



Town of Carrboro

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

Meeting Agenda Board of Aldermen



Tuesday, November 12, 2019

7:00 PM

Board Chambers - Room 110

7:00-7:20

A. POETRY READING, RESOLUTIONS, PROCLAMATIONS, AND ACKNOWLEDGEMENTS

1. [19-349](#) Resolution - Dispute Settlement Center Month
Attachments: [Attachment A - Dispute Settlement Center Month Resolution](#)
2. [19-348](#) Charges Issued to Recently Appointed Advisory Board Members and the Youth Advisory Board

7:20-7:25

B. ANNOUNCEMENT OF UPCOMING MEETINGS

7:25-7:35

C. REQUESTS FROM VISITORS AND SPEAKERS FROM THE FLOOR

Comments are limited to three minutes per speaker.

7:35-7:45

D. CONSENT AGENDA

1. [19-353](#) Approval of Minutes from September 17, October 15 and 22, 2019
2. [19-350](#) 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 - Chair Form and Applications](#)
3. [19-357](#) Economic Development Report for the Month of November
PURPOSE: The purpose of this agenda item is to update the Board on economic development activity within the Town.

Attachments: [Attachment 1 - November Economic Development Report 2019](#)

[Attachment 2 - Carrboro Economic Sustainability Plan - Adopted 11282017](#)

4. [19-318](#) Stormwater Utility Monthly Report
PURPOSE: The purpose of this item is to provide the monthly update regarding Stormwater Utility projects and initiatives.
Attachments: [November 2019 Stormwater Report](#)
5. [19-319](#) Request to Set a Public Hearing for Modifications to the Stormwater Rate Structure
PURPOSE: The purpose of this item is to set a public hearing for January 28th, 2020 to consider modifications to the stormwater rate structure.
Attachments: [Resolution](#)
[Request to Set Public Hearing](#)
6. [19-356](#) Contract Amendment for CEI Services for the Homestead Road-Chapel Hill High School Multi-use Path
PURPOSE: The purpose of this agenda item is to request authorization from the Board of Aldermen to amend the contract with Summit Design and Engineering Services for additional CEI services to complete the project.
Attachments: [Attachment A - Resolution Amending Summit CEI Contract](#)
7. [19-351](#) Authorization for Staff to Bring Back a Consent Agenda Item Making Amendments to the Town Code Pertaining to the Youth Advisory Board
PURPOSE: The purpose of this agenda item is to amend the Youth Advisory Board language to make the membership language less confusing and more practical.
Attachments: [Attachment A - Resolution](#)
[Attachment B - Tracked Changes - YAB Amendments](#)
8. [19-347](#) Town Code Amendment Establishing a Speed Limit on Laughing Bird Lane
PURPOSE: The purpose of this agenda item is to provide the Board with an update on the outreach conducted to residents on Laughing Bird Lane, a summary of their feedback, and a proposed town code amendment establishing a speed limit.
Attachments: [Attachment A - Town Code Amendment for Laughing Bird Lane](#)
[Att B - Summary of Responses](#)
[Att C - Responses Recieved](#)
9. [19-361](#) Disposal of Surplus Property and Public Auction November 16, 2019
PURPOSE: To seek authorization for disposal of surplus personal property

owned by the Town.

Attachments: [RESOLUTION FOR DISPOSAL OF TOWN SURPLUS PROPERTY 2019](#)

7:45-8:05

E. PUBLIC HEARING

1. [19-352](#) A Public Hearing Regarding Feedback on Making the Name of the Governing Board Gender Neutral
PURPOSE: The purpose of this item is to hold a public hearing regarding making the name of the governing board of the Town of Carrboro gender neutral.

F. OTHER MATTERS

8:05-8:40

1. [19-344](#) Approval of Design for Stage 2 Traffic Calming on Cobblestone Drive
PURPOSE: The purpose of this agenda item is to present a recommended design of Stage 2 traffic calming for Cobblestone Drive and for the Board of Aldermen to approve a design.
Attachments: [Attachment A - RESOLUTION](#)
[Attachment B - Town Code Amendment FOUR-WAY STOP ON Cobblestone Dr at Rockgarden Rd](#)
[Attachment C - Cobblestone Traffic Calming Locations \(Option 1\)](#)
[Attachment D - Cobblestone Traffic Calming Locations \(Option 2\)](#)
[Attachment E - TAB Comments for Cobblestone Drive TC](#)
[Attachment F - Cobblestone Resident Comments at TAB Meeting](#)
[Attachment G - Comments Recieved since May 2019](#)
[Attachment H - FHWA Speed Management Countermeasures](#)

8:40-9:05

2. [19-355](#) A Discussion of How to Increase Diversity on Advisory Boards by Reviewing the Advisory Board Application
PURPOSE: The purpose of this item is to allow the Board an opportunity to discuss how to increase diversity on advisory boards.
Attachments: [Attachment A - Advisory Board Application](#)

9:05-9:35

3. [19-359](#) Presentation of the 2019 Town of Carrboro Pavement Condition Survey and Sidewalk and Curb Ramp Condition Survey

PURPOSE: The purpose of this item is for the Board receive the Town of Carrboro's 2019 Pavement Condition Survey and Sidewalk and Curb Ramp Condition Survey report.

Attachments: [Attachment A - Town of Carrboro 2019 Pavement Condition Survey](#)
[Attachment B - Town of Carrboro 2019 Sidewalk and Curb Ramp Condition Survey](#)

9:35-10:05

4. [19-333](#) Presentation of Public Work's Facilities Condition Assessment and Consideration of a Town Facilities Rehabilitation Fund

PURPOSE: The purpose of this agenda item is for the Board of Aldermen to receive the Town of Carrboro's October 2019 Facilities Condition Assessment Report; and consider and approve the establishment of a Facilities Rehabilitation Fund to repair and renovate existing Town facilities.

Attachments: [Attachment A - Town of Carrboro Facilities Condition Assessment - October 2019](#)
[Attachment B - Facilities Rehabilitation Fund Resolution](#)

G. MATTERS BY BOARD MEMBERS

- H. CLOSED SESSION PURSUANT TO NCGS 143-318.11(a)(1) & (5) - To prevent the disclosure of information that is privileged or confidential pursuant to the law of this State or of the United States, or not considered a public record within the meaning of Chapter 132 of the General Statutes and To establish, or to instruct the public body's staff or negotiating agents concerning the position to be taken by or on behalf of the public body in negotiating (i) the price and other material terms of a contract or proposed contract for the acquisition of real property by purchase, option, exchange, or lease; or (ii) the amount of compensation and other material terms of an employment contract or proposed employment contract.**



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Agenda Item Abstract

File Number:19-349

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

Resolution - Dispute Settlement Center Month

DISPUTE SETTLEMENT CENTER MONTH

WHEREAS, the Dispute Settlement Center was established as a community mediation center in September, 1978 to provide mediation services for residents of Orange County, North Carolina; and

WHEREAS, its stated mission is “to promote and bring about the peaceful settlement of disputes and to prevent the escalation of conflict through mediation, conciliation, facilitation, and training;” and

WHEREAS, the Dispute Settlement Center was the first community mediation center in North Carolina, and assisted in the formation of others around the state; it now serves over 3000 people through mediation, training, facilitation, and restorative practices for youth services; and

WHEREAS, the Dispute Settlement Center is a statewide leader in the provision of these services, and its influence is now recognized nationally; it has earned accolades such as the North Carolina Crime and Justice Award for Outstanding Criminal Justice Program, the Bridges Award from the Martin Luther King, Jr., Banquet Committee, the NC Bar Association’s Dispute Resolution Section Peace Award, and the Governor’s Award for Outstanding Volunteer Service; and

WHEREAS, its influence has grown to reach an international audience; in 1996, it was the subject of a study by German academic, Christoph Besemer, in his book *Mediation in Practice: Experiences from the USA*; members have travelled to Austria, Bulgaria and Germany to conduct training and offer presentations; youth from Germany, Hungary, the Czech Republic, Poland and Slovenia have received training at the Center; and

WHEREAS, the Dispute Settlement Center is an essential partner for our courts, schools, and government units, and a resource for our residents; and

WHEREAS, the Town of Carrboro joins the Dispute Settlement Center in celebrating its 40th year of operation.

NOW, THEREFORE, BE IT RESOLVED that, we, the Carrboro Board of Aldermen, do hereby proclaim November, 2019 as “DISPUTE SETTLEMENT CENTER MONTH” in the Town of Carrboro, North Carolina. We encourage residents to learn about mediation, conflict management, facilitation, restorative justice and other ways of effectively and peacefully resolving disputes between people.

This, the 12th day of November, 2019.



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Version: 1

Charges Issued to Recently Appointed Advisory Board Members and the Youth Advisory Board



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Approval of Minutes from September 17, October 15 and 22, 2019



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Agenda Date: 11/12/2019

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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 three 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. Applications were received from Margaret Funkhouser and Deborah Filer.

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
Margaret Funkhouser	2/2023
Deborah Filer	2/2023

Section 2. This resolution shall become effective upon adoption.

Catherine Dorando

From: noreply@civicplus.com
Sent: Tuesday, October 15, 2019 3:34 PM
To: Catherine Dorando
Subject: Online Form Submittal: Advisory Board Chair Recommendation Form

Advisory Board Chair Recommendation Form

Advisory Board Name	Recreation & Parks Commission
Your Name	Tamara Sanders
Applicant Name	Margaret Funkhouser
Outstanding Qualifications	Events coordinating, Carrboro festival attendee, networked within the community, dedicated to the progressive movements in our area, engaged communicator
How applicant compliments current board composition:	She is offering a thoughtful, even-minded, and energetic presence to our commission. Other than our Youth Commission rep, Maggie will be another young voice in our group.
Other comments:	<i>Field not completed.</i>
Applicant Name	Deborah Filer
Outstanding Qualifications	She taught kids with special needs from 6 weeks to 22 years old. Mild disabilities to severe disabilities. Experienced in adaptive technology and playgrounds from 6 weeks to adult. Experienced in inclusive activities and adaptive playground equipment.
Other Comments:	How applicant compliments current board composition: As she is a retired special ed teacher, she brings along her experiences working with that population. She'll be able to contribute as a senior, as well as graduate from the Carrboro Citizen Academy.
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: *Field not completed.*

Other Comments: *Field not completed.*

Applicant Name *Field not completed.*

Outstanding
Qualifications: *Field not completed.*

Other Comments: *Field not completed.*

Email not displaying correctly? [View it in your browser.](#)

Print

Advisory Board Application - Submission #4329

Date Submitted: 10/5/2019

First Name*

Margaret

Last Name*

Funkhouser

Date*

10/5/2019

Select today's date

Address1*

105 Cheek Street

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?*

No

Telephone*

9199238010

Please enter your primary contact phone number.

Email Address*

maggiefunkhouser@gmail.com

Enter your primary email address.

Date of Birth*

8/22/1989

Please enter your Month/Day/Year of Birth

Race*

white

Please enter your race.

Sex*

female

Please enter your sex.

Occupation*

Assistant Manager
(Carrboro Farmers'
Market); Events
Coordinator (Lantern
Restaurant, Chapel Hill)

Please enter your
occupation.

**Are you a registered
Orange County Voter?***

Yes 

Please answer Yes or No

**Length of Residence in
Orange County***

current length 4 years
(resident of Chapel Hill
1997-2012; resident of
Carrboro 2015-present)

How long have you been a
resident of Orange
County?

**Length of Residence in
the Town of Carrboro***

current length 4 years
(resident of Chapel Hill
1997-2012; resident of
Carrboro 2015-present)

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 checked="" 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 checked="" type="checkbox"/> Appearance Commission/NPDC | <input checked="" 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 type="checkbox"/> Environmental Advisory Board | <input checked="" type="checkbox"/> Tourism Development Authority* |
| <input checked="" 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*

Tourism Development Authority, 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**

Carrboro Farmers' Market; Lantern Restaurant (Chapel Hill)

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

Number of Years Employed*

both <1

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.**

I have resided in Carrboro for many years and have lived in the vicinity for even longer, having grown up in Chapel Hill (attending elementary, middle, and high school through CHCCS) and then attending UNC Chapel Hill for my undergraduate degree. I like to think I know the Town well, and I get to know her better and better each year.

My work at the Carrboro Farmers' Market allows me to interact weekly with both community members and visitors to Carrboro. As a long-standing institution in the town, we take great care to create a welcoming and engaging space for customers, vendors, staff, and volunteers. I frequently interact with visitors from out of town who come to see the Market, and I strive to make sure it is a positive experience. We at the Market take part in many TOC activities throughout the year and are a huge draw for locals and far-flung visitors alike. I think that my position as the Assistant Manager for the Market would make me a valuable addition to the Tourism Development Authority.

****Required only for the Tourism Development Authority Application.****

Community Activities/Organizational Memberships*

I enjoy being a part of many communities within Carrboro. I am cultivating a deeper interest in food justice and food access issues in our area, and I started volunteering with PORCH this summer. I am a certified beekeeper and I work regularly with members of the Orange County Beekeepers Association in my personal and professional life. My interest in community stories led me to start a free monthly open-mic storytelling night, where I invite community members to tell their real stories. I am also a work-study at Carrboro Yoga Company. Additionally, my domestic partner is a local musician and regularly participates in community music events (such as Carrboro Music Fest), and so I am very familiar with the Carrboro music community, as well.

Please enter the requested information.

Experience to Aid You in Working on Advisory Boards*

I think that I have the personality and drive to make me an excellent member of an Advisory Board: I enjoy being part of a team, I feel dedicated to the progressive movements in our area, and I am highly organized and a skilled communicator.

I have never been a part of an Advisory Board before, though I have some experience being a part of regulatory groups: I was a member of the Elections Committee at Weaver Street Market while employed there, and I currently attend regular Board Meetings for the Carrboro Farmers' Market.

Reasons You Wish to be Appointed*

I would be honored to be appointed to an Advisory Board either as a resident of Carrboro or in my capacity as the Assistant Manager of the Carrboro Farmers' Market. I am seeking appointment because of my deep love for the Town and my desire to do my part towards her betterment. I am most interested in working to promote affordability, accessibility, and equity in Carrboro, whether that applies to food access, housing, public spaces, or policy. I am very interested in being more involved in Carrboro's governing organizations: I want to learn more about how issues are resolved, how decisions are made, and how research is conducted. I think that I would be a great addition to any Advisory Board, and I will do my best to be a thoughtful, even-minded, and energetic presence.

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. *

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 #4215

Date Submitted: 8/19/2019

First Name*

Deborah

Last Name*

Filer

Date*

8/19/2019

Select today's date

Address1*

122 Beechwood Drive

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?*

No

Telephone*

9199325708

Please enter your primary contact phone number.

Email Address*

beresheet04@aol.com

Enter your primary email address.

Date of Birth*

4/20/1953

Please enter your Month/Day/Year of Birth

Race*

Caucasian

Please enter your race.

Sex*

Female

Please enter your sex.

Occupation*

Retired Special Ed Tchrr

Please enter your occupation.

Are you a registered Orange County Voter?*

Yes

Please answer Yes or No

Length of Residence in Orange County*

+30

How long have you been a resident of Orange County?

Length of Residence in the Town of Carrboro*

+30

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☐ Animal Control Board of Appeals☐ Appearance Commission/NPDC☐ Arts Committee☐ Board of Adjustment☐ Economic Sustainability Commission☐ Environmental Advisory Board☐ Human Services Commission☐ Greenways Commission☐ Northern Transition Area Advisory Committee☐ OWASA Board of Directors☐ Planning Board☒ Recreation and Parks Commission☐ Safe Routes to School Implementation Committee☐ Stormwater Advisory Commission☐ Tourism Development Authority*☐ Transportation Advisory Board

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**

Teacher

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

Number of Years Employed*

19

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*

None

Please enter the requested information.

Experience to Aid You in Working on Advisory Boards*

Teaching kids with special needs from 6 weeks to 22 years old. Mild disabilities to severe disabilities. Experienced in adaptive technology and playgrounds from 6 weeks to adult. Experienced in inclusive activities and adaptive playground equipment.

Reasons You Wish to be Appointed*

Graduate of Carrboro's first Citizens Academy.

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. *

Ok

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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Agenda Item Abstract

File Number:19-357

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Economic Development Report for the Month of November

PURPOSE: The purpose of this agenda item is to update the Board on economic development activity within the Town.

DEPARTMENT: Economic and Community Development

CONTACT INFORMATION: Annette D. Stone, AICP ECD Director (919) 918-7319 or astone@townofcarrboro.org

INFORMATION: The ECD Department has been asked to provide a monthly update of economic activity within the town. The November update includes a review of the Economic Sustainability Plan and actions taken since adoption of the plan.

FISCAL & STAFF IMPACT: n/a

RECOMMENDATION: Staff recommends the Board receive the report.

ECONOMIC DEVELOPMENT - PRIVATE SECTOR

South Green (updated)



PROJECT DESCRIPTION: Development with 45,000 square feet of multiple commercial buildings on a 5.6 acre site at 501 South Greensboro Street.

CURRENT STATUS: Building 1 is occupied with Dr. Jeff Bernhdt Orthodontics. Building 3 is complete with Coronato Pizza , Carrboro Yoga, Craftboro Brewing Depot, and Flow Beauty Salon are now open. Building 4 is still under construction. The management company said there is a lease pending, but could not disclose right now.

PROJECT BACKGROUND: This Conditional Use Permit application proposed multiple commercial buildings on a site at 501 South Greensboro Street that formerly was occupied by Rogers-Triem. The site had considerable known flooding issues, which was addressed through collaboration with Town and NCDOT. The Board of Aldermen set a public hearing for the rezoning and CUP request on April 28, 2015. The project went before the Joint Advisory Boards Meeting on April 2 and ESC on April 8. The Board approved the project, with conditions, on June 9, 2015.

ESTIMATED TAX VALUE: \$13,000,000

Lloyd Farm (updated)



PROJECT DESCRIPTION: A mixed use project with multiple commercial buildings on approximately ~40 acres, including Harris Teeter grocery and energy center. A proposed 200 unit senior living residential facility and 10 duplex cottages (20 units). It is located at the corner of Old Fayetteville Road and Highway 54 on property historically known as Lloyd Farm. The developer is proposing a payment in lieu between \$743,000 and an additionally \$250,000 conditioned on the ability to provide on-site affordable housing units. Also, the developer will donate 4.6 acres fronting on James Street to the Town, future use of the property is to be determined.

CURRENT STATUS: The application for rezoning was approved by the Board on October 23, 2018. A concept plan has been submitted to staff and is under review by the town advisory boards at the joint meeting to be held February 7, 2019. Phase 1 of the project received its CUP on October 22, 2019.

PROJECT BACKGROUND: Project was originally considered by the Board and denied in 2016. The applicant modified the plan and resubmitted an application in the spring of 2018. A public hearing was held September 25, 2018 and continued until October 23, 2018. The Board approved the Conditional Rezoning on October 23, 2018.

ESTIMATED TAX VALUE: \$64,000,000

Shelton Station (updated)



PROJECT DESCRIPTION: A mixed use development located at 410 North Greensboro on 2.64 acres of land with 22,716 sq ft of commercial space, and 94 1 and 2 bedroom apartment units including 20 affordable units.

CURRENT STATUS: Construction up-fit for Dingo Dog Brewery is now underway and the owners are in negotiations for the remainder of the retail space. The market rate units are at 40% leased and 50% of the affordable units.

PROJECT BACKGROUND: Conditional use permit plans in accordance with the B-1(g) conditional zoning district approved by the Board of Aldermen was granted (with conditions) on April 2, 2013.



ACTUAL TAX VALUE: Apartments \$4,214,900*

ACTUAL TAX VALUE: Commercial \$3,042,700*

*Values are as of Jan. 2019 and will be updated in Jan. 2020 estimated value at that time is \$14,463,300.

Hilton Garden Inn - East Main Square (no change)



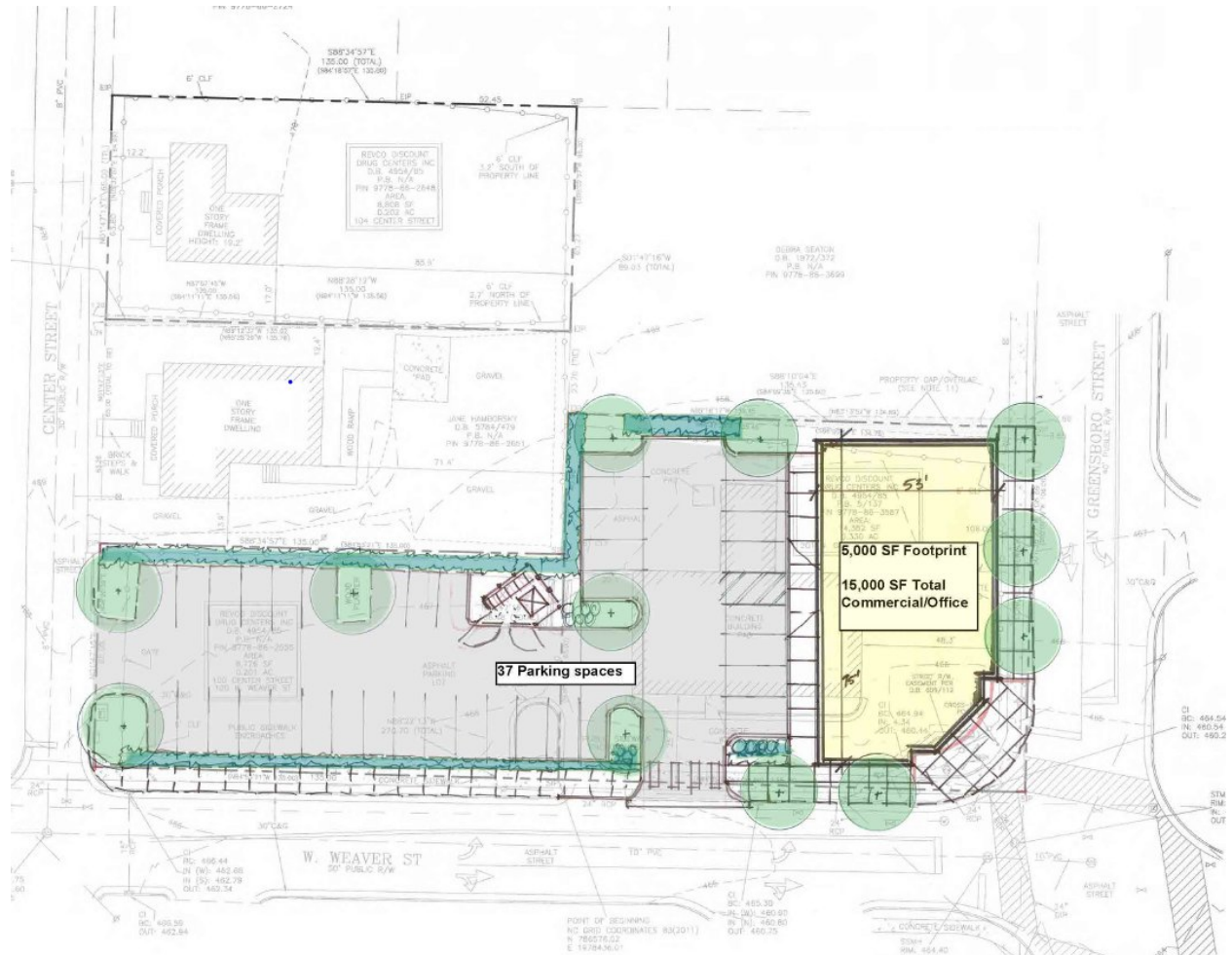
PROJECT DESCRIPTION: A five story, 144 room hotel with conference space to be located immediately behind the existing East Main Square shopping strip.

CURRENT STATUS: The developer has reported that construction is on hold until further notice.

PROJECT BACKGROUND: The project received a CUP in March of 2016 and a two year extension for the permit in January of 2018.

ESTIMATED TAX VALUE: \$12,000,000

201 North Greensboro Lot (no change)



The project is a three (3) story 15,000 square feet retail/office building proposed for the corner of North Greensboro and West Weaver Street. The property was recently sold by Revco Co. to a CKE III LLC. The project is being managed by Beacon Properties out of Chapel Hill. The project includes a property on Center Street where an existing house has been demolished and new residential dwelling unit will be built. The project is moving through concept review with the advisory boards at this time. A CUP application is expected from the developer in the next few months.

Estimated Tax Value: Land sold for \$1,900,000

Other Updates:

- 505 W. Main Street - 1400 Sq. Ft. office space for Wanda Neville's Chiropractic has been sold. The property was purchased by 505 West Main LLC.
- 300 Block East Main - Cham Thai Restaurant is now open and delicious!
- 406 E. Main St - Kalisher Building is on the market for lease. Staff is monitoring the Town's ED agreement for occupancy of the building.
- Claremont South Commercial - a two story mixed use building with the first floor containing 6,797sf of office space and the 2nd floor containing 4,879sf and a total of four residential units. Conditional Use Permit originally approved by the Board of Aldermen in April 2012. Construction on this project has not begun as of yet.
- Space For Sale or Lease -

Address	Description	Sale/Lease Price/Contact Info
201 E Main Street	Train Cars previously occupied by Cross ties	Annual Lease \$30 SF N. R. Milans and Associates nrmilan@aol.com
102 S. Merritt Mill Rd	300 SF Retail/Office Space	For Lease \$48 SF Contact Ben @ 919-649-5309
208, 210, 212 West Main Street	The Point owned by Sherri Ontjes 725 and 90 SF spaces available	Annual Lease - \$19 SF N. R. Milans and Associates nrmilan@aol.com
406 East Main Street	Kalisher/Art is Love 5334 SF Office space	\$22/SF/YR Reggie Oakley (919) 287-3213
610 Jones Ferry Road	11,683 SF office/light manufacturing Willow Creek Professional Center	For Sale - \$20 - \$22 SF Tommy Honey (Avison Young) Tommy.Honey@avisonyoung.com
311 East Main Street	8000 SF retail/flex space Old Fireplace Building next to Wings	For Sale/Lease - Price Not Disclosed Jim Shortbridge jleons@hotmail.com
602 Jones Ferry Road	4,620 SF retail space at Willow Creek Shopping Center	Annual Lease \$16 SF Tommy Honey (Avison Young) Tommy.Honey@avisonyoung.com
209, 211, & 213 Lloyd Street	Office Space	Annual Lease - \$19 SF N. R. Milans and Associates nrmilan@aol.com
104 NC - 54 Hwy	Carrboro Plaza 1200 SF	Annual Lease - \$21-\$26 SF Morris Commercial Jodi Amanda Tata (919)-407-1285
Tr 4 Berkshire Manor	1.4 acres located at the intersection of Main and Hwy 54	For Sale - \$325,000 Clayton Commercial Realty (919) 260-6078

410 N Greensboro Street	1250 – 4645 SF 1 st floor retail space Shelton Station	Annual Lease - \$27 sq. ft. Legacy Real Property Group (919)967-6711
250 E. Winmore Ave	914 SF Office Space	For Sale - \$258,000 or Annual Lease \$24 SF Morris Commercial – John Morris (919)942-1141
115 Ruth Street	2.27 AC Vacant Land	For Sale \$200,000 Keller Williams Elite Realty Michelle Edwards (919)484-2280
Chapel Hill Comps		
136 E Rosemary St	84,013 SF Class B Office Space	Avg Annual Lease \$31 SF
210 N Columbia St	8176 SF Class B Office Space	Avg Annual Lease \$26 SF
150 Providence Rd	10,000 SF Class B Office Space	Annual Lease \$18.50 SF
300 Market Street	1400 SF Class B Office Space	Annual Lease \$24 SF
400 W Franklin St	3600 SF Retail	Annual Lease \$28 SF
1728 Fordham Blvd	Retail at Rams Plaza	Between \$16 - \$22 SF

Sources: Loopnet and ECD

Economic Sustainability Plan Update:

The purpose of the Economic Sustainability Plan (attached) as stated in the document is to be “a simple to use set of values, guiding principles, and action items for the continued development and economic well-being of the Town.” It was anticipated in developing the document that subsequent work would need to include prioritizing, needs assessments, implementation strategies, funding options and partnership opportunities for action items.

Staff has begun to work with the Economic Sustainability Commission for implementation of actionable items and organizing to review and update the plan as needed. The following actions have taken place since adoption of the document.

1) People – Development – Page 10: Support and implement goals of the Affordable Housing Plan including grants for critical home repairs and energy efficiency, up-fits to accommodate changing mobility and opportunities to decrease utility payments.

The formation of the Affordable Housing Committee and .01 cent dedicated property tax housing who are tasked with the implementation of the Affordable Housing Plan.

2) People – Development – Page 10: Encourage transit oriented development and support goals to improve pedestrian and bike access in proposed developments.

The Town is currently updating the Comprehensive Bicycle Plan along with several other bike and pedestrian improvements. Also the Town has conducted a pavement, sidewalk, and curb ramp condition survey.

3) People – Business – Page 10: Implement the recommendations of the Parking Plan, especially wayfinding signs that are key to help customers locate parking.

Design for the Wayfinding system is complete, staff is working toward bidding out the project for fabrication and installation of the signs. The Tourism Development Authority has allocated \$50,000 for the first phase of the project.

4) People – Equity – Page 11: Create more opportunities for community conversations around social justices and equity to help develop a shared language and definitions.

The Town has joined the Government Alliance for Race Equity and working toward certification. Staff has begun training for this program.

5) People – Equity – Page 11: Partner with community organizations to assist residents of color that are not banked or under banked with the financial capability by expanding access to financial education and coaching.

The ECD Department partnered with the Latino Credit Union and developed flyers and posters for outreach and education on banking locally.

6) Local Economy – Partnerships – Page 12: Continue to support locally owned and operated businesses through the CBA and other networking opportunities.

The Town invest in the CBA through our membership. Staff attends monthly CBA leadership meetings, committee meetings and of other business networking events, like those hosted by Driven, a local business coaching consulting firm.

7) Local Economy – Marketing – Page 12: Increase awareness of the revolving loan fund through email, social media, newspaper articles and peer-to-peer communications.

The ECD Department partnered with the CBA, and Orange County Economic Development to host an After Edu-Hours event at the Honey Suckle Café to discuss opportunities for loans through Carrboro and Orange County and grant opportunities through Orange County.

Articles have been included in the Town's external newsletter about the Revolving Loan Fund.

8) Support building social capital by offering scholarships for membership in the Carrboro Business Alliance for low-asset businesses.

The Town provided scholarships to six MWOB for membership in the Carrboro Business Alliance.



TOWN OF CARRBORO

ECONOMIC SUSTAINABILITY PLAN 2017

ADOPTED NOVEMBER 28, 2017



PURPOSE STATEMENT

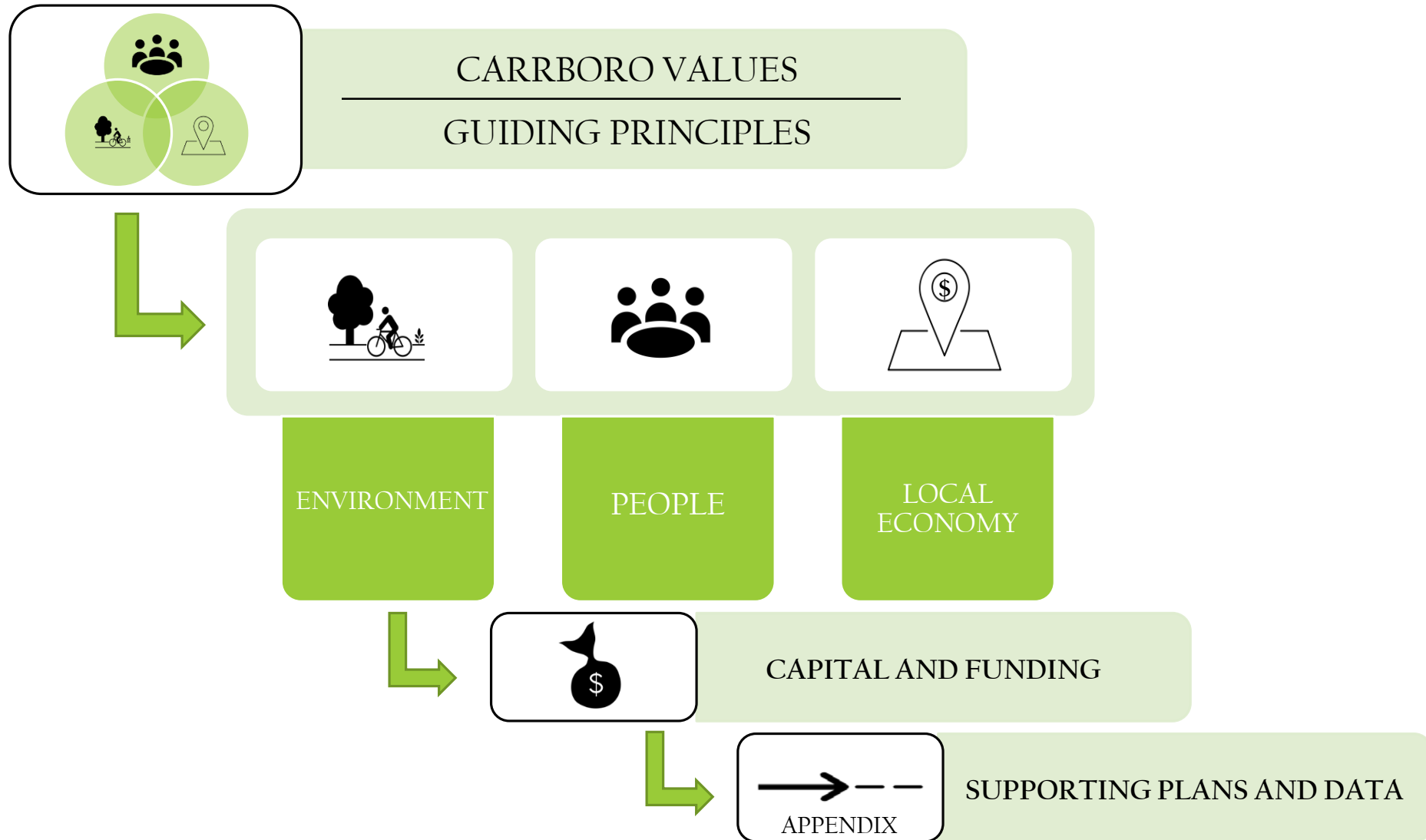
This document is intended to be a simple to use set of values, guiding principles, and action items for the continued development and economic well being of the Town. It is expected that the document will be reviewed and updated bi-annually as action items are addressed and values and guiding principles continue to evolve. Further studies related to this plan should include prioritizing, needs assessments, implementation strategies, funding options, and partnership opportunities for action items. The Economic Sustainability Plan seeks to be a guiding document for the community and the Economic Sustainability Commission's review of applications for loans, zoning permits, ordinance amendments, development plans and other documents submitted to them by the Board of Aldermen consistent with their duties and responsibilities.

DUTIES AND RESPONSIBILITIES OF THE ESC

- Evaluate commercial growth, development, and redevelopment to ensure projects correspond with the town's sustainability goals and the triple bottom-line sustainability principles:
 - Do no harm to the environment and protect natural resources.
 - Adhere to the principles of social justice and equity in economic and community development efforts.
 - Return strong stakeholders value.
- Promote the development and expansion of diverse job opportunities, providing for economic opportunity and mobility.
- Administer the Revolving Loan Fund.
- Work closely with the Town Manager or his designee for dealing with sustainability issues.
- Make studies and recommend to the board plans, goals, and objectives relating to the growth, development, and redevelopment of the town.
- Recommend to the board site-specific plans for the commercial development of various lots within the town, showing recommended types of development for these specific lots.
- Recommend to the board plans for the improvement of access to and circulation within the town by motorists (including parking), public transportation users, bicyclists, and pedestrians.
- Upon request of the board of adjustment or Board of Aldermen, make recommendations to the respective board on requests for special or conditional use permits, land use ordinance text or zoning map changes.
- Perform any other duties assigned by the board.



PLAN ORGANIZATION



CARRBORO VALUES

Foundational to the Community, the Economic Sustainability Commission and the Department of Economic and Community Development is the principle of sustainability, a value identified by Board of Aldermen.

SUSTAINABILITY

We value an equitable, fair, just, resilient, self-reliant, and sustainable local economic system. The value of sustainability affects how we plan for **people**, **environment**, and a **local economy**.



ENVIRONMENT

We value a sustainable land ethic and seek to exercise voluntary decency towards the land implementing policies and practices that are respectful of limited resources and the impacts expending resources have on the environment.

PEOPLE

We value all human life and seek to promote an economic system that provides opportunity, prosperity, justice, equity and dignity for all people.

LOCAL ECONOMY

We value an economic system that is locally-owned in nature as the basis for a strong, vibrant community.



GUIDING PRINCIPLES

QUALITY OF LIFE MEASUREMENTS

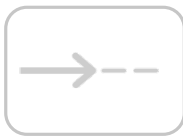
The quality of life measurements represent any principles that guide an organization throughout its life in all circumstances, irrespective of changes in its goals, strategies, or type of work.

EQUITY



*Equity is the goal to which we aspire where one's race, gender, age, creed, national origin, disability, sexual orientation, gender identity/expression or economic status is not a predictor in how a person fares in life. We will practice social justice as the proactive reinforcement of policies, practices, attitudes and actions that produce equitable power, access, opportunities, treatment, impacts and outcomes for all.

* Adapted from the glossary of terms racialequitytools.org



GUIDING PRINCIPLES

QUALITY OF LIFE MEASUREMENTS

ART



Investing in public art and performances is representative of Carrboro's commitment to the creative industries and also its interest in developing inclusive spaces. Incorporating public art in Carrboro's built performances environment will be pursued as a means of supporting the arts and beautifying public spaces.

COMMUNITY SPACES



We understand vibrant community spaces to be a source of civic pride and community attachment that sparks economic activity and investment. Carrboro seeks to grow shared public spaces that foster creativity and infuse value into our residential and business communities.

AGE-FRIENDLY



The growing population in Carrboro brings with it the social and economic interests of all ages. Planning for an age-friendly community is essential to growing Carrboro's inclusivity and benefiting local economic interests.

FRESH FOODS

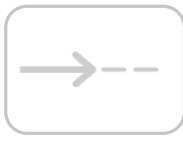


Access to fresh, healthy foods has positive impacts on public health and local agricultural businesses. Carrboro seeks to grow community access to fresh food in pursuit of a sustainable, local economy.

HEALTHCARE



Greater access and affordability of healthcare options contributes to improved livelihood and economic productivity. Carrboro is committed to growing affordable healthcare options and supporting local businesses as they seek to care for their employees.



GUIDING PRINCIPLES

QUALITY OF LIFE MEASUREMENTS



WALKABILITY

Recognizing that a walkable community provides mobility, exercise, and an affordable transportation option, the Town of Carrboro seeks to grow its pedestrian network and connectivity to businesses.



PUBLIC TRANSIT

Access to public transit embodies Carrboro's commitment to sustainability, people, environment, and a local economy. Development efforts will use public transit access as a measure of economic success.



BIKE FRIENDLY

Increasing bikability contributes to the urban vitality of our commercial and residential neighborhoods. Carrboro is committed preserving and growing bikability as a means of attracting people and businesses.



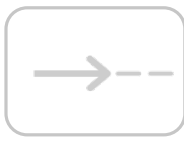
EDUCATION

The link between strong education systems and economic opportunity is well-established. Carrboro seeks to strengthen partnerships with education and economic development as a means of connecting talent development and community assets.



BUSINESS

Locally owned and operated businesses are the cornerstone of a vibrant local economy. Carrboro seeks to support and grow its locally owned and operated business community.



ENVIRONMENT

We value all of nature and the environment and seek to implement policies and practices that are respectful of those limited resources and the impacts expending resources have on the environment.

ACTION ITEMS ENERGY

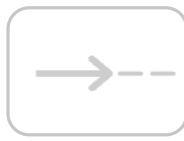


- Implement the recommendations of the Climate Action Plan (CAP) including integrating climate change mitigation into the locally owned marketing message
- Expand opportunities for renewable energy through low cost financing for energy efficiency and renewable energy projects
- Incentivize energy efficiency and green building to exceed minimum standards with special designations and recognition programs and meet climate change demands
- Explore changes to the Energy Efficiency Revolving Loan that would allow greater flexibility and more category of uses, including solar and geothermal
- Study potential risks and prepare for the economic vulnerability and stress of events such as extreme weather, water or power outages, or interruption of other energy supply lines

GREEN ECONOMY



- Consider Green Business with a special recognition program for businesses that meet or exceed climate change standards
- Support green economy initiatives consistent with the Local Living Economy Task Force
- Study the economic development benefits of land conservation and preservation practices
- Encourage the Tourism Development Authority to promote eco and agricultural tourism
- Encourage and support local sourcing between businesses as a means for reducing carbon footprints
- Encourage and support plant-based food businesses and encourage existing food businesses to offer more plant-based food options consistent with the CAP



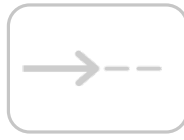
ENVIRONMENT

COMMUNITY DEVELOPMENT



- Support efforts to create a neighborhood energy diet program consistent with the CAP
- Support efforts to reduce utility cost for the advancement of affordable housing and equity issues related to the environment
- Work with the Carrboro Bicycle Coalition to encourage bike friendly businesses
- Prioritize integration of natural assets, greenways, and open space with development practices
- Continue to study and refine development standards that emphasize the importance of walkability and tree cover in the downtown for the economic well-being of the community
- Encourage downtown development that allows for free-flowing vehicular arteries which encourages customers to use downtown businesses but that reduces pollution from traffic jam conditions





PEOPLE

We value all human life and seek to promote an economic system that provides opportunity, prosperity, justice, equity and dignity for all people.

ACTION ITEMS

DEVELOPMENT



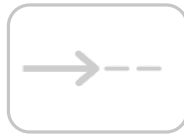
- Support and implement goals of the Affordable Housing Plan including grants for critical home repairs and energy efficiency, up-fits to accommodate changing mobility and opportunities to decrease utility payments
- Provide greater incentives for developers to include affordable housing and commercial space in development projects
- Encourage transit oriented development and support goals to improve pedestrian and bike access in proposed developments

BUSINESS



- Encourage and support businesses to become Orange County Certified Living Wage employers
- Seek out and encourage opportunities for light manufacturing industries that can create livelihoods with living wages
- Engage residents in activities that push the locally owned economy message in a fun or educational way
- Implement the recommendations of the Parking Plan, especially wayfinding signs that are key to help customers locate parking





PEOPLE

ACTION ITEMS

EQUITY



- Create more opportunities for community conversations around social justices and equity to help develop a shared language and definitions
- Consider adopting an equity rating tool for use in governmental decision-making
- Partner with community organizations to assist residents of color that are not banked or are under banked with the financial capability by expanding access to financial education and coaching
- Implement policies that promote affordable, diverse types of workforce and senior housing as a key component in bridging gaps in equity





LOCAL ECONOMY

We value an economic system that is locally-owned in nature as the basis for a strong, vibrant community.

ACTION ITEMS

PARTNERSHIPS

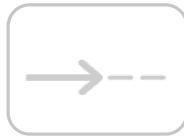


- Continue to support locally owned and operated businesses through CBA and other networking opportunities
- Collaborate with regional partners to develop an online retail application that allows local businesses to compete with growing online retailers
- Encourage collaboration and impact investing among the Arts community by hosting joint work sessions between the ESC, Carrboro & CH Arts Committee, and the OC Arts Commission
- Maximize partnerships with Farmer's Market, SBTDC, SCORE, TDA and other organizations that support a thriving local economy.
- Encourage and support co-op models as a way to expand business opportunities and address equity gaps
- Partner with minority and women-owned business technical assistance providers and with community development financial institutions that serve MWOB

MARKETING



- Actively educate citizens on the importance of buying and investing locally by communicating through events and various media channels, especially social media campaigns (LLETR-APP B)
- Increase awareness of the revolving loan fund through email, social media, newspaper articles, and peer-to-peer communications
- Develop marketing strategy to assist locally owned businesses in the recruitment of quality staff
- Create a study group to better understand neighborhoods/consumers of color and their unmet needs and wants and develop marketing strategies for outreach
- Implement the CAP recommendations that promote Carrboro as a plant-based food business friendly community



LOCAL ECONOMY

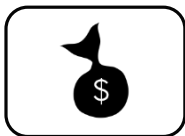
ACTION ITEMS

ACCESSIBILITY



- Support small businesses with opportunities for affordable healthcare options by supporting affordable community clinics and health options like Piedmont Health Services
- Sponsor a health fair with both traditional health and alternative/healing arts providers to provide health education and awareness in the community consist with LLETTF-Appendix B
- Implement wayfinding and parking strategies from 2017 Carrboro Parking Study
- Support locally owned businesses with access to capital through the revolving loan funds, connect with investors, and business expansion options by supporting new affordable commercial space
- Support building social capital by offering scholarships for membership in the Carrboro Business Alliance for low-asset businesses
- Reach out to businesses, entrepreneurs, and artist of color to understand their needs and the opportunities to help them thrive
- Seek out ways to expand the opportunities for essential services in town, including office and flex space to accommodate growing businesses and more diverse retail categories





FUNDING AND CAPITAL

We value a fair, just, resilient, self-reliant, and sustainable local economic system. The value of sustainability affects how we plan for **people, environment, and a local economy.**

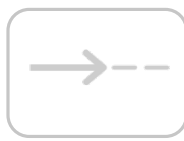
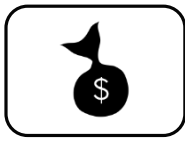
ACTION ITEMS

PARTNERSHIPS



- Collaborate with banks and other lenders to provide gap financing and lease assistance to local businesses and non-profits with an emphasis on equity gaps
- Work with local lenders and credit unions to develop incentive programs for funding locally owned businesses and non-profits
- Target light manufacturing opportunities, like development of the Old 86 town-owned property, and partner with the development community, banks, and other governmental agencies
- Target tertiary job sectors like professional services and technology for higher paying jobs
- Work with local non-profits to increase awareness of capital funding sources including the Revolving Loan funds.
- Seek a better understanding of debt and equity gaps for businesses and artist of color and leverage partnerships to close those gaps
- Work with the Orange County Board of Commissioners on re-examining funding distribution models for the one-quarter cent sales tax funds, called Article 46 funds





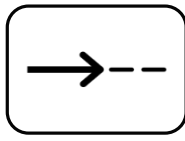
FUNDING AND CAPITAL

ACTION ITEMS

ACCESSIBILITY



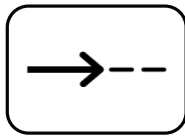
- Update the Revolving Loan Fund and the Business Loan Fund application process to be more streamlined and efficient
- Develop a process for micro-loans to small start-up businesses
- Explore micro-venture funds with investors/owners in Carrboro music and arts community
- Develop a policy for business investment grants that encourage job expansion and new business
- Help drive local consumers to businesses by continuing to market and educate the public on buying from and sourcing locally owned businesses
- Expand category of eligible expenditures for Energy Efficiency Revolving Loan Fund to help reduce cost for local businesses and non-profits improving affordability and equity
- Market the Orange County Business Loans and Grants programs to Carrboro businesses. Encourage applying for funds and provide technical assistance as needed



APPENDIX

SUPPORTING PLANS AND DATA





EXISTING PLANS

CARRBORO VISION 2020

PURPOSE

To establish guiding principles for growth and development in the Town of Carrboro through the year 2020.

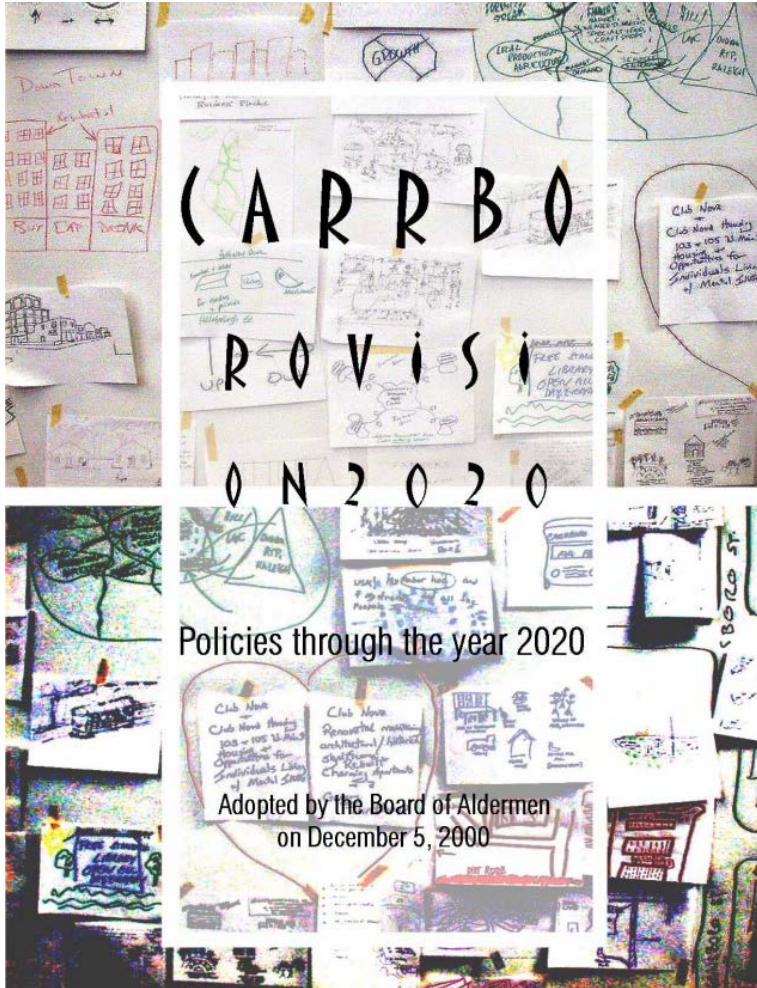
PROCESS

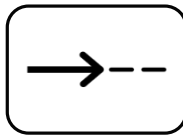
A community-driven plan that involved citizen volunteers who were instrumental in facilitation and collection of ideas and visions for Town services, including economic development resources.

CONTENT

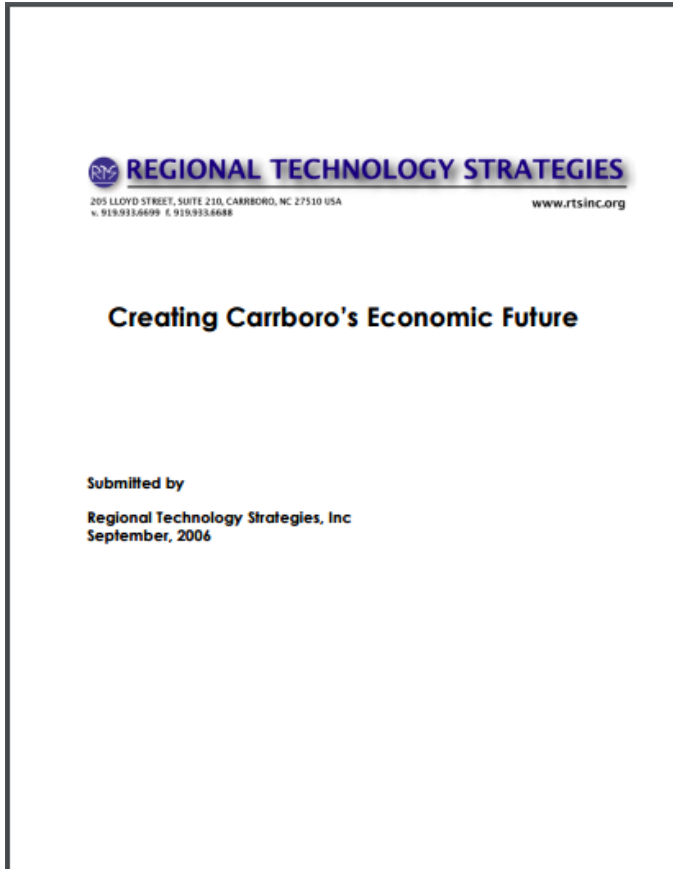
Section 3.1 “With the population of Carrboro expected to increase during the Vision 2020 period, additional commercial development should be anticipated both downtown and in peripheral areas. Carrboro should seek to reduce the tax burden on single-family owners by increasing the percentage of commercial space in town.”

Section 3.2: “Double the percentage of commercial space in the downtown and accomplish this by building up thereby increasing density.”





EXISTING PLANS



CREATING CARRBORO'S ECONOMIC FUTURE

PURPOSE

To expand opportunities for citizens to have “more good jobs” and to “pursue meaningful work.”

PROCESS

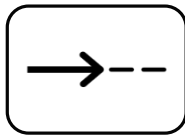
Developed by local economic development consulting firm, RTS. Recommendations were informed by interviews, data analyses, a community input process, and RTS' experience with similar communities.

CONTENT



✓ Goal achieved!





EXISTING PLANS

LOCAL LIVING ECONOMY TASK FORCE RECOMMENDATIONS

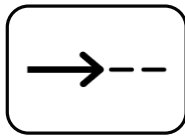


IDENTIFIED STRATEGIES

- *Think Local First Campaign*
- *Local Options for Banking*
- *Maintenance and Promotion of Revolving Loan Fund*
- *Pursue Stimulus Funds*
- *Branding and Marketing*
- *Support for Local Business Network*

Continue implementation of the recommendations in Appendix B

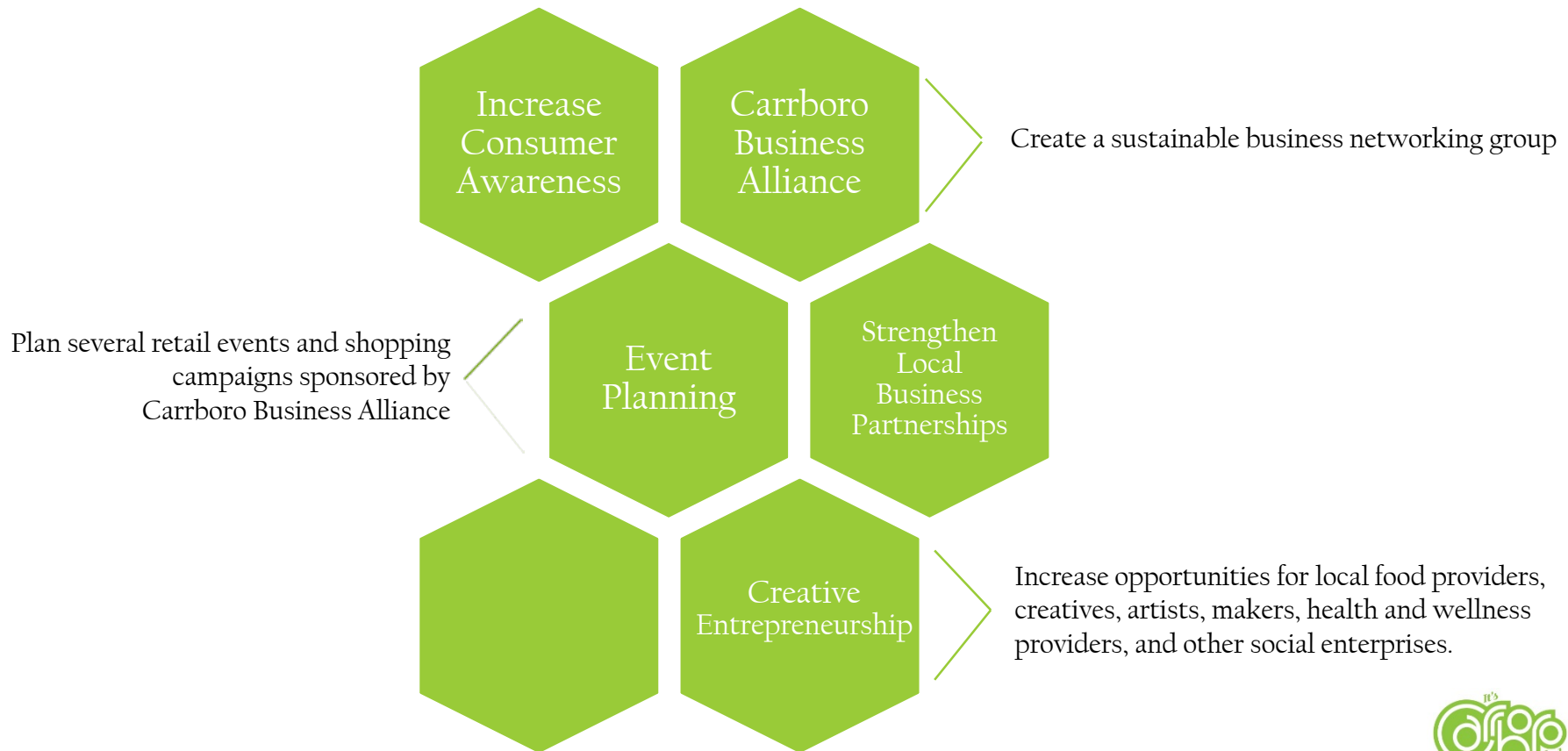


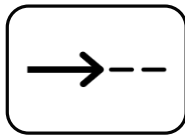


EXISTING PLANS

CARRBORO BUSINESS ALLIANCE AND LOCAL MATTERS, 2014

Goals identified by Carrboro Business Alliance





EXISTING PLANS

Progress Achieved, Needs Identified

VISION 2020

ACHIEVED

Increased commercial square footage

IDENTIFIED

Residential square footage increased at comparable rate

How to target increased commercial activity?

CREATING CARRBORO'S ECONOMIC FUTURE

ACHIEVED

Successful branding of local business and enhancement of creative assets

IDENTIFIED

Outside of branding, need for continued support and growth of creative assets

LOCAL LIVING ECONOMY TASK FORCE

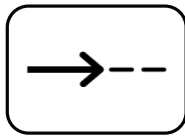
ACHIEVED

All initial recommendations were implemented or investigated

IDENTIFIED

What's next for sustaining a local, living economy? Continue implementation of Appendix B



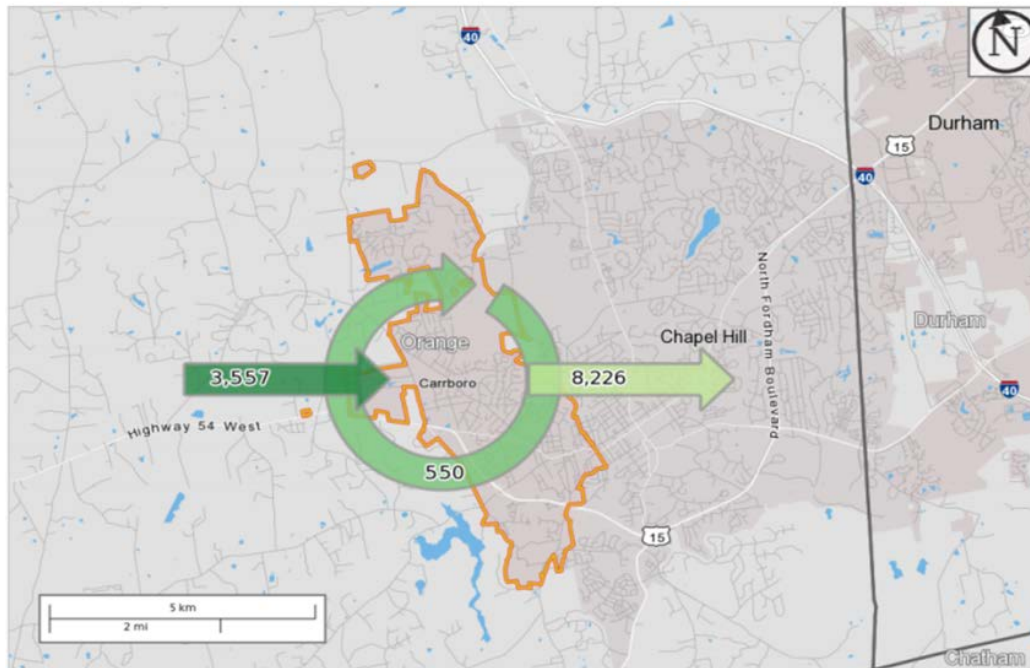


SUPPORTING DATA



PEOPLE | LABOR MARKET

Town of Carrboro Counts of Primary Jobs, 2014

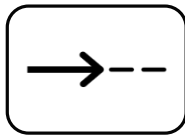


Primary Job: the job that earned the individual the most money.

Labor market: the number of jobs available versus the number of workers in any given geographical area.

- Employed and Live in Carrboro: 4.5%
- Employed in Carrboro, Live Outside of Carrboro: 28.8%
- Live in Carrboro, Employed Outside of Carrboro: 66.7%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, Beginning of Quarter Employment, 2nd Quarter, 2014



SUPPORTING DATA



PEOPLE | ECONOMIC TRENDS



3.9% unemployment

Orange County, September 2016

Continues to be among lowest in the state, statewide 4.8%



\$911 average weekly wage

Orange County, 1st Quarter 2016

6th highest in state after Mecklenburg, Durham, Wake, Forsyth, and Iredell



1.3% annual population growth rate

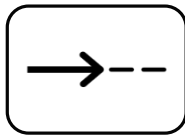
Orange County, 2014-2019 Projected population



2.8% job growth

Durham-Chapel Hill MSA, September 2015-2016. Compared to 1.9% at state level.

Sources: NC Department of Commerce, Bureau of Labor Statistics



SUPPORTING DATA



PEOPLE | ECONOMIC TRENDS

LIVING IN POVERTY*

Carrboro 7%
Orange County 23.3%
North Carolina 26%

MEDIAN HOUSEHOLD INCOMES**

Carrboro \$51,310
Orange County \$57,261
North Carolina \$46,693

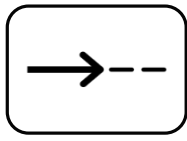
HIGH EARNERS^

Carrboro 25.5%
North Carolina 17.3%

* Poverty income level is defined as recording 50% or less than area median income

** 2010-2014 ACS 5-year estimates

^ High earners are here identified as households earning above \$100,000. Numbers expressed as percentage of all study area households. Source: Pew Charitable Trust

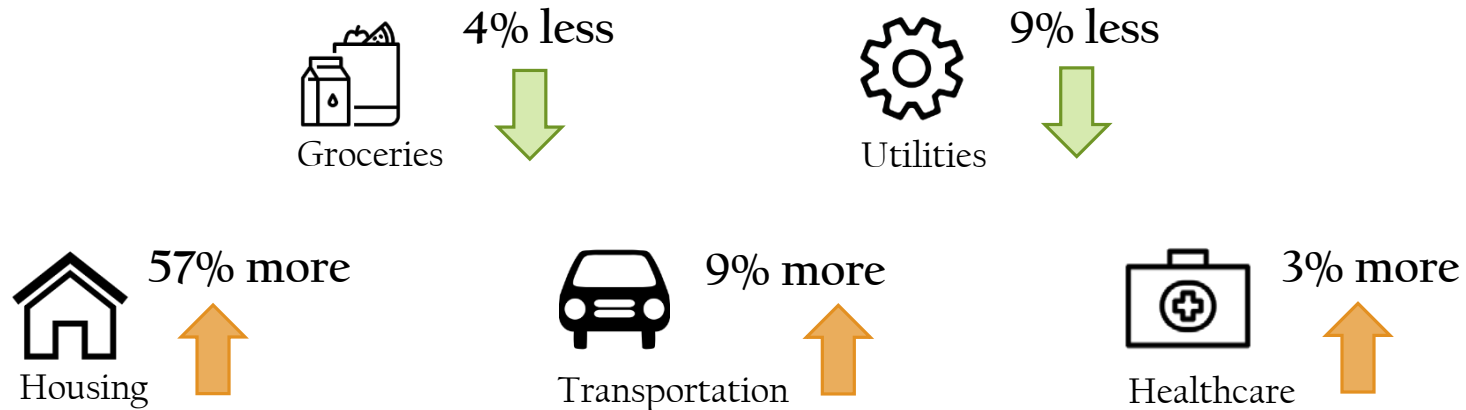


SUPPORTING DATA



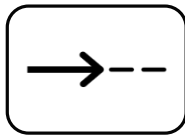
PEOPLE | COST OF LIVING

Prices in Chapel Hill-Carrboro as compared to Raleigh:



With a \$50,000 salary in Raleigh comparable to a \$57,582 salary in the Chapel Hill-Carrboro area, the Town of Carrboro recognizes the need to focus its economic development efforts to ensure that costs of living do not challenge our community's commitment to maintaining an economic system that provides opportunity, prosperity, justice, and dignity for all people.

Source: C2ER. December 2015

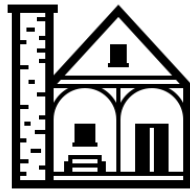


SUPPORTING DATA



PEOPLE | COST OF LIVING

AREA HOUSING PRICES



MEDIAN CLOSING PRICE

Chapel Hill	\$350,000
Apex	\$315,000
Pittsboro	\$305,000
Hillsborough	\$244,000
Carrboro	\$215,000
Durham	\$207,000
Efland	\$206,000

With Orange County's population expected to grow from an estimated 139,933 in 2014 to 172,586 by 2036, it is essential to Carrboro's economic vision that affordability of housing and commercial stock be prioritized so as to allow for the continued accessibility to Carrboro's vibrant community and economic offerings.

Source: National Association of Realtors, December 2016

*Original population based on NC Department of Commerce July 2014 Certified Population Estimate, 2036 estimate provided by NC Office of State Budget and Management.



Town of Carrboro

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

Agenda Item Abstract

File Number:19-318

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Stormwater Utility Monthly Report

PURPOSE: The purpose of this item is to provide the monthly update regarding Stormwater Utility projects and initiatives.

DEPARTMENT: Public Works

CONTACT INFORMATION: Randy Dodd, Stormwater Utility Manager, 919 918-7341

INFORMATION: The report identifies 15 separate projects and initiatives that Stormwater staff are and will/could be involved in within the next 12-18 months. These are specific efforts, some time limited and others part of ongoing stormwater program development, that are above and beyond the baseline workload associated with, for example: general program administration, e.g., coordination with and reporting to other Carrboro staff, the Stormwater Advisory Commission, and the Board as well as local, state, and federal agencies and contractors; tracking impervious surfaces; responding to billing and other community member inquiries); MS4 inspections; reviewing development plans; stream determinations/buffer reviews; and illicit discharge response and pollution prevention.

FISCAL & STAFF IMPACT: There is no fiscal impact associated with this update. There are/will be nearer and longer term fiscal and staff impacts, as presented in the report.

RECOMMENDATION: It is recommended that the Board receive the staff report.

STORMWATER UTILITY MONTHLY REPORT

Contents

PART 1: WATER QUANTITY DRIVEN WORK.....	2
1. FEMA Public Assistance: Public Works Stream Restoration	2
Status: Active/Funded.	2
2. FEMA Public Assistance: Broad Street Culvert Replacement	3
Status: Active/Funded.	3
3. Toms Creek Watershed Assessment and Outreach	4
Status: Active/funded.	4
4. Land Use Ordinance Stormwater Provisions Review	5
Status: Pending staff capacity.	5
5. FEMA Hazard Mitigation Grant Program (HMGP) Active Elevation Project	6
Status: Awaiting funding approval.	6
6. FEMA Hazard Mitigation Grant Program Letters of Interest (Acquisition and Elevation).....	7
Status: Application in progress.	7
7. FEMA Public Assistance: Damage Recovery from Hurricane Florence	8
Status: Active/nearing completion.	8
PART 2: WATER QUALITY & FEDERAL/STATE REGULATORY DRIVEN WORK	9
8. NPDES Town wide Permit	9
Status: Active.	9
9. NPDES Public Works Facility NPDES Permit	10
Status: Active.	10
10. Jordan Lake Rules Compliance	11
Status: Awaiting State Review.	11
11. Bolin Creek Watershed Restoration Plan Implementation	12
Status: Pending staff capacity/funding.	12
PART 3: WORK DRIVEN BY BOTH WATER QUANTITY AND QUALITY INTERESTS	13
12. Stormwater Service Delivery Review	13
Status: Active.	13
13. MS4 Inventory Update, Condition Assessment, Asset and Workflow Management	14
Status: Active.	14
14. Stormwater Project Planning and Prioritization	15
Status: Active.	15
15. Drainage Policy Review and Residential Assistance Program	16
Status: See Pilot Study (#3).	16

PART 1: WATER QUANTITY DRIVEN WORK

1. FEMA Public Assistance: Public Works Stream Restoration



Project Description: This project involves two phases of repairing/restoring a badly eroding stream channel in an extremely high risk situation adjacent to Public Works. The first phase will be preliminary engineering; the second will be construction/restoration.

Project Background: There are two unnamed intermittent streams that flow from the south side of downtown along South Greensboro Street and Old Pittsboro Road, join just above the 54 Bypass, and then flow under the bypass and along the Public Works property line before joining Morgan Creek. The stream channel is very incised adjacent to Public Works, with an extremely actively eroding bank. During Hurricane Florence, a large section of the streambank immediately adjacent to the fuel tanks (as well as outbuildings) collapsed, escalating and accelerating the importance of addressing the bank erosion. This project has been an identified need since 2015.

Status: Active/Funded. The Board approved a project ordinance and staff released an RFQ in June for assistance with preliminary engineering from a private engineering firm(s) in June. Interviews were held in July, and a contract was executed with Jennings Environmental in August, and the work has begun. 30% design review occurred in October and 60% review is schedule for November. Staff are working with the adjacent property owner to obtain necessary permissions since the required work will happen on both properties. The preliminary engineering is scheduled to be completed in February, 2020. Staff are continuing to work diligently with NCDPS and FEMA to pursue federal assistance for this project. Stormwater staff consider this to be the highest priority capital project.

Fiscal and Staffing Considerations: The contract with Jennings Environmental is for \$58k. Construction is preliminarily estimated to cost \$200k-\$300k. FEMA/NCDPS have reviewed past and planned work and have not raised concerns, although this is not a guarantee of federal funding. There is a significant staff impact associated with project and grant management.

Additional Information:

https://www.fema.gov/media-library-data/1534520496845-4b41646e3d8839c768deb3a7f4ded513/PADeliveryModelFactSheetFINAL_Updated_052418.pdf
<https://carrboro.legistar.com/LegislationDetail.aspx?ID=2288740&GUID=0B2EA271-314B-4ED8-8A38-0E199F87A49F%3E&FullText=1>

2. FEMA Public Assistance: Broad Street Culvert Replacement



Project Description: This project will involve two phases to replace an old and undersized culvert on the 400 block of Broad Street. The first phase will be preliminary engineering; the second will be construction.

Project Background: Stormwater staff have been leading the Town's exploration of FEMA Public Assistance funding following on Hurricane Florence. An old and undersized culvert on Broad Street has been responsible for previous overtopping of the road, and has been identified as being a candidate for FEMA PA funding. This site has been included in previous Town flood studies by Sungate Engineering.

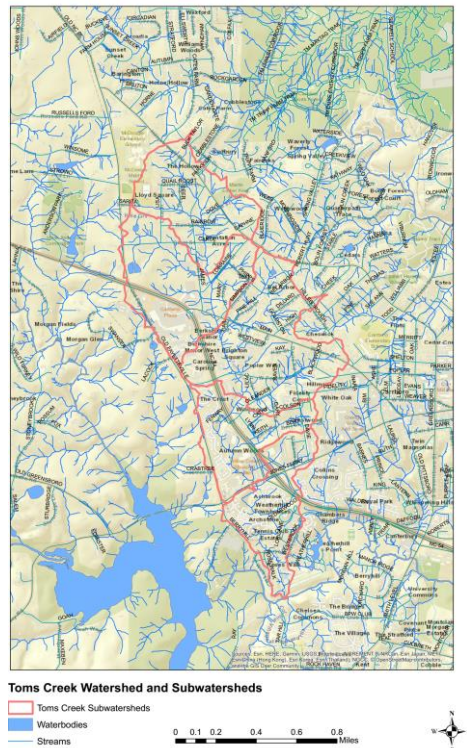
Status: Active/Funded. An RFQ for assistance with preliminary engineering from a private engineering firm(s) was released in June. Interviews were held in July, and contract negotiations and coordination continued in August-October since the bids that were received exceeded the amount approved by the Board and currently available in the Stormwater Enterprise Fund. Presuming a successful outcome, the plan is to complete the preliminary engineering this fall/winter, and construction in 2020. Staff have continued to work diligently with NCDPS and FEMA to pursue federal assistance for this project.

Fiscal and Staffing Considerations: If federal funding is made available, it will be reimbursed after spending, and require detailed cost tracking. There is a significant staff impact associated with project management.

Additional Information:

https://www.fema.gov/media-library-data/1534520496845-4b41646e3d8839c768deb3a7f4ded513/PADeliveryModelFactSheetFINAL_Updated_052418.pdf
<https://carrboro.legistar.com/LegislationDetail.aspx?ID=2288740&GUID=0B2EA271-314B-4ED8-8A38-0E199F87A49F%3E&FullText=1>
<https://carrboro.legistar.com/LegislationDetail.aspx?ID=2288740&GUID=0B2EA271-314B-4ED8-8A38-0E199F87A49F%3E>

3. Toms Creek Watershed Assessment and Outreach



Project Description: In April 2019, the Board directed staff to move forward with an assessment of conditions in a subwatershed. In June, 2019, an outreach session was held. There is an ongoing need to address flooding issues in the upper Toms Creek watershed.

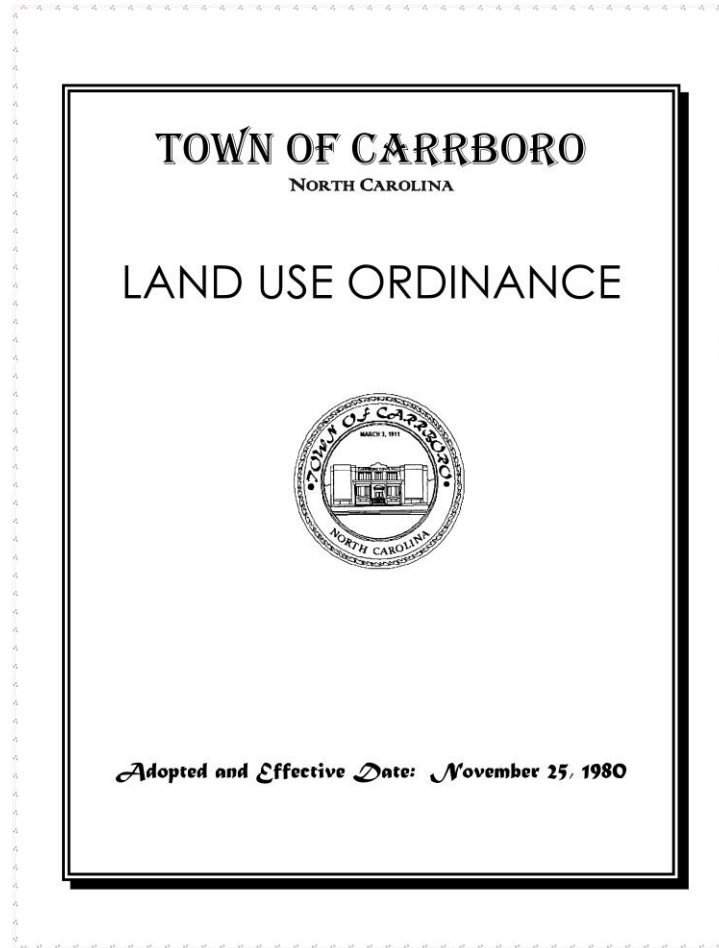
Project Background: For the Toms Creek watershed, flooding and drainage is a recurring and important theme. The upper watershed has received the most attention in recent years, including hydrologic and hydraulic modeling, due to the degree of flooding and drainage issues experienced by residential property owners both in the regulated floodplain and other areas. A watershed based approach is needed to comprehensively address the issues that exist. An emerging concern is resiliency in consideration of the growing number of recent intense storms and the potential for a shift to more flooding in the future due to climate change.

Status: Active/funded. An outreach session was held in June. Sungate Engineering is pursuing additional studies of a catchment between Hillsborough Rd. and West Main Street with known drainage issues. The contract with the Center for Neighborhood Technology (CNT) to assist with neighborhood preparedness and resilience to flooding and drainage concerns has been executed. CNT and Sungate initiated work in October.

Fiscal and Staffing Considerations: Sungate's work is costing \$16.5k and the Center for Neighborhood Technology's work is costing \$25k. There could be further implementation costs as a result of these projects. There will be a staff impact with overseeing the work.

Additional Information: Additional information is available from multiple Board agenda items from 2013-2019. A [project website](#) has been created with relevant historical and project related information.

4. Land Use Ordinance Stormwater Provisions Review



Project Description: LUO stormwater provisions are currently under review.

Project Background: At the April 16th Board of Aldermen meeting, the Board referred further review of the stormwater provisions in the LUO to staff and the Stormwater Advisory Commission in consideration of the flooding and drainage impacts being experienced and elevated risk for increasing impacts due to climate change.

Status: Pending staff capacity. This is being considered by Planning and Public Works staff, the Town Engineer, and the Stormwater Advisory Commission.

Fiscal and Staffing Considerations: There is no fiscal impact with reviewing and amending the LUO. There is a staff impact with performing the review.

Additional Information:

<https://carrboro.legistar.com/LegislationDetail.aspx?ID=3919560&GUID=59CDD594-2973-4C2B-813C-738A1CF5707B&Options=&Search>

<http://www.townofcarrboro.org/DocumentCenter/View/698/Article-XVI-Floodways-Floodplains-Drainage-and-Erosion-PDF>

5. FEMA Hazard Mitigation Grant Program (HMGP) Active Elevation Project



Project Description: Utilization of FEMA HMGP funds to elevate homes on Lorraine Street.

Project Background: In 2016, the Town was awarded a FEMA grant (administered by the NC Department of Public Safety [NCDPS]) to elevate two homes at 400 Lorraine Street and 403 Lorraine Street. After start up project delays, the Town hired Summit Design and Engineering Services in the late spring of 2018 to assist with pre-construction/design and bidding services, construction administration and grant compliance monitoring. Stormwater staff began providing administrative support for the project in October 2018. Summit wrapped up the preconstruction/design phase of the project in December, construction bid advertisement followed, and a responsive bid was received, but the bid exceeded the available funding. Staff requested grant extension and additional funding to cover increased construction costs in February.

Status: Awaiting funding approval. Staff have continued to coordinate with State and Summit staff and a contractor to move to the construction phase of the project. Staff have been awaiting response to a request for additional funding since February. In the event that funding is not awarded under the current grant, staff intend to resubmit for funding in November under a new funding cycle.

Fiscal and Staffing Considerations: Costs associated for work covered by the grant, if extended and fully funded, will be reimbursed to the Town with a combination of both Federal and State funds covering 100% of the costs associated with the project. Elevation costs, if funded, can be reimbursed at up to \$175k per home. There is a significant staff impact to administer the grant funds.

Additional Information:

<https://carrboro.legistar.com/LegislationDetail.aspx?ID=3767377&GUID=67B319F8-E1CC-4E4B-9DC2-5FA5AEC6CCED&Options=&Search=&FullText=1>

<https://carrboro.legistar.com/LegislationDetail.aspx?ID=2825729&GUID=06EB126A-0AE5-4A83-BFD0-0AA28C2CA6F1&Options=ID|Text|&Search=Flood>

https://www.fema.gov/media-library-data/1493317448449-b83f27544e36b7bf67913f964a56b15a/HMA_Homeowners_Guide_040717_508.pdf

6. FEMA Hazard Mitigation Grant Program Letters of Interest (Acquisition and Elevation)



Project Description: The information presented below is for an acquisition project for 116 Carol Street, and a new elevation project for 100 James Street

Project Background: Following on Hurricane Florence and Tropical Storm Michael, FEMA announced new rounds of HMGP funding. In addition to the Lorraine Street properties discussed above, two additional homeowners at 116 Carol Street and 100 James Street (properties included in previous HMGP applications for acquisitions that did not move forward) have responded, and were included in Letters of Interest submitted by the Town to the NCDPS. Staff submitted one Letter of Interest for an acquisition project for 116 Carol Street and a second Letter of Interest for elevation of the home at 100 James Street.

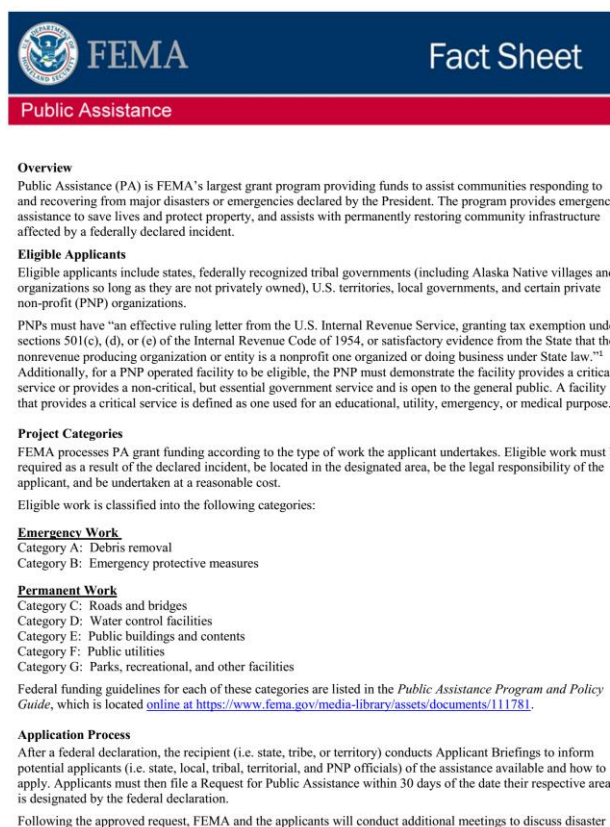
Status: Application in progress. Staff are working on completing application materials. Application materials for the 116 Carol acquisition were submitted to the State in October under Hurricane Florence. Application materials for the 100 James Street (and potentially for the Lorraine Street properties discussed above) elevation will be submitted to the State in November. Staff anticipate notification of award in early 2020, and if approved, finalization of one or both grant agreements later in 2020.

Fiscal and Staffing Considerations: If the Town is able to successfully enter into grant agreements (one for acquisition and one for elevation), costs associated for work covered by the grants will first be borne by the Town and then reimbursed to the Town with a combination of both Federal and State funds covering eligible costs associated with the project(s), provided that all grant requirements are met. Elevation costs can be reimbursed at up to \$175k per home and acquisition costs at up to \$276k per home. There would be a significant staff impact to administer the grant funds.

Additional Information:

https://www.fema.gov/media-library-data/1493317448449-b83f27544e36b7bf67913f964a56b15a/HMA_Homeowners_Guide_040717_508.pdf

7. FEMA Public Assistance: Damage Recovery from Hurricane Florence



Project Description: The Town has been working through the FEMA Public Assistance process for damage recovery from Hurricane Florence. This aspect of Public Assistance is associated with covering the costs associated with debris removal, emergency protective measures, restoring roads, equipment and facilities to pre-storm conditions, and administrative costs. It is considered separately from the activities described in #3 and #4 above, although also under the Public Assistance umbrella.

Project Background: Stormwater staff have been leading the Town's pursuit of FEMA Public Assistance funding. Staff have submitted claims for losses not covered by insurance and have been working with FEMA/NCDPS staff to document and receive reimbursement, as well as reimbursement for staff time associated with emergency response and follow up. This process has been underway since the winter.

Status: Active/nearing completion. The Florence damage recovery Public Assistance described above is nearing completion. The Town is awaiting final review and reconciliation, which is expected to take several months.

Fiscal and Staffing Considerations: The Town has requested support for about \$100k in uninsured costs. This work has required over 400 hundred hours of Stormwater staff time. **The Town started receiving reimbursal from FEMA in October.**

Additional Information:

https://www.fema.gov/media-library-data/1534520496845-4b41646e3d8839c768deb3a7f4ded513/PADeliveryModelFactSheetFINAL_Updated_052418.pdf
https://www.fema.gov/pdf/government/grant/pa/fema323_app_handbk.pdf

PART 2: WATER QUALITY & FEDERAL/STATE REGULATORY DRIVEN WORK

8. NPDES Town Wide Permit

What is an MS4 Permit Compliance Audit?

An MS4 Audit is a structured review of the Stormwater Management Program to evaluate whether the MS4 is meeting the requirements specified in the NPDES MS4 Permit & Stormwater Management Plan (SWMP)



AKA do you have your ducks in a row?

Department of Environmental Quality



Regulatory Requirement: The Town is regulated under a town wide permit that requires the Town to implement a comprehensive stormwater management program that includes six minimum measures:

- (1) Public education and outreach on stormwater impacts
- (2) Public involvement/participation
- (3) Illicit discharge detection and elimination
- (4) Construction site stormwater runoff control (delegated to Orange County)
- (5) Post-construction stormwater management for new development and redevelopment, and
- (6) Pollution prevention/good housekeeping for municipal operations.

The initial Carrboro permit was issued effective July 1, 2005, renewed in 2011, and again in 2017.

Background: In 1990, under the authority of the federal Clean Water Act and starting with large (population >100k) municipalities (and industries), EPA began regulating stormwater runoff. In 2000, the scope was extended to smaller municipalities, and EPA delegated the authority to the State to issue these municipalities (including Carrboro) a stormwater permit.

Status: Active. There is a planned EPA/State NPDES Phase II stormwater permit audit in 2020, with new compliance expectations from EPA and the State. Given the State's communications about the new requirements, and that 16 of the 20 communities that have been audited in 2019 have received Notices of Violation and 3 additional communities have received Notices of Deficiency, staff anticipate that a Notice of Violation or at best a Notice of Deficiency will result from the audit. Stormwater staff are working to improve permit performance, but have limited capacity due to other demands.

Fiscal and Staffing Considerations: Preparing for this audit and improving the Town's permit compliance and record keeping activities has been and will continue to be a major undertaking for staff.

Additional Information:

<https://deq.nc.gov/about/divisions/energy-mineral-and-land-resources/stormwater/stormwater-program/npdes-ms4-permitting>

9. NPDES Public Works Facility NPDES Permit

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF ENERGY, MINERAL, AND LAND RESOURCES
GENERAL PERMIT NO. NCG080000

TO DISCHARGE STORMWATER UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

for establishments primarily engaged in the following activities:

Vehicle Maintenance Areas

Regulatory Requirement: Under federal and state law, the Public Works facility continues to be regulated through an NPDES stormwater general permit.

Background: In 1990, under the authority of the federal Clean Water Act and starting with large (population >100k) municipalities (and industries), EPA began regulating stormwater runoff. In 2000, the scope was extended to smaller municipalities, and EPA delegated the authority to the State to issue these municipalities a stormwater permit. In addition to receiving a town wide permit, Carrboro received a separate permit for the Public Works facility given the operations occurring at the site and potential for stormwater impacts on water quality.

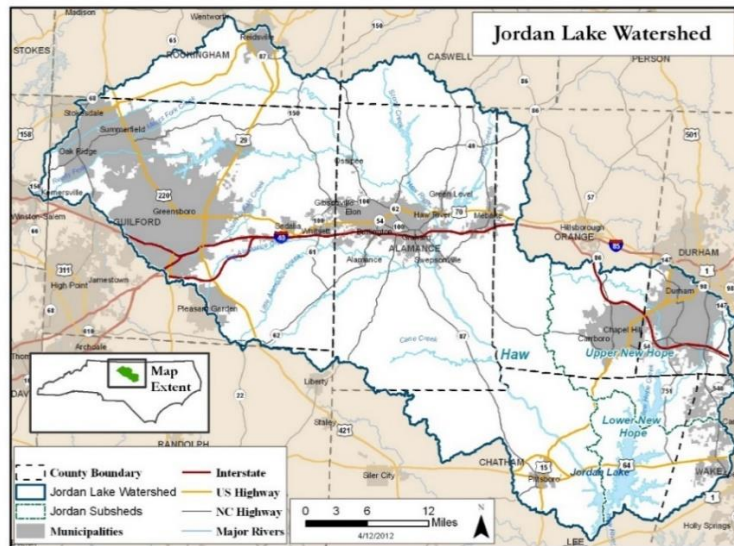
Status: Active. This activity has been and remains in a regular/routine operational status, with the facility remaining compliant with federal/state requirements.

Fiscal and Staffing Considerations: The Town has been working with a consultant for about \$6k/year to support regulatory compliance. There is also an ongoing and relatively low level of staff activity to maintain compliance.

Additional Information:

<https://deg.nc.gov/about/divisions/energy-mineral-land-resources/npdes-stormwater-gps>

10. Jordan Lake Rules Compliance



Regulatory Requirement: The Jordan Lake Rules are a nutrient management strategy designed to restore water quality in the lake by reducing the amount of pollution entering upstream. Restoration and protection of the lake is essential because it serves as a water supply for several thriving communities, a prime recreation area for more than a million visitors each year, and an important aquatic ecosystem.

Background: Jordan Lake was impounded in 1983 by damming the Haw River near its confluence with the Deep River. It was created to provide flood control, water supply, protection of water quality downstream, fish and wildlife conservation, and recreation. The lake has had water quality issues from the beginning, with the North Carolina Environmental Management Commission declaring it as nutrient-sensitive waters (NSW) the same year it was impounded. Since that time, Jordan Lake has consistently rated as eutrophic or hyper-eutrophic, with excessive levels of nutrients present. The most relevant provisions in the rules for Carrboro relate to stormwater management for both new and existing development, riparian buffers, and fertilizer application.

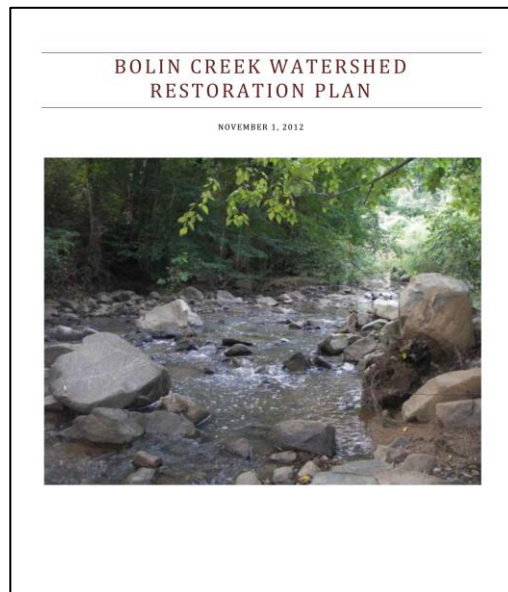
Status: Awaiting State Review. There was significant Town activity between about 2005 and 2015 to prepare for and enact ordinance provisions and begin work on implementation activities. Legislative action has delayed further implementation. Jordan Lake Rules regulatory review is anticipated for 2020, as a UNC Collaboratory study wraps up. TJCOG is coordinating stakeholder collaboration.

Fiscal and Staffing Considerations: The Town continues to be required to submit annual reports identifying stormwater retrofits, and has programmed these projects in the CIP. It is preliminary at this point to speculate on the potential fiscal/staff/regulatory impacts that will result, beyond an understanding that some staff time will be required to stay informed and report back as the review is pursued.

Additional Information:

<https://deq.nc.gov/about/divisions/water-resources/water-planning/nonpoint-source-planning/jordan-lake-nutrient>
<https://www.tjcog.org/programs-energy-environment%E2%80%AF-water-resources/jordan-lake-one-water>

11. Bolin Creek Watershed Restoration Plan Implementation



Regulatory Requirement: The downstream extent of Bolin Creek in Carrboro, and continuing into Chapel Hill, is on the state/federal list of impaired waters. Local actions are needed to improve water quality.

Background: Carrboro staff worked with Chapel Hill and other local, state and federal agency staff in 2006 to create the Bolin Creek Watershed Restoration Team (BCWRT) because of the impaired waters listing. At the time, the Bolin Creek watershed was selected as one of only 7 watersheds in the state to receive focused state and federal assistance in preparing grant applications and leveraging other resources to remove Bolin Creek from the impaired waters list. The selection was based on the listing and the existence of restoration planning efforts for the larger Morgan and Little Creek Watersheds, but also, because of the local interest in and capacity for progressive environmental initiatives. The BCWRT's long term goal is to improve the health of Bolin Creek and its tributaries and remove it from the impaired waters list. This is an ambitious goal that will require a robust commitment for many years to come.

Status: *Pending staff capacity/funding.* Watershed restoration plan implementation has been inactive since 2012 due to insufficient capacity/resources. Stormwater staff have met with Bolin Forest neighborhood representatives and others regarding collaborating on a potential grant application.

Fiscal and Staffing Considerations: There are no near term considerations. Longer term fiscal and staff considerations are uncertain. Competitive 319 grant funds (40% local match) could be pursued.

Additional Information:

<https://townofcarrboro.org/280/Bolin-Creek-Watershed-Restoration>

PART 3: WORK DRIVEN BY BOTH WATER QUANTITY AND QUALITY INTERESTS

12. Stormwater Service Delivery Review

The Stormwater Finance Landscape:

Where We've Come from and Where We've Yet to Go



UNC SCHOOL OF GOVERNMENT
Environmental Finance Center

Description: The purpose of this review is to research, consider, and prepare background material to present to the Board of Aldermen related to options for service delivery for the stormwater program going forward.

Background: The Town has been incrementally increasing the levels of stormwater services for several decades through Land Use Ordinance changes, preparation and implementation of multiple federal and state regulatory requirements, and in the past decade, in response to increases in intense rainfall events and increased flooding. This culminated in the creation of the Stormwater Utility and establishment of dedicated stormwater funding in 2017-18, setting the stage for the most significant increase in service delivery to date. The purpose of this review is to review current service delivery and look at options for service delivery going forward.

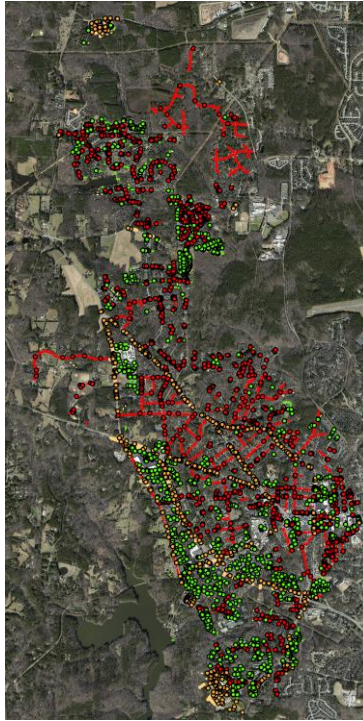
Status: Active. Staff presented the review and options and received feedback from the Board on September 10th. Staff are working on follow up items, and recommend scheduling a public hearing on modifications to the rate structure in early 2020.

Fiscal and Staffing Considerations: By nature of the review, future fiscal and staff impacts will occur if changes to the service delivery are chosen. **Additional Information:**

https://efc.sog.unc.edu/sites/default/files/2019/NC%20Stormwater%20Landscape_Final%20Draft_0.pdf

<https://www.epa.gov/sites/production/files/2018-01/documents/overcoming-barriers-to-development-and-implementation-of-asset-management-plans.pdf>

13. MS4 Inventory Update, Condition Assessment, Asset and Workflow Management



Description: This initiative involves using new technology to update the MS4 inventory, assess MS4 conditions, and create asset management and workflow systems and tools. Asset management is a strategic approach to maintaining and sustaining infrastructure in order to deliver services at the lowest overall life cycle cost. This method is intended for managing any assets, has traditionally been used for drinking water and wastewater, and is increasingly being used by stormwater utilities.

Background: A GIS based system inventory was first completed about 15 years ago in preparation for the Town's NPDES permit. While maintenance of the inventory is ongoing, some additional work is needed to fully complete the inventory so it can serve as the foundation for comprehensive stormwater workflow, regulatory tracking and asset management needs. The Town is in the process of implementing a new workflow management system (CityWorks) and GIS based field inventory capabilities. A system condition assessment has not been completed, nor has an asset management system been created. It is recommended that sufficient resources be allocated to allow this work to move forward.

Status: Active. Investments are being made in new information technology and staff are in the early phase of systems development, configuration, and staff training. Stormwater staff participated in Public Works review and configuration of City Works in September and October, and will be participating in training in the coming months.

Fiscal and Staffing Considerations: There is no direct fiscal impact currently. The need for additional resources (additional staffing and/or engineering or contractual services) will depend on the technical requirements and overall staff workload and the desired pace of moving this work forward.

Additional Information: <https://louisville.edu/cepm/projects/sustainable-community-capacity-building/asset-management-for-stormwater>

<https://www.epa.gov/sites/production/files/2018-01/documents/overcoming-barriers-to-development-and-implementation-of-asset-management-plans.pdf>

14. Stormwater Project Planning and Prioritization

	Criteria	Type	Possible	Points						
				10	9	8	7	6	5	4
	Public safety/welfare	Public interest	Mandatory	High infrastructure impacts			Medium infrastructure impacts			Low infrastructure impacts
Community Benefits	Conveyance repair/replacement	Infrastructure	10	Public infrastructure or insurable structures affected			Private property impacted			
	Public visibility/educational value	Public interest	10	High			Medium			
	Detention	Flood mitigation	10	Public infrastructure, insurable structures protected			private insurable structures protected			no insurable structures protected
	Water supply protection	Public interest	10				Yes			
	Green infrastructure	Multiple	10	Green street/parking lot			> 1 acre & reduction in curve # by >15			Other green infrastructure
Environmental Benefits	Stream/riparian repair/restoration	Stream/geomorphic	10	Perennial stream			Intermittent stream			
	Runoff (volume) reduction	Multiple	10	>cfs			> < cfs			>< cfs
	Impaired waters	Water quality/stream	8			Lower Bolin Creek		Upper Bolin Creek		
	Nutrient reduction	Water quality	7				> N reduction			< < N reduction
Feasibility	Landowner	Feasibility	10	Town owned		Other local agency		State/federal		Private-landowner easement/agreement
	In CIP?	Feasibility	5						Yes	

Description: The purpose of this work is to create a process for planning for and prioritizing large stormwater improvement/capital projects, to inventory all potential projects with a 10-20 year planning horizon, and to develop a prioritized 5 year project list/CIP update during FY 20.

Background: Carrboro has been identifying stormwater capital projects in the Capital Improvements Program (CIP) since 2012. These projects have historically been significantly but not solely motivated by the implementation of State's rules to restore Jordan Lake. Other studies have been completed and potential projects identified by the Town Engineer and also through, for example, the State's Ecosystem Enhancement program, Bolin Creek watershed restoration efforts, and efforts to identify infrastructure replacement/ improvement and stream repair/restoration projects. Identifying and implementing capital projects is an ongoing Town process, with updates to the CIP typically prepared annually.

Status: Active. Town staff have been working on planning level cost projections as part of the Service Delivery Review (#12). Jordan Lake Rules (#10), Bolin Creek Watershed Restoration (#11), and Condition Assessment/Asset Management (#13) are also relevant.

Fiscal and Staffing Considerations: There is no fiscal impact associated with identifying, planning for, and prioritizing projects. There will be a staff impact to pursue this work through much of FY 19/20, and a lower level impact in subsequent years.

Additional Information:

http://www.townofcarrboro.org/AgendaCenter/ViewFile/Agenda/_12052018-3552

15. Drainage Policy Review and Residential Assistance Program

TOWN DRAINAGE POLICY

The following constitutes a statement of the official policy of the Town of Carrboro, as adopted by the Board of Aldermen on June 12, 1984, relating to the improvement and maintenance of drainage ways within the town. This supersedes all previously adopted policies.

I. Drainage on Public Rights-Of-Way and Easements

The Town will continue to maintain at its own expense all drainage ditches, piped and unpipec, and other drainage ways located within public street rights-of-way or drainage easements conveyed to and accepted by the Town.

II. Drainage Problems On Private Property For Which the Town Is Legally Responsible

The Town will correct at its own expense a drainage problem created on private property where it is demonstrated to the reasonable satisfaction of the Public Works Director that: (i) surface water is being channeled from the public street right-of-way onto private property in a location where water would not naturally have flowed in the pre-development stage; or (ii) the drainage problem is created by water being channeled from the public street right-of-way onto private property, into a natural drainage way that is inadequate to handle the volume of water so channeled, and a substantial portion of the water consists of runoff from land not drained by the natural drainage way in the predevelopment stage; or (iii) the Town is otherwise legally responsible and liable for creating the drainage problem.

III. Town Participation In Drainage Improvements On Private Property Where The Town Is Not Legally Responsible For The Drainage Problem.

A. The Board of Aldermen has determined that drainage problems exit throughout the Town and that it is in the public interest and serves a public purpose for the Town to establish a public drainage system and to participate in the costs of making improvements to the public drainage system in accordance with the policies and procedures set forth in this section.

B. The Board of Aldermen hereby adopts that map entitled Stormwater Drainage Map and dated May 1, 1984 as the official public drainage system map for the town. The map indicates the network of natural drainage ways located on private property within the Town that the Town will improve and maintain, subject to the remaining provisions of this

Description: Stormwater staff have initiated a review of the Town's 1984 Drainage Policy and development of recommendations for an assistance program for residential property owners.

Background: Since the Stormwater Utility was formed, stormwater technical assistance provided by staff has increased. The residential assistance that staff have provide to date has not involved any financial assistance. An updated policy and program would help clarify the details of both technical and financial assistance (if any) that the Town may wish to provide for private residential property owners.

Status: See Pilot Study (#3). The proposed work by the Center for Neighborhood Technology (CNT) described in #3 will inform the development of an updated policy and program. Staff anticipate working on the drainage policy review and program recommendations during and after the CNT pilot project through internal staff review initially, followed by Stormwater Advisory Commission and Board of Aldermen review.

Fiscal and Staffing Considerations: Any fiscal impact resulting from financial assistance to be provided as part of a new program will be determined through administrative and policy level review. There has been and will continue to be a staff impact associated with technical assistance. This impact will increase if staff will be administering a new program.

Additional Information:

<http://www.townofcarrboro.org/AgendaCenter/ViewFile/Agenda/ 03142019-3607>



Town of Carrboro

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

Agenda Item Abstract

File Number:19-319

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Request to Set a Public Hearing for Modifications to the Stormwater Rate Structure

PURPOSE: The purpose of this item is to set a public hearing for January 28th, 2020 to consider modifications to the stormwater rate structure.

DEPARTMENT: Public Works

CONTACT INFORMATION: Randy Dodd, Stormwater Utility Manager 919 918-7341; Joe Guckavan, Public Works Director, 919 918-7427

INFORMATION: On September 10th, the Board received a staff report discussing stormwater service delivery and identifying options for accelerated and expanded service delivery going forward. Staff have reviewed and responded to the feedback provided and studied revenue needs for the program and translated the needs into a draft rate structure, as described in the staff memo and shown in the resolution. A public hearing is required for changes to the rate structure. It is recommended that this occur in January to provide ample time for consideration of the outcome in the preparation of the FY 20/21 operating budget. Staff will advertise through a variety of online/electronic means and the media, and will also plan for one or more drop in sessions.

FISCAL & STAFF IMPACT: The typical public hearing notice and advertising costs and staff impact will apply.

RECOMMENDATION: It is recommended that the Board set a public hearing on draft amendments to the Stormwater Utility rate structure for January 28th, 2020.

A RESOLUTION REGARDING
REVIEW OF THE STORMWATER UTILITY RATE STRUCTURE

WHEREAS, the Town of Carrboro modified the Town Code in June, 2017 to create a Stormwater Utility and Stormwater Enterprise Fund; and

WHEREAS, the Town adopted a stormwater rate structure in June, 2018; and

WHEREAS, the Board received a report with options for expanded delivery of stormwater services in September, 2019; and

WHEREAS, staff have prepared a recommendation for modifications to the rate structure to support expanded and accelerated services.

NOW, THEREFORE, The Board of Aldermen of the Town of Carrboro hereby directs staff to:

- a. schedule a Public Hearing on the amendment of the rate structure on January 28th, 2020;
and
- b. refer the recommended changes to the Stormwater Advisory and Economic Sustainability Commissions

The resolution is effective upon adoption.

This 12th day of November, 2019.

****DRAFT******CHANGES TO THE STORMWATER UTILITY RATE
STRUCTURE*****Draft 11-12-2019***

Section 1. Chapter 18, Article II, Section 18-6 of the Carrboro Town Code (Rate Structure) would be amended to read as follows:

Residential

<u>Tier</u>	<u>Minimum Impervious Surface (square feet)</u>	<u>Maximum Impervious Surface (square feet)</u>	<u>Fee</u>
1	500	5,999	\$90
2	6,000	---	\$180

Non-Residential

<u>Tier</u>	<u>Minimum Impervious Surface (square feet)</u>	<u>Maximum Impervious Surface (square feet)</u>	<u>Fee</u>
1	500	5,999	\$90
2	6,000	23,999	\$450
3	24,000	41,999	\$990
4	42,000	59,999	\$1,530
5	60,000	89,999	\$2,250
6	90,000	119,999	\$3,150
7	120,000	149,999	\$4,050
8	150,000	179,999	\$4,950
9	180,000	209,999	\$5,850
10	210,000	239,999	\$6,750
11	240,000	269,999	\$7,650
12	270,000	299,999	\$8,550
13	300,000	329,999	\$9,450
14	330,000	359,999	\$10,350
15	360,000	389,999	\$11,250
16	390,000	419,999	\$12,150
17	420,000	449,999	\$13,050
18	450,000	479,999	\$13,950
19	480,000	509,999	\$14,850
20	510,000	539,999	\$15,750
21	540,000	569,999	\$16,650
22	570,000	599,999	\$17,550



**TOWN OF
CARRBORO**

NORTH CAROLINA

**TRANSMITTAL
PUBLIC WORKS DEPARTMENT**

**To: David Andrews, Town Manager
Board of Aldermen**

From: Randy Dodd, Stormwater Utility Manager

Through: Joe Guckavan, Public Works Director

**Cc: Heather Holley, Stormwater Specialist
Arche McAdoo, Finance Director**

Date: November 5, 2019

Subject: Request to Set a Public Hearing on the Stormwater Rate Structure

Summary

The purpose of this memo is to follow up on the September 10th Board of Aldermen discussion by recommending that a public hearing be scheduled for January 28, 2020 on an amendment to the stormwater rate structure.

Information

Stormwater Services

On September 10th, the Board received a report on stormwater services, which have been incrementally increasing over the past 35-40 years. The Town is transitioning into its largest increase in services with the new Stormwater Utility, Enterprise Fund, and Advisory Commission.

Until 2018, the stormwater program was staffed through a distributed network of responsibility across departments and positions. With the formation of the Stormwater Utility and the establishment of a rate structure with dedicated funding, the Enterprise Fund is currently funding 2 full time staff positions who in turn are supported by other staff.

Beyond the transition from a formative to operational Stormwater Utility, the program is experiencing an inflection point for service delivery:

- 1) EPA and the State are now requiring a higher level of regulatory compliance, record keeping, and reporting for NPDES permits, which will require additional effort and capacity. One specific component of the Town's permit for which immediate attention is needed is expanding the inspections of Stormwater Control Measure (SCM) for private

properties with SCMs permitted by the Town.

- 2) Recent experience with and concern for more intense storms is leading to a need for the stormwater program to play an expanding role in improved resilience to storm/ flood events, and floodplain management. Specific current examples include pursuit of FEMA Hazard Mitigation Grant Program (HMGP) and Public Assistance funds, Toms Creek flood mitigation, and support for potential Land Use Ordinance amendments to improve resiliency.
- 3) Especially in some older sections of town, there is infrastructure that could need repair, rehabilitation, replacement, or retrofitting sooner than in newer parts of town.
- 4) The Jordan Lake Rules will be reviewed in 2020, which will likely place additional requirements on the program and Enterprise Fund.

Stormwater Enterprise Fund and Rate Structure

The Stormwater Enterprise Fund has been set up to fund both operational and capital stormwater program needs¹. The [rate structure](#) established in 2018 assumes that the utility will be both meeting operational needs and initiating projects with both water quantity/flood mitigation and water quality/environmental benefits, and there will be a transition time to build up reserves for larger projects that require more than a year of revenue.

The rate structure established in 2018 did not anticipate or attempt to completely reconcile:

- the new NPDES permit compliance requirements and record keeping that EPA and the State are in the process of implementing;
- uncertainties with comprehensive asset/infrastructure life cycle repair/rehabilitation/ replacement nor larger equipment purchases, given limited information;
- the hydrologic/meteorological situation in Carrboro in late 2018 and early 2019, and the resulting demands on the stormwater program;
- the staffing or fiscal impacts associated with seeking federal/state funding on a large scale, as is occurring with FEMA funds through the NC Department of Public Safety.
- uncertainties associated with requirements for the Jordan Lake Rules.

Establishing the rate structure was a necessary initial foundation for creating a program with dedicated funding, with a recognition that many details would need to be worked out over time to transition the Utility to a long term and sustainable enterprise. The long term nature is associated with the undertaking of developing a new and comprehensive program, maintaining and retrofitting infrastructure from a century worth of development, and building resiliency for uncertain and long term climate change related impacts. Since the Stormwater Utility is in the first year of receiving dedicated revenue, there are constraints on currently available funding for capital/larger projects since capital reserves are just beginning to accumulate. As a final point for the motivation for considering a rate increase, staff are responding to the general need for the program to increase and accelerate service delivery.

¹ This approach is referred to as “pay as you go”. According the UNC Environmental Finance Center, it is how most stormwater programs fund their programs, including capital improvements. The EFC discusses various funding and financing options at https://efc.sog.unc.edu/sites/default/files/2019/NC%20Stormwater%20Landscape_Final%20Draft_0.pdf

Service Level Options Going Forward

Three short term (1-2 year) service level/delivery expansion options were presented on September 10 (Table 1). Highlighted/italicized items were mentioned as priorities by Board members.

The following feedback is provided in response to specific Board comments provided on September 10th.

- Planning level projections have been run to determine a recommended rate structure to insure adequate capacity for a new residential assistance program. Staff are confident that the recommended rate structure will provide the capacity to initiate this new program. A more precise recommendation for annual program funding is expected in early 2020 when the “RainReady” pilot is wrapping up and the annual operating budget is being developed.
- Stormwater and Affordable Housing staff have conferred about coordination to support residents in affordable housing with stormwater related concerns and needs. When qualifying households have stormwater problems, staff plan to work on a case by case basis to see what solutions are possible. This will also be coordinated with the “RainReady” study and development of a Residential Assistance program.
- Regarding the creation of synergies in community outreach between the Community Climate Action Plan and the Center for Neighborhood Technology (CNT) Pilot “RainReady” Project, Stormwater staff and the Environmental Planner have collaborated and have also participated in a call with Center for Neighborhood Technology staff. Planning staff are looking into options for seeking support from CNT with neighborhood energy efficiency efforts.
- With regard to expediting inspections of privately owned and permitted Stormwater Control Measures, the main immediate need is for additional staff. The recommended rate structure will support a new staff position to focus on administrative and technical/office activities that will free up the Stormwater Utility Manager and Stormwater Specialist for these inspections, with the potential for support from other staff if needed. It is estimated that this responsibility requires approximately a full time equivalent professional position, which accounts for close to half of the recommended rate increase.

An important consideration for planning for service delivery over the next 1-2 years is that Stormwater staff are and, presuming funding is awarded, will continue to be supporting FEMA HMGP projects (2 grant cycles, four residential properties) and Public Assistance efforts (Florence disaster recovery and 2 projects). These are requiring a very significant amount of staff time, since their success is contingent on navigation of many administrative requirements. The primary motivation is that, if successful, flood mitigation will be provided for 4 of the most vulnerable residences along Toms Creek, a very vulnerable situation at Public Works will be addressed, and an important infrastructure project will be completed. The Town could, if successful, also access close to \$1M of federal and state funds for these projects. (They are being pursued on a reimbursal basis that requires substantial documentation and adherence to federal requirements; funding is not guaranteed.) Stormwater staff’s pursuit of these projects is one reason why the two core/full time Stormwater staff are not currently able to devote more time to other important activities such as NPDES permit compliance or other service expansion. In addition, it is important to plan for sufficient capacity for future infrastructure projects.

Table 1. Service Expansion Options Matrix (1-2 year time horizon)²

Services	Current/Planned	Option 1	Option 2
Public Stormwater Infrastructure (repair, rehab, replace, retrofit, extend)	Pursue Public Works stream restoration and Broad Street Culvert Replacement. Develop prioritization matrix of already identified projects.	Update MS4 inventory Initiate system wide condition assessment	Finish condition assessment and develop life cycle repair, rehab, replacement implementation plan. Develop green infrastructure plan.
Private Stormwater Control Measures Inspections	Inspect 25% of SCMs in next 18-24 months.	<i>Inspect 50% of SCMs within 2 years.</i>	<i>Inspect 100% of SCMs within 2 years.</i>
Regulatory/Water Quality	Prepare for NPDES audit in early 2020 as able with current capacity and workload. Continue to track Jordan Lake Rules.	Prioritize/expand NPDES permit compliance activities	Commit to 319 grant application for next grant cycle (2020).
Flood Mitigation/Resilience	Continue with FEMA HMGP grants and Public Assistance projects. Complete engineering assessment for Toms Creek catchment. Complete neighborhood pilot RainReady project. ³ Schedule LUO text amendment public hearing by December, 2020.	<i>Launch residential assistance program within 2 years</i> Schedule LUO text amendment public hearing by September, 2020.	Could include additional cost sharing. Schedule LUO text amendment public hearing by June, 2020.
Stormwater Operations and Administration	Continue with Stormwater Enterprise Fund administration and other current operations. Initiate workflow management system.	Consider new contractual services, e.g., on call Jet Vac and inspections of MS4	Invest in additional equipment. Consider tiered rate structure and/or credit manual Prepare first annual stormwater report.

Recommendation

Staff recommend amending the rate structure as shown below and in the attached resolution, which is a 20% increase along with an addition of a second residential tier. This rate structure will allow the Town to in general accelerate and expand stormwater service delivery, more quickly create reserves to pursue larger projects, and to specifically respond to the feedback provided by the Board. Staff recommend that the Board of Aldermen direct staff to set a public hearing for January 28, 2020 on the proposed changes to the rate structure.

² Options 1 or 2 will require a rate increase. All “Current/Planned” services are implicit in “Option 1”. “Option 1” services are implicit in “Option 2”. Only services not included in others are shown for “Option 2”.

³ The Center for Neighborhood Technology “RainReady” pilot study has been initiated.

Draft Residential Rate Structure

<u>Tier</u>	<u>Minimum Impervious Surface (square feet)</u>	<u>Maximum Impervious Surface (square feet)</u>	<u>Annual Fee</u>	<u># of properties</u>
1	500	5,999	\$90	4507
2	6,000	-	\$180	213

Draft Non-residential Rate Structure*

<u>Tier</u>	<u>Minimum Impervious Surface (square feet)</u>	<u>Maximum Impervious Surface (square feet)</u>	<u>Annual Fee</u>	<u># of properties</u>
1	500	5,999	\$90	1047
2	6,000	23,999	\$450	256
3	24,000	41,999	\$990	35
4	42,000	59,999	\$1,530	10
5	60,000	89,999	\$2,250	12
6	90,000	119,999	\$3,150	8
7	120,000	149,999	\$4,050	6
8	150,000	179,999	\$4,950	3
9	180,000	209,999	\$5,850	5
10	210,000	239,999	\$6,750	5
11	240,000	269,999	\$7,650	2
12	270,000	299,999	\$8,550	2
13	300,000	329,999	\$9,450	3
14	330,000	359,999	\$10,350	1
15	360,000	389,999	\$11,250	1
16	390,000	419,999	\$12,150	2
17	420,000	449,999	\$13,050	1
18	450,000	479,999	\$13,950	1
19	480,000	509,999	\$14,850	1
20	510,000	539,999	\$15,750	0
21	540,000	569,999	\$16,650	0
22	570,000	599,999	\$17,550	1

* includes condominiums



Town of Carrboro

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

Agenda Item Abstract

File Number:19-356

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Contract Amendment for CEI Services for the Homestead Road-Chapel Hill High School Multi-use Path

PURPOSE: The purpose of this agenda item is to request authorization from the Board of Aldermen to amend the contract with Summit Design and Engineering Services for additional CEI services to complete the project.

DEPARTMENT: Planning, Finance

CONTACT INFORMATION: Christina Moon - 919-918-7325; Patricia McGuire - 919-918-7327; Arche McAdoo - 919-919-7439

INFORMATION: As the Homestead Road-Chapel Hill High School multi-use path project shifts from construction to close-out, additional Construction Engineering and Inspection (CEI) services are needed associated with project administration. Summit Design and Engineering Services, the consultant firm providing CEI services have prepared an estimate of \$14,272 to complete this work. Final costs would reflect actual expenditures, equal to or less than the estimate. NCDOT has reviewed and approved the scope of work and associated rates. Contingency provided in the last capital improvement project ordinance, adopted on June 20, 2018 covers this expense.

FISCAL & STAFF IMPACT: NCDOT has approved Summit's estimate of \$14,272. There are sufficient funds in the project budget to cover this additional cost.

RECOMMENDATION: Staff recommends that the Board authorize the Town Manager to execute a contract amendment with Summit Design and Engineering Services for additional CEI services (Attachment A).

A RESOLUTION AUTHORIZING AN AMENDMENT TO THE CONTRACT WITH SUMMIT
DESIGN AND ENGINEERING SERVICES FOR ENGINEERING SERVICES FOR THE
HOMESTEAD ROAD CHAPEL HILL HIGH SCHOOL MULTI-USE PATH

WHEREAS, the Town entered into a contract with Summit Design and Engineering Services on May 2, 2016, to provide Construction Engineering and Inspection services (CEI) for the Homestead Road Chapel Hill High School Multi-use Path; and

WHEREAS, on June 20, 2018, the Board of Aldermen authorized the Town Manager to amend the contract with Summit Engineering for additional work; and

WHEREAS, the costs associated with the CEI services are expected to exceed the amount in the amended contract.

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

1. The Town Manager is authorized to amend the contract with Summit Design and Engineering Services for additional CEI services for the Homestead Road Chapel Hill High School Multi-use Path.
2. The amount of the existing contract shall be increased by \$14,272.00 from \$188,631.00 to a total amount not to exceed \$202,902.00.
3. The end date of the contract with Summit Design and Engineering Services is extended through the date of close out of the Project.
4. This resolution is effective immediately.

This the 12th day of November in the year 2019.



Town of Carrboro

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

Agenda Item Abstract

File Number: 19-351

Agenda Date: 11/12/2019

File Type: Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Authorization for Staff to Bring Back a Consent Agenda Item Making Amendments to the Town Code Pertaining to the Youth Advisory Board

PURPOSE: The purpose of this agenda item is to amend the Youth Advisory Board language to make the membership language less confusing and more practical.

DEPARTMENT: Town Clerk

CONTACT INFORMATION: Cathy Dorando

INFORMATION: During the 18-19 Youth Advisory Board (YAB) session the members voted to make the following practical changes to the Town Code:

- Allow for persons that are 14 years of age to serve (freshman)
- Allow members to be reappointed for up to 4 terms (allows service freshman-senior years)
- Change the liaison from Assistant to the Town Manager to a staff liaison selected by the Mayor and Town Manager (Currently Town Clerk)
- Amend the requirement to select officers at the first meeting of the YAB (this will allow them to get to know one another beforehand)
- Remove language that authorizes the Board of Aldermen to “remove members for conduct detrimental to the performance and function of the Board.” (The YAB thought this allowed for too much human discretion and judgement of character.)

Alderman Foushee spoke with the Town Clerk about a youth in the community that was confused over membership requirements and she recommended that the language in the Code be amended to be as clear and easy to understand as possible. After review, it is recommended that the following change is adopted to meet this goal:

- Remove equal representative language for area high schools to clarify that members are accepted if they meet one of the following three requirements:
 - Live in Carrboro’s jurisdiction; or,
 - Work in Carrboro; or,
 - Attend public/private/homeschool.

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

FISCAL & STAFF IMPACT: N/A

RECOMMENDATION: It is recommended that the Mayor and Board adopt the attached resolution authorizing staff to bring back a consent agenda item making the changes to the Town Code.

RESOLUTION AUTHORIZING STAFF TO PREPARE AN ORDINANCE AMENDING THE
TOWN CODE SECTION 3-24.13 PERTAINING TO THE YOUTH ADVISORY BOARD

NOW, THEREFORE BE IT RESOLVED BY THE CARRBORO BOARD OF ALDERMEN
THAT:

Section 1. Staff is hereby permitted to prepare a consent agenda item for November 19th that will have an ordinance amending the Town Code as depicted in Attachment B and described in the agenda item.

AN ORDINANCE AMENDING CHAPTER 3 OF THE TOWN CODE RELATING TO THE CARRBORO YOUTH ADVISORY BOARD

Section 1. Chapter Three of the Carrboro Town Code is amended by rewriting Section 3-24.13, in its entirety, as follows:

Section 3-24.13 Carrboro Youth Advisory Board Established

(a) There shall be a Carrboro Youth Advisory Board composed of no fewer than seven (7) and no more than eleven (11) voting members. These members shall be selected by the Mayor's Office in consultation with the staff liaison and shall be composed as follows:

- (1) All members shall be between the ages of 14 and 18 years old, and shall reside or work within the Carrboro jurisdiction and attend public, private or homeschool classes.
- (2) No member may be enrolled as a full-time college student;
- (3) To the extent possible, the membership of the Board should reflect the demographic diversity of the population of students eligible for membership.

(b) The purpose of the Carrboro Youth Advisory Board is to provide young people with an opportunity to participate in an advisory capacity in the decision-making process of local government, and to provide input to the Board of Aldermen about issues affecting young people and regarding how local government policies and actions affect young people. The Mayor's Office in consultation with the staff liaison will select members in the fall of each school year for a one year term which coincides with the current school year. Members may be reappointed for up to four (4) terms.

(c) The Carrboro Youth Advisory Board shall report to the Mayor. The Mayor and Town Manager shall select the Staff Liaison to the Board.

(d) The members of the Board shall elect a Chair and a Vice Chair to preside over the Board's meetings. Members shall only be eligible to serve as Chair or Vice Chair for one consecutive term.

(e) The Carrboro Youth Advisory Board shall meet one time each month. All meetings of the Carrboro Youth Advisory Board shall be open to the public, and shall be subject to North Carolina's open meeting statutes. The Mayor or the Staff Liaison may request information from members of the Board between Board meetings from time to time, and Board members are expected to be available and responsive to such requests.

(f) A simple majority of the members of the Board shall constitute a quorum.

(g) Board members shall be expected to attend and actively participate in all Board meetings. It is also expected that Board members will be asked, or required, to attend occasional leadership development programs and Board of Aldermen meetings (or other

Town Advisory Board meetings). Board members are expected to actively participate in the preparation of written reports to the Board of Aldermen on matters which are referred to the Board for comment, and may be asked to make presentations to the Board of Aldermen.

(h) Members of the Carrboro Youth Advisory Board may be removed by the Board of Aldermen if they are absent from two (2) consecutive Board meetings without having notified the Board Chair and the Staff Liaison that they will be unable to attend.

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

Section 3. This ordinance shall become effective upon adoption.



Town of Carrboro

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

Agenda Item Abstract

File Number:19-347

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Town Code Amendment Establishing a Speed Limit on Laughing Bird Lane

PURPOSE: The purpose of this agenda item is to provide the Board with an update on the outreach conducted to residents on Laughing Bird Lane, a summary of their feedback, and a proposed town code amendment establishing a speed limit.

DEPARTMENT: Planning

CONTACT INFORMATION: Zachary Hallock, 919-918-7329, zhallock@townofcarrboro.org

INFORMATION: This item was last discussed by the Board of Aldermen at their meeting on September 24, 2019. More information can be found at:

<https://carrboro.legistar.com/LegislationDetail.aspx?ID=4143994&GUID=2EB76330-51FE-4305-B9CC-3C63B3E04177&Options=&Search=>>

At that meeting the Board directed staff to conduct outreach to the residents living along Laughing Bird Lane to gauge their preference for a posted speed. This was done via a small mailing to the eight properties which have frontage along the street, responses were received from all. A summary of resident response and preferences [Attachment B] and the specific responses [Attachment C] are included in this agenda item.

Residents have shown a clear preference for a posted speed limit of 15 MPH.

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

RECOMMENDATION: Staff recommend the Board consider the proposed town code amendment [Attachment A], which establishes a speed limit of 15 MPH on Laughing Bird Lane.

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

Draft 11/12/2019

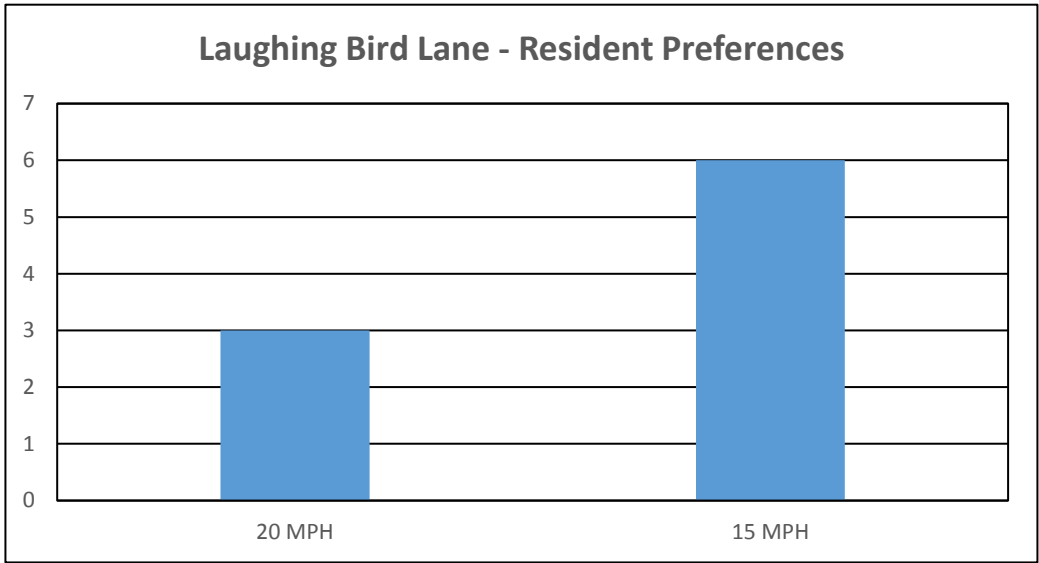
THE CARRBORO BOARD OF ALDERMEN ORDAINS:

Section 1 Article III, of Chapter 6, Section 6-15, Subsection (b)(2) of the Carrboro Town Code (established speed limit of Fifteen (15) 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.



Comments Received:

Prefer sign telling people to be mindful and slow down, no posted speed
Before setting speed limit drive on the street at 25 then 20 mph.
Delivery people turn off poplar very quickly.
Speed reducing measures needed on West Poplar.

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Jim Stephens

Address: 104 laughing bird lane

- ☐ Twenty-five (25) miles per hour
- ☒ Twenty (20) miles per hour
- ☐ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

- 1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
- 2. Delivering it in person to Carrboro Town Hall.

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Margaret Watts

Address: 105 Laughing Bird Lane

- ☐ Twenty-five (25) miles per hour
- ☒ Twenty (20) miles per hour
- ☒ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

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Establishing a Speed Limit on Laughing Bird Lane

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Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Adrienne Stephens

Address: 164 Laughing Bird Ln

- ☐ Twenty-five (25) miles per hour
- ☒ Twenty (20) miles per hour
- ☒ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

I think
I'd prefer a sign telling
people to be mindful
and slow down,
and no posted
speed limit

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

- 1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
- 2. Delivering it in person to Carrboro Town Hall.

Thanks!

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Paul Summ

Address: 106 Laughing Bird Ln

- ☐ Twenty-five (25) miles per hour
- ☐ Twenty (20) miles per hour
- ☒ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
2. Delivering it in person to Carrboro Town Hall.

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Stephen M. Randall

Address: 103 Laughing Bird Lane

- ☐ Twenty-five (25) miles per hour
- ☐ Twenty (20) miles per hour
- ☒ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
2. Delivering it in person to Carrboro Town Hall.

Before setting the speed limit
please drive onto the street
at 25 then at 20 mph.

If 25 is appropriate for Poplar
it cannot be appropriate for
Laughing Bird Lane as there is
less traffic.

Ask police for their opinion.

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Aileen Randall

Address: 103 Laughing Bird Lane

☐ Twenty-five (25) miles per hour

☐ Twenty (20) miles per hour

☒ Fifteen (15) miles per hour

☐ Ten (10) miles per hour

☐ No preference

the Lane only passes in front of 3 houses but deliver people fly off Paplar onto Laughing Bird at a high rate of speed. The Lane is made of gravel.

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

- 1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
- 2. Delivering it in person to Carrboro Town Hall.

Thank you for considering this matter.

Aileen Randall

Establishing a Speed Limit on Laughing Bird Lane

In order to help ensure the decisions made by the Town of Carrboro reflects the desires of its residents, we welcome your feedback to help identify a preferred speed limit on Laughing Bird Lane.

Please complete this form and indicate using the check boxes below what your preference for a posted speed limit on Laughing Bird Lane is. You may choose more than one option if you so prefer.

Name: Karin Mills / Linda Bourne

Address: 115 W. Poplar Ave, Carrboro

- ☐ Twenty-five (25) miles per hour
- ☐ Twenty (20) miles per hour
- ☒ Fifteen (15) miles per hour
- ☐ Ten (10) miles per hour
- ☐ No preference

We would also ask for
SPEED-REDUCING MEASURES
ON WEST POPLAR. Most people
drive entirely too fast !!

Please return this form to the Town of Carrboro Planning department to ensure that your feedback is received. You can return the form in one of two ways:

1. Mailing it back to Carrboro Town Hall using the stamped envelope provided; or
2. Delivering it in person to Carrboro Town Hall.



Town of Carrboro

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

Agenda Item Abstract

File Number: 19-361

Agenda Date: 11/12/2019

File Type: Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Disposal of Surplus Property and Public Auction November 16, 2019

PURPOSE: To seek authorization for disposal of surplus personal property owned by the Town.

DEPARTMENT: Finance, Public Works, et al

CONTACT INFORMATION: Arche McAdoo, ext. 7493; Joe Guckavan, ext. 7427

INFORMATION: It's been two years since the Town has held a public auction to dispose of surplus vehicles, equipment and other personal property owned by the Town. In the past all surplus vehicles and equipment were transported to High Point for public auction at facilities of the auctioneer. Other surplus personal property items were sold via the internet on www.govdeals.com <<http://www.govdeals.com>>. This year we plan to hold a public auction on site at the Public Works Facility and Grounds.

Exhibit 1 to Attachment A, Resolution for Disposal of Town Surplus Property, is a list of surplus property identified so far that is intended for the public auction sale on November 16, 2019. There may be other items, such as the solid waste vehicle recently taken out of service that needs to be added to the list. While each item or group of items is estimated to have a fair market value of less than thirty thousand dollars (\$30,000), we anticipate total revenues from this sale will be more than \$30,000.

The Town issued a Request for Proposals (RFP) for auctioneer services and subsequently contracted with Rogers Auctioneers, Inc. Rogers Auctioneers will handle set-up, advertising, logistics and a crew of 6-10 staff to conduct the auction.

FISCAL & STAFF IMPACT: All funds from the public auction sale will be deposited in the Town's General Fund.

RECOMMENDATION: That the Board of Aldermen adopt the attached resolution for disposal of Town surplus property.

RESOLUTION FOR DISPOSAL OF TOWN SURPLUS PROPERTY

WHEREAS, the Town Manager pursuant to N.C.G.S. 160A-266 (c) is authorized to dispose of any surplus personal property owned by the Town of Carrboro whenever he determines, in his discretion, that the property is no longer necessary for the conduct of public business; and, the item or group of items has a fair market value of less than thirty thousand dollars (\$30,000.00); and,

WHEREAS, the Town now has accumulated a number of vehicles and equipment that have been replaced by the acquisition of new vehicles and equipment; and,

WHEREAS, other personal property owned by the Town is no longer useable due to the wear and tear or obsolescence, such as Recreation and Parks athletic equipment, Police digital cameras, etc.; and,

WHEREAS, the Town Manager has determined that certain vehicles, equipment and other personal property no longer necessary for the conduct of Town business;

NOW THEREFORE, THE Board of Aldermen of the Town of Carrboro hereby resolves that:

1. The Town Manager is authorized to dispose of the surplus property listed in the attached Exhibit 1, and any other surplus property as the Town Manager may deem appropriate.
2. Town Manager is authorized to dispose of surplus property at a public auction to be conducted by Rogers Auctioneer, Inc. at the Public Works facility and grounds on November 16, 2019 beginning at 10:00 AM and ending at 5:00 PM.
3. The public auction shall be conducted by Rogers Auctioneer, Inc. or other licensed auctioneer retained on contract by the Town Manager.
4. The terms of the public auction sale shall be as follows:
 - a. to the highest bidder;
 - b. items specifying a minimum bid price shall be to the highest bidder equaling or exceeding the established minimum;
 - c. all sales shall be designated final on the day of the auction; and
 - d. all items shall be sold on an "as is" and "where is" basis and the Town makes no guarantee of merchantability or any other implied or express warranty and assumes no responsibility for any of the items.
5. Any items remaining after the public auction may, at the Town Manager's discretion, be offered for sale online at www.govdeals.com or other online bidding site(s); or the Town Manager may retain the property, obtain any reasonably available salvage value, or cause it to be disposed of as waste material.

6. Advertisement of all public and online auctions are to be posted to the Town of Carrboro website prior to the date(s) of the auction.
7. This resolution is effective immediately and shall remain in effect through the fiscal year ending June 30, 2020.

Town of Carrboro Personal Property Declared Surplus for Disposal

(Note: This list is not final and may be modified by the Town Manager at his discretion prior to public auction.)

SURPLUS VEHICLES AND EQUIPMENT

MAKE	MODEL	VIN/SER#	EST. VALUE
Epoke	Salt Spreader	13010212	\$500.00
045 Case	Case 685 tractor	3021176	\$2,500.00
OMC-Lincoln	Airrator	135123	\$350.00
Kodiak	Bush Hog	N/A	\$250.00
Billy Goat Ind.	Leaf vaccum	N/A	\$150.00
Gandy	Area-vator seeder	86215	\$250.00
067 LeeBoy	LPG Tar Kettle	KEB-115	\$250.00
Toro STI	Top Dresser	144501-70121	\$250.00
021 ODB Leaf Vac	LCT 600	0106-4296	\$500.00
ODB Leaf Box	14.5 Leaf box	N/A	\$1,000.00
601 Toro	GM3280-D	30345-260000450	\$450.00
801 Freightliner	Condor	5SXHANCYX7RZ22109	\$5,000.00
Large white seeder fertilizer	N/A	N/A	\$150.00
004 Ford	Taurus	1FAFP53U64A179927	\$1,131.00
222 Chevrolet	Impala	2G1WS55R97269454	\$2,382.00
223 Chevrolet	Impala	2G1WS55R379273676	\$1,038.00
232 Dodge	Avenger	1B3LC46R38N220329	\$1,848.00
250 Chevrolet	Malibu	1G11C5SA3DF258359	\$4,924.00
Old #33 Monroe	Snow Plow	11'-10"	\$1,800.00
Old #502 Monroe	Snow Plow	08-02-1008 10'-10"	\$1,200.00
068 Sullair	185 compressor	004-137106	\$2,000.00

TOTAL \$27,923.00

RECREATION AND PARKS SURPLUS EQUIPMENT

<u>ITEM</u>	<u>QUANTITY</u>	<u>PURCHASE PRICE (EA)</u>	<u>TOTAL</u>	<u>EST VALUE (EA)</u>	<u>TOTAL</u>
Field Hockey Helmet – Bauer	11	\$ 60	\$ 660.00	\$ 5.00	\$ 55.00
Field Hockey Helmet – Cooper	2	\$ 60	\$ 120.00	\$ 5.00	\$ 10.00
Field Hockey Sticks	27	\$ 20	\$ 540.00	\$ 5.00	\$ 135.00
Field Hockey Leg Guards	3	\$ 100	\$ 300.00	\$ 5.00	\$ 15.00
Field Hockey Girdle	4	\$ 56	\$ 224.00	\$ 2.00	\$ 8.00
Field Hockey Padded Pants	6	\$ 80	\$ 480.00	\$ 2.00	\$ 12.00
Field Hockey Kickers (shoes)	6	\$ 60	\$ 360.00	\$ 2.00	\$ 12.00
Field Hockey Chest Protector	15	\$ 37	\$ 555.00	\$ 2.00	\$ 30.00
Portable Backboard Rim Combo	5	\$ 400	\$ 2,000.00	\$ 50.00	\$ 250.00
Basketballs	78	\$ 30	\$ 2,340.00	\$ 10.00	\$ 780.00
Volleyballs	1	\$ 24	\$ 24.00	\$ 5.00	\$ 5.00
Standard style T-shirts (wording & colors change)	153	\$ 7	\$ 1,071.00	\$ 1.00	\$ 153.00
Tank top style t-shirts (wording & colors change)	82	\$ 7	\$ 574.00	\$ 1.00	\$ 82.00
Chest Protectors Rawlings LL8p-1 (ages 9-12)	17	\$ 24	\$ 408.00	\$ 10.00	\$ 170.00
Chest Protectors Rawlings 6P (ages 5-7)	5	\$ 20	\$ 100.00	\$ 5.00	\$ 25.00
Chest Protectors Rawlings 6P (ages 5-7)	13	\$ 20	\$ 260.00	\$ 5.00	\$ 65.00
Rawlings Adult ULG pro Shin Guards	1	\$ 30	\$ 30.00	\$ 10.00	\$ 10.00
Batting Helmet	229	\$ 14	\$ 3,206.00	\$ 5.00	\$ 1,145.00
Catcher's Mask	5	\$ 50	\$ 250.00	\$ 20.00	\$ 100.00
Face Mask (Umpire)	1	\$ 20	\$ 20.00	\$ 5.00	\$ 5.00
Catcher's Mitt	1	\$ 35	\$ 35.00	\$ 10.00	\$ 10.00
Bat Donut	1	\$ 7	\$ 7.00	\$ 2.00	\$ 2.00
Fastpitch Girls Softball Bat	1	\$ 15	\$ 15.00	\$ 5.00	\$ 5.00
Batting Helmet Face Shields	48	\$ 10	\$ 480.00	\$ 2.00	\$ 96.00
Equipment Bags	23	\$ 60	\$ 1,380.00	\$ 15.00	\$ 345.00
Compression Shorts- Rawlings	6	\$ 15	\$ 90.00	\$ 2.00	\$ 12.00
Mizuno Chipper Jones Baseball Glove (small)=1	1	\$ 2	\$ 2.00	\$ 0.25	\$ 0.25
Mesh bag (white)	1	\$ 2	\$ 2.00	\$ 2.00	\$ 2.00
Gray Pinstripe-Allenson youth XL BB Pants	1	\$ 15	\$ 15.00	\$ 2.00	\$ 2.00
Gray Pinstripe-Augusta youth XL =2	2	\$ 15	\$ 30.00	\$ 2.00	\$ 4.00
White Pinstripe-Augusta youth XL	1	\$ 15	\$ 15.00	\$ 2.00	\$ 2.00
Solid Gray-Russell-size	1	\$ 15	\$ 15.00	\$ 2.00	\$ 2.00
White-Nike youth XL	1	\$ 15	\$ 15.00	\$ 2.00	\$ 2.00
Rawlings	1	\$ 15	\$ 15.00	\$ 2.00	\$ 2.00
Baseball Caps	39	\$ 5	\$ 195.00	\$ 1.00	\$ 39.00
			\$ 15,833.00		\$ 3,592.25



Town of Carrboro

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

Agenda Item Abstract

File Number:19-352

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

A Public Hearing Regarding Feedback on Making the Name of the Governing Board Gender Neutral

PURPOSE: The purpose of this item is to hold a public hearing regarding making the name of the governing board of the Town of Carrboro gender neutral.

DEPARTMENT: Town Clerk

CONTACT INFORMATION: Town Clerk

INFORMATION:

Section 2-1. Governing Body.

(a) The governing body of the Town of Carrboro shall consist of a mayor and six aldermen, commissioners, councilors, or council members, as determined by resolution of the Town of Carrboro, elected as provided in Section 2-2. The governing body shall be known as the Board of Aldermen, Board of Commissioners, Board of Councillors, or Town Council, as determined by resolution of the Town of Carrboro. Whenever this Charter or any ordinance, resolution, or other document refers to the Carrboro Board of Aldermen, such reference shall be deemed to refer to the Carrboro Board of Aldermen, Board of Commissioners, Board of Councillors, or Town Council, as determined by resolution of the Town of Carrboro. [Amended by S.L. 1999, Ch. 255, Sec. 2]

Names not listed in Section 2-1 would require an act of the General Assembly.

At this meeting, the Board will hear from the public and consider the following:

1. Whether to adopt a resolution changing the name of the governing body to one of the allowable options per Section 2-1(a);
2. Whether to approve another name for the governing body and instruct staff to pursue a local act with the Town's legislative delegation;
3. Whether to keep the current name of the governing body.

FISCAL & STAFF IMPACT: There will be various levels staff time associated with responding to the

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

direction of the Board. The estimate is between 2 and 20 hours depending upon the direction.

RECOMMENDATION: It is recommended that the Board hold the public hearing and have a discussion.



Town of Carrboro

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

Agenda Item Abstract

File Number: 19-344

Agenda Date: 11/12/2019

File Type: Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Approval of Design for Stage 2 Traffic Calming on Cobblestone Drive

PURPOSE: The purpose of this agenda item is to present a recommended design of Stage 2 traffic calming for Cobblestone Drive and for the Board of Aldermen to approve a design.

DEPARTMENT: Planning

CONTACT INFORMATION: Zachary Hallock, 919-918-7329, zhallock@townofcarrboro.org
<<mailto:zhallock@townofcarrboro.org>>

INFORMATION:

- On March 19th, 2019 the Board of Aldermen received a petition for traffic calming on the 100 block of Cobblestone Drive and directed staff to proceed with installing Stage 2 traffic calming devices prior to the beginning of the 2019-20 school year. The Board of Aldermen also directed staff to implement Stage 1 traffic calming and include a bike boulevard concept in a meeting with neighbors and to perform follow up counts and analysis.
 - Details of this meeting can be found at:
<https://carrboro.legistar.com/MeetingDetail.aspx?ID=678571&GUID=ABCD5145-DDD0-4077-8022->
- Installing stage 2 measures before the fall school year accelerated the implementation sequence. Specifically, traffic counts, taken only during the school year, would follow Stage 2, rather than precede it.
- On Saturday, May 5th a neighborhood traffic calming meeting was held along Cobblestone Drive.
- Staff worked to develop a temporary installation that could be in place before the start of school and could be modified if it did not achieve desired results.
- Residents were notified of the installation during the week of July 31st.
- Based on feedback received from the residents, all physical traffic calming measures other than the speed bump were removed during the week of August 7th.
- Additional community input session were held during August and September, at which a design option [Attachment C] was presented which included three speed humps along the 100 block of Cobblestone Drive.
- The previously mentioned design and another alternative which included four speed humps [Attachment D] was presented at the Transportation Advisory Board meeting in October.
 - Comments from the TAB [Attachment E], comments from residents in attendance of the TAB meeting [Attachment F], and documentation of all comments received since May [Attachment G] are included.

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

- Residents have questioned the effectiveness of Speed Tables vs Speed Humps. Research from the Federal Highway Administration [Attachment H] indicates that across a large set of sample test sites showing both devices, the speed reduction is similar: -6 to -8 MPH for humps and -4 to -9 MPH for tables.
- The cost of three rubber or asphalt humps ranges from \$8,100 to \$19,500, with rubber devices having a lower unit cost. Rubber traffic calming devices are sufficiently durable given the low volumes of traffic on Cobblestone Drive that they could be used as permanent devices, with the additional benefits of being able to remove and reinstall during street resurfacing (rather than having to remove and replace a new asphalt speed hump or otherwise work around the existing section).
- A new stop sign was included as part of the pilot. A town code amendment recognizing the sign is needed to make it enforceable [Attachment B].

FISCAL & STAFF IMPACT: Cost to be determined based on Board action. Staff would bring a budget item forward at a future meeting, as needed.

RECOMMENDATION: Staff recommends the Board of Aldermen consider the resolution [Attachment A] approving the design with three speed humps and the town code amendment [Attachment B] for the four-way stop.

A RESOLUTION APPROVING DESIGN OF STAGE 2 TRAFFIC CALMING ON
COBBLESTONE DRIVE

WHEREAS, on March 19th the Board of Aldermen directed staff to implement Stage 2 traffic calming measures on Cobblestone Drive prior to the beginning on the new school year; and,

WHEREAS, staff have worked to incorporate feedback from residents and comments from the Transportation Advisory Board into the design of traffic calming; and,

NOW, THEREFORE BE IT RESOLVED by the Carrboro Board of Aldermen that the Board approves the proposed stage 2 traffic calming design for Cobblestone Drive.

BE IT FURTHER RESOLVED that the Board provides the following additional comments:

This is the 12th day of November in the year 2019

AN ORDINANCE AMENDING THE TOWN CODE TO CREATE A FOUR-WAY STOP ON
COBBLESTONE DRIVE AT ROCKGARDEN ROAD

Draft 11/12/2019

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:

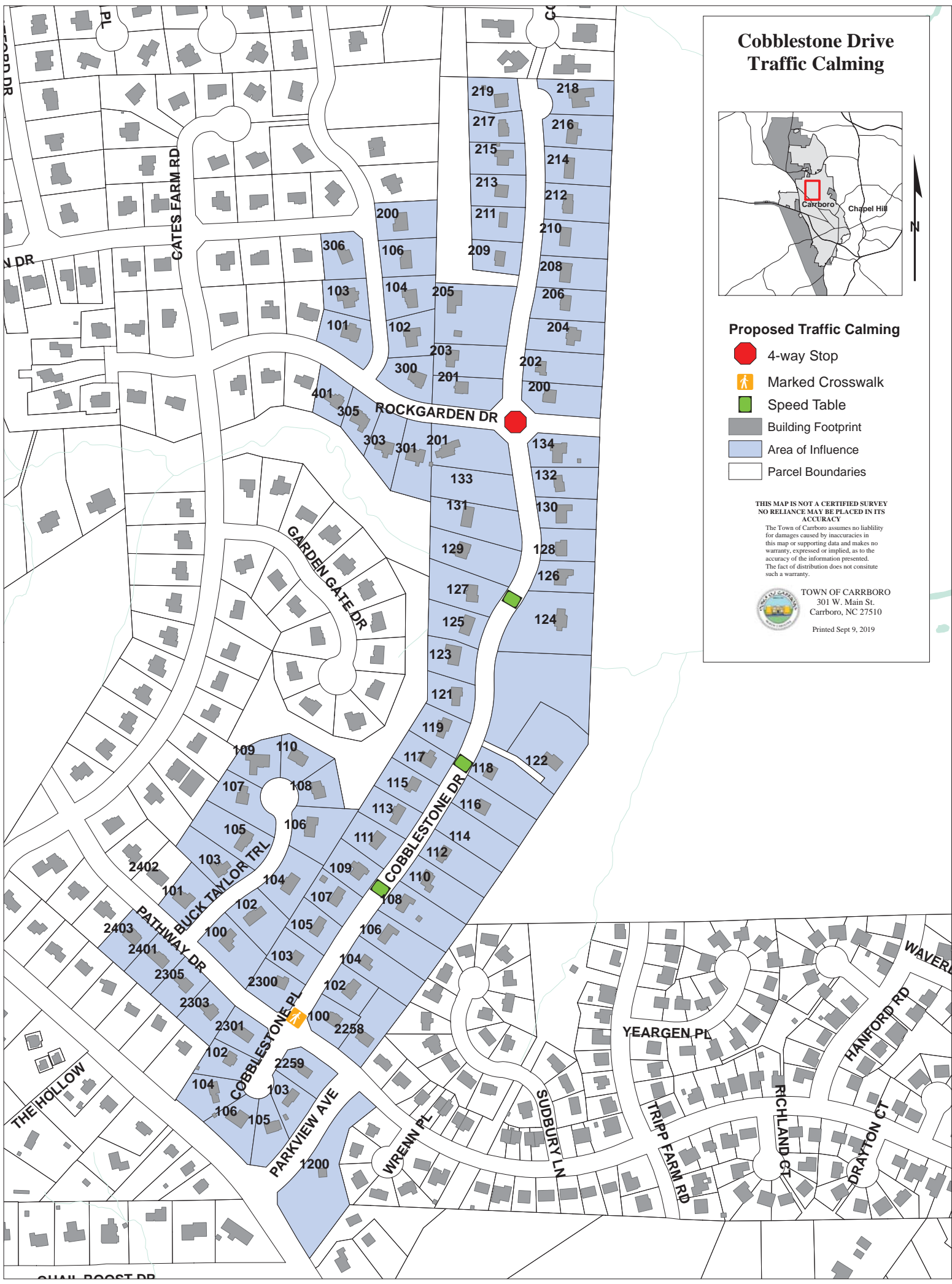
~~Rockgarden Road — Cobblestone Drive~~

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:

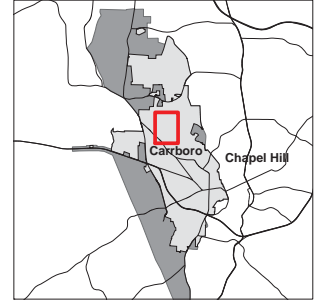
Rockgarden Road Cobblestone Drive

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







Section 3. This ordinance shall become effective upon adoption.



Cobblestone Drive Traffic Calming



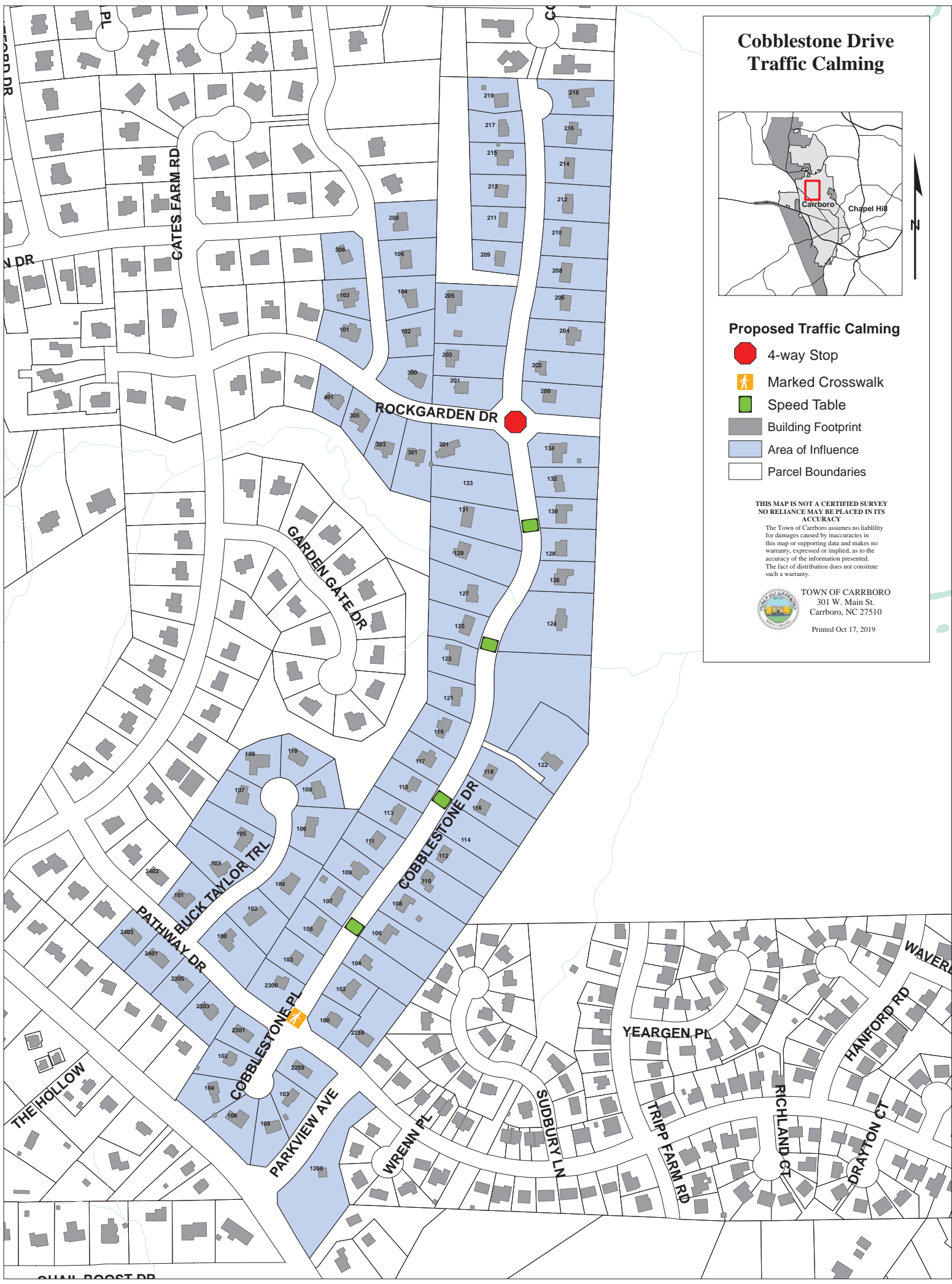
Proposed Traffic Calming

-  4-way Stop
-  Marked Crosswalk
-  Speed Table
-  Building Footprint
-  Area of Influence
-  Parcel Boundaries

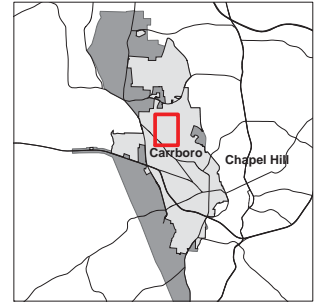
THIS MAP IS NOT A CERTIFIED SURVEY
NO RELIANCE MAY BE PLACED IN ITS
ACCURACY
The Town of Carrboro assumes no liability
for damages caused by inaccuracies in
this map or supporting data and makes no
warranty, expressed or implied, as to the
accuracy of the information presented.
The fact of distribution does not constitute
such a warranty.








TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510
Printed Sept 9, 2019




Cobblestone Drive Traffic Calming

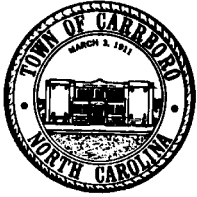


Proposed Traffic Calming

-  4-way Stop
-  Marked Crosswalk
-  Speed Table
-  Building Footprint
-  Area of Influence
-  Parcel Boundaries

THIS MAP IS NOT A CERTIFIED SURVEY
NO RELIANCE MAY BE PLACED IN ITS
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 TOWN OF CARRBORO
301 W. Main St.
Carrboro, NC 27510
Printed Oct 17, 2019



TOWN OF CARRBORO

Transportation Advisory Board

301 West Main Street, Carrboro, North Carolina 27510

C O M M E N T S

THURSDAY, OCTOBER 17, 2019

Proposed Cobblestone Drive Traffic Calming Measures

TAB of the Town of Carrboro submits the following comments to the Board of Aldermen to consider in relation to the proposed traffic calming measures for Cobblestone Drive:

1. The temporary deployment of Chicanes in the pilot phase, while not well received in this case, should still be considered in future traffic calming requests as they are effective in other locations.
2. There are no major impacts related to the proposed speed tables/humps other than EMS response time and whether they are bicycle-friendly.
3. Staff should assess the issues in communication and deployment which impacted the transition from initial design to pilot project to prevent these setbacks from happening in the future.
4. Staff should consider looking for analogous situations in Town as a point of comparison for the before and after effects of speed tables/humps.
5. Staff should determine the feasibility in creating a temporary setup which mimics the selected design (either 3 or 4 speed tables/humps) as closely as possible and perform follow up data collection prior to permanent installation.

Comments from Cobblestone Drive Residents

In attendance at TAB meeting on 10/17/2019: Joe Vanderford, Mary Sonis, Ryan Mills, Rena D'Adolf, Josh D'Adolf, Ryan Oates

- Ms. Sonis indicated that Cobblestone Drive is a viable bike route and we need to consider how speed humps or tables affect bikes and how they affect emergency vehicle response times. Furthermore that the process was not properly followed and Stage 1 traffic calming was never assessed before moving forward with Stage 2.
- Mr. Mills indicated that he thought the speed cushion design would also move cars closer to the middle of the road and be more dangerous.
- The group discussed the prevalence of traffic incidents on Cobblestone Drive. Those on the 200 Block indicated they don't recall any. Those on the 100 Block recalled a deer being struck and a parked car being struck.
- Mr. D'Adolf indicated that more people (kids, bikes, walkers, runners, dogs) are using the street in general and traffic doesn't seem to have been slowed by the stop sign or the reactive speed sign. Speed humps or tables are needed for safety even if it causes him to take longer to get to work.
- Mr. Oates said that the BOA had directed staff to implement Stage 2 traffic calming and that no further analysis was needed.
- Mr. Mills said that if the town was going to install temporary devices, they should try a setup with 3 speed tables/humps and a setup with 4 to determine what works best, but that the device used should be consistent with the permanent design as the current device is too narrow, it is more like a speed bump.
- Mr. Oates expressed concerns in spending extra money to test out multiple devices.
- Mr. Mills thinks much of the opposition to traffic calming is coming from residents of the 200 Block who don't have to deal with higher vehicle speeds as they live on a dead end street.
- Ms. Sonis indicated that delivery trucks will still be a problem as even if they slow down for speed humps/tables they just speed up again as they have a certain number of deliveries to make.
- Staff received an email on 10/8/19 from Kenneth Reither saying he thought that three speed tables would be ridiculous and would cause traffic to divert and impact other streets.
- Staff received an email on 10/8/19 from Joe Vanderford indicating the most important thing in this process is to make sure all the neighbors are engaged.
- Staff received an email on 10/10/19 from Matt MacKinnon in full support of traffic calming.

Email Comments Related to the May 5th Community Meeting

Zachary Hallock

From: Zachary Hallock
Sent: Monday, April 29, 2019 4:12 PM
To: 'Jami Burns'
Subject: RE: Cobblestone Drive

Hi Jami,

Thank you for reaching out.

The subject will be discussed at a Community Meeting to be held on May 4th from 10a-12p along Cobblestone Drive (approximate address 124 Cobblestone). I would also encourage you to attend a Board of Aldermen meeting (Tuesdays at 7pm in Town Hall) and sign up for the citizen comments.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

From: Jami Burns [mailto:jamiburns13@gmail.com]
Sent: Monday, April 29, 2019 4:07 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Cobblestone Drive

Hi Zach,

I'm a resident of Cobblestone Drive, and I am writing to give my input on what seems to have recently become an issue. I've been told the street is potentially going to be designated as a "bike boulevard" and that this may include speed bumps and new markings. I was told that someone on our street is claiming to speak for the entire neighborhood in asking for these changes. I do not feel the changes are necessary. I rarely see speeding on our street. I think the speed limit of 25 is reasonable, and we welcome enforcement of that speed limit. I am uncomfortable with the fact that one disgruntled resident seems to be speaking for the entire neighborhood.

Will the subject be discussed in an upcoming meeting? If so, what is the date of the meeting.
Thanks for considering my input.

Jami Burns
212 Cobblestone Dr, Chapel Hill, NC 27516

Zachary Hallock

From: Zachary Hallock
Sent: Tuesday, April 30, 2019 9:17 AM
To: 'Mary Sonis'
Subject: RE: Cobblestone Drive meeting May 4th

Dear Ms. Sonis,

Thank you for reaching out.

I will be documenting all comments received during this process and encourage you to attend the May 4th meeting if at all possible.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: Mary Sonis [mailto:msonis@nc.rr.com]
Sent: Monday, April 29, 2019 9:05 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Cobblestone Drive meeting May 4th

Dear Mr. Hallock, I am writing as a long time resident of Cobblestone Drive to object to any speed slowing devices or Bicycle Blvd. on our street. We have never had any trouble with speeding on the street, and our residents are careful to watch out for all cyclists as we use the road. At a BOA meeting, I asked about the bicycle blvd and was told that the center of the road would be painted to designate the change, and further I was told that "cars would be the guests" I have no problem sharing this road with anyone riding a bike, but I don't wish to be a guest on my own street. My own children often biked into town from Cobblestone, and there was no difficulty because we all shared the road. I see no need for changes to our street, and I feel that one resident has misrepresented the wishes of the residents. I have lived here for sixteen years without any problem with cars. if the town wishes to monitor speeds on the road, we welcome police presence at any time to enforce present speed limits, but I see no need for any other intervention.

Thank You,

Mary Sonis

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, May 01, 2019 11:13 AM
To: 'Leona Sanfilippo'
Subject: RE: Speed mitigation Cobblestone Dr. Chapel Hill

Dear Ms. Sanfilippo,

Thank you for reaching out, your comment has been recorded. I would also encourage you to attend the Neighborhood Meeting which is being held this Saturday, May 4th from 10a-12p along Cobblestone Drive, if at all possible.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: Leona Sanfilippo [mailto:lsanfilippo1@nc.rr.com]
Sent: Wednesday, May 01, 2019 10:59 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Speed mitigation Cobblestone Dr. Chapel Hill

Mr. Hallock,

I have resided at 205 Cobblestone Dr. since 2003.

Overall, I think you'll find that the traffic issue on our street is rooted in perception of speed and not a gross disregard for the posted speed limit. The complainers have no idea what 25mph "looks like". The major infractions of the limit are UPS, FedEx, Amazon and other delivery vehicles as well as a few teenagers that simply do not abide by the signage.

A "Bike Boulevard" would do absolutely nothing to slow traffic on the street. Paint on the roads is not a deterrent. and the road is not wide enough to partition it into thirds- unless you were to undertake a road widening project, in which case I would be in favor.

Speed bumps are sub-optimal as well. While they can slow routine traffic down, they also affect how fast emergency vehicles arrive at locations on our street. A number of residents on our street are "aging in place" and in an emergency situation, where seconds could be the difference between life and death, anything that further slows the EMS vehicles would be disastrous. Not to mention In the event of a fire, every second counts. 3 speed bumps = 30 seconds delay.

The best solution would be twofold/ Make a permanent driver feedback sign (like the one temporarily installed. and randomly post speed monitoring police throughout the month. The benefits would be enormous, speed would be decreased and the neighborhood would gain a further sense of security knowing an officer is right nearby. Break-ins would go down and packages would disappear from porches less.

Thank you for your attention

Leona Sanfilippo
205 Cobblestone Dr.
Chapel Hill, NC 27516
lsanfilippo1@nc.rr.com

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, May 01, 2019 10:36 AM
To: 'Mary Karnes'
Subject: RE: Cobblestone Dr future bike path

Dear Ms. Karnes,

Thank you for reaching out. Your comments have been recorded.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: Mary Karnes [mailto:marykar22000@gmail.com]
Sent: Wednesday, May 01, 2019 7:46 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Cobblestone Dr future bike path

As someone who has lived in the Cobblestone subdivision for many years I see no need for speed bumps and a bike path. There isn't that much traffic nor do people drive that fast. So we really don't need a speed bump. The street isn't as wide as say Pathway so adding a bike path would take away space not to forget the restrictions about parking on the street. So I'm against this change. I think many of agree,

Mary Karnes
218 Cobblestone Dr

Sent from my iPad

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, May 01, 2019 10:35 AM
To: '12Gauge'
Subject: RE: Cobblestone Drive "bike boulevard" and speed mitigating issues

Dear Mr. Sanfilippo,

Thank you for reaching out and your comments have been recorded.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: 12Gauge [mailto:12gaugewire@gmail.com]
Sent: Tuesday, April 30, 2019 9:57 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Cobblestone Drive "bike boulevard" and speed mitigating issues

Mr. Hallock,

I may not be able to attend the meeting planned for Saturday, so I'm submitting my comments directly to you.

I've been a resident of the street for about 13 years and was HOA president for 2 years. During my tenure as president, the issue of traffic mitigation had waxed and waned with the season and changes of residence along the section of the street between Pathway & Rockgarden.

Overall, I think you'll find that the traffic issue on our street is rooted in perception of speed and not a gross disregard for the posted speed limit. The complainers have no idea what 25mph "looks like". The major infractions of the limit are UPS, FedEx, Amazon and other delivery vehicles as well as a few teenagers that simply do not abide by the signage.

A "Bike Boulevard" would do absolutely nothing to slow traffic on the street. Paint on the roads is not a deterrent, and the road is not wide enough to partition it into thirds- unless you were to undertake a road widening project, in which case I would be in favor.

Speed bumps are sub-optimal as well. While they can slow routine traffic down, they also affect how fast emergency vehicles arrive at locations on our street. A number of residents on our street are "aging in place" and in an emergency situation, where seconds could be the difference between life and death, anything that further slows the EMS vehicles would be disastrous. Not to mention in the event of a fire, every second counts. 3 speed bumps = 30 seconds delay.

The best solution would be twofold/ Make a permanent driver feedback sign (like the one temporarily installed) and randomly post speed monitoring police throughout the month. The benefits would be enormous, speed would be decreased and the neighborhood would gain a further sense of security knowing an officer is right nearby. Break-ins would go down and packages would disappear from porches less.

Thank you for your attention
Mikel Sanfilippo & Lisa Sanfilippo
211 Cobblestone Dr.
Chapel Hill, NC 27516

Zachary Hallock

From: Zachary Hallock
Sent: Thursday, May 02, 2019 10:03 AM
To: 'Raymond Karnes'
Subject: RE: Cobblestone traffic calming

Dear Mr. Karnes,

Thank you for reaching out, your comment has been received.

For the sake of clarity, no part of the bicycle boulevard would involve the addition of bike lanes on Cobblestone. Potential changes would primarily include traffic calming devices, but the specific device would depend on what the neighborhood's preference is.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: Raymond Karnes [mailto:raykar2@icloud.com]
Sent: Wednesday, May 01, 2019 6:19 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Cobblestone traffic calming

I will not be able to attend the meeting about Cobblestone traffic calming proposals and want to voice my opinions. I am against speed bumps but if most of the people are in favor that's ok with me. I am strongly against making bike lanes on Cobblestone. On street parking is a recognized traffic calming technique. Bike lanes would prohibit on street parking for much of the day and would work against the goals of slowing traffic. Also prohibiting on street parking would be a major inconvenience to Cobblestone residents. There is not so much traffic on Cobblestone that bike lanes would add to biker safety.

Thanks

Ray Karnes
218 Cobblestone Dr.

Email Comments Related to the installation of the Pilot Project

Zachary Hallock

From: Patricia J. McGuire
Sent: Monday, August 12, 2019 10:42 AM
To: Christina Moon; Zachary Hallock
Subject: FW: Neighborhood Meeting - Cobblestone Drive Traffic Calming

From: Ann Lloyd [mailto:annlloyd793@gmail.com]
Sent: Monday, August 12, 2019 10:19 AM
To: Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Subject: Re: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Hello, We live at 117 Cobblestone. The traffic calming devices are directly in front of our house. We are hoping the poles are NOT going to remain there. A speed bump would be fine, but dont you think it would be more suitable for the speed bump to be in between 117 and 119 in the middle of the yards? Better yet, shouldnt all of these traffic devices be at the bottom of the hill where children live??? The so called bike lanes are throwing our cars into oncoming traffic. A disaster is waiting to occur...

It's a bit much for Cobblestone to be put in dangers way only to accommodate people that live in other areas and use our streets as cut throughs.

On Sat, Aug 10, 2019, 8:13 PM Patricia J. McGuire <PMcGuire@townofcarrboro.org> wrote:

Dear Residents,

Thank you for all the input on the recent traffic calming installation. Please consider joining us for a neighborhood meeting to discuss the pilot installation and next steps in the traffic calming process this coming Tuesday, August 13th, from 5 to 7 pm in Room 110 at the Carrboro Town Hall.

Don't hesitate to contact me if you have any questions.

Patricia McGuire

Planning Director

TOWN OF CARRBORO

301 West Main Street

Carrboro, NC 27510

Office 919 918-7327

Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Ann Lloyd <annlloyd793@gmail.com>
Sent: Friday, August 02, 2019 6:05 PM
To: Zachary Hallock
Subject: Fwd: Cobblestone Traffic Calming Issue

Follow Up Flag: Follow up
Flag Status: Flagged

I am forwarding the same email sent to the email as requested.

WE ARE OPPOSED TO THE TRAFFIC CALMING DEVICES AND BIKE LANES.

It is an very unsightly to the neighborhood and very concerning as residents of Cobblestone Drive. It is unfortunately in front of my house (as shared in the email below, no children live here.)

----- Forwarded message -----

From: Ann Lloyd <annlloyd793@gmail.com>
Date: Fri, Aug 2, 2019, 5:42 PM
Subject: Cobblestone Traffic Calming Issue
To: <boa@townofcarrboro.org>

My husband and I have been residents of Cobblestone Drive for approximately 30 years and have raised two children. There were approximately 30 children or more in the neighborhood as we raised our kids. They all are grown and have moved away. We never have seen or heard of an accident to a child or anyone caused by a vehicle on this street. I very much am opposed to the bike lanes and speed bump. The unsightly columns have unfortunately been placed in front of my house. This is unsightly as well as an issue for us to get out of our drive. We would kindly appreciate these being removed or moved as quickly as they were erected.

Zachary Hallock

From: Andy & Boyd Blackburn <andyboyd523@gmail.com>
Sent: Monday, August 05, 2019 7:25 AM
To: boa; Zachary Hallock
Subject: AGAINST traffic calming on Cobblestone Drive

Follow Up Flag: Follow up
Flag Status: Flagged

My name is Boyd Blackburn. I live on Cobblestone Place. Our household (including my wife) is definitely against speed bumps on Cobblestone Drive. We have already had two cars whose suspensions have been worn out unusually quickly by the long-term effects of the speed bumps on James St, so we are definitely anti-speed bumps (and also against adding an unnecessary stop sign). Other more mild traffic calming devices such as visually narrowing the road, etc would probably be fine. Honestly, I feel like the Cobblestone Drive residents already won the war when the town did not make the road a connector between Hillsborough Rd and Homestead. This new traffic calming issue feels like just one or two anxious parents with young children who are trying to manage their anxiety. Traffic is already quite calm and slow in our neighborhood.

Regarding the bicycle boulevard issue, I am probably the single heaviest user of Cobblestone Drive as a bicycle route because I use it to commute to my job at Smith Middle School (made even easier recently by completion of paths around Homestead Dr - thank you!). The traffic on the road is so light that I usually just ride down the middle and pass nobody in either direction. Marked bike lanes are unnecessary. If you want to designate it as some kind of official bike route, I am in favor of that mainly because it will alert people to how easy it is to bike to and from Chapel Hill HS using that route.

Thank you,
 - Boyd Blackburn

--

Andy and Boyd Blackburn
 105 Cobblestone Place
 Chapel Hill, NC 27516
 919.932.0887 (Boyd cell)
 919.932.0571 (Andy cell)
andyboyd523@gmail.com

Zachary Hallock

From: Keith Collins <keithcollins@yahoo.com>
Sent: Monday, August 12, 2019 6:14 PM
To: boa; Zachary Hallock
Subject: Home Owner on Cobblestone - Traffic Calming

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

I am the home owner at 119 Cobblestone Drive. Thanks for working on traffic-calming options for Cobblestone Drive. They are needed for the section of road on the hill and just below it (not all the way to Rock Garden).

However, I have some concerns over the newly installed traffic-calming devices on Cobblestone Drive. The white vertical poles that were installed as a bike "path" seem to cause more harm than good. It causes issues with the traffic riding on the wrong side of the road 100% of the time, instead of when a bike rider is actually on the road. This is likely to cause an accident. The poles also cause an issue with entering/exiting some driveways. Again a traffic flow issue. The poles are also pretty ugly and could impact home prices. As a bike rider I would probably avoid riding through the poles to avoid hitting them.

I am ok with replacing the two sets of white vertical poles with speed bumps. I am ok with more bike signs painted on the road.

I am not ok with forced or hindered traffic.

Regards,

Keith Collins
119 Cobblestone Drive
Chapel Hill, NC 27516

Zachary Hallock

From: Carol Offen <caroloffen@gmail.com>
Sent: Thursday, August 01, 2019 3:07 PM
To: Heather Tatreau
Cc: Zachary Hallock; Karin Crozier; Joe Crozier; Jason; Gina Lacava; Dena Papazoglou; Neil Offen
Subject: Re: Cobblestone Dr. traffic calming feedback

I also live on Cobblestone Drive and fully agree with Ms. Tatreau's concerns about the bike lanes. The top of the hill near Pathway has always been problematic even before the bike lanes. Adding another reason for cars to drive in the center of the road needlessly increases the dangers. Further, this morning, when dumpsters were curbside, in addition to the occasional cars parked along the curb, the flow of traffic was even more encumbered.

I too urge the removal of these bike lanes.

Thank you for considering our concerns.

Sincerely,

Carol Offen
www.kidneydonorhelp.com
 @CarolOffen

On Thu, Aug 1, 2019 at 2:37 PM Heather Tatreau <hltatreau@gmail.com> wrote:

Hello,

I live on Cobblestone Dr. where some traffic calming devices were installed this week. I understand the need for the four way stop and one speed bump at the curve in the road. I think these two things are enough to address the problem of speeding on our street.

However, the bike lane devices are extremely hazardous to cars. Our street is not wide enough to accommodate bike lanes. The devices force cars to drive in the middle of the road and only one car can pass at a time. I am especially concerned about the ones at the top of the hill where there is no visibility over it. I am worried about a head on collision if cars cannot see one other while being forced to drive in the center of the road. This becomes even more concerning when cars are parked on the street. I am strongly opposed to keeping these devices permanently!

Please keep me updated on the status of this project and a timeline for possible removal of the bike lane devices. I am copying some of my neighbors so that they can weigh in as well.

Thank you for your time!

Heather Tatreau
 215 Cobblestone Dr.

Zachary Hallock

From: Debra <dbaringtang@gmail.com>
Sent: Monday, August 12, 2019 8:50 PM
To: Zachary Hallock
Subject: traffic calming installations on Cobblestone Dr

Follow Up Flag: Follow up
Flag Status: Flagged

Hello,

I am writing in response to the request for feedback on the temporary traffic calming installations on Cobblestone Drive.

Placing a traffic calming installation at the top of the hill has limited effect as it does not prevent speeding down the hill. Even when simply coasting down the hill after slowing for the installation, a vehicle can exceed 35 mph. For an installation to even remotely affect the overall speed of traffic, it would need to be placed toward the middle of the hill, where speed increases. Note that the chicanes are no more effective than the cars parked on the side of the road.

I am opposed to the street being designated as a bike boulevard, especially if traffic calming devices do not slow cyclists. Cyclists can easily reach high speeds while coming down the hill, which is hazardous, especially with the limited visibility due to the curve in the road.

Debra Baringtang

126 Cobblestone Dr

Zachary Hallock

From: Frazier, Dianne M <dianne_frazier@med.unc.edu>
Sent: Sunday, August 04, 2019 11:13 AM
To: boa; Zachary Hallock
Subject: Traffic calming

Follow Up Flag: Follow up
Flag Status: Flagged

We live at 116 and 114 Cobblestone Drive. We are opposed to the traffic calming devices on our road. We have, unfortunately need EMS services several times over the last year. The calming devises in Cates Farm have impeded the progress of the vehicle and interfered with medical interventions that were being initiated inside the vehicle.

As for the “ bicycle boulevard” designation, I believe Cobblestone Drive is not the right road for this. Young neighborhood children often ride several abreast during play and a dedicated lane will not change that. Many families park in front of their homes because they have several vehicles or because they want the drive way to be cleared for children’s safe play. When cars are parked on the street, the proposed bicycle lanes, narrow the road even more.

Although traffic calming devices sound good in theory, periodic patrol car speed checks, as are so successful on the highway, seem like a better option.

James and Dianne Frazier

Zachary Hallock

From: Dena Papazoglou <dena.papazoglou@gmail.com>
Sent: Thursday, August 01, 2019 3:28 PM
To: Zachary Hallock
Cc: Heather Tatreau; Carol Offen; Karin Crozier; Joe Crozier; Jason; Gina Lacava; Neil Offen; Michael Papazoglou; raykar2@me.com
Subject: Re: Cobblestone Dr. traffic calming feedback

Mr. Hallock,

I also live on Cobblestone Drive, and I concur with the feedback from my neighbors, Heather Tatreau and Carol Offen.

I appreciate the attention to safety improvements on our street. The 3-way stop and speed bump seem like useful traffic calming measures. However, the white vertical barriers at the side of the road do not add much in the way of safety, and in fact pose a considerable potential hazard. For example, risk of head on collision with cars coming over the hill with limited visibility and dangerous congestion with oncoming cars, town curbside services, bicycles and pedestrians. I ask that they be removed.

Thank you for the opportunity to comment.

Regards,
 Dena Papazoglou
 703-801-8897

On Aug 1, 2019, at 3:06 PM, Carol Offen <caroloffen@gmail.com> wrote:

I also live on Cobblestone Drive and fully agree with Ms. Tatreau's concerns about the bike lanes. The top of the hill near Pathway has always been problematic even before the bike lanes. Adding another reason for cars to drive in the center of the road needlessly increases the dangers. Further, this morning, when dumpsters were curbside, in addition to the occasional cars parked along the curb, the flow of traffic was even more encumbered.

I too urge the removal of these bike lanes.

Thank you for considering our concerns.

Sincerely,

Carol Offen
www.kidneydonorhelp.com
 @CarolOffen

On Thu, Aug 1, 2019 at 2:37 PM Heather Tatreau <hltatreau@gmail.com> wrote:

Hello,

I live on Cobblestone Dr. where some traffic calming devices were installed this week. I understand the need for the four way stop and one speed bump at the curve in the road. I think these two things are enough to address the problem of speeding on our street.

However, the bike lane devices are extremely hazardous to cars. Our street is not wide enough

to accommodate bike lanes. The devices force cars to drive in the middle of the road and only one car can pass at a time. I am especially concerned about the ones at the top of the hill where there is no visibility over it. I am worried about a head on collision if cars cannot see one other while being forced to drive in the center of the road. This becomes even more concerning when cars are parked on the street. I am strongly opposed to keeping these devices permanently!

Please keep me updated on the status of this project and a timeline for possible removal of the bike lane devices. I am copying some of my neighbors so that they can weigh in as well.

Thank you for your time!
Heather Tatreau
215 Cobblestone Dr.

Zachary Hallock

From: Patricia J. McGuire
Sent: Monday, August 12, 2019 10:17 AM
To: Zachary Hallock; Christina Moon
Subject: FW: Neighborhood Meeting - Cobblestone Drive Traffic Calming

From: Dena Papazoglou [mailto:dena.papazoglou@gmail.com]
Sent: Monday, August 12, 2019 9:56 AM
To: Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Cc: boa <boa@townofcarrboro.org>; David Andrews <dandrews@townofcarrboro.org>
Subject: Re: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Dear Ms. McGuire,

Thank you for the update and notice of the public meeting. I am out of town this week, and would like to provide an additional comment in writing:

I support the idea of a bike corridor in Cobblestone, but I believe our road is too narrow for painted lines or the white vertical dividers to designate the bike lane. Rather, I believe it is most appropriate to keep the signs saying this is a bike lane, and painted bicycle and arrows on the street - to indicate that bikes and cars are supposed to share the road.

In this "shared road" spirit, I would not want to see any measures to prevent the roadside to be used for parking, leaves, trash/recycling pickup as it has been previously. Under these conditions, bikes and cars both are responsible for navigating all that safely -which provides a natural traffic calming effect in itself.

Thanks again for the opportunity to provide feedback on this project. We sincerely appreciate the efforts to improve the safety of our street for all who use it.

Dena Papazoglou

703-801-8897

On Aug 10, 2019, at 8:13 PM, Patricia J. McGuire <PMcGuire@townofcarrboro.org> wrote:

Dear Residents,

Thank you for all the input on the recent traffic calming installation. Please consider joining us for a neighborhood meeting to discuss the pilot installation and next steps in the traffic calming process this coming Tuesday, August 13th , from 5 to 7 pm in Room 110 at the Carrboro Town Hall.

Don't hesitate to contact me if you have any questions.

Patricia McGuire

Planning Director

TOWN OF CARRBORO

301 West Main Street

Carrboro, NC 27510

Office 919 918-7327

Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Daniel Snipes
Sent: Thursday, August 01, 2019 1:52 PM
To: Zachary Hallock
Cc: Kristen Benoit; Joe Guckavan
Subject: Cobblestone Complaint

Zach,

Diane Rothwell at (919)949-8274 called to express her concern with the speed hump on Cobblestone. She says the speed hump runs the entire width of the street and doesn't give room for bicycles to go around without having to slow down. Just wanted to pass this along if you would like to call her for further details. I know this is a pilot program and just want to pass along any comments Public works receives to document. Thanks

Thanks,

Daniel Snipes
Public Works Superintendent
Town of Carrboro
301 W. Main St.
Carrboro, NC 27510
919-918-7432

Zachary Hallock

From: Thompson, Daniel <dthomp@email.unc.edu>
Sent: Friday, August 02, 2019 10:41 PM
To: Zachary Hallock
Subject: Carrboro Bicycle Transportation Plan: dangerous road infrastructure installed without signage

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Hallock,

I'm writing about a dangerous speed bump which has recently been installed at the nadir of Cobblestone Dr. in Carrboro, between Pathway Dr. and Rockgarden Rd. I was out cycling this evening, descending on Cobblestone from the south slope, when the speed bump appeared in my field of vision without warning. Fortunately, I am a relatively experienced cyclist, and I was able to sit up and "brace for impact" without panicking too much. I am seriously concerned though that, especially due to the lack of any "speed bump ahead" signage, a less experienced rider might try to swerve to narrowly avoid the bump and crash at 30mph or more.

Speed bumps are generally dangerous for cyclists (especially on streets which are free of fast-moving vehicular traffic like Cobblestone Dr. in Carrboro). I think that the best solution would be to remove the speed bump immediately, or move it to a part of the road at which riders and cars may not have built up speed and be suddenly taken by surprise.

Please respond if you would like to further discuss this dangerous issue with our roads,
 Dr. Daniel Thompson

Zachary Hallock

From: Deborah Vanderford <debbie.vanderford@me.com>
Sent: Tuesday, July 30, 2019 7:42 PM
To: Zachary Hallock
Subject: Cobblestone traffic calming

Hello Zachary. I met you earlier this summer in the Cobblestone field when you came to present some options. I provided my contact information at that time but never received any information from you including the email to inform us of today's installation. Please include Joe and I in all communication related to Cobblestone traffic devices. We would also like to be notified when this issue will be addressed by the Board.

Thank you,

Debbie Vanderford
debbie.vanderford@duke.edu

Joe Vanderford
joevandy@mindspring.com

Zachary Hallock

From: Gina Lacava <Glacava@nc.rr.com>
Sent: Tuesday, July 30, 2019 1:04 PM
To: Zachary Hallock
Subject: Cobblestone Dr.

Hello Mr. Hallock,

I'm coming to the Cobblestone traffic calming devices party a little late, sorry to say.

We have lived on Cobblestone Drive since 1999 and I don't recall any speeding incidents that have occurred. Why all of the sudden do we need traffic calming devices? Was there an incident involving excessive speeding?

Just wondering what the heck is going on.

Best regards,

Gina Lacava
217 Cobblestone Dr.

Zachary Hallock

From: Heather Tatreau <hltatreau@gmail.com>
Sent: Thursday, August 01, 2019 2:37 PM
To: Zachary Hallock
Cc: Karin Crozier; Joe Crozier; Jason; Gina Lacava; Dena Papazoglou; Carol Offen
Subject: Cobblestone Dr. traffic calming feedback

Hello,

I live on Cobblestone Dr. where some traffic calming devices were installed this week. I understand the need for the four way stop and one speed bump at the curve in the road. I think these two things are enough to address the problem of speeding on our street.

However, the bike lane devices are extremely hazardous to cars. Our street is not wide enough to accommodate bike lanes. The devices force cars to drive in the middle of the road and only one car can pass at a time. I am especially concerned about the ones at the top of the hill where there is no visibility over it. I am worried about a head on collision if cars cannot see one other while being forced to drive in the center of the road. This becomes even more concerning when cars are parked on the street. I am strongly opposed to keeping these devices permanently!

Please keep me updated on the status of this project and a timeline for possible removal of the bike lane devices. I am copying some of my neighbors so that they can weigh in as well.

Thank you for your time!
Heather Tatreau
215 Cobblestone Dr.

Zachary Hallock

From: Janis Basnight <janisbasnight@att.net>
Sent: Friday, August 02, 2019 7:00 PM
To: boa; Zachary Hallock
Subject: Cobblestone

Follow Up Flag: Follow up
Flag Status: Flagged

Never liked them and do not want them. However, if we have to have them let's construct them like Lorraine street. I am talking about a nuisance called a speed bump. What in the world with the new stop signs? Just something else for someone to RUN through.

Jesse Basnight Jr.
204 Cobblestone Dr.

Zachary Hallock

From: Jody Benedict <nickally@bellsouth.net>
Sent: Wednesday, August 07, 2019 8:54 AM
To: boa; Zachary Hallock
Subject: Cobblestone

I am a Cobblestone resident, and I strongly oppose the traffic calming devices installed recently on my street. I do not support this road use as a "bicycle boulevard".

I have lived on Cobblestone Drive for 23 years. I have driven up and down this street thousands of times. There has already been the need to swerve around cars parked on the side of the road, requiring dangerous movement across midline into oncoming cars with limited visual field going up the hill toward Pathway. Adding bicycles and poles and a speed bump all add to the likelihood of collision in one form or another (bicycles/cars).

A bike lane painted to one side - sure. But these ridiculous slalom poles are an eyesore and a danger that encourages cars to cross over into the path of oncoming vehicles. Add bike traffic to that and this is more dangerous than ever!!

Please remove all calming devices! I can imagine the annoyance felt by property owners who have to look at these poles in front of their houses. They just are not necessary!

Jody Benedict
128 Cobblestone Drive

Sent from my iPhone

Zachary Hallock

From: Jami Burns <jamiburns13@gmail.com>
Sent: Thursday, August 08, 2019 11:10 AM
To: Zachary Hallock; boa
Subject: Re: Cobblestone Drive Traffic Calming - Pilot Project Installation

Dear Mr. Hallock and Board members,

I am writing to express my opposition to the traffic calming installations along Cobblestone Drive. I have lived on this road for almost thirty years. When I look at all the other residential streets in Carrboro, I wonder what is so unique about Cobblestone Drive that necessitates the measures that have been taken. I have never known speeding to be a particular problem here. Typically, many homeowners and visitors park on the street which means two cars traveling in opposite directions are unable to pass through many spots at the same time. That fact makes the street a little difficult to navigate as is. It is also routine to have a group of deer crossing the street at any time day or night, which is another natural reason that residents and people passing through tend to slow down and drive with caution. The radar device at the start of the downhill slope has made me aware of the fact that my speed sometimes creeps up above 25 in that stretch, so this has been a good reminder. However, the bump, the stop sign, and the unsightly plastic poles (which I do not understand the purpose of) are overkill in my opinion. They make driving on the road annoying and unpleasant. The poles at the top of the street are placed in an area where sight lines are blocked by the hill, and a couple of poles in the other locations have already been damaged somehow. If I were new to the area and interested in buying a house on the road, I'd reconsider based on these changes. I feel they detract from the positives of the neighborhood and do more to distract drivers than to make the roadway safe.

I wasn't able to attend the meeting about the issue that was held a month or so ago because I was out of town. Is there traffic data that supports these measures or widespread agreement from others in the neighborhood that these changes are needed? I appreciate your time in considering my opposition to these changes.

Sincerely,

Jami Burns
 212 Cobblestone Drive

On Wed, Jul 24, 2019 at 3:40 PM Zachary Hallock <zhallock@townofcarrboro.org> wrote:

Dear Cobblestone Drive Residents,

Public Works has informed us that they have procured the necessary materials for the temporary traffic calming installation along Cobblestone Drive. We anticipate that they will be on site along Cobblestone Drive to install the pilot traffic calming project from Tuesday, July 30th through Thursday, August 1st (weather permitting).

As a reminder, this is a pilot project, so any comments and concerns from residents will be incorporated as feedback on the project and will be used to inform decisions about the next steps for traffic calming devices on Cobblestone Drive. Please direct your comments to me either via email (or otherwise in writing) so that they can be properly documented.

Thank you for your patience with us as this project moves forward.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

Town of Carrboro

301 W. Main St.

Carrboro, NC 27510

Phone: 919-918-7329

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Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Patricia J. McGuire
Sent: Monday, August 12, 2019 9:10 AM
To: Christina Moon; Zachary Hallock
Subject: FW: Neighborhood Meeting - Cobblestone Drive Traffic Calming

From: Joshua d'Adolf [mailto:eggars2m@hotmail.com]
Sent: Saturday, August 10, 2019 8:29 PM
To: Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Cc: boa <boa@townofcarrboro.org>; David Andrews <dandrews@townofcarrboro.org>
Subject: Re: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Good evening, Ms. McGuire,

Thank you and the rest of the Board for your efforts in helping us calm the speed of traffic on the 100 block of Cobblestone Drive.

I'm sorry that I will be out of town for this very important meeting. I would be interested to hear the results of the information gathered. I will also respectfully submit one last "nod" for the use of the speed bumps. The one placed on the curve at the bottom of the hill has certainly slowed the traffic at that limited sight distance section of Cobblestone Dr. I hope that consideration will be given to applying that same tool to the hill and the top of the hill where speed continues to be an issue (in spite of the Chicanes).

With sincere thanks to you all...

Josh and Rena Dadolf

From: Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Sent: Saturday, August 10, 2019 5:13 PM
Cc: boa <boa@townofcarrboro.org>; David Andrews <dandrews@townofcarrboro.org>
Subject: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Dear Residents,

Thank you for all the input on the recent traffic calming installation. Please consider joining us for a neighborhood meeting to discuss the pilot installation and next steps in the traffic calming process this coming Tuesday, August 13th, from 5 to 7 pm in Room 110 at the Carrboro Town Hall.

Don't hesitate to contact me if you have any questions.

Patricia McGuire

Planning Director

TOWN OF CARRBORO

301 West Main Street

Carrboro, NC 27510

Office 919 918-7327

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Zachary Hallock

From: Joshua d'Adolf <beggars2m@hotmail.com>
Sent: Friday, August 02, 2019 7:31 PM
To: Damon Seils; Zachary Hallock
Subject: Traffic calming on Cobblestone

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Damon and Zach,

We wanted to extend a sincere thank you for the efforts to date in helping us address the issue of excessive speed on Cobblestone Drive.

Our concerns remain with the "bike friendly" designation. The curve and the hill, combined with the speed that some drive, make this a dangerous place for bikes. Our concern is that the signage and the road symbols create an illusion of bike safety and we frankly don't think we are there yet.

The chicanes (correct spelling?) are an interesting tool. They do seem to slow folks down, if for no other reason than to allow a car in the opposite lane pass by. However, we have serious concerns regarding the placement of one of these chicanes. It is right in front of 106 Cobblestone Drive. This is at the very crest of the hill. Drivers heading down the hill have no other option than to start down the hill in the on-coming lane of traffic. Folks coming up the hill cannot clearly see if/when there is a car navigating past this particular chicane. It seems to have made this section of road feel more dangerous, rather than less. If the chicanes are going to be a traffic calming tool on a more permanent basis, I wonder if that particular chicane can be moved away from the very top of the hill?

I think so far, for what it is worth, we are feeling most optimistic about the speed humps. The temporary hump seems to be the perfect height to slow folks down, but not so high that cars are scraping or bottoming out when they go over them. Our vote thus far is for several speed humps to be placed strategically on Cobblestone between Pathway and Rockgarden.

We would also like to offer, for your consideration, that the residents of Cobblestone Drive on the 200 block are having a very different experience with traffic on Cobblestone. At 200 Cobblestone (the intersection of Rockgarden and Cobblestone, the road becomes a long dead-end. Although many of our friends and neighbors on that stretch of Cobblestone are affected by the traffic calming devices, (seen as a nuisance) they are not experiencing the same impact of the number of cars and the rate of speed with which they travel up and down Cobblestone Drive between Pathway and Rockgarden. Although they share the same street name, they are essentially two very different roads. We hope you will take this into serious consideration when evaluating the feedback from residents.

Again, we thank you for your efforts thus far. We are grateful to see the action that has been taken and hope that this will ultimately improve the overall safety of our neighborhood.

Respectfully submitted,
 Josh and Rena Dadolf

Zachary Hallock

From: Johna Enders <westenders@att.net>
Sent: Monday, August 05, 2019 1:55 PM
To: boa; Zachary Hallock
Subject: Traffic Calming on Cobblestone Drive

Hello,

I am writing to express my opposition to the traffic calming measures being tested on Cobblestone Drive, for the following reasons:

1. The plastic poles merely add additional obstacles to a street that is already impeded by parked cars on both sides on a daily basis. Residents must drive slowly, stop and wait for oncoming cars, and "slalom" our way up and down the street all the time, due to parked cars that narrow the through lane to one-way. Thus the poles are redundant, as well as being awkwardly placed to block sightlines on our very steep hill.

2. Likewise, it seems that the temporary speed bump is situated in a less-than-ideal location, at the bottom of said hill. It is my belief that this will not prevent people from speeding down the hill, which in reality some do, but rather will cause them to brake abruptly at the bottom, to go over the speed bump safely. Therefore, it doesn't seem like this will solve the problem it's meant to address.

Having lived in this neighborhood for 5 years, I've observed many bicyclists using our streets, with no apparent difficulty. I believe that residents are aware of bikers and share the roads appropriately in our neighborhood, without extra measures needed. However, it is also notable that there are not consistent bike lanes in our group of neighborhoods (including Cates Farm, Wyndham, Rockgarden, etc.) which might be a useful step, if it's even possible, given the width of our roads.

I appreciate your attention to our safety, and the opportunity to share my thoughts on this matter.

Best,
Johna Enders (123 Cobblestone Drive)

Zachary Hallock

From: Jen Johnston <jenjohnston7@yahoo.com>
Sent: Wednesday, July 31, 2019 12:22 PM
To: Zachary Hallock
Subject: Traffic calming on Cobblestone

THANK YOU for working on traffic calming on Cobblestone. I live on Stratford, which would also benefit from slowing folks down, although our experience is speed bumps do nothing to slow anyone down who has no intention of slowing down. They simply fly over them. But, I do appreciate any efforts to slow cars down in our neighborhoods. Good luck.

Can you explain what the white, flexible posts collected together at various intervals are? The ones at the top of Cobblestone, near Pathway, create an issue when it comes to seeing the oncoming traffic. I think someone should go down there and check. If you pull onto the street, and attempt to make your way around this collection of posts, you do not have a clear visual as to the oncoming traffic due to the hill. This is an accident waiting to happen. I think the placement needs to be further up or further down if these are serving a particular, permanent purpose.

Thanks,
Jen Johnston
100 Stratford
919-937-8691

Zachary Hallock

From: Jennifer MacKinnon <jenhmackinnon@gmail.com>
Sent: Sunday, August 04, 2019 5:42 PM
To: boa; Zachary Hallock
Subject: Traffic calming on Cobblestone Drive

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Hallock and Carrboro Board of Aldermen,

I would like to start out by applauding your efforts to calm traffic on Cobblestone Drive. I have lived at 105 Cobblestone Dr. for the last 21 years. Over that time, I have seen our quiet street become busier and busier with cars speeding up the road. Since we live just past the crest of the hill, it is often difficult to see cars speeding up the hill until they are very close to our house. This often makes pulling out of our driveway or crossing the street on foot a difficult proposition.

I am very much in favor of making traffic calming measures a permanent fixture on Cobblestone. I think that the four way stop sign at the corner of Rockgarden and Cobblestone is fantastic. I also think that the speed bump at the bottom of the hill is a great idea. I hope that those measures become permanent.

However, the plastic posts that were installed in two spots on the street are very problematic. First, they cause cars to have to move into oncoming traffic to get around them. Where they are placed makes this particularly dangerous. The posts in front of 106 Cobblestone are right at the crest of the hill. At this location, it is difficult to see another car coming up the hill. If a car maneuvers into the other side of the road to go around the posts, they run the risk of being hit head on by a car that is speeding up the road. The posts that are near the Rockgarden intersection are equally problematic. Again, moving into the opposing lane is impractical and dangerous so close to a four way intersection. The second problem with the posts is that they are an incredible eye-sore and will surely drive down property values for any house where they are positioned.

A simple solution to both of these problems would be to install speed bumps in their place. Not only do speed bumps allow drivers to stay in their lanes, they are visually unobtrusive, and they do the job of slowing down traffic.

As an aside, encouraging bike traffic down Cobblestone is dangerous and ridiculous and does nothing to address the problem at hand.

I realize that there are a few very vocal residents of Cobblestone that are opposed to all traffic calming measures. However, those residents primarily live toward the end of the 200 block of the street. They are not affected by traffic flying up the hill at dangerous speeds. They are not affected by the fact that Cobblestone Drive is used as a cut through between Homestead Rd. and Hillsborough Rd. I believe that their opposition to traffic calming measures is completely selfish and short-sided.

Cobblestone Drive will continue to become busier and busier as development on Homestead Rd. continues, unabated. Unless sensible traffic calming measures are put into place, Cobblestone Drive will become a major route between the north end of Chapel Hill and the town of Carrboro. I urge you to install permanent speed bumps along Cobblestone Drive so that those of us affected by the fast moving traffic don't take our lives in our hands every time we want to cross the street!

Thank you for your time and consideration,
Jennifer Heisler-MacKinnon

Zachary Hallock

From: jon parker <jsparker1@gmail.com>
Sent: Thursday, August 01, 2019 11:04 AM
To: Zachary Hallock
Subject: Cobblestone Dr

Mr. Hallock, I have been a resident of Carrboro / CH for 22 years. We love this community and have raised our 3 kids here. We have lived on Rock Garden Rd for 9 years and I have seen the traffic increased as we continue to develop more and more along Homestead road and the surround areas. Frankly, it is very disappointing to see so much development, and what appears to be a lack of interest in protecting open / green space. That being said, it is creating more traffic though our neighborhood.

I understand the desire and likely the need for traffic calming measures in the area of Rock Garden and Cobblestone. Perhaps when school starts post a few police cars in the neighborhood and nail the kids flying through on the way to / from school? I work from home and my office faces the street. Believe me, there is a lot of speeding and stop sign coasting.

I noticed the steps that were just put in place on Cobblestone Dr. to be honest, I have no idea what you were thinking with the bike pylons on the road? I can see that on a more heavily traveled road, but it make no sense at all on this road. In fact, if you want to improve the bike safety on Cobblestone, perhaps ask cars NOT to park on the road. they are creating obstacles for cars and bikes to go around, which in my opinion, creates a dangerous situation for bikes and drivers.

Just my 2 cents from 305 Rockgarden Rd.

--

Jon Parker

919 949 1767

Zachary Hallock

From: joe vanderford <joevandy@mindspring.com>
Sent: Wednesday, July 31, 2019 11:53 AM
To: Zachary Hallock
Cc: deb.vanderford@gmail.com
Subject: cobblestone traffic calming updates

zachary,

it was nice to meet you on cobblestone dr this morning.

to summarize our conversation: it seems that information about the proposed traffic calming process in cobblestone is not being distributed to everyone in this neighborhood. several folks who signed a to-be-contacted sheet at a recent meeting have not received updated information, including my family.

my wife, deborah, has forwarded you an abbreviated neighborhood contact sheet. our family would like for you to communicate with EVERYONE in the neighborhood directly, not through any intermediary who may have a 'rooting interest' in the proposed traffic plan.

not everyone in this neighborhood is a proponent of traffic calming devices, but everyone deserves to know exactly what is happening directly from the town of carrboro.

we are especially interested in any board of alderman meetings (or any other meetings) where cobblestone traffic is discussed.

dialog welcome -- and thanks.

joe vanderford (resident for 21 years)
129 cobblestone dr
cell 919-260-2998

Zachary Hallock

From: Kim Powers <kimpowers@gmail.com>
Sent: Thursday, August 08, 2019 11:53 AM
To: boa; Zachary Hallock
Cc: eli rosen
Subject: Support for Cobblestone Traffic-Calming Measures

Dear Board of Aldermen and Mr. Hallock:

As residents of 100 Cobblestone Drive, we are writing in firm support of the traffic-calming efforts being implemented on our street. In particular, we very much appreciate the new speed bump; however, we are wondering if additional speed bumps could be considered farther up the hill, as it seems like a single speed bump at the very bottom of a very long hill might do little to slow cars' speed as they travel down the hill. We are fairly neutral on the bicycle boulevard, as we don't see a lot of bike traffic on the street; however, we are concerned that the specific placement of the plastic poles near the crest of the hill could be dangerous. It seems that traffic traveling in both directions will have limited visibility of traffic coming in the other direction just before reaching those poles, and we are concerned that a collision could occur when a car traveling down the hill needs to go around the poles with limited visibility. We don't have any objection to the existence of these poles; we just wonder if pole placement could be altered.

Thanks for your efforts to make our street safer! There are many small children in the neighborhood (including three of our own) and we are often dismayed at the speed with which cars travel on our street.

Thank you!
Kim Powers & Eli Rosen
100 Cobblestone Drive

Zachary Hallock

From: Kenneth Reiter <kreiter@belmontsayre.com>
Sent: Wednesday, July 31, 2019 8:53 PM
To: Zachary Hallock
Subject: Cobblestone

Zach,

Appreciate your interest in getting feedback from neighbors.

I live on Rock Garden Road and utilize cobblestone Road at least 4 to 8 times per day.

it's a little bit confusing what traffic calming measures are really accomplishing. It appears there are possible bike Lanes to help slow down traffic there may be some poles that are acting as ways to narrow the road to slow traffic and there's also a speed bump. Are they meant to be used all together maybe just to maybe just one. Very confusing.

the speed bump seems to be unusually located at the bottom of the hill where it may cause more damage to car suspensions. Wouldn't it make more sense to have the speed bump further up or down the hill instead of the bottom?

the poles are situated in a location where you have limited sight distance and you may have to drive your car into an oncoming lane if tumor oncoming traffic.

overall, I think it's very confusing. I am aware there are a couple of residents who are concerned with overall speed of traffic but to be honest I don't think these roads were designed for bike Lanes or traffic calming measures. I'd like to understand the basis of design of the subdivision when it was constructed to determine if any improvements are even feasible based on the traffic standards.

by putting more speed bumps in traffic calming it just further constricts the arteries that are already overloaded. In this particular instance, we need more opportunities for cut through traffic to eliminate the widening and further expansion of the road.

Appreciate all you do but I think this doesn't make much sense.

How will the final decision be made for any improvements? When will that decision be made? And what will be the cost?

Ken

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, July 31, 2019 9:19 AM
To: 'Kaitlin Powers'
Subject: RE: Cobblestone Drive Traffic Calming - Pilot Project Installation

Dear Ms. Powers,

Thank you for your comments.

We are monitoring the project and will incorporate resident feedback into any future recommendations.

Sincerely,

Zachary Hallock
Transportation Planner
 Town of Carrboro

From: Kaitlin Powers [mailto:kapow87@gmail.com]
Sent: Tuesday, July 30, 2019 7:56 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Re: Cobblestone Drive Traffic Calming - Pilot Project Installation

Good evening,

I was totally caught off guard today by a 4 way stop at Cobblestone and rock garden rd. I wasn't aware of any discussion about changing the traffic pattern on the street (just traffic calming devices). I know that I'm not the only person who probably blew through the new stop sign because no one expects it to be there. I honestly only realized after reading someone's note on the next door app. I suppose this is a two part question:

1. Why wasn't a change to enforceable traffic laws (I.e a stop sign) explicitly brought anyone's attention prior to its installation?
2. Why is this even necessary/was a complaint or recommendation specifically made for this?

It seems the only people it is affecting are those living on the side of Cobblestone between rock garden and the cul de sac. Anyone turning onto or off of Cobblestone is already slowing down (either to conduct a left hand turn onto rock garden or coming to a stop prior to executing a right hand turn onto it). You're literally stopping about a dozen people who are already respecting the traffic laws (those on the cul de sac side of cobblestone), rather than those in

neighboring areas speeding up our street to the exit on Greensboro. This seems a little extreme. If the point is to slow traffic, why not just stick a stop sign right at the bottom of the hill coming down from pathway? (In the vicinity of 127 Cobblestone? Or near the field where we had our meeting?). That would actually force people to slow in a spot where speeding is more prevalent.

Thanks and I really appreciate (and do not envy) your role as the recipient of our feedback.

Sincerely,

Kaitlin Skiver

On Jul 24, 2019, at 3:40 PM, Zachary Hallock <zhallock@townofcarrboro.org> wrote:

Dear Cobblestone Drive Residents,

Public Works has informed us that they have procured the necessary materials for the temporary traffic calming installation along Cobblestone Drive. We anticipate that they will be on site along Cobblestone Drive to install the pilot traffic calming project from Tuesday, July 30th through Thursday, August 1st (weather permitting).

As a reminder, this is a pilot project, so any comments and concerns from residents will be incorporated as feedback on the project and will be used to inform decisions about the next steps for traffic calming devices on Cobblestone Drive. Please direct your comments to me either via email (or otherwise in writing) so that they can be properly documented.

Thank you for your patience with us as this project moves forward.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

Town of Carrboro

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Carrboro, NC 27510

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Zachary Hallock

From: Kaitlin Powers <kapow87@gmail.com>
Sent: Friday, August 02, 2019 6:30 PM
To: Zachary Hallock
Cc: boa
Subject: Traffic calming on Cobblestone

Follow Up Flag: Follow up
Flag Status: Flagged

Good evening,

I am a current resident on Cobblestone Drive (209 Cobblestone) and am writing to express my opposition to both the traffic calming measures and new bicycle path that are currently in their testing phase on our street. Aside from the seemingly ineffective and dangerous placement of the temporary calming measures, I do not believe that such measures are necessary.

I walk my two children and dog on a daily basis up and down Cobblestone during the morning "rush hour". I have never felt unsafe due to vehicle traffic or speeds, and believe that calming measures would create new safety issues (it's difficult to safely place them on a winding, hilly, and narrow road). Additionally, it would cause unnecessary inconvenience to the current residents of Cobblestone and neighboring areas. If it might make it less safe, or at the very least not any more safe, it wouldn't be worth this inconvenience.

The nature of Cobblestone (particularly the blind curves) also makes me question it as a safe option for a bicycle boulevard (and doubly so if calming measures are added). It is also important to note that a very safe (dedicated lane on both sides of the road) bicycle boulevard already exists on Stratford drive and cates farm road. I am not sure why an additional bicycle boulevard is needed.

Sincerely,
Kaitlin Skiver

Zachary Hallock

From: Mike Ederle <mike@ederle.com>
Sent: Sunday, August 04, 2019 6:31 PM
To: Zachary Hallock
Cc: boa
Subject: Recent Traffic Calming to Cobblestone Drive

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Zachary,

My name is Mike Ederle and I live on Cobblestone Drive – actually on the corner of Rockgarden Road and Cobblestone Drive. We have lived here since 2002, so my guess is we have lived on Cobblestone Drive nearly as long as any current resident. I want to share my views of the recent traffic calming changes made to Cobblestone Drive. We've raised my two daughters here during the last 17 years as well as have had a few pets. I have never worried about the safety of my children on Cobblestone Drive due to cars or their speed. I don't see traffic problems on our street, or at best see them as minor.

The 4-way stop installed at the corner of Cobblestone Drive and Rockgarden Road is prudent. This will cause cars to move more slowly through that intersection which can be busy. However, the plastic poles to create bike lanes creates safety issues. They cause both cars and bicyclists to move into the opposite lane creating the risk of head-on collisions. We already have this safety issue with parked cars, especially on curves and at the top of the street where visibility to oncoming traffic is limited. You've now added three more instances of traffic being moved into a single lane. In just the few days of the plastic poles being installed, my wife and I have not seen a single bicycle go through the plastic poles. Instead they are steering around them.

The speed hump installed doesn't address cars exceeding the speed limit coming down the hill, since cars already slow down there because it is on an area of the street which curves.

In terms of making Cobblestone Drive into a permanent bicycle boulevard, I believe this will increase bicycle traffic and lower property values on our street. With the current changes, Cobblestone Drive is now a driving obstacle course for both cars and bicycles. I doubt any resident of Cobblestone wants to see their property values drop due to these extreme changes.

In summary, I feel the changes that have been made are excessive for the perceived problem and actually create new safety issues. My recommendations are to remove the speed hump as well as all the bike lane plastic poles.

Thanks,

Mike

Zachary Hallock

From: Patricia J. McGuire
Sent: Monday, August 12, 2019 9:09 AM
To: Zachary Hallock; Christina Moon
Subject: FW: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Please save with other pilot feedback.

Thank you.

Trish

From: Mark Everson [mailto:meverson001@gmail.com]
Sent: Sunday, August 11, 2019 2:45 PM
To: Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Cc: boa <boa@townofcarrboro.org>; David Andrews <dandrews@townofcarrboro.org>
Subject: Re: Neighborhood Meeting - Cobblestone Drive Traffic Calming

Dear Patricia,

Thank you for scheduling the August 13th meeting to discuss the installation of traffic calming devices on Cobblestone Drive. I think you will find that we Cobblestone residents are quite reasonable in our concerns and will cooperate with you and your staff in identifying cost-effective solutions.

I hope that there will be an opportunity to address two other related issues at this meeting:

- 1) Given the street's narrow width, is Cobblestone Drive a realistic and safe choice for designation as a bike blvd.?
- 2) If Cobblestone is designated as a bike blvd., how will our current on-street parking be affected?

There is a third, more serious and more fundamental question that has emerge from these deliberations:

- 3) Given that only a small minority of Carrboro residents are active cyclists (5-10%?), how is it that in the course of the last 15 years or so, Carrboro town policy has evolved from promoting bike use, to prioritizing bikes over vehicles, to implementing punitive measures to discourage vehicle use in the form of parking restrictions first downtown and now in the neighborhoods?

I realize that this issue likely warrants a larger, more public forum than our Cobblestone meeting.

Respectfully submitted,
Mark and Katharine Everson

On Sat, Aug 10, 2019 at 8:13 PM Patricia J. McGuire <PMcGuire@townofcarrboro.org> wrote:

Dear Residents,

Thank you for all the input on the recent traffic calming installation. Please consider joining us for a neighborhood meeting to discuss the pilot installation and next steps in the traffic calming process this coming Tuesday, August 13th, from 5 to 7 pm in Room 110 at the Carrboro Town Hall.

Don't hesitate to contact me if you have any questions.

Patricia McGuire

Planning Director

TOWN OF CARRBORO

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Zachary Hallock

From: Mark Everson <meverson001@gmail.com>
Sent: Friday, August 02, 2019 1:56 AM
To: Zachary Hallock
Subject: Cobblestone Dr. on-street parking

Follow Up Flag: Follow up
Flag Status: Flagged

With the addition of bike lanes on Cobblestone Drive, are there plans to restrict on-street parking for autos? As residents of 109 Cobblestone Dr. for 30+ years, my wife and I depend upon street parking for guests.

Mark Everson

Sent from [Mail](#) for Windows 10

Zachary Hallock

From: Mark Everson <meverson001@gmail.com>
Sent: Saturday, August 03, 2019 12:36 AM
To: boa
Cc: Zachary Hallock
Subject: Turning Cobblestone Drive into a Bike Blvd.

Follow Up Flag: Follow up
Flag Status: Flagged

The plan to turn Cobblestone Dr. into a bike blvd. is poorly conceived and not adequately researched. Rather than depending upon staff reports, we would encourage you to drive down Cobblestone -- especially during an evening after work when the bicyclists under the new plan would be out in numbers.

If you take the time to visit our neighborhood before you make your decision, you will note the following:

- 1) Cobblestone is a narrow street.
- 2) A number of Cobblestone residents rely on on-street parking for their guests, etc.
- 3) When a car is parked, there is inadequate space for two cars traveling in opposite directions to pass. One must stop to let the other car pass first.
- 4) A bicyclist passing a parked car has to swing into the middle of the street to do so.
- 5) Cobblestone Dr. includes a steep incline that many bicyclists must labor to climb.

Now please imagine this scenario: a parked car, two cars approaching in opposite directions to pass the parked car. Add in small groups of bicyclists traveling in opposite directions, also trying to get around the parked car, with some cyclists struggling to peddle up the hill. Do you not see that this is a design for disaster? Do you not see that your decision to turn Cobblestone Dr. into a bike blvd is going to require, in short order, that you prohibit on-street parking on Cobblestone? Please look ahead. Prohibiting on-street parking is going to be exceedingly unpopular with Cobblestone residents.

Please re-consider the Cobblestone bike plan.

Mark and Katharine Everson
 Residents of 109 Cobblestone Dr. for 30+ years

Zachary Hallock

From: Mary Karnes <marykar@icloud.com>
Sent: Saturday, August 03, 2019 1:29 PM
To: Zachary Hallock
Subject: Traffic calming on Cobblestone Dr

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Mr Hallock,

As some of my neighbors have said the improvements on Cobblestone Dr are not necessarily helpful. The stop signs are a needed improvement but the white poles set on the side of the street may not be. The ones at the top of the hill may encourage an accident since it's hard to see a car coming up the hill without being in the middle of the street. I've already seen that cars may not slow down for those poles. As for the speed hump I didn't think we need it at all but wonder what will happen in the winter with the snow plows. Will snow build up on the side of the bump?

Mary Karnes
218 Cobblestone

Sent from my iPad

Zachary Hallock

From: Matt MacKinnon <nonnikcam@gmail.com>
Sent: Saturday, August 03, 2019 11:49 AM
To: Zachary Hallock
Subject: Cobblestone Drive traffic project

Follow Up Flag: Follow up
Flag Status: Flagged

Mr. Hallock,

I've lived at 105 Cobblestone Drive for over 20 years. From my home, I see people speeding up the hill every day and have been in favor of adding speed bumps to our road for as long as I can remember.

I am also an avid cyclist and ride my bicycle all over town and the local trails. I'm in favor of public spending that make a meaningful improvement to bicycle safety.

1. I'm in favor of speed bumps that make our road similar to those in Cates Farm and Wexford neighborhoods.
2. The 4-way stop sign at Cobblestone and Rockgarden is a good idea. Please have an officer sit there and write a few warning tickets to get the word out so that people start obeying it.
3. I think the traffic cones that have been installed are atrocious.
4.
 1. They are difficult to see from both directions
 2. The location they are in (especially the one at the top of the hill) is dangerous.
 3. They eliminate much needed road-side parking for guests
 4. They are ugly
 5. They clearly damage the property value of the homes they are in front of, I'm sure you've heard from those homeowners already.
 6. I observed the waste collection trucks struggle to work around them this week. I'm sure this will be especially bad when the leaf trucks start to come in the fall. The mailman cannot be happy either.
 7. These things are simply a terrible idea, I cannot imagine what the possible benefits are?
5. The bicycle painting on the road and cheap plastic signs on the stop signs are simply a waste of money. How are those expected to change anyones behavior? Nothing done will make Cobblestone a better/safer place to ride a bike, in fact, as a cyclist I will tell you that I would never try to ride through the cones that have been installed. They are too narrow, and the area between them will accumulate road debris that won't be in the trafficked area.

I'd be happy to discuss or clarify my input further if that would be helpful.

Regards,

Matt MacKinnon
nonnikcam@gmail.com

919-949-6710
105 Cobblestone Drive

Zachary Hallock

From: CreativElectric <creativeelectric@gmail.com>
Sent: Monday, August 12, 2019 10:53 PM
To: Zachary Hallock
Subject: Cobblestone Dr. Pilot project

Follow Up Flag: Follow up
Flag Status: Flagged

Mr Haddock

I am quite perplexed and dismayed at the attempt to mitigate the speed on Cobblestone Dr. I'll address my concerns in no particular order.

I attended the meeting back in April, and understood that the "Bike Boulevard", like all of the other measures implemented, would be voted on and none would become permanent until votes were cast. Is that still the case? Cobblestone is not wide enough to support additional bicycle traffic - especially with the proposed road narrowing solutions. Besides there is a well established, and much safer route one block away on Cates Farm Rd.

I could tell from your surprise at the meeting that there would be a four way stop at Cobblestone and Rockgarden. That was an unnecessary move, you've managed to further slow down the group of people who were never the problem to begin with, as well as creating a huge annoyance for our end of the street.

It was my (and my neighbor's) impression that the various measures would be tried one or two at a time and not all at once. Where's the scientific process? How are you going to know which one of your ideas is the best one? Certainly you don't expect to keep all of those abominations in place?!

The pinch points you created are in completely wrong places. At the top of the street (near 127 Cobblestone) you force oncoming traffic into the opposite lane at a blind spot in a hill. Twice I've almost creamed the oncoming car because I simply could not see him. Also, think if a bicycle were in the mix, there most certainly would have been serious injury. It's a law suit waiting to happen.

Down at the bottom, near RockGarden you had the encroachment near the stop sign, we're already slowing down for the stop, so it has no effect at all other than , again to force traffic going up the hill onto the other side of the road.

The speed bump too is in the wrong spot at the bottom of the hill. If the idea is to slow traffic coming down the hill, it needs to be further up the hill. Where it is now, cars are already going 30 before they hit the bump. Similarly, a bicycle coming down the hill hitting that bump will catch air coming off it. If the idea is to make the street a "Bicycle Boulevard" and to have it be a thoroughfare for children on their bikes going to and from school, you're creating a situation where the most inexperienced riders are facing a challenge that experienced riders have difficulty negotiating. If your main thrust was to just placate Stephanie you have succeeded. However, rest assured if one of her children hit that bump at 20 mph coming down the hill on a bike she'd drain the towns coffers in a heartbeat.

After seeing all of this mess in place, one thought sticks out in my mind is in regards t the aging and informed citizens who live down on the dead end of the street. My father suffered a stroke a number of years ago, Had the EMT Vehicles been a second slower getting to him, he would have died, or been more seriously paralyzed than he was. He has since passed, but my mother remains in the house, 89 and equally fragile. Every second counts in an emergency.

Finally, it seems like you are attempting to cram this agenda down our throats and making it difficult for those who oppose these measures to have their voices heard. Holding a street meeting at 5-7 with one days notice- we work that's an almost impossible thing to manage.

Thank You,
 Lisa and Mike Sanfilippo
 CreativElectric
 919-698-9485 Lisa

919-868-6240 Mike
Hours Mon-Fri 9-5pm
<http://www.creativelectric.com/>

Zachary Hallock

From: Mary Sonis <msonis@nc.rr.com>
Sent: Wednesday, July 24, 2019 10:04 PM
To: Zachary Hallock
Subject: Re: Cobblestone Drive Traffic Calming - Pilot Project Installation

I bet if you did a survey of all Cobblestone residents, you would find that most people do not favor any traffic calming devices, beyond the enforcement of the present speed limit. This is an unfortunate waste of resources, and these devices have been shown to cause cars to produce more CO2 emissions than they produce in the course of normal driving.

Sincerely,
Mary Sonis

On Jul 24, 2019, at 3:40 PM, Zachary Hallock <zhallock@townofcarrboro.org> wrote:

Dear Cobblestone Drive Residents,

Public Works has informed us that they have procured the necessary materials for the temporary traffic calming installation along Cobblestone Drive. We anticipate that they will be on site along Cobblestone Drive to install the pilot traffic calming project from Tuesday, July 30th through Thursday, August 1st (weather permitting).

As a reminder, this is a pilot project, so any comments and concerns from residents will be incorporated as feedback on the project and will be used to inform decisions about the next steps for traffic calming devices on Cobblestone Drive. Please direct your comments to me either via email (or otherwise in writing) so that they can be properly documented.

Thank you for your patience with us as this project moves forward.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

Town of Carrboro

301 W. Main St.

Carrboro, NC 27510

Phone: 919-918-7329

Email: zhallock@townofcarrboro.org

Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Nan Babcock <nbabcock@me.com>
Sent: Thursday, August 01, 2019 1:39 PM
To: Zachary Hallock
Subject: Cobblestone dr

I use cobblestone multiple times a week - I understand what your after but narrowing the road is scary as a driver. I feel like I am playing Russian roulette on this road on a good day. When it's trash or recycling days it complicates things even further. Leaf collection times of year (or after storm or Xmas) adds other scary elements due to a one lane road scenario.

One additional element to consider is bikers. I use this road biking to grocery every now and then. If you have any speed going down the hill and weight of groceries (or not) when you hit the speed bump the biker is going to get some air. Teenagers may like it but moms/dads and middle school bikers are especially at risk.

In general I am not a fan of speed bumps due to the trade-off of emergency vehicles responding quickly.

Please reconsider!

Nan Babcock
23 year resident on tramore dr

Zachary Hallock

From: Nancy Lees <njalees@gmail.com>
Sent: Monday, August 05, 2019 10:21 AM
To: boa; Zachary Hallock
Subject: Opposition to Cobblestone Dr. Traffic Calming Device

Follow Up Flag: Follow up
Flag Status: Flagged

My husband and I own the home at 107 Cobblestone Dr. While we are not opposed to traffic humps to slow the speed of drivers on our street, we are opposed to the style of traffic calming feature outlined by the temporary cones across the street from our house.

The style of device, jutting out into the street to allow only one lane of traffic, is not desirable. The one across from 107 Cobblestone Dr. is at the crest of the hill.

There is not a clear line of sight to opposing traffic coming up the hill. This is dangerous - could cause a potential head on collision.

Please take our concerns into consideration.

Regards,
Nancy and Jonathan Lees

Zachary Hallock

From: Neil and Carol Offen <neilandcarloffen@gmail.com>
Sent: Sunday, August 11, 2019 12:07 PM
To: boa; Zachary Hallock
Subject: Cobblestone Drive traffic calming

I am writing concerning the recent implementation of temporary traffic-calming devices on Cobblestone Drive.

While the idea of slowing traffic on the street is a good one, and the 4-way stop at Cobblestone and Rock Garden particularly useful, the overall implementation has a number of problems.

On a small street, the chicanes are very problematic; they force vehicles to the center of the street, thus putting them in the way of vehicles coming in the other direction. On a street where there is significant curbside parking and regular town vehicle service, not only do these chicanes not aid safety, they create a much greater hazard.

The markings for a bike lane seem more than sufficient for bicycle right-of-way.

Furthermore, the speed bump that has been installed appears to have been placed at a location that's not terribly useful. The speeding on the street is more from vehicles descending the hill with momentum; the bump has been placed near the bottom of the hill, where vehicles no longer are traveling so fast. It would make much more sense to place the bump closer to the point where the hill descends abruptly.

It might also be better to use a lower hump or a speed table instead of a bump since the bump is hard on both vehicles, their drivers and their passengers. On a street without heavy traffic, a bump this high seems like a solution in search of a problem.

Thank you for your consideration.

Neil Offen
219 Cobblestone Drive

Zachary Hallock

From: Neptali bocanegra <nrubenbocanegra@gmail.com>
Sent: Saturday, August 10, 2019 12:26 PM
To: boa; Zachary Hallock
Subject: Traffic-calming at Cobblestone Dr

I am against the speed bumps! Against the bicycle lane that will increase traffic and not calm traffic. I have been living in 202 for 29 years, have raised two kids in this neighborhood. I have seen traffic increase due to the area neighborhood developments now that it has completely developed. I don't see any dangerous issues due to the present traffic. The only things that have changed are the new families moving in with new ideas and political agendas. If safety for our kids is an issue, personally I will not allow them to play in the street. The town has so many parks close to Cobblestone within a mile where they can play safely and free!

Why I am against speed bumps?

- . Increased noise and car emissions
- . Slow emergency vehicle response time and impeding of snow-plow trucks
- . Damage to car tires and fenders of cars with low clearance
- . Increased back and hip pain for people suffering from these issues

Why I am against bicycle lanes?

. Increased risk for accidents if the road modification like placing the poles in the top of the road with no visibility of the incoming traffic

- . Making bicycle lanes in Cobblestone will increase bicycle traffic, and how do you control or monitor bicycle speed?

I do hope the town will not consider to enforce these changes to our neighborhood!

Ruben & Wanda Bocanegra in 202 Cobblestone

Sent from my iPad

Zachary Hallock

From: Steve Himmelberg <stevhimmelberg@hotmail.com>
Sent: Friday, August 09, 2019 10:53 AM
To: pmmcguire@townofcarrboro.org
Cc: Zachary Hallock
Subject: Cobblestone Dr traffic calming
Attachments: [Untitled]_2019080909485500.pdf

Dear Ms. McGuire & Mr. Hallock,

As residents of Cobblestone Drive for almost 20 years we wanted to weigh in on the new traffic calming devices. We have seen over the years the steady increase not only in traffic but in the speed of drivers. Being one of the few streets without traffic calming devices we constantly watch drivers speeding up & down Cobblestone Drive as a cut through from Hillsborough Road to Homestead Road. We would even watch school buses using Cobblestone Drive as a cut through and going way to fast "down the hill".

A couple of observations;

- So far we have been extremely pleased with the short-term benefits as traffic has somewhat slowed.
- There does appear to be a serious need for an additional speed bump on the South end of the street which would be around 115/116 Cobblestone Drive. What we have witnessed recently is drivers seriously increasing their speed when they are traveling "up the hill" from the new speed bump at 130 Cobblestone Drive to the stop sign @ Cobblestone Drive & Pathway Drive. Seems that drivers are trying to "make up time" from slowing down at the speed bump @ 130 Cobblestone Drive and have grown impatient.
 - As of right now drivers have slowed on the North end of the street (where the speed bump is located) but have increased their speed on the South end of the street (going "up the hill").
- There has been an local movement to try and scare residents to voice their concerns against the traffic calming devices. Somebody passed out negative fliers in Cobblestone Drive mailboxes (see attached copy)
 - It appears that the only people who would be against the traffic calming devices are either 1) the people that use Cobblestone Drive as a cut through (i.e. do NOT live on the street) 2) people who are going above the speed limit and feel inconvenienced.
- If Cobblestone Drive does become a bicycle boulevard additional measures need to be taken to slow the traffic (i.e. a 2nd speed bump) to create a safe space since there is NO dedicated bike lane.

In talking with neighbors around us everyone has been in favor of the traffic calming devices. Since Cobblestone Drive is in the "walk zone" for McDougale Elementary School & Middle School there are A LOT of children using this road daily and crossing the road.

Thank you for your time and feel free to contact us with any questions.

Steve & Adrienne Himmelberg
 111 Cobblestone Drive

Zachary Hallock

From: Stephanie Wade <stephanie.wade09@gmail.com>
Sent: Wednesday, July 31, 2019 3:34 PM
To: Zachary Hallock; boa; Christina Moon; Patricia J. McGuire; Ryan Mills; Liz Harden
Subject: Traffic Calming on Cobblestone

Hi Zach and BOA.

Thank you so much for the stop signs, bike awareness, and the much needed speed hump/table on Cobblestone. Love it! Love it! Love the speed hump! We could definitely use one or two more speed humps further up the street. We get together as a community and we learn that not all needs are the same but we have a commonality...we need folks to slow down on Cobblestone. Thanks for coming through for us. Let's make it permanent.

Personally, the chicanes bring awareness but I'm not sure how much they slow folks down. Its just like having a parked car on the street since the chicanes are not opposing one another.

Thanks again.

Stephanie

Zachary Hallock

From: Sandra Walton <swalton6438@gmail.com>
Sent: Thursday, August 01, 2019 3:04 PM
To: Zachary Hallock
Subject: Re: Cobblestone Drive Traffic Calming - Pilot Project Installation

Hi Zachary,

I live at 103 Cobblestone Dr, and worked from home on Wed, 7/31. I definitely noticed that the temp. poles (the first set) just past our house caused cars to slow down/brake. I'm a big fan of seeing speed humps installed on our street but since I was at the meeting in May that you participated in, I'm sure you are receiving all sorts of negative feedback/reaction.

Our family is all for seeing something to slow down cars/deter people from speeding through our neighborhood.

Sandra Walton

On Wed, Jul 24, 2019 at 3:40 PM Zachary Hallock <zhallock@townofcarrboro.org> wrote:

Dear Cobblestone Drive Residents,

Public Works has informed us that they have procured the necessary materials for the temporary traffic calming installation along Cobblestone Drive. We anticipate that they will be on site along Cobblestone Drive to install the pilot traffic calming project from Tuesday, July 30th through Thursday, August 1st (weather permitting).

As a reminder, this is a pilot project, so any comments and concerns from residents will be incorporated as feedback on the project and will be used to inform decisions about the next steps for traffic calming devices on Cobblestone Drive. Please direct your comments to me either via email (or otherwise in writing) so that they can be properly documented.

Thank you for your patience with us as this project moves forward.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

Town of Carrboro

301 W. Main St.

Carrboro, NC 27510

Phone: 919-918-7329

Email: zhallock@townofcarrboro.org

Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Sean Wamsley <seanwamsley@gmail.com>
Sent: Sunday, August 04, 2019 8:53 AM
To: boa; Zachary Hallock
Cc: Bridget Wamsley
Subject: Cobblestone Homeowner- objection to traffic calming

Follow Up Flag: Follow up
Flag Status: Flagged

Dear Mr. Hallock & The Board of Alderman:

The temporary traffic calming measures installed on Cobblestone Drive are unacceptable to me as a homeowner of Cobblestone and I would like to see them removed.

Specifically, the post groupings and the electronic speed gauge present an eyesore and are not fitting with the aesthetic of the community.

The speed gauge is within only a few feet of my property as it is directly at the end of my driveway. It is my belief that the placement of this unsightly gauge will negatively impact the value of my home if it becomes permanent.

If it is agreed by the community and the traffic planner that permanent traffic calming measures are required, then I respectfully request that speed bumps be installed. It is my belief that speed bumps would not negatively impact home values and that they would potentially fit with the aesthetic of our quiet Cobblestone community.

Thank you for your service and efforts to improve our community.

Sincerely,
Sean and Bridget Wamsley
115 Cobblestone Dr
410.562.6282

Zachary Hallock

From: Tristan Swindell <tswindell32@gmail.com>
Sent: Thursday, August 08, 2019 9:20 AM
To: Zachary Hallock; Christina Moon; Patricia J. McGuire; boa
Subject: Cobblestone Drive speed bumps

To whom it may concern,

My family has recently moved into a home on Cobblestone Drive. We have two preschool age children and a dog and we are concerned about the amount of cars speeding through the neighborhood. I was very happy to see the speed monitor that was installed as well as the temporary traffic-calming devices. I want to advocate for these devices to stay and would like for a permanent speed bump to be placed in front of or near our home at 113 Cobblestone Dr. We are located at the bottom of a hill and people tend to accelerate as they are going up or are traveling at a fast speed while going down. Our family loves to spend time outside and play in the front yard however I have concerns about the children playing due to the speeding traffic. I have spoken with other neighbors and it is my understanding that some of this traffic is due to people avoiding other roads in the neighborhood that already have speed bumps. These individuals do not live on Cobblestone and are unaware of the amount of people (especially children) and animals that are outside on a daily basis. We love our new home and neighborhood and would like to make it a safer place to live and play! Thank you for your time.

Sincerely,

Tristan Swindell
113 Cobblestone Dr.

Email Comments Related to the August 13th Community Meeting

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, August 14, 2019 2:14 PM
To: 'swindell82@gmail.com'; 'Tristan Swindell'
Cc: Patricia J. McGuire; Christina Moon
Subject: RE: Please

Dear Mr. and Ms. Swindell,

Thank you for your comments.
The Town is currently working to address the issue and alleviate concerns of Cobblestone Dr residents.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

From: Patricia J. McGuire
Sent: Wednesday, August 14, 2019 11:14 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>; Christina Moon <CMoon@townofcarrboro.org>
Subject: Fwd: Please

Begin forwarded message:

From: Jade Swindell <swindell82@gmail.com>
Date: August 14, 2019 at 7:44:05 AM EDT
To: <PMcGuire@townofcarrboro.org>, Tristan Swindell <tswindell32@gmail.com>
Subject: Please

My wife and I could not attend the meeting last night due to my work. However, if I knew how fast people go up/down that hill I would not have moved on that street. Please put some sort of speed hump in front of our house. The town did the study and I hope are aware of how bad the problem really is. The digital speeding sign has been very helpful and it very close to our house. Thanks for your close attention to this matter. I know it's difficult. Cars just flat out fly going up and down that hill. I just want to feel safe playing with my kids in front of our home. I don't want the town to be in a position of having to do something after a tragedy rather than trying to prevent one.

-Jade Swindell

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, August 14, 2019 3:28 PM
To: 'cgoldste@gmail.com'
Subject: RE: Posts on Cobblestone

Dear Ms. Goldstein,

Thank you for your comments.

We are working to devise a different traffic calming setup which would alleviate any safety concerns on Cobblestone Drive.

Sincerely,

Zachary Hallock
Transportation Planner
 Town of Carrboro

From: Cheryl Goldstein <cgoldste@gmail.com>
Date: July 31, 2019 at 3:02:47 PM EDT
To: <pmcguire@townofcarrboro.org>
Subject: Posts on Cobblestone

Dear Ms. McGuire,

My name is Cheryl Goldstein and I live in the Fair Oaks subdivision off of Hillsborough Road. Today I notice that white posts with reflectors had been erected in the street on Cobblestone in three locations. Today I spoke with some of the men that had installed these posts and they explained that they were placed their to slow down traffic. I explained that while I am very supported of slowing down traffic on this street, it would be much safer and more effective to install speed bumps. As it is, Cobblestone is littered with cars parked on both sides of the street, often making it a "one lane" road in areas, especially when you encounter service vehicles (lawn, carpentry, construction, etc.) and the roll out bins for trash and recycling. Several years ago my side mirror was knocked off by a trash bin in the street when I had to try to navigate around parked cars on both sides of the street with a car coming in the opposite direction (and I had to pull over quickly to avoid an accident).

The men working on the posts advised me to contact you with my concerns, so I thought sending you an email to explain the situation on Cobblestone would be best. I truly feel that adding these posts in the street will make this road even more dangerous to navigate by restricting the road space even further.

Thank you for your consideration of my request to use speed bumps in lieu of the posts.

Kind regards,

Cheryl Goldstein

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, August 14, 2019 1:38 PM
To: 'heidi perov'
Subject: RE: Cobblestone Drive

Hi Heidi,

Thanks for your comments.

I know the sharrows need to be centered in the lane and we are looking at adjusting the traffic calming devices.

Thanks,

Zachary Hallock
Transportation Planner
 Town of Carrboro

From: heidi perov [mailto:heidiperov@gmail.com]
Sent: Tuesday, August 13, 2019 6:43 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Cc: Patricia J. McGuire <PMcGuire@townofcarrboro.org>; Christina Moon <CMoon@townofcarrboro.org>; Damon Seils <dseils@townofcarrboro.org>; Lydia Lavelle <lydlavelle@nc.rr.com>; David Andrews <dandrews@townofcarrboro.org>
Subject: Cobblestone Drive

Hi Zach et al.,
 I hope everyone is having a great summer.

I recently had a chance to ride on Cobblestone, where the Town is testing some traffic calming, and I had a few comments I wanted to share.

I understand that the main focus of the pilot project is to slow traffic and not to accommodate bicycling, but there are some issues that will affect people on bikes.

A few days ago there were temporary chicanes up but they appear to have been removed. Will you be relocating them to another part of the road, or is the only traffic calming being employed the speed bump at the bottom of the road and the addition of a 3 way stop sign? Although the chicanes had some problems with their locations, I imagine they may have helped to slow traffic down. I hope the Town gathered some data during their brief time up.

The speed bump is very dangerous for cyclists going down the hill. I have heard from a few cyclists that this has caused near crashes with experienced cyclists, and the concern is that it will cause actual crashes among less experienced people on bicycles, especially children. Bicycles can easily build up speeds of 18–25 miles an hour on that descent. It would be a good idea to give a much larger area on the sides for cyclists to travel through.

The sharrows have been painted incorrectly. They are currently located in the same portion of the road that cars are parked in. They should be placed in the middle of the travel lanes. According to the MUTCD, on a street with on-street parallel parking, the positioning of the sharrow "should be placed so that the **centers of the markings are at least 11 feet from the face of the curb.**"

If sharrows are the only accommodation being given to people on bikes, they need to be positioned correctly. Otherwise, a person riding along Cobblestone and trying to read the sharrow as a guide for where s/he is to ride will be continually moving in and out of the travel lane.

I'd like to keep up with the evaluation of this project. Could you let me know when the speed counts and other parts of the project are scheduled to be evaluated?

Thanks as always for all you do,

Heidi

Heidi Perov Perry
919-618-8199

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, August 14, 2019 1:45 PM
To: '12Gauge'
Cc: Christina Moon; Patricia J. McGuire
Subject: RE: Cobblestone Dr Speed mitigation

Dear Mr. Sanfilippo,

Thank you for your inquiry.

I will need to do some research and get back to you regarding the proper procedure here.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

-----Original Message-----

From: 12Gauge [mailto:12gaugewire@gmail.com]
Sent: Tuesday, August 13, 2019 9:26 PM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Cc: boa <boa@townofcarrboro.org>; Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Subject: Cobblestone Dr Speed mitigation

Mr Hallock et al.

Before the onset of this venture, Stephanie Oakes and David Resnick came around with a petition asking support for speed mitigation on Cobblestone. I believe they misrepresented the nature of their intent and I respectfully request that my name be stricken from the petition. Is that in your purview or do I need to follow some other protocol?

-Mikel Sanfilippo
211 Cobblestone Dr.

Zachary Hallock

From: Zachary Hallock
Sent: Wednesday, August 14, 2019 2:16 PM
To: 'Ryan Oakes'
Subject: RE: Cobblestone Traffic Calming Meeting

Hi Ryan,

Thanks again for all your comments.

We are working to find a solution that both addresses the safety issue and alleviates any concerns which residents of Cobblestone may have.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

From: Ryan Oakes [mailto:ryan@clearwaterconstructiongroup.com]
Sent: Wednesday, August 14, 2019 10:41 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>; boa <boa@townofcarrboro.org>; Christina Moon <CMoon@townofcarrboro.org>
Cc: Lydia Lavelle <LLavelle@townofcarrboro.org>; David Andrews <dandrews@townofcarrboro.org>; Patricia J. McGuire <PMcGuire@townofcarrboro.org>; Catherine Dorando <CDorando@townofcarrboro.org>
Subject: Cobblestone Traffic Calming Meeting

Hi Everyone,

This email is to follow up on the meeting held last night at the Town Hall regarding the Traffic Calming measures on Cobblestone Dr. I have also included my previous email below, as a reminder to why we need action on your behalf.

First, I would like to thank the three BOA Representatives, Barbara, Randee & Jaqueline for coming to listen to our meeting!

It was a lively discussion and unfortunately there is very vocal minority in our neighborhood that showed up to voice dissenting opinions or concerns regarding the traffic calming measures. They pointed out however that they felt like the communication to this point was not thorough and did not include them. Though a few of us that are in support of the traffic calming measures, in particular speed bumps/humps, showed up, many did not for a variety of reasons... family illness, out of town or they simply felt their signature on the initial petition was enough. Many people are non-confrontational; they want anonymity and don't want to be in a neighborhood feud.

As Town Management, I'm sure you are used to hearing opinions on both sides of the fence for various topics, even heated debates. As residents, we are not used to this. We do not want to have to fight for safety. We do not want to have to campaign our neighborhood and solicit support for something that saves lives and creates an enjoyable place to live. For our part, we moved to Carrboro for its reputation of being a bicycle and pedestrian friendly area, among other reasons. We moved to a neighborhood so our kids could ride bikes to school and visit their friends without having to hold their hands every day, which is detrimental to their psychological health.

Our six year old son Atticus was nearly hit by a car during the school year after a women passed my wife and Atticus on their bikes aggressively. Recently, one of our neighbors had a child nearly hit by a speeding car. She was devastated. She couldn't make it to the meeting last night due to tending to a friend in Hospice care. As a reminder, there was an accident on our street that knocked a parked car onto the curb. There is a bigger picture here as the take away....

The bigger picture is this: However we got here, The Town of Carrboro now has the data that shows there is a significant speeding problem in our neighborhood. It is at this point, the responsibility of the Town of Carrboro to rectify the problem. I am calling on you to be strong and explain to all the residents that we ARE getting some kind of device, whether we all want it or not. None of us want to see the implications of what happens if someone is injured or killed, if no action is taken, now that the data is collected and you know that there is a problem. For example, the Town could be sued for wrongful death and negligence. However, no one is going to be litigious if speed humps are installed. A few people may not be happy for a little while but they won't be litigious. I am obviously not your Council; rather I'm just pointing out the obvious.

If 100% of the neighbors had agreed to this, I'm sure we would not be having this conversation but as you all know, there will always be dissent to any decision that policy makers put in place. This matter is not about the popular idea at this point. It is about Child and Senior Safety.

With our children, when they argue about doing something they don't want to do, we give them two choices. This or that, but both choices are presented by us, not them. Working with a population is similar. You could simply present our neighborhood with choices. Speed Bumps, Speed Tables or Speed Humps. One of them is being installed due to the speeding problem. Which, dear residents, would you like?

Another option could be a Speed Camera, that issues citations and doesn't require an officer to be present. While this has been a contentious method in the past, many civilians have accepted this method as something that is here to stay. It would bring revenue to the Town,

though it could also bring unwanted Press. Hard to say right? Speed humps while annoying, are proven to work. And thank you so much for putting one in front of our house!!!

In closing, I would like to thank you all for the measures taken so far and for helping us create a safer Carrboro! We look forward to seeing your next moves and bringing closure to this matter.

Sincerely,

Ryan Oakes, MA. SWD

Professional Watershape Designer # KM 083-17

336-516-2191 Cell

www.ClearwaterConstructionGroup.com

www.SocietyofWatershapeDesigners.com

From: Ryan Oakes <ryan@clearwaterconstructiongroup.com>

Sent: Sunday, January 20, 2019 11:06 AM

To: zhallock@townofcarrboro.org; boa@townofcarrboro.org; CMoon@townofcarrboro.org

Cc: llavelle@townofcarrboro.org; dandrews@townofcarrboro.org

Subject: Accident on Cobblestone Dr

Hi Everyone,

My name is Ryan Oakes. Several of you know my wife Stephanie Wade. We live on 127 Cobblestone Dr.

I want to keep you all in the loop about a recent car accident on Cobblestone. On Friday night, January 18, a parked car on our street was hit by an oncoming car going up Cobblestone coming from the Wexford direction. I have attached photos for your reference.

The driver was moving fast enough to push the parked car up and onto the sidewalk. This is clearly not something that would happen if she were not speeding. Speed aside, she claimed she was looking for her phone, left the center of the road and collided with the parked car, or so the owner of the car reported to us.

Before the Holidays, Stephanie met with Tina and Zach to discuss the results of the traffic study, which proved that most people are indeed speeding through our neighborhood. I was told that calming devices such as speed tables were unlikely to be installed and that the town preferred to use measures such as parking cars strategically on the road to help calm traffic.

I would like to point out now, the failure of this type of traffic calming measure. Not only does a parked car on the street not slow traffic, it sets drivers up for more potential to have an accident. Having cars on the street

also creates a situation for children to step out in front of traffic from behind a parked car, leaving the drivers little time to stop, especially if they are already speeding. As well, children and adults alike cannot often see around cars parked on the street to prevent themselves from stepping into traffic.

We must ask ourselves, if speed tables had been present, would she have hit the car? At the very least her speed would have been reduced which could have reduced impact damage.

I can only imagine what conversation we would be having had a pedestrian or worse, a child, been injured or killed in this accident.

It was suggested to Stephanie, at her meeting, that our Emergency Services don't like traffic calming devices. I would like to suggest considering spaced traffic devices that allow wider vehicles such as buses and Emergency Services to span the humps. As well there are rubber tables that could be installed intermittently and even temporarily to see if the general traffic behavior could be modified. As a Town, we need to be considering the correlation between our mission and our circumstances. The Mayor promotes that this is an Exercise and Bicycle friendly community. I for one, as an avid cyclist and runner am worried about my children growing up riding and playing in our neighborhood. Had we any idea before we moved here, that this was a problem, we would never have considered this neighborhood.

I am begging you to please do something now. We have provided the town with:

- 1) Sufficient neighborhood support for a traffic calming study
- 2) Sufficient evidence that the majority of drivers (85% I believe) are speeding
- 3) Sufficient evidence that the road sees a lot of traffic, which is diverted from the wider Cates farm road because Cates farm road has Traffic calming devices.
- 4) Sufficient evidence that parking cars on the side of the road is not an option

We simply want the Town of Carrboro to do the right thing. I have included the following link for your convenience from the American Public Health Association. It provides research analysis proving that our children will live in a safer environment with traffic calming measures. Please take a moment to read it.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1448312/>

I would like to remind you of your own vision, as copied directly from your website.....

"Carrboro will be a place that is bicycle-friendly; where people have an accessible, safe, and convenient option of bicycling for transportation, recreation, and health; where bicycle lanes and greenways provide a connected system within and outside the Town; where future development provides access and facilities for bicyclists; where bicycle transportation is the easy choice; and where proposed policies and programs educate, inspire, and encourage residents and enforce safe bicyclist and motorist behavior."

--Vision from the Comprehensive Bicycle Transportation Plan, adopted by the Board of Aldermen, March 24, 2009

As a final note, I would like to point out that our local school buses are one of the speed offenders. Recently I called to complain about bus #254 which was going at least 40 mph by my estimate.

Thanks so much for taking the time to read this,

Ryan Oakes, MA. SWD

336-516-2191 Cell

www.ClearwaterConstructionGroup.com

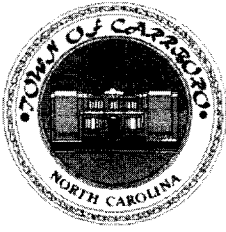
www.SocietyofWatershapeDesigners.com

Comments Related to the September 9th & 12th Community Meetings

Cobblestone Drive Neighborhood Drop-in Session Notes

Carrboro Town Hall, 7:30-9:00PM, 9/9/19

- Go back and check when the Cates Farm Road speed bumps were installed, if there is count data may be able to see a change?
- Are there other speed cushion locations nearby where they could be observed?
- What is the future of parking on Cobblestone?
 - There will be no change the parking through this traffic calming process
- Stop sign is a helpful improvement, keeps people from flying through the intersection at Rockgarden, even if they do a rolling stop that is better.
- Need to figure out how to handle speeding bicycles, though that is primarily a function of topography
- Could the flower pots be used to close off the north end of Cobblestone before Rockgarden?
- Putting a raised crosswalk on Cobblestone at Pathway won't do much to cars but would be good for pedestrians, but marking the crosswalk could be helpful.
- When repaving is done the speed humps are often made worse than originally designed.
- Would generally prefer speed table design over speed bumps (whichever is less aggressive)
- Any way to trial a speed cushion setup?
- The EMS time savings for speed cushions may be statistically irrelevant
- The speed cushion's cutouts for EMS vehicles could create a game of people trying to swerve
- Consider painting crosswalks at Rockgarden and at Pathway
- Enforce stop signs
- Place warning flags on new stop signs
- Try to place speed tables on the slopes of the hills as that is where speeding is more prevalent
 - Shift the one at the bottom of the hill further south and add another to the north
- There may be stormwater issues if locating a speed table at the bottom of the hill
- Move the speed limit sign for northbound cobblestone (coming from pathway) further away from the intersection or add a second sign.
- Increase enforcement at stop signs



TOWN OF CARRBORO

NORTH CAROLINA

Cobblestone Drive Traffic Calming Design**Community Comment Form**Address: 129 Cobblestone Drive, Chapel Hill, NC

Comments: _____

I attended the drop-in session on Sept. 9 to demonstrate proposed calming devices for Cobblestone Drive. I am not in favor of the Cushion Design. During the pilot phase of installations, all devices that encouraged traffic deviating from the lane resulted in uncertainty and erratic, dangerous driving behavior. The grooves in the cushions would have a similar effect. I would prefer the speed tables, maximum of three, as proposed. I would support crosswalks designated by paint to link sidewalks, but would not support them being raised. Some consideration should be made regarding placement of a table near the creek & aqueduct system. Thank you for your consideration.

Debbie Vandelford



TOWN OF CARRBORO

NORTH CAROLINA

Cobblestone Drive Traffic Calming Design**Community Comment Form**

Address: 11 Cobblestone Dr. — Steve + Adrienne Himmelberg

Comments: We are not in favor of the speed
cushions. The firm print of the example provided
details that commercial trucks will still be able to
maintain their speed ~ their wheel base is wide
like the emergency vehicles. Commercial vehicles
are a large part of our speeding issue. We also
feel the speed cushion would create a "game"
when people would attempt to align their wheels
with the space. On our narrow street, to swerve
toward the center is extremely dangerous given
oncoming traffic. Has no alternate path to avoid a
collision.

Email Comments Related to the October 17th Transportation Advisory Board Meeting

Zachary Hallock

From: Matt MacKinnon <nonnikcam@gmail.com>
Sent: Thursday, October 10, 2019 1:24 PM
To: Zachary Hallock
Cc: Christina Moon; Patricia J. McGuire
Subject: Re: Cobblestone Drive Traffic Calming

I'm unable to attend these meetings, however, I would like to register my full support for that plan as described. 20 years overdue, but exactly what needs to be done. Thank you.

Matt MacKinnon
105 Cobblestone Dr, Chapel Hill, NC 27516

On Tue, Oct 8, 2019 at 9:54 AM Zachary Hallock <zhallock@townofcarrboro.org> wrote:

Dear Cobblestone Drive Residents,

Attached you will find two items, a flyer with information about the upcoming meetings at which Traffic Calming on Cobblestone Drive will be discussed and a map indicating the proposed locations for traffic calming devices. Hard copies of these items have also been mailed to all addresses within the Area of Influence. The upcoming meetings are as follows:

Transportation Advisory Board – Thursday, October 17 @ 7:30 PM in Carrboro Town Hall, Room 109

Carrboro Board of Aldermen – Tuesday, November 19 @ 7:00 PM in Carrboro Town Hall, Board Room

If you have any other questions please let me know.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

Town of Carrboro

301 W. Main St.

Carrboro, NC 27510

Phone: 919-918-7329

Email: zhallock@townofcarrboro.org

Town of Carrboro, NC Website - <http://www.townofcarrboro.org> E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

Zachary Hallock

From: Zachary Hallock
Sent: Tuesday, October 08, 2019 10:43 AM
To: 'joe vanderford'
Subject: RE: Cobblestone Drive Traffic Calming

Hi Joe,

We sent the mailing out on Friday. Did you happen to receive it yet?

Either way if there is a visible place where you can post the flyer that would helpful to try any reach others, I can make some copies for you if needed. Also, if you can post the files on Nextdoor that would be good as well rather than just relying on Ms. Wade.

Thanks!

Zachary Hallock
Transportation Planner
Town of Carrboro

From: joe vanderford [mailto:joevandy@mindspring.com]
Sent: Tuesday, October 08, 2019 10:12 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: Re: Cobblestone Drive Traffic Calming

zach,

thanks for the head's up. the most important thing is to make sure EVERYONE in the neighborhood is aware of these meetings. let me know if there's anything i can do to get the word out.

yours,

joe vanderford

cell 919-260-2998

-----Original Message-----

From: Zachary Hallock
Sent: Oct 8, 2019 9:54 AM
To:
Cc: Christina Moon , "Patricia J. McGuire"

Subject: Cobblestone Drive Traffic Calming

Dear Cobblestone Drive Residents,

Attached you will find two items, a flyer with information about the upcoming meetings at which Traffic Calming on Cobblestone Drive will be discussed and a map indicating the proposed locations for traffic calming devices. Hard copies of these items have also been mailed to all addresses within the Area of Influence. The upcoming meetings are as follows:

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If you have any other questions please let me know.

Sincerely,

Zachary Hallock, AICP, EI

Transportation Planner

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Zachary Hallock

From: Zachary Hallock
Sent: Tuesday, October 08, 2019 4:17 PM
To: 'Kenneth Reiter'
Subject: RE: Cobblestone Drive Traffic Calming

Dear Mr. Reiter,

Thank you for your comments.

Based on the traffic speed, volume, and other thresholds identified in the Town of Carrboro's Residential Traffic Management Plan (RTMP) Cobblestone Drive meets the threshold for Stage 2 traffic calming devices, such as speed tables. This plan can be found at: <http://nc-carrboro.civicplus.com/DocumentCenter/View/1433/Residential-Traffic-Management-Plan?bidId=>

I would encourage you to attend the scheduled meetings of the Transportation Advisory Board and Carrboro Board of Aldermen at which Cobblestone Drive will be discussed.

Sincerely,

Zachary Hallock
Transportation Planner
Town of Carrboro

From: Kenneth Reiter [mailto:kreiter@belmontsayre.com]
Sent: Tuesday, October 08, 2019 11:40 AM
To: Zachary Hallock <zhallock@townofcarrboro.org>
Subject: RE: Cobblestone Drive Traffic Calming

I think three speed tables are ridiculous.

Is this really necessary or just being driven by complaints?

While speed tables reduce speed, they will influence drivers to use other non-speed tables paths, thereby utilizing the existing/limited capacity on Pathway and other connectors.

Has anyone studied the impact on those routes once the speed tables are installed?

Ken

From: Zachary Hallock <zhallock@townofcarrboro.org>
Sent: Tuesday, October 8, 2019 9:55 AM
Cc: Christina Moon <CMoon@townofcarrboro.org>; Patricia J. McGuire <PMcGuire@townofcarrboro.org>
Subject: Cobblestone Drive Traffic Calming

Dear Cobblestone Drive Residents,

Attached you will find two items, a flyer with information about the upcoming meetings at which Traffic Calming on Cobblestone Drive will be discussed and a map indicating the proposed locations for traffic calming devices. Hard copies of these items have also been mailed to all addresses within the Area of Influence. The upcoming meetings are as follows:

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If you have any other questions please let me know.

Sincerely,

Zachary Hallock, AICP, EI

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Engineering Speed Management Countermeasures: A Desktop Reference of Potential Effectiveness in Reducing Speed

July 2014

This chart summarizes studies about engineering countermeasures used to manage speeds. Studies where an increase in speed were reported are also shown since this information is also relevant in selection of countermeasures.

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Vertical Deflections Within the Roadway																	
Speed Hump —rounded, raised area placed across the roadway, typically 12 to 14 feet long	pedestrian	urban	local	1 (1999)	178	—	48 to 11544	46 to 110443	—	—	—	35	27	-8	—	various	
	pedestrian	urban	local	2 (2005)	7	—	400 to 4362	401 to 3384	—	—	—	32	26	-6	—	VA	
	pedestrian	urban	local	3 (2000)	4	—	475 to 1506	433 to 1343	—	—	—	36	31	-5	—	WA	
	pedestrian	urban	local	4 (2005)	1	25	1300	—	22	23	1	37	29	-8	1-mon	FL	
	pedestrian	rural/urban	local	5 (2002)	3	25	218 to 746	—	24	18	-6	28	22	-6	1-mon	IA	
	pedestrian	urban	—	1 (1999)	4	—	—	—	—	—	—	36	29	-7	—	—	with speed table
	pedestrian	urban	—	1 (1999)	2	—	2456 to 3685	2593 to 2931	—	—	—	38	25	-13	—	—	with choker



Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Speed Cushion—raised area typically 6 to 7 feet wide that allows most emergency vehicles to straddle the hump	pedestrian	urban	—	1 (1999)	1	—	3323	2321	—	—	—	35	28	-7	—	various	
	pedestrian	—	—	2 (2005)	2	—	1042 to 1556	693 to 1563	—	—	—	31 to 37	26 to 30	-5 to -7	—	VA	
Speed Table—a long speed hump typically 22 feet in length with a flat section in the middle and ramps on the ends	pedestrian	urban	—	1 (1999)	72	—	198 to 14500	242 to 14400	—	—	—	37	31	-6	—	various	
	pedestrian	urban	residential	6 (2003)	19	—	198 to 2102	364 to 2061	—	—	—	38	29	-9	—	GA	
	pedestrian	rural community	2-lane	7 (2007)	1	—	1200	—	27	24	-3	33	29	-4	1-mon	IA	
	pedestrian	rural community	local	5 (2002)	3	25	218 to 746	—	24	18	-6	28	22	-6	1-mon	IA	removable speed table
	pedestrian	urban	—	1 (1999)	2	—	6500 to 8440	6400 to 6780	—	—	—	37	29	-8	—	—	with center island
	pedestrian	urban	residential	8 (2001)	1	30	1600	—	34	23	-11	38	27	-11	within 12-mon	MN	raised crosswalk
Raised Intersection—a raised plateau, with ramps on all approaches, where roads intersect	pedestrian	urban	—	1 (1999)	2	—	—	—	—	—	—	37	38	1	—	various	
	pedestrian	urban	local	9 (2004)	1	—	—	—	—	—	—	30	30	0	12-mon	NY	
Horizontal Deflections/Roadway Narrowing																	
Choker/Bulb-out—mid-block curb extensions that narrow road by extending the sidewalk or widening the planting strip	pedestrian	urban	—	1 (1999)	4	—	750 to 6150	331 to 5040	—	—	—	34	30	-4	—	various	
	pedestrian	urban	residential	10 (1997)	6	—	—	—	—	—	—	30	29	-1	—	—	
	pedestrian	urban	residential	8 (2001)	1	—	950 to 1050	—	34	31	-4	38	34	-4	within 12-mon	MN	choker with crosswalk
	pedestrian	urban	residential	8 (2001)	1	—	950 to 1050	—	33	31	-2	37	34	-3	within 12-mon	MN	choker + “SLOW” + landscaping
	pedestrian	rural community	2-lane	11 (2010)	—	—	—	—	39	39	0	—	—	—	—	simulator	curb + gutter bulb-outs
Neck Down—intersection curb extensions that narrow a road by extending the width of a sidewalk	pedestrian	urban	—	1 (1999)	3	—	2800 to 8110	4660 to 5660	—	—	—	29	30	1	—	various	
	pedestrian	urban	local street	9 (2004)	2	—	—	—	23	25	2	27	31	4	12-mon	NY	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Chicanes—curb extensions that alternate from one side of the street to the other forming s-shaped curves, also includes lateral shifts which shift traffic to one side of the road for an extended distance and then back	pedestrian	urban	—	10 (1997)	2	—	1380 to 3200	790 to 2400	—	—	—	33	27	-6	—	various	
	pedestrian	urban	residential	3 (2000)	4	—	1380 to 1965	790 to 1993	—	—	—	31	22	-9	at least 4 years	WA	
	pedestrian	urban	arterial (school zone)	12 (1998)	1	—	8000	—	—	—	—	31	28	-3	—	Canada	
	pedestrian	rural community	2-lane	11 (2010)	—	—	—	—	39	30	-9	—	—	—	—	simulator	
	pedestrian	rural community	2-lane	11 (2010)	—	—	—	—	39	33	-6	—	—	—	—	simulator	painted chicane
Center Island—raised or painted island along the centerline that narrows travel lanes	pedestrian	urban	—	1 (1999)	—	—	—	—	—	—	—	—	—	—	—	various	
	pedestrian	urban	—	1 (1999)	2	—	6500 to 8440	6400 to 6780	—	—	—	37	29	-8	—	—	
	pedestrian	urban	local street	9 (2004)	1	—	—	—	30	28	-2	36	33	-3	12-mon	NY	
	pedestrian	rural	—	13 (2002)	2	—	—	—	—	—	—	44	38	-6	1-mon	MN	
	pedestrian	rural	within community (2-lane)	13 (2002)	1	30	900	—	34	29	-5	44	38	-6	2-wks	MN	
	pedestrian	rural	within community (2-lane)	13 (2002)	1	30	900	—	35	31	-4	44	38	-6	6-wks	MN	
	pedestrian	rural	community entrance (2-lane)	7 (2007)	2	25	2669	—	31	29	-1	36	35	-1	1-mon	IA	combined + tubular channelizers
	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	41	43	2	51	50	-1	—	simulator	median
	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	41	40	-1	52	46	-6	—	simulator	median + gateway
	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	41	41	0	52	50	-2	—	simulator	median in series
	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	41	40	-1	51	46	-5	—	simulator	median in series with crosswalk
	pedestrian	rural	community entrance (2-lane)	15 (2013)	3	25	593 to 1448	—	28	27	1	35	34	-1	1-mon	IA	temporary curbing

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
(cont'd) Center Island —raised or painted island along the centerline that narrows travel lanes	pedestrian	rural	community entrance (2-lane)	15 (2013)	3	25	593 to 1448	—	29	27	-2	35	33	-2	12-mon	IA	temporary curbing
	pedestrian	rural	community entrance (2-lane)	16 (1999)	5	—	—	—	38	29	-9	44	33	-11	—	Austria	braking islands
	roadway departure	rural	2-lane	17 (2008)	8	50 to 55	—	—	—	—	-4	—	—	-5	—	Austria	painted island + edge line
Reduce Lane Width with Markings —narrowing of the lanes using pavement markings, median, etc.	pedestrian	rural community	2-lane	7 (2007)	2	30	1680	—	28	29	1	34	35	1	1-mon	IA	narrowing with pavement marking
	pedestrian	rural community	2-lane	7 (2007)	2	30	1680	—	28	29	1	34	35	1	12-mon	IA	narrowing with pavement marking
	pedestrian	urban	residential	18 (1984)	2	—	—	—	34	34	0	—	—	—	1-wk	FL	narrowing using edgeline + centerline
	intersection	rural	intersection (2-lane)	19 (2008)	9	50 to 55	—	—	—	—	-4	—	—	-5	3-mon	PA, KY, MO, FL	edgeline + centerline
	roadway departure	urban	high speed intersection 4-lane	20 (2008)	—	—	—	—	—	—	-4	—	—	—	—	—	2.7 ft. lane width reduction
	roadway departure	urban	freeway exit	21 (2000)	—	—	—	—	31	30	-1	—	—	—	1-mon	VA	narrowing using herringbone markings
	roadway departure	rural day	2-lane	22 (2005)	3	—	—	—	57	58	1	—	—	—	1-mon	TX	edgeline + centerline
	roadway departure	rural night	2-lane	22 (2005)	3	—	—	—	60	59	1	—	—	—	1-mon	TX	edgeline (existing centerline)
Road Diet —reducing the number of lanes by reallocating roadway space for other uses (e.g. bike lanes, center turn lanes, medians, parking, shoulder lanes, etc.	pedestrian	urban	4-lane undivided	23 (2001)	1	—	—	—	—	—	-4	—	—	—	—	CA	4- to 3-lane
	pedestrian	urban	4-lane undivided	23 (2001)	1	—	—	—	35	32	-3	—	—	—	—	IA	4- to 3-lane
	pedestrian	urban	4-lane undivided	23 (2001)	1	—	—	—	—	—	—	—	—	-1	—	IA	4- to 3-lane
	pedestrian	urban	minor arterial	8 (2001)	1	35	5400 to 9100	—	45	43	-2	51	49	-2	—	MN	4- to 3-lane

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Surface Treatments and Markings																	
Transverse Rumble Strips—raised or grooved patterns installed on the roadway travel lane or shoulder pavements perpendicular to the direction of travel	pedestrian	rural	high-speed intersection	20 (2008)	3	70	—	—	—	—	—	—	—	-1	5-mon	—	
	pedestrian	rural	intersection	24 (2003)	11	—	—	—	—	—	—	55	54	-1	1-mon	TX	
	roadway departure	rural	2-lane	25 (2005)	3	—	—	—	46	46	-0	49	52	3	1-wk	KY	cars
	work zone	rural	work zone (2-lane)	26 (2000)	2	—	1250 to 1850	—	—	—	-2	—	—	—	1-day	TX	cars
	work zone	rural	work zone (2-lane)	26 (2000)	2	—	1250 to 1850	—	—	—	-2	—	—	—	1-day	TX	trucks
Transverse Bars—lines placed across the lane perpendicular to direction of travel	pedestrian	rural	community entrance (2-lane)	15 (2013)	3	—	843 to 1947	—	38	37	-1	44	44	0	1-mon	IA	
	pedestrian	rural	community entrance (2-lane)	15 (2013)	3	—	843 to 1947	—	37	38	1	44	43	-1	12-mon	IA	
	work zone	rural	work zone (4-lane divided)	39 (2003)	1	—	—	—	—	—	-2	—	—	-2	—	Canada	
	work zone	rural	work zone	40 (2001)	1	70	18000	—	64	63	-1	68	67	-1	—	KS	
Converging Chevrons—on-pavement chevrons	roadway departure	rural	freeway to freeway ramp	36 (2003)	—	—	39010	—	64	49	-15	70	53	-17	20-mon	WI	
	roadway departure	rural	freeway to freeway ramp	37 (2008)	—	30 adv.	18000	—	47	47	0	53	52	-1	1-mon	TX	
	roadway departure	rural	freeway to freeway ramp	37 (2008)	—	30 adv.	18000	—	48	48	0	53	53	0	6-mon	TX	
	roadway departure	rural	S-curve (2-lane)	38 (2006)	1	35/15 adv.	—	—	—	—	—	37	33	-4	15-mon	OH	
	pedestrian	rural	intersection	8 (2001)	1	30	4000	—	36	32	-4	41	35	-6	1-wk	MN	
	pedestrian	rural	intersection	8 (2001)	1	30	4000	—	36	34	-2	41	39	-2	2-yr	MN	
	pedestrian	rural	intersection	8 (2001)	1	30	4000	—	36	31	-5	41	35	-5	4-yr	MN	
	pedestrian	rural	community entrance	7 (2007)	2	25	2200 to 2420	—	30	29	-1	36	35	-1	1-mon	IA	
	pedestrian	rural	community entrance	7 (2007)	2	25	2200 to 2420	—	30	29	-1	36	33	-3	12-mon	IA	
	roadway departure	rural	freeway to freeway ramp	35 (2010)	—	—	18000 to 18600	—	31	29	-2	35	33	-2	1-mon	GA	
	roadway departure	rural	freeway to freeway ramp	35 (2010)	—	—	18000 to 18600	—	31	30	-1	35	34	-1	9-mon	GA	converging chevrons

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Optical Speed Bars— transverse stripes on travel lane (sometimes spaced progressively closer to create the illusion of traveling faster)	pedestrian	rural	intersection	20 (2008)	4	—	—	—	—	—	-1	—	—	-1	—	—	
	pedestrian	rural	community entrance	7 (2007)	3	25 to 30	886 to 1870	—	39	38	-1	47	46	-1	1-mon	IA	
	pedestrian	rural	community entrance	7 (2007)	2	25 to 30	234 to 662	263 to 646	39	34	-5	47	42	-5	1-mon	IA	with DSFS —“YOUR SPEED XX”
	pedestrian	rural	intersection	27 (2010)	1	—	4,450	—	53	51	-2	62	60	-2	6-mon	New Zealand	herringbone pattern
	pedestrian	rural	community entrance	28 (2011)	1	—	2800	—	37	29	-8	—	—	—	—	Italy	with dragon’s teeth
	intersection	rural	intersection (2-lane)	29 (2013)	1	37	—	—	42	31	-11	48	3	-13	12-mon	Spain	with RPM + reflectors to guardrail
	intersection	rural	intersection	30 (2000)	—	62	—	—	—	—	-6	—	—	—	simulator	Australia	full lane width
	intersection	rural	intersection	30 (2000)	—	62	—	—	—	—	-4	—	—	—	simulator	Australia	optical speed bar
	roadway departure	rural	horizontal curves	25 (2005)	3	—	—	—	46	46	0	49	49	0	1-wk	KY	transverse bars
	roadway departure	rural	horizontal curves	25 (2005)	3	—	—	—	46	45	-1	49	51	2	1-yr	KY	transverse bars
	roadway departure	rural	4-lane undivided	31 (2007)	2	45	12000	—	55	52	-3	—	—	—	1-wk	VA	transverse bars
	roadway departure	rural	4-lane undivided	31 (2007)	2	45	12000	—	56	49	-7	—	—	—	3-mon	VA	transverse bars
	roadway departure	rural	curve (2-lane)	32 (2007)	2	45 -65/40 adv.	—	—	48	49	1	52	56	4	4-mon	NY, MI, TX	optical speed bar
	roadway departure	rural	curve (2-lane)	31 (2007)	—	—	5215	—	46	44	-2	—	—	—	1-wk	VA	optical speed bar
	roadway departure	rural	curve (2-lane)	31 (2007)	—	—	5215	—	46	45	-1	—	—	—	3-mon	VA	optical speed bar
	roadway departure	rural	2-lane	33 (2009)	—	55 day 45 night	—	—	64	62	-2	71	69	-2	1-wk	AZ	optical speed bar
	roadway departure	rural	2-lane	33 (2009)	—	55 day/45 night	—	—	64	59	-4	71	68	-3	3-mon	AZ	optical speed bar
	roadway departure	rural	curve (freeway)	34 (2008)	—	50	—	—	57	54	-3	60	59	-1	1-wk	WI	optical speed bar
	roadway departure	rural	freeway exit ramp	32 (2007)	1	65/30 adv.	—	—	38	34	-4	44	39	-5	4-mon	NY, MI, TX	optical speed bar
	roadway departure	rural	2-lane	27 (2010)	1	—	2500	—	51	50	-1	60	59	-1	2-wk	New Zealand	herringbone

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
<i>(cont'd)</i> Optical Speed Bars —transverse stripes on travel lane (sometimes spaced progressively closer to create the illusion of traveling faster)	roadway departure	rural	2-lane	27 (2010)	1	—	2500	—	51	48	-3	60	60	0	6-mon	New Zealand	herringbone
	roadway departure	rural	freeway ramp	21 (2000)	4	—	—	—	33	30	-3	—	—	—	2-wk	NY, VA	herringbone markings
	pedestrian	rural	intersection	27 (2010)	1	—	4,450	—	53	52	-1	61	61	0	2-wks	—	Herringbone
“SLOW” Legend on Pavement	pedestrian	urban	residential	8 (2001)	1	30	950	—	28	29	0	32	33	1	—	MN	
	roadway departure	urban	curve (2-lane) day	41 (1998)	1	35/15 adv	5000	—	34	33	-1	—	—	—	2-wk	VA	with curve symbol
	roadway departure	urban	curve (2-lane) night	41 (1998)	1	35/15 adv	5000	—	35	32	-3	—	—	—	2-wk	VA	with curve symbol
	roadway departure	rural	curve	15 (2012)	2	55/none to 35 mph	780 to 1880	—	49	48	-1	54	53	-1	1-mon	IA	with curve symbol+ bars
	roadway departure	rural	curve	15 (2012)	2	55/none to 35 mph	780 to 1880	—	49	48	-1	54	53	-1	12-mon	IA	with curve symbol + bars
Speed Limit XX Pavement Legend	pedestrian	rural	within community	7 (2007)	1	25	2200	—	30	30	0	35	34	-1	1-mon	IA	
	pedestrian	rural	within community	7 (2007)	1	25	2200	—	30	29	-1	35	33	-2	12-mon	IA	
	pedestrian	rural	within community	7 (2007)	1	25	2420	—	28	28	0	32	3	-1	1-mon	IA	with lane narrowing
	pedestrian	rural	within community	7 (2007)	1	25	2420	—	28	29	1	32	33	1	12-mon	IA	with lane narrowing
	pedestrian	rural	community entrance	7 (2007);15 (2013)	5	25 to 35	1009 to 2850	—	37	35	-2	42	40	-3	1-mon	IA	with red colored pavement
	pedestrian	rural	community entrance	7 (2007);15 (2013)	2	25 to 35	1009 to 2850	—	40	39	-1	46	45	-1	12-mon	IA	with red colored pavement
	pedestrian	rural	community entrance	15 (2013)	3	25 to 35	1009 to 3070	—	35	34	-1	40	39	-1	1-mon	IA	colored pavement + dragon's teeth
“50 MPH” + Curve Symbol	roadway departure	urban	curve (divided 4-lane highway)	42 (2005)	1	—	—	—	67	60	-7	—	—	—	1-mon	TX	
“CURVE AHEAD” Pavement Legend	roadway departure	rural	curve	42 (2005)	1	—	990	—	56	61	5	—	—	—	3-mon	TX	
	roadway departure	rural	curve	42 (2005)	1	—	1160	—	60	59	-1	—	—	—	3-mon	TX	
Vertical Delineation																	
Center Island Using Tubular Channelizers	pedestrian	rural community	community entrance (2-lane)	7 (2007)	2	25	2669	—	30	29	-1	36	35	-1	1-mon	IA	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Post Mounted Delineators—reflective buttons place on post at edge of road	roadway departure	rural	curve (2-lane)	25 (2005)	3	—	—	—	46	46	0	49	50	1	1-wk	KY	
	roadway departure	rural	curve (2-lane)	11 (2010)	—	—	—	—	43	35	-8	—	—	—	—	simulator	one side of curve
	roadway departure	rural	curve (2-lane)	11 (2010)	—	—	—	—	43	34	-9	—	—	—	—	simulator	both sides of curve
Streaming PMD	roadway departure	rural	curve (2-lane)	11 (2010)	—	—	—	—	43	24	-19	—	—	—	—	simulator	
Chevrons with Reflective Post	roadway departure	rural	curve (2-lane)	46 (2010)	2	—	—	—	56	54	-2	65	63	-2	1-mon	TX	
Reflective Post Added to Existing Chevrons	roadway departure	rural	curve (2-lane)	47 (2012)	4	—	830 to 2280	—	50	50	0	56	55	-1	1-mon	IA	
	roadway departure	rural	curve (2-lane)	47 (2012)	1	—	1710	—	54	53	-1	59	57	-2	12-mon	IA	
Layered Landscaping—roadside plantings used to create vertical friction	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	43	44	1	54	53	-1	—	simulator	at treatment
	pedestrian	rural	community entrance (2-lane)	14 (2008)	—	35	—	—	42	40	-2	51	45	-6	—	simulator	300 ft. downstream of treatment
Landscaped Median	roadway departure	urban	collector	48 (2000)	1	—	11400	10900	37	33	-4	43	37	-6	—	CO	with curbside islands
Dynamic Signing																	
Speed Activated Speed Limit Sign—a blank out sign that displays “SPEED LIMIT XX” for vehicles exceeding threshold speed	roadway departure	urban	collector	55 (2013)	1	30	—	—	33	27	-6	36	30	-6	2-mon	CO	with striping between travel/ parking lanes + signing
	roadway departure	urban	collector	55 (2013)	2	30	—	—	—	—	—	39	34	-5	1-yr	CO	with physical narrowing + pedestrian refuge
	roadway departure	urban	collector	55 (2013)	3	30	—	—	—	—	—	37	33	-4	1-yr	CO	
	roadway departure	urban	collector	55 (2013)	1	30	—	—	—	—	—	37	32	-5	3-yr	CO	
Speed Limit Sign with LED	pedestrian	rural	community entrance	15 (2013)	2	25	980 to 2240	—	33	30	-3	42	28	-4	1-mon	IA	
	pedestrian	rural	community entrance	15 (2013)	2	25	980 to 2240	—	33	30	-3	42	38	-4	12-mon	IA	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Speed Feedback Sign— displays the speed of drivers traveling over the threshold speed with the message “YOUR SPEED XX	pedestrian	urban	school zone	50 (2005)	3	35 to 45	—	—	49	44	-5	55	49	-6	1-wk	TX	
	pedestrian	urban	school zone	50 (2005)	3	35 to 45	—	—	49	42	-7	54	51	-3	4-mon	TX	
	pedestrian	rural	community entrance	7 (2007); 15 (2013)	1	25	295	367	38	37	-1	46	45	-1	1-mon	IA	
	pedestrian	rural	community entrance	7 (2007); 15 (2013)	1	25	295	318	38	37	0	46	45	-1	12-mon	IA	
	pedestrian	rural	community entrance	51 (2006)	4	30 to 45	—	—	46	41	-5	51	46	-5	1-mon	MN	
	pedestrian	rural	community entrance	51 (2006)	4	30 to 45	—	—	47	40	-7	51	46	-5	12-mon	MN	
	pedestrian	rural	community entrance	52 (2009)	12	25 to 40	—	—	42	36	-6	—	—	—	1-wk	PA	
	intersection	urban	signalized intersection	50 (2005)	2	45 to 55	—	—	51	47	-4	57	54	-4	1-wk	TX	
	intersection	urban	signalized intersection	50 (2005)	2	45 to 55	—	—	51	49	-2	57	55	-2	4-mon	TX	
	roadway departure	urban	collector (2-lane)	53 (2004)	4	25	2700 to 4900	—	29	28	-1	34	32	-5	1-mon	WA	
	roadway departure	urban	collector (2-lane)	53 (2004)	4	25	2700 to 4900	—	28	27	-1	33	28	-5	2-yr	WA	
	roadway departure	urban	collector/ minor arterial	54 (2009)	16	25	—	—	—	—	—	—	—	-2	1-yr	WA	
	roadway departure	urban	collector/ minor arterial	54 (2009)	16	25	—	—	—	—	—	—	—	-3	5 to 8-yr	WA	
	roadway departure	urban	collector/ minor arterial	54 (2009)	16	30 to 35	—	—	—	—	—	—	—	-4	1-yr	WA	
	roadway departure	urban	collector/ minor arterial	54 (2009)	16	30 to 35	—	—	—	—	—	—	—	-6	5 to 8-yr	WA	
	roadway departure	urban	2-lane	54 (2009)	9	25 to 35	—	—	—	—	—	40	36	-4	1-mon	WA	
	roadway departure	urban	2-lane	54 (2009)	4	25 to 35	—	—	—	—	—	37	33	-4	12-mon	WA	
	roadway departure	urban	2-lane	54 (2009)	9	25 to 35	—	—	—	—	—	39	35	-4	2 to 3-yr	WA	
	roadway departure	urban	2-lane	54 (2009)	11	25 to 35	—	—	—	—	—	38	33	-5	4+ yr.	WA	
	roadway departure	urban	curve (2-lane)	54 (2009)	1	30	—	—	—	—	—	41	38	-3	1-mon	WA	
	roadway departure	urban	curve (2-lane)	54 (2009)	2	30 to 35	—	—	—	—	—	42	38	-4	2 to 3-yr	WA	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
(cont'd) Speed Feedback Sign —displays the speed of drivers traveling over the threshold speed with the message “YOUR SPEED XX”	roadway departure	urban	curve (2-lane)	54 (2009)	1	30	—	—	—	—	—	41	35	-6	4+ yr.	WA	
	roadway departure	rural	interstate (curve)	56 (2006)	2	45 adv.	16750	—	56	53	-3	—	—	—	2 to 4-mon	OR	passenger cars
	roadway departure	rural	interstate (curve)	56 (2006)	2	45 adv.	16750	—	51	49	-2	—	—	—	2 to 4-mon	OR	trucks
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 65/30 to 50 adv.	—	—	—	—	-2	—	—	-3	1-mon	AZ, FL, IA, OH, OR, TX, WA	
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 65/30 to 50 adv.	—	—	—	—	-3	—	—	-3	12-mon	AZ, FL, IA, OH, OR, TX, WA	
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 65/30 to 50 adv.	—	—	—	—	-2	—	—	-2	2-yr	AZ, FL, IA, OH, OR, TX, WA	
	roadway departure	rural	curve (2-lane)	50 (2005)	2	55/20 adv.	—	—	36	33	-3	42	39	-3	1-wk	TX	
	roadway departure	rural	curve (2-lane)	50 (2005)	2	55/20 adv.	—	—	36	35	-1	42	40	-2	4-mon	TX	
	roadway departure	rural	curve (2-lane)	58 (2012)	3	—	455 to 710	—	54	51	-3	61	57	-4	1-mon	MN	passenger cars
	work zone	rural	interstate	62 (2011)	3	55	28000	—	61	57	-4	66	61	-5	1-wk	NE	passenger cars
	work zone	rural	interstate	62 (2011)	3	55	28000	—	58	55	-3	62	59	-3	1-wk	NE	trucks
	work zone	rural	interstate	62 (2011)	3	55	28000	—	61	56	-5	66	60	-6	5-wk	NE	passenger cars
	work zone	rural	interstate	62 (2011)	3	55	28000	—	58	56	-3	62	59	-3	5-wk	NE	trucks
	work zone	rural	arterial	63 (2006)	1	—	—	—	—	—	—	66	63	-3	—	TX	
	work zone	rural	arterial	63 (2006)	1	—	—	—	—	—	—	66	63	-3	—	TX	
Speed Feedback Sign with Action Message —“YOUR SPEED XX” + “SLOW DOWN”	roadway departure	urban	2-lane	54 (2009)	9	25	—	—	—	—	—	34	32	-2	1 to 6-mon	WA	
	roadway departure	urban	2-lane	54 (2009)	3	25	—	—	—	—	—	33	-31	-2	12-mon	WA	
	roadway departure	urban	2-lane	54 (2009)	5	25	—	—	—	—	—	33	31	-2	2 to 3-yr	WA	
	roadway departure	urban	curve (2-lane)	54 (2009)	1	25	—	—	—	—	—	36	31	-5	1 to 6-mon	WA	
	roadway departure	urban	curve (2-lane)	54 (2009)	1	25	—	—	—	—	—	36	31	-5	4+ yr.	WA	
	intersection	rural	signalized intersection	20 (2008)	3	50 to 55	—	—	—	—	-2	—	—	-1	—	WA, TX	at sign
	work zone	rural	interstate	63 (2006)	1	—	—	—	—	—	—	65	63	-2	—	TX	
	pedestrian	rural	community entrance	7 (2007)	1	25	2870	—	31	26	-5	59	52	-7	3-mon	IA	SLOW DOWN 25

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Speed Feedback Sign plus New Curve Advisory Speed Sign	roadway departure	rural	curve (2-lane)	58 (2012)	3	—	455 to 710	—	54	50	-4	61	57	-4	12-mon	MN	PC
	roadway departure	rural	curve (2-lane)	58 (2012)	3	—	455 to 710	—	53	50	-3	53	50	-3	1-mon	MN	center of curve,
	roadway departure	rural	curve (2-lane)	58 (2012)	3	—	455 to 710	—	53	50	-3	53	49	-4	12-mon	MN	center of curve
“YOUR SPEED XX”	pedestrian	rural	community entrance	7 (2007); 15 (2013)	2	25 to 30	234 to 662	263 to 646	39	34	-5	47	42	-5	1-mon	IA	with optical speed bars
“SLOW”	pedestrian	rural	recreational area	13 (2002)	1	35	—	—	36	36	0.	43	44	1	1-mon	MN	
Speed Activated Curve Warning Sign and “SLOW DOWN” Action Message	roadway departure	rural	curve (2-lane)	59 (2002)	3	30 to 50	—	—	39	35	-4	—	—	—	—	United Kingdom	
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 70/35 to 50 adv.	—	—	—	—	-2	—	—	-2	1-mon	AZ, FL, IA, OH, OR, TX, WA	
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 70/35 to 50 adv.	—	—	—	—	-3	—	—	-2	12-mon	AZ, FL, IA, OH, OR, TX, WA	
	roadway departure	rural	curve (2-lane)	57 (2013)	11	50 to 70/35 to 50 adv.	—	—	—	—	-2	—	—	-2	2-yr	AZ, FL, IA, OH, OR, TX, WA	
“TOO FAST FOR CURVE”	roadway departure	rural	curve (interstate)	60 (2003)	1	50	—	—	—	—	-3	—	—	—	—	WI	trucks
“50 MPH CURVES” + “YOUR SPEED XX”	roadway departure	rural	interstate	61 (2000)	5	55 to 65/50 to 60 adv.	—	—	64	63	-1	—	—	—	—	CA	passenger cars
“50 MPH CURVES” + “YOUR SPEED XX”	roadway departure	rural	interstate	61 (2000)	5	55 to 65/50 to 60 adv.	—	—	58	56	-2	—	—	—	—	CA	trucks
Flashing Beacon	work zone	rural	2-lane	64 (2007)	3	45	—	—	—	—	-3	—	—	-3	—	SC	
	work zone	rural	multi-lane	64 (2007)	1	45	—	—	—	—	-3	—	—	-3	—	SC	
	work zone	rural	interstate	64 (2007)	1	45	—	—	—	—	-6	—	—	-5	—	SC	
Variable Speed Limit	roadway departure	rural	freeway	65 (2005)	2	—	—	—	—	—	—	82	77	-5	—	WA	
Curve Warning Sign with Flashers— flashing lights on sign	roadway departure	rural	2-lane curve	25 (2005)	2	—	—	—	47	46	-1	51	50	-1	—	—	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Static Signing																	
Chevron Signs—use of standard chevron signing	roadway departure	rural	2-lane	46 (2010)	2	70/45 & 50 adv.	—	—	57	55	-2	65	64	-1	1-mon	TX	
	roadway departure	rural	2-lane	25 (2005)	1	—	—	—	48	48	0	52	52	0	1-wk	KY	at PC
	roadway departure	rural	2-lane	46 (2010)	2	70/45 & 50 adv.	—	—	56	54	-2	65	63	-2	1-mon	TX	with full post delineation
Chevrons with Full Post Delineation	roadway departure	rural	2-lane	47 (2012)	4	50 to 55/35 to 50 adv.	—	—	50	50	0	56	55	-1	1-mon	IA	
Curve Sign + Flags	roadway departure	rural	2-lane	25 (2005)	3	—	—	—	46	45	-1	49	49	0	1-wk	KY	at PC
Arrow (MUTCD: W1-6)	roadway departure	rural	2-lane	25 (2005)	1	—	—	—	43	44	1	46	47	1	1-wk	KY	at PC
Intersection Treatments																	
Roundabout—large, raised, circular islands at the middle of major intersections, around which all oncoming vehicles must traverse	pedestrian	rural	—	66 (2005)	19	—	—	20400	—	—	—	48	28	-20	—	MD, CA, WA, MI, Canada	
	intersection	suburban	Y intersection (2-lane)	67 (2005)	1	—	—	5500	—	—	—	32	24	-8	1 to 3 years	MI	
	intersection	urban	—	68 (2005)	1	—	11000 to 12000	15500	—	—	—	47	33	-14	—	CO	
Traffic Circle—circular, raised island placed within the middle of an intersection	intersection	urban	—	1 (1999)	45	—	240 to 10910	269 to 8280	—	—	—	34	30	-4	—	TX, WA, CA, CO, NC, OH, OR, FL, GA, MD, NE, MA, MN, AZ	
Access Control																	
Half-Closure	pedestrian	urban	—	1 (1999)	11	—	220 to 9540	151 to 9180	—	—	—	30	24	-6	—	—	
Diagonal Diverter	pedestrian	urban	—	1 (1999)	7	—	474 to 2057	177 to 574	—	—	—	28	27	-1	—	—	
Full Closure	pedestrian	urban	—	1 (1999)	2	—	1540 to 1980	850 to 1080	—	—	—	18	13	-3	—	—	
Choker + Speed Hump	pedestrian	urban	—	1 (1999)	2	—	2456 to 3685	2593 to 2931	—	—	—	38	25	-13	—	—	
Half-Closure + Median Barrier	pedestrian	urban	—	1 (1999)	2	—	10160 to 10320	1120 to 2120	—	—	—	38	32	-6	—	—	

Countermeasure	Safety Focus	Area	Roadway	Reference	Sites	Speed Limit (mph)	Volume (vpd)		Mean Speed (mph)			85 th %tile Speed (mph)			Period	Location	Notes
							Before	After	Before	After	Change	Before	After	Change			
Gateway Entrance Treatments																	
Entrance Treatments—multiple treatments placed at community entrance to reduce speeds into community	pedestrian	rural	community entrance	49 (2000)	1	40	—	—	45	41	-4	50	46	-5	1-mon	United Kingdom	red bars + signing + bulb-outs
	pedestrian	rural	community entrance	49 (2000)	1	20	—	—	35	24	-11	41	30	-11	1-mon	United Kingdom	narrowing + speed cushions
	pedestrian	rural	community entrance	49 (2000)	1	20	—	—	35	15	-10	41	30	-11	12-mon	United Kingdom	narrowing + speed cushions
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	40	30	-11	47	35	-13	1-mon	United Kingdom	red box + speed limit + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	40	33	-8	47	38	-9	12-mon	United Kingdom	red box + speed limit + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	38	33	-5	43	39	-4	1-mon	United Kingdom	red box + speed limit + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	38	32	-6	43	36	-7	12-mon	United Kingdom	red box + speed limit + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	41	39	-2	47	47	0	1-mon	United Kingdom	red patches + “SLOW” + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	30	—	—	41	37	-4	47	44	-3	12-mon	United Kingdom	red patches + “SLOW” + dragon's teeth + signing
	pedestrian	rural	community entrance	49 (2000)	1	40	—	—	51	45	-6	60	51	-9	1-mon	United Kingdom	red lines of decreasing size and width + signing
	pedestrian	rural	community entrance	49 (2000)	1	40	—	—	51	45	-6	60	53	-7	12-mon	United Kingdom	red lines of decreasing size and width + signing
	pedestrian	rural	community entrance	49 (2000)	1	40	—	—	44	39	-6	50	43	-7	1-mon	United Kingdom	red box + speed limit + signing
	pedestrian	rural	community entrance	49 (2000)	1	40	—	—	44	38	-7	50	43	-7	12-mon	United Kingdom	red box + speed limit + signing

Notes: Information is presented to one significant digit unless the study only provided integer values. In some cases the study only provided resulting changes in speed rather than providing the actual before and after value.

Abbreviations

common state destinations are used and are not listed here (e.g. Iowa = IA)

advisory (adv)

intersection (isect)

month (mon.)

pedestrian (ped)

post mounted delineator (PMD)

rumble strips (RS)

run off road (ROR)

years (yrs.)

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Town of Carrboro

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

Agenda Item Abstract

File Number:19-355

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

A Discussion of How to Increase Diversity on Advisory Boards by Reviewing the Advisory Board Application

PURPOSE: The purpose of this item is to allow the Board an opportunity to discuss how to increase diversity on advisory boards.

DEPARTMENT: Town Attorney/Town Clerk

CONTACT INFORMATION: Cathy Dorando and Nick Herman

INFORMATION: Alderman Foushee has requested that the Board review the attached application and have a discussion on increasing diversity on advisory boards. The attorney is prepared to answer any legal questions pertaining to the application.

FISCAL & STAFF IMPACT: Staff time will be associated with amending the application and making any changes in recruitment strategies.

RECOMMENDATION: It is recommended that the Mayor and Board discuss this item.

TOWN OF CARRBORO

Advisory Board Application

FIRST NAME: _____ Last Name _____

DATE: _____

ADDRESS:

Address 2:

City: _____ State: _____ Zip: _____

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

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

TELEPHONE: () _____

E-MAIL ADDRESS: _____

DATE OF BIRTH _____

RACE: _____

SEX: _____

OCCUPATION _____

ARE YOU A REGISTERED ORANGE COUNTY VOTER? _____

LENGTH OF RESIDENCE IN ORANGE COUNTY _____

LENGTH OF RESIDENCE IN 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"/> Appearance Commission/NPDC	<input type="checkbox"/> OWASA Board of Directors
<input type="checkbox"/> Arts Committee	<input type="checkbox"/> Planning Board
<input type="checkbox"/> Board of Adjustment	<input type="checkbox"/> Recreation & Parks Commission
<input type="checkbox"/> Economic Sustainability Commission	<input type="checkbox"/> Stormwater Advisory Commission
<input 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	<input type="checkbox"/> Other:

Advisory Board Preference (if you select more than one):_____

*EMPLOYER/SELF EMPLOYED _____ *NUMBER OF YEARS EMPLOYED _____

*PROVIDE EXAMPLES OF HOW YOU ARE INVOLVED IN THE PROMOTION OF TRAVEL AND TOURISM IN THE TOWN OF CARRBORO?
(*REQUIRED ONLY FOR TOURISM DEVELOPMENT AUTHORITY APPLICATION)

COMMUNITY ACTIVITIES/ORGANIZATIONAL MEMBERSHIPS:

EXPERIENCE TO AID YOU IN WORKING ON THESE ADVISORY BOARDS

REASON(S) YOU WISH TO BE APPOINTED:

HAVE YOU EVER SERVED ON ANY TOWN OF CARRBORO COMMITTEE OR BOARD? If YES, WHICH ONE(S) _____

ARE YOU CURRENTLY SERVING ON A TOWN BOARD OR COMMITTEE? _____

If YES, ARE YOU APPLYING FOR A THIRD CONSECUTIVE TERM? _____

If YES, PLEASE DESCRIBE HOW YOU MEET ONE, OR MORE, OF THE EXCEPTIONS NOTED BELOW. PLEASE USE AN ADDITIONAL PAGE IF NECESSARY TO COMPLETE.

After completing two full terms, a member must take off one year before applying for re-appointment to the 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 qualified applicants.

(Please note that this document and the information contained on it is a public record and must be provided by the town to anyone requesting a copy of it.)



Town of Carrboro

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

Agenda Item Abstract

File Number:19-359

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

TITLE:

Presentation of the 2019 Town of Carrboro Pavement Condition Survey and Sidewalk and Curb Ramp Condition Survey

PURPOSE: The purpose of this item is for the Board receive the Town of Carrboro's 2019 Pavement Condition Survey and Sidewalk and Curb Ramp Condition Survey report.

DEPARTMENT: Public Works

CONTACT INFORMATION: Joe Guckavan, 919-918- 7427, jguckavan@townofcarrboro.org

INFORMATION: A Pavement Condition Survey and Sidewalk and Curb Ramp Condition Survey was conducted by LaBella Associates, P.C. The intent of the surveys were to identify roadway, sidewalk, and curb maintenance needs throughout the Town. The survey data may be used as one of the tools that the Board uses to consider budgetary priorities.

Pavement Condition Survey: LaBella Associates, P.C. identified approximately 46.61 miles of Town maintained asphalt roadway, and reported the street system is in "Good" condition with an overall weighted average Pavement Condition Rating value of 87.3. Approximately 25.51% (11.89 of 46.61 miles) of the rated streets in the Town need some level of routine maintenance or resurfacing, and approximately 1.15 miles of streets or 2.47% is recommended for resurfacing within the next year. The primary maintenance needs identified are crack sealing, patching and resurfacing to correct moderate to severe alligator cracking, and moderate to severe block cracking.

See Attachment A - Town of Carrboro 2019 Pavement Condition Survey for full report.

Sidewalk and Curb Ramp Condition Survey: Labella Associates, P.C. identified approximately 41.5 miles of sidewalks. The average sidewalk condition rating is 96.9. Based on the sidewalk condition survey results, approximately 0.5% of the total sidewalk length is recommended for replacement due to poor conditions identified in the report. Approximately 4.4% of the sidewalk system exhibits some level of distress.

Labella Associates, P.C. identified a total of 872 curb ramps located within the Town limits. 864 (99.1%) were rated as being in 'Good' condition, 7 (0.8%) were rated as being in 'Fair' condition, and only 1 (0.1%) was rated as being in 'Poor' condition

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 1

See Attachment B - Town of Carrboro 2019 Sidewalk and Curb Ramp Condition Survey for full report.

FISCAL & STAFF IMPACT: Funds were appropriated for the Pavement Condition Survey and Sidewalk Condition Survey in the FY 2018-19 Budget.

The Pavement Condition Survey indicated an estimated cost of approximately \$657,292 for asphalt pavement repairs. See Attachment A - Town of Carrboro 2019 Pavement Condition Survey for full report.

The Sidewalk and Curb Ramp Condition Survey estimated a cost of approximately \$35,600 for sidewalk replacement, and \$101,050 for curb ramp replacement needs. See Attachment B - Town of Carrboro 2019 Sidewalk and Curb Ramp Condition Survey for full report.

RECOMMENDATION: It is recommended that the Board of Aldermen receive the report as a tool to help consider budgetary priorities for necessary pavement, sidewalks, and curb ramps maintenance.

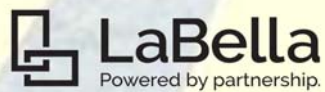
PAVEMENT CONDITION SURVEY

Prepared For:



Town of Carrboro

April 2019



**LaBella Associates, P.C.
400 S. Tryon Street, Suite 1300
Charlotte, NC 28285**

Town of Carrboro Pavement Condition Survey

Final Report- April 2019

N.C. License # C-0430

Prepared by:



LaBella Associates, P.C.
400 S. Tryon Street, Suite 1300
Charlotte, NC 28285



4/23/2019

Town of Carrboro
Pavement Condition Survey

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. FINDINGS	1
III. SUMMARY OF PAVEMENT CONDITION SURVEY	3
A. Procedures.....	3
B. Pavement Condition	3
C. Priorities	3
D. Pavement Condition Survey and Management System.....	5
E. Use of Survey Results.....	5
F. Acknowledgement	6
IV. BASIC STREET INVENTORY DATA	7
V. FINDINGS AND SUPPORTING DATA.....	8
A. Results	8
VI. MAINTENANCE RECOMMENDATIONS.....	13
A. Maintenance Activities	13
B. Unit Costs for Maintenance Activities.....	14
C. Maintenance Needs	14
D. Routine Maintenance	20
E. Resurfacing.....	21
 APPENDIX	
A. Distress Type Classifications	
B. Street Listings	
• Legend	
• Alphabetical	
• Rating (PCR)	
• Priority (High, Medium, and Low)	

Town of Carrboro, North Carolina

2019 Pavement Condition Survey

I. INTRODUCTION

LaBella Associates, P.C. (LaBella) is a consulting engineering firm with offices in Greensboro, Winston-Salem, and Charlotte, North Carolina. LaBella specializes in serving public agency clients and offers a full range of municipal engineering services in transportation, infrastructure management, stormwater management, water and sewer, neighborhood improvements, solid waste and recycling, and construction administration disciplines.

LaBella was retained by the Town of Carrboro (Town) to perform a pavement condition assessment of the Town street system. LaBella identified approximately 46.61 miles of Town maintained asphalt roadway. A visual pavement condition survey of these streets was conducted by LaBella. These street segments were rated by driving each segment on a block to block basis and observing eight common pavement surface distresses and their corresponding severity levels.

The data from the observations on the rated streets was entered into an automated pavement management software program which generated a Pavement Condition Rating (PCR) for each street segment (see Table 7 on page 10 for methodology). In addition, the pavement management program generated recommended maintenance activities to address the deficiency on each street segment. Recommended secondary, third, and fourth maintenance activities and costs, when applicable, were also calculated by the software and entered into the final database. Costs for the recommended maintenance activities were calculated using current local unit maintenance costs provided by the Town of Carrboro (See Table 10, page 14).

Streets are listed based on Pavement Condition Ratings (PCRs) assigned as the “Rating” attribute within the database. Streets were categorized by the municipality as either low volume (Class A) or high volume (Class B) streets. Certain low volume or high volume streets may have higher or lower importance for the municipality based upon the number of dwelling units served, commercial traffic, or projected land development and traffic growth.

II. FINDINGS

The Town of Carrboro’s street system is in “Good” condition with an overall weighted average PCR value of 87.3. This is an increase from 86.1 since the 2014 Pavement Condition Survey. This overall condition rating is slightly above average when compared to other municipalities. To put this figure in perspective, the estimated weighted PCR value for NC municipalities is approximately 80. There are some streets that exhibit moderate and severe alligator cracking. Street segments exhibiting 50% or more of moderate to severe alligator cracking should be analyzed in further detail for consideration of total reconstruction.

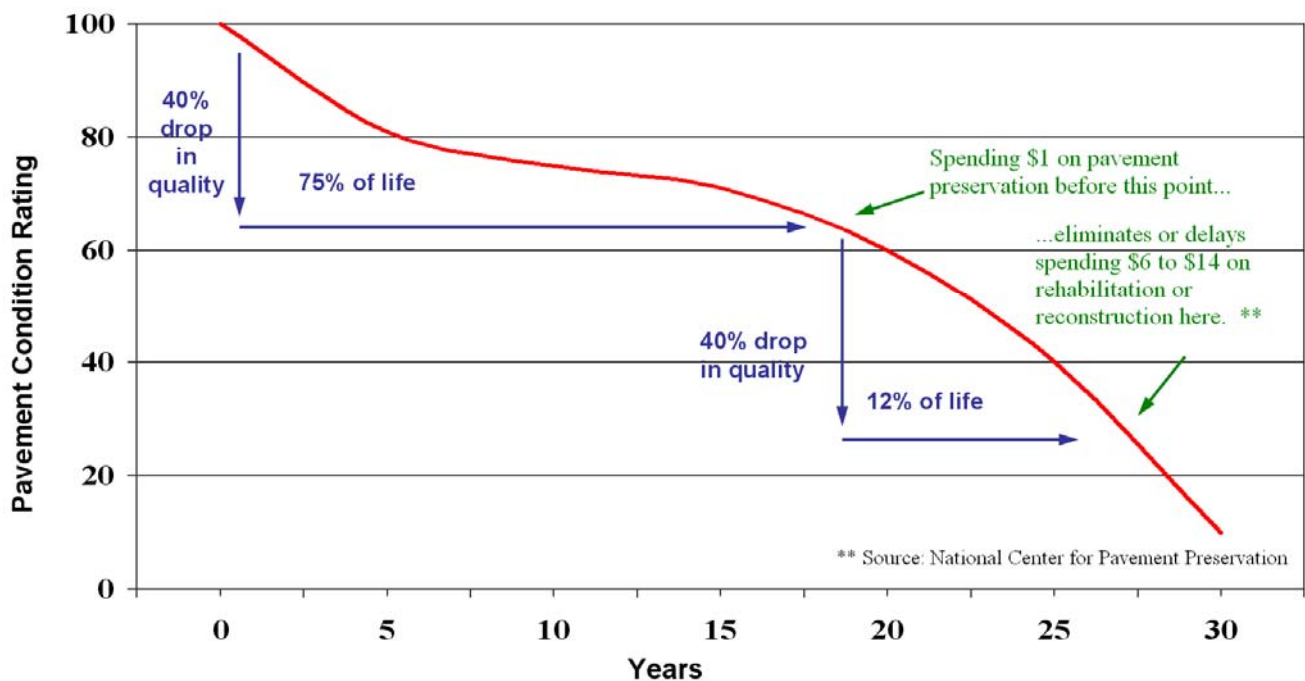
The primary maintenance needs are crack sealing, patching and resurfacing to correct moderate to severe alligator cracking, and moderate to severe block cracking. Based upon the results of this survey, approximately 1.15 miles of streets or 2.47% of the rated street system is recommended for resurfacing within the next year. Resurfacing as well as other maintenance needs are determined based on the pavement distress, its severity level, and the traffic volume (low or high) of the street. Recommended maintenance activities for each pavement distress are detailed in Table 8 on page 13. Once these immediate needs are addressed, LaBella recommends that Carrboro resurface approximately 3.1 miles of street segments per year. This rate would provide

the generally accepted optimum 15 year paving cycle. See Typical Pavement Deterioration Curve below. Such a cycle will allow the Town to maximize the effectiveness of its maintenance funds by providing for timely resurfacing of streets before they deteriorate to a point where more expensive rehabilitation or reconstruction is needed. It is LaBella's recommendation that this year's street maintenance funds be allocated to include resurfacing and high priority routine maintenance, primarily full-depth patching and crack sealing.

Approximately 25.51% (11.89 of 46.61 miles) of the rated streets in the Town of Carrboro need some level of routine maintenance or resurfacing. This figure is below the average for North Carolina municipalities, which is approximately 47%. This survey indicated a total estimated maintenance need for crack sealing, full depth patching, short overlay, and plant mix resurfacing of approximately \$657,292. This represents an average estimated expenditure of \$14,102 per mile for the entire rated Town street system. It should be noted that **this cost estimate is for pavement repair only**. Additional costs of 25-40% can be incurred for drainage improvements, administration, milling (prior to resurfacing), utility adjustments, work zone traffic control, and other items.

Without a continued financial commitment and dedicated funding for street maintenance and resurfacing efforts, pavement ratings will decrease. Ultimately, postponing recommended maintenance activities typically leads to pavement failures and subsequently costly major rehabilitation or reconstruction. As can be seen from the Typical Pavement Deterioration Curve below, spending \$1 on pavement preservation prior to a pavement condition rating of roughly 60 will eliminate or delay spending \$6 to \$14 on rehabilitation or reconstruction at a later date.

Typical Pavement Deterioration Curve



III. SUMMARY OF PAVEMENT CONDITION SURVEY

A. Procedures

The procedures used for this survey include:

- An inventory of the physical characteristics of selected segments of the municipality's streets. These characteristics include block number, length, number of lanes, width, type of pavement, presence of sidewalk and curb and gutter per street segment side, and asphalt height above gutter.
- Evaluation of the surface pavement distresses on selected street segments. Alligator cracking, block/transverse cracking, reflective cracking, rutting, raveling, bleeding, ride quality, and patching are measured according to well-defined severity levels. Alligator cracking is measured in detail by the percentage in increments of ten percent (10%) of the segment having each severity level (Light, Moderate, or Severe) of this distress. The other distresses are measured as an overall condition and categorized as light, moderate, or severe in distress level.
- Categorizing of the type of traffic volume on each segment. The municipality assigns all streets as either low volume or high volume streets. Low volume streets are typically lightly traveled residential streets. High volume streets are more heavily traveled arterial or collector streets and typically receive a higher level of maintenance and repair than low volume streets.
- Entering and compilation of the collected field and post processing information into a usable database management system. This Microsoft™ Access application **USI Total Pavement Access (USI-TPA)** enables the user to sort and query the Town street system database by street name, high or low volume class, priority (high, medium, or low), rating (PCR), maintenance activity, and distress type to access estimated cost information of selected query data.

B. Pavement Condition

The predominant distress types that require maintenance are alligator cracking (the most critical pavement distress), block/transverse cracking, and patching. Approximately 14.5% of the rated street system was noted as having some level of alligator cracking and approximately 75% of the rated street system exhibited some level of block cracking. Most of the block cracking was light, which requires no recommended maintenance at this time. Patching was noted on approximately 10.6% of the rated streets; most of this is in the form of light patching.

C. Priorities

Although all recommended maintenance activities are needed right away, for most public agencies there are typically more maintenance needs than funds available. Therefore, the suggested types of maintenance should be prioritized. High Priority maintenance should include full-depth patching, short overlay, and resurfacing of alligator cracking and rutting. Medium Priority maintenance includes resurfacing of severe block/transverse cracking, severe reflective cracking, severe raveling, and severe bleeding. Low Priority maintenance typically consists of resurfacing of moderate block/transverse cracking, moderate reflective cracking,

moderate raveling, rough ride quality, and moderate to severe patching. See Table 1 for maintenance priorities.

Carrboro should continue to dedicate its maintenance funding towards preventive maintenance practices and structural repair. This emphasis would reduce the rate of deterioration on pavements that exhibit light distress levels and it would extend the economic life of these streets by delaying the need for more costly maintenance or rehabilitation methods. Studies and empirical evidence from many agencies have shown that timely use of preventive maintenance practices is the most economically sound use of limited funds. Preventive maintenance and structural repair should also further reduce the maintenance cost per mile in future years. **Maintaining an aggressive patching and resurfacing program should be a high priority for the Town of Carrboro in tandem with allocating adequate funds and resources to accomplish this task.** Ultimately, postponing recommended maintenance activities typically leads to pavement failures and subsequently costly major rehabilitation or reconstruction.

In summary, LaBella recommends a continuation or expansion of current street maintenance funding. Carrboro has current needs of approximately \$657,292 which does not include preparatory activities and administrative costs. This includes recommended resurfacing of 1.15 miles of street segments at a cost of approximately \$236,849. It is recommended that once the immediate resurfacing needs are met, the Town budget for annual resurfacing of about 3.1 miles of street segments per year in order to achieve a desired 15 year resurfacing cycle. This will require nearly \$633,000 annually at today's unit prices including preparatory patching. It is LaBella's recommendation that this year's and future street maintenance funds be distributed to include resurfacing and high priority routine maintenance. The Town currently has a need for routine maintenance measures of approximately \$420,443. It would be desirable to secure sufficient funding to achieve the maintenance schedule recommended above. The Town should consider reviewing the budget for these measures annually in order to assure adequate funding for the optimum economic life of its street system.

TABLE 1
PRIORITY BY TYPE OF MAINTENANCE

PRIORITIES	Total Miles	Total Cost	Cost Per Mile	Percentage of Cost
<u>HIGH PRIORITY:</u> Routine Maintenance, Resurfacing of Alligator Cracking and Rutting	11.27	\$553,365	\$49,101	84.2%
<u>MEDIUM PRIORITY:</u> Resurfacing of Severe Block/Transverse Cracking, Severe Reflective Cracking, Severe Raveling, and Severe Bleeding	0.48	\$74,568	\$155,350	11.3%
<u>LOW PRIORITY:</u> Resurfacing of Moderate Block or Reflective Cracking and Raveling, Resurfacing of Severe Ride Quality and Patching	0.14	\$29,359	\$209,857	4.5%
Total Repairs	11.89	\$657,292	\$55,281	100.0%

D. Pavement Condition Survey and Management System

Information provided to the Town by our Pavement Condition Survey and Management System includes:

- An updated basic inventory of bituminous paved streets with block number, length, number of lanes, width, type of pavement, location of sidewalk and curb and gutter existence per street segment side, and asphalt height above gutter.
- Pavement distresses, by type and magnitude, along with the PCRs for each street segment.
- Recommended maintenance activities (primary and secondary) and anticipated repair costs.
- Digital copies of all data, reports, and charts.
- LaBella's Total Pavement Access (USI-TPA) application that enables the user to sort the Town database by street name, rating (PCR), maintenance activity, collected attributes and distress type. This program also allows the user to generate query summaries and alphabetical and rating (PCR) listings which can be printed to hard copy.
- List of street sections that includes field inventory data, distress ratings, and estimated repair function and cost data in an alphabetical listing and a listing of the street sections sorted by PCR from lowest to highest.
- List of street sections that includes field inventory data, distress ratings and estimated repair function and cost data for the high, medium, and low priorities highlighted in Table 1 on the previous page.

This information is advantageous for municipalities because:

- The survey is an objective evaluation of eight types of surface pavement distresses. Commonly accepted cost-effective maintenance practices are then recommended for repairing those pavement distresses.
- The survey permits the municipality to use its limited funds more cost efficiently for maintenance and resurfacing by prioritizing these activities.
- Streets with critical pavement distress are easily identified for further engineering investigation, testing, or pavement reconstruction.
- The computerized approach permits the municipality to vary the types of maintenance activities to allow budget planning for different levels of maintenance service.

E. Use of Survey Results

LaBella's Pavement Condition Survey is an objective evaluation of the amount and severity of eight types of pavement distresses. The inventory and analysis methods used for this project have been used for NCDOT and agencies throughout North Carolina and have proven to be valuable aids to street maintenance programs.

Municipal pavements are in a continuous state of deterioration. This deterioration rate depends upon many factors. Inadequate pavement thickness, unanticipated truckloads, and poor

drainage accelerate deterioration. Therefore, it is reasonable and prudent to conduct these surveys periodically (every 2 to 3 years) to monitor the condition of the street system.

Such periodic surveys not only indicate the rate of deterioration of the street system, but also provide the Town with a means to gauge the effectiveness of existing resurfacing programs and street maintenance activities. Additionally, these periodic surveys make it possible to build a history of all maintenance activities to assist in planning for more cost-effective maintenance procedures.

The results of the survey should never be used arbitrarily. There is no substitute for in-the-field engineering judgment and experience by Town personnel in determining the specific types of maintenance activities needed. The street ratings and recommended maintenance practices should be used as a guide for planning and scheduling maintenance activities.

It is the intent of this report to emphasize the importance of maintaining the Town roadway assets. Based on current industry pricing, it is estimated that the Town maintained streets, which are comprised of approximately 623,200 square yards of asphalt pavement, have an estimated value of \$19.3 million. To be a good steward of the Town street system, it is prudent that preventative maintenance practices continue and that a sustained financial investment be made to maintain these roadway assets. "There is no more fundamental transportation capital investment than system preservation – keeping existing infrastructure in good condition. If preservation investment is deferred, costs increase dramatically, leading to the saying 'pay me now or pay me more – lots more – later.'" - Washington Department of Transportation 2007 – 2026 Highway System Plan.

In an effort to further Carrboro's preventative maintenance practices, the Town could look at adding the following maintenance activities:

<u>Maintenance Activities</u>	<u>Distress</u>	<u>Pavement Age</u>	<u>Benefit</u>
Fog Seal Coating Fog Seal Rejuvenator	Light Oxidation	1 to 5 years	Replenishes asphalt chemicals; extends pavement life
Slurry Seal Microsurfacing	Moderate Ravel	5 to 10 years	Seals pavement; extends pavement life
BST Cape Seal	Severe Block Cracking	10 to 15 years	Seals cracks; extends pavement life

The key to preventive maintenance is to use the right maintenance activity for the right pavement at the right time. When this is accomplished, maintenance funding is used to its fullest potential.

F. Acknowledgment

LaBella appreciates the Town of Carrboro's cooperation during the pavement survey. Daniel Snipes, Aaron Vereoni and John Garland were very helpful and instrumental in working with LaBella in supplying field data collection support and information required for preparation of this report.

IV. BASIC STREET INVENTORY DATA

Carrboro has a total of 48.44 miles of Town maintained roadway that were identified by LaBella. This report addresses the 46.61 miles of paved asphalt roadway (Pavement Type = "P") streets that were rated. Table 2 lists the breakdown of surface types for all Town maintained streets, while tables 3 through 5 below list the basic inventory data for rated Town maintained street segments.

Table 2
PAVEMENT

Surface Type	Miles	Percent of System
Plant Mix Asphalt (P)	46.61	96.2
Concrete (C)	-	-
Unpaved (U)	1.83	13.8
Total	48.44	100.0

Table 3
SIDEWALK

Location	Length (linear mi)
Left Side	15.1
Right Side	17.0
Total	32.1

Table 4
CURB AND GUTTER

Location	Length (linear mi)
Left Side	30.5
Right Side	30.5
Total	61.0

Table 5
LOW AND HIGH VOLUME STREET BREAKDOWN

Volume	% Miles	Miles	Lane Miles	Avg Rating	Cost Per Mile	Total Cost	% Cost
Low	90.0	41.96	82.60	87.1	\$13,189	\$553,453	84.2
High	10.0	4.65	9.66	88.6	\$22,341	\$103,839	15.8
Total	100	46.61	92.26	87.3	\$14,101	\$657,292	100

V. FINDINGS AND SUPPORTING DATA

A. Results

The Pavement Condition Survey provides an objective evaluation by visual observation of eight types of pavement distress and the relative amount and severity of each type of distress. A pavement distress summary conducted for the Town of Carrboro is shown in Table 6 on page 9. The following are some observations from the survey:

- Approximately 25.51% of the rated streets in Carrboro are in need of some type of maintenance. The overall estimated cost for repairing these streets is \$657,292 or \$14,102 per mile system wide.
- The most predominant distress was found to be block cracking. Approximately 75% of the surveyed street system exhibits some level of block cracking. Approximately 2.68 miles (5.7%) exhibits moderate block cracking requiring crack sealing on low and high volume streets. Approximately 0.48 miles (1%) exhibits severe block cracking requiring 1.5" Plant Mix Asphalt (PM) Resurfacing and BST Seal on low and high volume streets.
- The most structurally damaging and costliest distress to repair is alligator cracking. Approximately 14.5% of the rated street system exhibits some level of alligator cracking. About 1.61 miles (3.5%) of roadway exhibit a severe level requiring full-depth patching. About 0.55 miles (1.2%) of roadway are at a moderate level requiring skin patching for low volume streets and full-depth patching for high volume streets. Alligator cracking is a high priority distress and is the most serious pavement distress because it results from a structural pavement failure. Unless corrected, it will progress to the point of requiring complete pavement reconstruction.

Table 6
PAVEMENT CONDITION SURVEY DISTRESS SUMMARY FOR RATED STREETS

Distress Items	Miles Low Volume	Miles High Volume	Total Miles	% Miles
1. Alligator Cracking				
None	35.87	3.99	39.86	85.5
Light	4.08	0.51	4.59	9.8
Moderate	0.50	0.05	0.55	1.2
Severe	1.51	0.09	1.61	3.5
2. Block Cracking				
None	10.35	1.31	11.66	25.0
Light	28.77	3.02	31.79	68.2
Moderate	2.37	0.31	2.68	5.7
Severe	0.48	0.00	0.48	1.0
3. Reflective Cracking				
None	41.81	4.65	46.46	99.7
Light	0.16	0.00	0.16	0.3
Moderate	0.00	0.00	0.00	0.0
Severe	0.00	0.00	0.00	0.0
4. Rutting				
None	40.96	4.65	45.61	97.8
Light	1.00	0.00	1.00	2.1
Moderate	0.00	0.00	0.00	0.0
Severe	0.00	0.00	0.00	0.0
5. Raveling				
None	41.15	4.53	45.68	98.0
Light	0.81	0.12	0.93	2.0
Moderate	0.00	0.00	0.00	0.0
Severe	0.00	0.00	0.00	0.0
6. Bleeding				
None	41.96	4.65	46.61	100.0
Light	0.00	0.00	0.00	0.0
Moderate	0.00	0.00	0.00	0.0
Severe	0.00	0.00	0.00	0.0
7. Ride Quality				
None	0.00	0.00	0.00	0.0
Light	41.57	4.51	46.08	98.8
Moderate	0.39	0.14	0.53	1.1
Severe	0.00	0.00	0.00	0.0
8. Patching				
None	37.56	4.11	41.67	89.4
Light	3.02	0.38	3.41	7.3
Moderate	0.99	0.01	1.00	2.1
Severe	0.40	0.14	0.54	1.2
Total	41.96	4.65	46.61	100.00

Note: Columns may not add up exactly due to rounding.

The type of distress that was observed on each street segment is shown in the final database, the Access database application (**USI-TPA**), and hard copy street listings provided in Appendix B.

The type and amount of distress that was observed on each street segment was used to obtain a Pavement Condition Rating (PCR). This rating has a scale between 0 and 100 and a basic description of each category is as follows:

<u>Rating</u>	<u>General Condition</u>
91-100	Very Good
81-90	Good
66-80	Fair
51-65	Poor
0-50	Very Poor

Each street segment begins with a rating of 100 and points are deducted from this rating based on the type and severity of distress. Deductions are the same for Class A (low volume) and B (high volume) streets. Deduct values for the severity levels of each distress are given below in Table 7.

Table 7
DEDUCT VALUES

PAVEMENT DISTRESS	SEVERITY			
	None (N)	Light (L)	Moderate (M)	Severe (S)
Alligator Cracking (AL, AM, AS) (Multiplied by percent)	0	25	60	99
Block/Trans Cracking (BK)	0	5	20	35
Reflective Cracking (RF)	0	5	10	20
Rutting (RT)	0	5	15	25
Raveling (RV)	0	5	25	35
Bleeding (BL)	0	5	15	25
Ride Quality (RQ)	0	0	10	25
Patching (PA)	0	5	10	15

As an example, presume a street segment has the following pavement distresses: 20% Light Alligator Cracking (AL), Moderate Rutting (RT), Light Patching (PA), and no other pavement distresses. The Pavement Condition Rating would be:

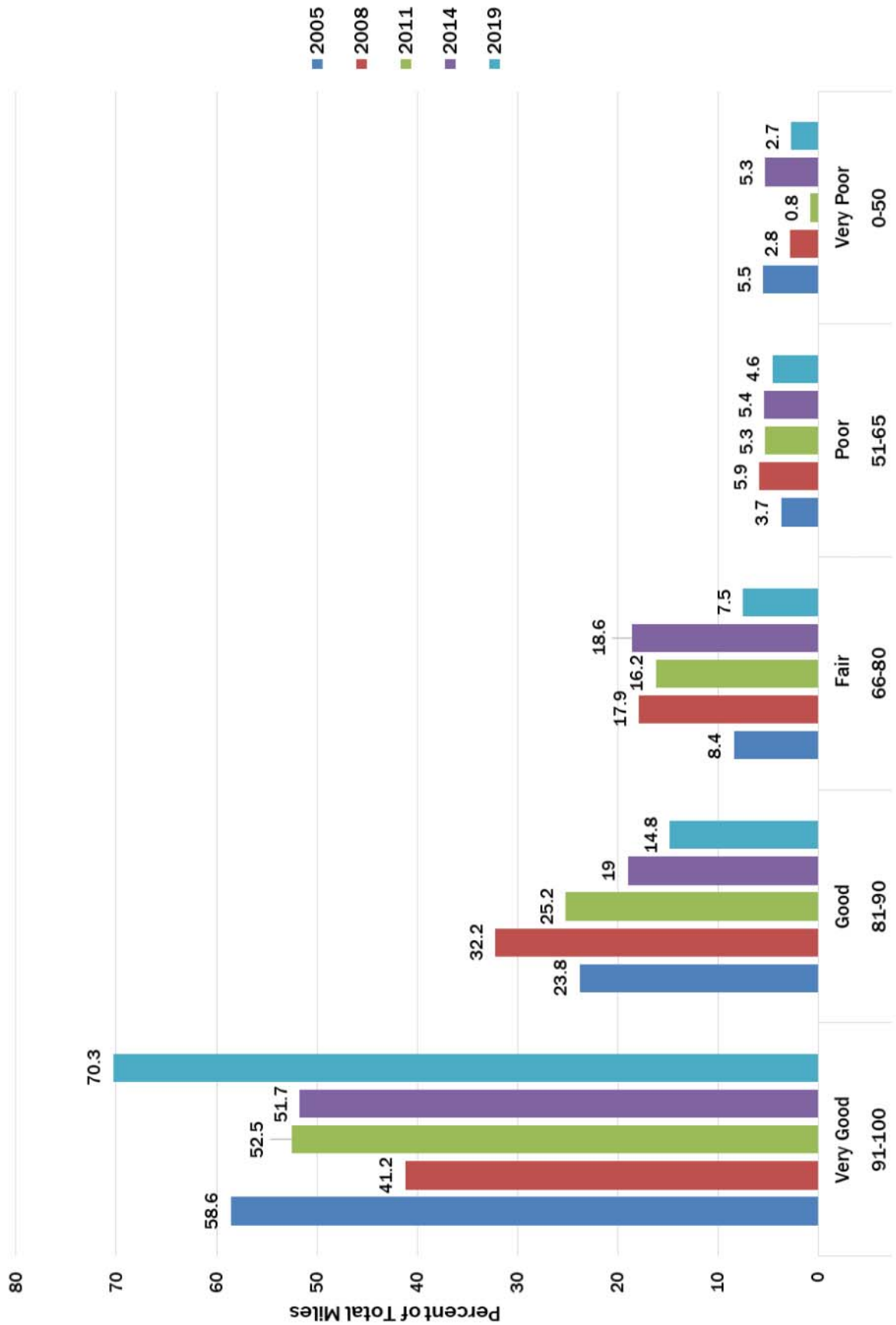
$$\begin{aligned} \text{PCR} &= 100 - (\text{AL}) - (\text{RT}) - (\text{PA}) \\ \text{PCR} &= 100 - (0.2 \times 25) - (15) - (5) = 75 \end{aligned}$$

Please note that the Pavement Condition Rating (PCR) does not differentiate between low volume and high volume streets. The same criteria is used to rate each street. However, the Town staff may want to separate these streets for analysis purposes. In regards to recommended maintenance activities, low volume and high volume streets are evaluated independently as shown in Table 8 on page 13. Depending on the street volume along with the pavement distress, the recommended maintenance activity may vary as shown in Table 8. Additionally, Table 9 on page 13 indicates how low volume and high volume streets are handled differently in regards to resurfacing needs when there is a high percentage of alligator cracking present and moderate or severe rutting.

The bar graph shown on the next page in Figure 1 illustrates the percentage of rated streets in the Town of Carrboro that have PCRs in each condition category for the last five surveys (2005, 2008, 2011, 2014 and 2019). As the graph illustrates, well over half of the rated street system is presently in very good or good condition in 2019 survey. Approximately 85.1% of the rated streets in the Town of Carrboro have a PCR that is considered in very good or good condition (PCR = 81-100), while approximately 7.3% of the rated street system was found to be in poor or very poor condition (PCR = 0-65). LaBella recommends that the Town set a goal of maintaining the percentage of streets in very poor and poor condition to less than 10%. Although the matter of reducing the streets in poor and very poor condition is important, the Town should also concentrate on streets in “Fair” condition, which includes 7.5% of the street system, (PCR = 66-80) where the cost of maintenance is more cost-effective.

If proper repairs and maintenance are not performed, a comparison of a street segment’s rating over time will indicate the rate of pavement deterioration. The effects of maintenance practices may also be reflected in a comparison of PCR values. For instance, a street segment’s PCR will increase after resurfacing or a declining PCR may be stabilized with patching or crack sealing.

**Figure 1 - Breakdown of Streets into PCR Categories
2005-2019**



VI. MAINTENANCE RECOMMENDATIONS

A. Maintenance Activities

The types of maintenance activities used in the Pavement Condition Survey analysis are listed below in Table 8. These activities are commonly accepted for cost-effective minimum levels of maintenance service. They include crack sealing, joint repair, full-depth patching, skin patching, short overlay, and complete resurfacing of a street segment with a 1.5" plant mix (PM), a 1.5" PM and BST Seal, and 2" PM asphalt.

Table 8
MAINTENANCE ACTIVITIES

PAVEMENT DISTRESS	LOW VOLUME STREETS			HIGH VOLUME STREETS		
	Light (L)	Moderate (M)	Severe (S)	Light (L)	Moderate (M)	Severe (S)
Alligator Cracking (AL, AM, AS)	None	4' Wide Skin Patch	4' Wide Full-Depth Patch	None	8' Wide Full-Depth Patch	8' Wide Full-Depth Patch
Block/Transverse Cracking (BK)	None	Crack Sealing	1.5" PM Resurfacing and BST Seal	None	Crack Sealing	1.5" PM Resurfacing and BST Seal
Reflective Cracking (RF)	None	Crack Sealing	Joint Repair	None	1.5" PM Resurfacing	Joint Repair
Rutting (RT)	None	None	1.5" PM Resurfacing	None	Short Overlay	1.5" PM Resurfacing
Raveling (RV)	None	1.5" PM Resurfacing	1.5" PM Resurfacing	None	1.5" PM Resurfacing	1.5" PM Resurfacing
Bleeding (BL)	None	None	1" PM Resurfacing	None	None	1.5" PM Resurfacing
Ride Quality (RQ)	None	None	1.5" PM Resurfacing	None	None	1.5" PM Resurfacing
Patching (PA)	None	None	Short Overlay	None	None	1.5" PM Resurfacing

If a high percentage of the pavement surface has alligator cracking, resurfacing is recommended as shown below in Table 9. All severe alligator cracking should be repaired with full-depth patching prior to resurfacing.

Table 9
MAINTENANCE FOR A HIGH PERCENTAGE OF ALLIGATOR CRACKING

VOLUME	CONDITION	RESURFACING
Low	AM & AS \geq 50%	1.5" PM Resurfacing
	AM & AS \geq 50% and M or S Rutting	2" PM Resurfacing
High	AM & AS \geq 30%	1.5" PM Resurfacing
	AM & AS \geq 30% and M or S Rutting	2" PM Resurfacing

B. Unit Costs for Maintenance Activities

The unit costs for maintenance activities are shown below in Table 10. These unit costs were provided by the Town of Carrboro.

Table 10
UNIT COSTS FOR MAINTENANCE ACTIVITIES

ACTIVITY	COST (PER SQUARE YARD)
Crack Sealing	\$0.95
Skin Patching	\$17.00
Joint Repair	\$0.85
Full-Depth Patch (4" Depth)	\$52.00
Short Overlay	\$6.20
1" Plant Mix Resurfacing	\$5.50
1.5" Plant Mix Resurfacing	\$8.25
2" Plant Mix Resurfacing	\$11.00
BST Seal (<i>also known as chip seal</i>)	\$2.50

C. Maintenance Needs

A comparative table with a summary of maintenance needs for 2019 is shown on the next page in Table 11. These activities are based on objective descriptions of conditions existing at the time of the survey. Although the computer analysis determines the primary and secondary maintenance activities for these conditions, there may be isolated distresses that are not evident in the results. The secondary maintenance activities and costs, when applicable, are included in the primary totals.

Alligator cracking is a high priority distress and it accounts for approximately 54.29% of the recommended repair cost in the form of full-depth patching.

Figure 2, on page 16, illustrates the average system PCRs over the past five surveys (2005, 2008, 2009, 2014 and 2019). The overall PCR is good, the trend is upward from the last survey.

Figure 3, on page 17, illustrates how the total mileage is distributed among the various recommended maintenance activities. Approximately 16.01% of the system's rated streets are recommended for full depth patching and about 2.47% of the system's rated streets are recommended for resurfacing, primarily due to alligator cracking and block cracking.

Figure 4, on page 18, illustrates how the total cost is distributed among the various recommended maintenance activities. Approximately 36.03% of the system's cost is for maintenance in the form of resurfacing, as a primary maintenance activity that includes all necessary patching.

Figure 5, on page 19, illustrates how the total recommended repair cost is distributed between routine maintenance and resurfacing activities. Routine maintenance activities account for approximately 63.97% (\$420,443) of the estimated maintenance while resurfacing activities account for 36.03% (\$236,849) of the estimated maintenance needs.

Table 11
SUMMARY TABLE OF SUGGESTED PRIMARY MAINTENANCE ACTIVITIES FOR RATED STREETS

Primary Activity	Miles Lo Vol	Cost Lo Vol	Miles Hi Vol	Cost Hi Vol	Total Miles	% Miles	Total Cost	Cost/Mile	% Cost
Crack Sealing	0.97	\$11,554	0.10	\$1,593	1.07	2.30%	\$13,147	\$12,287	2.00%
Skin Patching	1.90	\$17,161	0.00	\$0.00	1.90	4.08%	\$17,161	\$9,032	2.61%
Full-Depth Patching	6.91	\$323,088	0.55	\$35,698.00	7.46	16.01%	\$358,786	\$48,095	54.59%
Short Overlay	0.31	\$31,349	0.00	\$0	0.31	0.67%	\$31,349	\$101,126	4.77%
Routine Maintenance Total (RM Total)	10.09	\$383,152	0.65	\$37,291	10.74	23.04%	\$420,443	\$39,147	63.97%
1 1/2" Plant Mix Asphalt Resurfacing	0.40	\$95,733	0.27	\$66,548	0.67	1.44%	\$162,281	\$242,210	24.69%
1 1/2" Plant Mix Asphalt Resurfacing and Seal	0.48	\$74,568	0.00	\$0	0.48	1.03%	\$74,568	\$155,350	11.34%
Resurface Total	0.88	\$170,301	0.27	\$66,548	1.15	2.47%	\$236,849	\$204,180	36.03%
Total Repair	10.97	\$553,453	0.92	\$103,839	11.89	25.51%	\$657,292	\$55,281	100%
None	30.99	\$0	3.73	\$0	34.72	74.49%	\$0	\$0	0%
Total System	41.96	\$553,453	4.65	\$103,839	46.61	100%	\$657,292	\$14,102	100%

* RM is routine maintenance

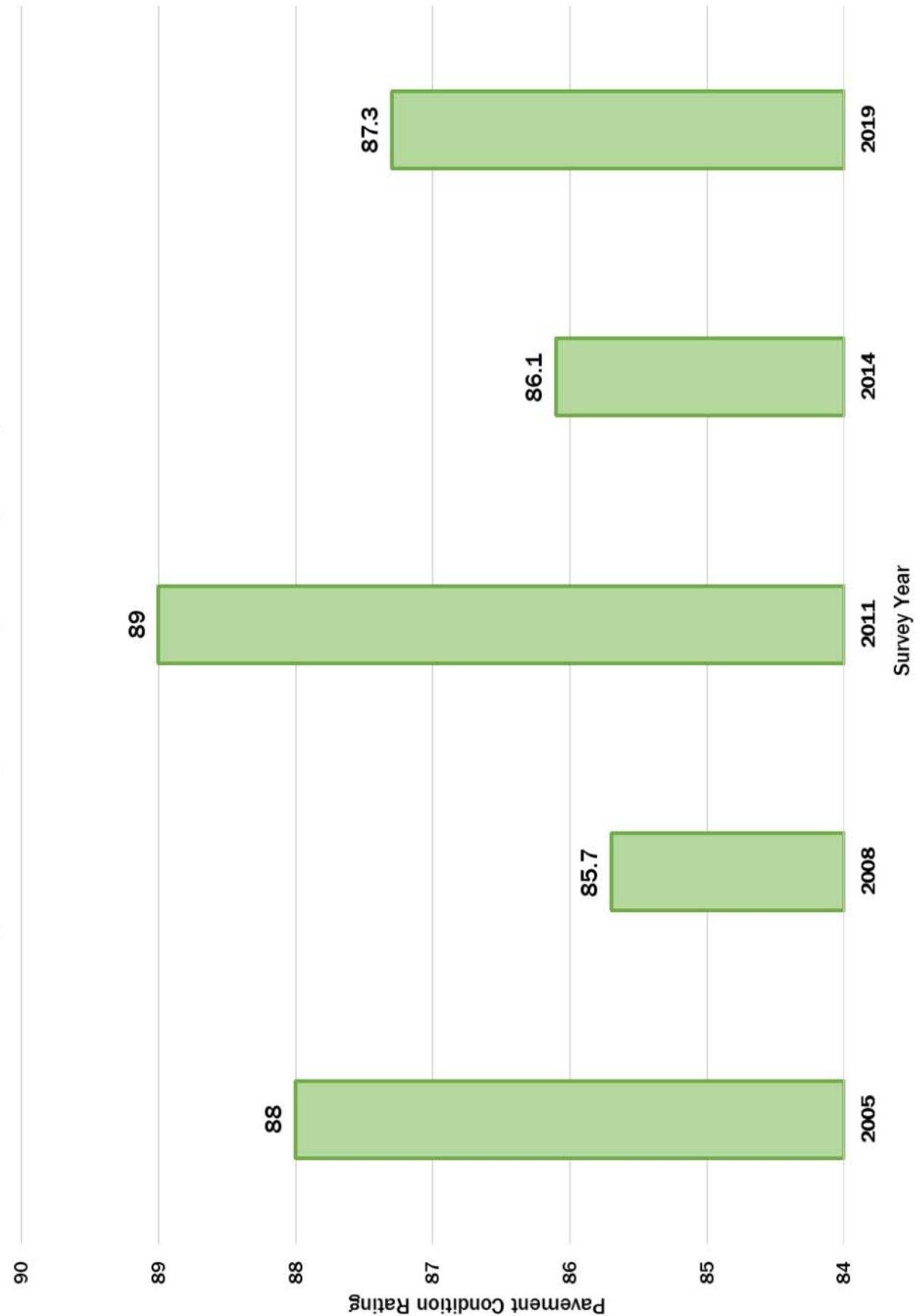
Note: Columns may not add up exactly due to rounding.

The results of the Pavement Condition Survey in the provided database and street listings have a code symbol in the 'Activity' column defining the controlling or primary maintenance activity for each street section. It should also be noted that a secondary maintenance activity has been incorporated into the database, when applicable, in the "Activity 2" field with associated cost data. A third and fourth activity and associated cost, when applicable, are also incorporated within the database as structured above. The code symbols are as follows:

CS = Crack Sealing	PM 1.5 = 1/2" Plant Mix
FDP = Full-Depth Patching	PM1.5+S = 1 1/2" Plant Mix and BST Seal
SO = Short Overlay	PM2 = 2" Plant Mix
SKP = Skin Patching	

These maintenance activities can be categorized as either routine maintenance or resurfacing. Routine maintenance limits the detrimental effects of traffic loads and weather conditions. For the Town of Carrboro routine maintenance includes crack sealing, skin patching, full-depth patching, and short overlay. Resurfacing adds a new layer to the pavement's structure and improves its load carrying capacity.

Figure 2 - Average PCR Comparison by Survey Year



**FIGURE 3 - DISTRIBUTION OF MAINTENANCE NEEDS BY PRIMARY REPAIR TYPE
(% OF MILES)**

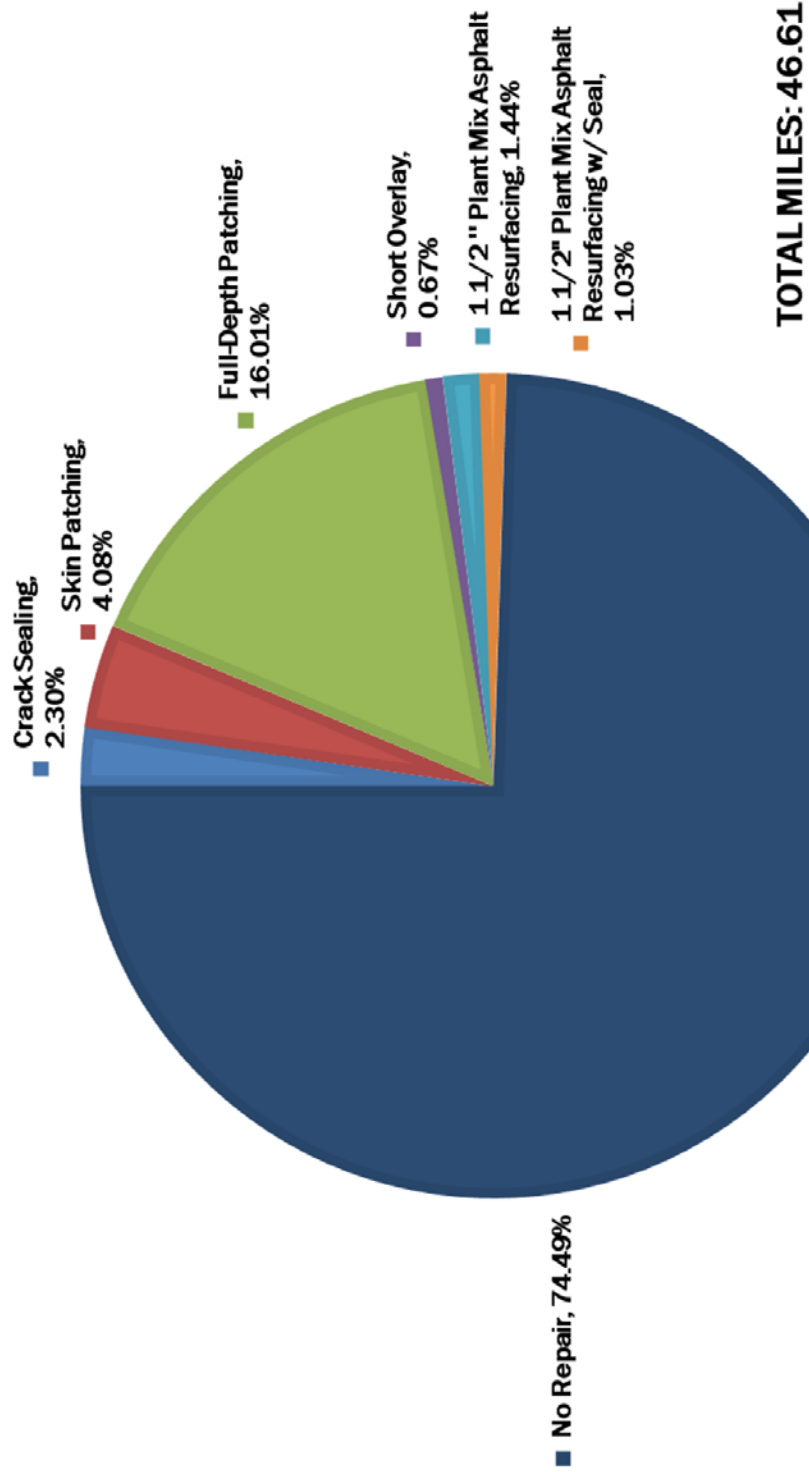


Figure 4 - Distribution of Maintenance Costs by Primary Type
Percentage of Total Cost
Total Cost: \$657,292

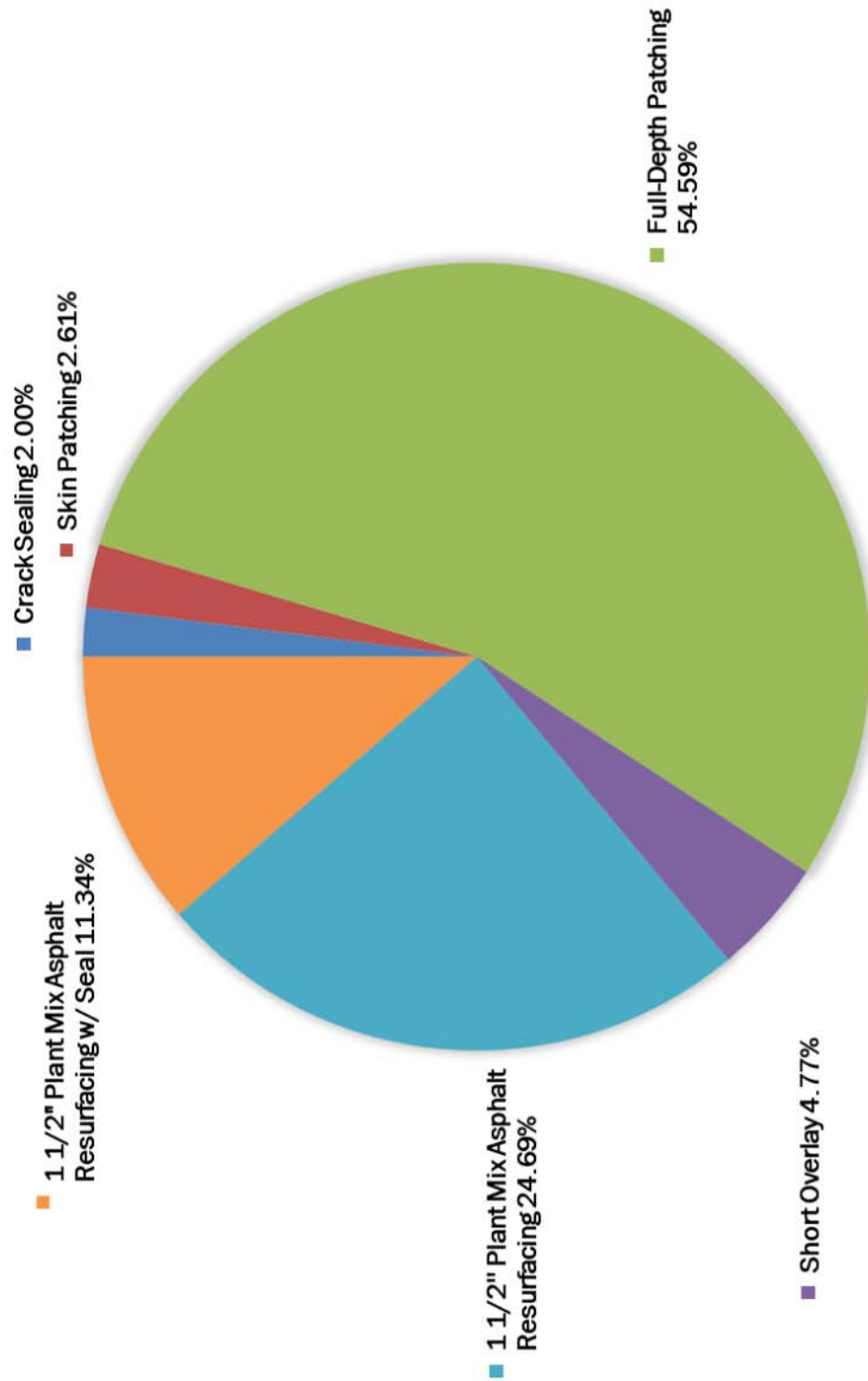
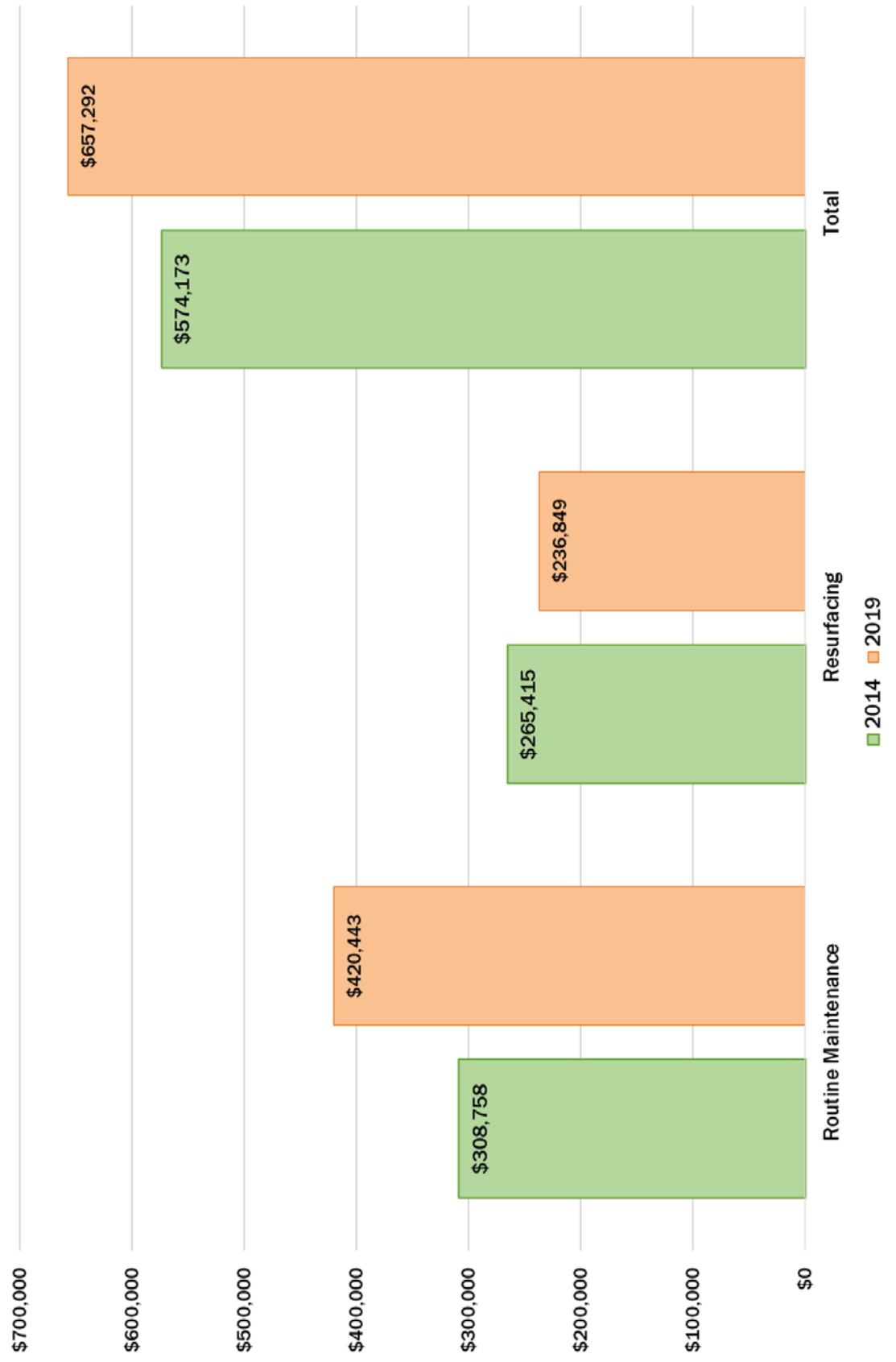


Figure 5 - Routine Maintenance vs. Resurfacing Cost



D. Routine Maintenance

These important maintenance activities are included where surface pavement distresses are not present in sufficient magnitude to warrant complete plant mix resurfacing. Routine maintenance includes crack sealing, skin patching, full-depth patching, and short overlay.

The Pavement Condition Survey indicates that there are approximately 10.74 miles of streets requiring routine maintenance. The estimated cost of this work is \$420,443 or \$36,147 per mile, accounting for roughly 63.97% of the estimated total street maintenance cost need.

The following sections define the routine maintenance for the Town of Carrboro.

- **Crack Sealing**

Crack sealing is needed for moderate block/transverse cracking on low and high volume streets and moderate reflective cracking on low volume streets. Block cracking is not a structural failure and does not usually progress rapidly. Cracks are generally caused by shrinkage of the asphalt and daily temperature cycling. Traffic loads can increase the severity of block cracking if water is allowed to penetrate into the cracks. Therefore, it is very important to seal these cracks to prevent water penetration into the base materials. The definition of moderate block/transverse cracking includes cracks that have been sealed previously but are beginning to open back up. **Although crack sealing is generally an effective preventive maintenance measure, it should not be used in place of patching to seal moderate to severe alligator cracking.** LaBella recommends crack sealing as a primary maintenance activity for approximately 1.07 miles of street segments. Crack sealing is also recommended as a secondary maintenance activity for 0.09 miles of street segments.

Even though it will result in a higher initial cost, the use of a rubberized asphalt crack sealant is recommended. Because cracks must be resealed periodically, a continuing crack sealing program is required. Crack sealing can be a very cost-effective expenditure of funds.

- **Skin Patch**

Skin patching is a maintenance practice used by the Town for repair of isolated locations of moderate alligator cracking. It seals the surface and slows the rate of deterioration. Alligator cracking is a structural failure of the pavement and can deteriorate rapidly if appropriate maintenance is not performed.

Similar to full-depth patching, skin patching (where required) is included in the primary resurfacing activities. There are approximately 2,814 square yards of recommended skin patching. Approximately 842 square yards (20 street segments) are recommended as a primary maintenance activity at an estimated cost of \$17,161 with the remaining 1,972 square yards to be performed as a secondary activity to resurfacing.

- **Joint Repair**

Joint Repair is recommended for severe reflective cracking. Reflective cracking occurs when cracking at the joints of an old concrete pavement reflects to the surface of an asphalt overlay. Often repairs must be made to the Portland cement concrete pavement below the surface. Resealing or repairing of the concrete joints, either by crack pouring or major reconstruction of the old joint might be required. Slab stabilization may also be required if pumping is present. There are no street segments that exhibit severe reflective cracking.

- **Full-Depth Patch**

Full-depth patching is required to repair severe alligator cracking. It involves the removal of the surface course, base course, and sub-grade, if necessary. New material should be placed in compacted lifts. Often, a full-depth asphalt repair can be used.

There are an estimated 7,968 square yards of full-depth patching needed in Carrboro. Approximately 6,157 square yards (64 street segments) are recommended as a primary maintenance activity at an estimated cost of \$358,786 (including secondary activities) with the remaining 1,811 square yards recommended as a secondary activity. Where resurfacing is recommended, the cost of full-depth patching is included in the total resurfacing cost. Those repairs must be done prior to any resurfacing activity.

It is recommended that the Town of Carrboro maintain an aggressive patching program. This type of maintenance is very cost-effective in extending the useful life of pavements. Delaying this type of maintenance will cause pavements to fail at a much faster rate. Many streets requiring patching may need resurfacing in the near future. However, timely and thorough patching can postpone the need for resurfacing.

- **Short Overlays**

Short overlays, or resurfacing portions of a street, are recommended on low volume streets with severe patching. There are two street segments (0.31 miles) requiring a short overlay as a primary activity.

E. Resurfacing

Plant mix resurfacing is a major maintenance activity. Plant mix resurfacing, combined with full-depth patching is used to repair structural damage. It is recommended for a variety of pavement distresses, as severity and magnitude increase, and some distress types require more immediate attention than others. Because the funds available for street resurfacing are typically limited, resurfacing activities need to be addressed by the type of pavement distress that causes the need. This section will address resurfacing activities by the type of distress that requires it.

The Pavement Condition Survey indicates that there are approximately 1.15 miles of streets requiring resurfacing. The estimated cost of this work is \$236,849 or \$204,180 per mile, accounting for roughly 36.03% of the estimated total street maintenance cost needs.

- **Alligator Cracking**

Alligator cracking is the most serious pavement distress. It is a structural pavement failure that may be caused by traffic overload, inadequate design thickness, base or sub-grade failure, poor drainage, or a combination of these factors. It should be given top priority for proper repair. It is a progressive failure, and unless corrected it may progress to the point that the street may require complete pavement reconstruction.

The Pavement Management program is set to determine the need for resurfacing when 30% of a segment on Class B (high volume) streets and 50% of a segment on Class A (low volume) streets has moderate and/or severe alligator cracking. The cost of full-depth patching is also included, where required, in the cost estimate of resurfacing. When light or no rutting exists with alligator cracking, no extra maintenance activity is recommended for low and high volume streets.

When moderate or severe rutting exists with alligator cracking, a full-depth patching is recommended. These streets are in very poor structural condition and may require reconstruction. Possibly, some engineering testing is needed to determine if there are subsurface problems.

- **Block/Transverse Cracking**

Block/Transverse cracking is not load associated but is caused by the shrinkage of asphalt and temperature fluctuations. The severity can increase if water penetrates into the cracks. Therefore, it is important to seal the block/transverse cracks to prevent water penetration into the pavement's base materials. Unless remedied, alligator cracking may develop.

Crack sealing would be needed to repair moderate block/transverse cracking on low volume (Class A) and high volume (Class B) streets. Crack sealing is very effective and cost-effective alternative on low volume (Class A) streets. Generally, resurfacing streets due to moderate cracking would be a low priority, unless municipal officials have seen a continued increase in the cracking and/or there is difficulty keeping it crack sealed because of heavy traffic volumes. Severe block/transverse cracking requires a 1.5" plant mix resurfacing and BST seal. It is not practical to crack seal severe block cracking as a sole maintenance activity.

- **Reflective Cracking**

Reflective cracking is generally not load associated but occurs on asphalt concrete which has been overlaid on old jointed concrete pavement. Reflective cracking is characterized by bulged joints above the riding surface and caused by movement of the concrete slab beneath the roadway surface. Where there is severe reflective cracking, joint repair is recommended. There are no roads in the Carrboro street system that exhibit severe reflective cracking at this time.

- **Rutting**

Rutting is a surface depression that typically occurs in the wheel path(s) or at the edge of the pavement. It occurs when the pavement layers or sub-grade consolidate due to traffic loads. Rutting represents a structural failure and often occurs in conjunction with alligator cracking. To repair severe rutting, a 1.5" plant mix resurfacing is recommended for low volume streets and high volume streets.

- **Raveling**

Raveling typically occurs on, but not limited to, bituminous surface treated (BST) streets, sometimes referred to as "tar-and-gravel". Raveling is identified by the loss of aggregate particles from the pavement surface. The inability of the liquid asphalt to hold the aggregate in place causes raveling. Resurfacing is needed to seal the pavement and provide a new wearing surface. A 1.5" plant mix resurfacing is recommended for both the moderate and severe conditions for both street classes (low and high volume).

- **Ride Quality**

Ride quality is a relative indication of roughness and how the street rides to the public. Any number of factors including rutting, cracking, utility cuts, localized dips, or poor patching can cause rough ride quality. Improving rough ride quality requires a 1.5" plant mix resurfacing for severe conditions on low and high volume streets.

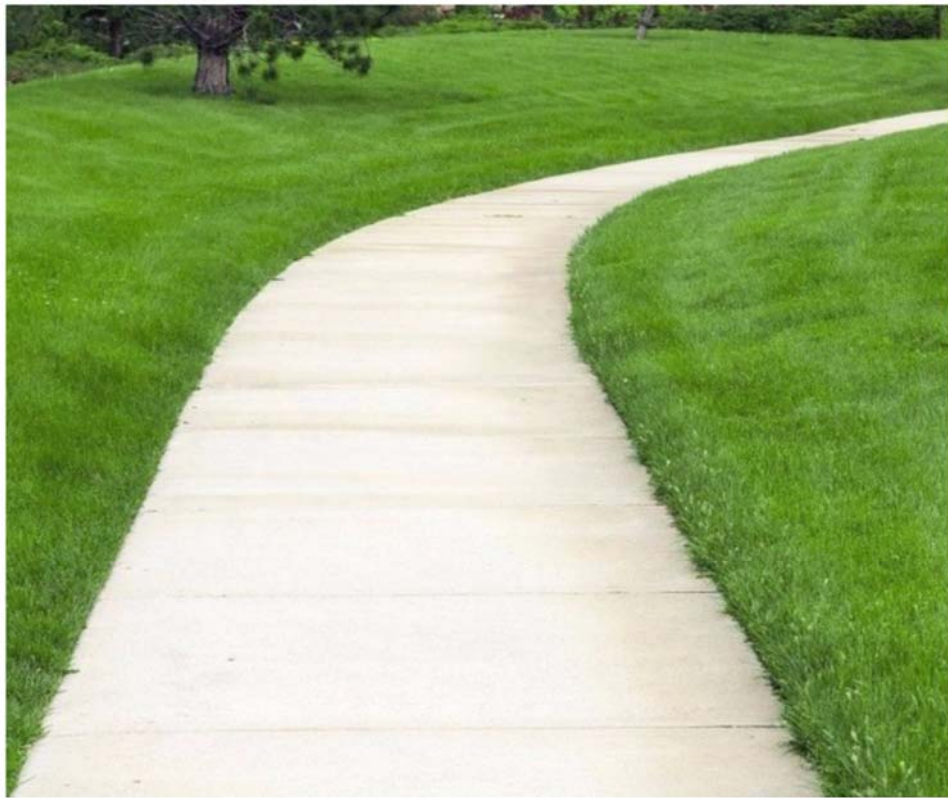
- **Patching**

Patching is only an indication of the amount of surface area that has received some type of maintenance repair. The quality or condition of the patch is not considered in the evaluation. Severe patching indicates that a large amount of patching exists on the pavement. Resurfacing is recommended when patching covers more than 30% of a pavement's surface area. Where there is severe patching on low volume streets, a short overlay is recommended; for high volume streets with severe patching, a 1.5" plant mix resurfacing is recommended.

SIDEWALK and CURB RAMP CONDITION SURVEY



Prepared For:
Town of Carrboro
July 2019



LaBella Associates, P.C. 400 S. Tryon Street, Suite 1300 Charlotte, NC 28285

Town of Carrboro Sidewalk & Curb Ramp Condition Survey

July 2019

N.C. License # C-0430

Prepared by:



LaBella Associates, P.C.
400 S. Tryon Street, Suite 1300
Charlotte, NC 28285



7/10/2019

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION.....	1
II. SURVEY PROCEDURES	3
III. DATA ANALYSIS	6
IV. REPLACEMENT COSTS.....	12
V. REPORTS	13
A. Needs Summary.....	13
B. Alphabetical Listing.....	15
C. Sidewalk Condition Rating Listing.....	15
VI. SUMMARY	17
APPENDIX	
Distress Identification	A
Legend for Alphabetical and Rating (SCR) Listing	B
Alphabetical Street Listing	B1
Rating (SCR) Order Street Listing	B2

I. INTRODUCTION

This report describes the results of the sidewalk condition survey that was conducted by the staff of **Labella Associates, P.C.** for the Town of Carrboro. The Town of Carrboro has recognized the need for an inventory of the sidewalks within their street system to provide an organized approach for addressing maintenance needs. LABELLA surveyed the location and condition of all concrete sidewalks along Town streets by means of a walking survey. Sidewalk locations were initially developed using aerial and street view images, and compared to the Town's sidewalk locations in GIS. In addition to the collected sidewalk data, curb ramp locations were identified that included basic condition information. The sidewalk field data information was placed into a database, which was analyzed to define maintenance needs and generate a sidewalk condition rating (SCR). Unit costs reflecting local area averages were used to estimate the costs for replacing unsuitable sections of the sidewalks.

The management system for sidewalks is designed as another part of LABELLA's total roadway management system. The street inventory segments used for the Sidewalk Management System are primarily the same as those used by LABELLA's pavement management system. Some block segments were split at business drives in which the sidewalk was not continuous. The GIS layer created and the databases used for sidewalks will allow the Town of Carrboro to maintain and update sidewalk data on a periodic basis.

Sidewalks are integral parts of a municipal street system. They serve pedestrians in and around the central business district, shopping centers, schools, churches, and residential areas. Sidewalks provide a safe travel way for pedestrians that are separate from vehicular traffic. Aesthetically, sidewalks should be clean, neat, and add to the attractive appearance of a neighborhood or business district. Sidewalks should also have a smooth even surface that is safe and negotiable for all pedestrians.

Virtually all of the sidewalks within the Town of Carrboro are constructed of Portland cement concrete. Over a period of time they begin to deteriorate due to aging, wear due to usage, poor construction, inadequate drainage, and damage caused by other forces such as tree roots, heavy loads, or chemicals. Their surfaces can become cracked (Cracking), uneven (Faulting), or show surface deterioration (Surface Wear). It is important to maintain sidewalk conditions at an

acceptable quality to avoid the unsightly and unsafe conditions associated with these distress types.

The Town of Carrboro maintains approximately 41.5 miles of sidewalks along the street system and located within the right-of-way of Town streets. The average sidewalk condition rating is 96.9, which is above average for municipalities of similar size. Based on the sidewalk condition survey results, approximately 0.5% of the total sidewalk length is recommended for replacement due to poor conditions identified in this report. Approximately 4.4% of the sidewalk system exhibits some level of distress. Total replacement needs will require approximately 508 square yards of concrete at an estimated cost of \$35,600. Unit costs used for estimating the replacement need were based upon the current local cost. The unit cost for replacing a typical sidewalk is estimated at \$70.00 per square yard (for 4" thickness). This estimated cost is for sidewalk replacement only and does not include repairs to curbs, pavement, tree root removal, horizontal or vertical alignment adjustments due to tree root encroachment and upheaval, or landscaping. The Town may also incur other costs related to construction administration, inspection, and mobilization.

Curb Ramps were also surveyed within a separate GIS point layer and database. It should be understood that this survey did not locate intersection points in which no ramp was present, but was needed. It should also be understood that this survey noted the general condition of ramps, but did not determine whether ramps were in compliance with any standard. A total of 872 curb ramps were located within the Town limits. Of these 872 curb ramps, 864 (99.1%) were rated as being in 'Good' condition, 7 (0.8%) were rated as being in 'Fair' condition, and only 1 (0.1%) was rated as being in 'Poor' condition.

II. SURVEY PROCEDURES

The sidewalk condition survey was conducted by a trained LABELLA evaluator to ensure accurate and consistent survey data. Visual inspections were used to collect survey data. Three different distress types were evaluated during the survey: cracking, faulting, and surface wear. Conditions were evaluated in accordance with the distress definitions shown in Appendix A of this report. Each distress type has three severity levels: light, moderate, and severe.

The sidewalk survey was a walking survey. The sidewalk on each side of an individual street block is evaluated separately and is distinguished as either left or right side of the street. The left and right convention is determined by the direction of the beginning to ending descriptions of the street segment where the sidewalk is located. Sidewalk was located geographically (beginning, ending, and horizontally) by LABELLA creating a GIS shape file of existing sidewalk prior to the walking survey. LABELLA supplemented the GIS shape file by locating and entering sidewalk that we found in the field. All of this data is included in the supplied GIS shape file.

Each block of sidewalk was also classified based on usage. Class A sidewalks are primarily located in residential areas and typically receive low usage. Class B sidewalks receive more pedestrian traffic and are generally located in the central business district, near shopping centers, or schools.

Sidewalks are generally segmented into square or rectangular panels formed by tooled or constructed joints. During the survey, each panel was evaluated according to the highest ranking distress on the priority list shown on the next page in Table 1. Therefore, each panel is only counted in one distress category. For example, if a panel exhibits light cracking and moderate faulting, it would be counted under moderate faulting since that distress has a higher priority.

Table 1 – Distress Priority

Priority	Distress	Severity
1	Faulting	Severe
2	Faulting	Moderate
3	Cracking	Severe
4	Surface Wear	Severe
5	Cracking	Moderate
6	Faulting	Light
7	Surface Wear	Moderate
8	Cracking	Light
9	Surface Wear	Light

During the field review, we also noted locations where “Tree Roots” were present and have or could potentially cause distresses to the sidewalk from tree root damage. Tree roots can cause faulting and/or cracking of sidewalks. This separate field within the database was used to inventory those sidewalk segments that may be damaged by the roots of nearby trees. The survey found that approximately 6.2% (30 segments) of the sidewalk segments had some level of tree root intervention. In many of these locations, the tree roots have already damaged the sidewalk. In others, the tree roots are adjacent to the sidewalk and could lead to future damages. Thus, the Town can use this data to address tree root issues before they damage the sidewalk in those locations.

The survey also noted physical “Obstructions” along sidewalk segments that significantly impair normal walking. These obstructions included mailboxes, utility poles, signs, fire hydrants, and trees. Approximately 0.82% (4 segments) of the sidewalk segments had at least one obstruction. The Town can use this data to possibly relocate some of these obstructions to provide better clearances.

In addition to distress information, other data collected during the survey included sidewalk dimensions. This information is listed in Appendix B - Alphabetical and Sidewalk Condition Rating (SCR) Listings. All dimensions are recorded in feet. This data includes the following:

- Sidewalk Length. This length is generated from the starting and ending points of the sidewalk segment as provided by the GIS shape file.
- Sidewalk Width. In some cases, the sidewalk may be more than one panel in width.
- Panel Width. This is the width of an individual panel. A panel is defined by a tooled or constructed joint in the sidewalk. The predominant panel width exhibited on the block is recorded for the entire block.
- Panel Length. The predominant panel length exhibited on the block is recorded for the entire block.
- Curb Distance. The distance in feet from the back of the curb to the front edge of the sidewalk. If the distance from the edge of the sidewalk to the back of the curb varies, then the most predominant distance along the block is recorded. A 'O' in this field indicates that the sidewalk is at the back of curb.

III. DATA ANALYSIS

The purpose of the data analysis is to identify sidewalks in poor condition that need replacement. This analysis also calculates replacement concrete quantities, which are then used to estimate repair costs.

Prior to calculating the square yards of concrete needed for replacement, it is necessary to identify the distress types that require the replacement of sidewalk panels. The replacement matrix shown below in Table 2 identifies the criteria used to determine the need for replacement.

Table 2 – Replacement Matrix

Magnitude	Cracking	Faulting	Surface Wear
Light	No	No	No
Moderate	No	Yes	No
Severe	Yes	Yes	Yes

The number of sidewalk panels recommended for replacement was summed for each side of a street block. The number of square yards needed for replacement of sidewalk was determined using the following procedure:

$$\text{Panel Quantity (square yards)} = \frac{\text{Panel Width (ft)} \times \text{Panel Length (ft)}}{(9 \text{ square feet} / \text{square yard})}$$

$$\text{Total Quantity (square yards)} = \text{Panel Quantity} \times \text{Number of Panels with "Yes" category}$$

Using this procedure, the replacement quantity calculated for the Town of Carrboro's sidewalk system is approximately 508 square yards of concrete.

Another analysis tool developed for the Sidewalk Management System is the Sidewalk Condition Rating (SCR). The function of this rating is very similar to the Pavement Condition Rating (PCR) used by the LABELLA pavement condition survey. The SCR is a rating between 0 and 100. The SCR is used to provide an overall assessment of the sidewalk's condition and to prioritize repair

needs. The key element used to calculate the SCR is the amount of each distress severity. The SCR is calculated as follows:

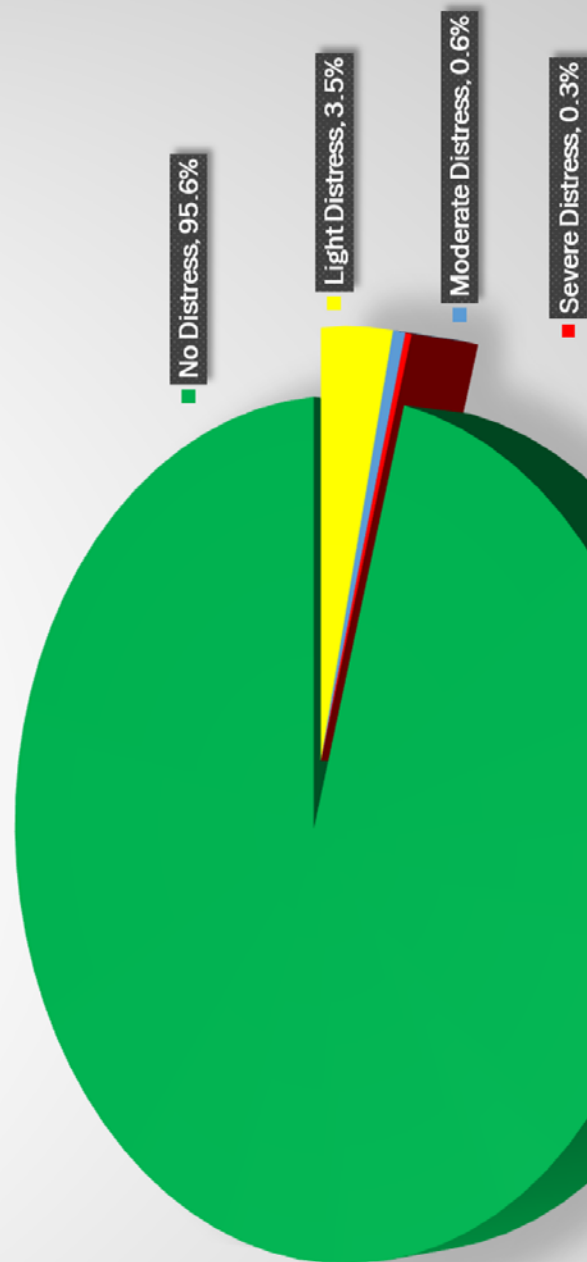
$$\text{SCR} = 100 - [(\% \text{ Severe Panels} \times \text{SDF}) + (\% \text{ Moderate Panels} \times \text{MDF}) + (\% \text{ Light Panels} \times \text{LDF})]$$

Where: SDF = Severe Distress Factor = 300
MDF = Moderate Distress Factor = 100
LDF = Light Distress Factor = 40

The formula accounts for the amount of light, moderate, and severe distressed panels. The Town may want to consider a level of use factor when prioritizing maintenance needs. Factors for each distress level in the sidewalk program may be adjusted by the municipality.

As indicated previously, approximately 4.4% of the sidewalk system exhibits some level of distress. A graphical breakdown of the panel distress by severity is shown in Figure 1 on the next page.

Figure 1 - Breakdown of Panel Distresses



Grouping SCR values into the four categories shown below in Table 3 will provide a general assessment of the sidewalk conditions in the Town of Carrboro. A lower SCR will indicate an increased need for sidewalk repairs and replacement. The percentage of sidewalk within each category is graphically shown on the next page in Figure 2. Approximately 99.8% of the sidewalks in Carrboro were found to be in ‘good’ or ‘fair’ condition (SCR = 51-100), and only about 0.1% were rated in ‘poor’ or ‘very poor’ condition (SCR = 0-50).

Table 3 – Sidewalk Condition Rating (SCR)

SCR Values	Condition
76 - 100	Good
51 - 75	Fair
26 - 50	Poor
0 - 25	Very Poor

As mentioned previously, we also located the Town’s existing curb ramps and assessed their general condition as ‘Good’, ‘Fair’, or ‘Poor’. A breakdown of the curb ramps into those rating categories is shown in Figure 3 on page 11. Please note this assessment does not address the need to add or replace detectable warning strips at curb ramps.

Figure 2 - Breakdown of Sidewalks into SCR Categories

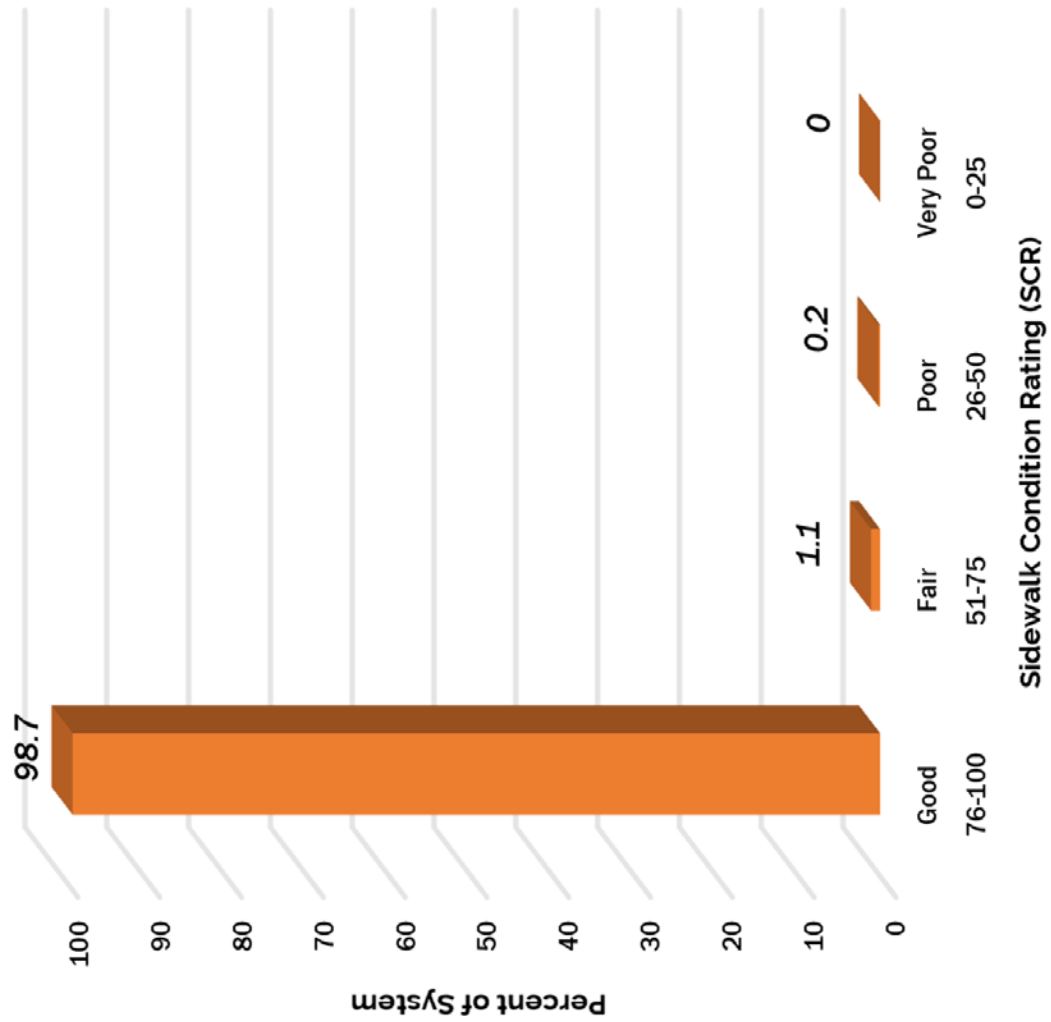
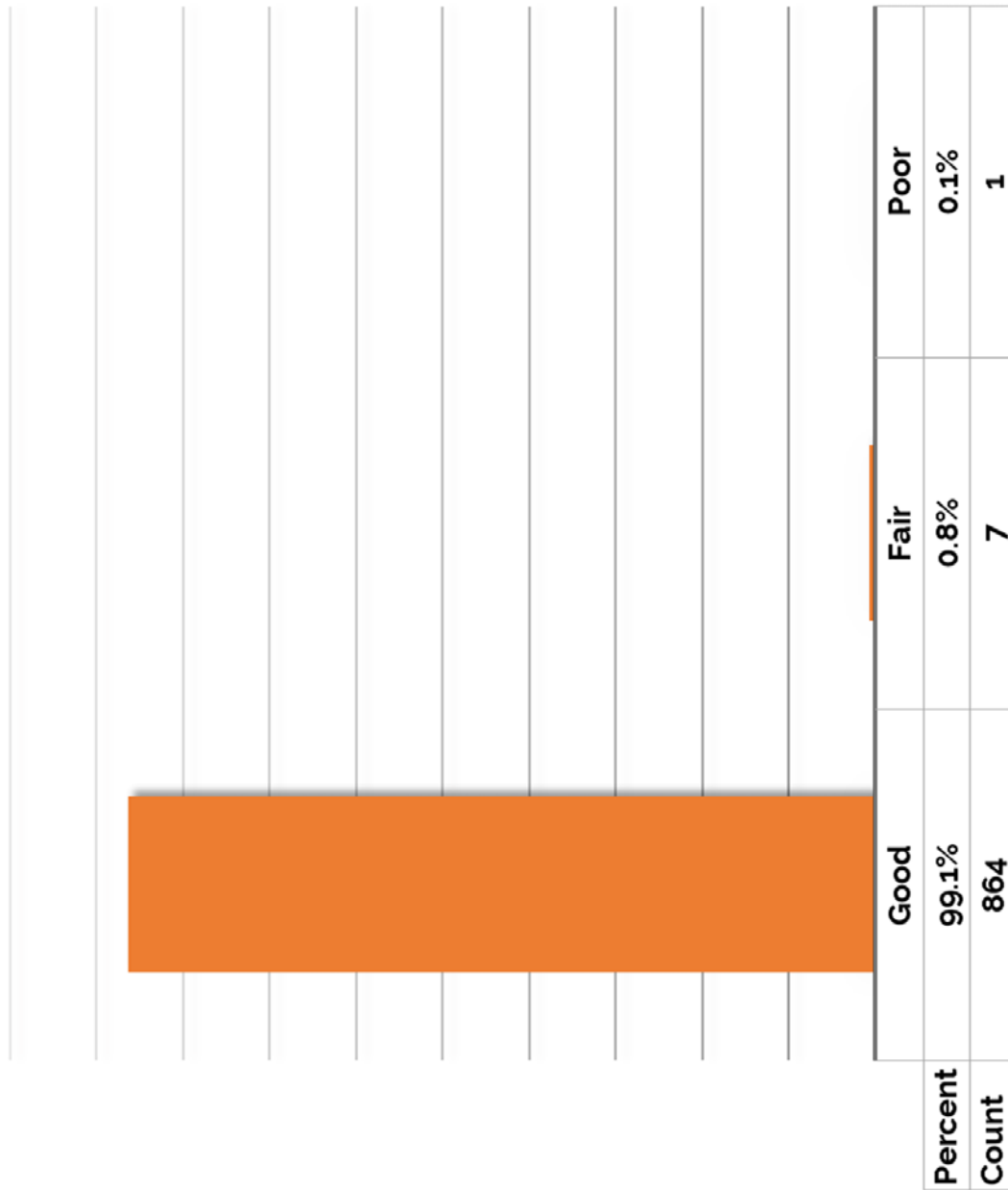


Figure 3 - Breakdown of Curb Ramps into Rating Categories



IV. REPLACEMENT COSTS

The unit cost for estimating the sidewalk replacement cost was determined by current local costs. Quantities estimated for replacement needs were multiplied by the unit cost of \$70/square yard to obtain the sidewalk repair costs. This unit cost does not include factors such as tree root manipulation or pavement / curb and gutter repair.

The unit replacement cost used in this report is \$70.00 per square yard for typical sidewalk repair. The total cost estimate for sidewalk replacement on each block was calculated by multiplying this unit cost by the respective quantities. However, some sidewalks may have a large percentage of panels that are in need of replacement. There is a cost-effective breakpoint where it is less expensive to replace the entire length of sidewalk instead of most of the individual panels. The breakpoint traditionally used is 70%. Therefore, when a sidewalk requires 70% or more replacement, the Town should consider replacing the entire section of sidewalk. This survey indicated that there are not currently any sidewalk segments that this criteria applies to. As a matter of fact, the largest replacement percentage for any sidewalk segment was approximately 16.7%. The estimated cost for sidewalk replacement needs in the Town of Carrboro is approximately \$35,600. See Table 5 on page 14 for a breakdown of these costs.

For Curb Ramps, the following unit replacement costs were used:

- Replace Curb Ramp \$2,000/each
- Add Detectable Warning Strip \$250/each
- Replace Detectable Warning Strip \$300/each

Using the units costs described above, the total cost estimated to address curb ramps (replacement or detectable warning strips) is approximately \$101,000. See Table 6 on page 14 for a breakdown of these costs. Curb ramp repairs or replacement can be programmed into the Town's ongoing maintenance program. At a minimum, curb ramp repairs need to be performed in conjunction with adjacent work, such as street resurfacing, intersection improvements, or sidewalk construction.

V. REPORTS

Listings containing survey data, results from the data analysis, and cost estimates were compiled for each block of sidewalk. These listings, an Alphabetical and a Sidewalk Condition Rating (SCR) listing, are provided in Appendix B. When using this information, it is important to understand the analysis described in Section III of this report. The results presented are intended to be guidelines for planning maintenance activities and are estimates only. The quantities and costs provided are not intended for contract specification purposes.

A. Needs Summary

The Needs Summary for sidewalks is shown below in Table 4. Of nearly 41.5 miles of sidewalk in Carrboro, approximately 0.5% is recommended for replacement. The total quantity of this replacement is about 508 square yards with an estimated cost of \$35,600. Considering Carrboro's entire sidewalk system, this is an average of approximately \$858 per sidewalk mile.

Table 4 – Needs Summary for Sidewalks

Total Length	41.5 miles
Replacement Needs	0.46%
Replacement Area	508 square yards
Replacement Cost	\$35,600

A further breakdown of the Needs Summary is provided in Table 6 on the next page. This table shows the amount and cost associated with each of the sidewalk distresses that require sidewalk replacement as outlined in Table 2 on page 6. Severe and Moderate Faulting account for approximately 69.4% of the projected sidewalk replacement cost. This information is also shown graphically in Figure 4 on page 16.

The Needs Summary for Curb Ramps is shown in Table 5. Curb ramps were identified and assessed relative to a general condition, such as Good, Fair, or Poor. While most of the curb ramps were in Good condition, other deficiencies were also noted. Nearly 40% of the curb ramps did not have a detectable warning strip, and another 2.4% have a strip that needs to be replaced. Detectable warning strips are required to meet the requirements of the Americans with

Disabilities Act (ADA). Please understand that this study was not focused on an ADA compliance review or transition plan. Curb ramp slopes and cross slopes were not physically measured in the field. However, approximately 2.9% of the curb ramps have some other potential compliance issue based on visual observation.

Table 5 – Needs Summary for Curb Ramps

Issue	Number	Percent
Need to Replace Curb Ramp	4	0.5%
Need Detectable Warning Strip for Curb Ramp	347	39.8%
Replace Detectable Warning Strip	21	2.4%
Other Potential Compliance Issues for Curb Ramp	25	2.9%
Total Curb Ramps With Some Type of Issue	397	45.6%
Total Curb Ramps	872	100.0%

Table 6 – Sidewalk Replacement Summary

Distress	Area (SY)	Area %	Cost	Cost %
Severe Faulting	114.0	0.10	\$7,980	22.5
Moderate Faulting	238.3	0.22	\$16,681	46.9
Severe Cracking	148.0	0.13	\$10,360	29.2
Severe Surface Wear	7.3	0.01	\$511	1.4
Total Repair	508	0.46	\$35,600	100.0
No Repair	109,287	99.54	\$0	0.0
Total System	109,794	100.00	\$35,600	100.0

Table 7 – Curb Ramp Replacement Summary

Issue	Number	Cost	Cost %
Need to Replace Curb Ramp	4	\$8,000	7.9%
Need Detectable Warning Strip for Curb Ramp	347	\$86,750	85.8%
Replace Detectable Warning Strip	21	\$6,300	6.2%
Other Potential Compliance Issues for Curb Ramp	25	TBD	TBD
Total Repair	397	\$101,050	100.0%

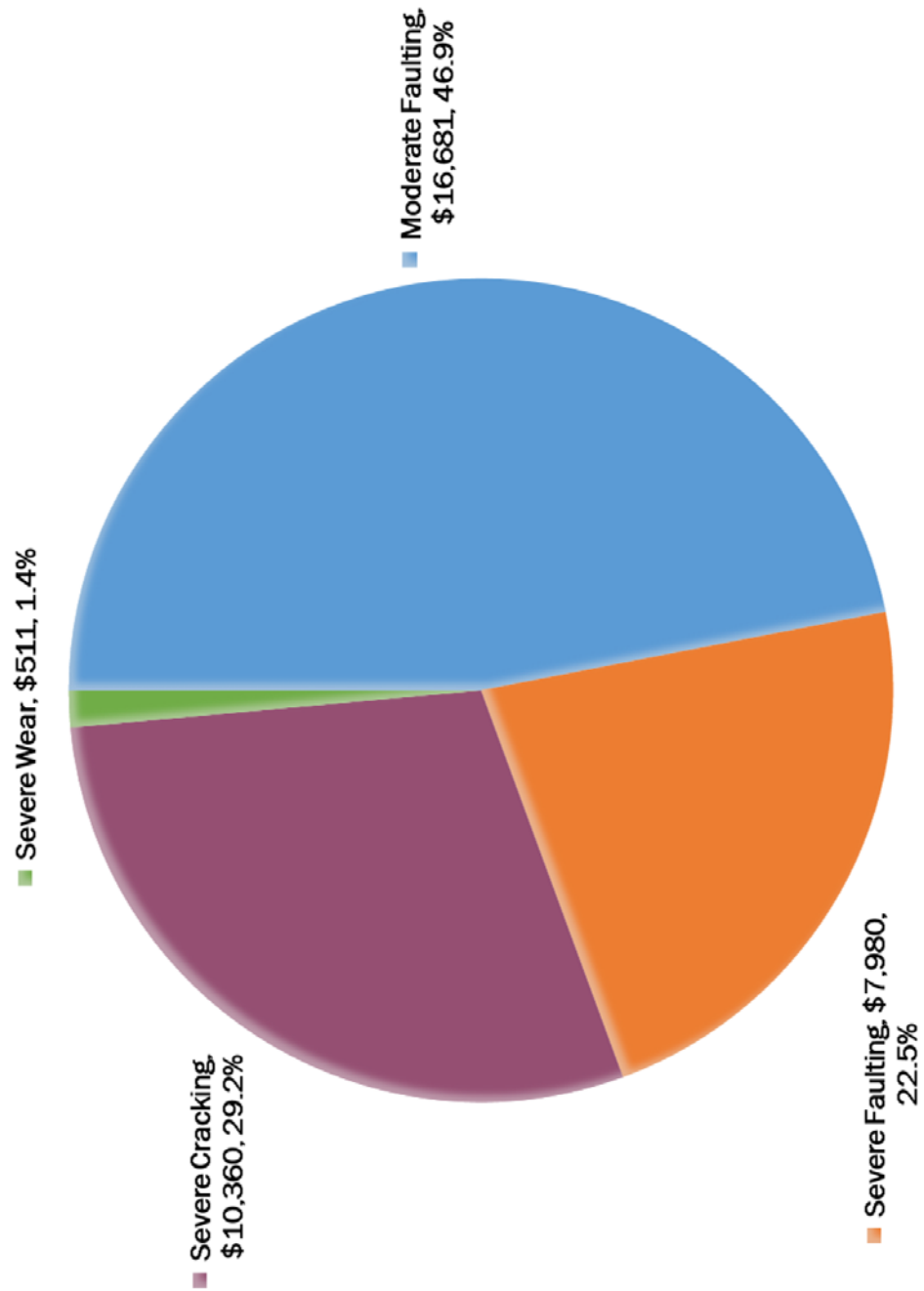
B. Alphabetical Listing

The Alphabetical Listing, provided in Appendix B, lists sidewalk blocks in alphabetical order by street name. The sidewalk location, length, results of the analysis, and estimated costs of repair are provided in this listing.

C. Sidewalk Condition Rating Listing

The Sidewalk Condition Rating (SCR) Listing is also provided in Appendix B to assist in planning and budgeting future sidewalk repairs. The information shown on the Sidewalk Condition Rating Listing is identical to that in the alphabetical listing. However, sidewalk segments are listed in order by SCR. The sections are listed from lowest SCR (0) up through the highest (100).

FIGURE 4 - SIDEWALK REPLACEMENT SUMMARY



VI. SUMMARY

The Town of Carrboro has recognized the importance of sidewalks as an integral part of the Town wide street system. It is important that timely maintenance be performed on sidewalks for aesthetic and safety reasons. An inventory and evaluation of existing conditions is imperative for a well-planned repair and improvement program.

The databases and programs developed by LABELLA are intended to assist in the planning, prioritization, and budgeting of maintenance activities. Data gathered during the condition survey and the analysis of that data provides a useful tool for managing the maintenance programs for sidewalks and curb ramps.

LABELLA appreciates the opportunity to provide this technical assistance for the Town of Carrboro. We also wish to thank Daniel Snipes and members of the Town's staff for their cooperation in the performance of this project. LABELLA would be pleased to provide any other technical assistance that might be needed by the Town of Carrboro.



Town of Carrboro

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

Agenda Item Abstract

File Number:19-333

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 2

TITLE:

Presentation of Public Work's Facilities Condition Assessment and Consideration of a Town Facilities Rehabilitation Fund

PURPOSE: The purpose of this agenda item is for the Board of Aldermen to receive the Town of Carrboro's October 2019 Facilities Condition Assessment Report; and consider and approve the establishment of a Facilities Rehabilitation Fund to repair and renovate existing Town facilities.

DEPARTMENT: Public Works, Finance, Town Manager's Office

CONTACT INFORMATION: Joe Guckavan, Public Works Director, Ben Schmadeke, Capital Projects Manager, Arche McAdoo, Finance Director, David Andrews, Town Manager and Rebecca Buzzard, Project Manager

INFORMATION: Facilities Condition Assessment: The Town of Carrboro Public Works Department developed a comprehensive picture of the physical condition and functional performance of Town buildings and infrastructure. Opportunities were also identified to improve the functionality and sustainability of Town facilities. This information will be used to develop budgets, prioritize resources, and plan for future improvements.

See Attachment A - Town of Carrboro Facilities Condition Assessment

Town Rehabilitation Fund: The Town is in the process of developing a facilities master plan that will propose renovations to exiting Town facilities including Town Hall, the Century Center, Fire Station One, and the Public Works facility. The Town also anticipates the development of new facility space for Recreation and Parks as part of the 203 Project. There is a high probability that funding for comprehensive renovations to Town facilities will not be available for at least another three years.

The purpose of the Facilities Rehabilitation Fund is to make interim improvements and restorations that are necessary to maintain our investment in the existing facilities until preparations have been made for major renovations. It is anticipated that the activities under the Facilities Rehabilitation Fund will address deficiencies reported in the Facilities Condition Assessment and complement future major renovations.

To develop the rehabilitation plan, all Town departments were asked to inventory the condition of their facilities

Agenda Date: 11/12/2019

File Type:Agendas

In Control: Board of Aldermen

Version: 2

and compile a list of needs that should not be deferred as well as those identified in the Facilities Condition Assessment. Addressing the items on the inventory will prevent further degradation of Town facilities and stabilize the functionality and aesthetics of Town assets.

All projects will incorporate and give high priority to energy efficient and environmentally responsible components as well as maintain the historical integrity of the structures.

FISCAL & STAFF IMPACT: Facilities Condition Assessment: Expenditures have been recommended in the current and following fiscal years (FY 2021 and FY 2022+) to correct deficiencies and prevent further degradation of Town Facilities.

Town Rehabilitation Fund: To initially fund the Facilities Rehabilitation Fund, a transfer of \$1,000,000 is proposed to be moved from unassigned fund balance in the general fund to the Facilities Rehabilitation Fund. Additional safe guards have also been proposed, such as a limit on the amount that may be awarded for a particular project, and requiring projects to be “job ready” before funding.

RECOMMENDATION: It is recommended that the Board receive the Town of Carrboro Facilities Condition Assessment and approve the establishment of a Facilities Rehabilitation Fund and the appropriation of funding as provided for in Attachment B - Budget Ordinance Amendment Establishing a Facilities Rehabilitation Fund.

Town of Carrboro

Facilities Condition Assessment

October 2019



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TABLE OF CONTENTS

Executive Summary	1
Introduction	1
Purpose	1
Scope	2
Methodology	2
Summary of Recommended Expenditures	4
Century Center	5
Facility Description	5
Building Sketch	8
Assets	9
Recommendations and Opportunities	11
Recommendation Investment for Repair and Renovation	11
Deficiency List and Opinions of Costs	12
Photographs	16
Community School	19
Facility Description	19
Building Sketch	20
Fire Station 1	21
Facility Description	21
Building Sketch	23
Assets	24
Recommendations and Opportunities	26
Recommendation Investment for Repair and Renovation	26
Deficiency List and Opinions of Costs	27
Photographs	31
Fire Station 2	33
Facility Description	33
Building Sketch	35
Assets	36
Recommendations and Opportunities	38
Recommendation Investment for Repair and Renovation	38
Deficiency List and Opinions of Costs	39
Photographs	40
Public Works	43
Facility Description	43
Building Sketch	46
Assets	47
Recommendations and Opportunities	49
Recommendation Investment for Repair and Renovation	50
Deficiency List and Opinions of Costs	51
Photographs	55



Town Hall	57
Facility Description	57
Building Sketch	59
Assets	61
Recommendations and Opportunities	64
Recommendation Investment for Repair and Renovation	64
Deficiency List and Opinions of Costs	65
Photographs	70
Baldwin Park	73
Park Description	73
Assets	74
Recommendations and Opportunities	75
Recommendation Investment for Repair and Renovation	75
Deficiency List and Opinions of Costs	75
Photographs	76
Hank Andersen III Community Park	77
Park Description	77
Assets	78
Recommendations and Opportunities	79
Recommendation Investment for Repair and Renovation	79
Deficiency List and Opinions of Costs	80
Photographs	81
Town Commons	83
Park Description	83
Assets	84
Recommendations and Opportunities	85
Recommendation Investment for Repair and Renovation	85
Deficiency List and Opinions of Costs	86
Photographs	87
Wilson Park	89
Park Description	89
Assets	90
Recommendations and Opportunities	91
Recommendation Investment for Repair and Renovation	91
Deficiency List and Opinions of Costs	92
Photographs	93
Bus Shelters	95
Description of Assets	95
Bus Shelter Survey	96
Recommendation Investment for Repair and Renovation	98



Cemeteries	99
Old Carrboro Cemetery	99
Recommendations and Opportunities	100
Westwood Cemetery	100
Recommendations and Opportunities	101
Municipal Parking Lots	103
Facilities Description	103
Location Map	103
Summary	105
Appendices	109
Appendix A - Glossary of Terms	
Appendix B – Additional Facility Improvements Identified by Stakeholders	
Appendix C - Stakeholder Questionnaire	
Appendix D - Community School Lease	



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EXECUTIVE SUMMARY

INTRODUCTION

The Public Works Department has prepared a Facilities Condition Assessment (FCA) for Town owned assets. The assessment evaluated the current condition of each facility and its components to obtain information for the purpose of allocating and prioritizing resources to address a backlog of deferred maintenance and address issues like life safety, code compliance, accessibility, energy efficiency, functionality, life expectancy, and aesthetics. This report gives us a tool to understand the current condition, needs and costs for repairs, and improvements so that we can plan and budget resources to systematically address Town needs. This FCA is intended to be updated and distributed annually. Also, the FCA is a valuable tool to be used in the preparation of a Facilities Master Plan.

The Manager's Office and Public Works propose to seek a consultant to prepare a Facilities Master Plan. The master plan will study demographics and anticipated growth of staff and facility needs, space planning, as well as large projects and renovations.

PURPOSE

The purpose of this assessment is to assist the Town of Carrboro in evaluating the physical aspects of the Town's facilities and provide key information for planned improvements by outlining the condition of:

- Mechanical, plumbing, and electrical systems;
- Fire protection and suppression systems;
- Site and landscape elements;
- Architectural, building envelope, and life safety elements; and
- Structural components

This report includes the evaluation of each facility's assets, prioritization of the recommended repair or replacement of assets, and opinion of costs to assist the Town in its planning for rehabilitation work and capital improvements.

Facility assets include major independent building components and systems. Each component and system was observed and its physical condition evaluated and recorded. The opinion of costs for repairs and/or capital reserve items are included in the enclosed *deficiency list and opinion of cost* tables.

Opportunities for improvements were also considered as part of this assessment. Maintaining and recapturing the historical integrity of structures shall be a guiding principal during rehabilitation and renovation projects. The Town's facilities offer many unique historical attributes which are detailed in the narrative sections of this report.

Additionally, opportunities to improve energy efficiency and alternative energy generation were considered. All findings are included in the relevant sections of this report.

This assessment does not include Americans with Disabilities Act (ADA) accessibility or evaluate environmental (hazardous material) impacts. ADA compliance and environmental evaluations will be



performed by licensed professionals during the planning and development of future renovations.

SCOPE

The assessment team visited the following Town facilities to evaluate the general condition of the building and site improvements:

- Century Center
- Community School
- Fire Station 1
- Fire Station 2
- Public Works
- Town Hall
- Baldwin Park
- Hank Anderson III Community Park
- Town Commons
- Wilson Park
- Bus Shelters
- Cemeteries
- Municipal Parking Lots

A walk-through survey of the building was conducted to observe building systems and components, identify physical deficiencies, and formulate recommendations to remedy the physical deficiencies.

As a part of the walk-through survey, the assessment team surveyed the exterior of the properties including the building exterior, roof(s), and pavement.

- The assessment team interviewed the building maintenance staff to obtain information about the subject property's historical repairs and replacements and their costs, level of preventive maintenance exercised, pending repairs and improvements, and frequency of repairs and replacements.
- The assessment team developed opinions based on their site assessment and interviews with Town's staff.
- The assessment team reviewed relevant available documents and information to gain a better understanding of the facilities' history.

METHODOLOGY

STAKEHOLDER QUESTIONNAIRE, KICK-OFF MEETING AND INTERVIEWS

A Pre-Survey Questionnaire was sent to Town Department Heads prior to physical inspection of Town's facilities. After receiving the Questionnaire responses, Public Works held a Kick-off Meeting with Department Heads to review key findings, the project's processes, and intent. In addition, several one-on-one interviews were conducted to gain a better understanding of Town staff needs. Information obtained from the questionnaire has been used in the preparation of this report. The questionnaire is included in Appendix A.

Additional facility improvements identified by Stakeholders can be found in Appendix B. The improvements have not been included in the Recommendation Investment for Repair and Renovation of this report.

FACILITY INSPECTIONS

Public Works inspected each of the Town's facilities, recorded existing conditions, identified problems and deficiencies, and documented corrective actions.



Facilities were inspected by the following personnel:

- Ben Schmadeke, Town of Carrboro Capital Projects Manager
- Mike Thompson, Town of Carrboro Engineer Inspector
- Ray Enoch, Town of Carrboro Fire Marshal

Additional inspections were completed by:

- Bonneville Electric
- Daulton HVAC

ASSET DATA COLLECTION

Examples Assets Analyzed in this Facilities Condition Assessment:

A/C Unit	Electrical Panel	Ice Machine
Air Compressor	Elevator	Lighting
Appliance	Eye Wash Station	Meter
Automatic Fire Suppression	Exhaust Fan	Parking Lot
Boiler	Fire Alarm	Pump
Ceilings	Fixture (plumbing)	Roof
Chiller	Floors	Walls
Control Panel	Generator	Water Heater
Doors	Heat Pump	Water Closet
Electrical Conduit	HVAC Controls	Well

Assets were assessed using the following criteria:

- **Failing** – *Must be addressed immediately to avoid further damage*
- **Poor** – *In diminished Condition with remedial work required prior to renovation*
- **Fair** – *In aging condition with some remedial work recommended*
- **Good** – *In serviceable condition with no remedial work recommended*
- **Excellent** – *In like new condition with no remedial work recommended*



DEVELOPMENT OF DEFICIENCY LIST

The Deficiency List incorporates assets that were evaluated as “poor” and “failing” and takes into consideration building systems that are not currently installed but are recommended.

OPINIONS OF PROBABLE COSTS

Opinions of cost are based on Public Work’s experience with past costs for similar projects and *GORDIAN’s 2018 Facilities Construction Costs with RSMeans Data*.

Expenditures have been recommended in the current and following Fiscal Years (FY20 & FY21) to correct most deficiencies and prevent the further degradation of Town assets.

Estimated expenditures for beyond FY21 have been included as a means of addressing remaining deficiencies and forecasting future deficiencies and associated costs. This estimate is based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed in this analysis. It is recommended that all deficiencies be corrected within 5 to 8 years to protect Town assets and maintain safe and functional facilities.

Note: costs do not include the routine maintenance of any asset.

SUMMARY OF RECOMMENDED EXPENDITURES

	FY 2020	FY 2021	FY 2022+	Total
Century Center	\$250,000	\$218,000	\$375,000	\$843,000
Fire Station 1	\$50,000	\$50,650	\$25,000	\$125,650
Fire Station 2	\$12,050	\$10,000	\$15,000	\$37,050
Public Works	\$50,000	\$62,650	\$75,000	\$187,650
Town Hall	\$300,000	\$329,250	\$250,000	\$879,250
Baldwin Park	\$0	\$15,000	\$5,000	\$20,000
Hank Anderson III Community Park	\$10,000	\$8,210	\$75,000	\$93,210
Town Commons	\$0	\$5,850	\$10,000	\$15,850
Wilson Park	\$7,850	\$1,000	\$5,000	\$13,850
Total Recommended Expenditures	\$679,900	\$700,610	\$835,000	\$2,215,510



CENTURY CENTER

FACILITY DESCRIPTION



Address: 100 North Greensboro Street

Current Facility Use: Police Department and Recreation and Parks Department

Land Area: .70 acres

Gross Building Area: 23,378

Year Built: 1924

Carrboro's Century Center, previously Carrboro Baptist Church, is a two-story historic structure in the heart of downtown Carrboro. Construction of the building was completed in 1924. The core of the building is a rectangular gable-roofed sanctuary supported by exterior buttresses to which a one-story hip-roofed wing is appended along the east elevation. On the main, west elevation, flat-roofed towers with recessed window planes topped with corbelling distinguish each corner; the southwest tower is taller due to the addition of a belfry (Source: *Carrboro, N.C. An Architectural & Historical Inventory*).

The property was purchased by the Town in 1997 and underwent a significant renovation in 2000. It is comprised of two primary spaces; the Carrboro Police Department and Carrboro Recreation and Parks Department. Included in the Recreation and Parks Department are event spaces open to the public and a small branch of the Orange County Library.



The average monthly summer electric bill is \$3,200/month and the average monthly winter electric bill is \$1,500/month.

The average monthly summer gas bill is \$350/month and average monthly winter gas bill is \$900/month.

Interior Elements

The interior of the building is typically made up of gypsum wallboard and plaster walls, vinyl tile flooring, and an acoustical drop ceiling with drop-in troffer style fluorescent light fixtures. The main hall, formerly the baptistery, is made up of hard wood floors, a vaulted ceiling, and has large pendent style lights with LED bulbs. Storage within the facility is lacking and any items are currently being stored in hallways. The windows are in good overall condition with the exception of the great hall; which have wooden frames that are deteriorating.

Life Safety and Fire Protection

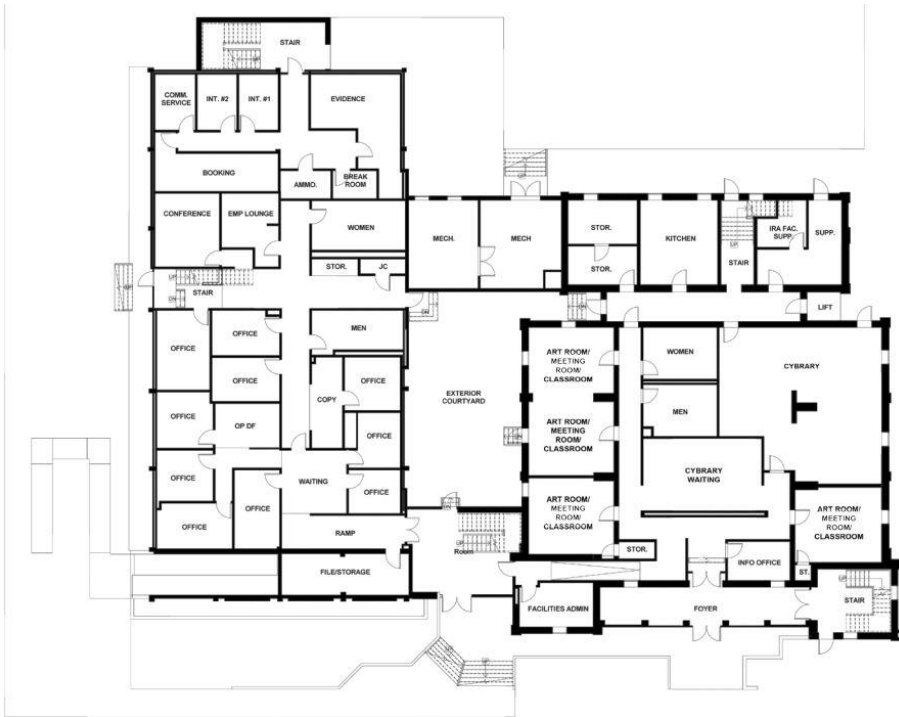
There is currently an automatic fire suppression system installed throughout the building consisting of automatic sprinklers. A fire alarm system is also installed. During the inspection with the Fire Marshal, it was noted that many egress corridors contain stored material which is in violation of the fire code.

Service contracts in place for the Century Center:

- Apple Electronics (fire alarm)
- Champion Control Systems (EMS)
- Clegg's Pest Control (pest control)
- KB Power (generators)
- Kemco (ice machines)



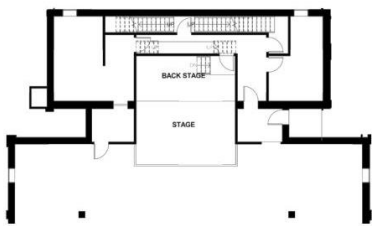
BUILDING SKETCH



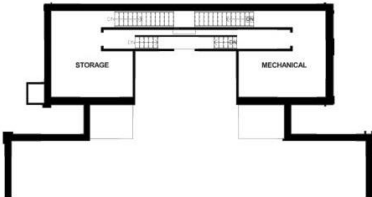
First Floor Plan



Second Floor Plan



Stage



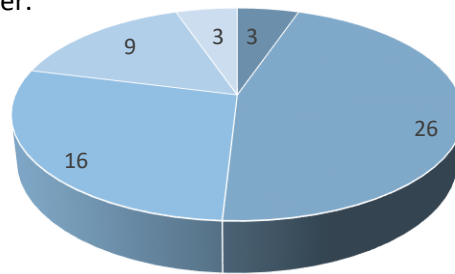
Baptistry



ASSETS

Fifty-seven (57) assets were identified at Century Center.

- 3 Assets in Excellent Condition
- 26 Assets in Good Condition
- 16 Assets in Fair Condition
- 9 Assets in Poor Condition
- 3 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Poor Condition ■ Failing Condition

The following table identifies each asset's location, system, type, and condition:

Building Level	Asset System	Asset Type	Condition
Basement	Mechanical	A/C Unit - Boiler	5
First Floor	Architectural	Ceiling	3
First Floor	Architectural	Wall	3
First Floor	Architectural	Exterior Doors	3
First Floor	Architectural	Ceiling - Rm 12	2
First Floor	Architectural	Flooring	1
First Floor	Electrical	Meter	4
First Floor	Electrical	Panel LA	4
First Floor	Electrical	Panel LB	4
First Floor	Electrical	Panel LE	4
First Floor	Electrical	MDP	4
First Floor	Electrical	Generator	4
First Floor	Electrical	Fountain Meter	4
First Floor	Life Safety	AED in Cybrary	3
First Floor	Life Safety	AED on Programs Side	2
First Floor	Mechanical	Appliance - Refrigerator/ Freezer	5
First Floor	Mechanical	Door - Pneumatic Opener	4
First Floor	Mechanical	Boiler	4
First Floor	Mechanical	A/C Unit - Blower	4
First Floor	Mechanical	A/C Unit - Coil	4
First Floor	Mechanical	A/C Unit - Filter Frame	4
First Floor	Mechanical	A/C Unit - Air Handler #1	3
First Floor	Mechanical	Cold water return pump	3
First Floor	Mechanical	Heating/Hot Water Pump	3
First Floor	Mechanical	Water Heater #2	3
First Floor	Mechanical	Water Heater #1	3



Building Level/Location	Asset System	Asset Type	Condition
First Floor	Mechanical	Appliance - Stove/Griddle	3
First Floor	Mechanical	Appliance - Vent Hood	3
First Floor	Mechanical	A/C Unit - Chiller	2
First Floor	Mechanical	Appliance - Island Electric Range	2
First Floor	Plumbing	Fixture - Cybrary	4
Second Floor	Architectural	Floor - Century Hall	2
Second Floor	Architectural	Windows (Century Hall)	1
Second Floor	Electrical	Panel LC	5
Second Floor	Electrical	Panel LD	4
Second Floor	Fire Protection	Fire Alarm - Century Center	4
Second Floor	Life Safety	AED near Century Hall	1
Second Floor	Plumbing	Fixtures (Water Closet)	4
First Floor and Second Floor	Fire Protection	Fire Extinguishers	4
First Floor and Second Floor	Mechanical	A/C Unit - VAV boxes (Qty 35)	4
First Floor and Second Floor	Mechanical	Elevator	3
First Floor, Second Floor, and Baptistry	Fire Protection	Fire Suppression	4
First Floor, Second Floor, and Baptistry	Life Safety	Egress	2
First Floor, Second Floor, and Baptistry	Mechanical	HVAC Control System	4
Attic	Mechanical	A/C Unit - Blower	4
Attic	Mechanical	A/C Unit - Filter Frame	4
Attic	Mechanical	A/C Unit - Coil	4
Attic	Mechanical	VFD for Air Handler - AHU-2 VFD	4
Attic	Mechanical	VFD for Air Handler - AHU-3 VFD	4
Attic	Mechanical	A/C Unit - AHU -2	3
Attic	Mechanical	A/C Unit - AHU-3	2
Attic	Structural	Facade	2
Roof	Architectural	Roof - Police Station	4
Roof	Architectural	Roof - Century Center	3
Roof	Mechanical	Chiller #1	2
Site	Parking Lot	Parking - Municipal lot at the corner of Weaver St. and N. Greensboro St.	3
Site	Parking Lot	Parking - Police Lot	3



RECOMMENDATIONS AND OPPORTUNITIES

Due to the heavy use of the public spaces, painting and remodeling is recommended. The large windows in the sanctuary are in failing condition and immediate replacement is recommended. The chiller (the largest electricity user in the building) is approximately 20 years old and at the end of its useful life. A new high efficiency chiller is recommended to replace the old within the next 3 years. Modifications to the programming of the EMS system are recommended to further reduce energy consumption. LED lighting should be installed throughout the building.

Security improvements are recommended due to the building being used by both the public and the police. Improved features for accessibility are also recommended to be more accommodating to individuals with disabilities. Currently, there is not adequate or secure parking for the police department; therefore, parking should be reevaluated.

The roof over the police station offers an excellent site for roof-top solar electric generation. Lighting throughout the building should be replaced with LED fixtures.

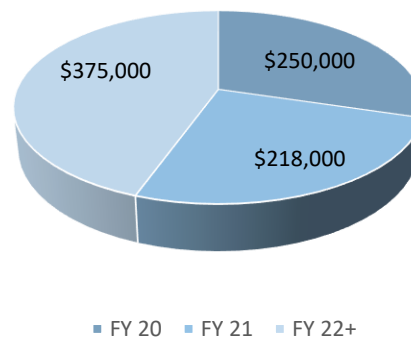
RECOMMENDATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$250,000
2021	\$218,000
2022+	\$375,000



DEFICIENCY LIST AND OPINIONS OF COSTS

Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor	Architectural	Floor/Ceiling/ Cabinetry	Recommend kitchen remodel, existing kitchen has equipment issues and gets heavy use - wear and tear is prevalent	1	\$30,000
First Floor	Architectural	Floor	Exposed subfloor. Recommend repair and replacing VCT.	1	\$4,500
First Floor	Electrical	J-box	There is an open junction box in the parks and rec men's bathroom, probably where a motion sensor was removed. Recommend reinstalling a motion sensor or blanking off junction box.	1	\$25
First Floor	Electrical	Equipment Disconnect	There is no disconnect in sight of the central stove. Recommend installing a disconnect.	1	\$250
First Floor	Electrical	Equipment Disconnect	The dead front interlock is broken on the disconnect for the stove. Recommend repairing or replacing	1	\$750
First Floor	Electrical	Electrical Outlet	There are multiple non-GFCI protected outlets. Recommend installing GFCI protection where required by code.	3	\$1,000
First Floor	Life Safety	Egress	Multiple obstacles - temporary sump pump, bushes, bench - blocking emergency egress path	1	\$5,000
First Floor	Life Safety	Egress	Remove stored material from stairwell.	1	\$0
First Floor	Life Safety	Egress	Remove stored material from hallway.	1	\$0
First Floor	Life Safety	Egress Lighting	Exit signs need bulbs.	2	\$100
First Floor	Life Safety	Egress Signage	Add exit sign.	1	\$350
First Floor	Life Safety	Fire Alarm	Add pull box.	2	\$400
First Floor	Life Safety	Fire Suppression	Sprinkler head above drop ceiling, needs to be lowered.	1	\$350
First Floor	Life Safety	Fire Suppression	Add sprinkler head.	1	\$1,000
First Floor	Life Safety	Fire Suppression	Add Sprinkler head	1	\$1,000



Building Level/Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor	Life Safety	Fire Suppression	Add sprinkler head to bottom of stairwell.	1	\$1,000
First Floor	Mechanical	Range Hood	The hood over the stove in the kitchen is very loose, it appears its supports are failing.	1	\$250
First Floor	Mechanical	AHU 1	Chilled Water Coil is dirty. Recommend cleaning.	1	\$750
Second Floor	Architectural	Windows	Rotting wood throughout window frames. Recommend replacing windows	10	\$150,000
Second Floor	Electrical	Electrical Outlet	Outlets in stage floor are not of a type approved for installation in floors and show signs of physical damage due to this; Recommend replacing with recessed outlet boxes designed for use on stage floors.	2	\$1,250
Second Floor	Electrical	Electrical Outlet	There is a feed in SO cable tapped out of the stage panel which feeds a dimmer pack. Due to the routing and type of cabling this is more suitable for temporary use. Recommend installing a permanent outlet in the vicinity of the dimmer pack in surface mounted conduit or other approved method.	1	\$1,000
Second Floor	Electrical	Electrical Wiring	Breaker trips. Recommend additional circuit to feed microwave.	1	\$2,000
Second Floor	Electrical	Electrical Wiring	Breaker trips. Recommend additional circuit to feed copy machine.	1	\$2,000
Second Floor	Life Safety	Egress	Remove stored material from stairwell.	1	\$0
Second Floor	Life Safety	Egress	Remove stored material from hallway.	1	\$0
Second Floor	Life Safety	Egress	Left exit door panic bar / hardware stuck.	1	\$250
Second Floor	Life Safety	Fire Alarm	Add pull box.	1	\$400
Second Floor	Life Safety	Fire Suppression	No drop ceiling.	1	\$400



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Second Floor	Life Safety	Fire Suppression	Fold down stairs to bell tower need to be fire rated.	1	\$3,000
Second Floor	Life Safety	Fire Suppression	Add Sprinkler head	1	\$1,000
Second Floor	Mechanical	AHU 2	Chilled Water Coil is dirty. Recommend cleaning.	1	\$750
Second Floor	Plumbing	Fixture	Number of fixtures does not meet needs of occupants. Recommend adding toilet fixture.	1	\$8,000
Basement, First Floor, and Second Floor	Architectural	Building Envelope	Multiple penetrations need to be sealed, windows need to be sealed, and weatherization throughout recommended.	1	\$7,500
First Floor and Second Floor	Architectural	Walls	Painting and patching recommended throughout	1	\$35,000
First Floor and Second Floor	Life Safety	Fire Suppression	No sprinkler head in elevator shaft. Add sprinkler head.	1	\$1,000
First Floor and Second Floor	Life Safety	Defibrillator	Change batteries and pads.	4	\$250
Attic	Life Safety	Fire Suppression	Sprinkler head needs 18" of clearance.	1	\$500
Attic	Mechanical	AHU 3	Chilled Water Coil is dirty. Recommend cleaning.	1	\$750
Roof	Mechanical	Chiller	Chiller is towards the end of its useful life and maintenance costs are increasing. Recommend replacing.	1	\$200,000
Site	Electrical	Generator	The lower filter on the generator transfer switch is loose. Recommend repairing/replacing	1	\$750
Site	Electrical	Raceway	There is a significant amount of rust on the main feeder conduits going into the basement. Recommend cleaning and painting to prevent further damage.	1	\$150



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Site	Life Safety	Fire Suppressio n	Sprinkler Riser Location signage needed on door.	1	\$50
Site	Life Safety	Fire Suppressio n	FDC is blocked by vegetation.	1	\$0
Site	Electrical	Fountain	The fountain has the following issues: 1) Incorrect types of wiring and junction boxes (not suitable for use in corrosive environments). 2) Incorrect wire routing (subject to physical damage). 3) Incorrect bonding of equipment and other piping systems Recommend further assessment/repair/rewiring/replace ment of pool equipment and associated wiring.	1	\$4,500
Site	Electrical	Feeder	There is a sump pump which drains the stairwell on the weaver street side of the building which is fed with a buried extension cord. Recommend adding a permanent outlet for this sump pump.		\$1,250
			Total Opinion of Cost		\$468,475



PHOTOGRAPHS



Elevator



Elevator



Automatic Handicap Door



Century Hall - Hardwood Flooring



Laminate Flooring



Laminate Flooring



Water Closet (fixtures)



Water Closet (fixtures)



Kitchen





Wall Repair



Attic - Exterior Wall



Damaged Ceiling Tiles



Fire Alarm



Hot Water Pump for HVAC



1st Floor Boiler for HVAC



1st Floor Air Handler



Chiller for HVAC



*Statue, Fountain, and
Electrical Panel*



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COMMUNITY SCHOOL

FACILITY DESCRIPTION



Address: 102 Hargraves Street

Current Facility Use: Early Education

Land Area: 2.29 acres

Gross Building Area: 3,453

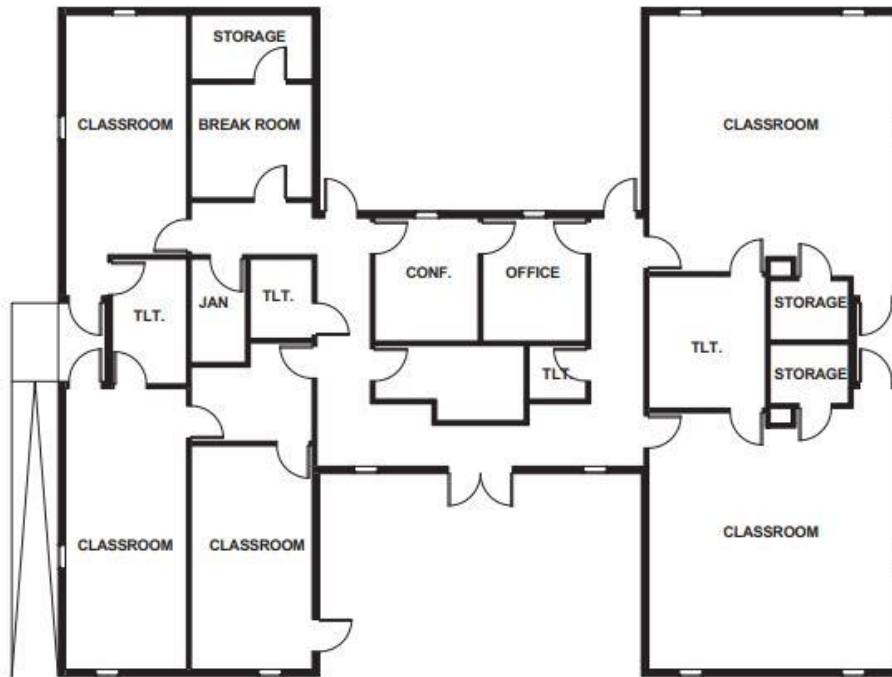
Year Built: 1985

The Community school is a single story modular classroom building and currently under lease to the Community School for People under Six. Under the terms of the lease, the Community School for People Under Six pays all utilities for the building, provides all janitorial services, routine maintenance, and repairs for both the interior and exterior of the building. The Town provides all routine grounds maintenance.

The Community School's assets have not been evaluated in this Facility Condition Assessment due to the terms and length of the current lease. The facility will be evaluated upon termination of the lease. A copy of the lease is included as Appendix B.



BUILDING SKETCH



First Floor Plan



FIRE STATION 1

FACILITY DESCRIPTION



Address: 301 West Main Street

Land Area: 3.96 acres (includes Town Hall and Town Commons)

Current Facility Use: Fire Station

Gross Building Area: 9,710

Year Built: 1922, 1981

Fire Station 1 is located adjacent to Town Hall at 301 West Main Street. The Fire Department moved to this location in the early 1960's. The building was originally the grade school's cafetorium and the stage can still be seen in what is now the kitchen. A major renovation and expansion began in 1979 which included a new 6-bay apparatus area. Construction was completed in 1981.

Site Improvements

The site has three main entrances and includes two driveways for the drive-through apparatus bay. The driveways are in poor condition. Parking and landscaping is shared with Town Hall. A large cell tower dominates the courtyard between Fire Station I and Town Hall.



Architectural and Structural Systems

Features of the old school are still apparent in the old part of Fire Station 1. The structural components to the old section of the building are not visible. The apparatus bay is supported by metal bar joists and has metal roof decking. The roof for Fire Station 11 is a built-up type of flat roof.

Electrical, Mechanical, and Plumbing Systems

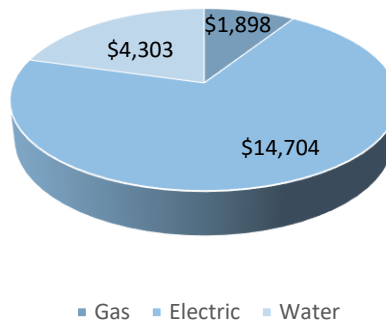
The HVAC system is a forced air ducted system consisting of packaged and split system heat pumps. The apparatus bay is heated with infrared gas heat. There is currently no dehumidification in the building. The plumbing system is aging, but no deficiencies were noted.

Energy Consumption:

The total annual energy usage per square foot of Fire Station 1 is approximately 68,000 btu/sf which is below the national average of 90,000 btu/sf for Public Order and Safety Facilities. (Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey).

Summary of FY 2019 Annual Utility Costs:

- Electric - \$14,704
- Gas - \$1,898
- Water - \$4,303



The average monthly summer gas bill is \$30/month and the average monthly winter gas bill is \$350/month. Electric bills do not vary considerably by season.

Interior Elements

Interior elements consist of gypsum board walls and ceiling and carpeted floors. Ceiling mounted fluorescent lighting can be found throughout the building. The lighting appears inadequate in the main hallway.

Life Safety and Fire Protection

The building is fully sprinkled for fire suppression. A fire alarm system is also installed.

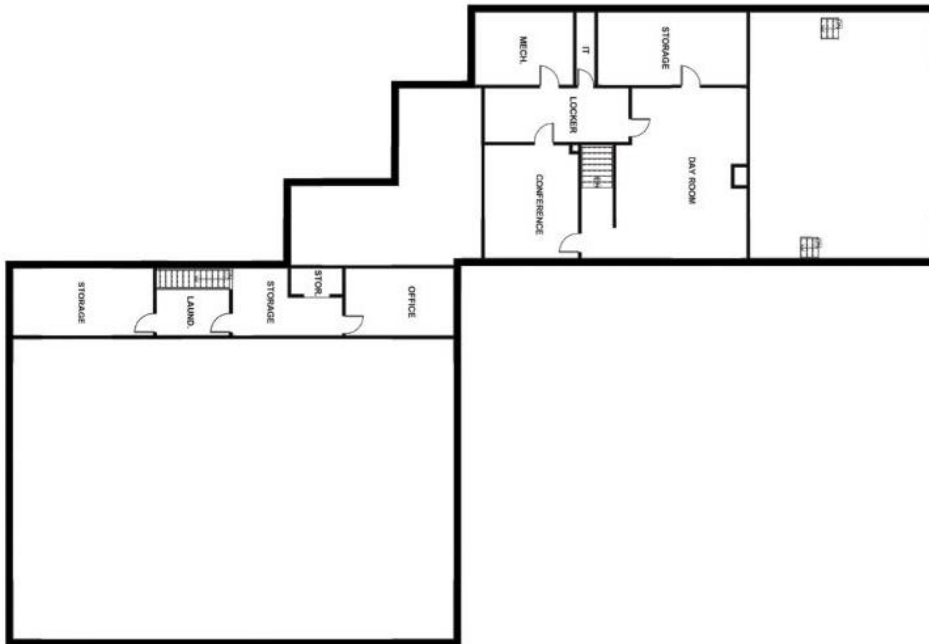


Service contracts in place for Fire Station 1:

- Air Cleaning Specialist (Plymovent exhaust system)
- Apple Electronics (fire alarm)
- ASSA ABLOY (Bay Doors)
- Clegg's Pest Control (pest control)
- Daulton HVAC (air conditioning)
- KB Power (generators)
- Kemco (ice machines)

BUILDING SKETCH

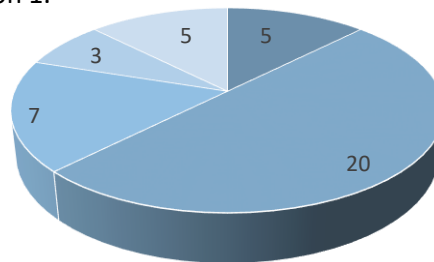




ASSETS

Forty (40) assets were identified at Fire Station 1.

- 5 Assets in Excellent Condition
- 20 Assets in Good Condition
- 7 Assets in Fair Condition
- 3 Assets in Poor Condition
- 5 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Poor Condition ■ Failing Condition

The following table identifies each asset's location, system, type, and condition:



Building Level/Location	Asset System	Asset Type	Condition
First Floor	Architectural	Door	1
First Floor	Electrical	Unmarked panel	5
First Floor	Electrical	Meter Bank	4
First Floor	Electrical	Generator transfer switch	4
First Floor	Electrical	Meter	4
First Floor	Electrical	Panel P4	4
First Floor	Electrical	Panel P3	4
First Floor	Electrical	Generator	3
First Floor	Electrical	Pane P1 MDP	3
First Floor	Electrical	Panel P2	3
First Floor	Electrical	Unnamed Distribution Panel	2
First Floor	Fire Protection	Fire Alarm System	4
First Floor	Life safety	Eye Wash Station	4
First Floor	Mechanical	A/C Unit - AHU	5
First Floor	Mechanical	Exhaust Fans	5
First Floor	Mechanical	Exhaust System for Vehicles	4
First Floor	Mechanical	Electric water Heater	4
First Floor	Mechanical	Infrared Heater	4
First Floor	Plumbing	Lavatory	4
First Floor	Plumbing	Fixture (Unisex Shower)	4
First Floor	Fire Protection	Fire suppression	4
Second Floor	Electrical	Unlabeled panel	3
Second Floor	Electrical	Unlabeled Panel	2
Second Floor	Mechanical	Vehicle Exhaust Extraction	5
Second Floor	Mechanical	Water Heater	4
Second Floor	Mechanical	Air compressor	4
First Floor and Second Floor	Fire Protection	Fire Extinguishers	4
First Floor and Second Floor	Life Safety	Egress	4
Roof	Architectural	Roof - Administration	4
Roof	Architectural	Roof - Bay	2
Roof	Mechanical	A/C Unit - PKG	3
Site	Mechanical	A/C Unit - Condenser	5
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - AHU	4
Site	Mechanical	A/C Unit - Condenser	3
Site	Mechanical	A/C Unit - AHU	3
Site	Mechanical	A/C Unit - Condenser	1
Site	Mechanical	A/C Unit - AHU	1
Site	Mechanical	A/C Unit - Condenser	1
Site	Mechanical	A/C Unit - AHU	1



RECOMMENDATIONS AND OPPORTUNITIES

The living quarters of Fire Station 1 are overdue for remodeling, this includes the bunk rooms and the kitchen. The roof over the apparatus bay has a history of leaking and likely needs to be replaced. There have been air quality issues in the past which may be the result of a poorly designed air conditioning system and associated controls. Dehumidification is recommended. The concrete driveway in front of the apparatus bay has been cut and patched to the point where replacement is recommended. Lighting should be replaced with LED fixtures. The flat roof above the apparatus bay offers an excellent site for roof top solar.

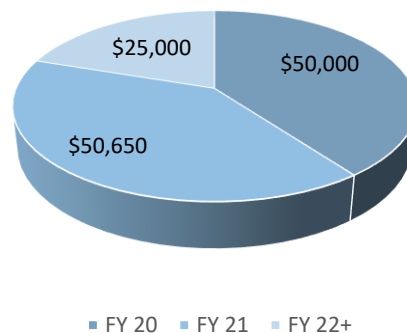
RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$50,000
2021	\$50,650
2022+	\$25,000



The following table lists recommended repairs for renovation in fiscal year 2020 and fiscal year 2021:



DECIFICIENCY LIST AND OPINION OF COSTS

Building Level/ Location	Asset System	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
First Floor	Architectural	Floor	Existing Carpet is old and mismatched. Recommend replacing.	1	\$20,000
First Floor	Architectural	Walls	Bay Walls are peeling. Recommend painting.	1	\$12,000
First Floor	Architectural	Cabinets	Residential cabinets do not meet the needs of the current use. Recommend replacing cabinets with commercial grade.	1	\$10,000
First Floor	Architectural	Floor	VCT floor is worn and shows signs of damage. Recommend replacement.	1	\$4,000
First Floor	Architectural	Door	Door is rusted and sticks. Recommend replacing door and fixing door awning.	1	\$4,000
First Floor	Electrical	J-box	There is an open junction box in the shift office where it looks like a smoke detector was once present. Recommend capping off junction box if smoke detector is no longer needed.	1	\$25
First Floor	Electrical	Electrical Panels	There are multiple electrical panels in the network room without required working space. Recommend rearranging equipment to provide required working space.	3	\$0
First Floor	Electrical	Electrical Outlet	There are multiple non GFCI protected receptacles in the vehicle bays and nearby areas, per NEC 511.12, all 120v receptacles in garages that are in areas where electrical diagnostic equipment, electrical hand tools, or portable lighting will be used must be GFCI protected. Recommend installing GFCI protection where needed.	12	\$1,000



Building Level/ Location	Asset System	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
First Floor	Electrical	Electrical Outlet	Multiple countertop outlets in the kitchen are not GFCI protected. Recommend installing GFCI protection.	6	\$850
First Floor	Mechanical	Door Controls	One of the vehicle bay door controllers is taped off and marked non-functional. Recommend repairing.	1	\$1,200
Second Floor	Electrical	Raceway	Many unsupported or insufficiently supported boxes and conduit runs in this area. Recommend supporting where required.	12	\$350
First Floor and Second Floor	Architectural	Building Envelope	Multiple penetrations need to be sealed, windows need to be sealed, and weatherization throughout recommended.	1	\$1,000
First Floor and Second Floor	Electrical	Electrical panels	Electrical Panels need to be properly labeled. Recommend creating a riser diagram and tracing circuits where necessary.	4	\$3,500
First Floor and Second Floor	Electrical	Generator	The generator disconnect switch was in the off position at time of survey. This disables the automatic function of the generator, creating a variety of potential safety hazards. It also may affect the proper automatic exercise function. Recommend determining why the disconnect switch was in the off position and fixing the problem.	1	\$500
First Floor	Electrical	Equipment Disconnect	There is no disconnecting means for the hard wired ice maker in the kitchen. Recommend installing a disconnect.	1	\$350
Second Floor	Electrical	Lighting	There is an emergency light with broken heads labeled "out of service." Recommend repairing or replacing.	1	\$150
Second Floor	Electrical	Conductor	There is a cable that is not properly terminated, likely an old water heater feed. Recommend boxing up properly or demoing.	1	\$100



Building Level/ Location	Asset System	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
Roof	Architectural	Roof	Roof leaks. Recommend repair or replacement.	1	\$20,000
Site	Architectural	Driveway	Driveway is broken into numerous sections. Recommend re-pouring concrete.	1	\$18,000
Site	Electrical	Exterior lighting	The exterior halogen flood fixtures on the rear of the vehicle bay did not function, at least one was missing a bulb. Recommend repairing/replacing.	2	\$100
Site	Electrical	Raceway	There is a LB conduit fitting with a loose/damaged cover behind an A/C unit. Recommend repairing/ replacing.	1	\$350
Site	Electrical	Exterior Lighting	There is an exterior vapor tight light fixture in the awning over the side door missing a lense. Recommend replacing lens.	1	\$75
Site	Electrical	Electrical Panels	There is a missing KO seal in the unlabeled panel in the courtyard. Recommend installing a KO seal.	1	\$25
Site	Electrical	Exterior lighting	The exterior halogen flood fixtures on the rear of the vehicle bay did not function, at least one was missing a bulb. Recommend repairing/replacing.	2	\$100
Site	Electrical	Exterior Lighting	Photocell on wall pack light near office entrance has failed (light is on during the day). Recommend replacing/repairing.	1	\$175
Site	Electrical	Generator	The generator exhaust is located closer than 5' to an operable window, this creates a potential carbon monoxide hazard. Recommend replacing window with a non-opening window or relocating generator.	1	\$150



Building Level/ Location	Asset Type	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
Site	Electrical	Electrical Service	Air conditioners are located in the working space required by NEC and Duke Power around the CT cabinet and service. Recommend relocating A/C units to provide clearance.	2	\$1,200
Site	Electrical	Generator	The generator has a significant amount of rust on the outer enclosure. Recommend painting.	1	\$600
Site	Electrical	Electrical Panels	There is a small abandoned electrical panel fed out of an unlabeled panel with several abandoned outlets below it. Recommend fully disconnecting and removing.	1	\$500
Site	Electrical	Raceway	There is a LB conduit fitting with a loose/damaged cover behind an A/C unit. Recommend repairing/ replacing.	1	\$350
			Total Opinion of Cost		\$100,650



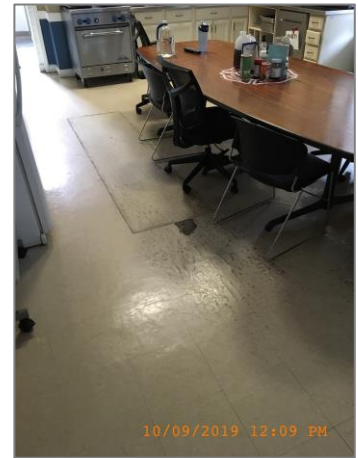
PHOTOGRAPHS



Day Room Carpet



Carpeting in Hallway



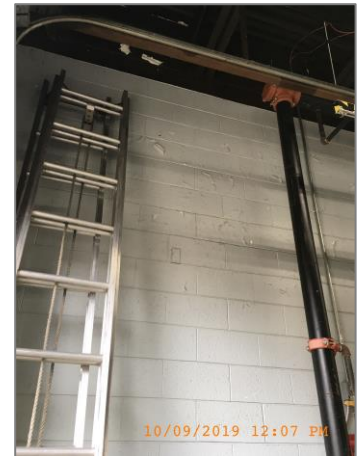
Kitchen



Interior Stairs



Interior Bay Wall



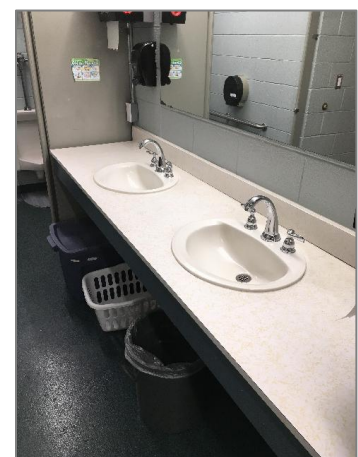
Interior Bay Wall



Kitchen

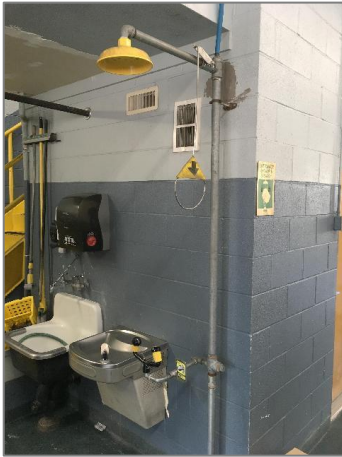


Locker Room



Locker Room

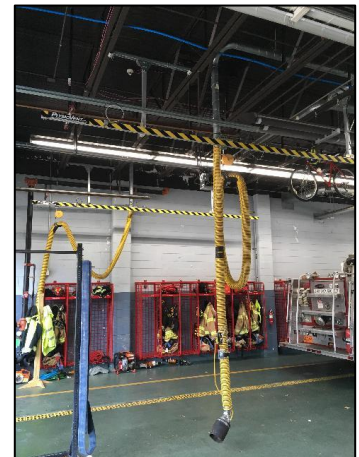




Wash Station



Exhaust fan



Exhaust Ventilation System



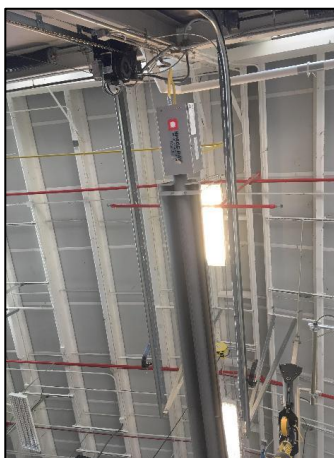
Fire Alarm System



Infrared Heaters



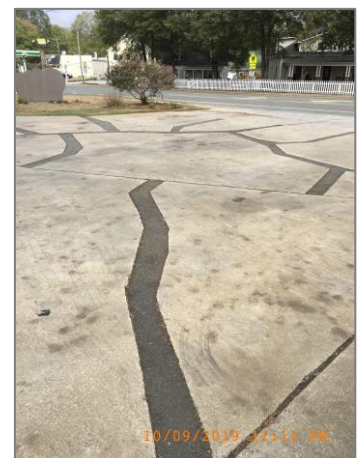
Exterior Door



Bay Door



Driveway



Driveway



FIRE STATION 2

FACILITY DESCRIPTION



Address: 1411 Homestead Road

Land Area: 2.1 Acres

Current Facility Use: Fire Station

Gross Building Area: 8,550

Year Built: 2010

Fire Station 2 is the Town of Carrboro's newest facility, opening on September 4th, 2010. It is located off of Homestead Road in the northern part of town.

Site Improvements

The site at Fire Station 2 includes two driveways for the Apparatus Bay, one parking lot, two rain gardens, and a covered back porch with picnic tables. There is also a large concrete test pit used for testing water pump equipment. There are several large trees featured on the property including a 34 inch American Holly which is the oldest holly tree in Carrboro (Source: *2019 Town of Carrboro Tree Inventory*).



Architectural and Structural Systems

Fire Station 2 is a pre-engineered metal building. The structure is clad in brick and concrete masonry veneer with painted aluminum storefront fenestration components.



Electrical, Mechanical, and Plumbing Systems

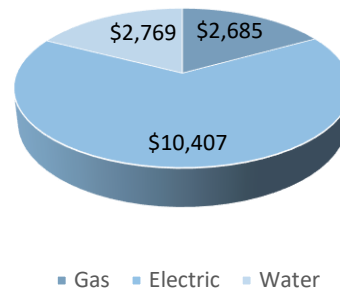
The building is heated and cooled by a series of forced air split system air condition systems with gas heat. The plumbing system includes modern energy and water saving technologies including a rainwater reclamation system to flush toilets, waterless urinals, and solar hot water heaters.

Energy Consumption:

The total annual energy usage per square foot of Fire Station I is approximately 58,000 btu/sf which is below the national average of 90,000 btu/sf for Public Order and Safety Facilities. (Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey)

Summary of FY 2019 Annual Utility Costs:

- Electric - \$10,407
- Gas - \$2,685
- Water - \$2,769



The average monthly summer gas bill is \$50/month and the average monthly winter gas bill is \$450/month. The electric bill does not vary considerably per season.

Interior Elements

Interior construction consists primarily of lay-in acoustical tile ceiling, non-load bearing gypsum wall board, and vinyl tile flooring. The lighting appears to be LED.

Life Safety and Fire Protection

The building is fully sprinkled for fire suppression. The kitchen has a commercial hood with a wet-chemical fire suppression system. A fire alarm system is also installed.

Service contracts in place for Fire Station 2:

- Air Cleaning Specialist (Plymovent exhaust system)
- Apple Electronics (fire alarm)
- ASSA ABLOY (Bay Doors)
- Clegg's Pest Control (pest control)
- Daulton HVAC (air conditioning)
- KB Power (generators)
- Kemco (ice machines)



BUILDING SKETCH



First Floor Plan



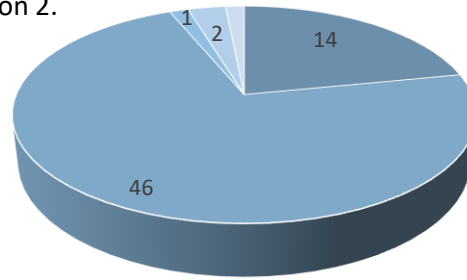
Mezzanine



ASSETS

Sixty-four (64) assets were identified at Fire Station 2.

- 14 Assets in Excellent Condition
- 46 Assets in Good Condition
- 1 Assets in Fair Condition
- 2 Assets in Poor Condition
- 1 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Poor Condition ■ Failing Condition

The following table lists identifies each asset's location, system, type, and condition:

Building Level/ Location	Asset System	Asset Type	Condition
First Floor	Architectural	Floor	5
First Floor	Architectural	Ceiling	4
First Floor	Architectural	Windows	4
First Floor	Architectural	Doors - Interior	4
First Floor	Architectural	Doors - Exterior	5
First Floor	Architectural	Walls - Interior	4
First Floor	Electrical	Lighting	4
First Floor	Electrical	Panel H	5
First Floor	Electrical	Meter	5
First Floor	Electrical	Generator 125kw	5
First Floor	Electrical	Panel NP	5
First Floor	Electrical	Panel MP	5
First Floor	Electrical	Panel A	5
First Floor	Electrical	Panel A1	5
First Floor	Electrical	Panel LP	5
First Floor	Electrical	Automatic Transfer Switch	5
First Floor	Fire Protection	Fire Alarm	4
First Floor	Fire Protection	Fire Extinguishers	4
First Floor	Fire Protection	Fire Suppression	4
First Floor	Life Safety	Eye Wash Station	4



Building Level/ Location	Asset System	Asset Type	Condition
First Floor	Life Safety	Signage - Egress	4
First Floor	Mechanical	Ice Maker	4
First Floor	Mechanical	Refrigerator	4
First Floor	Mechanical	Dish washer	4
First Floor	Mechanical	Gas range	4
First Floor	Mechanical	Range hood	5
First Floor	Mechanical	Equipment	3
First Floor	Mechanical	Washing machine	2
First Floor	Mechanical	Air quality	2
First Floor	Mechanical	Air Compressor	4
First Floor	Mechanical	Fans - Exhaust Removal System	4
First Floor	Mechanical	Bay Exhaust Fan	4
First Floor	Mechanical	Infrared Heater in Bay	5
First Floor	Mechanical	Garage Door Openers	4
First Floor	Plumbing	Fixture - Restroom 1	4
First Floor	Plumbing	Fixture - Water Fountains	4
First Floor	Plumbing	Fixture	4
First Floor	Plumbing	Fixture - Restroom 2	4
First Floor	Plumbing	Fixture - Restroom 3	4
First Floor	Plumbing	Fixture - Restroom 4	4
First Floor	Plumbing	Water Reclamation System	1
First Floor	Plumbing	Washing machine	4
First Floor	Structural	Walls - Exterior	5
Second Floor	Mechanical	Water Heater (Solar)	4
Second Floor	Mechanical	Vehicle Exhaust Extraction	4
Roof	Architectural	Roof	4
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4



Building Level/ Location	Asset System	Asset Type	Condition
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4
Attic	Mechanical	A/C Unit - AHU	4
Site	Fuel station	Fuel Pump	4
Site	Fuel Station	Fuel tank	4
Site	Landscaping	Rain Garden	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit - Condenser	4

RECOMMENDATIONS AND OPPORTUNITIES

Fire Station 2 is in good overall condition. It is recommended that building components be monitored so that degradation does not occur. Currently, the water reclamation system is down for maintenance and needs to be repaired and reconnected. The concrete test pit is leaking and needs to be repaired or replaced.

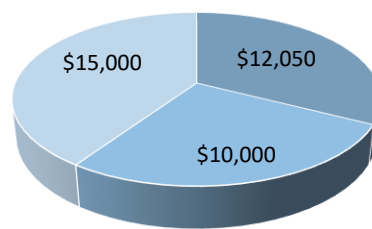
RECOMMENDATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$12,050
2021	\$10,000
2022+	\$15,000



■ FY 20 ■ FY 21 ■ FY 22+



DECIFICIENCY LIST AND OPINION OF COSTS

Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor	Life Safety	Sensor	Open junction box missing smoke or CO detector at bottom of stairs in vehicle bays There is a low voltage relay tied into this junction which likely indicates that it is tied into another system such as automatic ventilation. Recommended replacement of missing sensor.	1	\$800
First Floor	Mechanical	Washing Machine	Defective. Recommend replacing.	1	\$1,000
First Floor	Plumbing	Water Re-clamation System	System is disconnected, repair and reconnection needed.	1	\$5,000
Site	Electrical	Panel	The labels for panel H (located outside near A/C condensers) are mostly written on electrical tape and are not very permanent. Recommend installing more permanent labels.	1	\$250
Site	Plumbing	Test Pit	Test pit does not hold water, repair needed.	1	\$15,000
			Total Opinion of Cost		\$22,050



PHOTOGRAPHS



Entry



Interior Door



Ceiling Tiles



Kitchen - Range



Kitchen – Ice Machine



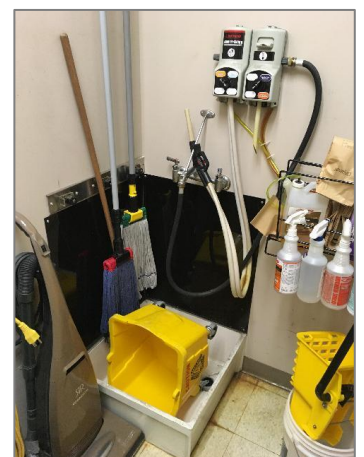
Kitchen – Refrigerator/Freezer



Water Fountains



Laundry Room

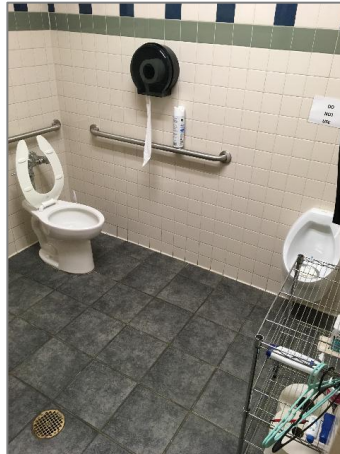


Janitorial Wash Basin

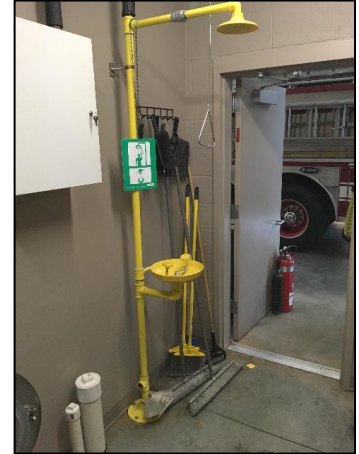




Water Closet



Water Closet



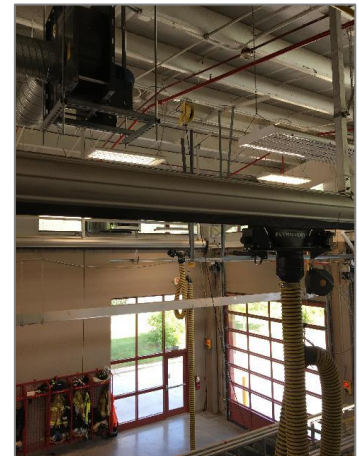
Wash Station



Fire Alarm



Solar Hot Water Heater



Exhaust Extraction System



Bay Door Opener



Fuel Station and Pump



Test Pit



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PUBLIC WORKS

FACILITY DESCRIPTION



Address: 100 Public Works Drive

Land Area: 3.75 acres (Main Yard)

Current Facility Use: Public Works

Gross Building Area: 6,004 (main building)

10,498 (storage and support buildings)

Year Built: 1970's

The Public Works Facility consists of a central building and eleven auxiliary support structures. The main building, constructed in the 1970s, is generally separated into two spaces: an office environment with a second floor serving as a storage mezzanine, and a large garage side for vehicle maintenance.

Public Works has the following six Divisions operating out of this location:

- Central Services
- Fleet Maintenance
- Landscaping & Grounds
- Streets Maintenance
- Solid Waste
- Stormwater

In 2018 the old paint bay in the rear of the building was renovated into four offices and a conference room.

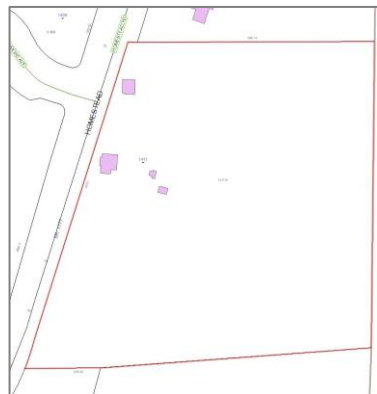


The Public Works Department has largely outgrown the Public Works Facility.

Site Improvements

The site serves many purposes for staging and storing equipment. Yard space and storage is limited. Temporary structures such as sheds and carports are being utilized in lieu of permanent facilities. The facility houses underground fueling tanks, salt and sand stockpiles, leaf compost, trash trucks, used and new oil, and other hazardous materials used in the daily operations of the Public Works Divisions.

There is a vehicle wash station on the south side of the facility which is utilized by Public Works and the Police Department. Leaf mulch is accessible to the public during normal operating hours. Much of the site is paved with asphalt.



History of Flooding:

The site is located within the Jordan Lake Water Supply Watershed and is bordered on two sides by jurisdictional waters – an unnamed Morgan Creek tributary on the east and Morgan Creek itself to the south. Approximately 70% of the site is within the 100 year flood plain.

Public Works experienced the most extensive flooding in recent memory during Hurricane Florence. This storm was followed by two additional flooding events that resulted in additional damages, loss of equipment, and loss of facility function during the 2018 calendar year. The flood elevation during Hurricane Florence exceeded the mapped 500 year elevation, making the only pedestrian and vehicular egress impassable and cutting off access to emergency response staff and equipment as well as the fueling station for Fire and Police vehicles. Public Works staff had to be evacuated by cutting a hole in the fence and walking up the embankment for NC HWY 54. While no leak was detected, flooding triggered an alarm detecting interstitial moisture in the underground fuel (diesel and gas) tanks. Significant stream bank erosion has occurred over time, with a large area of bank collapsing during Florence. This situation poses a considerable threat to the two 10,000 gallon underground fuel storage tanks immediately adjacent to this unstable stream bank for future storms, and will require an engineered stream restoration to bring the stream back to pre-storm conditions. There are downstream areas of concern for health, safety, and environmental impact from a potential release of oil, fuel, salt, etc. from the facility during a flooding event. Due to the potential adverse impacts as a plausible result of future flooding, the Town of Carrboro is seeking funding to assist in relocating the Public Works Facility out of the current precarious location. Current estimates indicate that the cost to recover the facility to Hurricane Florence pre-storm condition exceeds insurable claims by \$450,000. This amount includes equipment loss, damage to support buildings and equipment, and stream restoration.

Architectural and Structural Systems

The main building is a pre-engineered metal building. There are some signs of rust around the bottom of the metal walls but the building is in overall good condition structurally. The roof is metal and appears to be in good condition.



Electrical, Mechanical, and Plumbing Systems

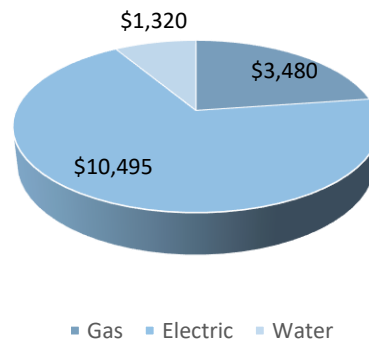
The building is served by two electrical meters. The electrical system is dated and the panels are overloaded. The plumbing system is aging and the fixtures are in poor condition. The HVAC system consists of split system air conditioners with gas heat. The maintenance bay does not have air conditioning and is heated with a single furnace.

Energy Consumption:

The total annual energy usage per square foot of Public Works is approximately 58,000 btu/sf which is below the national average of 90,000 btu/sf for Public Order and Safety Facilities. (Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey)

Summary of FY 2019 Annual Utility Costs:

- Electric - \$10,495
- Gas - \$3,480 (includes generator)
- Water - \$1,320



The average monthly summer gas bill is \$100/month and the average monthly winter gas bill is \$800/month. The electric bill does not vary considerably per season.

Interior Elements

The floor is a concrete slab with various coverings including vinyl tile and carpet. The walls are a combination of gypsum wall board and wood paneling. The ceiling is primarily made up of gypsum board with the exception of the newly renovated area which has a lay-in acoustical ceiling.

Life Safety and Fire Protection

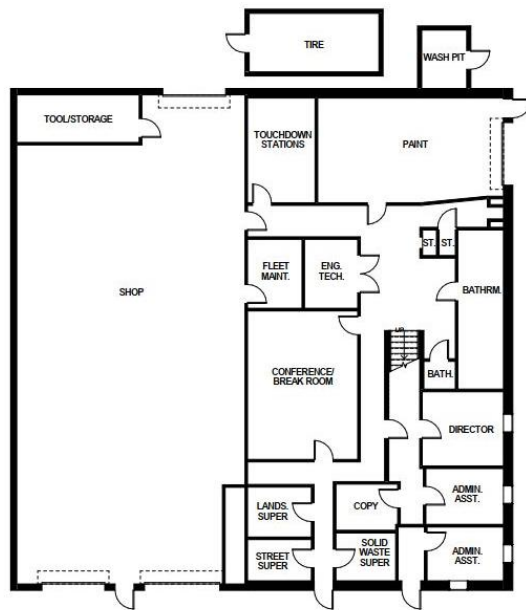
There is currently no fire suppression installed. A fire alarm system with smoke detection is installed.

Service contracts in place for Public Works:

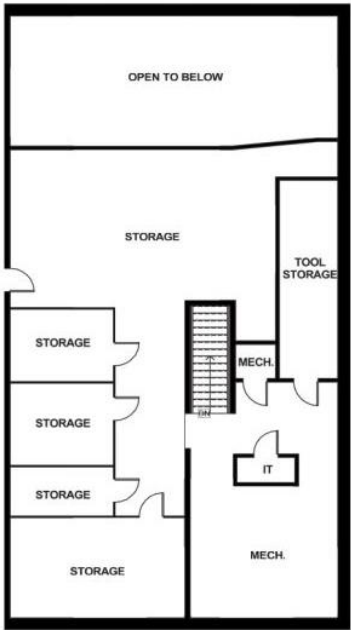
- Apple Electronics (Fire Alarm)
- Clegg's Pest Control,
- Daulton HVAC (air conditioning)
- Guardian (fuel tanks and pumps)
- KB Power (generators)
- Kemco (ice machines)



BUILDING SKETCH

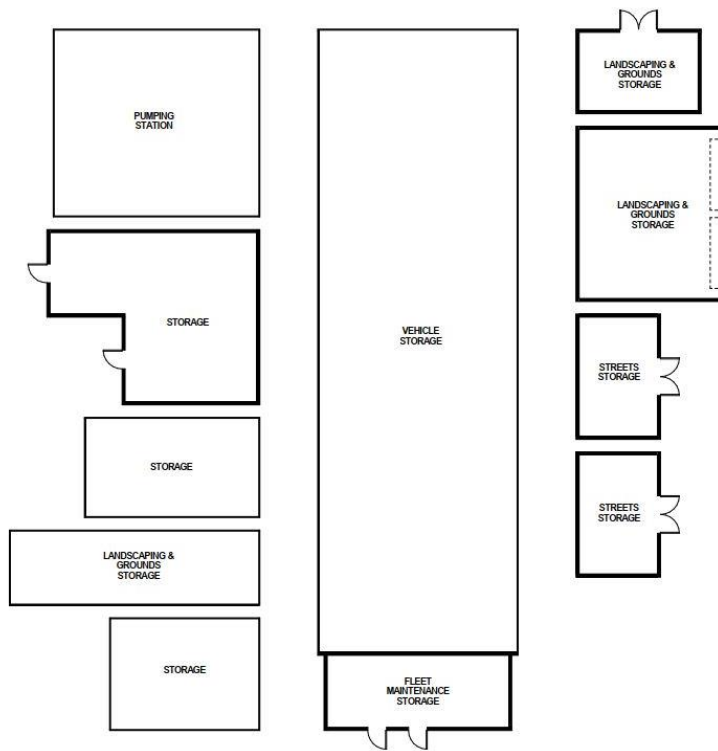


First Floor Plan



Attic



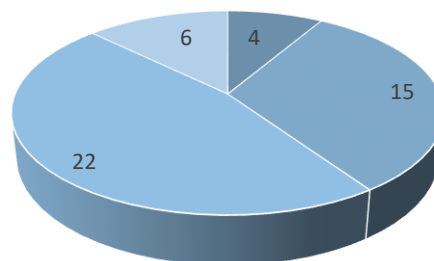


Exterior

ASSETS

Forty-seven (47) assets were identified at Public Works.

- 4 Assets in Excellent Condition
- 15 Assets in Good Condition
- 22 Assets in Fair Condition
- 6 Assets in Poor Condition
- 0 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Poor Condition

The following table identifies each asset's location, system, type, and condition:



Building Level/ Location	Asset System	Asset Type	Condition
First Floor	Architectural	Building Envelope - Walls	3
First Floor	Electrical	Panel - Conference Rm	4
First Floor	Electrical	Panel - Hallway	3
First Floor	Fire Protection	Fire Alarm	4
First Floor	Fire Protection	Fire Extinguishers	4
First Floor	Life Safety	Egress	4
First Floor	Mechanical	Ice machine	3
First Floor	Plumbing	Water Closet #1	2
First Floor	Plumbing	Water Closet #2	2
Attic	Electrical	Panel B1	5
Attic	Electrical	Panel A1-B	5
Attic	Mechanical	A/C Unit - AHU	3
Attic	Mechanical	A/C Unit - AHU	3
Roof	Architectural	Roof	3
Site	Electrical	Panel - Fleet Shop	4
Site	Electrical	Generator - Transfer Switch	3
Site	Electrical	Generator	3
Site	Fuel Station	Fuel Station Leak detection	4
Site	Fuel Station	Storage Unit - Fuel Tanks	3
Site	Mechanical	Vehicle Lift	4
Site	Mechanical	Vehicle Lift	4
Site	Mechanical	Garage Door Opener	4
Site	Mechanical	Eye Wash	4
Site	Mechanical	A/C Unit - Port-A-Cool	4
Site	Mechanical	Air Compressor	4
Site	Mechanical	Car Wash System	4
Site	Mechanical	Street Sign Squeeze Roll	4
Site	Mechanical	Car Vacuum	3
Site	Mechanical	A/C Unit - Condenser	3



Building Level/ Location	Asset System	Asset Type	Condition
Site	Mechanical	A/C Unit - Condenser	3
Site	Mechanical	A/C Unit - Port-A-Cool	3
Site	Mechanical	Fuel Pump	3
Site	Mechanical	Fuel Tank	3
Site	Mechanical	Car Wash/Oil Separator	3
Site	Mechanical	Hydraulic Pump for Tools	3
Site	Storage Building	Storage Unit - Fleet Maint. 2	5
Site	Storage Building	Storage Unit - L & G 1	5
Site	Storage Building	Storage Unit - Equipment 1	4
Site	Storage Building	Storage Unit - Equipment 2	3
Site	Storage Building	Storage Unit - L & G 2	3
Site	Storage Building	Storage Unit - L & G Shed 1	3
Site	Storage Building	Storage Unit - Sign Shop	3
Site	Storage Building	Storage Unit - Streets Maint. 1	3
Site	Storage Building	Storage Unit - Fleet Maint. 2	2
Site	Storage Building	Storage Unit - L & G Shed 2	2
Site	Storage Building	Storage Unit - Streets Maint. 2	2
Site	Parking Lot	Parking	2

RECOMMENDATIONS AND OPPORTUNITIES

The Public Works facility should be reevaluated so as to use the limited space more effectively. The asphalt parking lot is in poor condition and resurfacing is recommended in the near future. The restrooms and breakroom should be remodeled to meet current standards and accommodate the needs of the department. Currently the mechanics perform a lot of work in front of the Fleet Maintenance Bay, open to the elements, it is recommended that an open air awning or port be installed in front of the bay to provide a better working environment for the mechanics. The vehicle wash station does not currently comply with OWASA standards and needs to be modified. Various modifications to structures and storage should be considered due to the history of flooding.



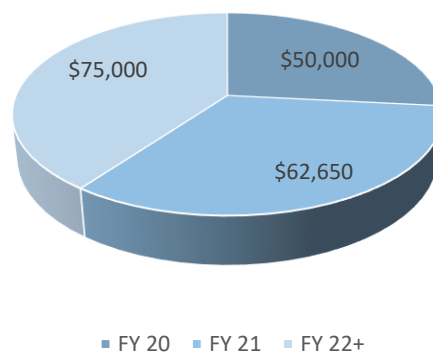
RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$50,000
2021	\$62,650
2022+	\$75,000



DECIFICIENCY LIST AND OPINION OF COSTS

Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor	Architectural	Walls/Floor/ Lighting	Recommend remodel to meet current office space standards.	1	\$3,000
First Floor	Architectural	Floor	Floor has deteriorated. Recommend replacing.	1	\$8,000
First Floor	Electrical	J-box	Multiple overloaded junction boxes in the garage. Recommend installing extension rings where needed.	1	\$1,200
First Floor	Electrical	Raceway	Incorrectly supported MC cable feeding light fixtures in garage, zip tied to existing EMT. Recommend re-supporting MC cable in a code compliant way.	1	\$1,200
First Floor	Electrical	Panel	Panel A is a 3 wire panel, and should be 4.	1	\$2,500
First Floor	Electrical	Panel	Panel A1 is a 3 wire panel and should be 4.	1	\$2,500
First Floor	Plumbing	Sink	No sink in break room, functionality can be improved greatly by adjusting wall and adding sink. Recommend remodeling.	1	\$15,000
First Floor	Plumbing	Fixtures/ Partitions	Fixtures do not work properly, space does not meet the needs of occupancy with lockers. Recommend renovation and remodel.	1	\$10,000
Second Floor	Electrical	Raceway	Incorrectly supported Cat5 / Cat6 cabling in attic (zip tied to existing EMT). Recommend re-securing in a code compliant manner	1	\$1,200
Second Floor	Electrical	J-box	Many unsupported junction boxes and insufficiently supported conduit runs in attic. Recommend securing all boxes and conduit	1	\$750



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Second Floor	Electrical	Raceway	Exposed wiring coming out of conduit in attic near HVAC units. Recommend boxing wiring up or demoing.	1	\$750
Site	Architectural	Driveway	Driveway is used as staging area and work area, currently sun and rain cause hardship for mechanics. Recommend installing carport structure.	1	\$15,000
Site	Electrical	Panel	While in general panel labeling is much better than at other properties surveyed there are still some missing and/or inaccurate labels. Recommend verifying all labeling and mapping missing circuit labels.	1	\$750
Site	Electrical	Raceway	There is damaged conduit at the street division storage sheds. It appears that the shed was moved slightly, breaking the conduit that fed into and out of it, we were unable to determine the full extent of the damage due to lack of access. Recommend further investigation and repair.	1	\$750
Site	Electrical	Generator Transfer Switch	There appears to be a ground loop present at the transfer switch and associated electrical service. The first symptom we noticed was corrosion of the grounding lug in the transfer switch, this often indicates current flow. We measured between 1.5A and 5A on various ground wires at this location. As well as imbalances in neutral conductors around 5A. The two common causes of this are bad neutral connections and/or multiple neutral ground bonds. We located three locations where incorrect neutral ground bonds are present in the course of this assessment, more may be present. Recommend investigation and repair.	1	\$3,500



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Site	Electrical	Raceway	Multiple fittings, conduit, and boxes located at gas pumps do not appear to be rated for the classified explosion hazard areas they are located in. Due to the age of the equipment, changing codes, and lacking labels, it will be difficult to determine what is and is not in compliance in this area. Recommend further investigation and possible repair/replacement.	1	\$3,000
Site	Electrical	Generator	The generator has a 3 wire connection, and should be 4.	1	\$2,500
Site	Electrical	Equipment Disconnect	Two air conditioner disconnects near panel B are missing their dead front covers. Recommend replacing the disconnects.	2	\$1,750
Site	Electrical	Conductor	The wiring in the central garage/tractor barn is primarily in Romex with dry location boxes and fittings. While this wiring is not directly exposed to rain and does not present an immediate safety hazard, it may complicate future work as it does not meet modern code.	1	\$1,500
Site	Electrical	Electrical Service	Grounding clamp at gas meter near panel B is installed incorrectly; Recommend relocating clamp slightly to allow better access to A/C unit disconnect. Recommend removing paint from gas piping where clamp connects to allow better electrical connection.	1	\$500
Site	Electrical	Conductor	In tire storage shed there is some wiring (Romex) that is exposed to physical damage from items being stored in the shed. Recommend installing a plywood panel covering the bay under the switch to protect wiring.	1	\$500



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Site	Electrical	Exterior Lighting	The lights in the sand storage shed are not functioning. This is likely related to the damaged conduit at the Street division storage shed.	1	\$500
Site	Electrical	J-box	The large pull/junction box at the service entrance at the sign shop is loose, and missing screws and an appropriate gasket. Recommend repairing.	1	\$500
Site	Electrical	Lighting	No light. Recommend installing a light for safety and maintenance.	1	\$350
Site	Electrical	Raceway	Insufficient strapping on conduit feeding A/C unit disconnect near panel B. Recommend securing conduit.	1	\$250
Site	Electrical	Electrical Service	No fault current labeling is present on any service gear or panels. Recommend contacting Duke Power, getting the required info, and labeling all equipment.	1	\$0
Site	Electrical	Panel	Insufficient working space around generator disconnect due to backflow preventer. Due to the expense/difficulty of relocating the backflow preventer we do not recommend fixing this at this time, but it may become a problem with future electrical work as it does not meet code.	1	\$0
Site	Electrical	Panel	There is insufficient working space around the main panel in the sign shop. Recommend clearing a 30' wide by 36" deep space around the panel	1	\$0
Site	Plumbing	Grease Trap	Grease Trap does not meet OWASA standards and needs to be upgraded so rain water is not getting into sanitary sewer.	1	\$35,000
Total Opinion of Cost					\$112,450



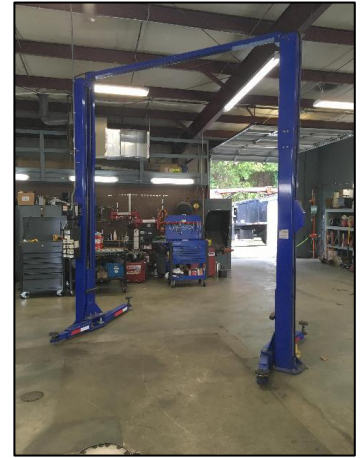
PHOTOGRAPHS



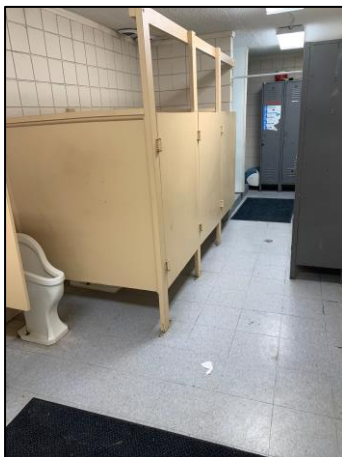
Break Room



Flooring



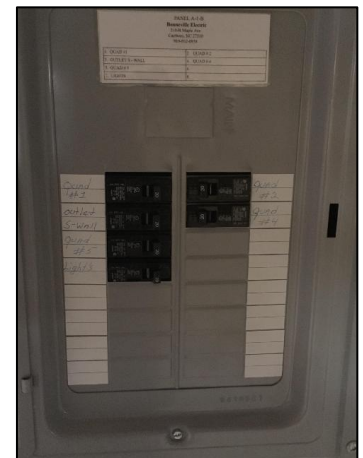
Fleet Shop – Vehicle Lift



Water Closet



Water Closet



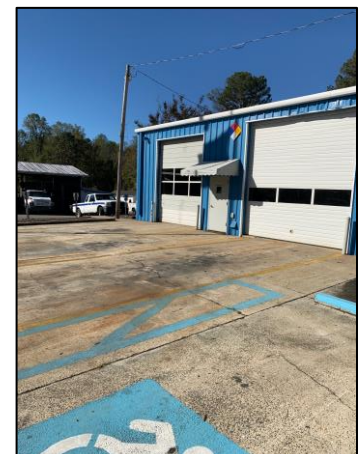
Electrical Panel



Electrical Panel



Eye wash Station



Fleet Overhead Bay Doors





Roof



Sign Shop



Storage Shed



Equipment Shed



Equipment Shed



Equipment Shed



Generator



Fuel Pump Station



TOWN HALL

FACILITY DESCRIPTION



Address: 301 West Main Street

Land Area: 3.96 acres (includes Fire Station 1 and Town Commons)

Current Facility Use: Town Hall

Gross Building Area: 19,328

Year Built: 1922

Carrboro's Town Hall is a three story historic structure adjacent to Fire Station 1. The building was originally Carrboro's grade school. The building's façade lends its shape to the Town's official seal.

The building underwent a renovation in the 1960s when it was converted into Town Hall. Significant alterations include the installation of a drop ceiling, forced-air HVAC system, and a front portico.

Currently the building contains the Board Room, the Mayor's office, storage for Recreation and Parks, and the following Town Departments:

- Planning Zoning & Inspections
- Building Maintenance (Public Works)
- Office of the Town Manager
- Finance
- Information Technologies
- Office of the Town Clerk
- Human Resources



Site Improvements

Town Hall is surrounded by parking lots on the south, east, and west sides. Town Hall and Fire Station 1 are connected with a covered walkway. In between the two buildings is a court yard that is being used for cellular equipment including a large tower. The front (east side) of Town Hall is home to a large elm tree which is the main feature of the landscape. There are four entrances to the building, one of which provides handicapped accessibility.



Architectural and Structural Systems

Town Hall has exterior brick walls providing vertical, load bearing structural support. The interior structure is composed of wood framed stud walls, posts, and headers. A column support is visible at the upper level, extending up to the trussed gable roofing. Rough sawn floor joists support diagonally oriented floor decking. (Source: Building Assessment Final Report, February 22, 2017, Creech and Associates) The auditorium space that is currently being used for storage needs to be evaluated by a structural engineer if the function of this space ever changes. The roof was recently replaced with a white 60mil EPDM roofing membrane along with five inches of polyisocyanurate insulation for energy efficiency. The gable portion of the roof is covered with corrugated metal.

Electrical, Mechanical, and Plumbing Systems

The building is heated and cooled with seven (7) high efficiency air source heat pump HVAC systems; there is no gas heat.

The electrical system is a combination of new and old wiring and distribution panels. Knob and tube wiring still exists throughout the building. There are many ungrounded circuits as made evident by two-pronged outlets.

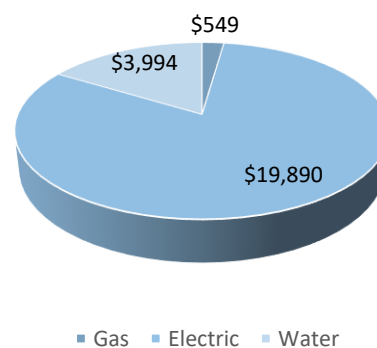
The plumbing is in poor condition and the number of bathrooms is inadequate for the building. Piping for the plumbing system is of varied material and corrosion is evident throughout the building.

Energy Consumption

The total annual energy usage per square foot for the occupied (non-storage) portion of Town Hall is approximately 70,000 btu/sf. The average total annual energy usage per square foot for a public assembly or office building is 90,000 btu/sf. (Source: U.S. Energy Information Administration, Commercial Buildings Energy Consumption Survey)

Summary of FY 2019 Annual Utility Costs:

- Electric - \$19,890 (includes EV charging station and ATM)
- Gas - \$549
- Water - \$3,994



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The interior walls vary throughout the building and include plaster, wood paneling, and gypsum board coverings. The floor is mostly carpeted and has been replaced in several locations. Recently remodeled areas have vinyl plank style flooring. The drop ceiling is in fair condition and has troffer style fluorescent lighting fixtures installed. The second floor area that is being utilized for storage has deteriorated interior components which are original to the building.


There is no automatic fire suppression installed. A fire alarm system with smoke detection is installed.

- Apple Electronics (fire alarm)
- Clegg's Pest Control (pest control)
- Daulton HVAC (air conditioning)

The floor plan of the 10th floor of the FBI Laboratory is a complex layout with numerous rooms and corridors. The rooms are labeled as follows:

- HR OFFICE (multiple locations)
- ST. (multiple locations)
- HR CONFERENCE
- BREAK ROOM
- MEN
- WOMEN
- HR STOR.
- ELEC.
- MECHANICAL
- STOR. (multiple locations)
- DESK SUPPORT
- IT OFFICE
- ST. (multiple locations)
- STORAGE (multiple locations)
- PD EVIDENCE
- IT
- SHOP (multiple locations)
- OFFICE
- CRAWL SPACE

The plan also includes several sets of stairs (ST.) and a large area labeled CRAWL SPACE. The layout is designed to facilitate the flow of personnel and materials between various functional areas.

 Town of Carrboro
Facility Condition Assessment
October 2019



First Floor Plan



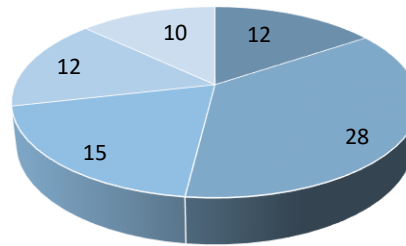
Second Floor Plan



ASSETS

Seventy-seven (77) assets were identified at Town Hall.

- 12 Assets in Excellent Condition
- 28 Assets in Good Condition
- 15 Assets in Fair Condition
- 12 Assets in Poor Condition
- 10 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Poor Condition ■ Failing Condition

The following table identifies each asset's location, system, type, and condition:

Building Level/ Location	Asset System	Asset Type	Condition
Basement, First Floor, and Second Floor	Fire Protection	Fire Extinguishers	4
Basement, First Floor, and Second Floor	Life Safety	Egress	2
Basement	Architectural	Wall - Exterior	3
Basement	Architectural	Lavatory - Water Closet	2
Basement	Architectural	Wall - - Water Closet	2
Basement	Architectural	A/C Unit	1
Basement	Architectural	A/C Unit	1
Basement	Architectural	Ceiling	1
Basement	Architectural	Floor	1
Basement	Electrical	Panel	5
Basement	Electrical	Panel C	5
Basement	Electrical	Meter	4
Basement	Electrical	Meter	4
Basement	Electrical	Panel M3	4
Basement	Electrical	Panel M4	4
Basement	Electrical	Panel 015	4
Basement	Electrical	Panel EMD	4
Basement	Electrical	Sub Panel D	3
Basement	Electrical	Panel S	3



Building Level/ Location	Asset System	Asset Type	Condition
Basement	Electrical	Panel B	3
Basement	Electrical	Panel X	3
Basement	Electrical	Panel H	1
Basement	Mechanical	Sump Pump - # 1	5
Basement	Mechanical	Sump Pump - # 1	5
Basement	Mechanical	A/C Unit - Inside Unit	5
Basement	Mechanical	A/C Unit - AHU	5
Basement	Mechanical	A/C Unit - AHU	5
Basement	Mechanical	A/C Unit - AHU	4
Basement	Mechanical	Water Heater	4
Basement	Mechanical	A/C Unit - AHU	4
Basement	Plumbing	Fixture - Water Closet	2
Basement	Plumbing	Fixture - Water Closet	2
Basement	Plumbing	Piping - Water Closet	2
Basement	Plumbing	Piping - Water Closet	2
First Floor	Architectural	Wall - - Water Closet	4
First Floor	Architectural	Doors - Entry	3
First Floor	Architectural	Windows	3
First Floor	Architectural	Door - Interior	3
First Floor	Architectural	Floor	2
First Floor	Electrical	Exterior Sub Panel	4
First Floor	Electrical	Lighting	3
First Floor	Electrical	Panel Box	3
First Floor	Electrical	Panel F	3
First Floor	Fire Protection	Fire Alarm	4
First Floor	Life Safety	AED near Reception Desk	1
First Floor	Mechanical	Door - Handicap accessible	4
First Floor	Mechanical	Lavatory - - Water Closet	4
First Floor	Mechanical	A/C Unit - AHU	4
Second Floor	Architectural	Floor- Planning Department	4
Second Floor	Architectural	Ceiling - Planning Department	3
Second Floor	Architectural	Wall- Planning Department	3
Second Floor	Architectural	Windows	2
Second Floor	Architectural	Floor - Auditorium	2
Second Floor	Architectural	Ceiling - Auditorium	1



Building Level/ Location	Asset System	Asset Type	Condition
Second Floor	Architectural	Wall - Auditorium	1
Second Floor	Electrical	Lighting	4
Second Floor	Electrical	Panel G	3
Second Floor	Electrical	Panel	2
Second Floor	Mechanical	A/C Unit - AHU	4
Second Floor	Mechanical	A/C Unit - AHU	1
Second Floor	Structural	Truss - Rafters	2
Attic	Mechanical	A/C Unit - AHU	4
Roof	Roof	Roof	5
Roof	Mechanical	A/C Unit - Condenser	4
Roof	Mechanical	A/C Unit - Condenser	4
Roof	Mechanical	A/C Unit - Condenser	1
Site	Electrical	Panel (Outside Light Pole)	4
Site	Electrical	Meter (Outside Light Pole)	4
Site	Mechanical	A/C Unit - Condenser	5
Site	Mechanical	A/C Unit - Condenser	5
Site	Mechanical	A/C Unit - AHU	5
Site	Mechanical	A/C Unit - Condenser	5
Site	Mechanical	A/C Unit - Condenser	4
Site	Mechanical	A/C Unit	4
Site	Mechanical	A/C Unit - Condenser	4
Site	Parking Lot	Parking - Farmer's Market	4
Site	Parking Lot	Parking - Town Hall	3



RECOMMENDATIONS AND OPPORTUNITIES

The building is of historical significance and remains relatively unaltered from its original floor plan, any future renovations or remodels should endeavor to regain the historical attributes of the original design. It is recommended that HID locks be installed throughout the building to better differentiate the public space from staff offices. In general, security should be re-evaluated and improved upon. It is recommended that an automatic fire suppression system be installed. There is significant opportunity to increase daylighting using the original window glazing area. It is recommended that the bathrooms be renovated with the possible addition of a bathroom area; low flow fixtures should be utilized. Currently only the first floor of the building is handicapped accessible, it is recommended that an elevator be installed as part of future renovations. The windows are not properly sealed and are drafty; new high efficiency windows can be installed to improve the performance of the building envelope. LED lighting should be installed throughout the building. Egress signage should be replaced or retrofitted with new batteries.

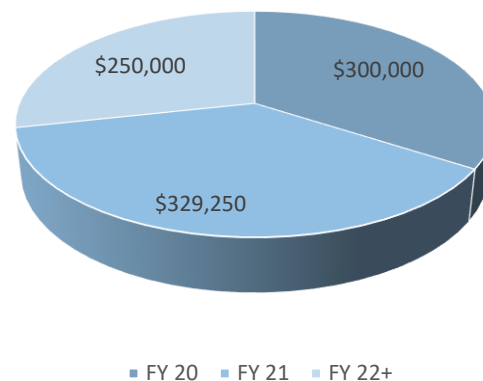
RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

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Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$300,000
2021	\$329,250
2022+	\$250,000



DECIFICIENCY LIST AND OPINION OF COSTS

Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Basement	Electrical	Panel	Panel B has a 3 wire feed. Recommend replacing and refeeding this panel.	1	\$5,000
Basement	Electrical	Conductor	Live knob and tube wire. Recommend removing and replacing.	1	\$2,500
Basement	Electrical	Panel	Panel H is a zinsco brand panel. Recommend replacing due to difficulties servicing and maintaining this discontinued brand of panel.	1	\$1,500
Basement	Electrical	Equipment Disconnect	Water Heater does not have disconnect. Recommend installing disconnect per NEC code.	1	\$350
Basement	Electrical	Raceway	The LV wiring in the cable ladder and the lower landing is blocking access to a LB conduit fitting. The LV wiring is also partially supported by zip tying to EMT electrical conduit. Recommend re configuring LV wiring to allow access and be supported in a code compliant way.	1	\$350
Basement	Electrical	Raceway	Conduit serving water heater not supported. Recommend installing strapping.	1	\$250
Basement	Electrical	Raceway	There is a significant amount of BX cabling and junction boxes in the ceiling that are not properly supported. Recommend securing junction and outlet boxes and strapping conduit.	1	\$250
Basement	Electrical	Lighting	There are several "pull chain" type light fixtures mounted on floating boxes in the ceiling of the room. Several of these have non-GFCI protected outlets built into them. As these fixtures are no longer in use, recommend removing and capping off wiring.	2	\$250



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Basement	Electrical	Raceway	EMT conduit through floor subject to physical damage. Recommend installing guard	1	\$150
Basement	Electrical	Panel	Panels M3 and M4 lack working space. Recommend clearing 30 x 36 area.	1	\$0
Basement	Electrical	Panel	N/A	1	\$0
Basement	Plumbing	Fixtures/Walls	Bathroom does not meet needs of occupancy. Recommend renovation and remodeling.	2	\$180,000
First Floor	Electrical	Panel	Unlabeled sub panel - panel lacks sufficient working space. Recommend clearing a 30" wide, 36" deep area around the panel.	1	\$0
First Floor	Electrical	Panel	Panel F lacks sufficient working space. Recommend clearing a 30" wide, 36" deep area around the panel.	1	\$0
First Floor	Electrical	Conductor	Knob and Tube fed outlet. Recommend rewiring.	1	\$0
First Floor	Electrical	J-box	Several boxes missing KO seals.	3	\$100
First Floor	Electrical	Lighting	There is an exterior gooseneck light fixture on the front (South East) side of the shop which is broken. Recommend replacing and/or repairing	1	\$250
First Floor	Electrical	Panel	Unlabeled sub panel is fed with 3 wire feed. Recommend refeeding panel.	1	\$2,500
First Floor	Electrical	Panel	Panel F is a 3 wire panel. Recommend refeeding.	1	\$2,500



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor	Electrical	J-box	Inaccessible j-boxes due to ductwork. Recommend rerouting conduit or ductwork.	1	\$2,500
First Floor	Electrical	Panel	Panel F, Circuit 10 has a dead short, resulting in an immediate trip of the circuit breaker when attempting to reset. We were unable to determine what this circuit feeds. Recommend locating the cause of the short and repairing.	1	\$750
First Floor	Electrical	Panel	Panel D is fed from main building. Recommend disconnecting and refeeding circuit from shop panel.	1	\$500
First Floor	Electrical	Egress Lighting	No emergency egress lighting. Recommend installing light.	1	\$500
Second Floor	Electrical	Panel	Small panel in office has incorrectly sized breakers feeding receptacles. Recommend replacing.	6	\$450
Second Floor	Electrical	Panel	Unlabeled panel. Recommend mapping and labeling.	1	\$400
Second Floor	Electrical	Panel	Panel G is not properly grounded. Recommend installing bonding bushing and verifying ground path	1	\$250
Second Floor	Electrical	Electrical Outlet	There are several outlets that are ungrounded and are possibly fed with knob and tube. Some are likely already GFCI protected. Recommend verifying GFCI protection and possibly re-wiring/replacing outlets.	6	\$7,500
Second Floor	Electrical	Electrical Outlet	There are several outlets that are ungrounded and are possibly fed with knob and tube. Some are likely already GFCI protected. Recommend verifying GFCI protection and possibly re-wiring/replacing outlets.	4	\$6,500
Second Floor	Electrical	Lighting	Several pendants are damaged, many do not currently work. Recommend repair or replace.	4	\$800



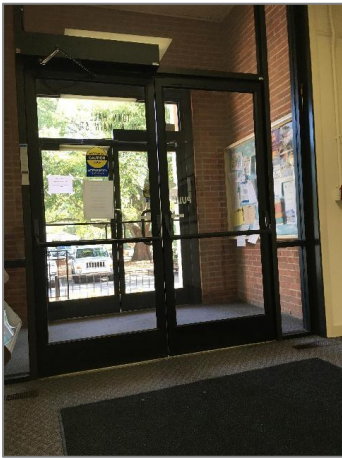
Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
First Floor, Second Floor, and Basement	Architect ural	Exterior Trim/Railings, Metal Staircase	Damaged wood and peeling paint. Recommend repair and painting.	1	\$18,000
First Floor, Second Floor, and Basement	Architect ural	Building Envelope	Multiple penetrations need to be sealed, windows need to be sealed and weatherization throughout recommended.	1	\$5,000
First Floor, Second Floor, and Basement	Architect ural	Windows	Replace Windows	62	\$130,000
First Floor, Second Floor, and Basement	Life Safety	Fire Suppression	Add automatic sprinkler system.	1	\$150,000
First Floor, Second Floor, and Basement	Electrical	Electrical Wiring	Existing Knob and Tube wiring throughout building, particularly on second floor and in attic. Wiring is unsafe and needs to be removed and replaced.	1	\$21,000
First Floor, Second Floor, and Basement	Electrical	Electrical Panels	Electrical Panels need to be properly labeled. Recommend creating a riser diagram and tracing circuits where necessary.	16	\$15,000
First Floor, Second Floor, and Basement	Security	Doors	Security system including door locks does not meet current standards; recommend installing HID readers.	5	\$69,000
Roof	Electrical	Equipment Disconnect	A/C disconnect not properly supported. Recommend re- supporting.	2	\$350
Site	Electrical	Raceway	Abandoned conduit with conductors (not live at time of survey). Recommend demoing back to panel and removing conduit.	1	\$750
Site	Electrical	Electrical Outlet	The receptacles under the panel are not GFCI protected and have incorrect covers. Recommend installing GFCI outlets and "In Use" covers.	2	\$600



Building Level/ Location	Asset System	Asset Type	Description / Recommendation	Quantity	Opinion of Cost
Site	Electrical	Main Service	None of the electrical service gear or panels were labeled with available fault current. Without this information we cannot verify that all the equipment is properly rated. Recommend contacting Duke Power to get fault current information and have values calculated for all main disconnects and sub panels. Recommend installing permanent labels with this information.	1	\$250
Site	Electrical	Exterior Lighting	Square recessed light fixture under awning has a broken lense. Recommend replacing	1	\$250
Site	Electrical	Electrical Outlet	One of the GFCI outlets under the panel will not reset. Recommend repairing and/or replacing	1	\$250
Site	Electrical	Panel	Grounding conductor not properly secured. Recommend strapping to building	1	\$250
Site	Electrical	Equipment Disconnect	A/C disconnect missing dead front cover. Recommend replacing	1	\$250
Site	Electrical	Exterior Lighting	The flood light for the sign is broken, with exposed wiring. Recommend replacing.	1	\$250
Site	Electrical	Panel	Panel S has surface rust on its enclosure, inside of panel is still in fair shape. Recommend painting outside of panel S to prevent further damage.	1	\$200
Site	Electrical	Panel	Weatherproof Sub panel behind bushes lacks sufficient working space. Recommend clearing a 30" wide, 36" deep area around the panel.	1	\$0
Site	Life Safety	Egress Lighting	No lighting on staircase to old boiler room. Recommend installing egress lighting.	1	\$1,000
Site	Life Safety	Egress Lighting	No emergency egress lighting on staircase. Recommend installing light	1	\$750
Total Opinion of Cost					\$629,250



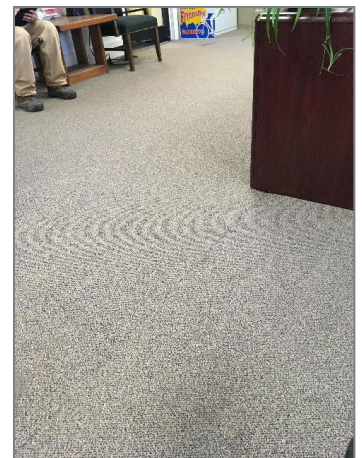
PHOTOGRAPHS



Entry



First Floor Walls



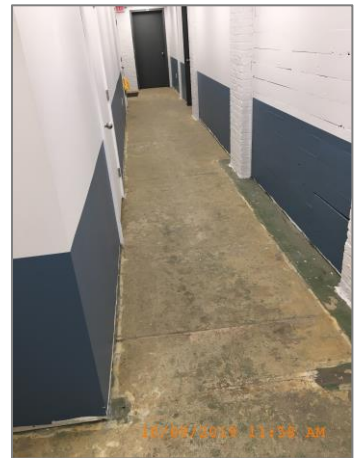
Second Floor Office



Conference Room



First Floor Hall



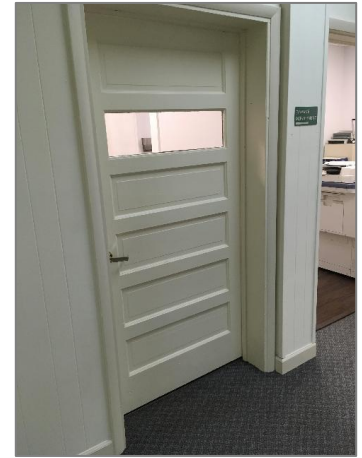
Basement Hall



Second Floor – Ceiling



Second Floor – Plaster Walls



Interior Door





Auditorium - Flooring



Auditorium - Walls



Auditorium - Ceiling



Auditorium - Trusses



Water Closet



Water Closet



Water Closet

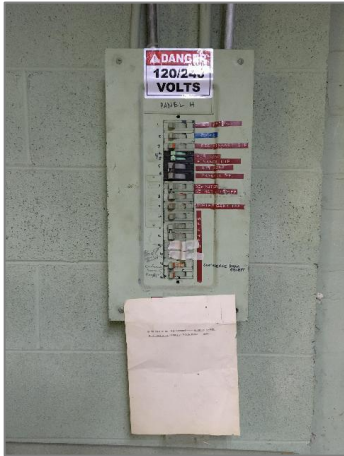


Water Closet



Window





Electrical Panel



Electrical Panel



Electrical Conduit



Hot Water Heater



Exterior



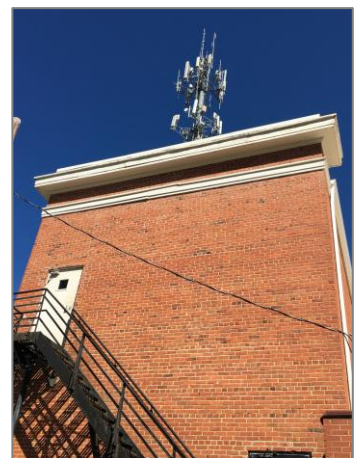
Exterior



Exterior Stairway



Exterior



Exterior



PARK DESCRIPTION



Address: 400 Broad Street

Land Area: 2.50 acres

Current Use: Community Park

Site Improvements

Baldwin Park is a 2.5 acre community park located off Broad Street in Carrboro. The park offers play equipment, a basketball court, and a community garden. A rain garden was installed in 2012.

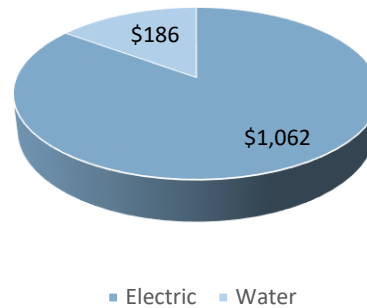


Energy Consumption:

There is no electrical infrastructure at this site apart from security lighting.

Summary of FY 2019 Annual Utility Costs:

- Electric - \$1,062
- Water - \$186

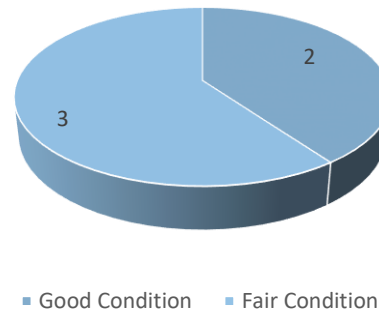


Service contracts in place for Baldwin Park: None

ASSETS

Five (5) assets were identified at Baldwin Park.

- 0 Assets in Excellent Condition
- 2 Assets in Good Condition
- 3 Assets in Fair Condition
- 0 Assets in Poor Condition
- 0 Assets in Failing Condition



The following table identifies each asset's location, system, type, and condition:

Location	Asset System	Asset Type	Condition
Site	Rec and Parks	Play Equipment	4
Site	Landscaping	Rain Garden	4
Site	Structural	Playground Surface	3
Site	Structural	Basketball Court	3
Site	Architectural	Pavilion	3



RECOMMENDATIONS AND OPPORTUNITIES

There is currently no sidewalk to the community garden. It is recommended that an ADA compliant sidewalk be installed at this location.

RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.



DECIFICIENCY LIST AND OPINION OF COSTS

Location	Asset System	Asset Type	Description/Recommendation	Quantity	Opinion of Cost
Site	Accessibility	Sidewalk	No access to community garden that meets ADA guidelines. Recommend installing new sidewalk.	1	\$15,000
Total Opinion of Cost					\$15,000



PHOTOGRAPHS



Sign



Pavilion



Basketball Court



Play Equipment



Play Equipment



Sidewalk & Raingarden



HANK ANDERSON III COMMUNITY PARK

PARK DESCRIPTION



Address: 203 Highway 54 West

Land Area: 54.79 acres

Current Use: Community Park

Site Improvements

Anderson Park is a 55-acre community park outside of town on Hwy 54 West. The park offers multiple lighted baseball and multi-purpose fields, lighted basketball courts, tennis courts, a dog park, a fishing pond, a pavilion, volleyball court, ½ mile trail and disc golf course, open space and restrooms.

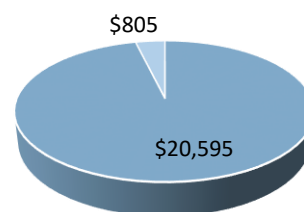
The park is in overall in good condition. There is some aging electrical infrastructure that is recommended to be replaced. Water for the park is provided by a well. The well pump system has multiple electrical deficiencies and the well house needs to be repaired and insulated.

Energy Consumption:

The largest energy demand at Anderson Park is the stadium lighting. Other electricity demands include convenience outlets, bathroom lighting and power for the well pump and fountain, however, these are very small in comparison to the stadium lights.

Summary of FY 2019 Annual Utility Costs:

- Electric - \$20,595 (includes lighting, well, and pond fountain)
- Water - \$805



■ Electric ■ Water



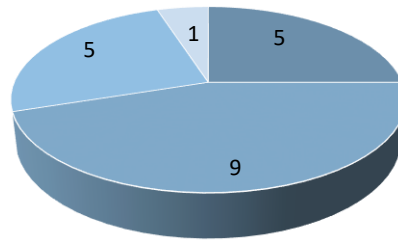
Service contracts in place for Henry Anderson III Community Park:

- Aquatix (aquatic weed eradication)
- Water Specialists (well testing)

ASSETS

Twenty (20) assets were identified at Henry Anderson III Community Park.

- 5 Assets in Excellent Condition
- 9 Assets in Good Condition
- 5 Assets in Fair Condition
- 0 Assets in Poor Condition
- 1 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition ■ Failing Condition

The following table identifies each asset's location, system, type, and condition:

Building Level/ Location	Asset System	Asset Type	Condition
Site	Architectural	Pavilion	3
Site	Electrical	Stadium Lighting Controls	5
Site	Electrical	Transformer 30kva	5
Site	Electrical	Electrical Service -Panel B1	5
Site	Electrical	Electrical Service - Meter	4
Site	Electrical	Electrical Service - Panel A	3
Site	Electrical	Unmarked panel, built in xformer	3
Site	Electrical	Electrical Service - Meter	4
Site	Electrical	Electrical Service - Panel A1	4
Site	Electrical	Transformer 10kva	4
Site	Electrical	Electrical Service - Panel A	4
Site	Electrical	Fountain Pump Controls	4
Site	Electrical	Electrical Service - Meter	4
Site	Electrical	Electrical Service - Panel B	3
Site	Mechanical	Water Heater	5



Building Level/ Location	Asset System	Asset Type	Condition
Site	Plumbing	Water Closet	4
Site	Plumbing	Septic Pump and Alarm Control Panel	5
Site	Rec and Parks	Play Equipment	4
Site	Parking Lot	Parking - 108,000 SF - Hank Anderson III Parking lot	3
Site	Well house	Pump	1

RECOMMENDATIONS AND OPPORTUNITIES

It is recommended that the well system be reconfigured to meet current electrical codes. The installation of lighting controls for the stadium lights is also recommended. There is an opportunity to save a considerable amount of electricity by retrofitting the stadium lighting with LEDs. The parking lot will need to be resurfaced in the next 5 - 7 years. There is an opportunity to install a bioretention and water quality swale to improve the stormwater system at the park. Currently the existing swale is eroding and needs to be addressed. The park also offers an excellent site for a rack-mounted solar photovoltaic system.

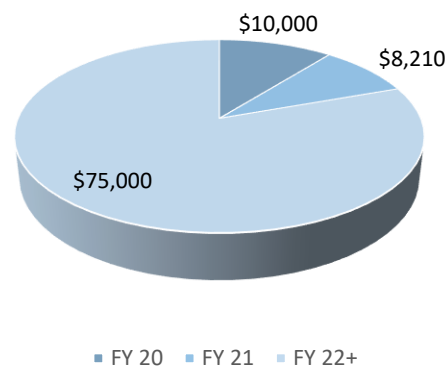
RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$10,000
2021	\$8,210
2022+	\$75,000



DECIFICIENCY LIST AND OPINION OF COSTS

Location	Asset System	Asset Type	Description/Recommendation	Quantity	Opinion of Cost
Ballfields 1 & 2	Electrical	Electrical Breakers	Circuit breakers in panels A and B are being used as switches to control lighting. They are not marked "HID" indicating that they are rated for this use. I was also unable to find any mention of an HID listing in the online specs for these breakers. Recommend installing control system to properly operate lights.	6	\$7,000
Ballfields 1 & 2	Electrical	Electrical Panels	Replace temporary labels with permanent panel schedule.	3	\$500
Ballfields 1 & 2	Electrical	Electrical Panels	Panel B has a label that says "LEAVE OFF?" Recommend determining what this load is and labeling properly and/or disconnecting.	1	\$500
Ballfields 1 & 2	Electrical	Electrical Panels	There is an unlabeled transformer with integrated panel freestanding north of the bathroom building. The labeling is at least partly incorrect. Recommend mapping and properly labeling.	1	\$500
Ballfields 1 & 2	Electrical	Electrical Panel	GFCI outlets required.	2	\$250
Ballfields 1 & 2	Electrical	Electrical Panels	One of the LED lights in the plumbing access hallway with a built in motion detector did not turn on. Recommend repairing and/or replacing.	1	\$160
Ballfields 1 & 2	Electrical	Electrical Outlet	There is a non-GFCI protected receptacle under the unlabeled transformer/panel. Recommend replacing with a GFCI outlet and in use cover.	1	\$150
Ballfields 1 & 2	Electrical	Electrical Outlet+F17	There is a non-GFCI protected outlet on a post on the north side of baseball field one. Recommend replacing with a GFCI outlet and in use cover	1	\$150
Site	Mechanical	Pump/ Fountain	System is offline, investigation required.	1	\$2,000
Site	Mechanical	Well System for Portable Water	The electrical system has multiple deficiencies and code issues, the roof is rotten and uninsulated, the expansion tank is rusted at base, and the filter housing does not open to remove the filter. Recommend reworking entire system.	1	\$7,000
			Total Opinion of Cost		\$18,210



PHOTOGRAPHS



Play Equipment



Play Equipment



Baseball Field



Dog Park



Pond



Electrical Panel (Near Pond)



Electrical Panel



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TOWN COMMONS

PARK DESCRIPTION



Address: 301 West Main Street

Land Area: 3.96 acres (includes Town Hall and Fire Station 1)

Current Use: Community Park

Site Improvements

Town Commons is a 1.7-acre community park located adjacent to Town Hall. The park is home to the Carrboro Farmer's Market and includes two lighted pavilions, a band stand, play equipment, bathrooms, and greenspace. Recently the Town installed industrial ceiling fans in the pavilions to keep the farmer's market cool on hot summer days. The park underwent a major renovation in 2017 which included adding new bathrooms, two permeable pavement parking lots, ground stabilization measures, and landscaping. There is a 5KW solar photovoltaic system on the south facing pavilion; this system includes 20 solar panels and an inverter. Irrigation is provided by a well. There is also an EV charge station with a two car capacity. Before Town Commons was the park it is today, it was a baseball field for many years used by the grade school and the community at large.



Energy Consumption:

Summary of FY 2019 Annual Energy Costs:

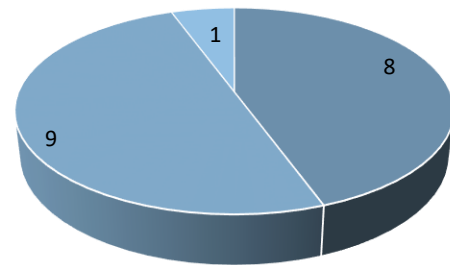
- Electric - included in Town Hall
- Water - N/A (on well)

Service contracts in place for the Town Commons: None

ASSETS

Eighteen (18) assets were identified at Town Commons.

- 8 Assets in Excellent Condition
- 9 Assets in Good Condition
- 1 Assets in Fair Condition
- 0 Assets in Poor Condition
- 0 Assets in Failing Condition



■ Excellent Condition ■ Good Condition ■ Fair Condition

The following table identifies each asset's location, system, type, and condition:

Building Level/ Location	Asset System	Asset Type	Condition
Site	Architectural	Pavilion	3
Site	Electrical	Free standing Power/ Panel Box P-2	5
Site	Electrical	Free standing Power/Panel Box P-3	5
Site	Electrical	Meter	5
Site	Electrical	Panel PNL	5
Site	Electrical	Panel PRM - Water Closets	5
Site	Electrical	Free Standing Panel/Panel Outlet - Water Closets	5
Site	Electrical	EV Charge Station	4
Site	Electrical	EV Charger Subpanel	4
Site	Electrical	Inverter and Solar Panels	4
Site	Electrical	Meter	4
Site	Electrical	Meter (Solar)	4
Site	Electrical	Panel Box (LP 100)	4



Building Level/ Location	Asset System	Asset Type	Condition
Site	Mechanical	Industrial Fans	5
Site	Parking Lot	Parking	4
Site	Plumbing	Irrigation	5
Site	Plumbing	Water Closet	4
Site	Rec and Parks	Play Equipment	4

RECOMMENDATIONS AND OPPORTUNITIES

The bollards providing area lighting stay on 24/7, it is recommended that these be modified so the light turns off during the day. The permeable pavement parking lot needs routine maintenance in order for the surface to maintain its permeable trait. Regular vacuuming of the surface is recommended. The pavilion structures will need to be stained and possibly repaired in the next four years. The pavilion roofs should be inspected periodically for leaks and repaired as necessary. The green space gets heavy use by the farmers market; therefore, erosion and irrigation should be closely monitored.

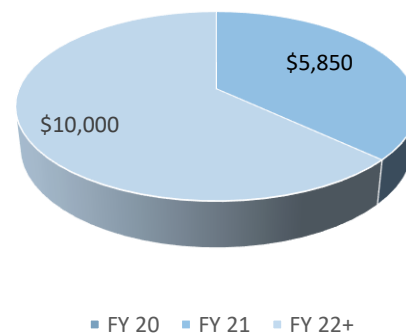
RECOMMENDATION INVESTMENT FOR REPAIR AND RENOVATION

Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.

Fiscal Year	Amount
2020	\$0
2021	\$5,850
2022+	\$10,000



DECIFICIENCY LIST AND OPINION OF COSTS

Location	Asset System	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
Site	Electrical	Exterior Lighting	Bollard light fixtures are always on. In order to make the outlets work with the lights turned off, additional wires would need to be pulled through the conduit to the bollards.	12	\$5,000
Site	Electrical	EV Charge Station	One of the automatic cable retractors is broken, this leads to cable laying on the ground where it is more likely to be driven over. Recommend repairing/replacing The cables are getting twisted and worn, these will need to be replaced eventually.	1	\$500
Site	Electrical	Electrical Panels	Panel LP200's labels are missing or unreadable. Recommend mapping and relabeling branch circuits.	1	\$250
Site	Electrical	Electrical Panels	The equipment grounding conductors at panel LP100 are exposed to physical damage. Recommend rerouting and possibly sleeving the grounding wires to protect them from damage.	1	\$100
			Total Opinion of Cost		\$5,850



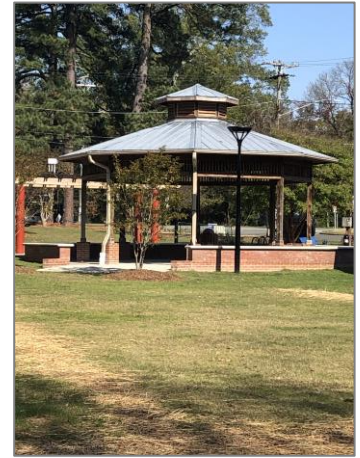
PHOTOGRAPHS



Pavilion



Pavilion



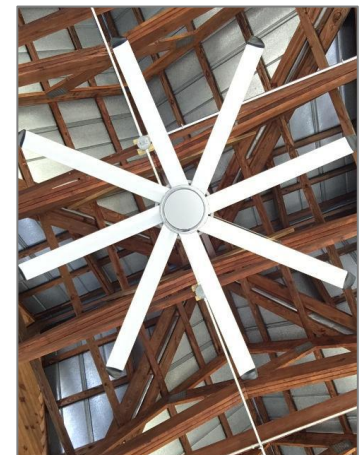
Gazebo



Play Equipment



Bollard



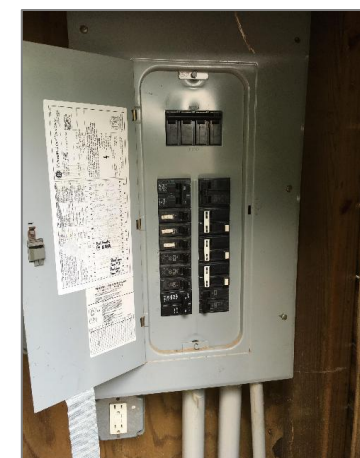
Pavilion Fan



Power Inverter for Solar Panels



Power Pole Box



Electrical Panel



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WILSON PARK

PARK DESCRIPTION



Address: 101 Williams Street

Land Area: 8.50 acres

Current Use: Community Park

Site Improvements

Wilson Park is an 8.50-acre community park with a lighted youth baseball field, four lighted tennis courts, a pavilion, play equipment, and restrooms. There is also a paved trail that accesses the Adams Tract forest and connects to Estes Drive.

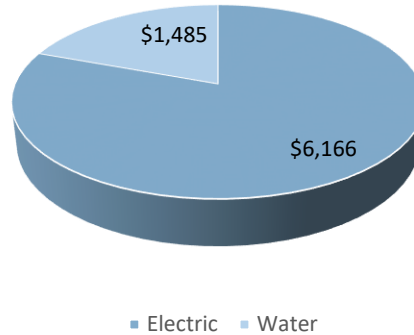


Energy Consumption:

The largest energy demand at Wilson Park is the stadium lighting. Other electricity demands include bathroom lighting, however, this is very small in comparison to the stadium lights.

Summary of FY 2019 Annual Utility Costs:

- Electric - \$ 6,615
- Water - \$186

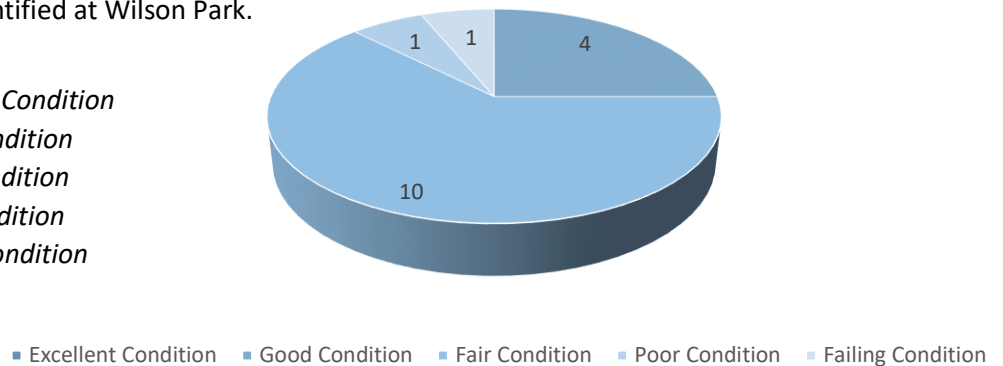


Service contracts in place for the Town Commons: None

ASSETS

Eight (16) assets were identified at Wilson Park.

- 0 Assets in Excellent Condition
- 4 Assets in Good Condition
- 10 Assets in Fair Condition
- 1 Assets in Poor Condition
- 1 Assets in Failing Condition



The following table identifies each asset's location, system, type, and condition:



Location	Asset System	Asset Type	Condition
Site	Architectural	Pavilion	1
Site	Electrical	Panel A	4
Site	Electrical	Meter	4
Site	Electrical	Lighting Controls	3
Site	Electrical	Unmarked panel	3
Site	Electrical	Ballfield Light Towers	3
Site	Electrical	Tennis Court Light Tower	2
Site	Parking lot	Park Parking lot	3
Site	Plumbing	Water Closet	4
Site	Rec and Parks	Play Equipment	4
Site	Structural	Playground Surface	3
Site	Structural	Bleachers	3
Site	Structural	Ballfield Fencing	3
Site	Structural	Ballfield Dugouts	3
Site	Structural	Tennis Courts	3
Site	Structural	Tennis Court Fencing	3

RECOMMENDATIONS AND OPPORTUNITIES

The electrical infrastructure for the stadium lighting needs to be repaired. It is recommended that the lighting controls be replaced in the near future. LED lighting with better controls is an opportunity to decrease energy usage. The shelter has a roof leak and needs a new roof along with repairs to rotten wood. The picnic tables and benches need to be painted.

RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

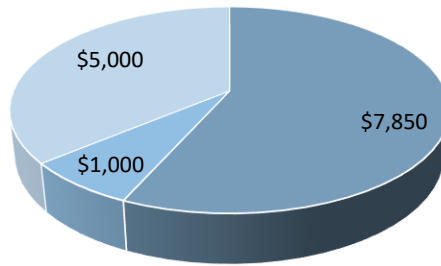
Recommended repair and renovation investments for fiscal years 2020 and 2021 include items identified in the *Deficiency List and Opinion of Cost* table below. The list does not include items that are recommended to be incorporated into a larger renovation which will be identified in a forthcoming *Facilities Master Plan*.

Recommended repair and renovation investments for fiscal years 2022+ are based on the number of assets in “fair” and “good” condition that will likely need to be repaired or replaced in the near future; itemized opinions of cost have not been developed for these assets.

Note: Costs do not include routine maintenance of any asset.



Fiscal Year	Amount
2020	\$7,850
2021	\$1,000
2022+	\$5,000



■ FY 20 ■ FY 21 ■ FY 22+

DECIFICIENCY LIST AND OPINION OF COSTS

Location	Asset System	Asset Type	Description/ Recommendation	Quantity	Opinion of Cost
Site	Architectural	Roof - Picnic Shelter	Roof leaks and needs to be replaced.	1	\$7,500
Site	Architectural	Amenity - Picnic Tables	Tables and benches need to be painted.	4	\$1,000
Site	Electrical	Support Structure	There is a lot of rust damage on the Unistrut supports for the main service gear. Recommend cleaning and painting Unistrut.	1	\$250
Site	Electrical	J-box	The pull box beside the main panel is missing a KO seal. Recommend installing a KO seal	1	\$100
Total Opinion of Cost					\$8,850



PHOTOGRAPHS



Play Equipment



Play Equipment



Baseball Field



Tennis Courts



Picnic Shelter



Picnic Shelter Roof



Electrical



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BUS SHELTERS

DESCRIPTION OF ASSETS

There are twenty-seven (27) bus shelters (22 constructed of wood; and 5 constructed of plexiglass, plastic, and metal) located in the Town of Carrboro. In May 2019, the condition of all Town bus shelters was evaluated during an inventory conducted by the Town of Carrboro and reviewed by Chapel Hill Transit (CHT).

The Town of Carrboro and Town of Chapel Hill are currently negotiating a Memorandum of Understanding to contract with the Town of Chapel Hill to maintain (repair) the existing bus shelters.

There are a total of 9 bus shelters that have been identified for immediate replacement. To create a more consistent waiting environment for customers, the Town of Carrboro will transition its existing wooden shelters into the CHT bus shelter program. The estimated cost of replacement of each shelter ranges from \$3,000 to \$12,000, depending on size. The actual cost of improvements will be determined by the assessments (CHT will conduct 12 full assessments at its expense).

The remaining 13 shelters “in acceptable condition” will be maintained and eventually replaced proportionally relative to the number of shelters in the CHT system. Funding will be supported through the CHT budget, including future grant requests.

The Town of Carrboro will continue to maintain the grounds around the bus shelters as well as collect trash.

Service agreements in place for Bus Shelters:

- Town of Chapel Hill (pending)



BUS SHELTER SURVEY

Location	ADA Compliant Bench (Min 17" Max 19" Height)	ADA Compliant Canopy Coverage (Minimum 4' excluding bench)	Glazing	Approximate Size	Condition
Carrboro High School	Yes	No	Missing 2 panels	16' x 4'	3
BPW Road near Smith Level Rd.	No	No	Ok (aluminum framed panels)	16' x 4'	3
W. Hwy 54 / Royal Park Apartments	No	No	Missing 2 panels	16' x 4'	2
W. Hwy 54 / Carolina Apartments	No	No	Missing all 6 panels	16' x 4'	2
Poplar Ave. / W. Hwy 54	No	No	Missing 1 panel	16' x 4'	2
W. Main St. / W. Hwy 54	No	No	Missing 4 panels	16' x 4'	2
E. Hwy 54 / Berkshire Apartments	No	No	Missing 2 panels; 1 panel loose	16' x 4'	2
E. Hwy 54 / Poplar Ave.	No	No	Missing 2 panels	12' x 4'	3
Jones Ferry Rd. near Willow Creek Center	Yes	No	Missing 3 panels	8' x 5'	2



Location	ADA Compliant Bench (Min 17" Max 19" Height)	ADA Compliant Canopy Coverage (Minimum 4' excluding bench)	Glazing	Approximate Size	Condition
Old Fayetteville Rd. / Carrboro Plaza #1	Yes	No	OK	8' x 5'	4
Old Fayetteville Rd. / Carrboro Plaza #2	Yes	No	OK	8' x 5'	4
Jones Ferry Park & Ride #1	Yes	No	1 panel loose	16' x 4'	4
Jones Ferry Park & Ride #2	Yes	No	Missing 1 panel	16' x 4'	4
Old Fayetteville Rd. / Jones Ferry Rd.	No	No	OK	12' x 4'	4
E. Hwy 54 / Westbrook Dr.	Yes	Yes	1 panel loose	16' x 6'	4
E. Hwy 54 / Abbey Ln.	Yes	Yes	OK	16' x 6'	4
N. Greensboro / Shelton St	No	No	Missing 1 panel	8' x 5'	2
N. Greensboro / Sue Ann Ct.	No	No	Missing 1 panel	8' x 5'	3
W. Main St. / Town Hall	No	Yes	OK (Art Installation)	12' x 6'	4
Jones Ferry Rd. / Collins Crossing Apartments #1	Yes	No	Missing 1 panel	16' x 4'	2
Jones Ferry Rd. / Collins Crossing Apartments #2	No	No	Missing 3 panels	8' x 4'	2



Location	ADA Compliant Bench (Min 17" Max 19" Height)	ADA Compliant Canopy Coverage (Minimum 4' excluding bench)	Glazing	Approximate Size	Condition
Rock Haven Rd. / Rock Creek Apartments	Yes	No	Missing 2 panels	8' x 4'	3
Old Fayetteville / Autumn Woods Apartments	Yes	Yes	Ok	12' x 6'	4
Old Fayetteville / W. Poplar Ave.	Yes	No	Ok	8' x 4'	4
S. Greensboro St. (mobile homes)	Yes	Yes	Ok	8' x 4'	4
W. Main St / Simpson St.	No	No	OK	8' x 5'	4
Rogers Road / Purefoy	Yes	Yes	Good - Tempured Glass	10' x 5'	5

RECOMMENATION INVESTMENT FOR REPAIR AND RENOVATION

At the time of this assessment, investments for repair and renovation are not included in this report due to ongoing negotiations with Chapel Hill Transit.

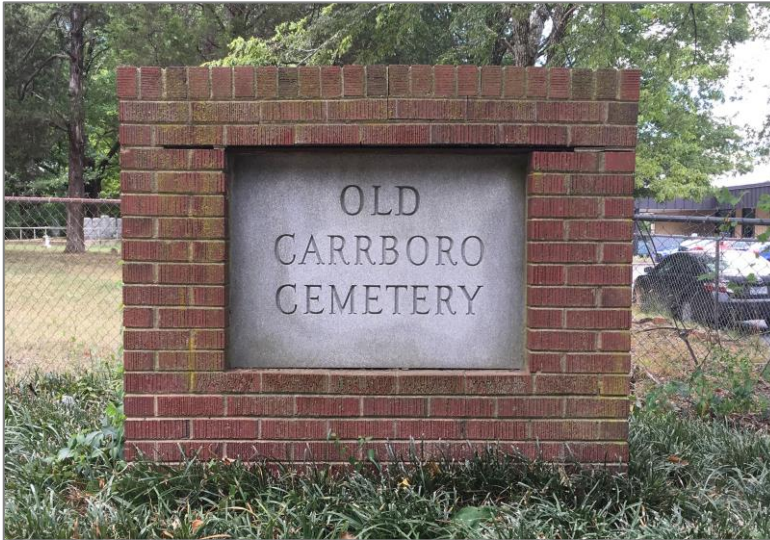


CEMETERIES

The Town of Carrboro owns and maintains two municipal cemeteries, Old Carrboro Cemetery and Westwood Cemetery.

Public Works Department manages plots sales, plot staking, and monument/marker staking. Cemetery plots sell for \$750 to residents and non-residents at \$1,500.

OLD CARRBORO CEMETERY



Address: 100 Hargraves Street

Land Area: 2.40 acres

Current Use: Municipal Cemetery

Site Improvements

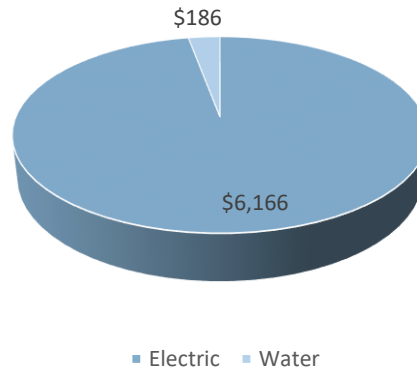
Old Carrboro Cemetery is located just off the Libba Cotton Greenway and consists of 2.40 acres of land. There are a total of 170 plots, of which 82 are available for sale.



Energy Consumption:

Summary of FY 2019 Annual Utility Costs:

- Average electric bill: \$6,165
- Average water bill: \$186



Service contracts in place for Old Carrboro Cemetery: None

RECOMMENDATIONS AND OPPORTUNITIES

None

WESTWOOD CEMETERY



Address: 101 Williams Street

Land Area: 8.50 acres

Current Use: Municipal Cemetery



Site Improvements

Westwood Cemetery is located on Davie Road and consists of 8.73 acres of land. Approximately 3.10 acres of land is currently undeveloped. (See aerial photograph of Zone 3 and Zone 4 in Recommendations and Opportunities). There are a total of 2,231 plots in Westwood Cemetery (excluding the undeveloped portion of Zone 4). There are 328 plots available for sale.

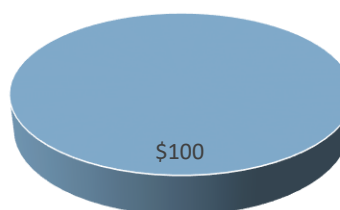


Energy Consumption:

There is currently some spot lighting at Westwood Cemetery which accounts for the electricity usage.

Summary of FY 2019 Annual Utility Costs:

- Electric bill: \$100



■ Electric ■

Service contracts in place for Westwood Cemetery: None

RECOMMENDATIONS AND OPPORTUNITIES

Town of Carrboro Public Works Department is currently seeking to contract with a qualified consultant to provide cemetery design services for the undeveloped portion of Westwood Cemetery (Zone 3 and Zone 4 on map). The Project Scope may be expanded to include redesign of Zone 1 and Zone 2 if deemed advantageous to the Town. The consultant shall provide a conditions assessment and recommendations to guide the design and development of Westwood Cemetery by:

- Examining the conditions of the cemetery including surface and subsurface conditions;
- Expanding the use of the cemetery by broadening options for interment and memorialization;
- Increasing capacity;
- Making the cemetery more aesthetically pleasing as public green space; and
- Providing the Town with clear direction on future development.



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MUNICIPAL PARKING LOTS

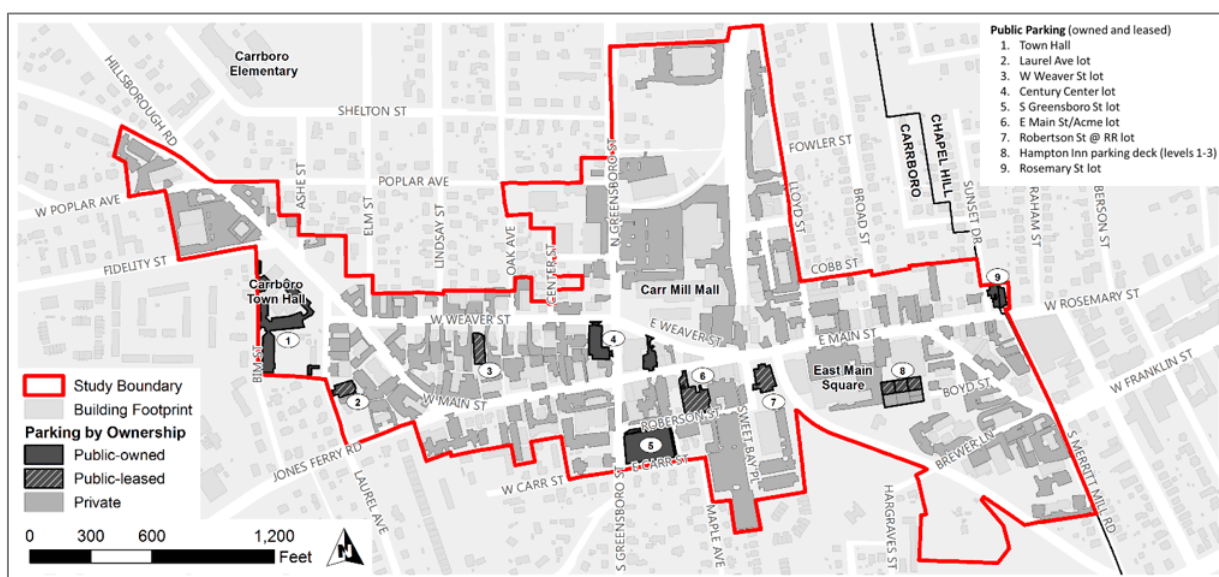
FACILITIES DESCRIPTION

The Town of Carrboro maintains six municipal parking lots, excluding parking lots located at Town buildings and parks. Four of the municipal parking lots are gravel and two are a combination of gravel and asphalt. The following table is a summary of the six municipal lots:

Location	Surface Material	Number of Parking Spaces	Condition	Owned/ Leased
Laurel Ave.	Gravel	15	Fair	Leased
W. Weaver St.	Gravel/ asphalt	30	Fair	Leased
Robertson St. @ Rail Road	Gravel	30	Fair	Leased
Rosemary St.	Gravel	20	Fair	Owned
203 South Greensboro St.	Gravel/ asphalt	75	Poor	Owned
East Main Street/Acme	Gravel	25	Fair	Leased

Service contracts in place for Municipal Parking Lots: None

LOCATION MAP



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SUMMARY

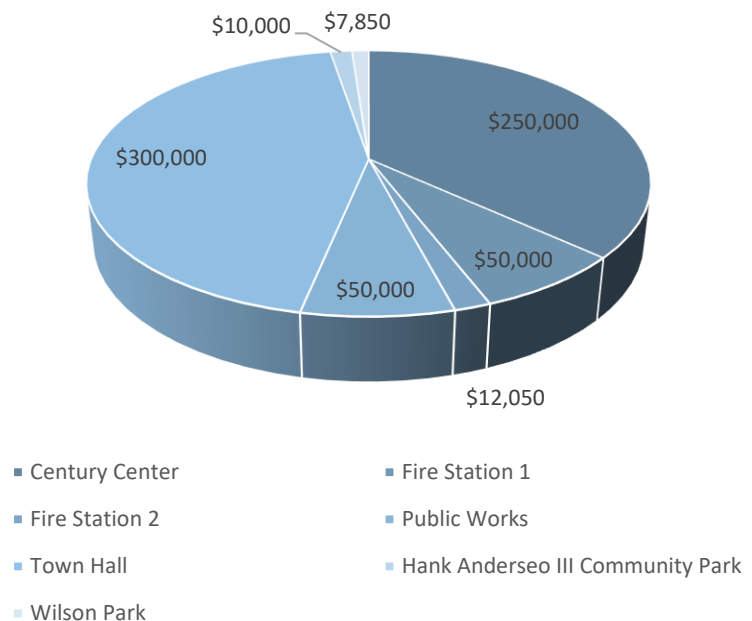
The Town of Carrboro has a variety of unique buildings and parks which are significant to the Town's history and character. These facilities offer the public many services and opportunities. Public Works is tasked with maintaining the majority of these facilities which requires a great amount of resources. In order to preserve the function and aesthetics of these facilities additional resources need to be committed to the repair and upkeep of structures and assets. The total cost to rehabilitate the facilities is approximately \$2.2M which should be systematically expended over a number of years as part of a planned project.

Opportunities to improve upon the building's performance should be explored further to improve energy efficiency and meet the goals of the Town's adopted Climate Action Plan. Steps to revitalize the historical attributes of these structures should be taken and future renovations should prioritize the historical preservation of buildings.

FY 2020 TOTAL OPINION OF COSTS

Total Opinion of Costs for FY 2020 equates to \$679,900.

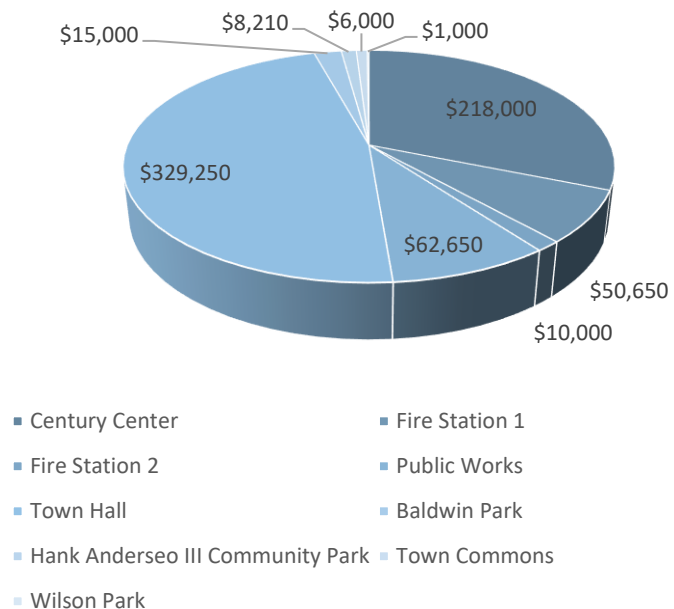
Building/Location	FY 2020
Century Center	\$250,000
Fire Station 1	\$50,000
Fire Station 2	\$12,050
Public Works	\$50,000
Town Hall	\$300,000
Baldwin Park	\$0
Hank Anderson III Community Park	\$10,000
Town Commons	\$0
Wilson Park	\$7,850
Total Recommended Expenditures	\$679,900



FY 2021 TOTAL OPINION OF COSTS

Total Opinion of Costs for FY 2022+ equates to \$700,760.

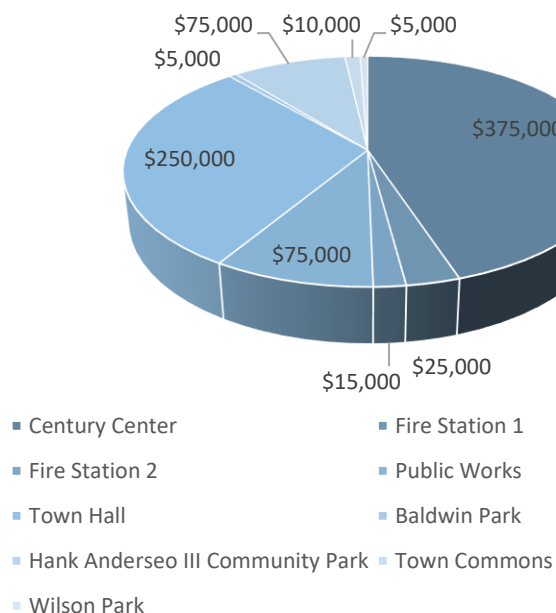
Building/Location	FY 2021
Century Center	\$218,000
Fire Station 1	\$50,650
Fire Station 2	\$10,000
Public Works	\$62,650
Town Hall	\$329,250
Baldwin Park	\$15,000
Hank Anderson III Community Park	\$8,210
Town Commons	\$5,850
Wilson Park	\$1,000
Total Recommended Expenditures	\$700,610



FY 2022+ TOTAL OPINION OF COSTS

Total Opinion of Costs for FY 2022+ equates to \$835,000.

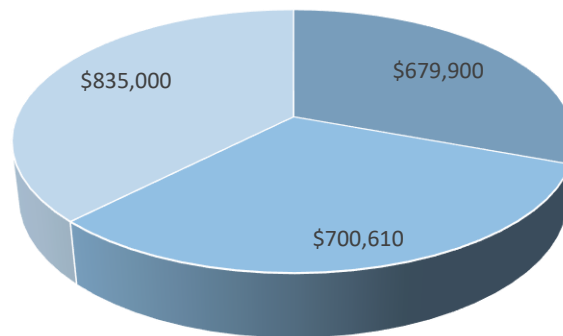
Building/Location	FY 2022+
Century Center	\$375,000
Fire Station 1	\$25,000
Fire Station 2	\$15,000
Public Works	\$75,000
Town Hall	\$250,000
Baldwin Park	\$5,000
Hank Anderson III Community Park	\$75,000
Town Commons	\$10,000
Wilson Park	\$5,000
Total Recommended Expenditures	\$835,000



TOTAL OPINION OF COSTS

Total Opinion of Costs for all improvements equates to \$2,215,660.

	FY 2020	FY 2021	FY 2022+	Total
Century Center	\$250,000	\$218,000	\$375,000	\$843,000
Fire Station 1	\$50,000	\$50,650	\$25,000	\$125,650
Fire Station 2	\$12,050	\$10,000	\$15,000	\$37,050
Public Works	\$50,000	\$62,650	\$75,000	\$187,650
Town Hall	\$300,000	\$329,250	\$250,000	\$879,250
Baldwin Park	\$0	\$15,000	\$5,000	\$20,000
Hank Anderson III Community Park	\$10,000	\$8,210	\$75,000	\$93,210
Town Commons	\$0	\$5,850	\$10,000	\$15,850
Wilson Park	\$7,850	\$1,000	\$5,000	\$13,850
Total Recommended Expenditures	\$679,900	\$700,610	\$835,000	\$2,215,510



■ FY 2020 ■ FY 2021 ■ FY 2022+



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APPENDICES



APPENDIX A – GLOSSARY OF TERMS

Deferred Maintenance - An amount needed but not yet expended for repairs, restoration, or rehabilitation of an asset.¹

Corrective Maintenance - Activities taken to detect, isolate, and rectify a fault so that the failed equipment, machine, or system can be restored to its normal operable state.² Also known as Reactive Maintenance.

Facilities Condition Assessment - An analysis of the condition of a facility in terms of age, design, construction methods, and materials. The industry professionals who perform the assessment are typically architects and engineers, and skilled-trade technicians.³

Master Plan – Study demographics and anticipated growth of staff and facility needs, space planning, as well as large projects and renovations.

Maintenance - Actions necessary of retaining or restoring a piece of equipment, machine, or system to the specified operable condition to achieve its maximum useful life.²

Preventive Maintenance – Systematic inspection, detection, correction, and prevention of incipient failures, before they become actual or major failures.²

Rehabilitation -The action, process, or result of rehabilitating or of being rehabilitated: such as

- a. restoration especially by therapeutic means to an improved condition of physical function.
- b. the restoration of something damaged or deteriorated to a prior good condition.¹

Renovate - to restore to a former better state (as by cleaning, repairing, or rebuilding).¹

Remodel - To alter the structure of.¹

Repair – Restoration of a broken, damaged, or failed device, equipment, part, or property to an acceptable operating or useable condition or state.²

Sources:

1. Merriam-Webster Dictionary
2. Business Dictionary
3. Wikipedia
4. Oxford Dictionary



APPENDIX B – ADDITIONAL FACILITY IMPROVEMENTS IDENTIFIED BY STAKEHOLDERS

Building/ Park	Location	Asset System	Asset Type	Recommendation	Quantity	Opinion of Cost
Fire Station 1	First Floor and Second Floor	Life Safety	Air Quality	Remedial mold testing of facility.	1	\$2,000
Public Works	First Floor	Architectural	Breakroom	Installation of kitchenette.	1	\$2,500
Town Hall	Basement	Architectural	Flooring	Installation of carpet.	1	\$7,000
Town Hall	First Floor	Architectural	Partition	Install Partition in room 109 around IT equipment.	1	\$10,000
Town Hall	First Floor	Architectural	Painting	Painting board room.	1	\$1,500
Town Hall	First Floor	Architectural	Painting	Painting conference room.	1	\$1,500
Town Hall	First Floor	Architectural	Painting	Paint HR offices.	1	\$6,000
Town Hall	First Floor	Architectural	Painting	Paint first floor hallways.	1	\$6,000
Town Hall	Second Floor	Architectural	Painting	Painting second floor.	1	\$8,000
Town Hall	First Floor and Second Floor	Architectural	Flooring	Fixing flooring on first and second floor.	1	\$25,000
Town Hall	First Floor and Second Floor	Architectural	Painting	Paint stairwells	1	\$5,000
Town Hall	Site	Architectural	Awning	Removal of porch roof near IT	1	\$1,500
Town Hall	Site	Architectural	Painting	Painting and exterior repairs	1	\$18,000
Town Hall	First Floor	Security	Security	Install security measures for HR	1	\$1,000
Town Hall	Basement	Security	Security	Manager's door repair	1	\$1,500
Hank Anderson III Comm. Park	Site	Landscaping	Volley Ball Court	Remove weeds and add new sand to volleyball court.	1	\$500
Parks	Site	Landscaping	Playground Equipment	Pressure wash all playground equipment on town properties.	7	\$2,500
				Total Opinion of Cost		\$96,500



APPENDIX C – STAKEHOLDER QUESTIONNAIRE

SECTION 1 - SAFETY & SECURITY

1. Does the front entry to the building provide a safe and welcoming entry?

Comments:

2. Are room graphics and directional signage in the building adequate?

Comments:

3. Does the building have adequate security?

Comments:

4. Is the exterior and site around the building lighted adequately?

Comments:

5. Do exterior and interior doors lock properly?

Comments:

6. Is there an emergency generator and automatic transfer switch? If yes, do they function properly?

Comments:

7. Is there adequate emergency back-up power for facility?

Comments:

8. Is there specific equipment that is not on a back-up generator that should be?

Comments:

9. Can you identify any safety issues that need to be addressed?

Comments:

10. Do you have any suggestions to improve security in the building (i.e. security cameras, etc.)?

Comments:

11. Do you have any other safety or security comments/concerns?

Comments:

SECTION 2 - SITE

12. After a rain fall are there areas that hold water for multiple days?

Comments:

13. Are there any areas that flood when it rains or have poor drainage?

Comments:

14. Is the parking lot adequate in size?

Comments:

15. Is directional signage on the site adequate?

Comments:

16. Are landscaping improvements needed?



Comments:

17. On a scale of 1 to 10 with 1 being the worst and 10 being the best, are the grounds and landscaping maintained well?

Comments (please enter number and comments):

18. Can you identify any site safety issues?

Comments:

19. Do you have any other comments/concerns regarding the site?

Comments:

SECTION 3 – BUILDING STRUCTURE

20. Are the gutters adequate and clear of debris?

Comments:

21. Does the roof leak when it rains?

Comments:

22. Are the windows sealed properly?

Comments:

23. Do windows lock properly?

Comments:

24. Do the windows have proper shading devices?

Comments:

25. Are exterior and interior doors easy to operate?

Comments:

26. Are there any unusual noises in the building?

Comments:

27. Are there any unusual odors in the building?

Comments:

28. Are you aware of any pest problems i.e., ants, roaches, etc.?

Comments:

29. Are you aware of any areas where the floor tile or carpet is separating?

Comments:

30. Are you aware of any areas where the ceilings are cracking, peeling, or have broken tiles?

Comments:

31. Are you aware of any areas where the walls are cracking or peeling?

Comments:

32. Are you aware of any other deferred maintenance?

Comments:



33. Do you have any suggestions to improve the building's energy efficiency?

Comments:

34. Are there adequate trash/recycling receptacles?

Comments:

35. On a scale of 1 to 10 with 1 being the worst and 10 being the best, how clean is the building kept?

Comments (please enter number and comments):

36. Do you foresee future needs to modify your current space (i.e. offices, conference rooms, bathrooms, etc.)? If yes, please explain.

Comments:

37. Do you have any other comments/concerns regarding the building structure?

Comments:

SECTION 4 - HVAC/MECHANICAL

38. Is there adequate control of HVAC/mechanical system?

Comments:

39. Are offices comfortable in the winter?

Comments:

40. Are offices comfortable in the summer?

Comments:

41. Does the exhaust air systems perform adequately (i.e. restrooms, locker room exhaust)?

Comments:

42. Is there adequate ventilation?

Comments:

43. Do you have any other concerns/comments regarding the HVAC system?

Comments:

SECTION 5 - ELECTRICAL

44. Are there enough electrical outlets in facility?

Comments:

45. Are there enough outlets to serve present computer needs?

Comments:

46. Are you aware of any electrical problems with systems?

Comments:

47. Do circuit breakers trip frequently?



Comments:

48. Are there frequent power outages in the building?

Comments:

49. Is the room/area lighting adequate for its use?

Comments:

50. Are there known problems with the lighting system?

Comments:

51. Is there an emergency lighting system (i.e. battery backup)?

Comments:

52. Does the telephone system function adequately?

Comments:

53. Do you have any other comments/concerns regarding the electrical system?

Comments:

SECTION 6 - PLUMBING

54. Are there adequate restrooms and do the fixtures function adequately?

Comments:

55. Are bathrooms accessible for the disabled?

Comments:

56. Is the water ever not clear (i.e. after a long weekend or holiday)?

Comments:

57. Do all of the water fountains work properly?

Comments:

58. Is there a need for additional water fountains? If yes, where?

Comments:

59. Is the water pressure adequate?

Comments:

60. Do the drains clog?

Comments:

61. Does the hot water system function adequately?

Comments:

62. Do you have any other comments/concerns regarding the plumbing?

Comments:



SECTION 7 - OTHER

63. Are you aware of any known hazardous material in the building(s)? If so, what type and where?

Comments:

64. Is there adequate space for administration at this facility?

Comments:

65. Is there adequate storage for all departments at this facility?

Comments:

66. Are there any other building/site improvements, repairs, maintenance needs, or changes that you would recommend for the facility in general? If yes, please explain.

Comments:

67. In the past five years have there been any updates to the improvements (renovations, remodeling etc.)? If yes, please describe.

Comments:

68. Are you aware of any Americans with Disabilities Act (ADA) accessibility needs?

Comments:

69. Please discuss any other noted property condition concerns.

Comments:

70. On a scale of 1 to 10 with 1 being the worst and 10 being the best, how responsive is Public Works to your needs/requests?

Comments (please enter number and comments):

71. What do you see Public Works should be focusing on?

Comments:

72. Additional comments, suggestions, or concerns.

Comments



APPENDIX D – COMMUNITY SCHOOL LEASE

Lease Agreement

THIS LEASE AGREEMENT, made and entered into the _____ day of _____, 2019 by and between the TOWN OF CARRBORO, a North Carolina Municipal Corporation, 301 W. Main Street, Carrboro, North Carolina, 27510, hereinafter referred to as the "Town" and the COMMUNITY SCHOOL FOR PEOPLE UNDER SIX, 102 Hargraves Street, Carrboro, North Carolina, 27510, hereinafter referred to as "CSPU6."

Witnesseth

Whereas the Town acquired a modular unit for three (3) classrooms and other facilities, hereinafter referred to as "Facilities," at a site owned by the Town on Hargraves Street in Carrboro, North Carolina, hereinafter referred to as "Leased Premises," and

WHEREAS, the Town has agreed to allow CSPU6 to use the Leased Premises pursuant to this Lease Agreement subject to the Town's ability to use a portion of the Facilities as outlined below.

NOW, THEREFORE, in consideration of the mutual covenants and agreements set forth herein, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. Lease of Premises

The Town hereby leases to CSPU6 that certain property owned by the Town located at 102 Hargraves Street, Carrboro, North Carolina 27510, for the purpose of using an existing modular unit for three (3) classrooms and other facilities (the "Facilities"), upon the Leased Premises. CSPU6 accepts the Leased Premises and the Facilities in "as is" condition.

Attached hereto as Exhibit "A" and incorporated herein by reference is a schematic plan of the Facilities (hereinafter referred to as the "Floor Plan").

CSPU6 hereby allows, and the Town reserves the right to, exclusive access to and use by the Town of one (1) office at the Facilities for a community policing facility, referred to as the "Community Outreach" office upon the Floor Plan; non-exclusive access to and use of auxiliary areas of the Facilities, including but not limited to the restroom facilities, and non-exclusive access and use to a meeting room for town and community functions, referred to as the "Community Conference" room upon the Floor Plan.

The Town may request and receive approval from CSPU6 for the Town's access to and use of the "Community Conference" room provided such access does not conflict with CSPU6's scheduled use of said "Community Conference" room. Such approval from CSPU6 shall not be unreasonably withheld. The schedule for the use of this "Community Conference" room shall be maintained and scheduled by the Director of CSUP6, or his/her designee. Anticipated scheduling for the use of this "Community Conference" room by the Town shall be coordinated by the Town's Director of Community and Economic Development, or his/her designee, and for CSPU6 by the Director of CSPU6, or his/her designee.



2. Rent

The Town agrees to rent the Leased Premises to CSPU6 for the sum of One Dollar (\$1.00) per year.

Term of Lease

The term of this Lease shall be for ten years (10), commencing on August 18, 2019 and ending on August 18, 2029, unless terminated sooner in accordance with the provisions below. CSPU6 reserves the right to terminate this Lease upon at least sixty (60) days' notice to the Town. Oral notice of termination or oral discussion of same has no validity under this Lease. ALL NOTICES MUST BE WRITTEN.

3. Surrender of Lased Premises

At the expiration of the Lease term, or upon earlier termination as allowed, CSPU6 shall surrender the Leased Premises in as good condition as it was in at the beginning of the Lease term, reasonable wear and tear and damages by the elements excepted.

4. Duties of CSPU6

a. CSPU6 shall provide all routine janitorial services at its own expense for the Facilities. Provision for contract janitorial service shall include worker's compensation insurance, general liability insurance and employee bonds.

b. CSPU6 shall provide for the Facilities and at its expense for its own use the following utilities: gas, water, sanitary sewer, solid waste collection (including recycling), electricity, telephone, and cable service, if desired. CSPU6 shall not provide telephone or cable service to the Town in connection with this Agreement. CSPU6 shall also be responsible for the maintenance and upkeep of its equipment and personal property located upon the Leased Premises and outside of the Facilities, i.e., playground and playground equipment.

c. CSPU6 shall be responsible for the cost of all routine maintenance and repairs to both the interior and exterior of the Facilities, including public water and sanitary sewer lines to the extent such routine maintenance and repairs is not the responsibility of OWASA or any other public utility. CSPU6 reserves the right to bill the Town for extraordinary maintenance resulting from the activities and/or neglect of Town employees.

d. CSPU6 shall ensure that the Leased Premises are maintained and operated in a safe and sanitary manner. CSPU6 shall leave the Facilities in a safe and sanitary condition following CSPU6's use of said Facilities. CSPU6 shall also be responsible for proper safekeeping and security of the Facilities.

e. CSPU shall comply with all applicable statutes, regulations and codes relating to occupancy by a certain number of persons, building code provisions for kitchens, fire regulations, and provisions governing food preparation and handling. CSPU6 shall take reasonable precautions to prevent damage to the Leased Premises and/or Facilities from fire or other causes and to prevent bodily and personal injury.



f. CSPU6 shall seek the Town's prior written approval before making any structural changes the Leased Premises and/or Facilities. The Town shall inform CSPU6 of any intended structural changes to be made to the Leased Premises and/or Facilities prior to making said changes.

6. Duties of the Town

a. The Town shall provide all routine grounds maintenance for the Leased Premises at its own expense, including the parking lot and basketball courts, except that portion of the Leased Premises upon which CSPU6 maintains its equipment and personal property outside of the Facilities, i.e., playground and playground equipment -which area and equipment shall be maintained by CSPU6. Provision for contract grounds maintenance service shall include worker's compensation insurance, general liability insurance and employee bonds.

b. The Town shall provide for its own and exclusive use, and at its expense any telephone and cable service, if desired, for use in the "Community Outreach" office.

c. In the event the Town shall use said portion of the Facilities on the Leased Premises, the Town shall ensure that the Facilities shall be left in a safe and sanitary condition following the Town's use. Except in designated storage areas, the Town shall not use the Facilities for storage or for other non-temporary uses. The Town shall be responsible for proper safekeeping and security of the Facilities while in its use.

7. Insurance

To the extent permitted by law, CSPU6 shall provide at its expense liability insurance, for bodily injury, personal injury, contractual liability and property damage, naming the Town as an additional insured, covering its activities on the Leased Premises and/or Facilities, and any other insurance required by law or the Town, which insurance policy shall name the Town as an "additional insured". Copies of said insurance policies or Certificates of Insurance shall be filed in the Town Purchasing Office. Said insurance shall provide that the Town shall be given at least thirty (30) days prior written notice before the policy may be altered, amended, canceled, or terminated or allowed to lapse.

To the extent permitted by law, the Town shall provide at its expense liability insurance, for bodily injury, personal injury, contractual liability and property damage, naming CSPU6 as an additional insured, covering its activities on the Leased Premises and/or Facilities, and any other insurance required by law or CSPU6. Copies of said insurance policies or Certificates of Insurance shall be filed at the CSPU6 Director's office at 102 Hargraves Street, Carrboro, North Carolina. Said insurance shall provide that CSPU6 shall be given at least thirty (30) days prior written notice before the policy may be altered, amended, canceled, or terminated or allowed to lapse.

8. Waiver of Subrogation

The Town agrees to maintain fire, extended coverage, and vandalism and malicious mischief insurance on the Leased Premises and on personal property of the Town contained therein to the extent of its full insurable value. CSPU6 shall do the same with respect to its property located in or on the Leased Premises. CSPU6 hereby mutually releases and discharges the Town from all claims or liabilities arising from or caused by fire or other casualty covered by its insurance on the Leased Premises, or property in or on the Leased Premises. The Town hereby mutually releases and discharges CSPU6 from



all claims or liabilities arising from or caused by fire or other casualty covered in its insurance on the Leased Premises, or property in or on the Leased Premises.

9. Sublease or Assignment

This Lease Agreement may not be assigned or transferred, nor may any of the Leased Premises and/or Facilities be sublet, without the prior written approval of both parties.

10. Alterations, Repairs

The Town reserves the right to approve and/or make alterations, renovations, or repairs to the Leased Premises. CSPU6 may make alterations, renovations, or repairs to the Facilities but only with the Town's written approval, and such approval shall not be unreasonably withheld.

11. Right of Inspection

The Town reserves the right to enter the Leased Premises and inspect the Leased Premises, or to repair and maintain the Leased Premises, upon reasonable notice.

12. Personal Injury or Property Damage

CSPU6 shall, to the extent allowed by law, indemnify and hold harmless and defend the Town, its agents and employees from any claims, cost, expense, liability, action, or judgment including attorney's fees arising out of or related to any personal injury, death or property damage with respect to its use of the Leased Premises for operation of the CSPU6 program for preschoolers, except to the extent same are caused by the negligence or misconduct of the Town.

The Town shall, to the extent allowed by law, indemnify and hold harmless and defend CSPU6, its agents and employees from any claims, cost, expense, liability, action, or judgment including attorney's fee arising out of or related to any personal injury, death or property damage with respect to its use of the Facilities and related CSPU6 space, for which the right of access is granted to the Town for town and community functions and a community policing facility, except to the extent same are caused by the negligence or misconduct of CSPU6.

13. Amendment to Lease

This Lease may be modified or amended by written agreement of the parties.

14. Damage to Leased Premises

In the event the Leased Premises and/or Facilities shall be damaged so as to render it untenable, this Lease Agreement shall terminate.

15. Default

In the event CSPU6 shall default under any of its obligations and fails to remedy default within reasonable time after notice from the Town, the Town may declare this Lease terminated and reenter Leased Premises to take possession and terminate the Lease. In the event the Town shall default under any of its obligations and fails to remedy default within reasonable time after notice from CSPU6, CSPU6



may declare this Lease terminated and reenter the Facilities to take possession and terminate the Lease.

16. Notice

Any notice or written communication related to this Lease shall be deemed effective if mailed or delivered to:

1. For the Town:	2. For CSPU6:
David Andrews, Town Manager	Anna McClain, Director
Town of Carrboro	CSPU6
301 W. Main Street	102 Hargraves Street
Carrboro, NC 27510	Carrboro, NC 27510

or such other place as the parties may be directed.

IN WITNESS WHEREOF, the parties hereunto cause this Lease Agreement to be executed in their respective names.

This the _____ day of _____, 2019

TOWN OF CARRBORO
A Municipal Corporation

By: _____

Town Manager

COMMUNITYSCHOOL FOR
PEOPLE UNDER

By: _____

Director, CSPU6

Attest: _____

Attest: _____



ATTACHMENT B

**BUDGET ORDINANCE AMENDMENT ESTABLISHING A FACILITIES
REHABILITATION FUND**

WHEREAS, the Board of Aldermen adopted the FY 2019-20 Annual Budget Ordinance No. 22/2019-20 for the Town of Carrboro on June 18, 2019; and,

WHEREAS, the Town's Management Team has identified facilities that are in need of immediate repair and/or rehabilitation; and,

WHEREAS, the immediate repair and rehabilitation needs are related to maintenance backlog, safety and security, compliance with ADA and other rules, and functionality and estimated to cost \$1.0 million. On a facility by facility basis, the anticipated cost would be:

CC - Recreation & Parks	\$ 221,500.00
CC - Police	\$ 39,000.00
Fire Stations	\$ 116,000.00
Town Hall	\$ 429,000.00
Public Works	\$ 90,500.00
Profession Services	\$ 104,000.00
Total Estimate	\$ 1,000,000.00

WHEREAS, the Board of Aldermen for the Town of Carrboro has adopted a Fund Balance Policy; and,

WHEREAS, the adopted Fund Balance Policy provides that when the unassigned fund balance exceeds 35% the Town Manager may assign some or all of the amount above 35% for transfer to the Capital Projects Fund for future projects; and,

WHEREAS, the Town's annual audit at June 30, 2018 confirmed that the fund balance exceeds 35%, and

WHEREAS, the Town Manager has assigned an amount of fund balance above 35% for future capital project purposes; and

WHEREAS, the adopted Fund Balance Policy requires formal action by the Board of Aldermen to commit the use of fund balance for projects or purposes in any current year or future year's budget; and,

WHEREAS, it is no longer prudent nor cost effective to continue postponing needed repairs and rehabilitation projects.

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF ALDERMEN OF THE TOWN OF CARRBORO THAT:

Section 1: The Town shall establish and maintain a Facilities Rehabilitation Fund for the purpose of repairing and rehabilitating existing Town facilities. Revenue sources for this fund may include grants, donations, interest payments or other revenues that may become available.

Section 2: Appropriations from the Facilities Rehabilitation Fund shall be used to repair or renovate existing Town facilities that cost less than \$150,000. This fund may not be used for new construction.

Section 3: Up to \$1,000,000 is appropriated from unassigned fund balance in the General Fund for transfer to the Reserved Funds category in the Facilities Rehabilitation Fund.

Section 4: The Town Manager may transfer all or a portion of the funds in Section 3 above to repair and/or rehabilitation projects. For projects that are “job ready” for repair or rehabilitation, the Town Manager may move up to \$150,000 from the Reserve Category to a specific project.

Section 5. The Town Manager shall provide a quarterly report to the Board of Aldermen on the use of the Facilities Rehabilitation Fund.

Section 6: Within five (5) days after this ordinance is adopted, the Town Clerk shall file a copy of this ordinance with the Finance Director.

Section 7: This Fund shall be effective immediately upon passage by the Board