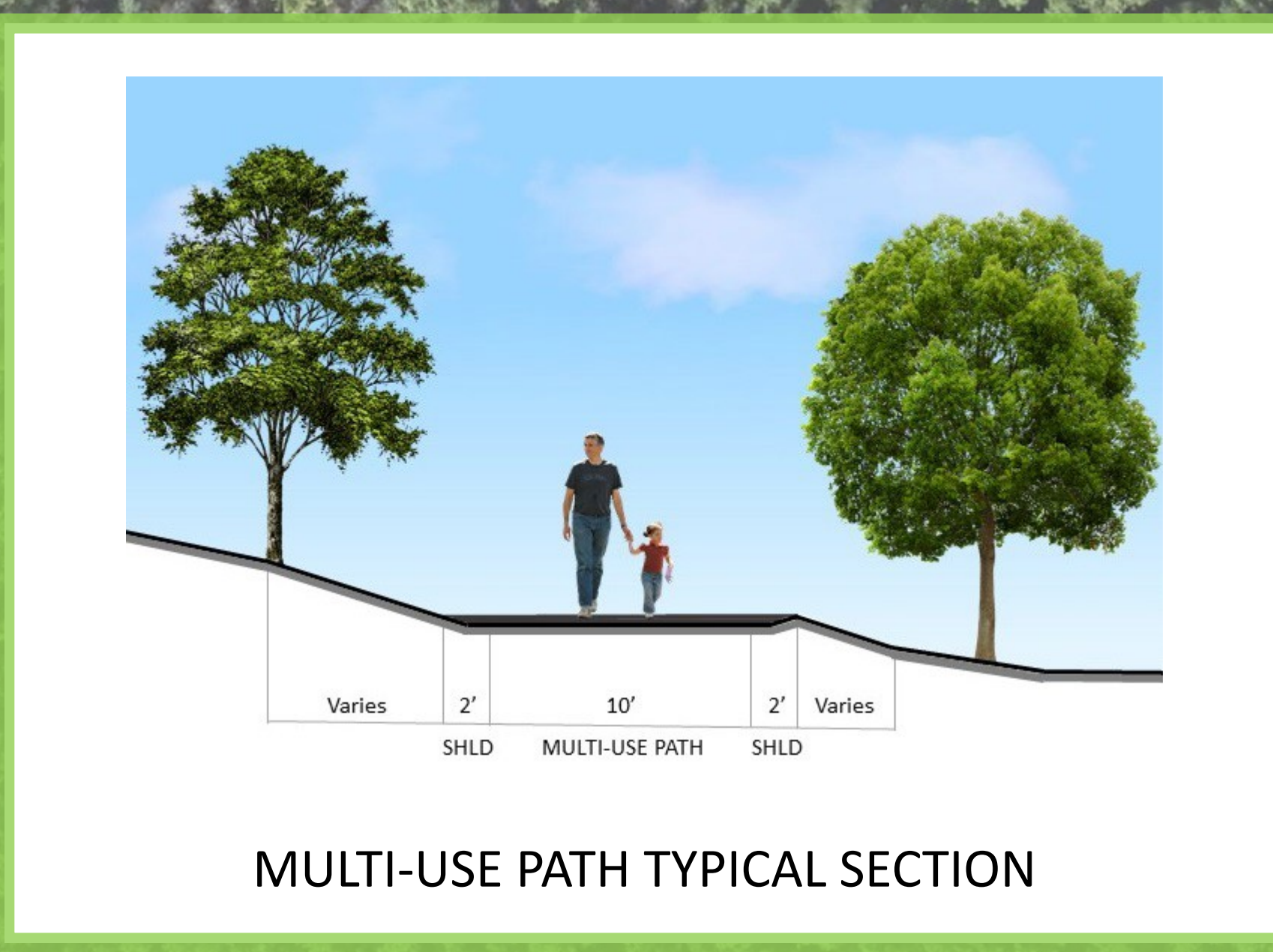
SCALE:

X-4



JONES CREEK MULTI-USE PATH

-MEETING MAP-
September 24, 2019



TO MORRIS GROVE ELEMENTARY SCHOOL

ORANGE COUNTY
(FUTURE TWIN CREEKS PARK)

CONNECT TO EXISTING
MULTI-USE PATH

PROPOSED 10' WIDE
MULTI-USE PATH

MI HOMES OR RALEIGH LLC

DELORIS HOGAN ETAL

PROPOSED 70' LONG BRIDGE
OVER BUCKHORN BRANCH

PROPOSED 10' WIDE
MULTI-USE PATH

EXISTING LAKE HOGAN FARMS
MULTI-USE PATH

BUCKHORN BRANCH

GLEN RIDGE
TOWNHOME
ASSOC INC

JONES CREEK

LEGENDS AT LAKE HOGAN OWNERS ASSOCIATION INC

LEGENDS WAY

LAKE HOGAN FARM ROAD

JONES CREEK PL

TOWNE RIDGE LN



Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number:19-292

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Update on Request for a Paid Parking and Enforcement Study

PURPOSE: The purpose of the item is to update the Board on results of an RFP process to allow for discussion on moving forward.

DEPARTMENT: Economic and Community Development and Planning

CONTACT INFORMATION: Annette D. Stone, AICP Director of Economic and Community Development astone@townofcarrboro.org <<mailto:astone@townofcarrboro.org>> (919) 918 7319; Patricia McGuire, AICP Director of Planning and Inspections pmcguire@townofcarrboro.org <<mailto:pmcguire@townofcarrboro.org>> (919) 918 - 7327

INFORMATION: At the June 11, 2019 meeting the Board of Aldermen directed staff to either conduct in-house or seek out consulting services to design a paid-for-parking program and how to implement enforcement of parking in the downtown, including options for the private lot owners to participate in the program and the enforcement. Scenarios were to include a deck and without a deck. The study should also provide assessments of how to pay for these projects.

During the summer staff assessed current workloads and determined a consultant would be best able to fulfill the Board's directive. Staff crafted an RFP (Attachment1) and sent it out on August 12th. Based on the responses to the RFP, the cost of the study will be approximately \$48,000.

Staff will summarize information presented at the June 11th meeting and review the scope of services for the paid parking and enforcement study, for the Board's discussion.

FISCAL & STAFF IMPACT: The cost of the study is \$48,000 +/- plus staff time.

RECOMMENDATION: Staff recommends the Board discuss the item.

Request for Proposals (RFP) for Parking Planning Services

Purpose

The purpose of this request is to obtain professional consulting services to assist the Town of Carrboro with planning and possible implementation of a paid parking system for Town operated parking spaces within downtown business district.

Background

The Town of Carrboro had a Downtown Parking Plan completed in July 2017. Recommendations included in this Plan included: wayfinding improvements, enforcement of time-limits, and shared parking agreements as key tools for managing parking supply and demand. At that time, a paid parking system was not recommended and a survey of downtown visitors showed that more than 60% of respondents had a negative view of paying for parking.

On June 11, 2019, the Carrboro Board of Aldermen passed a resolution directing Town Staff to investigate and study the design of a paid-for-parking system in Downtown Carrboro. This study is to include scalable paid-parking technology, time-limited parking & enforcement, and options for private parking lot owners to participate in the paid system. This study should review scenarios that propose maintaining the existing parking supply or providing additional parking supply (e.g. a town-owner deck or increased on street parking), along with an assessment of the costs and revenues associated with any proposed program, enforcement efforts, and major capital investments.

The Town of Carrboro is seeking a qualified consulting firm to provide professional services to conduct this analysis. This project shall be completed with the desired schedule for completion of this planning is January 15, 2020. An initial draft should be made available for staff review by December 15, 2019.

Scope of Services

The anticipated scope of services for this include the following tasks and/or deliverables:

1. Stakeholder Engagement: This study does not need to assess public opinion of paid parking, as the town already has an understanding of it from previous efforts, rather this outreach should aim to gauge the perceived impacts (both positive and negative) on businesses and customers which would result from such a change. The consultant will identify options to engage various stakeholders including businesses, employees, customers, and other residents of Carrboro who would be impacted by paid parking.
2. Data Review/Analysis: The Town of Carrboro completed a Parking Plan in 2017, which at the time did not recommend implementing paid parking. The consultant shall perform data collection in a manner which is consistent and comparable to the data collection methodology used during the 2017 plan. Any additional data collection beyond this is left to the discretion of the consultant.
3. Parking Technology, Payment Systems and Scalability: The consultant shall conduct a review of best practices for managing paid parking including available parking technologies & payment

RFP for Parking Planning Services

systems should be conducted and recommendations provided. Any proposed payment system should be **capable** of providing multiple transactions methods (Cash, Card, or Smartphone App). The scalability of any proposed system is needed to enable to opportunity for private sector parking owners to participate in the system if/when they see fit.

4. Parking Enforcement and Operations: The consultant shall conduct a review of current best practices in parking enforcement, operations, and maintenance procedures. Examples from municipalities of comparable size and within the state of North Carolina shall be used where applicable and recommendations made based on this review
5. Parking Costs and Revenue: The consultant shall conduct an assessment of the costs and revenues associated with the aforementioned parking technologies, parking enforcement, operation & maintenance, and potential costs associated with providing additional town-owned/operated parking supply, such as a parking structure, shall be assessed.
6. Analysis of Equity Impacts: The consultant shall conduct a before and after assessment of the costs associated with paid parking as experienced by businesses and patrons. This would be a comparison between the current paradigm (where businesses generally provide parking at no charge to the users, but the underlying cost of that parking affects the rest of their business and the price customers pay, even those who do not access an establishment by car) versus a paid parking paradigm (where drivers pay for parking, both customers and employees) and the associated impacts that would have on prices (those seen by consumers) and land rents.

Reference Document

The following plans and documents should be used as reference:

Downtown Parking Plan Report - <http://townofcarrboro.org/DocumentCenter/View/4877/Carrboro-Downtown-Parking-Plan-REPORT-July-2017>

Downtown Parking Plan Appendix - <http://townofcarrboro.org/DocumentCenter/View/4876/Carrboro-Downtown-Parking-Plan-APPENDIX-July-2017>

Community Climate Action Plan - <http://www.townofcarrboro.org/DocumentCenter/View/4116/Community-Climate-Action-Plan>

Comprehensive Bicycle Transportation Plan - <http://townofcarrboro.org/737/Bike-Plan>

Comprehensive Bicycle Transportation Plan Update – Draft Network -

Vision 2020 - <http://www.townofcarrboro.org/DocumentCenter/View/1371/Vision-2020>

Downtown Transportation Study - <http://www.townofcarrboro.org/DocumentCenter/View/1941/Carrboro-Downtown-Transportation-Study>

The Town of Carrboro's participation in the Government Alliance on Race and Equity (GARE) - <https://www.racialequityalliance.org/tools-resources/>

RFP for Parking Planning Services

Submittal

If you are interested in submitting a proposal, please provide the following items August 26, 2019.

1. A 2-page or less summary of firm's methodology and resources to undertake this project;
2. A summary of firm's experience with parking planning and design for similarly sized Towns.
3. Schedule and proposed timeline for completing work.
4. List of deliverable work documents (e.g. paid parking system plan, technology & scalability plan, equity analysis)
5. Three (3) references that can speak to the firm's experience duties
6. Estimated cost for completing Parking Planning Services .

Meetings to discuss final documents and materials for submittal to the Town will be scheduled for **prior to award of a contract.** At a minimum, the contractor shall deliver the following to the Town:

1. All elements of the scope of services in a comprehensive report with findings.
2. A financial implementation and impact plan that to include: 1) required initial capital outlays, 2) annual revenue estimate; 3) annual expenditure estimate; and 4) breakeven cost analysis. F

3.

No Obligation - The Town reserves the right to: (1) evaluate the responses submitted; (2) waive any irregularities therein; (3) select candidates for the submittal of more detailed or alternate proposals; (4) accept any submittal or portion of submittal; (5) reject any or all Respondents submitting responses, should it be deemed in the Town's best interest; or (6) cancel the entire process.

Submit information to:

Zachary Hallock, Transportation Planner

Town of Carrboro

301 W. Main Street

Carrboro, NC 27510

Phone: 919-918-7329

Email: zhallock@townofcarrboro.org



Town of Carrboro

Town Hall
301 W. Main St.
Carrboro, NC 27510

Agenda Item Abstract

File Number:19-297

Agenda Date: 9/24/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Update on Transportation Projects Anticipated to be Submitted by the DCHC MPO for Ranking in the Prioritization Process for SPOT 6.0

PURPOSE: The purpose of this agenda item is to provide the Board with an update on the status of Town transportation projects identified for submittal for SPOT 6.0, the current prioritization schedule, and NCDOT's recently adopted Complete Streets Implementation Guide.

DEPARTMENT: Planning

CONTACT INFORMATION: Christina Moon - 919-918-7325; Zachary Hallock - 919-918-7329

INFORMATION: At the February 19, 2019 Board of Aldermen meeting, staff provided the Board with an update on the recently released draft 2020-2029 State Transportation Improvement Plan (STIP), and a list of potential projects to submit for consideration for the next round of prioritization-P6.0. (Agenda materials may be found at the following link

<https://carrboro.legistar.com/MeetingDetail.aspx?ID=679784&GUID=7D469578-03C6-4BC6-A6F7-DA8A23CD41D9&Options=&Search=>>.) NCDOT uses the data-driven process for scoring projects based on specific criteria for the development of STIP. Projects submitted for P6.0 will be considered for inclusion in the 2023-2032 STIP.

The Town submitted eight projects for P5.0. Some projects were submitted both as bike-pedestrian and highway projects to improve the likelihood of being selected for funding. Only one project-the NC 54 Sidepath from James Street to Anderson Park--was programmed. Per the Board's direction in February, staff submitted all of the remaining seven projects to be evaluated as part of the technical committee's work to develop a list projects for the MPO Board to consider for formal submittal to NCDOT.

As part of this process, staff has been working with Orange County and Chapel Hill to identify possible projects of mutual interest. Orange County also submitted a number of intersections for initial evaluation by NCDOT as potential improvement projects, including the intersection at Calvander. Town staff submitted a bike-ped project and a highway modernization project for consideration in P5.0 to improve bicycle infrastructure along Old NC 86 from Farm House Road to Calvander and at the Calvander intersection. Based on the scoring criteria, however, both projects scored poorly. In response to the County's submittal for an intersection improvement at Calvander, however, NCDOT has identified a possible roundabout project that has received a relatively high initial score as a highway project to improve capacity. Staff will present these options at the meeting. Bike-ped improvements to Seawell School Road were likewise submitted with two design

Agenda Date: 9/24/2019

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options-bike lanes and a sidewalk, or a shared-use path; the shared-use path scored notably higher.

An updated schedule for the P6.0 process is attached, and reflects the new timeline of updating the STIP every three years instead of every two years (*Attachment B*). The extended timeline provides an opportunity to present another update to the Board in February, once the technical committee's subcommittee has completed its evaluation. The Board may wish to refer the matter to the Transportation Advisory Board for recommendation during this process.

Information relating to NCDOT's updated complete streets policy is also attached. This includes the *NCDOT Complete Streets Evaluation* document (*Attachment C*) and the recently adopted *Complete Streets Implementation Guide* (*Attachment D*). It is staff's understanding that the updated funding formulas will apply to projects submitted in P6.0. Bike-Ped projects would still be subject to a 20-percent local match, but bike-ped improvements to highway projects may be funded in full if such the improvements are identified in an adopted plan. Improvements not included in a plan, may be constructed as "betterments" subject to a local match. The new guide includes an updated formula that lowers the Town's match for betterments from 30 percent to 10 percent. Hanna Cockburn, NCDOT's Director of Bike/Pedestrian and Public Transportation Divisions is scheduled to make a presentation at the MPO Board meeting in November and will be able to respond and provide more information about the changes in the new policy.

FISCAL & STAFF IMPACT: Future fiscal impacts are dependent on the selection of projects during the P6.0 process. Based on the most recent cost estimates, if the two bike-ped projects (i.e. bike lanes from Farmhouse Road to Calvander and one of the Seawell School Road options) were to be funded and constructed as standalone projects, the total cost would be approximately \$5,414,690 and the local match would be \$1,082,938. Some of the local match could be subject to cost sharing with our neighboring jurisdictions, the Town of Chapel Hill and Orange County. Staff time would also be needed for project management. All bike-ped projects selected for funding would come before the Board for final approval and appropriation of required matching funds prior to contract execution and design.

RECOMMENDATION: Staff recommends that the Board receive the update and reaffirm the Town's interest in these projects (*Attachment A*).

A RESOLUTION FOR THE CONSIDERATION OF TRANSPORTATION
PROJECTS FOR THE P6.0 PRIORITIZATION PROCESS

WHEREAS, the 2023-2032 Statewide Transportation Improvement Program (STIP) process, which provides an opportunity for local governments to submit transportation project priorities to the North Carolina Department of Transportation (NCDOT) has begun; and

WHEREAS, the DCHC-MPO has requested that local governments begin to identify new and unfunded transportation projects for consideration in Strategic Prioritization 6.0 process; and

WHEREAS, the Town submitted a number of bike-ped and highway projects for consideration for Prioritization 5.0; and

WHEREAS, only one bike-ped project, a sidepath along NC 54 from James Street to Anderson Park has been programmed in the draft 2020-2019 STIP, as a project selected for funding; and

WHEREAS, there is still public interest in the projects that were not selected for the upcoming funding cycle, including:

- A sidepath or bike lanes and sidewalk along one side of Seawell School Road
- Bike lanes from NC Old 86 from Farm House Road to Calvander (bike-ped or highway modernization)
- Intersection improvements at Calvander for improved multimodal travel
- Intersection improvements at NC 54 and Old Fayetteville Road

NOW, THEREFORE, BE IT RESOLVED by the Carrboro Board of Aldermen that the Board directs staff to work with our neighbors, the Town of Chapel Hill and Orange County to seek opportunities to partner on transportation projects of mutual interest, and to resubmit the above mentioned projects, as standalone projects or in combination, for consideration in the P6.0 process.

BE IT FURTHER RESOLVED:

- 1) _____
- 2) _____
- 3) _____
- 4) _____
- 5) _____

This the 24th day of September 2019.

FINAL Prioritization 6.0 Schedule

2019						2020												2021												2022																			
Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun														
BOT approves P6.0 Criteria & Weights		BOT adopts 2020-2029 STIP																																															
		MPOs, RPOs, & Divisions test, enter, and submit projects into SPOT Online																																															
										SPOT Reviews and Calculates Quant. Scores for All Projects (Existing + New)																																							
														Review period of all data & costs to be used for scoring (by MPOs, RPOs, and Divisions)																																			
																				TIP Unit Programs Statewide Mobility Projects																													
																				MPOs, RPOs, & Divisions assign Regional Impact Local Input Points (with option to assign Division Needs Local Input Points)																													
																								SPOT finalizes Regional Impact scores and TIP Unit programs Regional Impact projects																									
																								MPOs, RPOs, & Divisions assign Division Needs Local Input Points																									
																												SPOT finalizes Division Needs Scores and TIP Unit programs Division Needs projects																					
																																NCDOT releases Draft STIP																	
																																NCDOT Provides Report to JLTOC																	
																																		NCDOT Provides Report to JLTOC															
																																				BOT adopts 2023-2032 STIP													

Key Dates:

July 2019: BOT approves P6.0 Criteria & Weights

October 2019: SPOT Online opens for testing, entering, and submitting projects (closes 5/1/2020)

December 20, 2019: Carryover Project Deletions due for receiving extra submittals (one out, one in)
Carryover Project Modifications due

May 1, 2020: Area-Specific Weights due
SPOT On!ine closes for submitting projects

End of February 2021: Quantitative scores for all projects released
Draft list of Programmed Statewide Mobility projects released

March 1, 2021: Regional Impact Local Input Point window opens for 3 months (closes 5/28/2021)
Deadline for Approval of Local Input Point Assignment Methodologies

End of July 2021: Draft list of Programmed Regional Impact Projects released

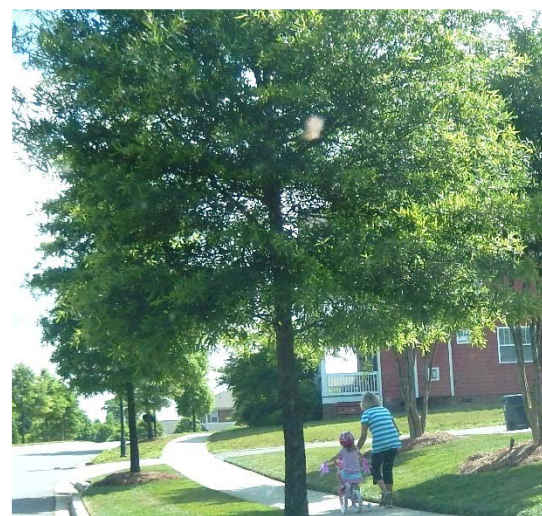
August 2, 2021: Division Needs Local Input Point window opens for 3 months (closes 10/29/2021)

February 2022: DRAFT 2023-2032 STIP released

June 2022: Anticipated BOT adoption of 2023-2032 STIP

Notes:
Blue Box = NC BOT Actions
Yellow Box = MPO/RPO/Division Input
Green Box = NCDOT Work Tasks

NCDOT Complete Streets Evaluation



Prepared for
North Carolina Department of Transportation

Prepared by
WSP USA

July 2018



EXECUTIVE SUMMARY

At the request of Transportation Secretary James H. Trogdon, the North Carolina Department of Transportation (NCDOT) Bicycle and Pedestrian Transportation (DBPT) Division is completing an evaluation of its Complete Streets Policy and *Complete Streets Planning and Design Guidelines*, completed in 2009 and 2012 respectively. The Secretary expressed the need to prioritize Complete Streets implementation throughout the State and to evaluate the success of the policy. The goals of the evaluation are to assess how the policy is being utilized across NCDOT business units, assess how NCDOT's policies work in relation to other related state policies, to conduct a best practices review and make recommendations about implementation and tracking.

Interview Process

The project team conducted 45 interviews with stakeholders representing municipalities, metropolitan planning organizations (MPOs), rural planning organizations (RPOs), councils of government (COGs), grassroots advocacy organizations, NCDOT staff and leadership.

Interviewees noted the obstacles for Complete Streets were primarily with implementation rather than with the policy. Most interviewees noted there is not a formal place for Complete Streets in the project planning and development process. Decisions on Complete Streets elements are not typically decided until late in project development and that can lead to project delays or even removal of these elements from the project. Interviewees also noted there is a lack of ownership and accountability of Complete Streets within NCDOT and confusion about who municipalities should work with during the process.

Funding was the most widely cited impediment to implementing Complete Streets by interviewees. Strategic Transportation Investments (Prioritization or SPOT) can act as a barrier, as interviewees shared instances of Complete Streets projects not scoring high enough to receive funding. Cost-share requirements for beyond-the-curb facilities were a widely cited barrier. Municipalities, especially smaller municipalities, often do not have the financial resources to contribute to cost-share requirements. This can lead to an inequitable allocation of Complete Streets projects.

Interviewees noted NCDOT design guidelines, manuals, and other documents have not been updated to reflect the Complete Streets policy or the cross sections provided in the *Complete Streets Planning and Design Guidelines*. This inconsistency can limit implementation of Complete Streets as current design guidelines are largely organized around automobile transportation rather than multimodal options. In addition, strict adherence to the AASHTO design manual or "Green Book" can lead to projects not being context sensitive.

Evaluation of Supporting NCDOT Policies

A review of NCDOT policies, manuals, and documents revealed that none had been updated to reflect the Complete Streets Policy and *Planning and Design Guidelines*. Some include language related to bicycle and pedestrian facilities but there is not a consolidated source for bicycle and pedestrian design

guidelines within NCDOT. This information is often disseminated through memoranda within the roadway design group but there is no Complete Streets section in the *NCDOT Roadway Design Manual*.

Best Practices

The evaluation team reviewed the Complete Streets policies and supporting documents of California, Florida, New Jersey, Tennessee, and Virginia. Notable best practices include: a clearly defined implementation process with designated responsible parties; consideration of land use when determining appropriate transportation elements; regular updates to design and related guidelines; development of supporting documents and guidance; clearly defined exemptions processes; and clearly defined funding incentives and options.

Performance Metrics

Providing before and after comparisons of Complete Streets projects can help evaluate the effectiveness of the Complete Streets initiative, as well as serve as a reporting tool to provide accountability. Based on interviews and the best practices review, the following performance metrics are proposed for NCDOT:

- **Safety:** in addition to motor vehicle crash data, data for stand-alone bicycle and pedestrian crashes can be centrally collected and managed to provide a more complete understanding of roadway safety.
- **Congestion:** utilizing multimodal level of service (MMLOS), a metric included in the 2010 Highway Capacity, to measure how Complete Streets affects congestion of all modes present on a roadway.
- **Inventory:** while existing and proposed facilities are collected in the Pedestrian and Bicycle Infrastructure Network geodatabase, this resource can be updated to include more comprehensive sets of data and data from more municipalities throughout the state.
- **Economic Development:** project proximity to commercial areas and low-income Census Block Groups can be measured to ensure projects serve trip purposes beyond recreation and communities at all income levels.

Implementation and Tracking

Based on the interviews, it is apparent that there is a need to standardize the Complete Streets implementation process, clearly incorporate it into the project development lifecycle, and assign responsibility to persons at critical milestones throughout the process. A tracking system would allow the Department to clearly see how and where Complete Streets elements are being implemented throughout the State.

Next Step Recommendations

The next phase of the project will involve a detailed review of the design guidelines with

recommendations for improvements, recommendations for process improvements, and development of a training and outreach strategy.

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1. INTRODUCTION

At the request of Transportation Secretary James H. Trogdon, the North Carolina Department of Transportation (NCDOT) Bicycle and Pedestrian Transportation (DBPT) Division is completing an evaluation of its Complete Streets Policy (adopted in 2009) and *Complete Streets Planning and Design Guidelines* (2012). The Transportation Secretary expressed the need to prioritize Complete Streets implementation throughout the state and to evaluate how much progress has been made thus far. The goals of the evaluation are to assess how the policy is being utilized across NCDOT business units, assess how NCDOT's policies work in relation to other related state policies, to review best practices for measuring performance, and to make recommendations for an implementation and tracking system.

2. COMPLETE STREETS POLICY



The North Carolina Board of Transportation adopted a Complete Streets policy in 2009. The policy states NCDOT planners and engineers are to “consider and incorporate multimodal alternatives” when designing new projects or making improvements to existing infrastructure. NCDOT is to collaborate with cities, towns, and communities to ensure

multimodal facilities are planned, funded, designed, constructed and maintained. Complete Streets facilities are to be integrated into all projects within a growth area of a town or city given the surrounding land use and transportation infrastructure compliments multimodal transportation. Multimodal facilities can be included on rural transportation projects if there is an existing need and network. Exemptions to the policy are to be made on a case-by-case basis and must be approved by the Chief Deputy Secretary. The policy states planning and design guidelines are to be developed to facilitate the implementation of the policy.

3. COMPLETE STREETS PLANNING AND DESIGN GUIDELINES

The *Complete Streets Planning and Design Guidelines* were developed to provide direction in the “decision-making and design processes to ensure that all users are considered during the planning, design, construction, funding, and operations of the state’s transportation system.” The document details processes, street types and recommendations intended to support a collaboratively-designed and context-based complete streets approach.

This report reviews how successful NCDOT has been at implementing its Complete Streets policy and guidelines into the project development process.

4. STAKEHOLDER INTERVIEWS

4.1 Interview Process

The first stage of the evaluation consisted of interviewing individuals within various business units of NCDOT and individuals external to NCDOT who participate in Complete Streets planning, implementation, and advocacy. This group includes individuals representing municipalities, metropolitan planning organizations (MPOs), rural planning organizations (RPOs), councils of government (COGs), and grassroots advocacy organizations. Interview questions focused on when and how Complete Streets principles are incorporated into project timelines, collaboration and communication, utilization of the *Complete Streets Planning and Design Guidelines*, design standards, funding, and possible changes to existing practices. A total of 43 interviews were conducted over an approximately three-week period in January 2018. Most interviews occurred over the phone, though some interviews took place in person and a few interviewees provided written responses to the interview questions. Interview questions and a list of those interviewed are included in the Appendix.

4.2 Summary of Responses

The responses have been grouped into categories based on themes identified by the interview team. These include:

- Policy
- Planning and Project Development
- Accountability
- Strategic Transportation Investments (referred to as SPOT or Prioritization)
- Funding
- Performance Measures
- Design Guidelines
- Institutional Barriers/Paradigm Shift
- Safe Routes to School
- Equity
- Public Awareness and Education

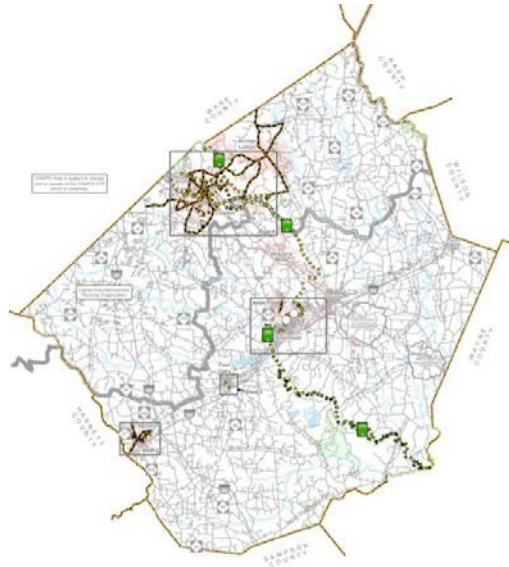
4.2.1 Policy

Many interviewees were satisfied with the policy as it is currently written. Some interviewees, mainly external to NCDOT, noted the policy is written more as an advisory document and does not include enforcement measures and language needed for implementation. A sentiment echoed in multiple external interviews was that Complete Streets elements are typically viewed as an enhancement, as opposed to a necessary component, of a project. The way the policy is framed leaves Complete Streets inclusion open to interpretation, which poses a barrier to its implementation. There is less incentive to include Complete Streets elements in the design. If these elements are not considered essential, it is

more difficult to include them, particularly when funding is limited. For this reason, many interviewees noted the importance of a funding policy to parallel the existing Complete Streets policy, which could help ensure implementation.

The policy is also written to address future transportation projects and does not provide direction regarding retrofitting Complete Streets elements into existing transportation infrastructure. One interviewee pointed out the importance of keeping the policy and implementation and design guidelines separate to allow implementation procedures to be adaptable. Doing so would allow for greater flexibility in the *Planning and Design Guidelines*. Other interviewees noted that other NCDOT policies have not been updated to reflect the Complete Streets policy. Interviewees also indicated that the Complete Streets policy has not been updated to incorporate new and updated bicycle, pedestrian, and landscaping policies or related policies such as Vision Zero or the Policy on Street and Driveway Access. This can create inconsistencies and conflicts between the policies.

4.2.2 Planning and Project Development



A common observation noted throughout the interviews was the lack of an official “place” for Complete Streets in the planning process and project development. To be successful, Complete Streets needs to be considered early in project planning and development. Many interviewees noted the importance of Complete Streets being included in the planning phase prior to Prioritization. Comprehensive Transportation Plans (CTP) include bicycle, pedestrian, and transit modes, but Complete Streets does not play a formal role in highway planning. While CTPs have recommended cross sections with Complete Streets elements, CTPs do not reference the *Complete Streets Planning and Design Guidelines* for these cross sections. Ensuring CTPs are regularly updated and outreach is conducted with local stakeholders and the

public is key for ensuring these longrange plans reflect the planning goals of local communities and Complete Streets can be considered before NCDOT’s Prioritization process. Interviewees also noted the lack of transparency on project progress from the conclusion of the CTP and Metropolitan Transportation Plans (MTP) process to the decision to submit projects for scoring in Prioritization. Once projects are included in the State Transportation Improvement Program (STIP) and enter project development, most interviewees noted Complete Streets elements are considered almost exclusively during NCDOT’s external scoping process, when input is sought from local and agency stakeholders. There seemed to be consensus that external scoping is too late in project development to begin the discussion of including Complete Streets elements in the project. Some NCDOT staff commented that these decisions are sometimes not finalized even while alternatives are being developed, and the back and forth between NCDOT and municipalities sometimes leads to project delays or to the Complete Streets elements being left out completely. These issues seem to be a result of a misalignment of

municipalities' expectations and NCDOT's project development process. They could also stem from the lack of clarity in how Complete Streets is integrated into project development.

4.2.3 Accountability

Multiple interviewees noted they do not know who to contact within NCDOT for information about project development, design or cost-sharing. They indicated it would be helpful to have a designated point of contact within NCDOT for Complete Streets inquiries. There should be a clear understanding within NCDOT business units about who can be contacted regarding Complete Streets concerns.

The lack of ownership for the Complete Streets process results in issues of accountability for its application. Unless there is a person or unit who is responsible for Complete Streets application at various points throughout project development, there will continue to be inconsistent interpretation and implementation of the policy across the State. Some interviewees suggested that Complete Streets elements be included on project development checklists (Preliminary, R/W and Final Design), field inspection forms and the project commitment (green) sheets for a project. This could allow for greater accountability and better tracking in the implementation process.

4.2.4 Strategic Transportation Investments (SPOT/Prioritization)

Another theme heard during interviews was the lack of compatibility between Complete Streets projects and Prioritization. Some noted that a project that incorporates Complete Streets components seems to score lower than a project without these components. A project with Complete Streets elements may score higher on safety criteria, but the project will have lower scores on cost-benefit and congestion, which brings its overall score down. Interviewees also commented on the importance of choosing the appropriate cross section for a project as this will affect the project's benefit-cost score. The criteria used in Prioritization should reflect the priority NCDOT places on Complete Streets.

4.2.5 Funding

Funding was the most commonly cited challenge to implementing Complete Streets by external and internal interviewees. Many expressed frustration over the fact that roadway projects receive an overwhelming amount of funding relative to other transportation modes, and the focus of these projects is almost exclusively motor vehicles. While roadway projects should include Complete Streets elements, that is not generally the case.

MUNICIPAL POPULATION	PARTICIPATION	
	DOT	LOCAL
> 100,000	50%	50%
50,000 to 100,000	60%	40%
10,000 to 50,000	70%	30%
< 10,000	80%	20%

Cost-share requirements based on population from the
Pedestrian Policy

Additionally, funding is generally less attainable for pedestrian facilities (primarily sidewalks) compared to bicycle facilities. This disparity is because of the local match that is required for facilities beyond the curb. This means municipalities are responsible for providing part of the costs for facilities such as sidewalks and multi-use paths. Many interviewees commented that local governments with a smaller

tax base – and thus, less available funding – often face insurmountable obstacles in their attempt to implement Complete Streets elements. Several individuals representing smaller municipalities explained that in their experience, if their communities are unable to provide the local match, this constraint usually prevents inclusion of Complete Streets elements. They noted if smaller municipalities receive federal funding for Complete Streets projects, municipal staff often do not have the experience or knowledge to manage federally-funded projects.

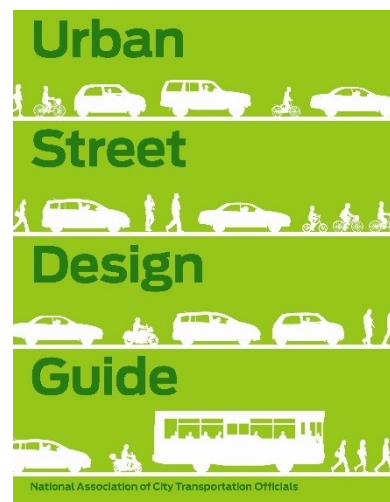
Some suggested that NCDOT allocate more funding to Complete Streets projects and help municipalities identify alternative funding sources (discussed in Section 5.2.2). This type of assistance could be particularly beneficial for economically distressed municipalities that want to incorporate Complete Streets elements but often lack the staff to identify and secure funding options.

4.2.6 Performance Measures

A recurring theme among interviewees is the lack of performance metrics associated with the Complete Streets policy and bicycle and pedestrian transportation in general. The lack of metrics does not allow for quantitative evaluations of the Complete Streets Policy and the *Complete Streets Planning and Design Guidelines*. Other interviewees commented on the limited availability of data on bicycle and pedestrian usage and bicycle and pedestrian crashes not involving motor vehicles. The absence of data leads to less precise bicycle and pedestrian planning, especially compared to highway traffic where there is an abundance of data due to both industry and NCDOT standards. The availability of bicycle and pedestrian data will be important for Complete Streets implementation as NCDOT begins to use a more data-driven approach to project planning, funding and implementation. This lack of data, as one interviewee noted, can be seen in Prioritization where bicycle and pedestrian projects are unable to use existing usage data for scoring.

4.2.7 Design Guidelines

It was apparent that most of those interviewed rarely, if ever, consult the Complete Streets Design and Planning Guidelines for design standards. Some NCDOT roadway staff noted they have occasionally consulted the Guidelines as an alternative resource for cross sections but most NCDOT staff noted they consult the design manuals in the NCDOT design library or the cross sections that are disseminated in memoranda by senior staff. There does not appear to be a consolidated reference for designing Complete Streets and its bicycle, pedestrian and transit components. The roadway designers interviewed generally agreed they would find it helpful if the *Complete Streets Planning and Design Guidelines* were incorporated into the Roadway Design Manual. Representatives of local jurisdictions noted these design manuals and memoranda often do not provide flexibility or feature updated design standards found in other design guidelines such as the National Association of City Transportation Officials (NACTO) Urban Street Design Guide.



Interviewees also commented *the Complete Streets Planning and Design Guidelines* only provide three land use contexts (urban, suburban, and rural) when providing guidance on facility selection. They noted that many projects are in areas not reflected in these contexts, which can lead to situations where there is insufficient guidance for the selection of the safest and most appropriate facility type.

Interviewees also noted the lack of consistency in cross sections developed in the planning and design stages of projects. For example, cross sections often vary between CTPs, Prioritization, and cross sections referenced in design manuals. This lack of uniformity is an obstacle to having a consistent Complete Streets cross section throughout a project's planning and development process. The lack of consistency may require new decision-making as a project progresses through planning and implementation. For example, cross sections put forth in the CTP may not correspond to what is in the Roadway Design Manual.

There was also a desire among interviewees to emphasize Context Sensitive Design within the *Complete Streets Planning and Design Guidelines*. An urban typical section might not work in a rural or suburban area and might be met with resistance by a Division Engineer, local officials or the public if it is proposed as the only cross-section. It is necessary to take a place-based approach in the development of the Complete Streets guidelines and not be rigid when it comes to designs.

4.2.8 Institutional Barriers/Paradigm Shift

Several interviewees both within and outside of NCDOT noted a major barrier to implementing Complete Streets policies is institutional. Some local officials noted that Division Engineers have tried to help them get Complete Streets elements included in transportation projects but their "hands have been tied" by bureaucratic processes. Some external constituents felt that the rigid guidelines of the Roadway Design Manual can act as a constraint to including Complete Streets elements in projects.

Opinions of external constituents towards Complete Streets varied considerably from one Division to the next. It was noted that certain Divisions seem motivated to incorporate Complete Streets elements into projects, while other Divisions seem to resist the inclusion of such elements, particularly when doing so is perceived to complicate project development and delivery. These complications are mainly funding challenges or right of way limitations. However, several interviewees expressed that the reluctance to incorporate Complete Streets elements could result from a perceived lack of priority within NCDOT.

Another institutional barrier discussed by interviewees is NCDOT's highway/auto-centric focus. As we become a more multimodal society, it is important for NCDOT to have a paradigm shift. One interviewee said, "Think people, not cars." Interviewees suggested it is difficult to think of Complete Streets as integral to a project when so much right of way is allocated to cars. As another interviewee noted, NCDOT Divisions are referred to as the Divisions of Highways. This naming implies an auto-oriented rather than multi-modal focus. Some respondents suggested that NCDOT take a close look at the context of the project. How are people moving around? Match the facility to the context rather than forcing a community to adjust to a roadway that might not be appropriate. This shift would allow NCDOT to be more forward thinking and proactive. As one interviewee stated, "NCDOT is not in the fire prevention business. They put out fires instead."

4.2.9 Safe Routes to Schools

One interviewer whose organization focuses primarily on Safe Routes to School discussed the challenges of incorporating Complete Streets elements on school property or the surrounding network of local and NCDOT-maintained streets. Some of the challenges cited echo what was heard from other interviewees, namely that there is a lack of understanding regarding who is responsible for Complete Streets design and implementation within NCDOT and how to coordinate with NCDOT to get Complete Streets elements implemented. There is confusion between the schools and municipalities about which entity should initiate the process of requesting these elements. Additionally, there is reluctance on the part of the schools because of perceived liability issues.

Other barriers include funding and lack of a designated person within schools to oversee the process. While the issue is important to principals, they are often too busy to take on the responsibility of Safe Routes to Schools. These create many missed opportunities to incorporate the Complete Streets design guidelines into new school construction projects.



An important issue raised by the interviewee is NCDOT's requirements for carpool lanes. This requirement is to prevent cars from queueing on state-maintained roads, but the consequence is too many vehicles on school grounds creating hazards for pedestrians and cyclists.

4.2.10 Equity

Because of the growing conversation on transportation and equity, our team sought to interview people who were knowledgeable about transportation, Complete Streets and equity. We heard two general



themes regarding equity and Complete Streets. First, Complete Streets projects tend to be focused more in urban centers. There is often a perception that Complete Streets is a precursor to gentrification. While the two might be related, data shows there is not a direct, causal relationship between the two. NCDOT and municipalities might cite research or conduct their own to better explain this relationship to the public.

The cost-share requirement has serious implications for lower wealth municipalities. As was mentioned in the funding section, these communities often cannot afford their share for Complete Streets enhancements so those are often removed from projects. This can exacerbate equity issues as the areas most in need of bicycle and pedestrian facilities, because of a lack of vehicle ownership, are often the ones least likely to have them.

The lack of Complete Streets projects in lower wealth communities can also have equity implications from a public health perspective, as poorer areas tend to have less access to greenways, sidewalks, bike lanes. Some interviewees noted these facilities can encourage a more active, healthier lifestyle and public health professionals are advocating for Complete Streets policies and designs. It was suggested

that NCDOT might collaborate more with hospitals, foundations and universities to help build metrics to show the benefits of Complete Streets designs and how they could help reduce inequities in access and public health.

4.2.11 Public Awareness and Education

Several people interviewed discussed the need for more education and public awareness about Complete Streets. While the concept is widely accepted in some areas, in other areas, there is skepticism and NIMBYism. Concerns range from a perception of increased criminal activity to gentrification (as mentioned in the equity discussion). Metrics showing the positive impacts of Complete Streets could help garner more support for the policy and even create additional advocates.

There was also discussion from Safe Routes to School advocates about NCDOT preparing a brochure or educational pamphlet specifically for schools that could be distributed to parents and students. This type of awareness campaign could be a short-term solution until more long-term policy changes can be implemented.

5. EVALUATION

5.1 Evaluation of NCDOT Complete Streets Policy Guidelines

The Complete Streets Policy and *Planning and Design Guidelines* were evaluated to identify deficiencies and areas for improvement or update.

5.1.1 Policy Language

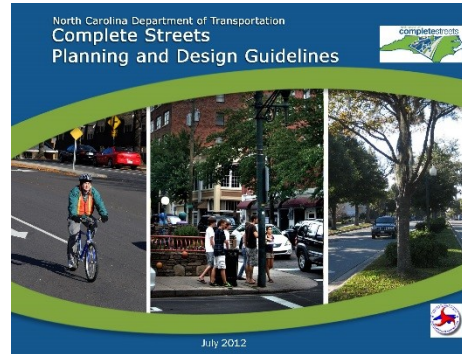
There is a disconnect between the Complete Streets policy and policy implementation. As currently written, the NCDOT Complete Streets policy is a blanket policy for all new NCDOT roadway projects that are located within growth areas of towns and cities. Policy language indicates that Complete Streets improvements in higher density, growth areas should be the expected practice and that the decision to not implement Complete Streets elements should be made on a case-by-case basis. The mandate to consider Complete Streets approaches and provide a justification if Complete Streets elements are not implemented establishes the need for projects to have an evaluation and documentation protocol. It also establishes the expectation that decisions not to implement Complete Streets elements need to be 'documented out' of consideration.

The policy outlines two exceptions: (1) facilities where specific modes are prohibited by law (such as bicycles and pedestrians along controlled access highways) and (2) areas where population, employment density and modal demand do not justify Complete Streets facilities. With the expectation that exceptions to the policy would be issued on a case-by-case basis, the policy requires each exception to be approved by the Chief Deputy Secretary. With little protocol guiding the documentation of this evaluation and justifying the rationale for an exception, the policy lacks the mechanism to hold project teams accountable for this evaluation.

The opportunity exists to bridge the disconnect between policy and implementation by establishing an explicit protocol for project evaluation and guidance for documenting this exception.

5.1.2 Implementation Process

The *Complete Streets Planning and Design Guidelines* is a broad comprehensive document that serves as both primer for local officials and members of the public that are not familiar with Complete Streets and detailed technical guidance for practitioners (engineers, planners, landscape architects, and allied professionals). While the policy requires Complete Streets to be considered and implemented in growth areas of towns and cities, there is no clear guidance to situate this evaluation within the project timeline. A review of policy guidance and stakeholder feedback indicate the current practice considers Complete Streets elements too late in the process to properly evaluate and implement these approaches into many projects. The *Complete Streets Planning and Design Guidelines* do not indicate the step in the project development process when Complete Streets evaluation should be conducted.



The Guidelines document implies that the Complete Streets evaluation could occur within the NEPA process, as alternatives and designs are evaluated. However, waiting to assess the appropriateness of Complete Streets elements at the NEPA stage presents issues for programming the accurate level of project funding. To effectively assess and implement Complete Streets approaches, an evaluation should occur prior to SPOT. This would allow the appropriate level of funding to be programed for each project, including Complete Streets elements.



There is an opportunity to establish Complete Streets evaluation and documentation prior to Prioritization and incorporate this documentation into the SPOT scoring process.

5.1.3 Policy Guidance

The *Complete Streets Planning and Design Guidelines* document provides a small, open-ended worksheet to help situate the project context. However, there is no formal set of Complete Streets assessment evaluation tools associated with the policy guidelines.

As noted in the implementation process section, the guidance does not situate Complete Streets evaluations into the larger planning process. A thorough description of the planning process is provided and the document lays out the expectation that Complete Streets elements should be included throughout the process. However, the policy guidance does not establish a specific point to evaluate the appropriateness of Complete Streets elements for a specific project. An opportunity exists to address

both issues. The establishment of a formal Complete Streets assessment checklist embedded in a userfriendly quick reference guide for practitioners could provide a means for assessing Complete Streets elements at a specific point in the planning process. New Jersey DOT developed a Complete Streets checklist (included in the Appendix) to be used throughout concept development and preliminary engineering to ensure that all alternatives comply with the Complete Streets policy. The checklist would be signed and filed by the project manager.

5.2 Potential Opportunities and Barriers

The interviews conducted in the first task revealed several opportunities to improve the Complete Streets Policy and the *Complete Streets Planning and Design Guidelines* document. Additional opportunities were identified in the review of policies and guidelines documents from other states.

5.2.1 Planning and Development Process

One of the most cited challenges to implementing Complete Streets is confusion over the appropriate time to include Complete Streets elements in project development. While the policy states that Complete Streets elements should be included in all phases of project development, it might be beneficial for the policy to stipulate a specific point when inclusion should begin. Interview responses showed that inclusion of Complete Streets elements often occurs too late in project development, after funding for the project has been determined, and this limits Complete Streets development.

5.2.2 Funding

SPOT was viewed as a challenge to Complete Streets inclusion in projects. This is partially due to the lack of performance metrics for bicycle and pedestrian facilities, which makes it difficult to quantify any improvements achieved through these elements. Instead, current performance metrics tend to focus on the level of service of motor vehicles exclusively. There is an opportunity to shift this focus and to prioritize the level of service for all modes. In doing so, it would be easier to justify inclusion of Complete Streets elements, and to receive funding for them.

Cost-share requirements and long-term maintenance requirements act as a major obstacle in building Complete Streets. There is an opportunity for NCDOT to explore ways to reduce cost-share requirements or help municipalities find alternative funding sources to reduce or eliminate cost-share requirements. However, how financial assistance would factor into SPOT remains a challenge.

Various state and federal funding sources are available for Complete Streets projects. These are listed below along with a description of each.

- Powell Bill funds are permitted for the planning, construction, and maintenance of bicycle, greenway, and pedestrian facilities.
- The North Carolina Highway Safety Improvement Program (HSIP) offers funding for low-impact safety improvement projects. Bicycle and pedestrian crash data is one of the criteria used to identify potential bicycle and pedestrian improvements projects.

- The SPOT Safety program offers up to \$250,000 of funding per project for quick-fix safety and operational improvements.
- Contingency Funds are available for projects located near schools if the project is part of the Safe Routes to Schools program.
- Congestion Mitigation and Air Quality (CMAQ) funds can be used for some Complete Streets projects but only if they are in nonattainment and maintenance areas (areas that either currently or have previously not met the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter).
- Surface Transportation Block Grant-Direct Allocation (STBG-DA) funds are available to urban areas with populations greater than 200,000. Municipalities are generally responsible for providing 20 percent of project costs when STBG-DA funds are used.
- Federal Transportation Alternatives Program funds are available to municipalities with populations under 5,000. Some stakeholders mentioned that these funds sometimes are unused because these small communities generally have few, if any, staff experienced in securing the funds. Some NCDOT highway divisions have assisted municipalities in obtaining these funds, particularly in the case of building ADA ramps.



5.3 Relationship of Complete Streets Policy to Other Programs, Units, and Procedures

A review of the main policies and manuals for NCDOT Divisions and Units found little mention of pedestrians, sidewalks, walking, bike lanes or bicycling, or the Complete Streets policy.



NCDOT's Public Transportation Division documents note that a lack of sidewalks and the poor condition of some existing sidewalks limits mobility of transit riders. The Construction Unit, Materials and Tests Unit, Roadside Environmental Unit, Right of Way Branch, Structures Management, Utilities Section, Geotechnical Engineering Unit, Location and Surveys Unit and Photogrammetry Unit do not refer to any pedestrian or bicycling related concepts in their documents. Within the Hydraulics Unit Guidelines for Drainage Studies and Hydraulic Design,

sidewalks are mentioned but not within the context of the existing Complete Streets Policy. The absence of bicycle and pedestrian considerations in a Complete Streets context in guidance and policy documents demonstrates the inconsistency in applying and implementing Complete Streets elements across the State.

5.3.1 NCDOT Bicycle and Pedestrian Laws and Policies

The Division of Bicycle and Pedestrian Transportation website lists laws and policies related to bicyclists and pedestrians. It includes the Complete Streets Policy, although the Policy is not mentioned in these other laws and policies. The contents of the webpage are summarized in this section.

House Bill 232 – Bicycle Safety Laws Study and The Bicycle and Bikeway Act are the main laws related to cyclists. There are also specific laws on lamps on bicycles, impaired bicycle driving, vehicle and bicycle operation on roadways, passing distances, bicycle racing, the Child Bicycle Safety Act, pedestrians and traffic signals, pedestrian rights of way at crosswalks, pedestrians at unmarked crossings and trespassing on railroad rights of way.

Multiple policies mention bicycle and pedestrian transportation. However, these policies are generally outdated and have not been integrated into the Complete Streets Policy and *Planning and Design Guidelines*. These include:

- Pedestrian Policy (established 1976, last revised in 2001): The pedestrian policy provides guidance on the inclusion of sidewalks in TIP projects and as standalone projects. NCDOT is to replace and pay the full cost of sidewalks that are disrupted because of TIP projects such as a widening. Pedestrian hazards resulting from TIP projects are to be avoided as much as possible to preserve pathways for sidewalks municipalities may wish to add in the future. In situations where sidewalks are “incidental” to TIP projects, the policy states it is the municipality’s responsibility to inform NCDOT of this request. Municipalities are responsible for evaluating the need of sidewalks based on the following criteria: local pedestrian policy, local government commitment, continuity and integration, location, generators, safety, and existing or projected pedestrian traffic. The policy also lists cost-share requirements for municipalities based on population size.
- Bicycle Policy (established 1978, last revised 1991): The Bicycle Policy states that bicycle transportation is to be integrated in the operations of NCDOT with bicycle facilities to be included in long-range planning, environmental documents, and on projects where there is “significant” bicycle usage and when facilities would be cost-effective. Bicycle facilities are highly encouraged to be included within highway right-of-way and designed to the standards included in the *Design Guidelines for Bicycle Facilities* and to AASHTO guidelines on federal aid projects. The policy also states NCDOT holds the responsibility of maintenance when bicycle facilities are within state right-of-way.
- Bridge Policy (established 1981, last revised 1994): The policy states sidewalks are to be included on bridge projects with curb and gutter approach and where there is no control of access. Including sidewalks on one or both sides of the bridge is to be determined during project planning. Bikeways are to be designed to AASHTO standards when a bikeway is “required.” However, the policy does not specify when a bikeway is required.

- Administrative Action to Include Local Adopted Greenways Plans in the NCDOT Highway Planning Process and Guidelines (1994): These guidelines state NCDOT will include local greenway plans in long-range planning and during environmental analysis if localities have shown a commitment to building the planned greenways. It is the locality's responsibility to inform NCDOT of adopted and changed plans, demonstrate greenways perform a primarily transportation rather than recreational function, and demonstrate a commitment to constructing greenway segments surrounding a proposed highway project. Other greenway crossings and elements may be constructed only if the locality pays for the construction and NCDOT design standards are met. Localities are responsible for the maintenance of the greenway facilities regardless of whether NCDOT or the locality funded the construction costs.
- NC Board of Transportation Resolution on Mainstreaming (2000): This resolution states that NCDOT will consider bicycle and pedestrian transportation "a routine part" of its "planning, design, construction, and operations activities" and encourages cities and towns to integrate bicycle and pedestrian transportation in their transportation planning and projects.
- Guidelines for Inclusion of Greenway Accommodations Underneath a Bridge as Part of a NCDOT Project (2015): These guidelines establish criteria and cost-share structures for greenway accommodations underneath bridge replacement projects. When a municipality requests a greenway accommodation, the NCDOT project team uses these criteria to determine if the accommodation is justified. Criteria include: if the accommodation is included in state and/or local plans, if the accommodation serves a transportation rather than recreation function, if the accommodation is the best crossing of the site situation, if the locality requested the accommodation, and if the accommodation would result in excessively high impacts. If the NCDOT project team and management consider the accommodation justified, NCDOT will fund the lesser of \$50,000 or 5 percent of the cost of the bridge replacement cost. Additional costs are to be covered through a cost-share determined by population for municipal or county partners. If the accommodation is not considered justified, the locality is responsible for all costs assuming the accommodation meets NCDOT design standards. Localities are responsible for maintenance of the accommodation regardless of whether NCDOT participated in funding of construction.

A review of these policies and feedback from stakeholders made clear that most pedestrian, bicycle and greenway policies offer limited guidance in how policy is to be implemented and who is responsible for its implementation. In addition, none of the policies have been updated since the Complete Streets Planning and Design Guidelines were developed. The guidelines for accommodating a greenway underneath a bridge are the only policy developed since the Complete Streets guidelines. The wording of many of the guidance documents creates opportunities for interpretation, which can lead to an inconsistent approach to implementing Complete Streets.

In addition, there is a lack of clarity in the guidance documents about who can participate in costsharing. The *Pedestrian Policy* lists cost-share guidance for municipalities only, while the *Guidelines for Inclusion of Greenway Accommodations Underneath a Bridge as Part of a NCDOT Project* offers costshare

guidance for municipalities and “counties or other interested parties.” Many stakeholders cited confusion about who qualifies as an “other interested party.”

5.3.2 Traffic Engineering Policies, Practices, and Legal Authority (TEPPL)

NCDOT *Traffic Engineering Policies, Practices, and Legal Authority (TEPPL)* documents contain references to pedestrians and bicyclists, though not necessarily from the perspective on implementing Complete Streets.

In [MU-7] Exceptions to Maintenance Responsibilities on State Highway System Streets in Municipalities, it states, *“Sidewalks - The construction and maintenance and all financial liability for accidents on sidewalks are the complete responsibility of the municipality. Similarly, that section of ground between the curb and gutter and the sidewalk and from the sidewalk to the edge of the right of way is considered a municipal responsibility from a maintenance standpoint.”* This language leaves room for debate of whose responsibility it is to pay for and maintain non-motorized facilities.

In Article 15. Streets, Traffic and Parking (G.S. 160A-296 Establishment and control of streets; center and edge lines), it states that, *“cities shall have general authority and control over all sidewalks... within its corporate limits...”* It further states that this includes keeping such facilities in proper repair. As local governments often have limited transportation dollars, building and maintaining sidewalks and bicycle lanes can be daunting. In G.S. 160A-217 Petition for Street or Sidewalk Improvements, there are further details of city’s powers and responsibilities as well.

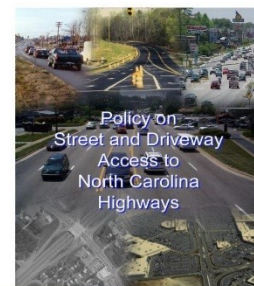
19A NCAC 02D .0406 Construction and Maintenance of Sidewalks, makes clear the Department of Transportation’s responsibilities regarding sidewalks. NCDOT is responsible for replacing any sidewalks that are disturbed by construction of a new roadway. Also, it is the Department’s responsibility to evaluate the need for sidewalks in the planning process, analyze the existing and projected future needs for pedestrian facilities, and draft a pedestrian facilities maintenance agreement.



5.3.3 NCDOT Policy on Street and Driveway Access to North Carolina Highways

The NCDOT Policy on Street and Driveway Access to North Carolina Highways was established before the Complete Streets policy, and it has not been updated to incorporate the policy or design guidelines.

The policy references NCDOT Traditional Neighborhood Development (TND) Guidelines. The TND Guidelines were developed prior to the Complete Streets Policy; however, the document champions many of the principles of



Complete Streets – such as walking and biking, enhancing access to transit, improving safety for all roadway users through traffic calming measures and other techniques. The TND Guidelines are not referenced in the CS policy or guidelines document.

5.3.4 NCDOT Roadway Design Manual



The *NCDOT Roadway Design Manual* is the guiding document used by all roadway designers at NCDOT in developing alternatives for projects. While the Complete Streets policy is not cited within the manual, there is guidance for designing sidewalks and discussion about accommodating bicycle facilities within the roadway design. Design guidance for bicycle facilities is scattered throughout the manual and generally follows guidance set by FHWA. The Roadway Design Manual also refers to guidance contained in AASHTO's *A Policy on Geometric Design of Highways and Streets*, commonly referred to as the

"Green Book." There is limited discussion in this nearly 1,000-page document about bicycle and pedestrian facilities. The guidance included is more from the perspective of designing for automobiles and accommodating these alternative modes than from a "complete streets" view. Updating the *NCDOT Roadway Design Manual* to include Complete Streets language would allow for a more consistent application of Complete Streets principles across the State.

5.3.5 Summary of Related Policies Review

The above discussion shows the numerous policies and guidance documents must be consulted for successful implementation of Complete Streets elements. Some units have no language at all that pertains to Complete Streets elements. None of the documents reviewed presented a clear, coordinated process for implementing Complete Streets in projects. The language of many of the policies underscores the perception that non-automobile transportation elements are viewed as amenities, not critical to the overall project. In many of the policies cited, NCDOT makes localities responsible for requesting, justifying and, in some cases, partially funding sidewalks, bicycle facilities, and greenways. Small communities with limited staff and limited expertise about NCDOT's project development process and funding options might not know when to contact NCDOT or who to contact. While the language of the policies generally supports Complete Streets elements, as one interviewees noted, they are not written in a way that promotes greater inclusion of their respective modes into projects.

The policies might also be streamlined to minimize confusion during project development. In talking to roadway design engineers, it became clear that it is critical to integrate the Complete Streets planning and design guidelines into the Roadway Design Manual.

5.4 Best Practices Review of Complete Streets Policies and Guidelines

A review of several other states' Complete Streets policies and guidelines documents was conducted to determine those elements that are vital for a successful Complete Streets policy, and to understand how NCDOT's Policy and *Planning and Design Guidelines* compare to those in other states. States were selected (1) because they are known for excelling in Complete Streets implementation or (2) to gain a better understanding of what other states in the Southeast are doing to implement Complete Streets.

The following section details strengths identified within each of the reviewed state policies and supporting documents.

5.4.1 California

The State of California passed the Complete Streets Act (AB 1358) and the California Department of Transportation (Caltrans) passed Deputy Directive 64-R1 in 2008.

Policy

Caltrans' Deputy Directive clearly delineates who is responsible for overseeing inclusion of Complete Streets elements, throughout every step of project development. In addition, the policy specifies that a bicycle and pedestrian coordinator must be designated and serve as advisor and external liaison for issues involving district, local agencies and stakeholders. These elements of the policy are particularly important as they bring a sense of accountability.

The Deputy Directive ties in Complete Streets with other policies that are important to the state, namely California's Global Warming Solutions Act of 2006. By drawing a connection between the two, there is additional incentive to support Complete Streets. Additionally, it establishes one of the many benefits that come from including multimodal elements in roadway design.

Localities are required to match federal funding for transportation projects. Transportation funding in California allows use of Toll Road revenue to be used for federal matching.

Supporting Documents

Complete Streets Elements Toolbox

The *Complete Streets Elements Toolbox* provides design guidance and walks the user through the logistics of how to implement Complete Streets, in terms of project development and funding. The Toolbox is intended to be used as an electronic document that is continually updated, to reflect adopted Caltrans guidance and new elements appropriate for use of the State Highway system, and to provide links to additional resources. For each bicycle and pedestrian element in the Toolbox, there are resources, illustrations of what the element looks like, and an explanation of how it is included in the State Highway Operations Protection Program (SHOPP). SHOPP is California's 4-year funding program dedicated to repair and maintenance of various types of roadside facilities. These maintenance projects receive prioritized funding over transportation improvement projects that are included in the STIP.



Update to the General Plan Guidelines: Complete Streets and the Circulation Element

The *General Plan Guidelines: Complete Streets and the Circulation Element* document provides support for cities and counties in their compliance with the California Complete Streets Act. It includes guidance

to update general plan circulation element goals, policies, data collection techniques, and implementation measures related to multimodal transportation networks.

Complete Streets Implementation Action Plan

The *Complete Streets Implementation Action Plan*, created as a direct result of Deputy Directive 63-R1, sets forth priority actions necessary to ensure Complete Streets implementation and establishes responsible units to complete certain actions within a specified time frame.

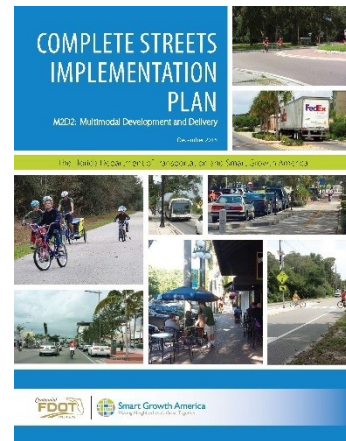
5.4.2 Florida

Policy

FDOT's Complete Streets Policy provides clear language that the department is to incorporate Complete Streets into project planning, design and construction. The department's Complete Streets program parallels a shift with FDOT to evaluate land use and development patterns in determining facility type. Complete Streets are to be evaluated and incorporated into all projects, whereas NCDOT's policy specifies projects in urban and suburban areas. The policy does not specify any exceptions than could be made to the policy. There is also a directive within the policy to integrate Complete Streets into existing and future FDOT manuals, guidelines and documents. **Supporting Documents**

Complete Streets Implementation Plan

FDOT developed a *Complete Streets Implementation Plan* in partnership with Smart Growth America that outlines a five-year timeline for implementation with five focus areas: 1-Revising guidance, standards, manuals, policies and other documents; 2- Updating Decision Making; 3- Modifying Approaches for Measuring Performance; 4- Managing Internal and External Communication and Collaboration during Implementation; 5- Providing Ongoing Education and Training. The plan identifies FDOT manuals, guidelines, and documents to be updated to incorporate Complete Streets considerations and specifies how the documents are to be updated and lists specific timelines. The plan also provides actions items to adapt the Florida Transportation Plan (the state's long-range transportation plan) and the Strategic Intermodal



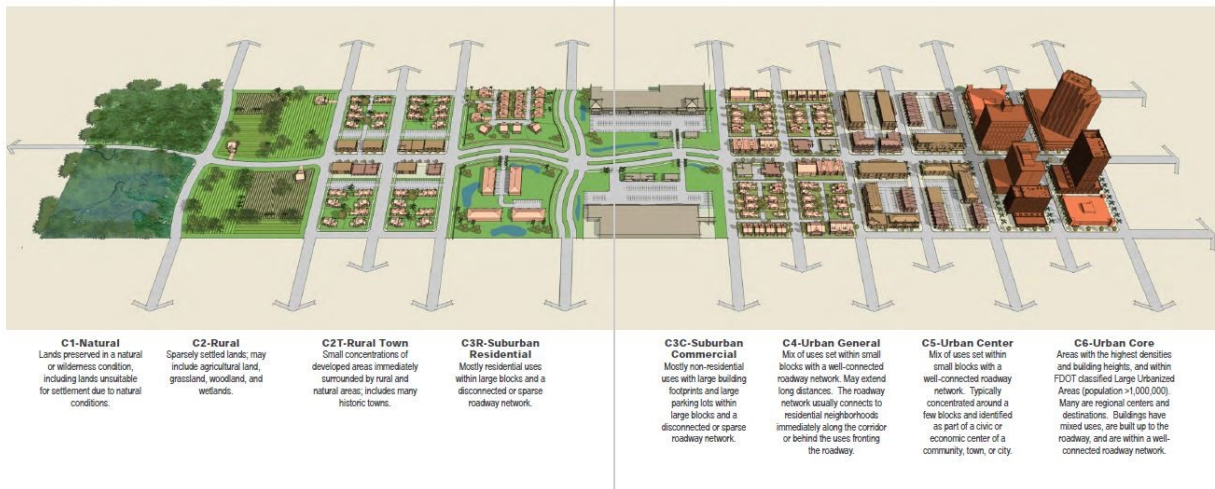
System Policy Plan (similar to NCDOT's SPOT program) to be compatible with the Complete Streets Policy. The Implementation Plan also provides recommendations and action items to initiate a cultural shift within FDOT to more include a greater FDOT focus.

FDOT Context Classification

As FDOT shifts to reviewing land use and development patterns for facility selection, the Context Classification document assists project developers in identifying and selecting appropriate context classifications for projects. Eight context classifications, and one Special District classification, are listed. The document provides Primary and Secondary measures relating to land use, building dimensions, block dimensions, and population and employment density to distinguish between the context

classifications. Guidance is provided on transportation and environmental characteristics to provide clarity on facility selection. Case studies are also provided for each context classification in the appendix.

FIGURE 2 FDOT CONTEXT CLASSIFICATIONS



A transect view of the eight context classifications listed in the document

Draft FDOT Design Manual

FDOT began utilizing a new design manual beginning January 1, 2018. The design manual has been updated to become compatible with FDOT's Complete Streets policy to include information on context classification, updated cross sections, and updated design standards for bicycle and pedestrian facilities.

5.4.3 New Jersey

New Jersey Department of Transportation (NJDOT) passed Policy No. 703 in 2009.

Policy

NJDOT offers several examples of how incentives can help reinforce Complete Streets. NJDOT's policy states that there should be an incentive within the Local Aid Program for municipalities and counties to implement the Complete Streets policy. All NJDOT projects that undergo the Capital Project Delivery process are required to include a Complete Streets checklist, which documents how bicycle/pedestrian elements are included in the project. An explanation must be provided for projects that do not include bicycle/pedestrian elements. An extra point (out of 25 possible points) is awarded to projects that do include Complete Streets elements.

Since NJDOT enacted its Complete Streets policy, other supporting policies have been put in place. NJDOT policy #705 provides that there should be provisions for bicyclists and pedestrians in the event of roadway closures for construction. As states begin to acknowledge the importance of Complete Streets it is necessary to update protocol that affects all roadway users, not just drivers.

There are ethical reasons to design Complete Streets as well. While certain people elect not to drive out of personal preference, others do not drive due to a lack of options. This can be due to mobility constraints, financial reasons, among others. Complete Streets policies should include the need for

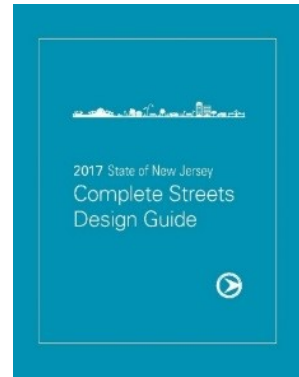
consideration of these populations. NJDOT's Complete Streets policy acknowledges this and stipulates that improvements must comply with Title VI/Environmental Justice, and Americans with Disabilities Act (ADA).

NJDOT has a detailed process for how such exemptions are to be handled. Anything that does not fall within the exemptions must be documented and approved by the Capital Program Committee and receive written approval by the Commissioner of Transportation.

Localities are required to meet a 20 percent match to federal funds. Under Transportation Equity Act for the 21st Century (TEA-21) toll credits were created and allowed to be used toward the non-federal matching share. **Supporting Documents**

NJ Complete Streets Design Guide

The *Complete Streets Design Guide* provides technical guidance for Complete Streets facility design. A section within the guide provides aid to policy makers, government officials, and local citizens with addressing multimodal elements. The guidance provides logical updates to steps within the project development process. For example, the guide recommends that Complete Streets principles are to be integrated from project inception, to avoid costly rework further down the line and to achieve a cohesive overall design. The guide also addresses limited scope projects (i.e. pavement resurfacing or bridge deck/superstructure replacement) which do not follow the typical project development process, due to a tighter timeline and special constraints. In short, the guide identifies which steps should be completed along different phases of project development to incorporate Complete Streets, and it does so for projects of varying nature.



The guide also details what can be done to ensure Complete Streets projects score favorably in NJDOT's project prioritization process. Given that the prioritization process is largely driven by quantitative data, the guide emphasizes the need to develop metrics for modes other than motor vehicles. There are suggestions for how to develop such metrics.

Guidance for localities includes recommendations for how to: develop an effective Complete Streets Policy, go beyond the policy and change every day processes that guide decision-making, involve stakeholders and community members, and redefine how to measure success for transportation projects.

Making Complete Streets a Reality: A Guide to Policy Development

Making Complete Streets a Reality: A Guide to Policy Development provides a model policy template, and describes the policy process of writing and adopting a Complete Streets policy that responds to local context, issues and needs.

A Guide to Creating a Complete Streets Implementation Plan

Once a Complete Streets policy has been adopted, *A Guide to Creating a Complete Streets Implementation Plan* can be used to help translate policy into action. The document details

implementing strategies, procedures, plans and projects to help decision makers and professionals with implementation.

5.4.4 Tennessee

Tennessee Department of Transportation (TDOT) passed the Bicycle and Pedestrian Policy in 2010 and the Multimodal Access Policy (TCA 4-3-2303) in 2015.



Tennessee Long-Range Transportation Plan

Bicycle and Pedestrian Element

December 2005

Policy

TDOT's Complete Streets policy addresses the need to look beyond existing conditions and to consider improvements for future demand. This is an important consideration to include in project development because it is easier to include Complete Streets elements with other improvements and to avoid retrofits further in project implementation.

The policy states that if all feasible roadway alternatives have been explored and suitable multimodal facilities cannot be included due to environmental constraints or if facilities cannot be included in the right of way, an alternate route that provides continuity and enhances accessibility of multimodal travel should be considered.

TDOT funding requires a 25 percent local match for highway construction projects and 20 percent local match for bridge construction projects. TDOT also offers multimodal access grants, limited to multimodal access projects that are under \$1 million, which matches up to 95 percent in state grant funds and requires a 5 percent local match. **Supporting Documents**

Tennessee Long-Range Transportation Plan, Bicycle and Pedestrian Element

The *Tennessee Long-Range Transportation Plan, Bicycle and Pedestrian Element* was created prior to adoption of the Complete Streets policy. The document serves as a guide for development and maintenance of the bicycle and pedestrian network, as well as specific programs, implementation, maintenance and funding.

5.4.5 Virginia

Virginia Department of Transportation (VDOT) passed the Policy for Integrating Bicycle and Pedestrian Accommodations in 2004.

Policy

The policy states that VDOT encourages "participation of localities in concurrent engineering activities that guide the project development" for bicycle and pedestrian accommodations. Independent construction projects are identified as an opportunity to allow development of bicycle/pedestrian accommodations, outside of highway construction. These projects can be utilized to retrofit facilities along existing roadways, improve existing facilities, and install facilities to provide continuity within the bicycle and pedestrian network.

VDOT's policy identifies additional opportunities where bicycle and pedestrian elements can be included, outside of standard roadway projects. This includes operation and maintenance activities, long distance bicycle routes, and tourism and economic development. Complete Streets element inclusion is not limited to roadway projects, increasing the opportunity to advance multimodal networks.

In the event VDOT decides not to include bicycle/pedestrian accommodations in a project, there is a process for localities to counter. There is a formal appeals process where the locality provides the district administrator with documentation (resolution or plan documents) justifying inclusion of Complete Streets elements. This process must be completed prior to the submission of design approval recommendation to the chief engineer for program development.

Transportation funding in Virginia requires a 20 percent funding match to obtain federal funds for allowable construction projects. Highway construction funds can be allocated towards bicycle and pedestrian accommodations in conjunction with highway construction or as independent transportation projects. Bicycle and pedestrian accommodation projects are to be funded in the same manner as other highway construction projects along interstate, primary, secondary, or urban systems. If the project is located elsewhere, it will be determined through a negotiated agreement with the locality/localities involved. The policy lists additional funding sources, including programs for highway safety, enhancement, air quality, congestion relief and special access. **Supporting Documents**

State Bicycle Policy Plan

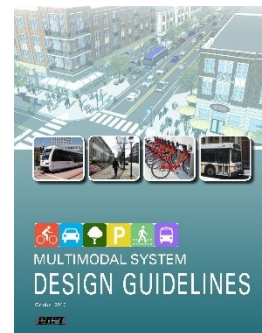
The *State Bicycle Policy Plan* provides bicycle policy recommendations, meant to guide the planning, design, construction, operation and maintenance of bicycle accommodations.

State Pedestrian Policy Plan

The *State Pedestrian Policy Plan* addresses the implementation of both the Bicycle and Pedestrian Policy Plans but focuses on the walking element of the Policy for Integrating Bicycle and Pedestrian Accommodations. The Plan focuses on policy implementation, procedures, and programs within VDOT's authority.

Multimodal System Design Guidelines

The *Multimodal System Design Guidelines* document was developed, by the Virginia Department of Rail and Public Transportation, to assist in the implementation of Complete Streets, with the goal of providing a better multimodal and intermodal transportation system. The Guidelines provide a holistic framework for multimodal planning, for varying contexts, by identifying how to develop connected networks for all travel modes that fit the surrounding context.



5.4.5 Summary of Best Practices Review

The review of Complete Streets initiatives in other states revealed that a clear, concise and actionable policy is an important first step to ensuring implementation. Strong policy elements include: a thorough but succinct exceptions section, with a reasonable procedure for processing exemptions; consideration

of future land use context; designation of responsible parties for implementation throughout project development; a plan to update guidelines and relevant policies; and clearly explained funding options.

The evaluation task also made it clear that adopting a Complete Streets policy does not guarantee implementation. Given that the Complete Streets approach is a shift from an historical focus on motor vehicles to a broader focus that takes all roadway users into consideration, it is important to update the project development process, including a thoughtful review of prioritization and funding mechanisms. Thus, it is necessary to have supporting documents and updates to institutional mechanisms that integrate the Complete Streets policy in all project development processes.

6. PERFORMANCE METRICS

Performance measures support policy objectives and help evaluate performance over time. Several interviewees commented that the DBPT has not tracked Complete Streets implementation and thus has not been able to assess performance within the State. There are numerous performance measures DBPT can utilize to evaluate the performance of the Complete Streets Policy and *Planning and Design Guidelines*. Performance measures can include metrics that serve varying purposes.

The performance metrics outlined in this section can be utilized for the purposes of evaluating the effectiveness of Complete Street strategies, specifically, in terms of improving safety, congestion, accessibility and economic development. NCDOT could perform “before and after” comparisons for Complete Streets projects, and evaluate the effectiveness of certain applications of Complete Streets elements. While DBPT has previously been the primary unit within NCDOT tracking performance, it could be beneficial to have another NCDOT unit co-manage this task and other tasks associated with Complete Streets implementation. The next phase of this process will look more at process improvements and make recommendations about responsibilities and accountability within NCDOT.

6.1 Metrics

6.1.1 Safety

Complete Streets elements offer safety benefits and they should play a key role in North Carolina’s Vision Zero policy, the state’s initiative to eliminate roadway deaths and injuries. Crash data is one metric that can help identify whether safety has improved due to the introduction of Complete Streets elements. Bicycle and pedestrian crash data should be readily accessible and should be available independent of motor vehicle crash data. Currently, crash data is only reported and documented when a motor vehicle is involved, meaning crashes only involving bicycles and pedestrians are probably underreported. DBPT could partner with the Mobility & Safety Unit and the Vision Zero task force, run out of the Institute for Transportation Research and Education (ITRE), to begin this collection effort. Once data has been collected, it can be analyzed and used to evaluate Complete Streets performance. This data could also be made available online to the public, as is the case with crash data associated with motor vehicles.



6.1.2 Congestion

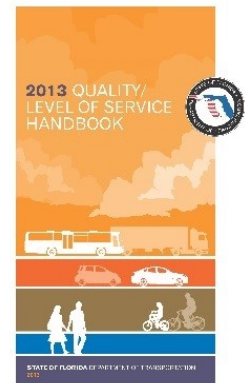
Level of service (LOS) is a metric used to quantify the quality of transportation service. It has traditionally focused on conditions for motor vehicles. However, this narrow focus overlooks the necessity to address other modes. Multimodal LOS (MMLOS) provides a broader overview of the quality of the transportation system. MMLOS generates a separate LOS for four modes of travel – automobile drivers, bus passengers, pedestrians and bicyclists. This allows planners and engineers to gauge how a design will affect each mode and weigh potential trade-offs in performance. This metric is included in the 2010 Highway Capacity Manual and was intended for urban settings, though the Congestion Management Guidelines states MMLOS is only required as requested. DBPT can partner with the Mobility & Safety Unit to identify ways MMLOS can have greater inclusion in traffic analyses and to be used as a metric in facility selection. Part of this effort would also require creating a process to collect more comprehensive data for bicycle, pedestrian and transit use.

Florida's Department of Transportation (FDOT) developed a quality level of service handbook (Q/LOS), which is comparable to MMLOS. However, FDOT's Q/LOS metric addresses all contexts, not just urban settings. Like the MMLOS, it takes multiple modes into account and provides a broader picture about how well the roadway network is performing. The City of Raleigh references FDOT's Q/LOS in its street design manual and utilizes its software.

6.1.3 Inventory

There are several metrics that could be utilized to track improvements in accessibility. An inventory of existing and proposed bicycle and pedestrian facilities is already kept by DBPT through its Pedestrian and Bicycle Infrastructure Network (PBIN) geodatabase. As DBPT's website states, however, this is not a comprehensive list of all existing and proposed facilities in North Carolina. DBPT should build on this existing effort and update this geodatabase so it will be a more useful and effective tool.

Examples of data that should be collected include: planned facilities from NCDOT and local plans, funded projects, projects under development/construction, miles of existing Complete Streets facilities, transit stops with ADA accommodations, and existing and planned transit routes. Cataloging transit facilities is especially key to ensuring Complete Streets infrastructure encompasses all modes of travel.



6.1.4 Economic Development and Equity

Complete Streets generally have a positive impact on economic vitality and quality of life. Making streets more accommodating to walking, biking, or riding transit can help stimulate local economic activity. At the other end of the spectrum, a lack of bicycle, pedestrian and transit accommodations disproportionately impacts low-income populations who often are in zero car households and need access to alternative modes of travel.

Complete Streets projects should be tracked based on their proximity to commercial and employment centers and to low-income Census Block Groups. This can provide insight to ensure Complete Streets projects serve the trip purposes beyond recreation and communities at all income levels. The Community Studies Group (now part of the Environmental Analysis Unit) has procedures for identifying low-income communities.

6.2 Reporting

Performance measures can be used to ensure accountability in the implementation of Complete Streets statewide and the effectiveness of NCDOT's execution of the initiative. Progress reports could be produced that summarize the percentage of total projects submitted to SPOT that include Complete Streets facilities, the percentage of projects included in the STIP with Complete Street facilities, and the percentage of total projects that are constructed that include Complete Streets facilities. For the purposes of the progress report, Complete Streets facilities would be defined as any bicycle, pedestrian or transit accommodation. The progress reports could be prepared with input from the Transportation Planning Division, MPOs, RPOs, Roadway Design Unit, and Highway Divisions. This would provide insight into how many proposed Complete Streets facilities are constructed and would help quantify the number of such facilities. The NCDOT unit responsible for Complete Streets, to be identified in later phases of this study, would be responsible for producing and submitting the progress reports to the Chief Deputy Secretary and/or the Board of Transportation. The progress reports could also be published online to communicate the performance of Complete Streets to NCDOT's partners and the public.

7. IMPLEMENTATION AND TRACKING

As discussed previously, there are multiple stages in the project lifecycle where decisions about Complete Streets are made. These include Comprehensive Transportation Plans, Prioritization, design and implementation. As discovered in the interview stage, ensuring Complete Streets is incorporated in these stages is essential for statewide Complete Streets implementation. Tracking these decisions as they progress can ensure that a record is kept to inform NCDOT staff and external stakeholders as projects progress through NCDOT business units. This approach can also provide a record of the "break points" where Complete Streets elements are no longer being considered in project development, determine why and develop mechanisms to ensure their inclusion throughout the process when local context indicates these elements are appropriate.

The Governance Office within NCDOT has created a tracking document, External Stakeholder Coordination Plan, that is intended to track external coordination and design decisions. These decisions include amenity type, costs and cost-share agreements. DBPT can build on this effort and work with the Governance group to create a tracking mechanism for Complete Streets that tracks projects as they emerge in planning through project development and design. DBPT is currently developing a more formal tracking process for its projects using the Smartsheets tool to assist in project management and project delivery for bicycle and pedestrian projects. The tool allows for detailed project tracking and a comprehensive record of decisions that can actively alert project members to action items and project updates. However, this tool is not currently used across all NCDOT modal divisions. If DBPT finds this tool

to be useful, DBPT could consider partnering with the Roadway Design Unit or a Highway Division for a trial of this tracking approach on Complete Streets projects to determine if it allows for greater clarity in communication and design consistency, both identified as issues during stakeholder interviews. Alternatively, DBPT may consider working with the Governance group to incorporate Complete Streets into this effort if the External Stakeholder Coordination Plan is implemented across all NCDOT projects. Phase 2 of this process will examine these questions in detail and will make recommendations about how DBPT should proceed and what its role should be in the Complete Streets process.

[illegible]

External Stakeholder Coordination Plan spreadsheet

While this tracking will provide project specific information, it can also provide metrics about Complete Streets projects during the project life cycle, from concept to Prioritization and, ultimately, construction. For example, the following could be tracked: percentage of projects submitted for scoring in Prioritization that incorporate Complete Streets, percentage of projects in the STIP that incorporate Complete Streets and percentage of Complete Streets projects constructed. This mechanism would also show where these projects are being built. If such an approach is adopted, NCDOT should evaluate projects currently in each of these stages to establish benchmarks for comparison of future data. This approach also would create the opportunity to track Complete Streets funding.

In Illinois, Champaign County Regional Planning Commission (CCRPC), the MPO for the Champaign-Urbana urbanized area, established a process to track the progress of Long Range Transportation Plan (LRTP) goals. The Champaign-Urbana Area Transportation Study (CUUATS) tracks progress through annual reports in which Measures of Effectiveness (MOE) are scored. The MOEs are contextualized by establishing future goals for different performance categories and by comparing data to previous years. NCDOT could develop and implement a similar process. MOEs can be established for any NCDOT policy, such as Vision Zero or Complete Streets. Examples of some of the MOEs used within the Complete Streets context include miles of existing non-ADA compliant sidewalks, miles of trail infrastructure, and miles of bicycle infrastructure.

To ensure compliance with the Complete Streets policy on a statewide level, NCDOT should develop a progress reporting procedure to show the status of Complete Streets projects. Phase 2 of this process will explore this recommendation in greater detail, including the information that should be included, who should prepare them, and to whom they should be submitted.

8. PUBLIC INVOLVEMENT STRATEGY

Educating and communicating with internal and external stakeholders is vital to ensuring consistent, equitable implementation of Complete Streets. Following the publication of the *Complete Streets Planning and Design Guidelines* in 2012, a series of trainings was held to educate stakeholders, both within and outside of NCDOT. Many of the stakeholders interviewed during this evaluation mentioned they had attended one of those trainings and found them to be informative and useful. They indicated they would be interested in participating in annual Complete Streets trainings and workshops to help them and their agencies stay informed of current policy and guidelines.

In 2017, NCDOT created a 25-person Bicycle and Pedestrian Stakeholder committee to review and advise the Department on bicycle and pedestrian policies. The committee includes representatives from DBPT, other divisions within NCDOT, MPOs, RPOs, municipal planning departments, and various advocacy organizations.

DBPT plans to conduct a new round of training exercises to educate non-traditional stakeholders (i.e. public health advocates and economic development organizations) about the revised Complete Streets policy and guidelines. This training will explain to stakeholders the process for getting Complete Streets projects included in local plans, the STIP and, ultimately, funded and constructed. The trainings will occur at multiple locations throughout the State after process improvements have been approved.

9. NEXT STEPS

The second phase of this study will involve recommending specific revisions to the Complete Streets policy and planning and design guidelines. In addition, process improvements will be recommended to better integrate Complete Streets into NCDOT's project delivery process. Finally, an outreach strategy will be developed to communicate and educate internal and external stakeholders about these changes and to explain roles and responsibilities for Complete Streets implementation.

10. CONCLUSION

This evaluation indicated few problems with the Complete Streets Policy. There are opportunities to strengthen and clarify the language (e.g., exceptions process) but, in general, stakeholders indicated no major concerns with the policy itself. The 2012 planning and design guidelines were an important first step in successfully integrating a comprehensive multimodal approach into NCDOT's project development process. A review of other states' planning and design guidelines reveals the Department's



guidelines are not substantially different from other states that have success with Complete Streets. The primary concern is with the process. This evaluation indicates the following opportunities for improving the planning and design guidelines: (1) clearly establishing roles and responsibilities for better accountability (2) improving the process by which Complete Streets elements are integrated into project development, including Prioritization, funding and tracking (3) regularly updating the design guidelines and

(4) better communication with internal and external stakeholders. In addition, it is important for NCDOT to update institutional mechanisms and procedures to help facilitate a paradigm shift from automobile transportation planning to a multimodal focus. Phase 2 will provide detailed recommendations that address each of these opportunities and lay out a process for achieving desired goals. The overall goal is to develop a clear, comprehensive and standardized approach for implementing Complete Streets that allows NCDOT to provide a safe and equitable multimodal transportation network.



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

MEMORANDUM

TO: NCDOT Employees

FROM: James H. Trogon, III, PE
Secretary

DATE: August 30, 2019

SUBJECT: Complete Streets Policy Guidance

A handwritten signature in black ink, appearing to be "JH Trogon", written over the "FROM" field of the memorandum.

Attached is the Department's updated Complete Streets Policy, adopted by the Board of Transportation at the August meeting. This policy update is a result of nearly two years of careful analysis, engagement with our partners and collaboration across units to understand and address the challenges of delivering Complete Streets. Updating the Complete Streets Policy has been one of my priorities since returning to the Department, and I am committed to ensuring the Policy is implemented consistently across the state.

As we plan, design and construct the transportation network of the future, this policy update represents the Department's ongoing commitment to safe, multi-modal transportation. The attached Complete Streets Policy and Implementation Guide details my expectations for how Complete Streets will be planned, prioritized, designed, constructed and maintained across the state. My priority is to ensure that as a Department, we construct facilities that our communities want, need and will use.

Effective immediately, Highway Division projects that have not yet completed an Environmental Document will be expected to comply with the updated Policy. As we implement Complete Streets, we will refine our guidance and the Complete Streets Technical Team formed to aid in the development of the Policy update will continue to meet to oversee implementation.

cc: David Howard, Chief Deputy Secretary
Julie White, Deputy Secretary for Multi-Modal
Hanna Cockburn, AICP, Director of Integrated Mobility
Chris Werner, PE, Director of Technical Services, Division of Highways
Tim M. Little, PE, Chief Engineer
Division Engineers



COMPLETE STREETS

Business Category: Multi-Modal		Business Area: Bicycle & Pedestrian Division
Approval Date: 8/8/2019	Last Revision Date: N/A	Next Review Date: 8/8/20
Authority: Select all that apply: <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Requires Board approval <input type="checkbox"/> Requires Federal Highways Administration (FHWA) approval <input type="checkbox"/> Requires other external agency approval: Click here to enter external agency name(s).		Policy Owner: Bicycle & Pedestrian Division, Division of Highways
Definitions: <p>Complete Streets is North Carolina's approach to interdependent, multi-modal transportation networks that safely accommodate access and travel for all users.</p>		
Policy: <p>Transportation, quality of life, and economic development are all undeniably connected through well-planned, well-designed, and context-sensitive transportation solutions. To NCDOT, the designations "well-planned", "well-designed" and "context-sensitive" imply that transportation is an integral part of a comprehensive network that safely supports the needs of communities and the traveling public.</p> <p>The North Carolina Department of Transportation, in its role as steward over the transportation infrastructure, is committed to:</p> <ul style="list-style-type: none"> Enhancing safety for all transportation modes, in support of Vision Zero, a statewide program which aims to eliminate roadway deaths and injuries using data-driven prevention strategies; Providing an efficient multi-modal transportation network in North Carolina such that the access, mobility, and safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities are safely accommodated; Caring for the built and natural environments by promoting sustainable development practices that minimize impacts on natural resources, historic resources, businesses, residents, scenic and other community values, while also recognizing that transportation improvements have significant potential to contribute to local, regional, and statewide quality of life and economic development objectives; Working in partnership with local government agencies, interest groups, and the public to plan, fund, design, construct, and manage complete street networks that sustain mobility through walking, biking, transit and driving. <p>This policy requires NCDOT planners and designers consider and incorporate multimodal facilities in the design and improvement of all appropriate transportation projects in North Carolina. Routine maintenance projects may be excluded from this requirement if an appropriate source of funding is not available. Consideration of multimodal elements will begin at the inception of the transportation planning process and the decisions made will be documented.</p>		

The Department recognizes the types of roadway users and the way they interact with the transportation network is evolving as transportation technologies such as ride share, connected and autonomous vehicles, and electric vehicles become more prevalent. The Department will consider these evolving technologies and users in its planning and design guidelines.

This policy sets forth the protocol for the development of transportation networks that encourage non-vehicular travel without compromising the safety, efficiency, or function of the facility. The purpose of this policy is to guide existing decision making and design processes to ensure that all users are included during the planning, design, construction, funding, operation and maintenance of North Carolina's transportation network, and will not create barriers or hazards to the movements of those users.

Scope:

This policy generally applies to all projects undertaken by NCDOT throughout the state.

There are many factors that must be considered when implementing the policy, e.g., number of lanes, design speeds, intersection spacing, medians, curb parking, etc. The applicability of this policy should not be construed as conclusive. Each facility must be evaluated for proper applicability. Notwithstanding the exceptions stated herein, all transportation facilities funded by or through NCDOT, and planned, designed, or constructed on state-maintained facilities, must adhere to this policy.

Approach:

The Department is committed to collaborate with cities, towns, and communities to ensure pedestrian, bicycle, transit and evolving transportation technology options are included as an integral part of their total transportation vision. As a partner in the development and realization of their visions, the Department desires to assist localities, through the facilitation of long-range planning, to optimize connectivity, network interdependence, context sensitive options, and multimodal alternatives. During the Comprehensive Transportation Planning process, bicycle, pedestrian, transit, and other multimodal usage shall be presumed to exist along and across certain corridors (e.g. between residential developments, schools, businesses and recreational areas).

It is the policy of the Department of Transportation to fully replace existing Complete Streets facilities disturbed as a result of a highway improvement project.

Planning and Design Guidelines:

The Complete Streets Planning and Design Guidelines were developed in 2012 to provide planners, designers and decision-makers with a framework for evaluating and incorporating various design elements into the planning, design, construction, and maintenance of the Department's transportation projects. The guidelines describe the planning and project development procedures, including required documentation, to support the Complete Streets policy. In addition, the guidelines describe how all roadway users will share the right of way safely and provide special design elements and traffic management strategies to address unique circumstances.

Planning, implementation and design guidelines will be updated periodically to address changes in Departmental policies and procedures and to reflect new transportation technologies and innovations.

The NCDOT Roadway Design Manual is intended to serve as the authoritative reference for Complete Streets design in accordance with adopted guidelines of the American Association of State Highway and Transportation Officials and other adopted or approved State and Federal guidelines and standards.

Exceptions to Policy:

It is the Department's expectation that suitable multimodal facilities will be incorporated in all appropriate new and improved infrastructure projects. Exceptions to this policy will be considered where exceptional circumstances that prohibit adherence to this policy exist. Such exceptions include, but are not limited to:

- Facilities that prohibit specific users by law;
- Areas in which the population and employment densities or level of transit service around the facility does not justify the incorporation of a multimodal facilities;
- Emergency repairs that require immediate attention.

As exceptions to policy requests are unique in nature, each will be considered on a case-by- case basis. Each exception must be approved by the Complete Streets Review Team consisting of the following or their designees:

- Complete Streets Program Administrator,
- State Traffic Engineer,
- State Roadway Engineer,
- Integrated Mobility Division Director, and
- Division Planning Engineer/Corridor Development Engineer.

Routine maintenance projects may be excluded from this requirement if an appropriate source of funding is not available.

Policy Distribution:

It is the responsibility of all employees to comply with Departmental policies. Therefore, every business unit and appropriate private service provider will be required to maintain a complete set of these policies. The Department shall periodically update departmental guidance to ensure that accurate and up-to-date information is maintained and housed in a policy management system.

Related Documents:

This policy builds on current practices and encourages creativity for considering and providing multi-modal options within transportation projects, while achieving safety and efficiency. Specific procedural guidance includes:

- Highway Landscape Planting Policy (dated 6/10/1988)
- Pedestrian Policy Guidelines – Sidewalk Location (Memo from Larry Goode, 2/15/1995)
- Board of Transportation Resolution: Bicycling & Walking in North Carolina, A Critical Part of the Transportation System (adopted 9/8/2000)
- Bridge Policy (2000)
- Pedestrian Policy Guidelines (effective 10/1/2000, Memo from Len Hill, 9/28/2000)
- NCDOT Context Sensitive Solutions Goals and Working Guidelines (updated 9/8/2003)
- Aesthetics Guidance Manual (2015)

Revision History		
Revision Date	Revision Number	Description
8/8/19	0	Approved

RESOLUTION

North Carolina Department of Transportation

RESOLUTION FOR THE BOARD OF TRANSPORTATION IN SUPPORT OF IMPLEMENTATION FOR THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION COMPLETE STREETS POLICY THAT WILL ENHANCE SAFETY AND PROVIDE AN EFFICIENT NETWORK OF ALL TRANSPORTATION MODES

WHEREAS, The North Carolina Department of Transportation is a state agency created in Article 8 of Chapter 143B of the North Carolina General Statutes; and

WHEREAS, the general purpose of the Department of Transportation is to provide for the necessary planning, construction, maintenance and operation of an integrated statewide transportation system for the economical and safe transportation of people and goods provided by the law; and

WHEREAS, the Department of Transportation Complete Streets Policy evaluation focuses on process improvements that ensures consideration and implementation of an integrated statewide transportation system; and

WHEREAS, the Department of Transportation's 2009 Complete Street Policy has been updated to reflect this intent and purpose; and

WHEREAS, the Department of Transportation's Complete Street Policy focuses on actions to strengthen institutional support;

NOW, THEREFORE, BE IT RESOLVED:

That the North Carolina Board of Transportation hereby adopts the 2019 amendments to the Complete Streets Policy.


Chairman

August 8, 2019

Date


Secretary of Transportation

August 8, 2019

Date



North Carolina Department of Transportation Complete Streets Implementation Guide

The North Carolina Department of Transportation (NCDOT) Complete Streets Implementation Guide (Guide) is designed to assist NCDOT staff engineers, project managers and designers in implementing the Complete Streets Policy as adopted by the NCDOT Board of Transportation. This document provides comprehensive guidance for incorporating a complete streets approach into NCDOT's planning, programming, design, and maintenance processes.

The prime elements of this Guide are the following:

- 1 Planning**
- 2 Project Development**
- 3 Resurfacing and Maintenance Activities**
- 4 Work Zone Accommodations**
- 5 Related Policies**
- 6 Cost Share**
- 7 Design Guidance**
- 8 Administration**

This Guide will be updated periodically as processes and procedures are refined, with a comprehensive review and update every five years, beginning in August 2024.

1 Planning

This section outlines the approach for ensuring Complete Streets elements are evaluated as a roadway project is planned, prioritized and programmed. Each roadway project will include the preparation of a Complete Streets Project Sheet as detailed below. The Project Sheet will identify planned multi-modal facilities and document any exceptions considered in the course of project development.

1.1 Complete Streets Project Sheet (Prioritization 6.0)

For projects where a project sheet has yet to be developed as part of the CTP process, a Complete Streets Project Sheet will be used to document the types of pedestrian, bicycle, public transit, and other multimodal facilities to be evaluated in each highway project. This sheet will be submitted during the Strategic Prioritization submittal process in conjunction with the needs statement required for

Prioritization. The Complete Streets Project Sheet will carry forward as a key document in the Project Advancing Transportation through Linkages, Automation, and Screening (ATLAS) workbench, allowing any personnel to access the project later in development.

1.2 Complete Streets Project Sheet (within the CTP)

Comprehensive Transportation Plans (CTP) developed through NCDOT's Transportation Planning Division identify projects to address network deficiencies for motorists, pedestrians, bicyclists, and transit users. Complete Streets Project Sheets are being introduced into the CTP process. The Project Sheet outlines the recommended improvement, propose a typical cross-section for highway projects, explains the identified need for the project, provide current and projected traffic volume and capacity, identify high-level environmental constraints and provides Complete Street recommendations. These sheets lay the foundation for Complete Streets facilities and serve as a starting point for projects selected for Strategic Prioritization submittal and carry forward as a key document in the project development phase.

1.3 Exceptions to Policy

The Complete Streets Project Sheet will capture requests and approvals of any exceptions to the Complete Streets Policy. Documentation of exceptions will reference the reason for such action, including, unique site constraints, prohibition of pedestrians or bicyclists on the facility or a lack of existing or planned public transit service. Exceptions may be requested and considered any time throughout the process through the Complete Streets Program Administrator in the Integrated Mobility Division. Exceptions are automatically granted if requested by the local government.

A multi-disciplinary Complete Streets Review Team will review all requests for exceptions to the Complete Streets Policy. The Review Team will consider the justification for the proposed exception as detailed on the Complete Streets Project Sheet and decide whether to recommend approval of the exception.

If the exception is not approved, the Review Team will initiate additional discussion with relevant parties, including the Project Manager, to explore options and alternatives for including appropriate multi-modal elements in the project. If necessary, the decision will be elevated to the Chief Deputy Secretary and/or Secretary for a final decision.

The Complete Streets Review Team will consist of:

- Complete Streets Program Administrator,
- State Traffic Engineer or designee,
- State Roadway Engineer or designee,
- Integrated Mobility Division Director or designee, and
- Division Planning Engineer/Corridor Development Engineer or designee.

2 Project Development

The project development phase carries a project from concept to the specific street design to be constructed.

The Complete Streets Project Sheet will carry forward with a project through the project development phase. Project managers will use the Complete Streets Project Sheet early in project development to assist with determining facilities to be included in preliminary project design alternatives.

The Complete Streets Project Sheet will be a 'key document' in the Project Advancing Transportation through Linkages, Automation, and Screening (ATLAS) workbench, allowing all personnel working on the project throughout the development process to refer to the information. Project ATLAS features a workbench tool to organize technical reports and data needed during project delivery. As part of the Workbench structure, the Project Manager will be responsible for documenting how complete street elements are reflected in the project design.

2.1 Project Scoping

The Project Engineer shall coordinate with NCDOT's Integrated Mobility Division (IMD) on all programmed highway projects. The Integrated Mobility Division will participate in scoping meetings and provide a written summary memo identifying facility recommendations and design guidance as appropriate.

2.2 Bridge Projects

The Complete Streets Project Sheet will be integrated into the Structures Management Planning Process for bridge replacements and refurbishments. Until that step is complete, project managers will communicate with the Integrated Mobility Division through scoping requests to incorporate complete streets elements in bridge designs. This will occur for each bridge replacement project undertaken by NCDOT.

Due to the long useful life of bridges, on bridges with shoulder approach sections, where:

- a pedestrian need is identified through an adopted plan, sufficient deck space will be made available on the replacement bridge for future construction of sidewalks.
- a bicycle need is identified through an adopted plan, sufficient width for bike facilities will be provided.
- a multi-use path or sidepath need is identified through an adopted plan, sufficient width for the appropriate facility will be provided on and/or below the structure.

2.3 Equal or Better Performance of Facility

Conditions often change between the time a project is added to the STIP and the when the project development process begins that may support the incorporation of a different type of bicycle or pedestrian improvement than shown in an adopted plan. NCDOT will review an alternative facility to the bicycle and/or pedestrian facility type proposed in the adopted plan upon the written request of the local representatives. An alternative facility will be evaluated by the Complete Streets Review Team based on:

- purpose and need of the proposed facilities
- current or anticipated land use context of the project area
- traffic count data
- design speed
- crash history
- topographic and geometric features of the roadway
- safety

Project Managers will consult with the Complete Streets Program Administrator to request evaluation of an alternative facility. The decision of the Complete Streets Review Team will be documented in the Complete Streets Project Sheet.

3 Resurfacing and Maintenance Activities

3.1 Scheduled Resurfacing

Each year, a county-level resurfacing schedule is developed within each NCDOT Division. NCDOT Division staff will meet with local agencies to review the scheduled roadways and identify locations to evaluate Complete Streets improvements. These may include striping, markings and associated signage.

The following process shall be followed to review resurfacing projects for complete street improvements:

- The Operations Program Management Unit will coordinate with the Integrated Mobility Division to identify planned facilities within the project limits suitable for implementation in conjunction with maintenance activities.
- Identified locations for Complete Streets improvements will be noted on the resurfacing list distributed to each unit of local government.
- The local government concurrence with recommended Complete Streets improvements will be provided to the local NCDOT Division in writing.
- Completed improvements will be incorporated into the Pedestrian and Bicycle Infrastructure Network (PBIN) and ATLAS upon completion.

3.2 Addition of Rumble Strips

Rumble strips (raised traffic bars), asphalt concrete dikes, reflectors, and other such surface alterations, where installed on roadways without full access control, will be placed in a manner as not to present hazards to bicyclists or interfere with existing on-road bicycle facilities. Rumble strips shall not be extended across the shoulder of the roadway or other areas intended for bicycle travel.

4 Work Zone Accommodations

The continuity of existing bicycle and pedestrian facilities will be maintained during construction and maintenance activities. During the construction phase of a roadway project, NCDOT's [Guidelines for the Level of Pedestrian Accommodation in Work Zones](#) will be followed.

5 Policy References

5.1 Eliminated Policies

The following policy documents are superseded by the Complete Streets Policy (2019):

- *Complete Streets Policy* (2009) and *Complete Streets Planning and Design Guidelines* (2012)
- *Bicycle Policy* (2009, update)
- *Pedestrian Policy Guidelines* (2001)
- *Administrative Action to Include Local Adopted Greenway Plans in the NCDOT Highway Planning Process* (1994)

5.2 Related Policies

The following policy documents include elements related to Complete Streets implementation:

- *Traditional Neighborhood Development Manual* (2000)
- *Bridge Policy* (2000)
- *Policy on Street and Driveway Access to North Carolina Highways* (2003)
- *Exceptions to Maintenance Responsibilities on State Highway System Streets in Municipalities* (2003)
- *Subdivision Roads: Minimum Construction Standards* (2010, updated May 2016)
- *Guidelines for Inclusion of Greenway Accommodation Underneath a Bridge as Part of a NCDOT Project* (2015)

6 Cost Share

6.1 Complete Street Cost Share

The table below illustrates the funding responsibilities for Complete Streets incorporating bicycle and pedestrian and roadway public transportation facilities.

Complete Street Cost Share			
Facility Type	In Plan	Not in Plan, but Need Identified	Betterment
Pedestrian Facility	NCDOT pays full	Cost Share	Local
Bicycle Facility	NCDOT pays full	NCDOT pays full	Local
Side Path	NCDOT pays full	Cost Share	Local
Greenway Crossing	NCDOT pays full	Cost Share	Local
Bus Pull Out	NCDOT pays full	Cost Share	Local
Bus Stop (pad only)	NCDOT pays full	Cost Share	Local

Bicycle and pedestrian and public transportation facilities that appear in a state, regional or locally adopted transportation plan will be included as part of the proposed roadway project. NCDOT will fully fund the cost of designing, acquiring right of way, and constructing the identified facilities.

Bridges will not be included in the total project construction cost for cost-sharing purposes. NCDOT is responsible for the full cost of bridges.

Where an alternative facility requiring equal or lesser right-of-way is deemed to perform on an equal or better basis with concurrence by the Integrated Mobility Division, NCDOT shall construct the alternative facilities no cost share by the local jurisdiction.

6.2 Maintenance

Bicycle and pedestrian improvements within a municipal boundary are subject to local maintenance. A local maintenance agreement will be executed prior to the completion of a construction project.

In instances where a local maintenance agreement is not executed to maintain a bicycle or pedestrian facility, NCDOT will maintain the facility after construction if the bicycle or pedestrian facility lies within NCDOT right-of-way.

6.3 Betterment

A roadway project betterment is defined as:

- A requested bicycle, pedestrian or public transportation improvement that exceeds the recommendations appearing in a state or locally adopted plan requiring additional roadway width and/or right-of-way
- Aesthetic materials and treatments, if this cost is determined to exceed the cost of standard construction materials
- Landscaping in excess of standard treatments
- Lighting in excess of standard treatments

The additional costs associated with inclusion of these elements in a roadway project are the responsibility of the local jurisdiction, executed through a local agreement.

6.4 Betterment Cost Share Formula

Bicycle and pedestrian facilities incidental to a roadway project where a need has been identified through the project scoping process but not identified in a locally adopted plan may be included in the project. Inclusion of these incidental facilities requires the local jurisdiction to share the incremental cost of constructing the identified improvements.

NCDOT will estimate the incremental cost of proposed improvements. The percentage of the total cost share for these improvements will be based on the table below according to the population of the jurisdiction in the most recent [annual certified estimated of population](#) as determined by the state demographer, and executed through a local agreement.

Betterment Cost Share		
Municipal Population	Cost Participation	
	NCDOT	Local
> 100,000	80%	20%
50,000 to 100,000	85%	15%
10,000 to 50,000	90%	10%
< 10,000	95%	5%

7 Design Guidance

The NCDOT **Roadway Design Manual** will serve as the authoritative reference for Complete Streets design. Cross-sections from the Manual will be used in stages of project planning, prioritization and development.

American Association of State Highway Transportation Officials (**AASHTO**) guides will serve as authoritative references for street design and will be used in coordination with the NCDOT Roadway Design Manual.

National Association of City Transportation Officials (**NACTO**) guides will serve as supplemental references for street design and will be used in coordination with the NCDOT Roadway Design Manual and AASHTO guides.

8 Administration of the Policy

The Complete Streets Core Technical Team (CTT) will meet quarterly to oversee the implementation of Complete Streets. The primary role of the CTT will be to review and maintain the Implementation Guide, recommend updates and process improvements and establish performance metrics for implementation. The CTT will direct the implementation of recommendations contained within the NCDOT Complete Streets 2.0 Recommendations document.

The CTT is comprised of the following units.

- ADA/Title VI Office
- Integrated Mobility Division
- Chief Deputy Secretary's Office
- Division of Highways
- Environmental Policy Unit
- Mobility & Safety
- Planning & Programming
- Rail Division
- Roadway Design Unit
- Technical Services
- Transportation Planning Division