



CITY COUNCIL AGENDA
Monday, May 15, 2017

6:00 p.m. **Closed session as provided by Section 2.2-3712 of the Virginia Code**
Second Floor Conference Room (Appointments to Boards and Commissions; Consultation with legal counsel regarding litigation – CPC v. City)

7:00 p.m. **Regular Meeting - CALL TO ORDER**
Council Chambers

PLEDGE OF ALLEGIANCE
ROLL CALL

AWARDS/RECOGNITIONS ANNOUNCEMENTS Albemarle Amateur Radio Club; Flicker the Flame 10th Birthday; Damage Prevention Leadership Award to Utilities
Board Appointments

CITY MANAGER RESPONSE TO MATTERS BY THE PUBLIC

MATTERS BY THE PUBLIC Public comment is provided for up to 15 speakers at the beginning of the meeting (limit 3 minutes per speaker.) Pre-registration is available for up to 10 of these spaces, and pre-registered speakers are announced by noon the day of the meeting. An unlimited number of spaces are available at the end of the meeting.

1. **CONSENT AGENDA*** (Items removed from consent agenda will be considered at the end of the regular agenda.)
 - a. Minutes for May 1, 2017
 - b. APPROPRIATION: CDBG-HOME Funding for FY 2017-2018 (2nd of 2 readings)
 - c. APPROPRIATION: Clark Elementary School – Safe Routes to School Grant - \$13,992 (2nd of 2 readings)
 - d. APPROPRIATION: Virginia Trees for Clean Water Grant - \$5,500 (1st of 2 readings)
 - e. RESOLUTION: Reimbursement Agreement with Fluvanna County for Share of Circuit Court Judge's Administrative Costs (1st of 1 reading)
 - f. ORDINANCE: Homeowner Tax Relief Grant Program (2nd of 2 readings)
2. **PUBLIC HEARING ORDINANCE*** Utility Rates for FY2018 (1st of 2 readings) – **15 min**
3. **REPORT*** Blue Ribbon Commission on Monuments – Recommendations – **30 min**
4. **RESOLUTION*** Approval of West Main Streetscape Design Plans (1st of 1 reading) – **30 min**
5. **ORDINANCE*** Retirement Plan Amendments (1st of 2 readings) – **15 min**
6. **REPORT** State of the Forest – **20 min**
7. **REPORT** Workforce Development Update – **20 min**

OTHER BUSINESS
MATTERS BY THE PUBLIC

**ACTION NEEDED*

GUIDELINES FOR PUBLIC COMMENT

**We welcome public comment;
it is an important part of our meeting.**

Time is reserved near the beginning and at the end of each regular City Council meeting for Matters by the Public.

Please follow these guidelines for public comment:

- If you are here to speak for a **Public Hearing**, please wait to speak on the matter until the report for that item has been presented and the Public Hearing has been opened.
- Each speaker has **3 minutes** to speak. Please give your name and address before beginning your remarks.
- Please **do not interrupt speakers**, whether or not you agree with them.
- Please **refrain from using obscenities**.
- If you cannot follow these guidelines, you will be escorted from City Council Chambers and not permitted to reenter.

**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 1, 2017
Action Required:	Appropriation and Approval
Presenter:	Tierra Howard, Grants Coordinator, NDS
Staff Contacts:	Tierra Howard, Grants Coordinator, NDS
Title:	Approval and Appropriation of CDBG & HOME Budget Allocations for FY 2017-2018

Background:

This agenda item includes project recommendations, action plan approval, and appropriations for the Community Development Block Grant (CDBG) and HOME Investment Partnerships (HOME) funds to be received by the City of Charlottesville from the U.S. Department of Housing and Urban Development (HUD).

In a memo provided to Council on March 17, staff informed Council that the President's FY (fiscal year) 18 budget proposal proposes \$6 billion in cuts to the HUD budget which would eliminate the CDBG & HOME Programs. To date, the City has not received its allocation letter from HUD and is currently unaware of what the impacts (if any) will be to the City's FY 17-18 budget. For the purpose of carrying out the FY 17-18 Action Plan on time, staff will estimate allocations using previous FY allocations.

Discussion:

In Fall 2016, the City of Charlottesville advertised a Request for Proposals (RFP) based on the priorities set by Council on September 19, 2016. The priorities were microenterprise assistance, workforce development, access to quality childcare, down payment assistance, and homeowner rehab. The City received two applications totaling \$98,520 for housing projects; four applications totaling \$80,600 for public service projects; one application totaling \$12,500 for economic development projects; and one application totaling \$10,000 for public facilities projects. A summary of applications received is included in this packet.

In January and February 2017, the CDBG/HOME Task Force reviewed and recommended housing and public service projects for funding and the Strategic Action Team reviewed and recommended economic development projects for funding. The 10th and Page Priority Task Force met over the course of late 2016 and early 2017 and made recommendations for

neighborhood improvements.

On March 14, 2017, these items came before the Planning Commission and Council for a joint public hearing. The Planning Commission accepted the report and unanimously recommended the proposed budget for approval by City Council.

CDBG and HOME Project Recommendations for FY 2017-2018:

The CDBG program total has an estimated \$371,309 for the 2017-2018 program year. The CDBG grand total reflects the \$371,309 Entitlement (EN) Grant, and \$42,268.31 in Reprogramming. The HOME total consists of an estimated \$58,520 which is the City's portion of the Consortium's appropriation, in addition to \$14,630 for the City's 25% required match, \$19,357.13 in HOME EN available after PI applied, and \$3,214.26 in program income carry forward. Minutes from the meetings are attached which outline the recommendations made. It is important to note that all projects went through an extensive review by the CDBG/HOME Task Force as a result of an RFP process.

Priority Neighborhood – The FY 2017-2018 Priority Neighborhood is the 10th and Page Neighborhood. The 10th and Page Priority Neighborhood Task Force has recommended several projects to improve the streetscape and pedestrian safety along the 10th Street Corridor and within the 10th & Page Neighborhood. The Task Force has set the following as priorities, thus far: 1) Pedestrian improvements at the 10th St NW and West St intersection; 2) Pedestrian improvements at the 10th St NW & Page St intersection; 3) Beautification efforts at 8th Street and Hardy Drive; and 4) Lighting improvements on the west end (dead end) of Page Street. The Task Force will continue to meet on an as needed basis to discuss additional priorities and improvement projects as needed.

Economic Development Projects – Council set aside FY 17-18 CDBG funding for economic development Activities. Members of the Strategic Action Team reviewed applications for economic development. Projects recommended for funding include:

- Community Investment Collaborative: funds are proposed to be used to provide scholarships to assist 20 entrepreneurs hoping to launch their own micro-enterprises.

Public Service Programs – The CDBG/HOME Task Force has recommended several public service programs. Programs were evaluated based on Council's priority for workforce development and quality childcare. Funding will enable the organizations to provide increased levels of service to the community. Projects recommended for funding include:

- City of Promise - Enroll to Launch Program: Estimated benefits include increased participation in parenting education and support, access to quality childcare and preschool enrollment and access to quality after-care for 20 families;
- OAR – Re-entry Services: Estimated benefits include supportive services for 100 recently released offenders to assist with recidivism; and
- United Way Childcare Scholarships: Estimated benefits include childcare scholarships for 2-3 families.

Housing Projects: The CDBG/HOME Task Force recommended funding to programs that support down payment assistance. Estimated benefits include 11-13 newly supported affordable

units.

Administration and Planning: To pay for the costs of staff working with CDBG projects, citizen participation, and other costs directly related to CDBG funds, \$74,261 is budgeted.

Program Income/Reprogramming: For FY 2017-2018, the City has \$19,357.13 in HOME EN available after PI applied and \$3,214.26 in HOME PI carryforward to be circulated back into the HOME budget. There are also completed projects that have remaining CDBG funds to be reprogrammed amounting to \$42,268.31. These are outlined in the attached materials.

Adjusting for Actual Entitlement Amount: Because actual entitlement amounts are not known at this time, it is recommended that all recommendations are increased/reduced at the same pro-rated percentage of actual entitlement to be estimated. No agency's EN amount will increase more than their initial funding request.

Community Engagement:

A request for proposals was held for housing, economic development, public facilities and public service programs. Applications received were reviewed by the CDBG Task Force or SAT. Priority Neighborhood recommendations were made by the 10th and Page CDBG Task Force.

Alignment with City Council's Vision and Strategic Plan:

Approval of this agenda item aligns directly with Council's vision for Charlottesville to have **Economic Sustainability and Quality Housing Opportunities for All.**

Budgetary Impact: Proposed CDBG projects will be carried out using only the City's CDBG funds. The HOME program requires the City to provide a 20% match (HOME match equals ¼ of the EN amount). The sum necessary to meet the FY 2017-2018 match is \$14,630, which will need to be appropriated out of the Charlottesville Housing Fund (CP-0084) at a future date.

Recommendation:

Staff recommends approval of the CDBG and HOME projects as well as the reprogramming of funds. Planning Commission recommended approval of the proposed budget with any percent changes to the estimated amounts being applied equally to all programs and also recommended that if less funding is available, than estimated, then the funding be deducted from PHA's funding allocation and if more funding is available that it be added to PHA's funding allocation (so that Habitat for Humanity is fully funded). HOME program income will also be applied to FY 17-18 projects. All Planning Commissioners present at the meeting voted. Staff also recommends approval of the appropriations. Funds will not be available or eligible to be spent until HUD releases funds on July 1, 2017. If the funds are not released on that date, funds included in this budget will not be spent until HUD releases the entitlement.

Alternatives:

No alternatives are proposed.

Attachments:

2017-2018 Proposed CDBG and HOME Budget

Appropriation Resolution for CDBG funds

Appropriation Resolution for HOME funds

Appropriation Resolution for HOME PI funds

Appropriation Resolution for CDBG reprogrammed funds

Summary of RFPs submitted

Minutes from CDBG Task Force meetings

2017-2018 CDBG and HOME BUDGET ALLOCATIONS
RECOMMENDED BY CDBG/HOME TASK FORCE and SAT: 1/10/17, 1/11/17, 1/19/17, and 1/25/17
RECOMMENDED BY PLANNING COMMISSION: 3/1/2017
APPROVED BY CITY COUNCIL:

I.	PRIORITY NEIGHBORHOOD		
	A. 10 th and Page		\$271,120.31*
II.	ECONOMIC DEVELOPMENT PROJECTS		
	A. Community Investment Collaborative Scholarships		\$12,500
		ECONOMIC DEVELOPMENT TOTAL:	\$12,500
III.	PUBLIC SERVICE PROJECTS		
	A. City of Promise – Enrolled to Launch		\$17,000
	B. OAR – Re-entry Services		\$14,696
	C. United Way – Child Care Subsidies		\$24,000
		SOCIAL PROGRAMS TOTAL:	\$55,696 (15% EN)
IV.	ADMINISTRATION AND PLANNING:		
	A. Admin and Planning		\$74,261 (20% EN)
		GRAND TOTAL:	\$413,577.31
		ESTIMATED NEW ENTITLEMENT AMOUNT:	\$371,309
		REPROGRAMMING:	\$42,268.31

* Funding includes program income/reprogrammed funds

2017-2018 HOME BUDGET ALLOCATIONS

A.	Habitat – Down payment Assistance	\$50,000
B.	PHA – Down payment Assistance	\$45,721.39*
	TOTAL:	\$95,721.39
	ENTITLEMENT AMOUNT:	\$58,520
	ESTIMATED EN AVAILABLE AFTER PI APPLIED:	\$19,357.13
	PI CARRY FORWARD TO BE APPLIED TO PROJECTS:	\$3,214.26
	LOCAL MATCH:	\$14,630

* Includes estimated EN available after program income applied and program income carry forward

**APPROPRIATION OF FUNDS FOR
THE CITY OF CHARLOTTESVILLE'S 2017-2018
COMMUNITY DEVELOPMENT BLOCK GRANT - \$413,577.31**

WHEREAS, the City of Charlottesville has been advised of the approval by the U.S. Department of Housing and Urban Development of a Community Development Block Grant (CDBG) for the 2017-2018 fiscal year in the total amount of \$413,577.31 that includes new entitlement from HUD amounting to \$371,309.00, and previous entitlement made available through reprogramming of \$42,268.31.

WHEREAS, City Council has received recommendations for the expenditure of funds from the CDBG Task Force, the SAT, the 10th and Page Priority Neighborhood Task Force and the City Planning Commission; and has conducted a public hearing thereon as provided by law; now, therefore

BE IT RESOLVED by the City Council of Charlottesville, Virginia, that the sums hereinafter set forth are hereby appropriated from funds received from the aforesaid grant to the following individual expenditure accounts in the Community Development Block Grant Fund for the respective purposes set forth; provided, however, that the City Manager is hereby authorized to transfer funds between and among such individual accounts as circumstances may require, to the extent permitted by applicable federal grant regulations.

PRIORITY NEIGHBORHOOD

10th and Page – Pedestrian safety and accessibility improvements \$271,120.31

ECONOMIC DEVELOPMENT

Community Investment Collaborative Scholarships \$12,500

PUBLIC SERVICE PROGRAMS

United Way – Childcare Subsidies \$24,000

City of Promise – Enrolled to Launch Program \$17,000

OAR Re-entry Services \$14,696

ADMINISTRATION AND PLANNING:

Admin and Planning \$74,261

TOTAL \$413,577.31

BE IT FURTHER RESOLVED that this appropriation is conditioned upon the receipt of \$371,309 from the Department of Housing and Urban Development.

The amounts so appropriated as grants to other public agencies and private non-profit, charitable organizations (sub-recipients) are for the sole purpose stated. The City Manager is authorized to enter into agreements with those agencies and organizations as he may deem advisable to ensure that the grants are expended for the intended purposes, and in accordance with applicable federal and state laws and regulations; and

The City Manager, the Directors of Finance or Neighborhood Development Services, and staff are authorized to establish administrative procedures and provide for mutual assistance in the execution of the programs.

**APPROPRIATION OF FUNDS FOR
THE CITY OF CHARLOTTESVILLE'S 2017-2018
HOME FUNDS \$92,507.13**

WHEREAS, the City of Charlottesville has been advised of the approval by the U.S. Department of Housing and Urban Development of HOME Investment Partnerships (HOME) funding for the 2017-2018 fiscal year;

WHEREAS, the region is receiving an award for HOME funds for fiscal year 17-18 of which the City will receive \$58,520 to be expended on affordable housing initiatives such as homeowner rehab and downpayment assistance.

WHEREAS, it is a requirement of this grant that projects funded with HOME initiatives money be matched with local funding in varying degrees;

BE IT RESOLVED by the Council of the City of Charlottesville, Virginia that the local match for the above listed programs will be covered by the Charlottesville Housing Fund (account CP-0084 in SAP system) in the amount of \$14,630; the resolution for this appropriation with come forward after July 1, 2017. Project totals also include previous entitlement made available through program income of \$19,357.13. The total of the HUD money, program income, and the local match, equals \$92,507.13 and will be distributed as shown below.

PROJECTS	HOME EN	% MATCH	MATCH	OTHER	TOTAL
Habitat for Humanity, DPA	\$40,000	20 %	\$10,000		\$50,000
PHA, DPA	\$18,520	20 %	\$4,630	\$19,357.13	\$42,507.13

* includes Program Income which does not require local match.

BE IT FURTHER RESOLVED that this appropriation is conditioned upon the receipt of \$58,520 from the Department of Housing and Urban Development.

The amounts so appropriated as grants to other public agencies and private non-profit, charitable organizations (subrecipients) are for the sole purpose stated. The City Manager is authorized to enter into agreements with those agencies and organizations as he may deem advisable to ensure that the grants are expended for the intended purposes, and in accordance with applicable federal and state laws and regulations; and

The City Manager, the Directors of Finance or Neighborhood Development Services, and staff are authorized to establish administrative procedures and provide for mutual assistance in the execution of the programs.

APPROPRIATION
HOME INVESTMENT PARTNERSHIPS PROGRAM
\$3,214.26

WHEREAS, The City of Charlottesville has received \$3,214.26 from Charlottesville Redevelopment and Housing Authority as repayment for loans made through the HOME Investment Partnerships Program (HOME) program in prior years;

NOW, THEREFORE BE IT RESOLVED by the Council of the City of Charlottesville, Virginia that the sum of \$3,214.26 is hereby appropriated in the following manner:

\$3,214.26 Revenue

Fund: 210 IO: 1900280 HOME PI Carry-forward G/L: 451070 HOME PI

\$3,214.26 Expenditures

Fund: 210 IO: 1900280 HOME PI Carry-forward G/L: 530670 Other Contractual Services

APPROPRIATION
AMENDMENT TO COMMUNITY DEVELOPMENT BLOCK GRANT ACCOUNT
Reprogramming of Funds for FY 17-18

WHEREAS, Council has previously approved the appropriation of certain sums of federal grant receipts to specific accounts in the Community Development Block Grant (CDBG) funds; and

WHEREAS, it now appears that these funds have not been spent and need to be reprogrammed, and therefore,

BE IT RESOLVED by the Council of the City of Charlottesville, Virginia that appropriations made to the following expenditure accounts in the CDBG fund are hereby reduced or increased by the respective amounts shown, and the balance accumulated in the Fund as a result of these adjustments is hereby reappropriated to the respective accounts shown as follows:

Program Year	Account Code	Purpose	Proposed Revised Reduction	Proposed Revised Addition	Proposed Revised Appropriation
14-15	P-00001-05-03	C4K Websites	\$37,340.08		
15-16	P-00001-05-08	Seedplanters	\$150.29		
15-16	P-00001-02-72	City of Promise	\$2,624.77		
15-16	P-00001-05-12	ReadyKids Facility Project	\$1,556.12		
16-17	P-00001-02-79	OED GO Driver	\$597.05		
16-17	P-00001-05-19	Priority Neighborhood		\$42,268.31	\$42,268.31
		TOTALS:	\$42,268.31	\$42,268.31	\$42,268.31

CDBG/HOME RFP SUBMISSIONS - FY 2017-18

Organization, (Program Title)	Applicant	Program Description	Funding Requested
City of Promise	Sarad Davenport	Enroll to Launch	\$20,000
OAR	Pat Smith	Reentry Services	\$20,000
PACEM	Dawn Grzegorzcyk	Shelter to Home	\$12,000
United Way	Barbara Hutchinson	Child Care Scholarships	\$28,500
			\$80,500
Organization, (Program Title)	Applicant	Program Description	Funding Requested
Community Invest. Collaboration	Stephen Davis	Entrepreneurship-training	\$12,500
			\$12,500
Organization, (Program Title)	Applicant	Program Description	Funding Requested
City of Charlottesville Dept of Parks & Recreation	Chris Gensic	Crescent Halls sidewalk connection	\$10,000
			\$10,000
Organization, (Program Title)	Applicant	Program Description	Funding Requested
Habitat for Humanity	Ruth Stone	Project 20 - Downpayment Assistance	\$40,000
PHA	Karen Reifenberger	Downpayment Assistance	\$58,520
			\$98,520
Social	Economic Development	Public Facilities	Housing Programs

CDBG TASK FORCE

Minutes

Neighborhood Development Services Conference Room, City Hall

Tuesday, January 10, 2017

2:00pm – 3:00pm

Attendance:

Task Force Members	Present	Absent
Taneaia Dowell	X	
Howard Evergreen	X	
Kathy Johnson Harris	X	
Joy Johnson		X
Sherry Kraft	X	
Kelly Logan	X	
Sarah Malpass	X	
Megan Renfro		X
Matthew Slaats	X	
Tierra Howard (staff)	X	
Others:		

The meeting began at 2:00pm. The group members began introductions.

Task Force Questions

Staff provided asked the Task Force (TF) if there were any questions before reviewing scores. Tierra Howard (TH) explained that the SAT reviews the economic development proposals and that they would be reviewing the CIC proposal. Sherry asked for an explanation of question #5 regarding how the point system works. TH explained that recipients of FY 15 funds could get up to 10 points on #5, non-recipients or new applicants would receive 5 points (neutral score) and then would have the opportunity to gain 5 additional points in the next question (posed to non-recipients of FY 15 funds).

There was discussion about how many of the proposals received (from applicants that received FY 15 funds) did not answer #5 or report on FY 15 outcomes. TH explained that she has the data on FY 15 outcomes, however, TH expressed that it is up to the TF to decide if it would like to provide a score based solely on the application response versus scoring on additional information provided by staff or other group members. Howard Evergreen (HE) explained that he would like to have additional information from staff on outcomes because he would not like to penalize an applicant on a misunderstanding. Sarah Malpass (SM) explained that OAR and PACEM answered the question fully but she did not see the information from City of Promise. TH explained that she could share the information.

Taneaia Dowell (TD) asked if the TF is supposed to utilize the beneficiary information that was included in the staff report. TH explained that some of the information in relation to beneficiaries was unclear in the proposals, therefore questions about the number of those to be served were sent out as applicant questions and responses were distributed to the

group. TH explained that as the TF reviews the applications, she can share the responses with the group.

SM explained that for item #7 on the evaluation, she was unsure how to evaluate the proposals based on key words of “evidence-based practices” and “best practices and/or research) because many of the proposals did not include the key words. TH explained that difference between best practices, solid research on the effectiveness of strategies, and evidence-based strategies. She explained that evidence-based strategies would be strategies in which there are proven scientific (specific) results and best practices would be using models from other programs/places that were successful (more of a general consensus). Matthew Slaats (MS) explained that evidence-based strategies would have numbers to support the strategies whereas best practices would be more of a verbal suggestion or idea. TH explained that next year it would be helpful to have the questions of clarification from the TF when the evaluation tool is sent out so that the tool can be revised or staff can provide clarification prior to the evaluation of proposals. The TF agreed that the evaluation tool improved from the previous year.

HE stated that it is difficult to determine organizational capacity on paper. Kelly Logan (KL) explained that some of the items on the evaluations are hard to quantify into a number, however, she was in hopes that the discussion would help with quantifying a score. TH explained that meeting with the organization is an option. HE explained that he thinks that the group has enough information to make an informed decision.

Review of Preliminary Scores for Public Service Proposals

City of Promise – Enrolled to Launch Proposal

The group shared preliminary scores for items #1 – 10 on the evaluation tool and discussed why certain scores were given.

- [#2] Sherry Kraft (SK) explained that the domain of the program and what it is trying to accomplish is broader than childcare and the program has proven to fit within the goals of the Consolidated Plan and priority neighborhood and the goals are very broad for the families (children and parents) and it is hitting the mark. HE stated that the broadness of the response made it more difficult to provide a high score. TD explained that she looked at the Council Priority, however, SK explained that the specific question is asking about the high priority need. HE explained that the question asks the applicant to demonstrate how the program will address the need and it was so broad that he was unable to determine how the program would meet the need. TD disagreed and stated that they explained what they were going to do and how they would meet the needs (help enroll children) and that the program is helping the City schools in meeting their goals. MS explained that he scored low because he was confused. TH explained that the question is specifically related to the high priority need and not consolidated plan goal (in previous question). SM asked what the reasoning is for asking if it meets a consolidated plan goal, TH explained that the program has to meet a consolidated plan goal to be eligible for CDBG. SM explained that the TF should not be so rigid in scoring because the program ties to supporting job improvement and quality childcare. HE explained that he had difficulty identifying what the broader CoP programming was, TD explained that the proposal did a good job in identifying what it offers and the

successes. MS explained that there was no place on the evaluation to evaluate grammatical errors and TD stated that that issue does not give her heartburn.

- [#3] SK explained that she was confused because the timeline was not clear. TH explained that she believes that the dates are an oversight error. KL explained that she did not see as much detail. The group decided that they would like to stick to providing an average score versus a consensus score.
- [#4] MS explained that the proposal did not clearly describe the answer to the question. KL agreed. SK asked the group, how is performance indicators being define and she suggested that the TF is probably not defining it in the same way. SK stated that the application provided specific answers related to reading benchmarks (reading assessments) and no children will enter kindergarten with less than 15 hours/week of preschool. SK stated that she may have a biased view because she reviews reports that have the information in them so she knows it but CoP did not explain it in their proposal. SM explained that the application did a good job in showing how CoP is shifting the bar. HE explained that he felt that the discussion is important for someone who does not know about CoP.
- [#5] TD explained that she was unable to identify actual outcomes from the application, however, the staff report provided the actuals. TD asked if we are supposed to go by what is provided in the application versus what the staff report provided. HE stated that he thinks that other information should be included in the evaluation process and that we should not be so rigid. Kathy Johnson Harris (KJH) stated that the group could have asked staff to find out the actual outcomes from CoP, however, staff provided the information upfront therefore the information should be used. KL stated that it was not reported, so she gave a score of a 0. TH explained that they were not the only applicant that missed the question. TD stated that she agreed with KL. She stated if we are only using what was provided in the application, then the score for her is a 0. TD suggested that the group provide a decision on what information to use to provide a score. SM stated that maybe we should provide some flexibility because they were not the only applicant who missed the question, she suggested that perhaps there was confusion about the question. SM stated that she would provide a higher score due to the fact that they did meet their goals, however, she suggested that next year it should be made clear to the applicant that if the applicant does not provide an answer as to how it met its goals and of outcomes of the previous funding, perhaps they should be penalized/disqualified from the process. SM stated that CoP did not answer the question but they did provide outcome data in other sections. KJH asked if staff can provide the applicants feedback to brush up on skills so that if applicants apply for other grants, they will have that knowledge.
- [#7] TD explained that some of the needs were identified in other areas,
- [#8] HE stated that he could not identify the rigorous evaluation score in the application. SK stated that they did adequately explain their evaluation system. KL stated that it was hard to determine the rigorous nature of the evaluation system in the application. TD explained that they did provide outcome information under question #19. SK stated that they explained how they are using a data system similar to other promise neighborhood programs and also working with City schools to report on data/evaluate. KL stated that she fully supports CoP's efforts and if it was a yes or no of whether or not to provide funding, she would say yes, however, she felt as though the application did not answer a lot of the questions. KL stated that there is a lot of information that they could provide, but it is not being

provided in the application. MS feels that the application perhaps was not written by an experienced grant writer (weak application). SK stated that perhaps the group was looking at different things but she felt as though they described their data collection system but others felt it was not adequate as a description of their evaluation system. TH stated that perhaps the source of confusion amongst the group is that the question asked them how the evaluation system informs their program and that information was not clear.

- [#9] SK stated it's hard to assess the financial benefits as they are long-term. HE stated that the conversation has helped increase his score. MS stated that it is hard to assess financial benefits in this program because benefits occur long term, however, other applications were able to assess the financial benefits (where this application was lacking that information). TD stated that the program budget leverages 16 percent of alternative funds, which does not seem like a lot of funding from other sources, however, she stated that she can see how the program could assist with generating revenue for the City long-term but the application did not answer the question or provide enough detailed information. SM explained that she felt like the application did not use key words from the question to answer the questions.
- [#10] SM stated that the application did not mention MOU or formal partnership agreement. SK stated that they do work with ReadyKids and the school system, which was mentioned in the application.
- [#11] SM stated that since the program is targeted outside of the SIA, she did not know how to answer it. KJH stated that it is outside of the SIA, however, the majority of the kids that they are serving are transient. SM suggested that for next year we may want to change the question. SK asked if this question was in place to differentiate the SIA from the priority neighborhood. TH explained that when Council set priorities they specifically stated that they wanted to see workforce development funds tied towards PHA and CRHA residents within the SIA area. There was a discussion about whether the other applications specifically stated that they would assist beneficiaries living within the SIA area. SM stated that OAR did specifically discuss doing outreach in the SIA area. HE stated that OAR's application stated that OAR did not describe that it would be using the funds to specifically target residents within the SIA area.

KL stated that we had an intense discussion about how to score applications based on specific facts and information provided. She stated that she had framed her scoring based upon last year's discussion regarding using facts and information provided in the proposal. She stated that this year, it seems as though we are not providing scores based on the information provided in the proposal (more flexible). She stated that the group needs decide what approach it will be taking to score the evaluations (we are not being consistent). SM stated that she believes that we have not ever decided on an approach. MS stated that it would be helpful for staff to take the averages and focus on numbers that the group does not agree on. KJH stated that she agrees with KL, however, when you have an open end to discuss, it allows you to be flexible. TD stated that she is trying to leave out her personal knowledge about the organization and she is using the proposal to score. SM asked if we can submit out scores based upon the application submissions and then discuss flexibility about the scores that have major differences. SK asked if any of the groups requested technical assistance. TH stated that PACEM was the only organization that she met with. SK stated that she is okay with the approach that SM stated. SK stated that she

was looking for the answer in the application under different questions. TH stated that she will tabulate all TF member scores, distribute them to the TF, point out the major point differences (3-4 points), and then the TF can focus discussion on areas where scores differed and then TF members who wish to change their scores can do so. TD stated that we just ask if we can go off of the information that was provided. KJH stated that when she evaluated the applications, that she used what was provided in the application. She stated that if we submit forms to TH and she tabulates them (based on the submission), then we can discuss the areas where there are differences and that should satisfy TD and KL's concerns. MS stated that the larger concern is that the estimated budget is \$55,696 and we have requests of up to \$80,000. He stated that we should move quickly through the evaluations and focus more on funding amounts/recommendations.

The meeting adjourned at 3:15pm.

CDBG TASK FORCE

Minutes

Neighborhood Development Services Conference Room, City Hall

Thursday, January 19, 2017

2:00pm – 3:30pm

Attendance:

Task Force Members	Present	Absent
Tanea Dowell	X	
Howard Evergreen	X	
Kathy Johnson Harris	X	
Joy Johnson		X
Sherry Kraft	X	
Kelly Logan	X	
Sarah Malpass	X (via phone)	
Megan Renfro		X
Matthew Slaats		X
Tierra Howard (staff)	X	
Others:		

The meeting began at 2:00pm. Tanea Dowell (TD) suggested that staff provide the Task Force (TF) with a map of the SIA next year.

Review of Preliminary Scores for Public Service Proposals

Tierra Howard (TH) reviewed the preliminary scores. After discussion, the scores were as follows:

United Way 86
City of Promise (CoP) 86
OAR 84
PACEM 71

TD stated that she struggled with the identifying answers to the budget-related questions. TD expressed that some of the proposals did not provide a clear/detailed line item budget. Howard Evergreen (HE) stated that United Way's budget is straightforward because they are requesting funding for childcare scholarships. HE agreed that it was difficult to identify what the CDBG funding would be used for in many of the proposals. HE stated that he could not identify what PACEM wanted the funding for other than to use CDBG to supplement the organizational budget. Sherry Kraft (SK) questioned if CDBG funds are supposed to target a discrete activity and if it is legitimate to fund a position for "X" number of hours with CDBG funds. TH stated that using CDBG funds to fund a position that is providing a direct service to eligible beneficiaries is an eligible activity under the HUD regulations. HE stated that he would be more inclined to fund applicants who can demonstrate specifically "how" the CDBG funds will be used.

SK stated that the scoring criteria related to outreach and services provided to residents within the Strategic Investment Area (SIA) puts CoP at a disadvantage because their services are limited to a specific geographic area. SK suggested that maybe the request for proposal should state that the City will not provide funding to organizations that do not serve or do outreach to residents within the SIA. TH explained that the application was not limited to only those serving or doing outreach to residents within the SIA, however, the evaluation tool allowed for an applicant to gain additional points. HE explained to SK that the scoring criterion allows the applicant to gain bonus points. Sarah Malpass (SM) asked TH if she could elaborate on City Council's push for targeting funds to SIA residents, which she explained is different from how applications were evaluated last year. She stated that in previous years, applicants were encouraged to target funds towards residents who live in the 10th & Page Neighborhood which was the current priority neighborhood. TH stated that City Council sets the CDBG & HOME priorities every year and that for FY 17-18, Council set a priority that emphasized the targeting of economic development and workforce development activities to CRHA and PHA residents that live in the SIA. TH explained that the priorities are used as directives/guidance that the TF must follow.

Kelly Logan (KL) stated that it appears as though the scores reflect expectations of where each of the applicants should have scored. She stated that she felt as though PACEM did not meet the requirements, therefore the TF should not recommend funding for PACEM. She suggested that the TF should focus on funding amounts for the top three scoring organizations (United Way, CoP, and OAR). The TF agreed with KL. Kathy Johnson Harris (KJH) and HE agreed with KL and stated that they also felt like the scores came out as expected.

HE stated that PACEM's application indicates that the organization has \$175,000 in cash. HE also stated that PACEM had the lowest scoring application. SK agreed that PACEM's application was an outlier. The TF agreed to not consider PACEM's application for funding.

SK inquired about the number of beneficiaries to be served by United Way. TH explained that initially, United Way proposed to serve over 20 beneficiaries by subsidizing childcare costs for each child, however United Way could fully fund three scholarships for three beneficiaries if they received the requested amount.

TH explained that she had one concern with CoP being able to expend the amount of requested funds (\$20,000) within the required timeframe. She stated that CoP had funds leftover from FY 15-16 and unlike other CDBG categories, public services funds cannot be rolled over to the following year due to the annual budget cap on public service activities. TH stated that she was unclear on how many total hours would be charged to CDBG within the fiscal year. TH explained that she sent a question to CoP requesting that they outline the details on total CDBG hours, however, she did not receive the appropriate response.

HE stated that he feels that if CoP cannot explain how they will budget to expend the full funding request at \$20,000, then perhaps the reduction from CoP could be used to increase the funding amount for United Way.

KJH explained that she feels that OAR is going to receive funding no matter what. She stated that the funding should be divided in three ways in accordance with the ranking scores.

HE stated that according to the application, the CoP did include other funding sources (other than CDBG) for the Enrolled to Launch Program. He stated that OAR may be able to find other funds, however, for CoP, he does not know how they would be able to function if their funding amount was reduced by \$4,000 or \$5,000.

KL stated that she would like to fully fund United Way because there is a high need for childcare. TD stated that if you don't have childcare, then you are unable to work and childcare is tied to workforce development. She stated that she feels like OAR may be able to identify alternative funding. KJH stated that she feels like United Way can find alternative funding (not OAR - as she previously suggested). HE stated that United Way always has a waiting list and if the TF makes a recommendation to fully fund United Way, then it's possible that they will be able to serve three more beneficiaries from the waiting list. KL stated that the Department of Social Services (DSS) has a waiting list for childcare assistance as well and that if clients can't get the childcare assistance from DSS, then United Way is the only other option.

TD stated that if you invest into childcare, then you are preventing the need for OAR services in the long run. HE asked the group about the average cost of childcare. The TF stated that it is very expensive. TD stated that childcare costs more than college tuition. KJH stated that she believes that childcare is very important.

SM stated that she agrees that United Way can find alternative funding sources. She stated that she scored OAR as the highest because they had a good application. She stated that all of the services by each of the applicants are valuable to the community. She added that when she looks at the difference between fully funding United Way and CoP, that she would be inclined to fully fund CoP because wrap around services are so important and that if the TF does not recommend fully funding United Way, United Way will most likely be able to still fully fund the scholarships.

TH reviewed CoP's outcomes from previous years in relation to the proposed outcomes and the amount of requested funding for FY 17-18. TH explained that if the group decided to reduce the funding amount for CoP, then CoP would probably still be able to operate the program, but may not be able to serve as many beneficiaries as proposed. KL stated that she feels like CoP did not demonstrate the need in the application and did not report on outcomes.

SK stated that she feels that the three proposals have worthy requests and that we should fund them to some extent. SK stated that CoP is trying to grow with the Enroll to Launch program, OAR is trying to sustain their services, and United Way has been a great asset with providing childcare scholarships.

SK suggested that the TF consider not fully funding all of the requests, but reducing the requests by some amount. TD stated that she recalls a discussion from last year about fully funding requests and KL added that the discussion was about whether or not organizations can provide the proposed service with reduced funding.

TH suggested that the group come up with options for voting on how to divide the funding amounts.

- TH asked the group to raise hands and/or vote yes if they would like to equally divide the \$55,696 by three and each agency would receive \$18,565. There were no “yes” votes out of six votes for this option.
- TH asked the group if the top two scoring agencies should be fully funded. There were two “yes” votes out of six votes for this option.
- TH asked the group to vote on a proportional reduction with some reduction for the top two agencies and more of a reduction for the lowest scoring organization. There were three “yes” votes (HE, SM, SK) out of six for this option.

KL stated that the scores are so close that she suggests splitting the funding equally amongst the three. SK stated that the group would be eliminating more funding from United Way if the group decided to equally divide the funding.

TD asked if the TF recommends reducing funding from CoP, then would CoP be able to still operate the Enroll to Launch program. TH suggested that the TF review CoP’s budget. She stated that if the TF recommends reducing CoP’s request, then, there would be a reduction of CDBG hours for the Enroll to Launch coach and/or the community connections coordinator.

On a motion by SK, seconded by TD, the CDBG Task Force unanimously approved the CDBG public services funding recommendations as follows:

- Fund United Way at \$24,000; and
- Fund CoP at \$17,000; and
- Fund OAR at \$14,696.

TH stated that if the City receives less funding than estimated, then, each organization’s funding recommendation will be reduced equally (proportionately). The TF agreed.

TD suggested that staff inform each applicant that it is very important for them to answer the questions. TD stated that the TF puts a lot of hard work into the applications to make funding recommendations. KJH asked TH if she could help the applicants by providing technical assistance. She also suggested that staff provide helpful grant writing tips to the applicants. TH mentioned that she provided a mandatory technical assistance workshop to all of the applicants. HE suggested that TF members attend the mandatory workshop and provide feedback about their experience.

The meeting adjourned at 3:30pm.

CDBG TASK FORCE

Minutes

Neighborhood Development Services Conference Room, City Hall

Wednesday, January 25, 2017

2:00pm – 2:30pm

Attendance:

Task Force Members	Present	Absent
Tanea Dowell	X	
Howard Evergreen	X	
Kathy Johnson Harris	X	
Joy Johnson		X
Sherry Kraft	X	
Kelly Logan	X	
Sarah Malpass		X
Megan Renfro		X
Matthew Slaats		X
Tierra Howard (staff)	X	
Others:		

The meeting began at 2:00pm. The Task Force (TF) decided not to fund the City of Charlottesville Department of Parks and Recreation proposal as the project scored very low at a 27. There was discussion about the proposal not being strong and not fitting in with the priorities.

Tierra Howard (TH) explained that the City has an extra \$20,000 of program income or recaptured funds to be added toward the estimated budget of \$58,520.

Review of Preliminary Scores for Housing Proposals

Habitat for Humanity and Piedmont Housing Alliance (PHA)

- Tierra Howard (TH) stated that the score for Habitat is 90 and the score for PHA is 84.
- TH shared Sarah Malpass' (SM) email to the group that if all other things are equal, her preference is to prioritize funding for programs that address the needs of Charlottesville's lowest-income residents. TH stated that maybe SM was indicating the maximum area median income (AMI) eligibility thresholds for those being served by Habitat is up to or below 60% of the AMI and the maximum area median income (AMI) eligibility thresholds for those being served by PHA is up to or below 80% of the area median income.
- Tanea Dowell (TD) stated that Habitat does receive some down payment assistance (DPA) from PHA. TH stated that specifically for their HOME DPA FY 17-18 project, the sources of funding are proposed to be \$40,000 from CDBG and \$64,000 from the Federal Home Loan Bank for DPA.
- Sherry Kraft (SK) stated that last year the City gave Habitat \$139,460 last year. TH stated that the reason why Habitat received that amount is because they were able

to show how they would commit the \$105,400 of recaptured funds by the July 21, 2016 deadline and the TF agreed that they outlined a specific plan/projects for how they would be able to do that.

- TD stated that she had a question about Habitat beneficiaries to be served. She stated that Habitat has proposed to assist 8 families with \$40,000 in HOME funds this year but they requested \$80,000 last year to assist 8 families in the previous year (more than half of the FY 17-18 request). Howard Evergreen (HE) stated that this year, Habitat is incorporating the Federal Home Loan Bank as an additional source of funding. TH also stated that the DPA amount per family is based upon need and is determined on a case by case basis.
- HE stated that Habitat has the ability to serve families that go below the 60% AMI and possibly serve families that make up to 40% AMI whereas PHA would probably not be able to do that given the different mortgage streams that they work with. He stated that when it comes to serving lower income families, Habitat is most likely able to do that.
- HE suggested that the TF fully fund Habitat and give PHA the amount of funding that is leftover (about \$38,000). SK agreed.

On a motion by TD, seconded by Kathy Johnson Harris (KJH), the CDBG Task Force unanimously approved the HOME funding recommendations as follows:

- Fully fund Habitat's request at \$40,000; and
- Fund PHA with the remaining balance at \$38,520; and
- If less funding is available, the TF recommends that the funding be deducted from PHA and if more funding is available that it be added to PHA.

The meeting adjourned at 3:15pm.

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 1, 2017
Action Required:	Request for Appropriation – Clark Elementary Safe Routes to School Appropriation
Presenter:	Amanda Poncy, Bicycle and Pedestrian Coordinator
Staff Contacts:	Amanda Poncy, Bicycle and Pedestrian Coordinator
Title:	Clark Elementary Safe Routes to School Appropriation - \$13,992

Background:

In 2013, the Virginia Department of Transportation (VDOT) awarded the City \$190,000 to reconstruct the Monticello Avenue and 6th Street intersection, as well as the Monticello and Rialto intersection, to increase visibility, shorten crossing distances, and provide access as part of a Safe Routes to School project for Clark Elementary. The grant also funded curb ramp and crosswalk improvements at the Belmont Avenue and Meridian intersection. The city awarded the construction contract to Vess Excavating and construction was completed in November 2016.

This appropriations is part of the VDOT project closeout process and seeks to reallocate VDOT project charges to construction costs.

Discussion:

As part of the original contract with VDOT the City was allowed to use up to \$174,800 for actual project construction expenses with the remaining balance estimated to cover VDOT's grant administration costs. Upon project closeout, VDOT charges were significantly less than originally budgeted (\$1,208 compared to \$15,200). This appropriations seeks to revise the original grant appropriation to allow the City to utilize an additional \$13,992 in grant funding (a total amount of \$188,792) to cover the actual construction costs.

Alignment with City Council's Vision and Strategic Plan:

Safe Routes to School supports Council's Vision to be a "Connected Community" and "America's Healthiest City and contributes to Goal 2 of the Strategic Plan. It further implements recommendations within the Comprehensive Plan (2013) and supports the City's Healthy Eating Active Living (HEAL) Resolution

Community Engagement:

Not applicable.

Budgetary Impact:

This appropriation will allow the City to reimburse VDOT for an additional \$13,992 to cover construction costs. Local CIP funds have been spent to cover the increased construction costs and a portion of these local funds will be reimbursed with this appropriation.

Recommendation:

Staff recommends approval and appropriation of the grant funds.

Alternatives:

If funds are not appropriated, the City would spend \$13,992 of local CIP funds to pay for construction costs.

Attachments:

Appropriation

APPROPRIATION

**Clark Elementary Safe Routes to School Appropriation
\$13,992**

WHEREAS, the City of Charlottesville, through Neighborhood Development Services, was been awarded \$190,000 from the Virginia Department of Transportation for the Safe Routes to School program; and

WHEREAS, \$174,800 of the grant funding was to be used for construction and \$15,200 was to go towards the administrative expenses from the Virginia Department of Transportation; and

WHEREAS, the administrative expenses from the Virginia Department of Transportation were \$13,992 less than anticipated, resulting in additional funding for actual project construction.

NOW, THEREFORE BE IT RESOLVED by the Council of the City of Charlottesville, Virginia, that the sum of \$13,992 is hereby appropriated in the following manner:

Revenue

\$13,992 Fund: 426 WBS: P-00801 G/L Account: 430120

Expenditures

\$13,992 Fund: 426 WBS: P-00801 G/L Account: 599999

BE IT FURTHER RESOLVED, that this appropriation is conditioned upon the receipt of \$13,992 from the Virginia Department of Transportation.

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 15, 2017
Action Required:	Appropriation
Presenter:	Mike Ronayne, Parks and Recreation
Staff Contacts:	Mike Ronayne, Parks and Recreation
Title:	Virginia Trees For Clean Water - \$5,500

Background:

The City of Charlottesville, through the Parks and Recreation Department, has been awarded a \$3,500 grant from Virginia Trees for Clean Water. This grant is administrated through the Virginia Department of Forestry. There is a required local match of at least \$3,500. A cash match of \$2,000 will be provided from the Parks Division operational budget and an in-kind match of \$2,250 will be provided by volunteer labor.

Discussion:

The grant will assist with ongoing efforts to manage invasive, undesirable plants in Pen Park by removing them and replacing the area with appropriate native trees and plants. Goats have been used in the past as part of the eradication process and large progress has already been made at Pen Park. This project is limited by manpower and funding, and this grant will help accelerate this ongoing project.

Alignment with City Council's Vision and Strategic Plan:

The project supports City Council's "Green City" vision by providing funds to replace undesirable trees and creating a more sustainable and healthy urban forest canopy in efforts to preserve and enhance the forested area of the City. The Pen Park Invasive Canopy Replacement Project satisfies several components of the Urban Forest Master Plan. It contributes to Goal 2 of the Strategic Plan, to be a safe, equitable, thriving and beautiful community, and objective 2.5, to provide natural and historic resources stewardship.

Community Engagement:

Charlottesville Parks and Recreation will be able to provide opportunities for the public to volunteer to plant trees with this grant. The Parks Division will be installing signage in this work area that explains the importance of removing invasive species and replacing them with native tree species and the impact it has on forest health and water quality in the community.

Budgetary Impact:

The funds will be expensed and reimbursed to a Grants Fund. The balance of funding, \$2,000, for the project will be transferred from the Parks Division. to pay for a Tree Maintenance Contract.

Recommendation:

Staff recommends approval of the appropriation of the grant funds.

Alternatives:

If grant funds are not appropriated, the Pen Park Canopy Replacement Project will be decelerated and will have to be funded entirely with local funds.

APPROPRIATION

Virginia Trees for Clean Water Grant

\$5,500

WHEREAS, the City of Charlottesville has received \$3,500 from the Virginia Department of Forestry through the Virginia Trees for Clean Water Grant in order to contribute to the Pen Park Canopy Replacement Project; and

WHEREAS, the City will contribute \$2,000 in funds from the Parks Department for cash-match, with the remainder match supplied by in-kind volunteer labor;

NOW, THEREFORE BE IT RESOLVED by the Council of the City of Charlottesville, Virginia that the sum of \$3,500 received from the Virginia Department of Forestry is hereby appropriated in the following manner:

Revenue

\$3,500	Fund: 209	IO: 1900281	GL: 430120
\$2,000	Fund: 209	IO: 1900281	GL: 498010

Expenditure

\$5,500	Fund: 209	IO: 1900281	GL: 599999
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Transfer

\$2,000	Fund: 105	CC: 3671001000	GL: 561209
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BE IT FURTHER RESOLVED, that this appropriation is conditioned upon the receipt of \$3,500 from the Virginia Department of Forestry.

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**CITY OF CHARLOTTESVILLE, VIRGINIA.
CITY COUNCIL AGENDA.**



Agenda Date:	May 15, 2017.
Action Required:	Approve Reimbursement Agreement.
Presenter:	Chris Cullinan, Director of Finance.
Staff Contacts:	Chris Cullinan, Director of Finance.
Title:	Reimbursement Agreement with Fluvanna County for Portion of Circuit Court Judge's Administrative Costs.

Background: The Charlottesville Circuit Court is a part of the 16th Judicial Circuit of Virginia. In addition the City, the Circuit includes Albemarle, Culpeper, Fluvanna, Goochland, Greene, Louisa, Madison, and Orange Counties. Five judges cover the Circuit.

As a result of growing caseloads, the Chief Judge has had to reassign judges to cover the various courts in the Circuit. In the past, one judge covered primarily Culpeper and sat on occasion in Fluvanna. As a part of this arrangement, Fluvanna reimbursed Culpeper for a portion of the judge's administrative costs. Due to growing caseload in Culpeper, the judge is now covering Culpeper full time. To cover the needs of Fluvanna, Charlottesville Circuit Court Judge Richard Moore has been sitting in Fluvanna as well as Charlottesville since July 1, 2016. On average, Judge Moore has been sitting one to two days a week in Fluvanna.

Discussion: As noted above, Fluvanna had been reimbursing Culpeper for a portion of the judge's administrative costs. For the current fiscal year, the administrative budget for Judge Moore totals \$76,700. This includes the salary and benefits for his administrative assistant and operational costs.

Through discussions between staff for the City and Fluvanna, Fluvanna has agreed to pay to the City twenty five percent (25%) of the administrative assistant's salary and benefits and ten percent (10%) of operational costs.

The Fluvanna Board of Supervisors approved this reimbursement agreement as a part of their Consent Agenda during their regular meeting on April 19, 2017.

Recommendation: Approval of the reimbursement agreement with Fluvanna County for a portion of the Circuit Court Judge's administrative costs.

Alignment with City Council's Vision and Priority Areas: This agreement aligns with Goal 4- Be a well-managed successful organization, specifically 4.2, Maintain strong fiscal policies.

Budgetary Impact: Based on past budget and actual totals for the Circuit Court Judge's administrative costs, Fluvanna's reimbursements to the City would average \$20,000 per year.

Alternatives: The City can elect to not be reimbursed for these costs and subsidize the judge's administrative costs for time spent in Fluvanna.

Attachments: Reimbursement Agreement

RESOLUTION

BE IT RESOLVED by the Council for the City of Charlottesville, Virginia, that the City Manager is hereby authorized to sign the following document, attached hereto, in form approved by the City Attorney or his designee.

Reimbursement Agreement between the City and Fluvanna County for a portion of the administrative costs incurred by the Charlottesville Circuit Court Judge's office in performing judicial duties for the Fluvanna County Circuit Court.

This agreement, made this _____ day of _____, 2017, by and between THE CITY COUNCIL OF THE CITY OF CHARLOTTESVILLE, a political subdivision of the Commonwealth of Virginia, (“Charlottesville”); and THE COUNTY OF FLUVANNA, a political subdivision of the Commonwealth of Virginia (“Fluvanna”).

WITNESSETH:

WHEREAS the City of Charlottesville and Fluvanna County are both located in the 16th Judicial Circuit of the Commonwealth and are served by the circuit courts thereof; and.

WHEREAS, by the current assignment of the judges of the 16th Judicial Circuit, the City of Charlottesville and Fluvanna are served by the Honorable Judge Moore; and.

WHEREAS the City of Charlottesville and Fluvanna have determined that Judge Moore needs secretarial services and that it is lawful and appropriate that they provide for such secretarial services for Judge Moore; and.

WHEREAS secretarial services includes the salary, benefits, and operating expenses of the Judge’s secretary as enumerated in the City’s annual adopted budget; and.

WHEREAS, based upon the existing caseload, it has been determined that it is most efficient that Judge Moore have his principal office in the City of Charlottesville, and the City of Charlottesville is willing and able to provide appropriate office space and to provide for secretarial services for Judge Moore; and.

WHEREAS the City of Charlottesville and Fluvanna have determined that based upon the time and resources spent on Fluvanna County cases, Fluvanna should contribute to a portion of the cost of providing such secretarial services;

NOW, THEREFORE, for and in consideration of the mutual covenants set forth hereinafter, and pursuant to the provisions of Virginia Code Section 15.2-1300, the parties hereby agree as follows:

- (1) City of Charlottesville agrees to provide for secretarial services for Judge Moore. Such services may be provided in any manner which may be determined to be acceptable by Judge Moore and the City of Charlottesville; provided, however, that the City of Charlottesville covenants that the manner of providing for such services shall be at all times lawful under the laws of the Commonwealth and of the United States.
- (2) Fluvanna agrees to pay to the City of Charlottesville twenty five percent (25%) of the administrative assistant’s salary and benefits and ten percent (10%) of operational costs providing for such services, as determined hereinafter.
- (3) In each year during which this agreement shall remain in effect, the City of Charlottesville shall provide to Fluvanna a proposed budget setting for Fluvanna’s share of the estimated amount necessary for the provision of such secretarial services. Such proposed budget shall be provided to Fluvanna prior to the adoption of Fluvanna’s annual budget, and in no event later than February 1 of each year. A final budget showing Fluvanna’s share shall be provided to Fluvanna not later than June 20 of each year.

- (4) Thereafter, the City of Charlottesville shall bill Fluvanna for its share of costs no later than September 30 in each year. Payment shall be due to the City of Charlottesville on or before January 1 of the following year.
- (5) This agreement shall be effective upon the execution hereof by both parties and shall thereafter remain in effect unless and until the parties, or either of them, shall terminate the same. Notice of such termination shall be made not later than June 1 in each year, to be effective for the fiscal year commencing on the 1st of July next succeeding. No such termination shall affect the obligations of the parties with respect to the fiscal year during which such notice is given. Notice shall be effective when mailed or delivered to the office of the County Administrator of the other party.
- (6) The obligations of the parties set forth hereinabove shall be subject to annual appropriation by each of them, respectively, in amounts sufficient to satisfy the same.

Witness the following signatures and seals the date first above written.

THE CITY COUNCIL OF THE
CITY OF CHARLOTTESVILLE.

BY: _____
Its Mayor.

ATTEST:

Maurice Jones, City Manager.

THE COUNTY OF FLUVANNA.

BY: _____
Its Chairman.

ATTEST:

Steven M. Nichols, County Administrator.

APPROVED AS TO FORM:

S. Craig Brown, City Attorney.

Frederick W. Payne, Fluvanna County Attorney.

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 1, 2017
Action Required:	Approval of Homeowner Tax Relief Grant Program
Presenter:	Todd D. Divers, Commissioner of the Revenue
Staff Contacts:	Todd D. Divers, Commissioner of the Revenue
Title:	Homeowner Tax Relief Grant – 2017

Background:

Attached is an ordinance for Council’s consideration for the Homeowner Tax Relief grant program for Calendar Year 2017, for certain low-and moderate-income homeowners. The program allows the owners of eligible homeowner-occupied properties grant amounts to be applied to real estate taxes due on the property for the second half of calendar year 2017.

Discussion:

Grant amount is tied to the adjusted gross income of the applicant. An applicant with a household income of \$0 - \$25,000 may receive a grant of \$525. An applicant with a household income of \$25,001- \$50,000 may receive a grant amount of \$375.

Alignment with City Council’s Vision and Priority Areas:

This aligns with the City Council’s Vision “...to be flexible and progressive in anticipating and responding to the needs of our citizens.”

Budgetary Impact:

Cost of this program is funded with the annual budget appropriation for Fiscal Year 2018 approved by Council.

Recommendation:

Approve proposed ordinance

AN ORDINANCE TO ESTABLISH A GRANT PROGRAM TO PROMOTE AND PRESERVE HOMEOWNERSHIP BY LOW- AND MODERATE-INCOME PERSONS WITHIN THE CITY OF CHARLOTTESVILLE

WHEREAS, effective July 1, 2006, §50.7 of the Charter of the City of Charlottesville authorizes City Council to make grants and loans of funds to low- or moderate-income persons to aid in the purchase of a dwelling within the City; and

WHEREAS, this City Council desires to offer a monetary grant for Fiscal Year 2018, to aid low- and moderate-income citizens with one of the ongoing expenses associated with the purchase of a dwelling, *i.e.* real estate taxes; and

WHEREAS, public funding is available for the proposed grant;

NOW, THEREFORE, effective July 1, 2017 and for calendar year 2017, the Charlottesville City Council hereby ordains:

Grant—provided.

(a) There is hereby provided to any natural person, at such person's election, a grant in aid of payment of the taxes owed for the taxable year on real property in the city which is owned, in whole or in part, and is occupied by such person as his or her sole dwelling. The grant provided within this section shall be subject to the restrictions, limitations and conditions prescribed herein following.

(b) If, after audit and investigation, the commissioner of revenue determines that an applicant is eligible for a grant, the commissioner of revenue shall so certify to the city treasurer, who shall implement the grant as a prepayment on the applicant's real estate tax bill due on December 5, 2017.

(c) The amount of each grant made pursuant to this ordinance shall be \$525 for taxpayers with a household income of \$0-25,000, and shall be \$375 for taxpayers with a household income from \$25,001-\$50,000, to be applied against the amount of the real estate tax bill due on December 5, 2017.

Definitions.

The following words and phrases shall, for the purposes of this division, have the following respective meanings, except where the context clearly indicates a different meaning:

(1) *Applicant* means any natural person who applies for a grant authorized by this ordinance.

(2) *Dwelling* means a residential building, or portion such building, which is owned, at least in part, by an applicant, which is the sole residence of the applicant and which is a part of the real estate for which a grant is sought pursuant to this ordinance.

(3) *Grant* means a monetary grant in aid of payment of taxes owed for the taxable year, as provided by this ordinance.

(4) *Spouse* means the husband or wife of any applicant who resides in the applicant's dwelling.

(5) *Real estate* means a city tax map parcel containing a dwelling that is the subject of an grant

application made pursuant to this ordinance.

(6) *Taxes owed for the current tax year* refers to the amount of real estate taxes levied on the dwelling for the taxable year.

(7) *Taxable year* means the calendar year beginning January 1, 2017.

(8) *Household income* means (i) the adjusted gross income, as shown on the federal income tax return as of December 31 of the calendar year immediately preceding the taxable year, or (ii) for applicants for whom no federal tax return is required to be filed, the income for the calendar year immediately preceding the taxable year: of the applicant, of the applicant's spouse, and of any other person who is an owner of and resides in the applicant's dwelling. The commissioner of revenue shall establish the household income of persons for whom no federal tax return is required through documentation satisfactory for audit purposes.

Eligibility and restrictions, generally.

A grant awarded pursuant to this ordinance shall be subject to the following restrictions and conditions:

(1) The household income of the applicant shall not exceed \$50,000.

(2) The assessed value of the real estate owned by the applicant shall not exceed \$365,000.

(3) The applicant shall own an interest in the real estate that is the subject of the application (either personally or by virtue of the applicant's status as a beneficiary or trustee of a trust of which the real estate is an asset) and the applicant shall not own an interest in any other real estate (either personally or by virtue of the applicant's status as a beneficiary or trustee of a trust of which the real estate is an asset).

(4) As of January 1 of the taxable year and on the date a grant application is submitted, the applicant must occupy the real estate for which the grant is sought as his or her sole residence and must intend to occupy the real estate throughout the remainder of the taxable year. An applicant who is residing in a hospital, nursing home, convalescent home or other facility for physical or mental care shall be deemed to meet this condition so long as the real estate is not being used by or leased to another for consideration.

(5) An applicant for a grant provided under this ordinance shall not participate in the real estate tax exemption or deferral program provided under Chapter 30, Article IV of the City Code (Real Estate Tax Relief for the Elderly and Disabled Persons) for the taxable year, and no grant shall be applied to real estate taxes on property subject to such program.

(6) An applicant for a grant provided under this division shall not be delinquent on any portion of the real estate taxes to which the grant is to be applied.

(7) Only one grant shall be made per household.

Procedure for application.

(a) Between July 1 and September 1 of the taxable year, an applicant for a grant under this

ordinance shall file with the commissioner of revenue, in such manner as the commissioner shall prescribe and on forms to be supplied by the city, the following information:

(1)the name of the applicant, the name of the applicant's spouse, and the name of any other person who is an owner of and resides in the dwelling.

(2)the address of the real estate for which the grant is sought;

(3) the household income;

(4)such additional information as the commissioner of revenue reasonably determines to be necessary to determine eligibility for a grant pursuant to this ordinance.

(b)Changes in household income, ownership of property or other eligibility factors occurring after September 1, but before the end of the taxable year, shall not affect a grant once it has been certified by the commissioner of the revenue, in which case such certified grant shall be applied to the subject real estate.

(c)Any person who willfully makes any false statement in applying for a grant under this division shall be guilty of a misdemeanor and, upon conviction thereof, shall be fined not less than \$25 nor more than \$500 for each offense.

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**CITY OF CHARLOTTESVILLE, VIRGINIA.
CITY COUNCIL AGENDA.**



Agenda Date:	May 15, 2017
Action Required:	Public Hearing for Utility Rates- Proposed Adoption is June 5, 2017
Presenter:	Lauren Hildebrand, Director, Public Utilities Sharon O’Hare, Assistant Finance Director, City of Charlottesville
Staff Contacts:	Christopher V. Cullinan, Director of Finance Lauren Hildebrand, Director, Public Utilities Sharon O’Hare, Assistance Finance Director Teresa Kirkdoffer, Senior Accountant
Title:	Proposed Utility Rates for FY2018

Background:

The City of Charlottesville owns and operates public utilities for water, wastewater, natural gas, and stormwater. The word “utility” comes from the Latin word “ūtilitās” which means “useful”. The usefulness of the City’s utilities includes:

- **Convenience** – Service is delivered directly to or from your home or business.
- **Reliability** – Service is provided within reach 24 hours a day, 7 days a week, 365 days a year with few or no interruptions in service.
- **Quality** – The City has taken the lead in promoting projects to enhance the quality of utility services provided. Examples include replacement of the water distribution and wastewater collection pipelines, use of granular activated carbon to improve water quality and odor reduction improvements at the Moores Creek Advanced Water Resource Recovery Facility.
- **Safety** - Protecting public health and safety is a core part of the City’s utility service. The City (in conjunction with our partners at the Rivanna Water and Sewer Authority and Albemarle County Service Authority) has an exceptional track record of providing water that meets or exceeds all federal and state standards for public health. The Natural Gas Division has a robust safety program for our customers and the public to be cautious working around natural gas pipelines and how to detect gas leaks.
- **Sustainability** – The City promotes conservation of natural resources through a number of programs including water conservation kits, low flow toilets, rain barrels, and programmable thermostats. The success of these programs is evident by the trend of reduced water and natural gas consumption per customer. Conservation is good for both the environment and customer’s wallets as lower usage lowers utility bills.

Utility services are essential and invaluable on a daily basis to us as both individuals and a community. Thoughtful, deliberate planning and sufficient financial resources ensures efficient and orderly maintenance and operation of these systems. This need for investment in our utility systems is not without cost but must be balanced with affordability.

The budgets for each of the utilities have been thoroughly examined for opportunities to reduce costs

without sacrificing service. Reductions are based on either historic spending patterns or sufficient monies already on hand as a result from carrying funds forward from previous fiscal years. As a result of cost reductions and an expanding customer base, water rates are remaining unchanged and wastewater rates are increasing by only 0.25%. The cost of natural gas is increasing after several years of decline. As a result, rates for natural gas are increasing 3%. For City residential customers who receive water, wastewater, and natural gas (approximately 87% of City residents), their total utility bill is projected to increase by a little more than 1%.

Each of the City's utilities is accounted for separately as enterprise funds. Enterprise funds are operated on a self-supporting basis, meaning that they are required to cover the full costs of providing its services. The City's utilities are funded solely through their rates and related fees and charges and are not subsidized with general tax revenues. The utilities do not operate on a for-profit basis. Utility rates are calculated annually to bring each fund to a break-even point. However, given variable factors, such as weather, usage, and number of customers, the utilities can generate either an operating surplus or deficit during any given year. Any annual surpluses or deficits are accounted for and remain within their respective fund.

The City of Charlottesville will adopt water, wastewater, and natural gas rates for the upcoming fiscal year beginning July 1, 2017 (FY2018). This is the public hearing for the proposed utility rates which are scheduled to be adopted by City Council on June 5th, 2017.

Discussion:

The City is proposing the following rates in the water, wastewater, and gas utility:

- \$54.51/1,000 cubic feet (cf) of water,
- \$74.83/1,000 cf of wastewater, and;
- \$72.09/8,000 cf of natural gas.

Utility customers continue to conserve water and natural gas which is both good for the environment and their utility bill. The average residential water customer is using 422 cf per month compared to 427 cf per month last year. Similarly, the average residential gas customer is using 4,611 cf compared to 4,878 cf last year. Based on these usage figures and the proposed utility rates, the average residential customer is projected to spend the following per month:

	Current	Proposed	\$ Change	% Change
Water	\$27.00	\$27.00	\$0.00	0.00%
Wastewater	\$35.49	\$35.58	\$0.09	0.25%
Gas	\$45.99	\$47.37	\$1.38	3.00%
TOTAL	\$108.48	\$109.95	\$1.47	1.36%

For City residential customers who receive water, wastewater, and natural gas (approximately 87% of City residents), their total utility bill is projected to be rise by \$1.47 per month. For residential customers who receive just water and wastewater service, their utility bill will increase by less than \$0.09 per month.

Budgetary Impact:

Not adopting the recommended rates would impact both the Utility Funds and the General Fund. The Utility Funds are self-sustaining and they are supported 100% by self-generated revenues. Not

adopting the full rates would result in unbalanced budgets for the Utility Funds. In addition, City Council has adopted the General Fund budget for FY2018, which includes transfers from the Utility Funds in the form of payments-in-lieu-of-taxes (PILOT) and indirect cost allocations. Not adopting the proposed rates would result in decreased revenues to the General Fund.

Recommendation:

Staff recommends approval of the proposed rates.

Alternatives:

Maintaining existing rates will result in under a \$50,000 loss within the Water Fund and over \$600,000 loss within the wastewater fund. This would tax available fund balances for water and exhaust fund balances for wastewater, which would violate the City's long term financial policies by not meet the working capital requirements. Keeping FY2017 gas rates will result in a loss within the gas utility. If the utilities are not self-sustaining, the funds would either require subsidies from other City funds to maintain levels-of-service or reduced reliability and performance of the utility systems.

Attachments:

Operations Overview, At a Glance, Press Release, Ordinance.

Operations Overview



Water Distribution System



The City's water distribution system contains over 1,047 fire hydrants, 3,366 water valves and 180 miles of water main line ranging in size from 2" to 18" in diameter.

A Water Prioritization Study was completed in 2009, which identified 48 projects totaling \$7 million to be completed. Since 2009, additional projects were identified and added to the list and work has been completed on 58 water projects.

These projects aim to improve fire protection, reduce main breaks, improve overall water quality and address the undersized lines. Total length of pipe replaced to date for water projects is approximately 11.4 miles (60,177 linear feet) averaging about 2 miles (10,000 linear feet) per year. This work is continuing in FY2018.

Additional projects include the following:

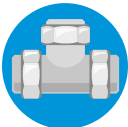
1. 17th Street NW Water Main Extension
2. Rugby Road Water Meter Replacements/ Gentry Lane Water Main Installation
3. Emmet Street/ Ivy Road Water Main Replacement
4. High Street Water Main Replacement
5. West Main Street Water Main Replacement (Summer of 2018)

The City has implemented a meter testing, recalibration, and replacement project that addresses all size meters at assessment frequencies determined by the meter size. Also as part of the meter replacement program, the City is evaluating customer consumption to verify that the meters are appropriately sized. Since regular water meters less accurately measure low flow rates, extra-sensitive "low-flow" ultrasonic meters will be installed in all applications.

The City has also performed annual system wide leak detection surveys. Leak audit surveys were completed in twelve of the past fourteen years and will continue annually.

In 2016, the City of Charlottesville was recognized for their water conservation efforts supporting the WaterSense program and for the second time in a row, received the 2016 Partner of the Year Award for the excellent water conservation efforts performed in 2015. The water conservation program was also recognized for their excellence in public information and communication with their use of social media from AWWA's Virginia Chapter.

Wastewater Distribution System



Charlottesville's sanitary sewer system extends to most areas of the City and consists of about 170 miles of pipe and 5,700 manholes.

In 2009, the City awarded a multi-year, multi-million dollar contract for sewer repair and rehabilitation. The work encompasses the rehabilitation of sewer manholes and sewer lines. In addition, crews have been performing CCTV (closed circuit televising) and smoke testing throughout the City system. Any deficient pipes or structures are immediately added to the list for rehabilitation/replacement under the same contract.

- To date, 39.7 miles or 209,627 linear feet of sewer lines have been replaced or rehabilitated.
- For FY2016, \$3,187,395 was spent on City wastewater projects.
- DEQ Consent Order that originated in August 5, 2011 has been terminated since terms have been met.

Stormwater Conveyance System



Charlottesville's stormwater conveyance system is integrated throughout the City's municipal boundary and consists of approximately 130 miles of pipe and approximately 8,250 structures.

Approximately 33% of the stormwater pipes and 28% of the stormwater structures located within the municipal boundary are City owned. Approximately 13 miles of the stormwater conveyance system carry streams that have been piped.

The City has had an active Stormwater Conveyance System Rehabilitation Program since 2010. The work encompasses the rehabilitation, replacement, and repair of vitrified clay and corrugated metal pipes and associated structures located in the City right of way and on City owned parcels. To date, approximately 10 miles of pipe have been rehabilitated. 90% of the pipes rehabilitated were vitrified clay and corrugated metal pipe. Approximately 120 structures have been rehabilitated

For FY2016, \$1,751,357 was spent on Stormwater Utility capital infrastructure improvements.

The City-wide Water Resources Master Plan was initiated in 2016. The goal of the plan is to apply criteria to select and prioritize capital projects that improve water resources and/or drainage issues. The final product, to be completed in 2017, is a drainage improvement capital improvement plan (CIP) and a water quality CIP. Projects included in the drainage CIP address a combination of historic and recent drainage issues. Projects in the water quality CIP focus on stormwater management retrofits.

Gas System



It has provided residents of Charlottesville and urban areas of Albemarle County with safe, efficient, reliable, and economical service for over 150 years. Charlottesville Gas currently has over 21, 000 customers and maintains 330 miles of gas lines and 270 miles of gas service lines.

The Virginia Division of Utility and Railroad Safety has recently announced Charlottesville Gas as this year's winner of the annual Damage Prevention Leadership Award. The Damage Prevention Leadership Award was established to recognize individuals, companies or stakeholder groups who have demonstrated a significant impact on damage prevention in Virginia through different leadership roles. Recipients are voted on by the Damage Prevention Advisory Committee before being presented to the Commission for approval.

Charlottesville Gas' damage prevention program took off in 2014 with the implementation of the outreach program "Dig with Care" and the outsourcing of its gas line location operation. The program includes a series of "Marty's Minute" radio spots, annual VA811 Day celebrations, excavation safety training workshops, distributing VA811 kits to local contractors, and outsourcing the utility location process to improve its accuracy. Charlottesville Gas' mascot, Flicker the Flame, also contributed to spreading awareness about safe digging and calling VA811. Since the program's start, there has been a 75% reduction in gas line damage caused by third party excavators.

Gas Marketing and Gas Public Awareness Programs



At A Glance

City of Charlottesville

Utility Rate Report



FY2018

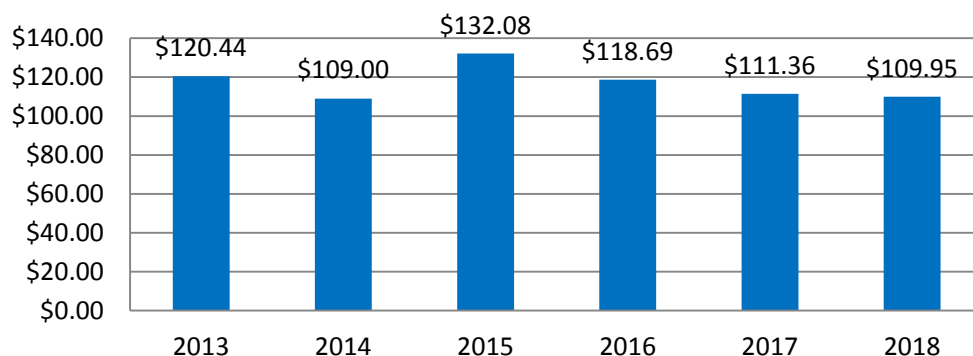
The following material provides a brief summary of the rate and fee recommendations for water, wastewater, and natural gas for FY2018. All rates will go into effect July 1, 2017. For a thorough explanation and details of the recommendations please consult the complete Proposed Utility Rate Report FY2018.

The City is proposing the following changes in the water, wastewater, and gas utility. The rates are based on average single family household usage per month (422 cf of water and wastewater, 4,611 cf of gas):

	Current	Proposed	Change	Percent
Water	\$27.00	\$27.00	\$ 0	0.00%
Wastewater	\$35.49	\$35.58	\$0.09	0.25%
Gas	\$45.99	\$47.37	\$1.38	3.00%
Total	\$108.48	\$109.95	\$1.47	1.36%

As a result of water and energy conservation, in conjunction with the proposed FY2018 rates, the average customer's total utility bill (for customers receiving all three utilities) will be lower than last year and the lowest in three years.

Total Monthly Utility Bill for Average Residential Customer (water, wastewater, gas)



Water Rates

The proposed composite rate for FY2018 for 1,000 cubic feet of water is unchanged from FY2017 and remains at \$54.51.



Impact on the Customer

The average single-family household uses 422 cf/month (3,157 gallons/month; approximately 105.2 gallons/day). To the extent an individual customer's usage differs from the average will determine the impact of the proposed rate on their bill.

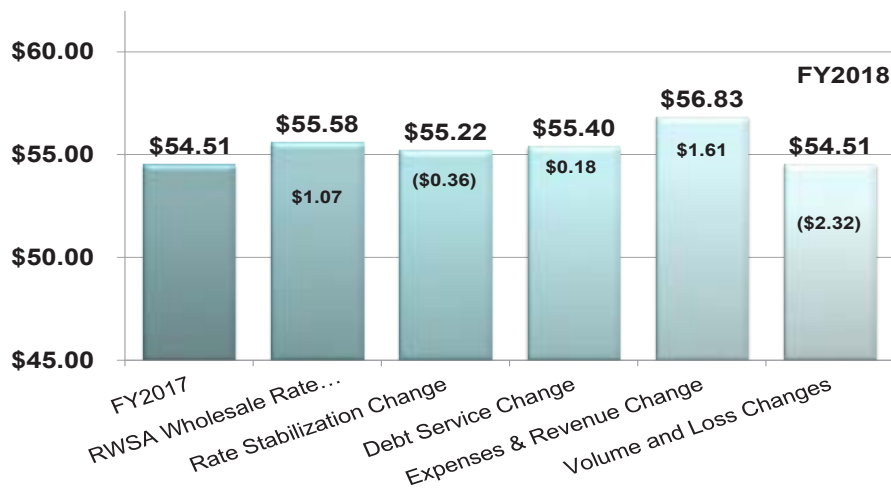
- **The monthly bill for the average single-family customer will remain \$27.00.**
- The monthly bill for the customer who uses 1,000 cubic feet of water per month (and including the \$4.00 monthly charge) will remain unchanged at \$58.51.

Factors Influencing the Water Rate

The impact of each component on the final rate is depicted below.

- Increasing wholesale rate from RWSA increased the City's rate by \$1.07.
 - The \$50,000 increase in the use of rate stabilization funds reduces the rate by \$0.36.
 - The \$25,000 increase in debt service resulted in an increase of \$0.18.
 - The change in operating expenses and revenue caused an increase in the rate of \$1.61.
 - The increase in volume and number of customers that resulted in a \$2.32 reduction in the rate.
- These factors resulted in an increase in rate to \$54.51, which is the same rate as FY2017.

Impacts on Water Rate (per 1,000 cf)



Wastewater Rates

The proposed rate for 1,000 cubic feet of wastewater FY2018 is \$74.83, a 0.29% change.



Impact on the Customer

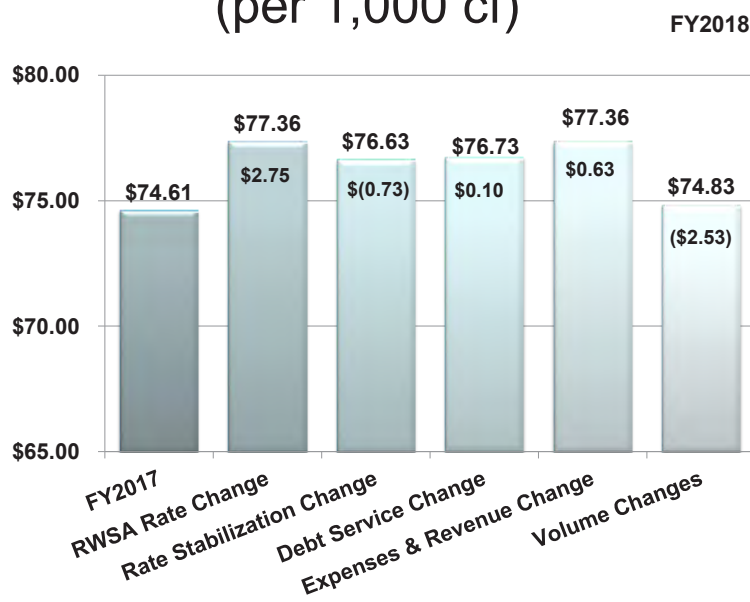
- The average monthly wastewater bill for the single-family customer, who uses 422 cubic feet of water, will rise from \$35.49 to \$35.58, an increase of \$0.09 or 0.25%.
- The monthly bill for the customer who uses 1,000 cubic feet of water per month (and including the \$4.00 monthly charge) will rise from \$78.61 to \$78.83, an increase of \$0.22 or 0.28%.

Factors Influencing the Wastewater Rate

The impact of each component on the final rate is depicted below.

- The increase in the treatment rate from RWSA increases the City's rate an additional \$2.75 to \$77.36.
- The use of an additional \$100,000 in rate stabilization funds produces a decrease in the wastewater rate by \$0.73 to \$76.63.
- A \$15,000 rise in debt service will cause the rate to increase \$0.10 to \$76.73.
- Changes in City expenses and revenue results in an increase in the rate of \$0.63 to \$77.36/cf.
- The change in treatment volume and number of customers causes a decrease in the rate of \$2.53 for a final rate per 1,000 cf of \$74.83, which is 0.22% higher than FY2017.

Impacts on Wastewater Rate (per 1,000 cf)



Gas Rates



Proposed firm rates for July 1, 2017 are (3.31%) higher for the typical firm customer using 8,000 cf than the rates for March, 2016. Firm customers include all types of customers (residential, commercial and industrial) for whom gas supplies are guaranteed to be available all year long without interruption.

Impact on the Customer

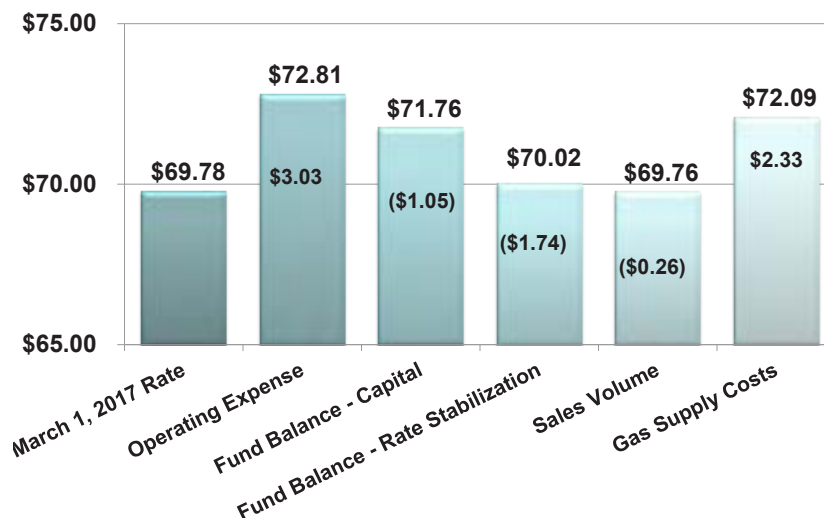
- **For a representative residential monthly consumption of 8,000 cf, the monthly bill will increase from \$69.78 to \$72.09, an increase of 3.31%.**
- The average single-family household, who consumes 4,611 cf of gas, will see the monthly bill increase from \$45.99 to \$47.37, an increase of 3.00%.

Factors Influencing the Gas Rate

Continued growth in our customer base and a changing gas wholesale market contribute to the 3.31% increase to firm customers. The proposed increase to firm customers is due to the following:

- The total non-gas operating budget increased by \$147,294 from FY2017 to FY2018, or 1.83%, resulting in a \$3.03 increase due to increased operating expenses.
- Fund balance is used to defray the cost of capital, resulting in a \$1.05 decrease.
- Fund balance is used to help stabilize rates, which reduced the rate by \$1.74
- The sales volume for firm customers decreased in FY2018 by 95,180 dth causing the gas rate to decrease by \$0.26.
- The total gas supply costs resulting in a \$2.33 increase and a new rate of \$72.09.

Impacts on Gas Rate
(per 8,000 cf)



CHARLOTTESVILLE, VA - The City of Charlottesville announced today that staff will present the FY 2018 Utility Rate Recommendations to City Council at their regular meeting on May 15, 2017, at 7pm in City Council Chambers.

The City is proposing the following changes in the water, wastewater, and gas utility. The rates are based on average single family household usage per month:

	Current	Proposed	Change	Percent
Water	\$ 27.00	\$ 27.00	\$ -	0.00 %
Wastewater	35.49	35.58	0.09	0.25
Gas	45.99	47.37	1.38	3.00
Total	\$ 108.48	\$ 109.95	\$ 1.47	1.36 %

For Customers using water, wastewater, and gas the monthly charge will increase by \$1.47 or 1.36% of the combined charges for the average single family residential house using 422 cubic feet of water and 4,611 cubic feet of gas.

The rates charged to our customers are derived from wholesale charges from the Rivanna Water and Sewer Authority (RWSA), BP Gas, operating expenses of the City utilities, and debt service cost.

The entire Utility Rate Report recommendation can be found on the City website, www.charlottesville.org/ubo.

**AN ORDINANCE
AMENDING AND REORDAINING CHAPTER 31 (UTILITIES) OF THE CODE
OF THE CITY OF CHARLOTTESVILLE, 1990, AS AMENDED,
TO ESTABLISH NEW UTILITY RATES AND SERVICE FEES
FOR CITY GAS, WATER AND SANITARY SEWER.**

BE IT ORDAINED by the Council of the City of Charlottesville, Virginia, that:

1. Sections 31-56, 31-57, 31-60, 31-61, 31-62, 31-153, 31-156 and 31-158 of Chapter 31, of the Code of the City of Charlottesville, 1990, as amended, are hereby amended and reordained as follows:

CHAPTER 31. UTILITIES

ARTICLE II. GAS

DIVISION 2. TYPES OF SERVICE; SERVICE CHARGES

Sec. 31-56. Rates - Generally.

The firm service gas rates based on monthly meter readings shall be as follows:

Basic Monthly Service Charge	\$ 10.00	
First 3,000 cubic feet, per 1,000 cubic feet	\$ 8.0201	<u>\$8.2781</u>
Next 3,000 cubic feet, per 1,000 cubic feet	\$ 7.5389	<u>\$7.7814</u>
Next 144,000 cubic feet, per 1,000 cubic feet	\$ 6.7369	<u>\$6.9536</u>
All over 150,000 cubic feet, per 1,000 cubic feet	\$ 6.5765	<u>\$6.7880</u>

Sec. 31-57. Same--~~Summer~~ air conditioning.

(a) Gas service at the rate specified in this paragraph ("air conditioning rate") shall be available to customers who request such service in writing and who have installed and use air conditioning equipment operated by natural gas as the principal source of energy. The air conditioning rate will be ~~\$7.1571~~ \$7.3171 per one thousand (1,000) cubic feet of gas used per month.

(b) The director of finance may, when it is impracticable to install a separate meter for air conditioning equipment, permit the use of one (1) meter for all gas delivered to the customer, in which instance the director of finance shall estimate the amount of gas for uses other than air conditioning and shall bill for such gas at the rates provided in applicable sections of this division.

...

Sec. 31-60. Interruptible sales service (IS).

(a) *Conditions. . . .*

(b) *Customer's agreement as to discontinuance of service. . . .*

(c) *Basic monthly service charge.* The basic monthly charge per meter for interruptible sales service ("IS gas") shall be sixty dollars (\$60.00).

(d) *Rate.* For all gas consumed by interruptible customers the rate shall be ~~\$5.6652~~ \$5.8319 per one thousand (1,000) cubic feet for the first six hundred thousand (600,000) cubic feet, and ~~\$4.3750~~ \$4.5763 per one thousand (1,000) cubic feet for all volumes over six hundred thousand (600,000) cubic feet.

(e) *Annual Minimum Quantity.* Interruptible rate customers shall be obligated to take or pay for a minimum quantity of one million two hundred thousand (1,200,000) cubic feet of gas annually. Each year, as of June 30, the director of finance shall calculate the total consumption of each interruptible customer for the preceding twelve (12) monthly billing periods, and shall bill any customer that has consumed less than the minimum quantity for the deficient amount at the rate of ~~\$4.3750~~ \$4.5763 per one thousand (1,000) cubic feet. Any new customer shall be required to enter into a service agreement with the City prior to the start of service. If an interruptible customer terminates service the annual minimum requirement shall be prorated on the basis of one hundred thousand (100,000) cubic feet per month for each month the customer has received service since the last June 30 adjustment.

(f) *Contract required. . . .*

Section 31-61. Interruptible Transportation Service (TS).

(a) *Generally. . . .*

(b) *Rates.* The rates for interruptible transportation service ("TS gas") shall be as follows:

- (1) \$3.6347 per decatherm for a combined IS and TS customer, and
- (2) ~~\$3.1808~~ \$3.2827 per decatherm for a customer receiving only TS gas, and
- (3) ~~\$1.8869~~ \$1.9569 per decatherm, for customers who transport 35,000 or more decatherms per month ("large volume transportation customers"), regardless of whether such large volume transportation customer receives only TS gas, or also receives IS service.

(c) *Basic Monthly Service Charges. . . .*

(d) *Special terms and conditions. . . .*

- (e) *Extension of facilities. . . .*
- (f) *Billing month. . . .*
- (g) *Lost and unaccounted-for gas. . . .*
- (h) *Combined IS and TS customer using more than provided or scheduled by customer....*
- (i) *TS Customer providing more gas, or less gas, than customer's usage. . . .*
- (j) *Other terms and conditions. . . .*

Section 31-62. Purchased gas adjustment.

In computing gas customer billings, the basic rate charges established under sections 31-56, 31-57, 31-60 and 31-61 shall be adjusted to reflect increases and decreases in the cost of gas supplied to the city. Such increases or decreases shall be computed as follows:

(1) For the purpose of computations herein, the costs and charges for determining the base unit costs of gas are:

- a. Pipeline tariffs;
- b. Contract quantities; and
- c. Costs of natural gas, in effect or proposed as of March 1, ~~2016~~ 2017.

(2) Such base unit costs are ~~\$3.2613~~ \$4.412 per one thousand (1,000) cubic feet for firm gas service and ~~\$1.9814~~ \$3.1235 per one thousand (1,000) cubic feet for interruptible gas service.

(3) In the event of any changes in pipeline tariffs, contract quantities or costs of scheduled natural gas, the unit costs shall be recomputed on the basis of such change in accordance with procedures approved by the city manager. The difference between the unit costs so computed and the base unit costs shall represent the purchased gas adjustment to be applied to all customer bills issued beginning the first billing month after each such change.

ARTICLE IV. WATER AND SEWER SERVICE CHARGES

...

Sec. 31-153. Water rates generally.

(a) Water rates shall be as follows:

	<u>May-September</u>	<u>October-April</u>
(1) Monthly service charge.	\$4.00	\$4.00
(2) Metered water consumption, per 1,000 cu. ft .	\$62.78	\$48.29

(b) This section shall not apply to special contracts for the consumption of water which have been authorized by the city council.

...

Sec. 31-156. Sewer service charges generally.

(a) Any person having a connection directly or indirectly, to the city sewer system shall pay therefor a monthly charge as follows:

(1) A basic monthly service charge of four dollars (\$4.00).

(2) An additional charge ~~of seventy four dollars and sixty one cents (\$74.61)~~
seventy four dollars and eighty three cents (\$74.83) per one thousand (1,000) cubic feet, of metered water consumption.

(b) Any water customer not discharging the entire volume of water used into the city's sanitary sewer system shall be allowed a reduction in the charges imposed under this section, provided such person installs, at his expense, a separate, City-approved water connection to record water which will not reach the City sewer system. The cost and other terms of City Code section 31-102 shall apply. For customers with monthly water consumption in excess of thirty thousand (30,000) cubic feet, where the director of finance considers the installation of a separate meter to be impracticable, the director may establish a formula which will be calculated to require such person to pay the sewer charge only on that part of the water used by such person which ultimately reaches the city sewers.

...

Sec. 31-158. When bills payable; delinquent accounts.

(a) ...

(b) ...

(c) ...

(d) The director of finance shall establish administrative procedures to ensure that any applicant for service or customer who wishes to dispute any bill, deposit requirement, refusal of service, charge or termination notice imposed under this section is entitled to an administrative review of such dispute by a designated person or persons within the finance department, ~~other than the person or persons within the finance department, other than~~ the person who made the initial determination in such dispute.

2. The foregoing amendments shall become effective July 1, 20167.

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CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA



Agenda Date:	May 15, 2017
Action Required:	Update
Presenters:	Maurice Jones, City Manager
Staff Contacts:	Mike Murphy, Assistant City Manager Kaki Dimock, Director Human Services Charlene Green, Manager, Office of Human Rights
Title:	Blue Ribbon Commission on Race, Memorials and Public Spaces Recommendations follow-up

Background:

Council created an ad-hoc blue ribbon commission on May 2, 2016 to address the questions and concerns brought before council regarding race, memorials and public spaces in Charlottesville. Eleven commission members were appointed after an application process. They were charged with providing Council with options for telling the full story of Charlottesville's history of race relations and for changing the City's narrative through our public spaces. The Chair of the Blue Ribbon Commission (BRC), Don Gathers, presented a final report to Council on December 19, 2016. A total of 9 recommendations were made based on the charge from City Council.

Action has been taken on several of the recommendations, with considerable attention given to the statues of Robert E. Lee and Thomas Jackson. A master planning process for the downtown area parks is underway with staff planning to issue a RFP. The Vinegar Hill Park concept has advanced and designs are being planned. Significant support for the African American Heritage Center was incorporated into the FY 2018 City of Charlottesville Budget. Funds from Council pledge support for rent and common area costs for a period of five years, in addition to dollars for a development officer to build fundraising capacity. The BRC report applauds the work of the Bridge Builders Committee and encourages Council to encourage these efforts. Council will be weighing a number of factors in the development plans for West Main Street. Historical interpretation is a key feature of the plan the consultant and team will continue to work on in coordination with community partners. The West Main Street plan also calls for improved visibility and other enhancements to the Drewary Brown Bridge. Staff will benefit from additional direction and information on the remaining action steps.

Discussion:

The following recommendations from the BRC may require additional consideration:

Recommendation

Court Square Slave Auction Block

Daughters of Zion Cemetery

Vinegar Hill Community
Vinegar Hill Monument

Highlight and Link Historic Places

Place Names

Status

While the draft RFP for the North Downtown Master Plan includes clear instructions for a legible plaque, it is unclear whether it includes instructions or expectations for the design of a new memorial for Charlottesville's enslaved population

The BRC report recommends funds beyond those initially appropriated by Council. \$80,000 has been allocated to support cemetery improvements. Should additional resources be required, requests for financial support in FY19 should be considered in October 2017 as part of the budget development process.

The BRC report recommends funds be appropriated for the fabrication and installation of the designed Vinegar Hill Monument. No action has been taken to date.

The BRC plan calls for financial and planning support for historic resource surveys of African American, Native American and local labor neighborhoods and sites, seeking National Register listings, and zoning and design guideline protections. The Historic Resources Committee and staff have \$50,000 that was appropriated in the FY 2018 CIP Budget. However, these resources are not adequate to complete the neighborhoods and areas already prioritized and take on the work recommended by the BRC.

BRC recommended that the city consider naming new streets, new bridges, new buildings or other new infrastructure after people or ideas that represent the city's history in consultation with affected

neighborhoods, Albemarle County Historical Society and the African American Heritage Center. No new recommendations have been made to date nor has the development process been changed to prompt additional consideration.

New Memorials

The BRC recommended that the City Council should not pursue adding new memorials to individuals at this time. City staff would benefit from additional discussion on new and different ways to recognize city leaders and hidden heroes.

Other Option/Recommendation included:

Recommend Charlottesville City School students learn the fuller history of our community including the difficult history of slavery and racism.

This is a matter that would require policy and implementation changes by the Charlottesville School Board and staff.

Ensure that courses in African American and Native American history are included in the curriculum for Charlottesville City School students

This is a matter that would require policy and implementation changes by the Charlottesville School Board and staff.

Participate in the Equal Justice Initiative's Memorial to Peace and Justice acknowledging the lynching in Albemarle County of John Henry James

Staff has provided an attachment prepared by Jane Smith on this incident. There have been requests by community members to consider the City's participation. It would seem that recognition by the Board of Supervisors in Albemarle County is appropriate under the circumstances.

Designate March 3rd as either Liberation Day or Freedom Day

This requires input from Council.

Alignment with City Council's Vision and Strategic Plan:

The blue ribbon commission reflects the City's vision to be a "Community of Mutual Respect." This also aligns with Strategic Plan Goal 5: *Foster Strong Connections*, and the initiative to respect and nourish diversity.

Budgetary Impact

Any budget impact would be determined based on the particular item to be advanced. Staff believes some of the potential items that would require additional financial resources could be considered in the FY 2019 Budget process.

Recommendation:

Council may elect to instruct staff to provide additional information on particular recommendations, provide guidance on direction, or take no further action at this time.

Attachments:

The lynching of John Henry James

The Lynching of John Henry James at Wood's Crossing on July 12, 1898

"The lynching of John Henry James will be far more damaging to the community than it will be to the alleged criminal. His troubles are o'er; those of the community have just begun."
Richmond Planet, July 16, 1898

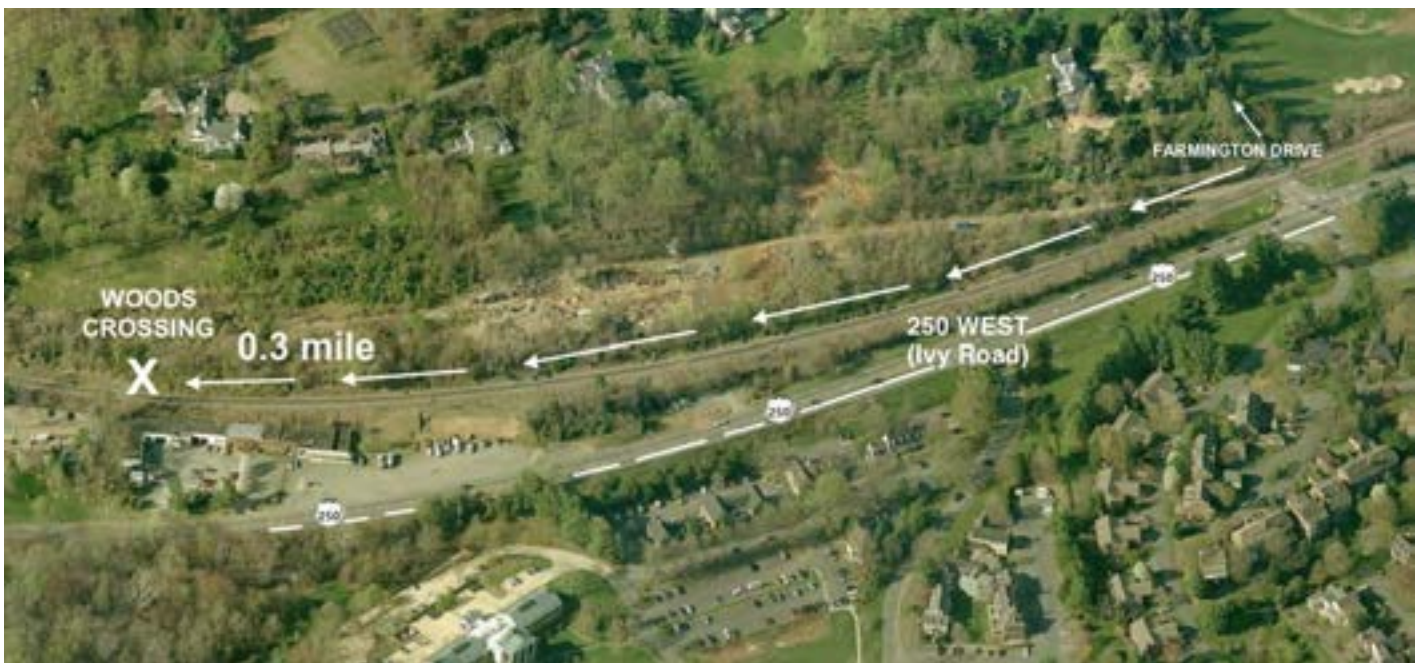
"John Henry James is not a resident of Charlottesville. He came here a tramp, but has been around the city for five or six years. He has been in various occupations, and possibly several times a valued member of the chain-gang. As far as we can learn he has no relatives or friends in this section."

"When the train was nearing Wood's Crossing about four miles west of this city, the officers noticed a crowd at the station . . . As soon as the train slowed up, a number of men, unmasked, boarded the platforms, front and rear all were armed with pistols and there seemed to be about 150 in the crowd. . . . a rope was thrown over his head and he was carried about 40 yards to a small locust tree near the blacksmith shop. . . . As soon as he was elevated the crowd emptied their pistols into his body, probably forty shots entering it."

"He Paid the Awful Penalty"

Daily Progress, Tuesday July 12, 1898, page 1

<http://search.lib.virginia.edu/catalog/uva-lib:2076186/view#openLayer/uva-lib:2076187/5207.5/1513.5/3/1/0>



Wood's Crossing was on the C&O railroad, 0.3 mile west of Farmington and 2.9 miles east of Ivy Depot, according to an old table of Virginia railroad stations. <http://www.railwaystationlists.co.uk/pdfusarr/virginiarrs.pdf>

"She described her assailant as a very black man, heavy-set, slight mustache, wore dark clothes, and his toes were sticking out of his shoes.

"About noon a negro named John Henry James was arrested in Dudley's barroom as answering somewhat the description of Miss Hotopp's assailant. . . .

". . . It is said that the young lady resisted the fellow to the extent of scratching his neck so violently as to leave particles of flesh under her fingernails and so effective was the resistance that he failed of accomplishing his foul purpose."

"Atrocious and Outrageous"

Daily Progress, Monday July 11, 1898, page 1

<http://search.lib.virginia.edu/catalog/uva-lib:2076181/view#openLayer/uva-lib:2076182/5396/1283.5/3/1/0>

Reports in the *Richmond Planet*:

"They Lynched Him: A Brutal Murder--Mob Makes No Efforts at Disguise"

Richmond Planet, 16 July 1898 page 1

<http://tinyurl.com/zxym3wf>

"The lynching of John Henry James, (colored) was as dastardly in its conception and as heinous in its execution as the crime with which he stood charged. . . . The lynching of John Henry James will be far more damaging to the community than it will be to the alleged criminal. His troubles are o'er; those of the community have just begun."

"Another Virginia Lynching"

Richmond Planet, 16 July 1898, page 4

<http://tinyurl.com/zdouovf>

More reports in the *Daily Progress*:

"Being asked as to his guilt or innocence, he admitted that he was the right man . . . the crowd thought there was no reason for delay, and they decided to lynch the prisoner, who then begged for his life and protested his innocence but without avail. . . . The fact that there is no doubt of his guilt makes the people of Charlottesville heartily approve the lynching, as in this way the innocent victim is spared the terrible ordeal of being a prosecuting witness."

"Result of Coroner's Inquest"

Daily Progress, Wednesday July 13, 1898, page 1

<http://search.lib.virginia.edu/catalog/uva-lib:2076191/view#openLayer/uva-lib:2076192/5550/1072.5/4/1/0>

"From an Eyewitness"

Daily Progress, Saturday July 16, 1898

<http://search.lib.virginia.edu/catalog/uva-lib:2076206/view#openLayer/uva-lib:2076207/5562/3508.5/4/1/0>

"The Lynching of James: The Staunton „Spectator“ Has Somewhat to Say on the Subject"

Daily Progress, Thursday July 21, 1898, page 1

<http://search.lib.virginia.edu/catalog/uva-lib:2076226/view#openLayer/uva-lib:2076227/5607/2983.5/4/1/0>

Reports in the *Staunton Spectator and Vindicator*:

"Mob Law"

Staunton Spectator and Vindicator, July 21, 1898, page 2

<http://tinyurl.com/hubvtjz>

"The exact reason why the Sheriff of Albemarle, took the local train instead of the fast train to Charlottesville with his prisoner, James, who was lynched was not considered a material question before the coroner."

Staunton Spectator and Vindicator, July 21, 1898, page 2

<http://tinyurl.com/zu4aqfk>

The exact reason why the sheriff of Albemarle, took the local train instead of the fast train to Charlottesville with his prisoner, James, who was lynched was not considered a material question before the coroner.

The terrible effort made by the sheriff of Albemarle county, at Wood's Crossing last week to save his prisoner seemed to temporarily unbalance his mind, so much so that he came very near charging the lynching to the people of Staunton. Such efforts are often attended with serious consequences.

The jury summoned by the coroner to sit upon the body of the late James lynched in Albemarle county last week at Wood's Crossing for assault on Miss Hotopp, found that "deceased came to his death by the hands of persons unknown to the jury." The rule in society in Albemarle is such that one frequently has to be introduced to another several times there before he can be said to know him. The jury had not had a formal introduction, you see.

Staunton Spectator and Vindicator, July 21, 1898, page 2

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 15, 2017
Action Required:	Approval or Disapproval of Schematic Streetscape Plan
Presenter:	Carrie Rainey, Urban Designer, Neighborhood Development Services
Staff Contacts:	Maurice Jones, City Manager Alex Ikefuna, Director, Neighborhood Development Services Missy Creasy, Assistant Director, Neighborhood Development Services Carrie Rainey, Urban Designer, Neighborhood Development Services Tony Edwards, Development Services Manager, Neighborhood Development Services Martin Silman, City Engineer, Neighborhood Development Services Brennan Duncan, Traffic Engineer, Neighborhood Development Services Brian Daly, Director, Parks & Recreation Paul Oberdorfer, Director, Public Works Lance Stewart, Facilities Maintenance Manager, Public Works Chris Engel, Director, Office of Economic Development Rick Siebert, Parking Manager, Office of Economic Development Miriam Dickler, Director, Office of Communications
Title:	West Main Street Schematic Streetscape Design Plan

Background:

On March 21, 2016, Council approved the conceptual West Main Street Streetscape Plan Option 1 as the guiding document for executing streetscape improvements to the West Main Street corridor. Council established itself as the West Main Street Streetscape project's review body, and directed the City Manager, his staff and consultants (led by Rhodeside & Harwell) to proceed immediately with construction documents needed to bid and execute the work and secure all necessary approvals. The West Main Street Schematic Streetscape Design Plan provides the next step of detailed design necessary to produce construction documents as directed by Council.

Discussion:

Subsequent to Council direction to proceed with construction documents, a staff implementation team was formed to provide guidance and input on the next phases of design necessary to complete construction documents. The team includes representatives from the City Manager's Office, Neighborhood Development Services (Planning, Engineering, Traffic Engineering, and

Urban Design), Public Works, Public Utilities, Fire Department, Parks & Recreation, Charlottesville Area Transit (CAT), Office of Economic Development, and Office of Communication. Monthly meetings have been held with representatives from the consultant team led by Rhodeside & Harwell to discuss issues such as coordination, design, best practices, and maintenance. Additional coordination meetings have been held as necessary to discuss specific areas of design, such as the undergrounding of all utilities, Fire Department access and maneuverability, and CAT bus stop locations and amenities.

Schematic Design

Details on the work undertaken subsequent to the Council approval of the conceptual West Main Street Streetscape Plan are provided in the Schematic Design Report (Attachment 2). The report outlines the progression of the schematic design from the approved conceptual plan (Option 1) to the West Main Street Schematic Streetscape Design Drawings, which can be viewed at: <http://gowestmain.com/project-documents/>. The Schematic Design Report includes several appendices providing greater detail on work performed for tree assessment, utility design, archaeological assessment, and interpretation strategies. The full Project Report with appendices can be viewed at: <http://gowestmain.com/project-documents/>. A summary of work follows:

Streetscape Character

- Establishment of key principles to guide design:
 - Create green gateways
 - Create groupings of trees that are irregular in length and diverse in species
 - Save existing trees in good or excellent condition where possible
 - Maximize areas for diverse activities
 - Create a central, identifiable place for adjacent neighborhoods and City residents
 - Build upon the history of West Main Street and the cultural identity of the City
 - Incorporate lessons learned from the Downtown Pedestrian Mall
- Analysis of materials options to fit the context of the City and define the various uses that come along on West Main Street:
 - Neutral and warm ground plane with simple and consistent patterning
 - Exploration of permeable pavement, paving for special activity areas, painted bike lanes and bike boxes
 - Consistent furniture palette with variety and flexibility
 - Proposed bus shelters maximize access and movement, provide lighting and seating
 - Tree planting details with root growth protection and maintainable grates
 - Pedestrian and roadway lighting provides visibility, safety, and distinction of spaces

Historical Interpretation

- Archaeological assessment undertaken to provide a historical overview and identify potential types and locations of buried archaeological resources on West Main Street
- Analysis of interpretation opportunities to tell the story of West Main Street and the City
- Proposed elements include:
 - Tactile maps to illustrate the evolution of West Main Street and surrounding neighborhoods
 - Street corner markers to highlight nearby cultural and historical hotspots
 - Changeable directory and community message board to orient visitors

- Information provided at bus stops illustrating transit options of the past
- Bridge Builders commemorative walk with enhanced honoree recognition through more visible display of names, special lighting and paving
- Memory markers for locations such as Vinegar Hill, the Inge Store, and the Albemarle Hotel
- Midway Park at Ridge Street/McIntire Road acts as a gateway, creates public gathering space, and provides additional opportunities to share information on the history of West Main Street

Street Trees

- Detailed analysis of existing streets trees' vitality and expected lifespan
- Analysis of required soil volumes, planting structures, and design methods to ensure vitality of proposed trees while achieving the Council directive to provide a 400% increase in canopy
- Proposed tree selection chosen to provide shade, durability, seasonal interest, and bioretention abilities

Utilities

- Development of a coordinated design strategy to integrate utility relocation with stormwater management components, street trees, and access points
- Coordination with and review by Dominion Power and private utility companies

The staff implementation team has reviewed the West Main Street Schematic Streetscape Design Drawings. Staff has recommended approved the general concepts and layouts proposed, but will continue to review and provide input on further refinements. Such refinements include the final location of a bus pull-off area in the vicinity of 11th Street, raised crosswalks, proposed driveway modifications, and other engineering details. Staff will also continue review of subsequent phases of design and construction documents.

Traffic Analysis

An updated traffic analysis was performed during the schematic design phase (Attachment 3). The full West Main Street Traffic Analysis Memorandum with appendices of collected traffic data and Synchro outputs can be viewed at: <http://gowestmain.com/project-documents/>. Traffic Engineering has reviewed the traffic study for the West Main Street project and is satisfied with its findings with the following conditions. Traffic along the corridor is nearly at capacity now and the new plan laid out by the consultant team is predicated on an optimized signal corridor. In order for this not only to run smoothly when it is first installed, but well into the future, as well as help deal with bleeding of West Main traffic into surrounding neighborhood, Traffic Engineering will be asking for an additional employee whose primary role will be signal timing and synchronization throughout the City. This will allow for a more regular analysis of how not only this corridor is functioning, but others throughout the City, and hopefully gain capacity on our streets through better efficiency of our in-place infrastructure. The other condition that has already been added to the City budget is upgraded signal cabinets. The City will be updating our software and hardware over the next few years in an effort to modernize our facilities to again be able to provide more efficiency on a real time basis.

Parking

Accessible and available parking is critical to the long-term success of the design plan and the corridor. As the pre-construction process moves into the next phase, Staff is actively exploring

several viable options to replace the expected loss of on-street parking and add new capacity to the parking supply on West Main Street.

Alignment with City Council's Vision and Strategic Plan:

Council Vision Areas

Each of the Council Vision Areas is addressed through the West Main Street Streetscape Plan. The following Areas will be particularly impacted by the project.

Economic Sustainability

The Plan seeks to retain and grow the patrons of the corridor by creating a pleasant and usable space for all users, thereby sustaining the customer base for local businesses.

C'ville Arts and Culture

The Plan proposes the commission and installation of new public art along the corridor. The Plan also recommends celebrating the unique history of the adjacent neighborhoods through informational plaques and commemorative art at locations such as the bridge across the railroad tracks.

A Green City

The Plan proposes a 400% increase in street trees along the corridor. In addition, a variety of large-canopy, medium-canopy, columnar, and small trees are proposed to create an interesting and healthy plant culture. Species are proposed for both their visual interest and their ability to adapt and thrive in the West Main Street environment. The Plan also establishes several areas for Low Impact Development where green infrastructure practices could be utilized and highlighted. Recommendations for technologies to preserve tree root zones prevent compaction, a deadly force upon many urban trees. The Plan also proposes undergrounding overhead utilities, which are limiting to the health and canopy of large trees due to the regular trimming or removal of branches to prevent conflicts with utility lines.

America's Healthiest City

The Plan encourages physical activity by creating a safe and welcoming place to walk or bike. The Plan's proposed increase in tree canopy discussed above may also have a positive impact on the environmental quality of the immediate area through carbon dioxide reduction, although the exact effect is currently unknown.

A Connected Community

The Plan improves the walkability and bikeability of a vital corridor connecting neighborhoods, downtown, and the University of Virginia. The Plan also improves bus service on the City's busiest route by adding shelters and amenities and creating access to the Jefferson School on Fourth Street, a highly desired connection.

The 2015 Bicycle and Pedestrian Master Plan ranked West Main Street as the second highest priority project for bicycle infrastructure. Portable counters have been installed on West Main Street since May 2015 in order to measure bicycle traffic in the corridor. Well over 50,000 bicycle trips have been recorded from May 2015 until January 2016. Further information on the

data collected can be viewed at: <http://www.charlottesville.org/departments-and-services/departments-h-z/neighborhood-development-services/transportation/bicycle-and-pedestrian/data>

Strategic Plan Goals

The West Main Street Streetscape Plan meets many of the aspects of Council's Strategic Plan:

Goal 2: Be a safe, equitable, thriving and beautiful community

2.1. Provide an effective and equitable public safety system: The West Main Street corridor is an important route for emergency response personnel. The Plan maintains effective movement through the corridor by providing elements such as dedicated bicycle lanes wherein motorists may pull over to allow emergency vehicle passage and reconfiguring intersection geometry to increase emergency vehicle turning capacity.

2.2. Consider health in all policies and programs: The Plan provides a pleasant and safe atmosphere for walking and biking; activities which improve citizen health in a variety of ways.

2.3. Provide reliable and high quality infrastructure: The Plan recommends reorientation of public and private utilities in locations that reduce conflicts with elements such as tree roots. Undergrounding utilities also minimizes potential outages due to the increased protection. Implementation of the Plan will call for new technologies to improve longevity of streetscape elements, including Silva Cells to reduce sidewalk upheaval and deterioration from tree roots.

2.4. Ensure families and individuals are safe and stable: The Plan improves safety for all users by providing wider sidewalks where pedestrians can safely pass one another, and dedicated bike facilities to minimize conflicts with vehicular traffic.

2.5. Provide natural and historic resources stewardship: The Plan proposes locations for art and installations providing education on the history of the West Main Street area and adjacent neighborhoods.

2.6. Engage in robust and context sensitive urban planning: The Plan is the result of extensive public engagement, Steering Committee efforts, and the collaboration of a variety of disciplines to create a comprehensive plan for the corridor. The Plan takes into account the existing features of the corridor, the historic resources, and the vibrant commercial fabric.

Goal 3: Have a strong diversified economy

3.2. Attract and cultivate a variety of new businesses: The Plan provides a pleasant and safe atmosphere for walking and biking; the potential changes in travel modes may encourage businesses geared towards these groups (i.e. cycling shops, etc.)

3.3. Grow and retain viable businesses: The Plan improves the quality of the experience for users on the street, encouraging patrons to linger on the corridor and potentially visit multiple businesses. The Plan also improves access to the businesses on West Main Street for all users.

3.4. Promote diverse cultural tourism: The Plan improves the quality of the experience for users

on the street, attracting visitors who desire to walk and bike in pleasant locations while traveling. At the time of this report, one hotel is under construction on the corridor, and another is under review. These projects have the potential to greatly increase the number of tourists spending time on West Main Street.

Community Engagement:

The West Main Street Streetscape project has included extensive community engagement activities, which were detailed in the August 17th, 2015 Council materials. These materials can be downloaded at: <http://www.charlottesville.org/home/showdocument?id=34075>

Subsequent to the Council approval of the conceptual West Main Street Streetscape Plan Option 1 on March 21, 2016, City staff and the consultant team led by Rhodeside & Harwell conducted two (2) work sessions with the Board of Architectural Review (BAR) on October 10, 2016 and February 28, 2017. At both work sessions, the BAR was generally supportive of the schematic design materials presented, and provided guidance on streetscape elements such as lighting fixtures and historic interpretation components.

City staff and the consultant team led by Rhodeside & Harwell conducted a community meeting with adjacent neighborhoods on December 8, 2016 to explore ways West Main Street can remain an important place for the neighboring communities. Attendees discussed elements such as street trees, public bench and seating area locations, and locations of historical importance on the corridor. Attendees expressed a desire to illuminate the history of West Main Street with carefully placed interpretation opportunities that would not overwhelm the corridor.

City staff notified 11 property owners whose property may be affected by proposed driveway modifications on March 27, 2017, requesting further discussion. The modifications proposed include driveway consolidation, the narrowing of driveways, and the shifting of driveway locations. At the date of this report, staff has discussed the proposed driveway modifications with three (3) property owners, and will continue outreach and coordination.

Budgetary Impact:

The West Main Street Streetscape Plan is estimated to cost approximately \$31,037,700 to install, plus the cost of routine gas and water utility betterment (approximately \$3,076,000 provided from utility betterment funds). \$548,896 of the streetscape cost is attributed to stormwater utility work. Approximately \$225,000 of that cost will be provided by the utility betterment fund, resulting in an approximate total of **\$30,812,700** to be covered using Capital Improvement Project (CIP) funds or funds from federal and state programs. It has not been determined how the \$225,000 will be applied to project costs (whether provided evenly amongst the four (4) proposed phases or through a different system). Therefore, the costs provided in the phasing breakdown below have not been reduced to reflect the anticipated contribution from the stormwater utility fund. The detailed estimate is provided as Attachment 4. The estimated cost has risen from the previous estimation at approximately \$30,000,000 due to further refinement of details, as well as the necessary inclusion of unanticipated signalization work to optimize vehicular traffic.

These costs could be greatly offset by federal and state funding opportunities. However, many funding sources require projects to be either shovel-ready, or substantially ready in order to qualify for funds. In 2016, City staff and the consultant team led by Rhodeside & Harwell applied for state funds through the SmartScale program for transportation projects (formerly known as HB2). Funding was not awarded to the West Main Street Streetscape Plan in this round. To facilitate new application in the next round of SmartScale funding (as cost is a factor for consideration) to be awarded in 2019 and potentially available in 2022, as well as other funding opportunities such as Revenue Sharing, City staff and the consultant team have recommended the Plan be installed in five (5) phases:

- Gas and Water Utility Improvements (provided from betterment funds): \$3,076,000
- Phase 1 Streetscape (Ridge Street/McIntire Road to 6th Street): \$11,327,084
- Phase 2 Streetscape (6th Street to Bridge): \$8,623,586
- Phase 3 Streetscape (Bridge to Roosevelt Brown Boulevard): \$4,778,640
- Phase 4 Streetscape (Roosevelt Brown Boulevard to Jefferson Park Avenue): \$6,308,393

Design fees to complete schematic and final designs, prepare construction documents, and consultant assistance with bidding and construction phases were previously estimated to cost approximately \$3 million. Approximately \$1,370,000 (\$1.37 million) was spent on schematic design, including detailed surveying necessary to complete the project. Consultant fees to complete final design and prepare construction documents for Phase 1 are in development.

The parking strategies will have associated costs that are difficult to determine until negotiations begin with property owners.

CIP Funds

The following funds have been committed or projected for the West Main Streetscape Plan in the CIP process. Please note design work and construction document creation subsequent to schematic design approval will utilize CIP funds.

CIP FY2017 Approximately \$3,260,000 (\$3.26 million) is still available.

CIP FY2018 \$3,250,000 (\$3.25 million) has been adopted for West Main Street.

CIP FY2019 \$3,250,000 (\$3.25 million) has been projected for West Main Street.

Maintenance Costs

Major streetscape improvement projects such as the West Main Street project typically include an increase of fixtures and other elements that will require regular maintenance and associated additional maintenance costs. City staff has prepared estimations of the costs for maintenance associated with the improvements proposed in the West Main Street Schematic Design Plan (Attachment 5).

Public Works has provided an estimate of annual maintenance costs associated with traffic markings, raised crosswalks, signage, lighting fixtures, and transit amenities. The proposed improvements will result in a maintenance cost increase of approximately \$154,900 per year (in FY 2017 dollars) once all four (4) phases are installed. The existing maintenance cost is approximately \$57,000, while the proposed maintenance cost will be approximately **\$211,900**.

Parks & Recreation has provided an estimate of annual maintenance costs associated with sidewalk paving, street trees, and other plantings. The proposed improvements will result in a maintenance cost of approximately **\$183,600** per year (in FY 2017 dollars) once all four (4) phases are installed. An initial additional capital expense of **\$210,000** (in FY 2017 dollars) during the first year of maintenance will be required to procure additional equipment.

The combined annual maintenance total is expected to be approximately **\$395,500** (in FY 2017 dollars) once all four (4) phases are installed.

Recommendation:

Staff recommends approval of the general concepts and layouts of the West Main Street Schematic Streetscape Design Plan and initiation of the next phase of design necessary to progress to the completion of construction documents.

Alternatives:

BY MOTION, City Council may take action on this agenda item. Council's alternatives include the following:

1. Provide direction on modifications to the West Main Street Schematic Streetscape Design Plan and direct staff to present modifications at a later date.
2. Disapprove the West Main Street Schematic Streetscape Design Plan and direct staff to cease further work on the corridor.
3. Defer the decision on approval of the West Main Street Schematic Streetscape Design Plan until a later date.

Attachments:

1. Proposed Resolution
2. _____ and Schematic Design Report dated May 2017
3. West Main Street Traffic Analysis Memorandum dated April 10, 2017
4. Rough Order of Magnitude (cost estimate) dated April 24, 2017
5. Maintenance Estimates dated April 28, 2017

RESOLUTION

WHEREAS, by vote taken on March 21, 2016, City Council adopted the West Main Streetscape Improvement Plan (Option 1) (the “Plan”); and

WHEREAS, as part of its adoption of the Plan, directed the City Manager, his staff, and consultants to proceed with construction documents, and Council retained the right and authority to review the construction plans as they are developed; and

WHEREAS, a Schematic Design, dated February 17, 2017, for the West Main Streetscape Improvement Project (“Project”) has been completed and is consistent with the concepts and components of the Plan, now, therefore,

BE IT RESOLVED BY THE CHARLOTTESVILLE CITY COUNCIL that the Schematic Design for the Project is hereby approved and City Council authorizes the City Manager, City staff, and the City’s design consultants to proceed with the next phase of development of construction plans, the production of 35% construction documents.



DESIGN REPORT

PROJECT INITIATION and SCHEMATIC DESIGN



Go WESTMAIN

RHODESIDE & HARWELL

LEAD AGENCY



CITY OF CHARLOTTESVILLE
Department of Neighborhood Development Services
Carrie Rainey, Project Manager
610 E. Market Street
Charlottesville, Va 22902

CONSULTANTS



RHODESIDE & HARWELL

RHODESIDE & HARWELL
510 King Street, Suite 300
Alexandria, Va 22315

in association with...

Timmons Group
Bushman-Dreyfus Architects
Nelson/Nygaard
Kimley-Horn
Rivanna Archaeological Services
Wolf/Josey Landscape Architects

INTRODUCTION

project overview



West Main Street is an important commercial corridor that provides services to adjacent neighborhoods and serves as a vital connector between the Downtown Mall and the University of Virginia.



BASIS OF DESIGN

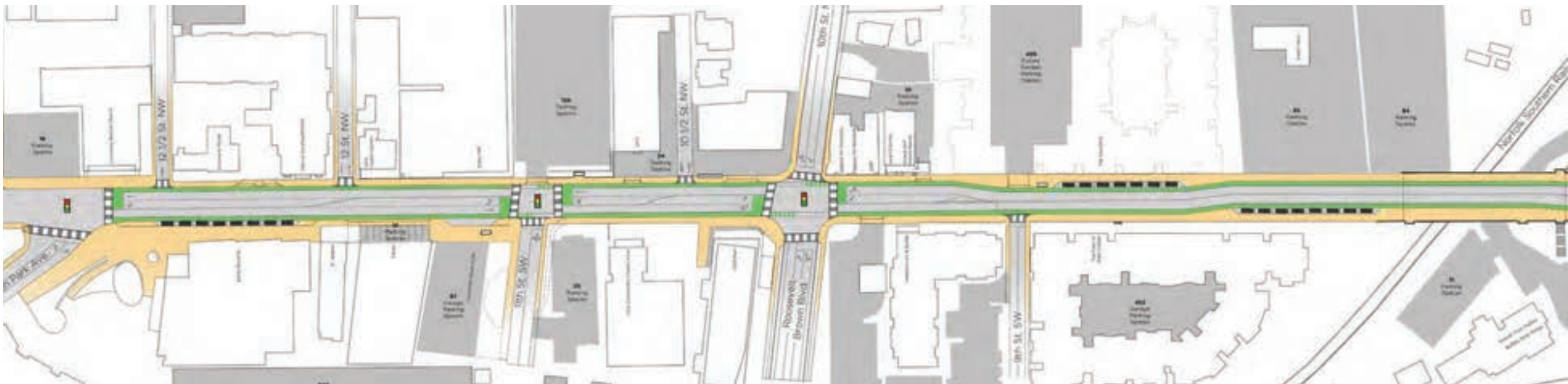
option 1 plan



Typical Condition West of Bridge



Typical Condition East of Bridge



RESOLUTION TO ADOPT WEST MAIN STREETSCAPE IMPROVEMENT PLAN OPTION 1 (for March 21, 2016)

WHEREAS, The West Main Street Streetscape Plan Option 1 (herein referred to as “The Plan”) seeks to retain and grow the patrons of the corridor by creating a safe, active, pleasant and usable space for all users, thereby sustaining the customer base for local businesses and promoting a sense of well-being for local residences, and

WHEREAS, The Plan proposes a 400% increase in street trees along the corridor in a variety of large-canopy, medium-canopy, columnar, and small trees for their visual interest, their ability to adapt and thrive in the West Main Street environment, and their positive impact on the environmental quality of the immediate area through carbon dioxide reduction, and

WHEREAS, The Plan establishes several areas for Low Impact Development where green infrastructure practices could be utilized and highlighted and recommends technologies to preserve tree root zones that prevent compaction, a deadly force upon many urban trees, and

WHEREAS, The Plan also proposes undergrounding overhead utilities, which are limiting to the health and canopy of large trees due to the regular trimming or removal of branches to prevent conflicts with utility lines, and prone to failure during heavy snow and wind storms thereby disturbing the well-being of both businesses and residences, and

WHEREAS, The Plan encourages physical activity by creating a safe and welcoming place to walk or bike by improving the walkability and bike-ability of a vital corridor that connects neighborhoods, downtown, and the University of Virginia and improves bus service on the City’s busiest route by adding shelters and amenities and creating access to the Jefferson School on Fourth Street, and

WHEREAS, Execution of The Plan will meet several objectives of the City’s Strategic Plan Goal 2: Be a safe, equitable, thriving and beautiful community and Goal 3: Have a strong diversified economy;

WHEREAS, The Plan is the product of three (3) public meetings with over 100 citizens in attendance at each meeting, several focus group sessions, two parking surveys and meetings with the planning commission, board of architectural review, tree commission, Mid-Town Business Association and the University of Virginia over several years beginning in December, 2013, and

WHEREAS, The West Main Street Citizen Steering Committee has provided valuable input throughout the multi-year planning process and has fulfilled its duties as charged for which the Charlottesville City Council is grateful;

BE IT RESOLVED that the Charlottesville City Council hereby adopts the West Main Street Streetscape Plan Option 1, as the guiding document for executing streetscape improvements to the West Main Street Corridor, and

BE IT FURTHER RESOLVED that the Charlottesville City Council shall henceforth serve as the West Main Street Streetscape project’s review body during the construction documents phase, availing itself of the expertise of its advisory groups as needed, and

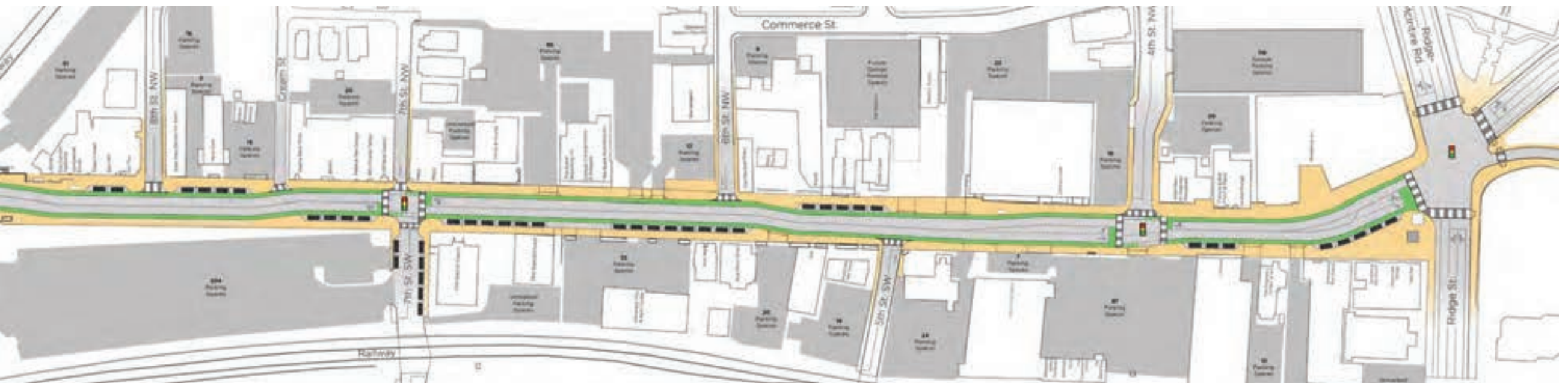
BE IT FURTHER RESOLVED that the City of Charlottesville through its representatives on the Planning and Coordination Council (PACC) and key staff shall engage with the University of Virginia to identify shared investment opportunities within three (3) months of passing this resolution, and

BE IT FURTHER RESOLVED that Charlottesville City Council directs the City Manager, his staff and consultants to within six (6) months of passing this resolution:

- Authorize the design and engineering team of Rhoadside Harwell to proceed immediately with Construction Documents needed to bid and execute the work and secure all necessary approvals, inclusive of undergrounding utilities but without the use of a Pilot Project; and
- Develop an Implementation “Action” Plan inclusive of the following:
 - Parking plan (including but not limited to developing a parking garage on City-owned property within the West Main Street corridor, on-street parking meters, restriping spaces and enhanced enforcement);
 - Cost Estimate based on more accurate Design Development drawings;
 - Funding and financing strategy (including but not limited to Tax Increment Financing-TIF strategies, parking meter revenue dedicated to infrastructure maintenance, general obligation bonds, revenue bonds and applicable State and Federal Grants);
 - Phasing Plan (based on a critical path sequence), and Timeline; and
 - Construction Mitigation Plan (that identifies strategies and timeframe for informing west main residents and businesses about construction, alternative routes, appropriate signage);
 - Property Owner Outreach Plan (inclusive of meetings with owners about the streetscape improvement plan);
 - Coordinated, timely community Engagement/Information Strategy;
 - Project management strategy for pre- and post ground breaking to ensure proper coordination of the above, and contract monitoring and
 - Quarterly progress reports to City Council, and

BE IT FURTHER RESOLVED that Charlottesville City Council directs the City Manager to conduct an analysis of jobs required by the West Main Street Improvement Project that can be performed in-house by city departments (such as sidewalk installation, laying pipe, others) and linked to the Growing Opportunity GO apprenticeship programs for the benefit of local residents within nine (9) months of passing this resolution.
Submitted to Mayor Signer and City Manager Jones by Councilor Galvin 3/21/16

Charlottesville City Council ‘Resolution to adopt West Main Street Streetscape Improvement Plan Option 1’- March 21, 2016



Option ‘1’ Plan



STREET TREE ANALYSIS

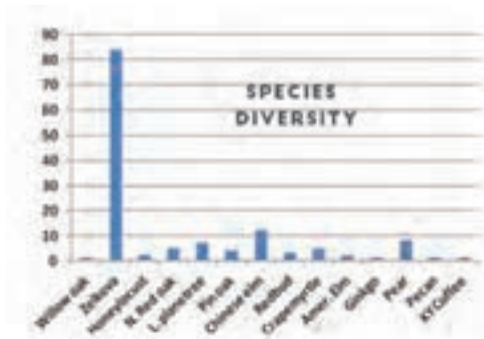
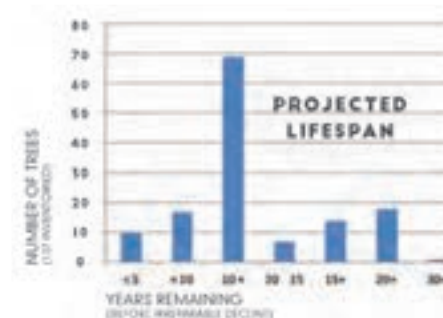
existing conditions summary

Great streets maintain a consistent, healthy, and diverse street tree canopy. West Main Street features large canopy trees, providing shade and marked viewsheds, but suffers from a monoculture of species and poor rooting volumes to sustain its existing trees. In order to be a great street, West Main Street must plant more trees, increase diversity, and develop techniques to increase soil volume for sustained tree growth. Doing so, as it relates to implementing the Option 1 design layout, may mean removing many existing trees. The challenge for justifying removing trees entails quantifying the costs and benefits of tree removal versus new tree planting.

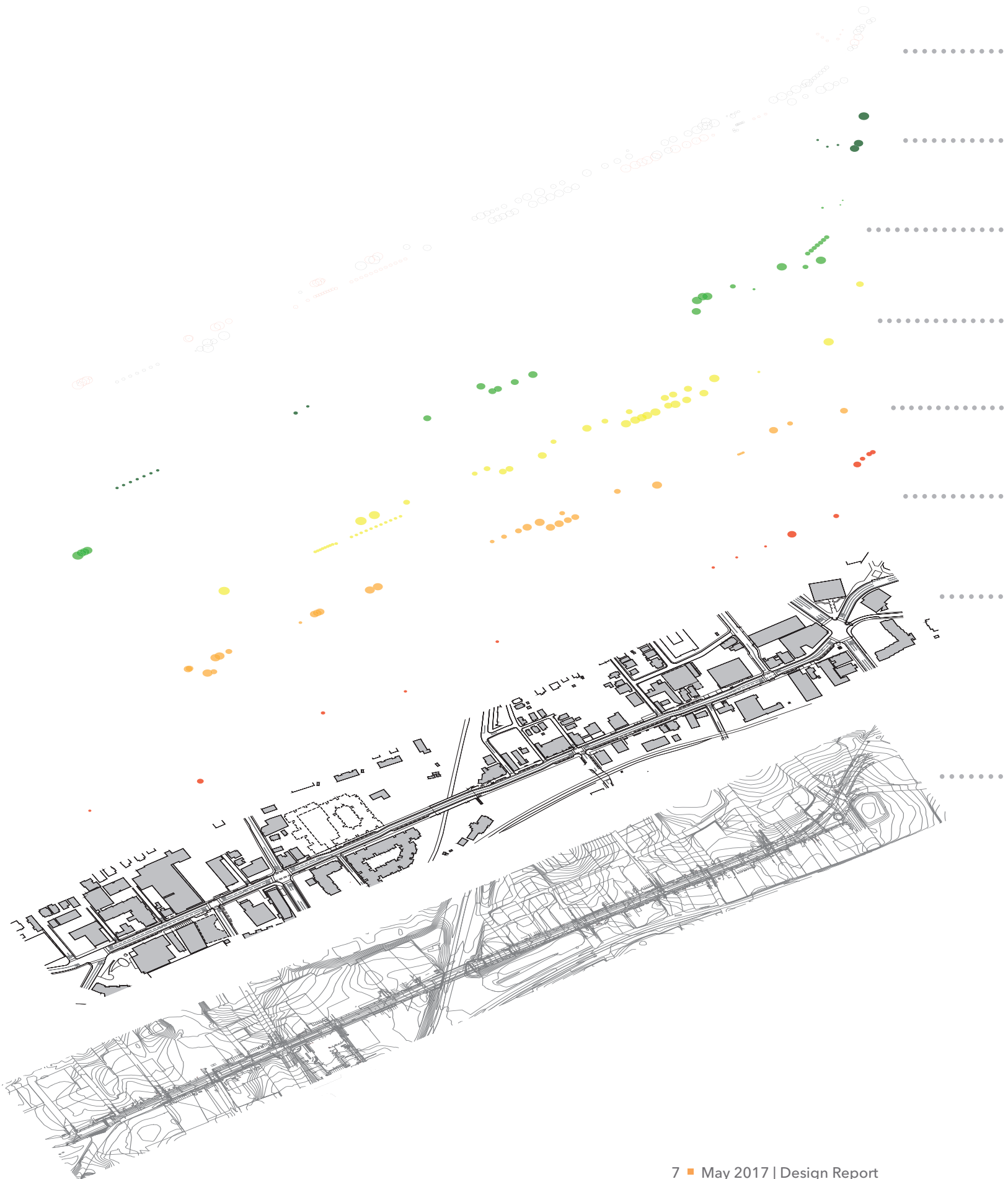
CONCLUSIONS

The current street tree conditions evidence a lack of species diversity and planting conditions which inhibit the healthful and sustained growth of vigorous, productive trees.

- 62% of street trees along West Main St. are Zelkova; a monoculture with increased susceptibility for widespread disease.
- Limited rooting space has created inhospitable conditions for tree growth, limiting life expectancy to approximately 10 years for the majority of trees before an irreversible stage of decline occurs.
- Opportunities to save trees are limited to considerably expanding the available rooting zone.



EXISTING CONDITIONS SUMMARY



WEST MAIN ST. STREET TREES (139)
 • Public R.O.W street trees = 80 (black)
 • Private Property street trees = 59 (red)

GOOD TO EXCELLENT STREET TREES (15) ●
 • 100% live canopy
 • Strong annual growth and healthy condition
 • 20-30+ year healthy lifespan before decline

GOOD STREET TREES (29) ●
 • 100% live canopy
 • Strong to average annual growth rate
 • 15-20+ years before irreparable decline

FAIR TO GOOD STREET TREES (49) ●
 • 50-100% live canopy
 • Average to low annual growth rate
 • 10-15 years before irreparable decline

FAIR STREET TREES (32) ●
 • Less than 50% live canopy
 • Low annual growth
 • Less than 10 years before irreparable decline

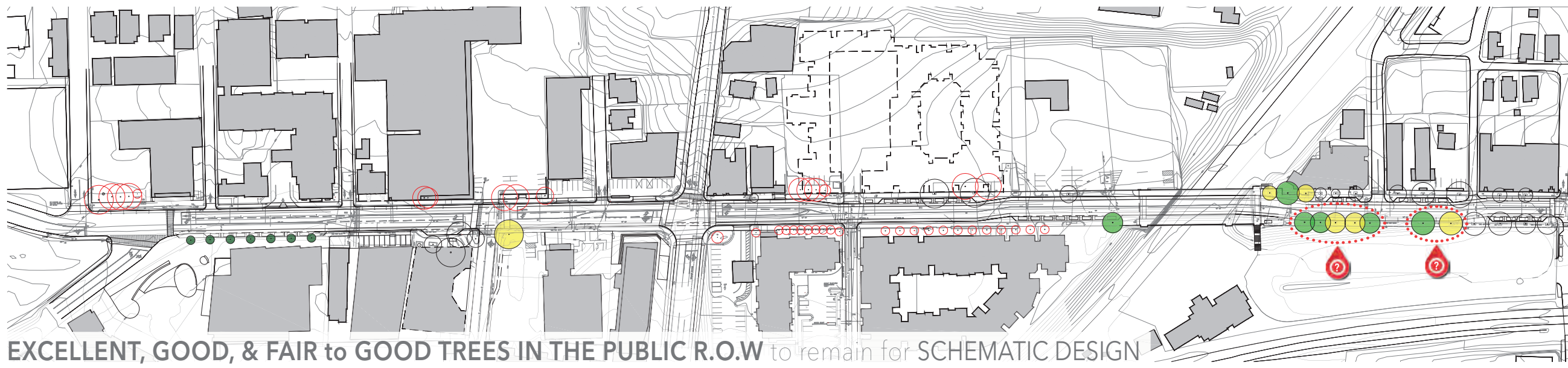
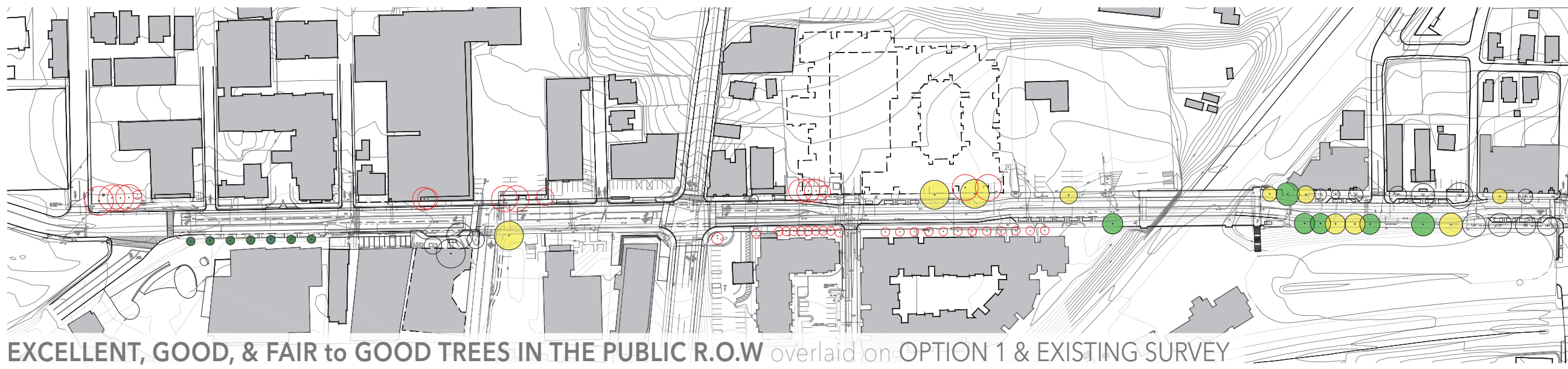
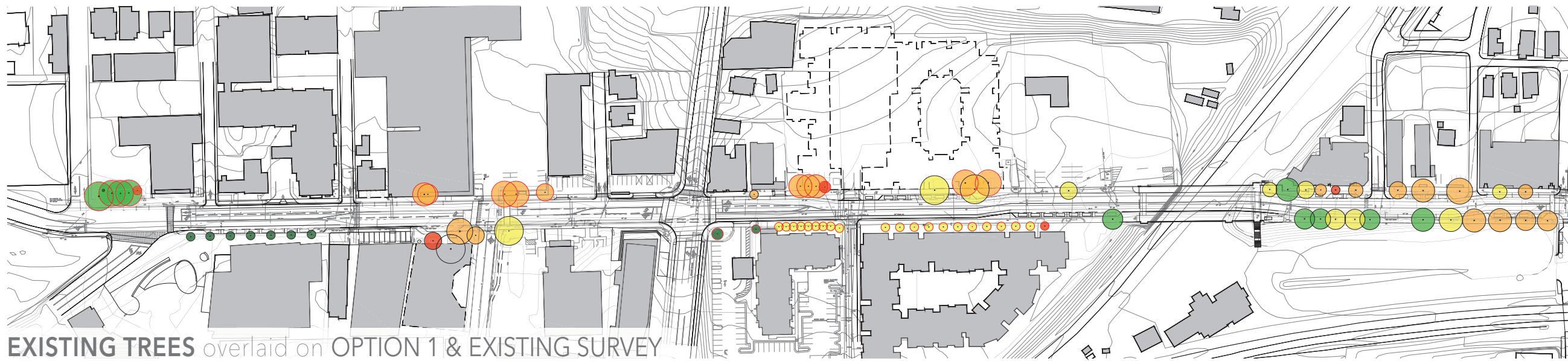
POOR TO REMOVE STREET TREES (14) ●
 • Less than 50% live canopy
 • Minimal annual growth
 • In state of irreparable decline

TRY TO SAVE & PRESERVE

TO REMOVE

OPTION 1 PREFERRED STREET CONFIGURATION, 2016

EXISTING CONDITIONS SURVEY, 2014





ANALYSIS MAP 1

- Reviewed the current state of street tree planting along West Main Street. Determined species, health, planting conditions, canopy and trunk size, indications of disease, damage, and hazards to adjacent infrastructure.

- Assessed locations of existing trees in relation to proposed Option 1 layout.

- Fair and Poor trees in the public right-of-way, totaling 32, with low to minimal annual growth and already in a state of decline, should be viewed as being removed altogether. These trees either conflict with proposed Option 1 layout, will not survive through construction processes, and have no or limited remaining aesthetic and ecological benefit.



ANALYSIS MAP 2

- Trees shown here include Excellent, Good, and Fair to Good in the public right-of-way, totaling 48, which have average to strong growth rates, make up the majority of West Main Street's canopy, and have at least 15 years before they enter an irreversible state of decline.

- These trees should be viewed as having the potential for being saved, permitting no conflicts with the layout and construction of Option 1 and ensuring the possibly for substantially increased rooting zone volumes in the proposed design.

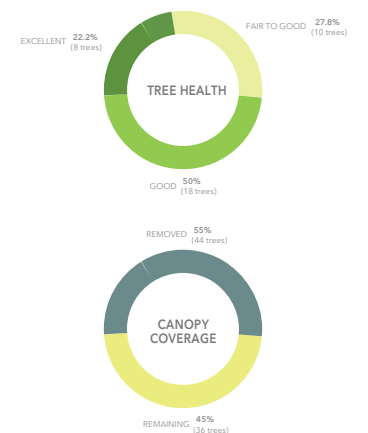
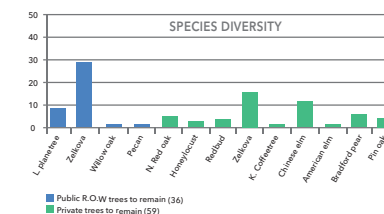


ANALYSIS MAP 3

- Excellent, Good, and Fair to Good trees in the public right-of-way to remain, totaling 36 (45% of total canopy), 14 of which may still require removal, have been vetted through an analysis consistent with the same process above.

- Trees selected for removal either impede normal pedestrian traffic flow in the proposed Option 1 layout or will have rooting zones severely impacted by construction processes that normal tree protection efforts cannot prevent. Trees outside the public R.O.W have been maintained but may require special tree protection efforts in order to save.

BREAKDOWN OF TREES FOR POTENTIAL TO REMAIN





STREET TREE PLANTING ANALYSIS

soil volume requirements and goals

Urban trees face numerous challenges, but the biggest roadblock for healthy, sustainable trees that reach their proper mature canopy, and thus greatest ecological benefits, is the adequacy of abundant soil volume and preventing soil compaction. Multiple studies suggest that trees need 1 to 2 cubic feet of soil volume for every square foot of crown area spread (Casey Trees). Charlottesville's Streets that Work Design Guidelines (adopted September 6, 2016) recommends 400 cf of soil per tree for medium and large deciduous trees. Tree roots will spread up to twice the width of the tree's canopy and penetrate areas where soil is not highly compacted, which are abundant in air and water. Urban trees in small tree boxes rarely reach their full growth potential due to the highly compact subgrade that tree roots inhabit. The recommended minimum soil volume for urban trees is 400 cubic feet with an optimal range being between 700 and 1000 cubic feet for full maturity.

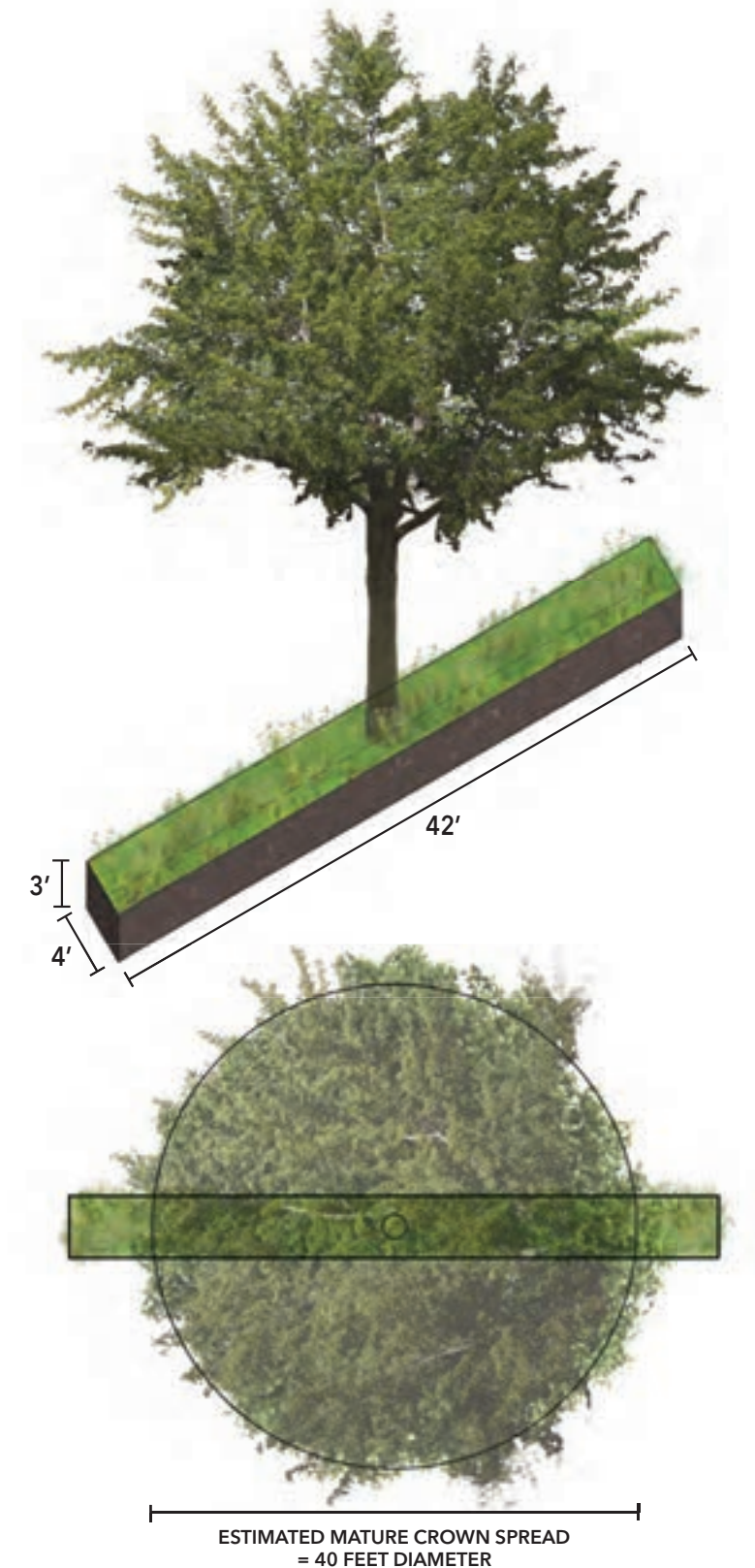
TRADITIONAL OPEN SOIL TREE BOX VS. SILVA CELL TREE BOX

DESIGN METHODS: HOW TO ACHIEVE SOIL VOLUME

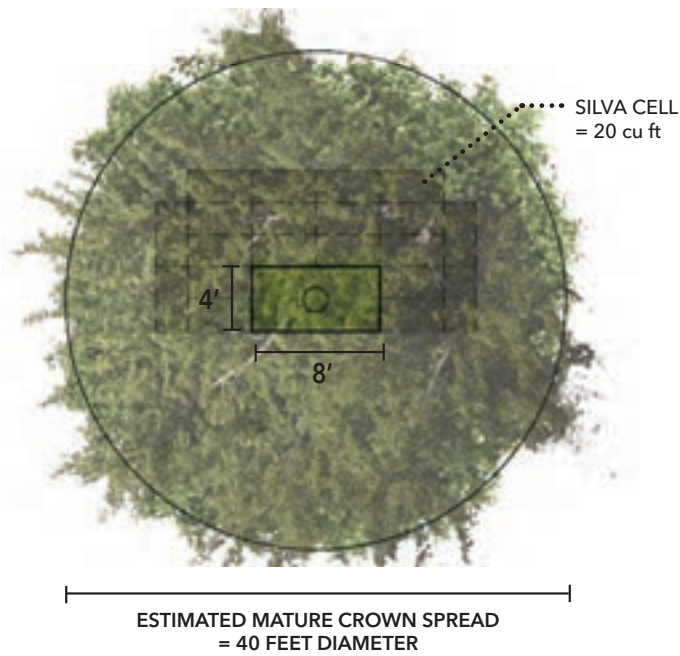
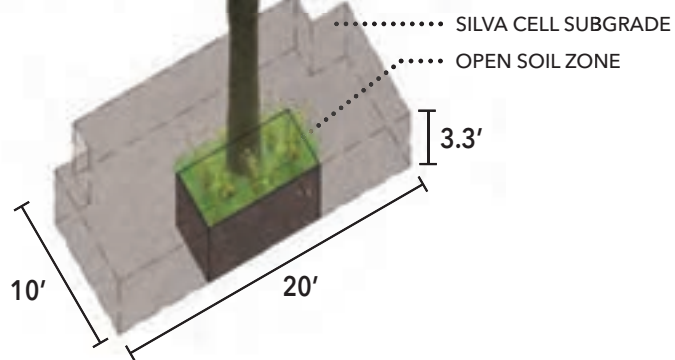
- Open Soil Area
- Managed Root Paths
- Structured Subgrade Soil Area
- Continuous Soil Planters with Reinforced Slabs

TREE BOX DESIGN MATRIX PARAMETERS

- Sidewalk Width
- Tree Space Soil Volume - 500 cuft Design Goal
- Minimum Tree Space Width
- Minimum Open Soil Area
- Charlottesville's Streets that Work Guidelines - 400 cuft Standard Minimum

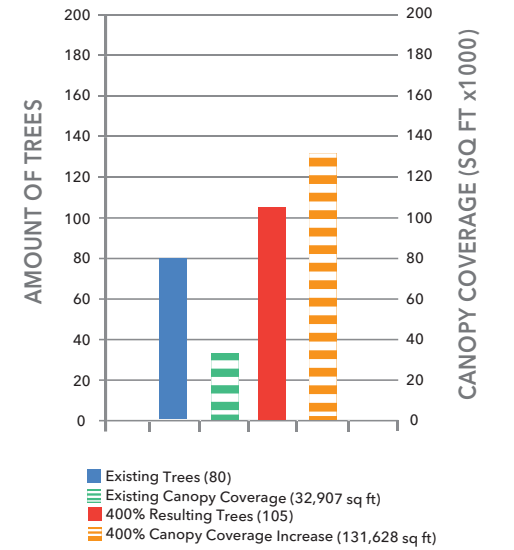
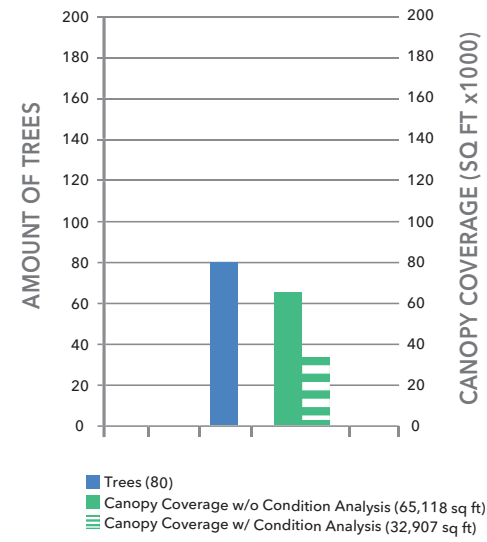


Soil Volume = 504 cubic feet

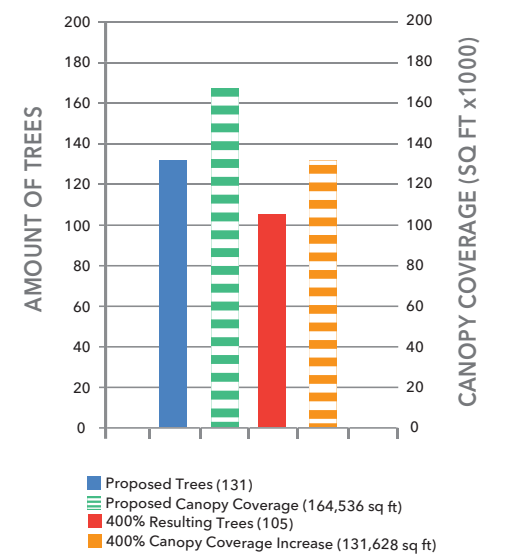
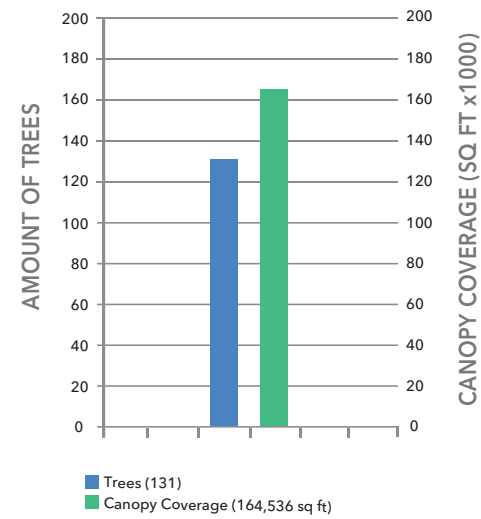


Soil Volume = 505 cubic feet

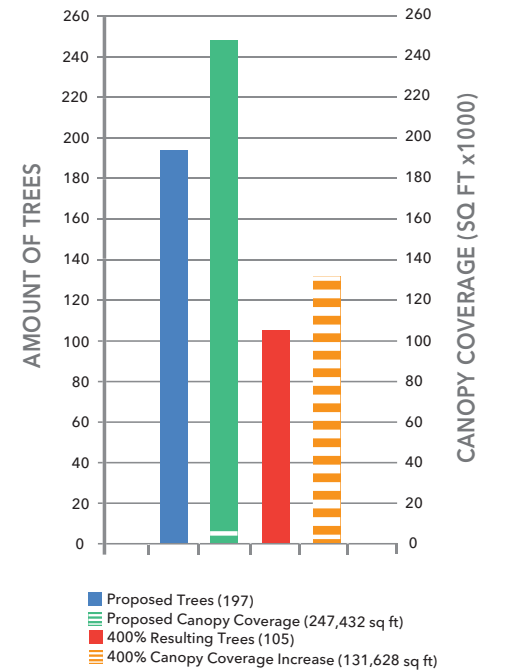
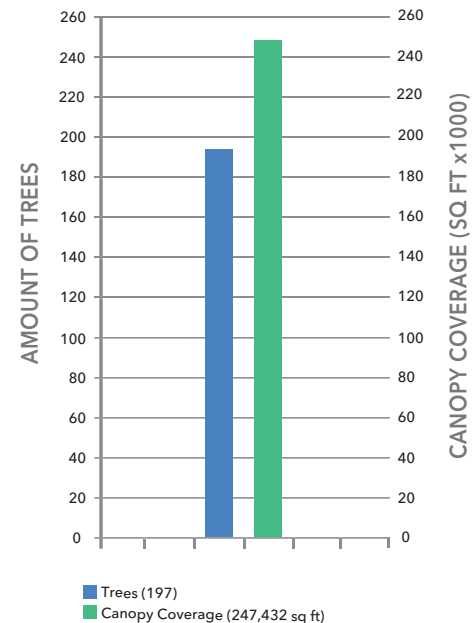
**Analysis Map 1:
Existing Tree Planting
vs 400% Increase**



**Analysis Map 2:
Traditional Tree Planting
vs 400% Increase**

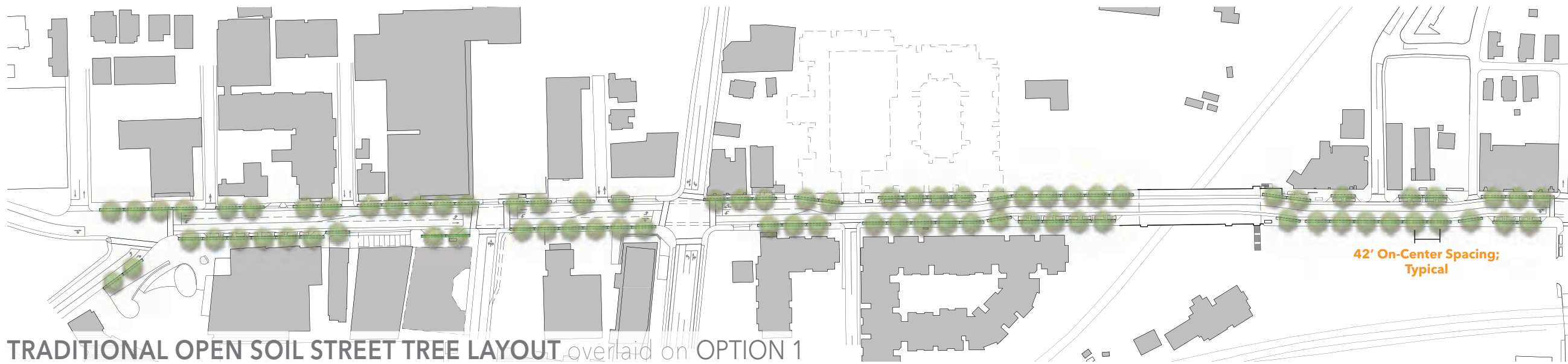


**Analysis Map 3:
Silva Cell Tree Planting
vs 400% Increase**





EXISTING TREES overlaid on EXISTING SURVEY



TRADITIONAL OPEN SOIL STREET TREE LAYOUT overlaid on OPTION 1

42' On-Center Spacing;
Typical



SILVA CELL STREET TREE LAYOUT overlaid on OPTION 1

30' On-Center Spacing;
Typical



ANALYSIS MAP 1

- There are 139 existing street trees, however, only 80 of those trees in the public right-of-way contribute to the effective West Main Street canopy coverage. The existing trees within the public-right-of-way are planted in either 4' x 4' or 4' x 6' tree boxes where the designed soil volume only equals 48 to 72 cubic feet. Existing trees in these conditions will underperform anywhere from 20% - 50% their expected mature size.

CALCULATIONS

Without Condition Analysis assumes 100% live canopy for all trees.

With Condition Analysis:

Excellent and Good trees = 100% live canopy

Fair to Good trees = 75% live canopy

Fair trees = 50% live canopy

Poor trees = 25% live canopy.

400% CANOPY INCREASE

- 400% multiplied by the existing canopy coverage of 32,907 sq ft results in an expected canopy of 131,628 sq ft, which equals approximately 105 (40' dia.) trees.



ANALYSIS MAP 2

- Using a traditional open soil tree box, placed continuously alongside one another, West Main Street can feasibly maintain 131 street trees, each using 504 cu ft of soil. This hypothetical layout requires a continuous open soil zone and cannot accommodate amenity areas for site furnishings. Any increase in soil volume per tree would mean less trees can be sustained and their spacing would be farther apart.

ASSUMPTIONS

No soil volume is shared

All existing trees are removed

42' on-center tree spacing (40' is City standard)

40' average canopy based on good sandy-loam soil and species variation

COMPARISON TO A 400% CANOPY INCREASE

- 400% multiplied by the existing canopy coverage of 32,907 sq ft results in an expected canopy of 131,628 sq ft, which equals approximately 105 (40' dia.) trees.

- The proposed canopy coverage for traditional tree pits equals 164,536 sq ft, which equals 131 (40' dia.) trees.



ANALYSIS MAP 3

- Using a silva cell tree box, West Main Street can feasibly maintain 197 street trees, each using 495 cu ft of soil. This hypothetical layout allows room for increasing soil volume per tree (thus increasing canopy coverage), and alternating tree spacing to allow for structured amenity areas for site furnishings.

ASSUMPTIONS

No soil volume is shared

All existing trees are removed

30' on-center tree spacing (40' is City standard)

40' average canopy based on good sandy-loam soil and species variation

COMPARISON TO A 400% CANOPY INCREASE

- 400% multiplied by the existing canopy coverage of 32,907 sq ft results in an expected canopy of 131,628 sq ft, which equals approximately 105 (40' dia.) trees.

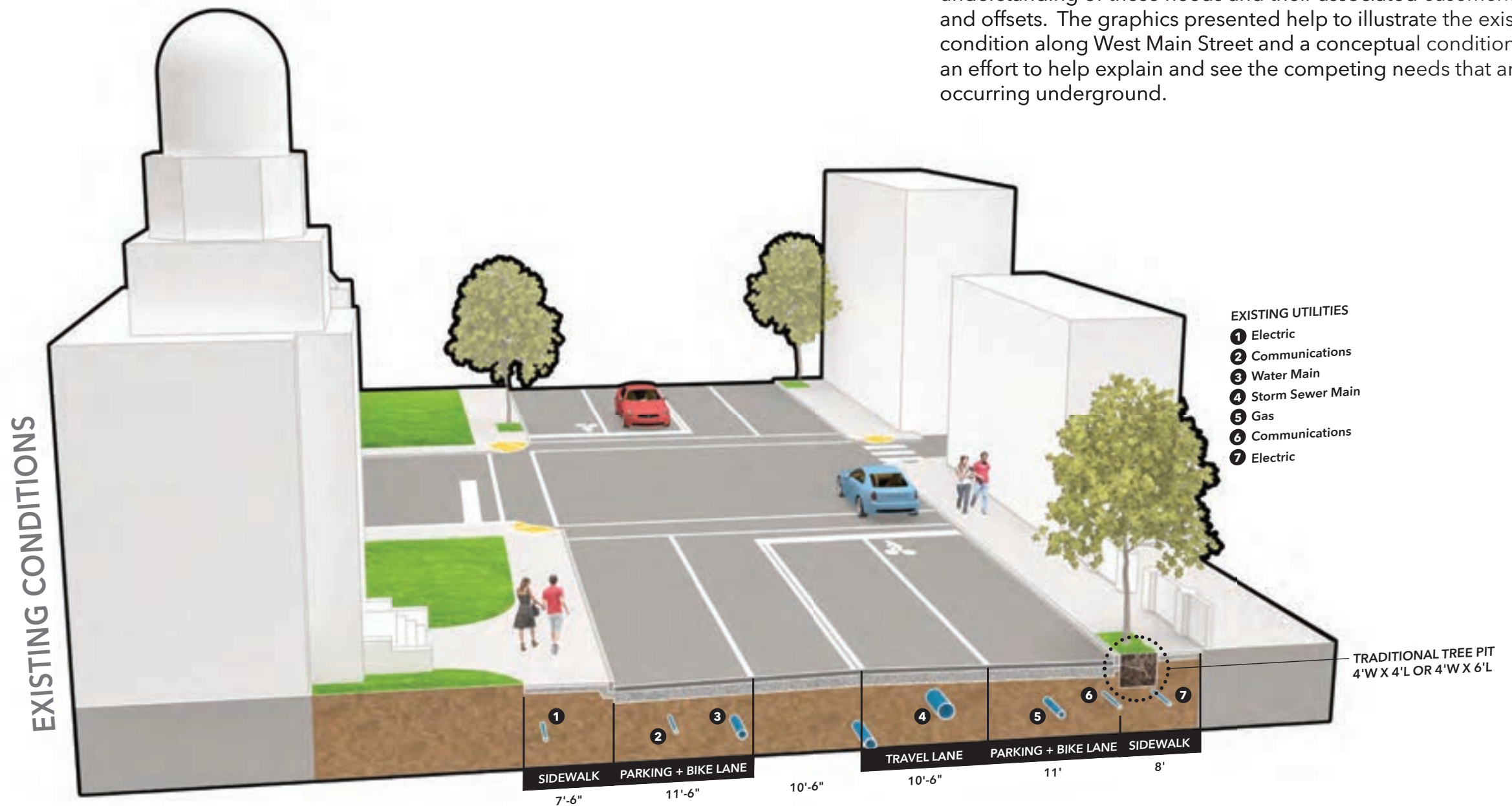
- The proposed canopy coverage for traditional tree pits equals 247,432 sq ft, which equals 197 (40' dia.) trees.



UTILITY INFRASTRUCTURE ANALYSIS

existing and conceptual utility layout

The stormwater management techniques and utility relocation and under-grounding often have competing spatial requirements and needs. The strategy for effectively integrating stormwater management with utility relocation requires a strong understanding of these needs and their associated easements and offsets. The graphics presented help to illustrate the existing condition along West Main Street and a conceptual condition in an effort to help explain and see the competing needs that are occurring underground.



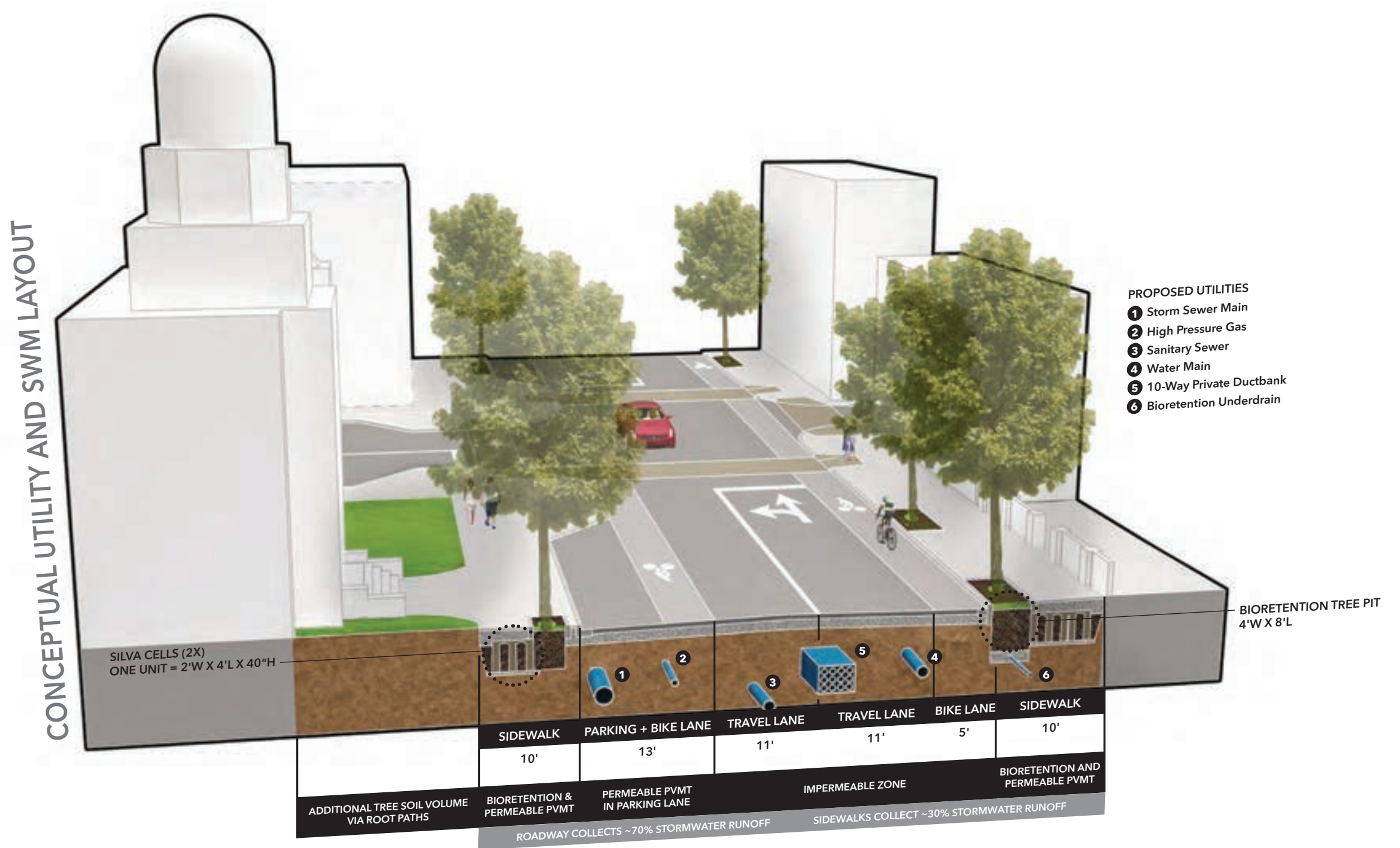
EXISTING UTILITY LAYOUT VS. CONCEPTUAL UTILITY AND SWM LAYOUT

EXISTING INFRASTRUCTURE

Traditional Tree Box
 Electric, Communications, and Gas Utilities
 Storm Sewer, Sanitary Sewer and Water Utilities

PROPOSED INFRASTRUCTURE

Silva Cells
 Bioretention Tree Box and Underdrain
 Storm Sewer, Sanitary Sewer, and Water Utilities
 Private Utility Ductbank
 Gas and Service line Relocation





STREETSCAPE CHARACTER ANALYSIS

design language matrix

West Main Street is a place between two very historic and storied landscapes; the University of Virginia and the historic downtown pedestrian mall. The materiality of these two places has evolved, albeit stringently, within the visions of Thomas Jefferson and Lawrence Halprin respectively; and by those people upholding their visions. The materials and furnishings palette and typologies of each of these places expresses consistency, visual appeal, cohesiveness, and simplicity.

West Main Street is a very historic and culturally important place in itself. However, the street suffers from being un-imageable, otherwise described as lacking characteristics and qualities that help define the image of a place in a person's minds-eye. This is largely the result of an incoherent palette of streetscape elements and improperly organized collection of materials, furnishings, and other street features. Furthermore, the City of Charlottesville streetscape standards aren't expressive enough of design and construction qualities that would foster a vision for West Main. The question then becomes, what should West Main Street look like?

CONTENTS/RESEARCH

OPTION 1 PREFERRED STREET CONFIGURATION, 2016

RHODESIDE & HARWELL MASTER PLAN, 2014

Streetscape & Urban Design Framework
Value Engineered Corridor Improvements

UNIVERSITY OF VIRGINIA

Office of the University Building Official - Facility Design Guidelines
Office of the Architect - Landscape Typologies and Standards

CITY OF CHARLOTTESVILLE

Architectural Design Control (ADC) Guidelines
City Standards and Design Manual
Streets That Work Design Guidelines

DOWNTOWN PEDESTRIAN MALL

Halprin design elements

THE CHARLOTTESVILLE DOWNTOWN MALL

Video by Paul Josey & Karl Krause

MATERIAL STANDARDS

Art
Furnishings
Lighting
Paving
Seating
Site Features
Wayfinding





Art



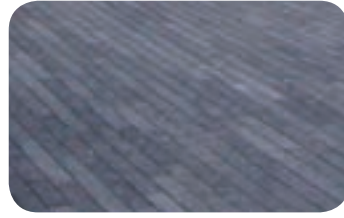
Furnishings



Lighting



Paving



Seating



Site Features



MASTER PLAN VALUE ENGINEERED ITEMS

- Bridge Deck site features removed
- Medians and Median Planting removed
- Sidewalk changed to Poured-in-Place Concrete
- Curbs changed to Concrete
- Crosswalks changed to Painted Asphalt

Wayfinding



ON ART:

- Offers a place-making role in celebrating and communicating history and culture.
- Develop relationship between artworks' materials, scale, and surrounding environment
 - Murals' appearance, materials, colors, size, and scale should be compatible with building/context
 - Sculpture should be accessible to public



ON FURNISHINGS:

- Furniture should be durable, free-standing, and matching.
- Litter receptacles should be metal and match other street furniture
 - Should be of compatible design, materials, and color with other street furniture



ON LIGHTING:

- Of a character to complement land-use, sense of place, existing context and street typology.
- Fixture selection to create hierarchy of streets and spaces
 - Consider special lighting of key landmarks to provide a focal point in evening hours
 - Traditional, pole mounted for historic places



ON PAVING

- Materials selected on intent of reinforcing the existing character.
- Traditional materials: brick, stone, concrete
 - Concrete and permeable pavers are appropriate in new construction and if applicable
 - Avoid variation in color, texture, tooling
 - Traditional patterns laid to match historic context



ON SEATING:

- Design and location of seating should respond to how surrounding space is used.
- Use design constructed of wood and/or metal
 - Should be of compatible design, materials, and color with other street furniture
 - Relates to historic character of district

WEST MAIN STREET EXISTING CONDITIONS PHOTOS

- Not standards; for visual reference only



ON SITE FEATURES:

- Walls and Fences should respect scale, materials and context of site and adjacent properties.
- Stone, wrought-iron, wooden pickets, brick
 - Not to exceed 4' height in public r.o.w
 - Take design clues from historic precedents

ON WAYFINDING:

- Maintain city-wide informational public sign system.
- Add distinctive street sign system for historic districts
 - Can be plaques, pole-mounted, or interpretive



Art



Furnishings



Lighting



Paving



Seating



Site Features



Wayfinding



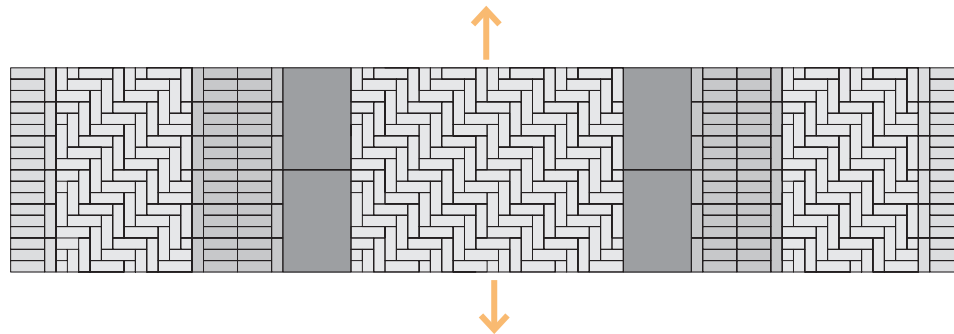
STREETSCAPE CHARACTER



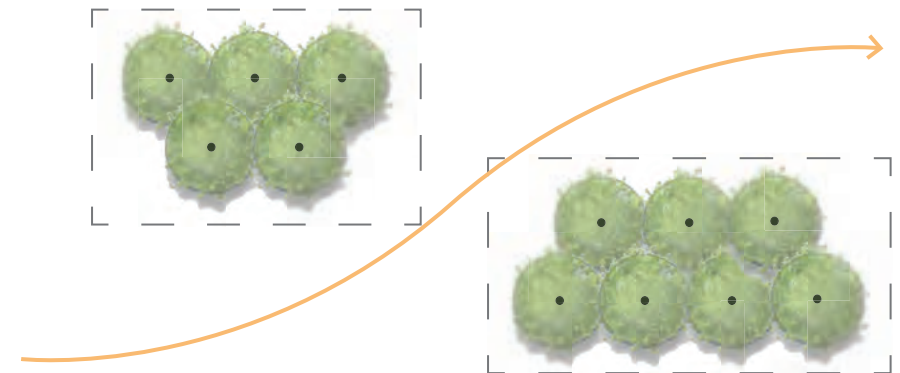
LEARNING FROM THE MALL

design principles from lawrence halprin

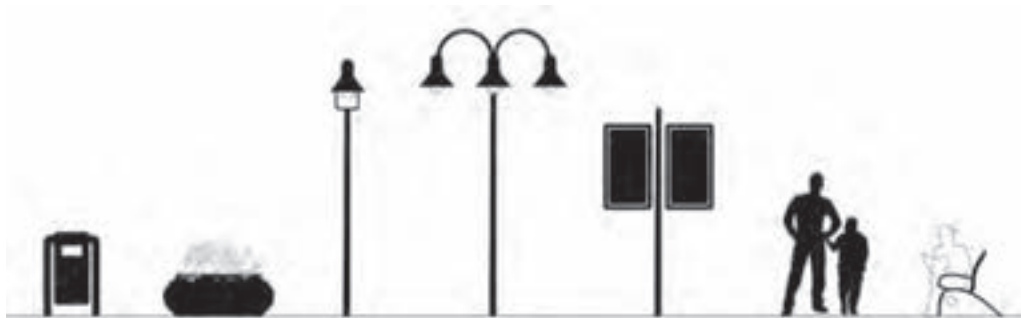
1 GROUNDPLANE AS URBAN FLOOR



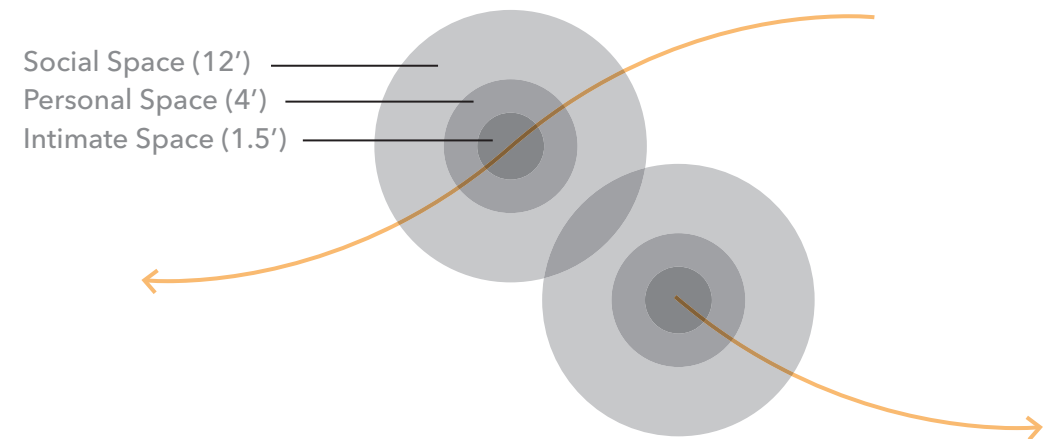
2 TREE BOSQUES AS LANDSCAPE ROOMS



3 MATERIAL AND FURNISHING SIMPLICITY



4 CHOREOGRAPHED LAYOUT CREATES 'EPISODES'



THE DOWNTOWN PEDESTRIAN MALL IS...

"A Durable Mall"

"A Flexible Mall"

"An Interactive Mall"



WEST MAIN STREET DESIGN

key principles

- 1** Create 'green gateways' along West Main Street at
1) Ridge-McIntire Road (east terminus)
2) Jefferson Park Avenue (west terminus)
3) the Bridge (center)
- 2** Create bosques of trees that are irregular in length and diverse in species
- 3** Try to save existing trees that are in excellent and good condition where possible
- 4** Maintain visibility of significant features along West Mains Street (e.g. First Baptist Church)
- 5** Maximize areas for diverse activity along West Main Street, particularly where land use suggest gathering of people. Create a rhythm of active and calm spaces along the corridor
- 6** Create a central, identifiable place for adjacent neighborhoods and City residents
- 7** Build upon the history of West Main Street and the cultural identity of the City
- 8** Incorporate lessons learned from the Downtown Pedestrian Mall

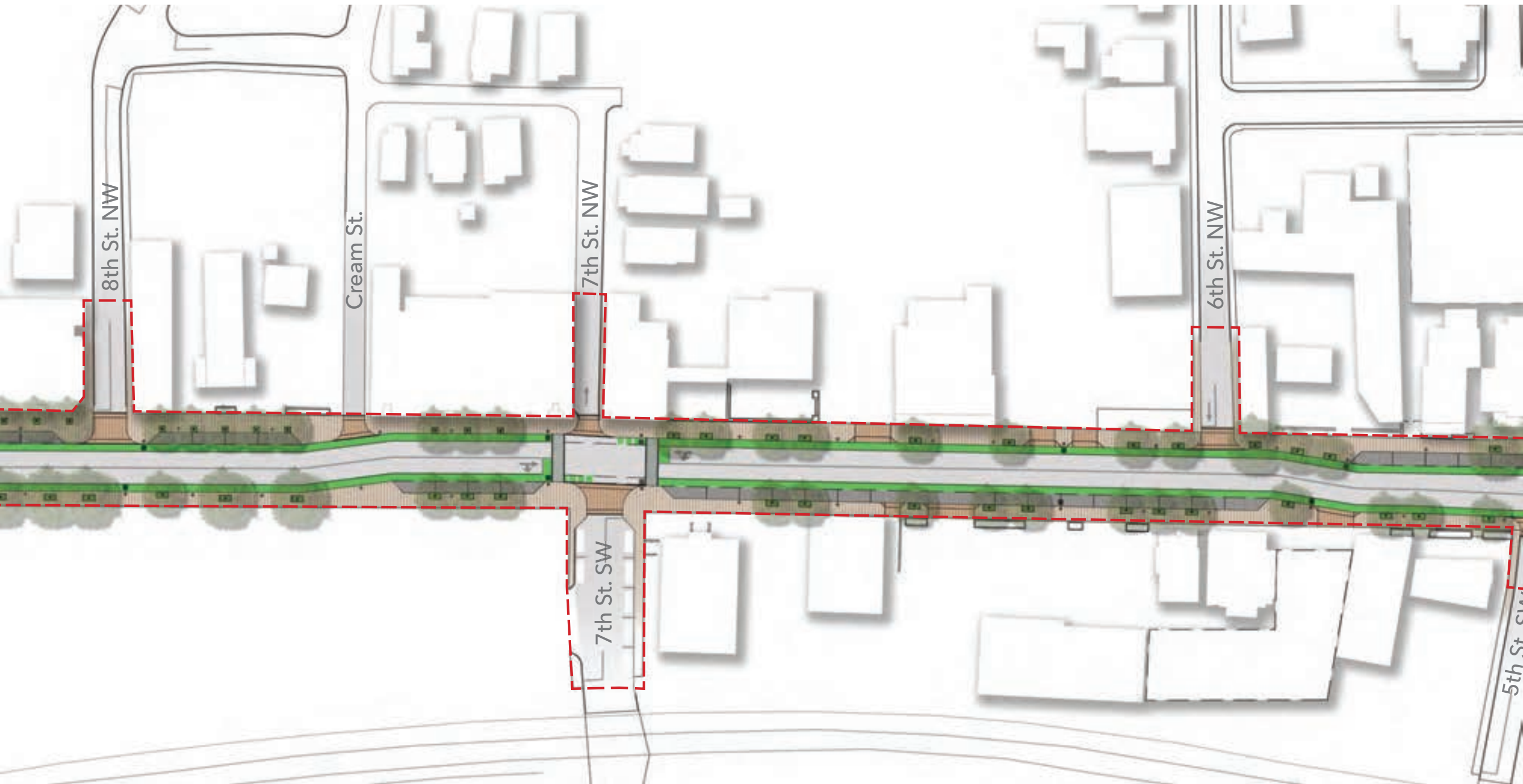


OPTION '1' PLAN UPDATE

revised streetscape plan

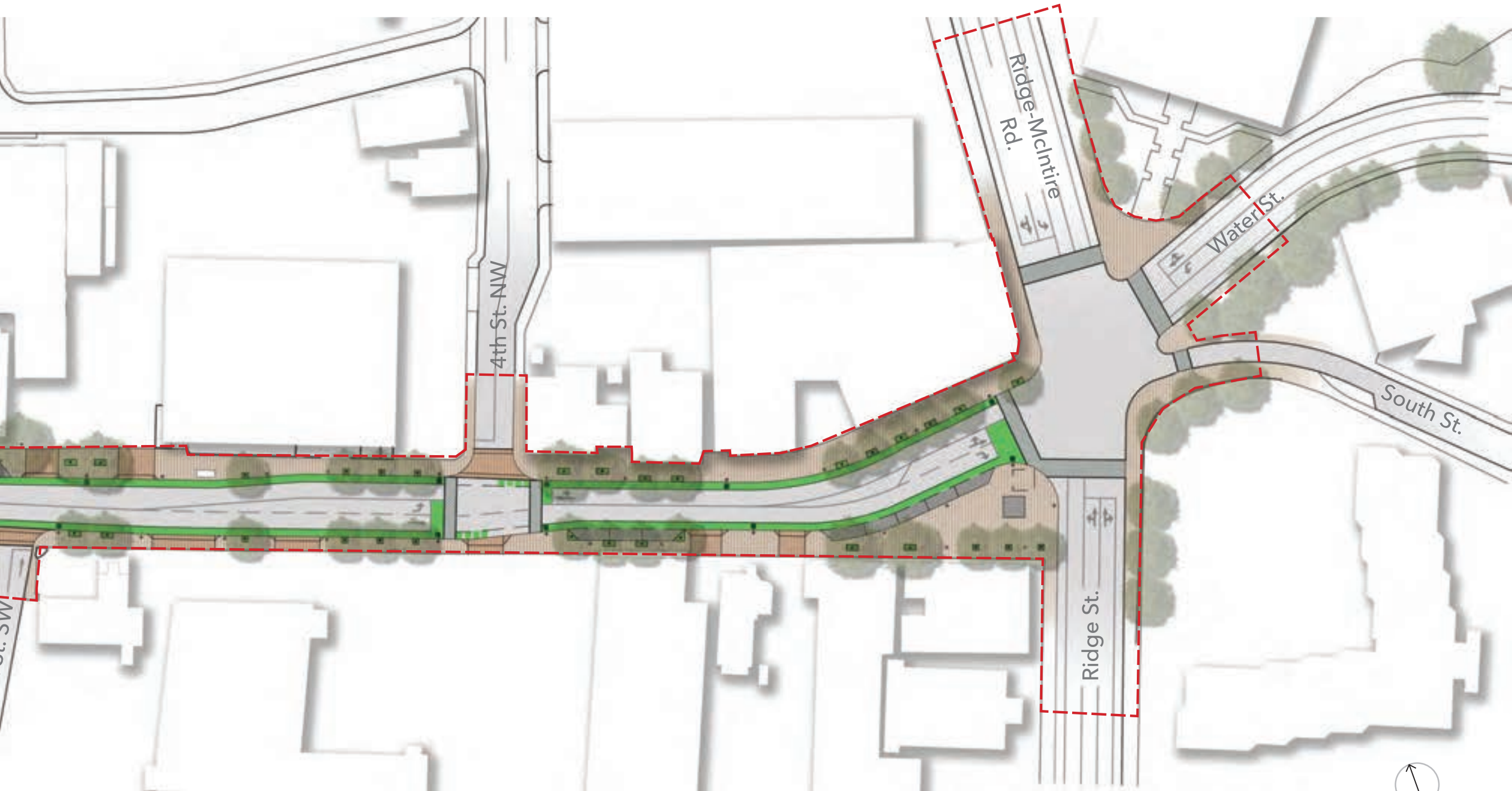






LEGEND

-  SIDEWALK
-  CROSSWALK
-  BIKE LANE
-  RAISED STREET CROSSING
-  PERMEABLE PARKING LANE
-  TRAVEL LANE
-  LIMITS OF WORK





STREET TREE DESIGN

conceptual street tree layout



JPA

Bridge

Gateway

Activity Bosques



Downtown Pedestrian Mall Tree Layout

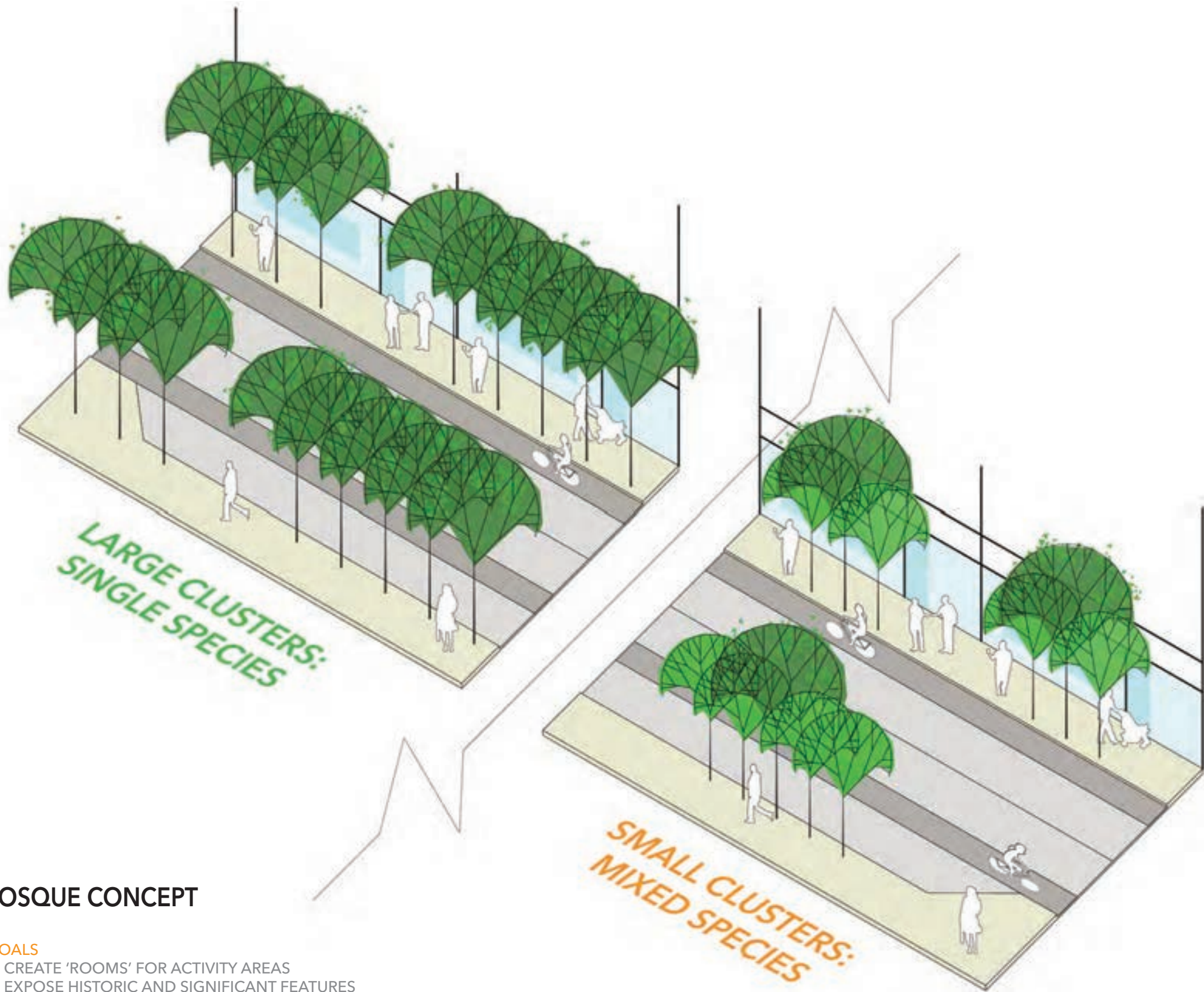


Ridge-McIntire

Gateway

Activity Bosques

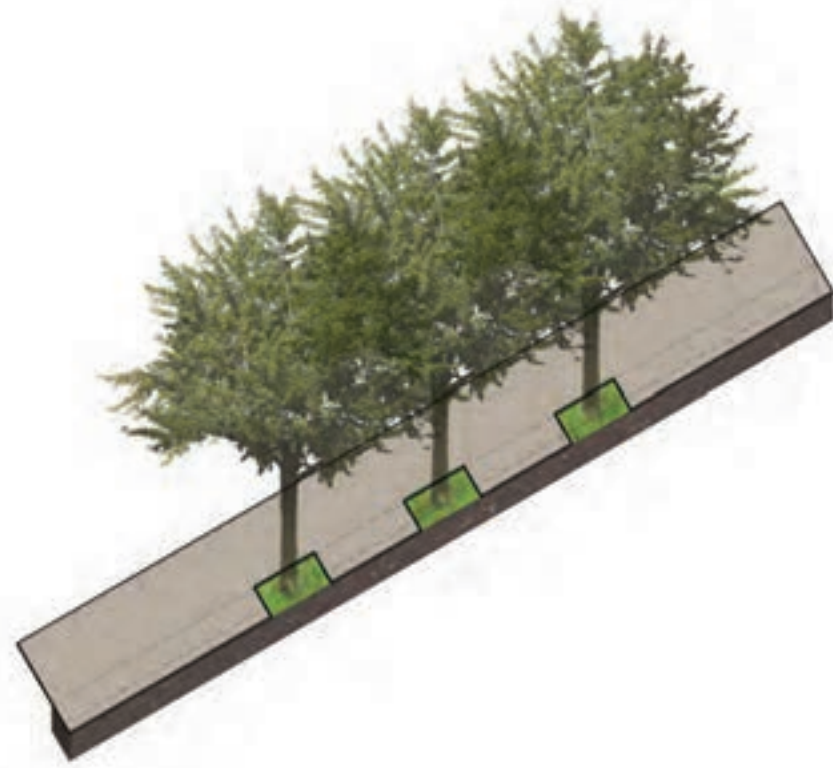
Gateway



BOSQUE CONCEPT

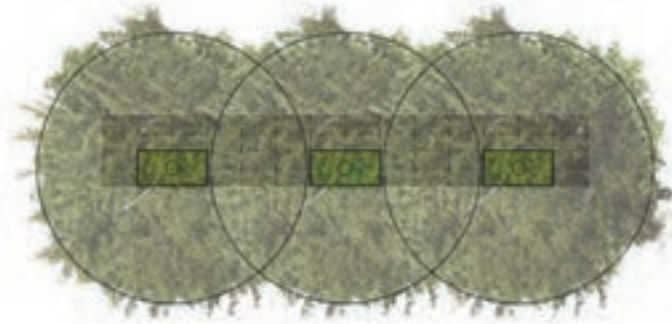
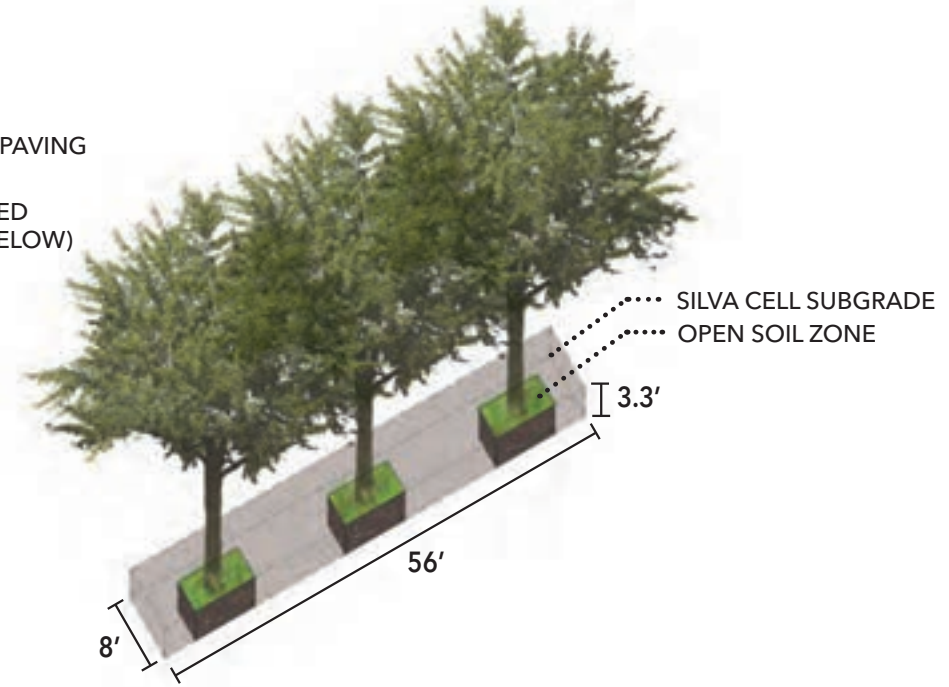
GOALS

- 1) CREATE 'ROOMS' FOR ACTIVITY AREAS
- 2) EXPOSE HISTORIC AND SIGNIFICANT FEATURES
- 3) SCREEN UNSIGHTLY ADJACENCIES



PAVING

ED
ELOW)



LLS
AL
REE
:

Soil Volume = 1,200 cubic feet

Soil Volume = 1,197 cubic feet

SOIL VOLUME REQUIREMENTS

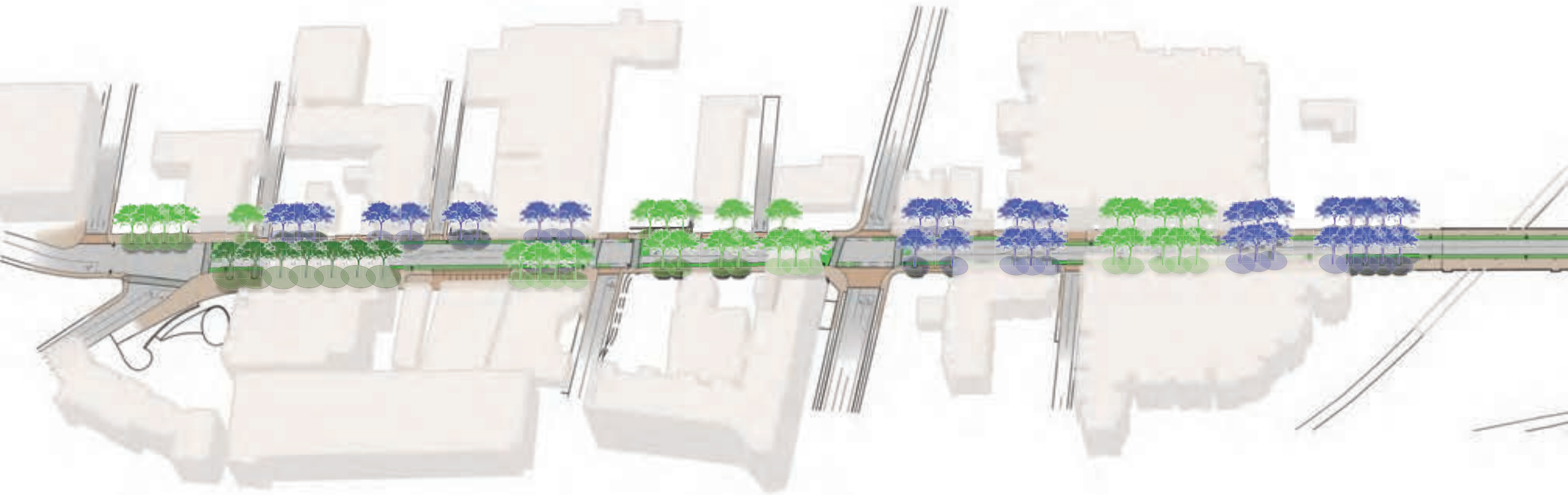
SHARED SOIL VOLUME

- 1) RESULTS IN 15%-25% DECREASE IN SOIL VOLUME PER TREE WHEN CLUSTERED
- 2) DESIGN ASSUMES 20% DECREASE
- 3) RESULTING SOIL VOLUME GOAL PER TREE WHEN CLUSTERED EQUALS 400 CU FT



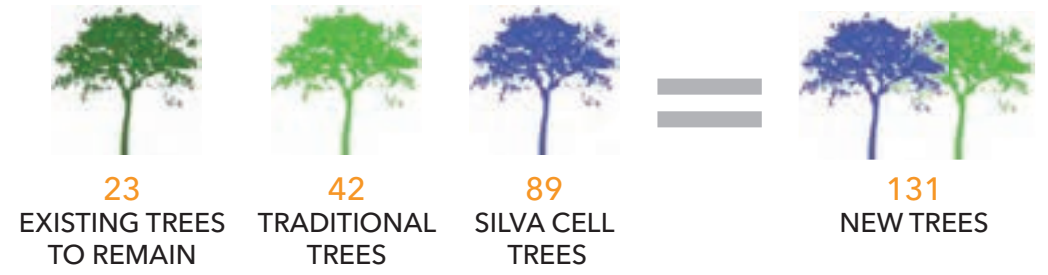
STREET TREE DESIGN

types of street tree planting





TREE TOTALS





PROGRAMMATIC DESIGN

understanding the program

West Main Street should first be understood as a place of intermingling experiences before any design or material suggestions are made. The efforts taken to describe the character of a place will ultimately lead to the choice of specific spatial form, pattern, and design technique that will help manifest the character trying to be achieved.

When programming West Main Street, there were four main questions that needed to be asked (see list on right). The answers to these questions help determine the expected uses of the street, the expected users of the street, the anticipated experiences along the street, and the types of spaces required to provide for all the above. The space use and experience typologies indicated in the following diagrams are laid out along West Main Street as they relate to the existing land use and as an attempt to begin defining the pedestrian experience. Character images help explain in visual terms what each of the programmatic zones are and how they function.

UNDERSTANDING THE PROGRAM

WHAT IS WEST MAIN STREET?

- ...a vibrant pedestrian experience
- ...a cultured place for arts and knowledge
- ...a connector for neighborhoods
- ...a storied place with a rich history
- ...an evolving corridor
- ...a place for transit

WHAT ARE THE EXISTING LAND USES?

- ...residential
- ...restaurants
- ...retail
- ...offices
- ...educational institutions
- ...hotels

WHEN DO EVENTS TAKE PLACE AND WHERE?

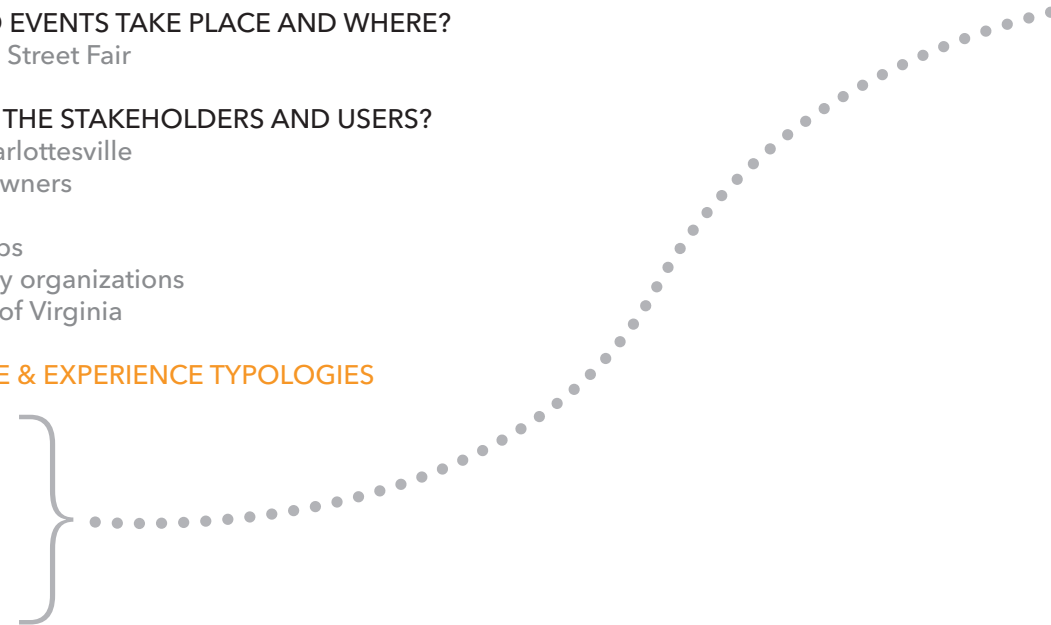
- ...Midtown Street Fair

WHO ARE THE STAKEHOLDERS AND USERS?

- City of Charlottesville
- Business owners
- Residents
- Civic groups
- Community organizations
- University of Virginia

SPACE USE & EXPERIENCE TYPOLOGIES

- Gather
- Dine
- Relax
- Learn
- Stroll
- Bike
- Play
- Celebrate



Gather 



Dine 



Stroll 



Play 



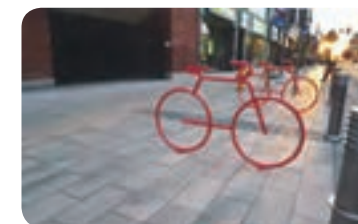
Relax 



Learn 

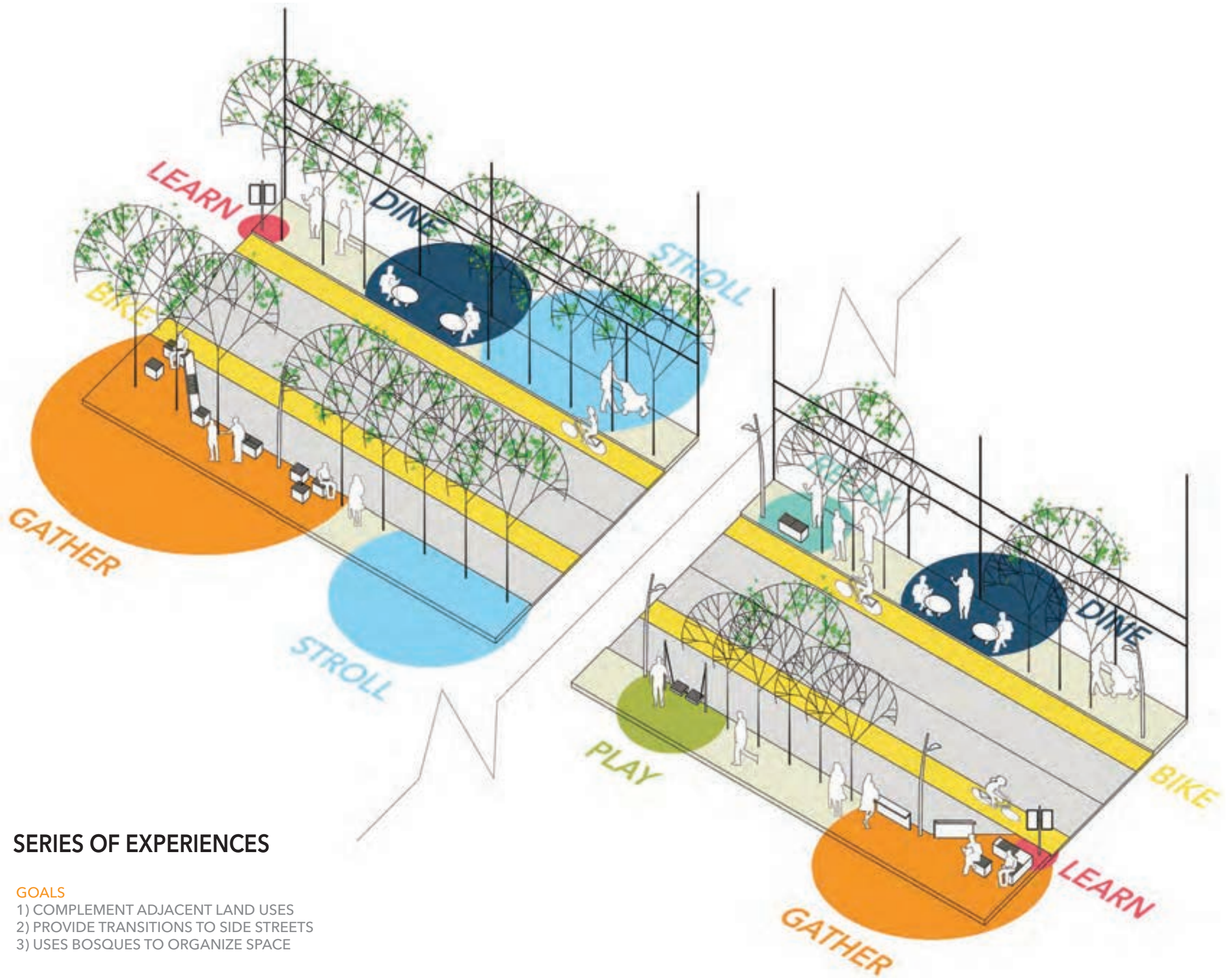


Bike 



Celebrate 

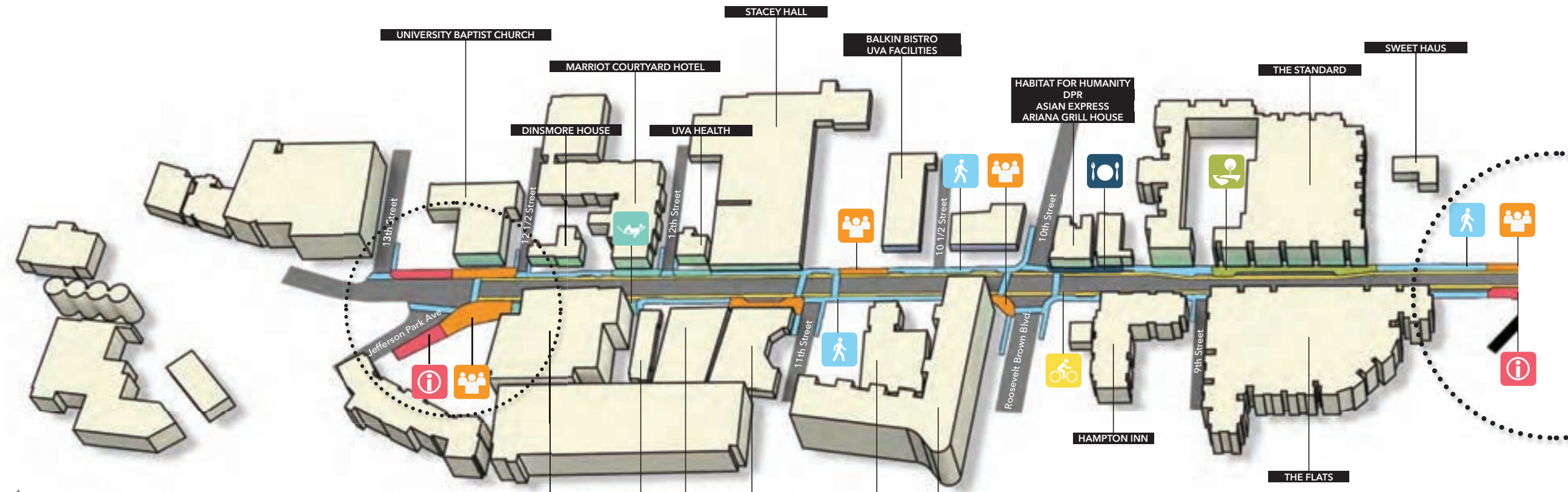




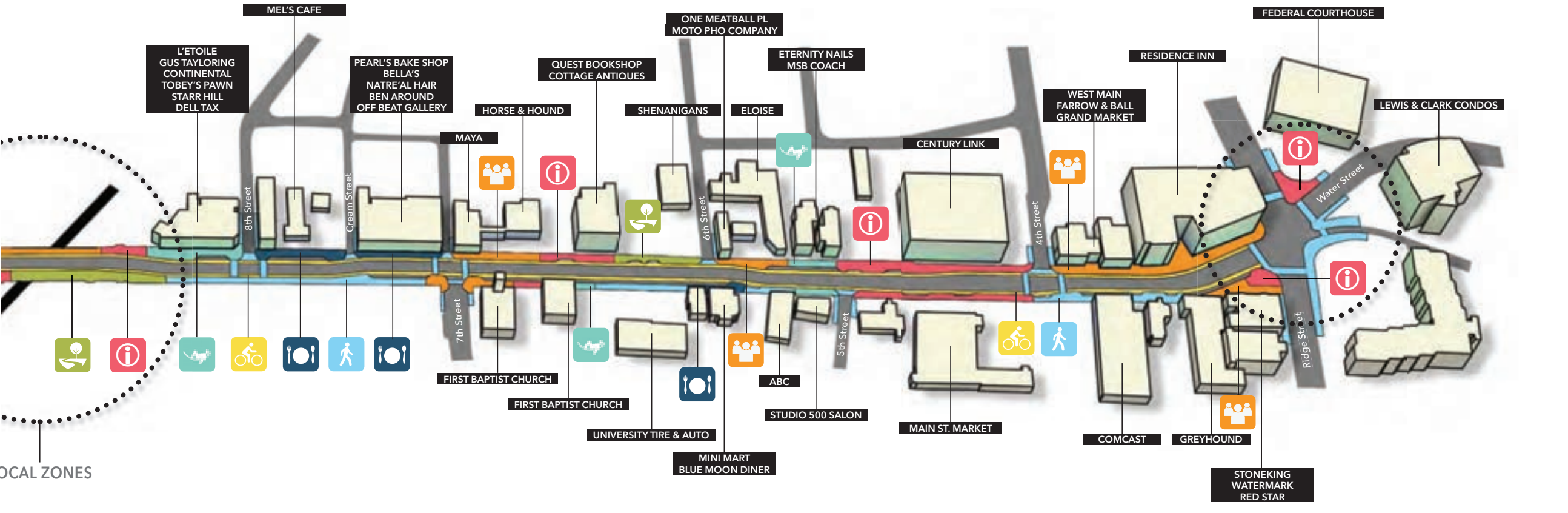
SERIES OF EXPERIENCES

GOALS

- 1) COMPLEMENT ADJACENT LAND USES
- 2) PROVIDE TRANSITIONS TO SIDE STREETS
- 3) USES BOSQUES TO ORGANIZE SPACE



← TO THE UNIVERSITY OF VIRGINIA



FOCAL ZONES

TO THE DOWNTOWN MALL →



PROGRAMMATIC DESIGN

program and activity layout





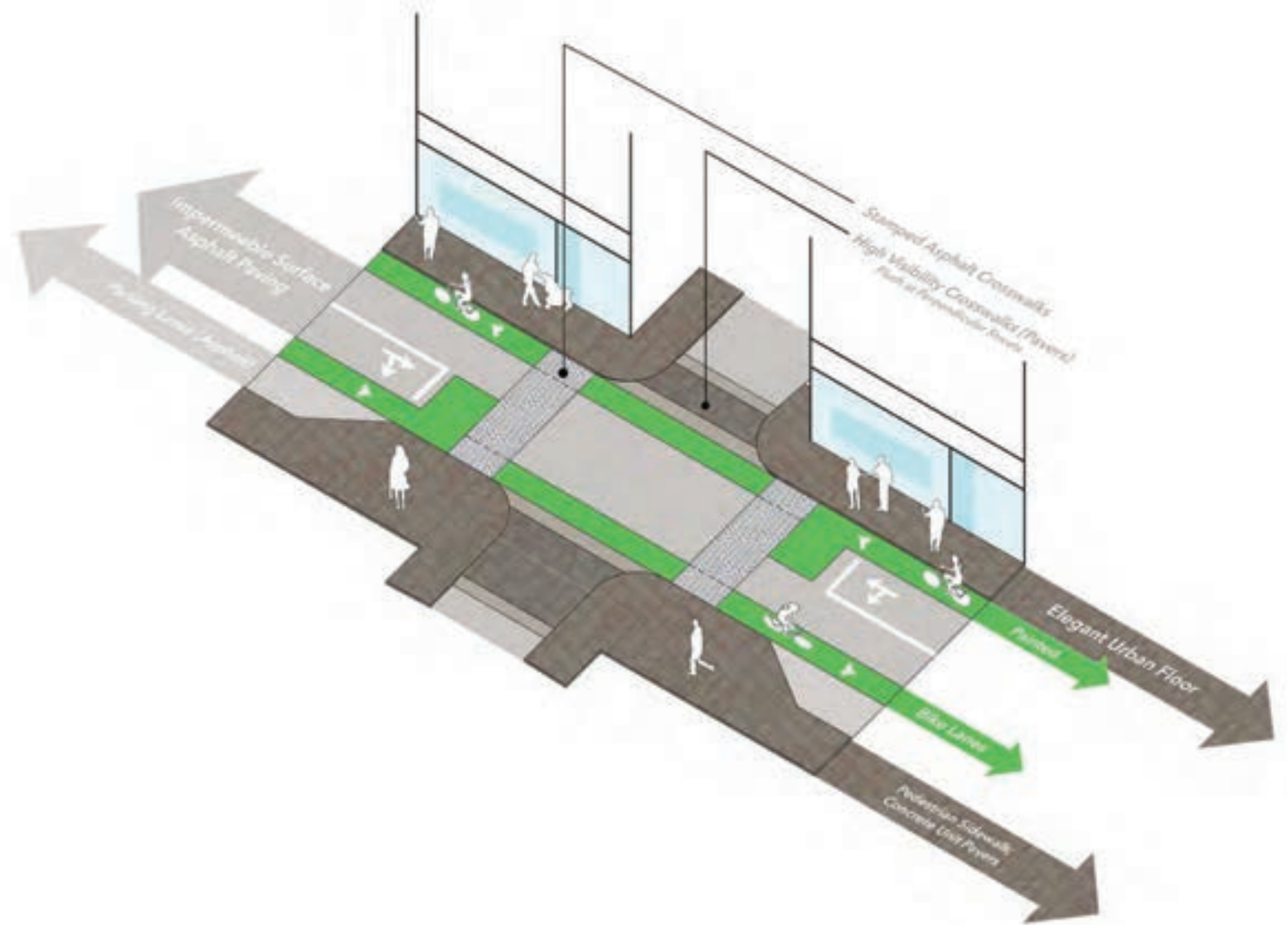
Gather		Relax		Dine		Stroll		Play		Learn	
---------------	--	--------------	--	-------------	--	---------------	--	-------------	--	--------------	--



MATERIALS ANALYSIS

hardscape and surfacing options

The character of materials chosen will work to create a consistent, unifying element that cohesively ties the corridor together. The proposed palette of materials should fit within the context of Charlottesville and help define the corridor throughout. Material design element that gives a street its sense should be given considerable thought.



MATERIALS CHARACTER

STYLE & AESTHETICS

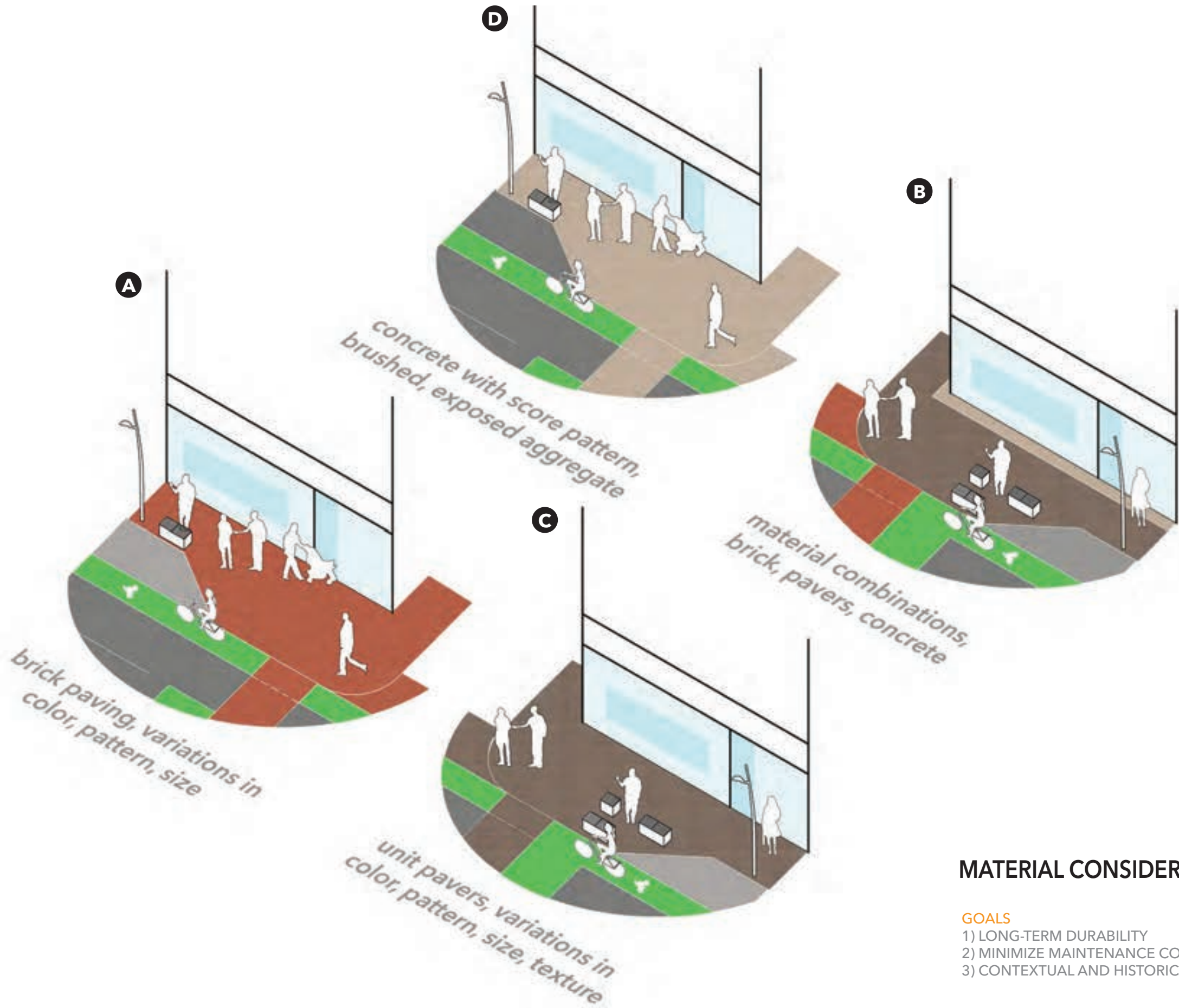
- Neutral and warm ground plane
- Simple, consistent patterning
- Uniform field

MANAGING INTRICACIES

- Material or pattern differentiation
- Change in size, texture

SPECIAL ZONES

- Permeable paving areas
- Activity areas
- Driveways and cross streets
- Building edges

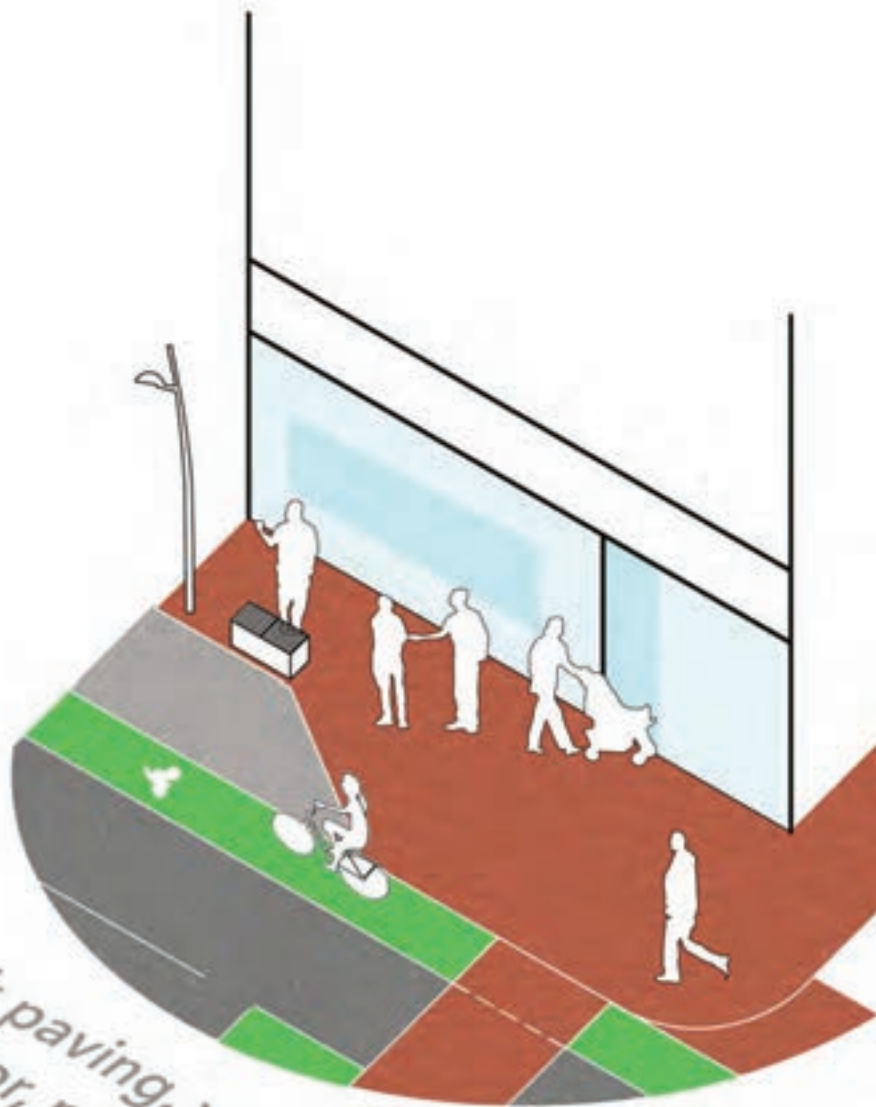


MATERIAL CONSIDERATIONS

GOALS

- 1) LONG-TERM DURABILITY
- 2) MINIMIZE MAINTENANCE COSTS
- 3) CONTEXTUAL AND HISTORICAL CONSISTENCY

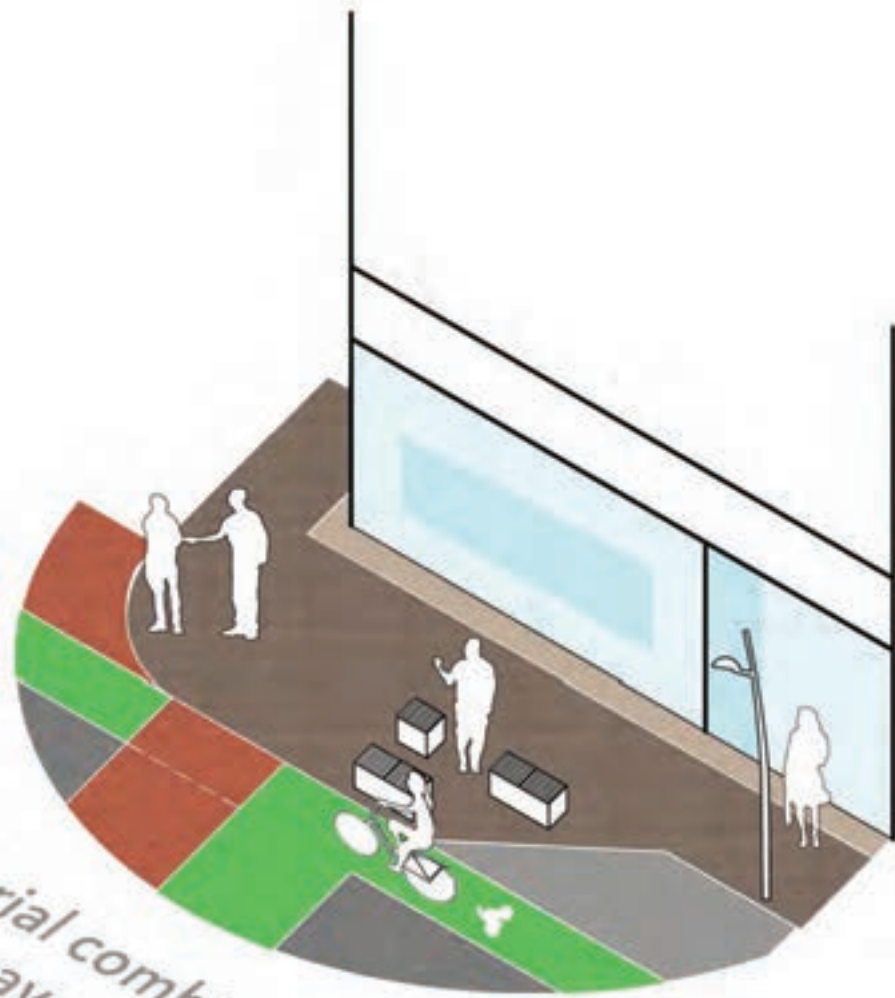
A



brick paving, variations in color, pattern, size

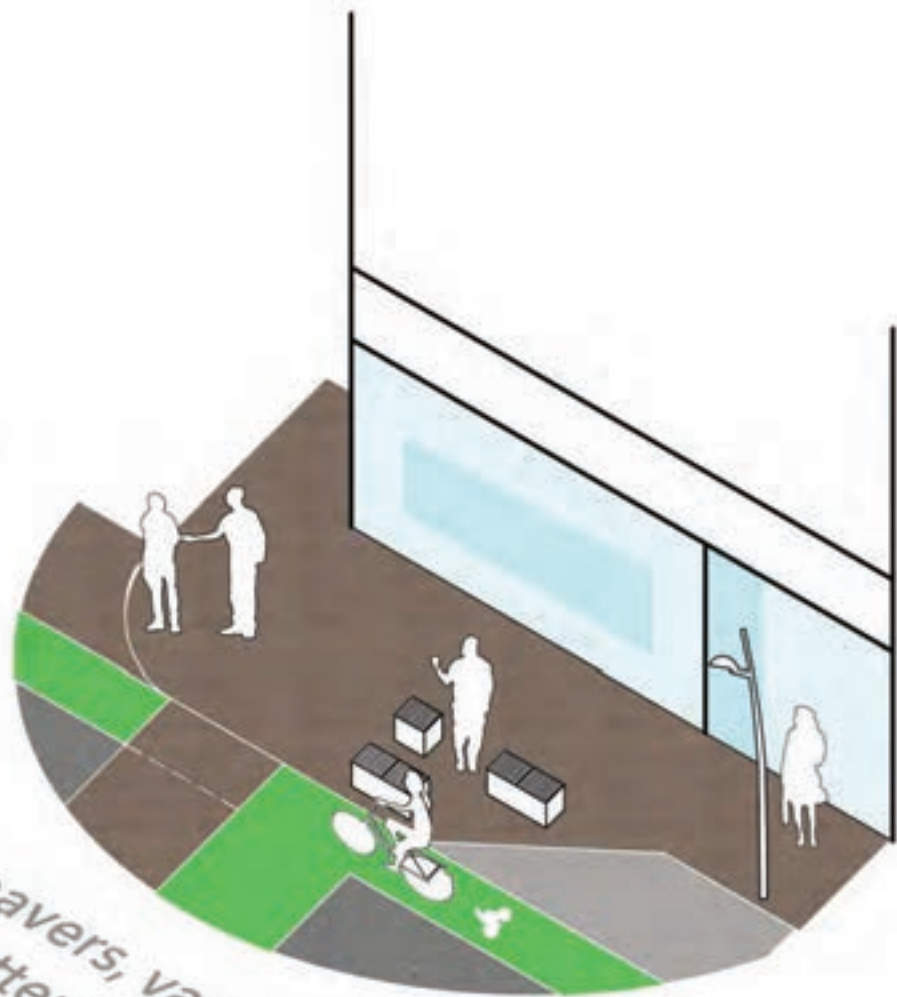


B



*material combinations,
brick, pavers, concrete*

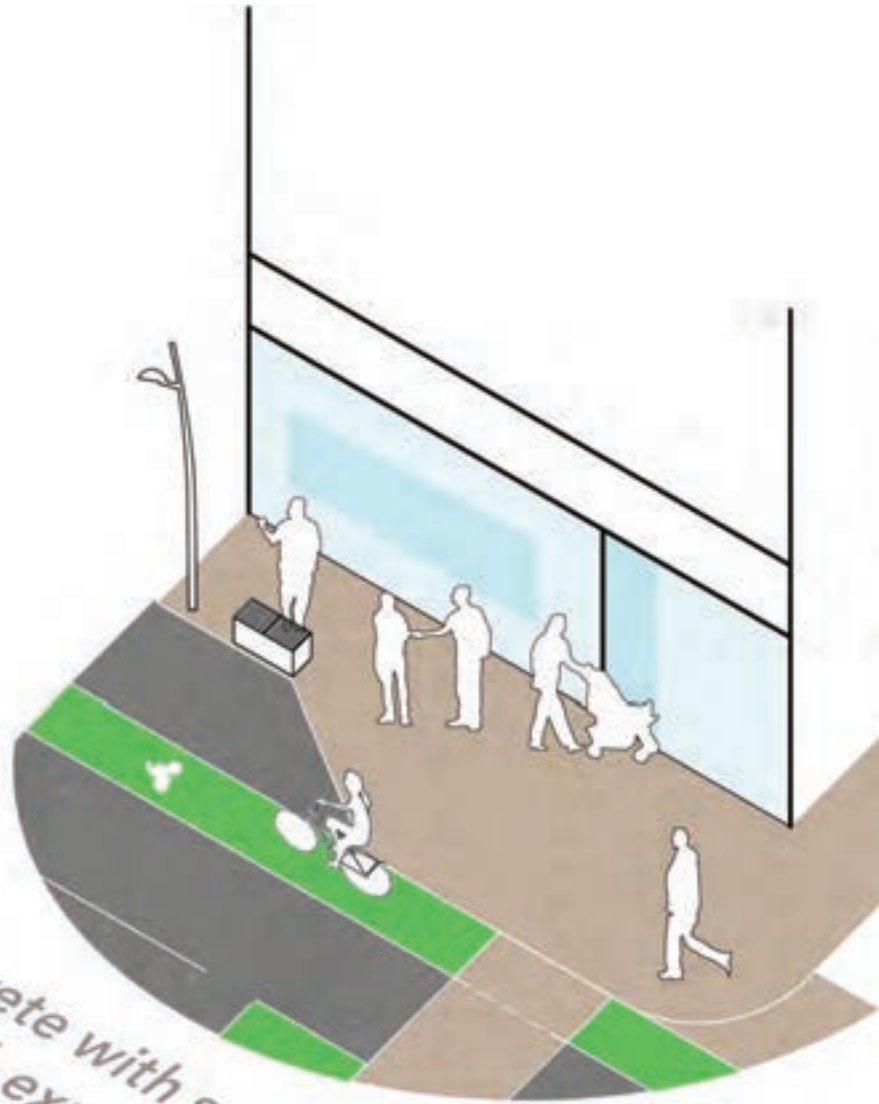




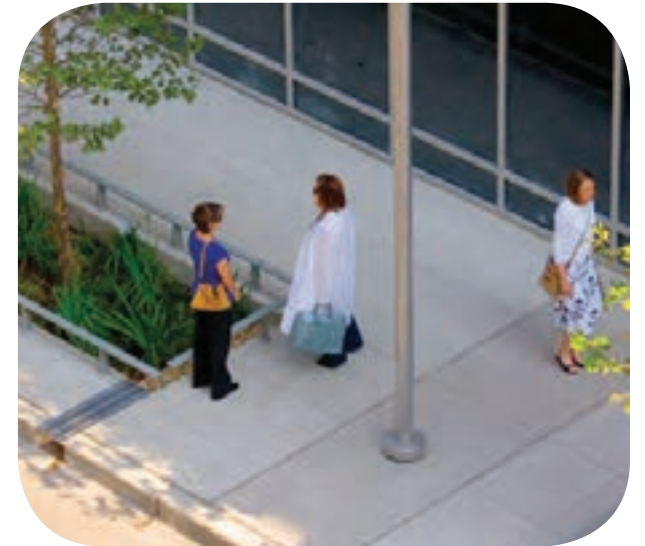
unit pavers, variations in color, pattern, size, texture



D



*concrete with score pattern,
brushed, exposed aggregate*





FURNISHINGS ANALYSIS

seating, lighting, and amenity options

The character of furnishings chosen will also work to create a consistent, unifying element. The proposed palette of furnishings and their locations will help to define zones of activity and should be activating and dynamic themselves. Two of the most important factors for great public places are numerous places to sit and safety at night-time via lighting. Various different types of seating and engaging lighting at the pedestrian scale will help create a more inviting place at all times of the day.

FURNISHINGS CHARACTER

STYLE & AESTHETICS

Contains timeless qualities
Includes variety of materials (e.g. metals, woods)
Evokes warmth, artfulness

A VARIETY OF AMENITIES

Street furnishings and signage
Art and murals
Lighting
Banners and logos
Neighborhood gateway features
Building awnings and signage
Container plants / moveable planters

TECHNOLOGICAL AND SUSTAINABLE

Wifi opportunities
Mobile recharging
Recyclable materials

FLEXIBILITY

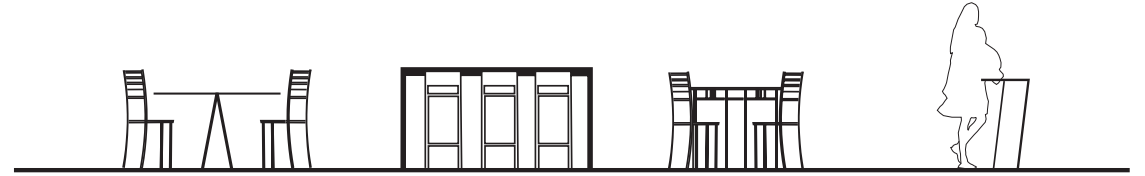
Maximize limited sidewalk space
Multi-functional use of furnishings
Fixed and moveable options

LIGHTING

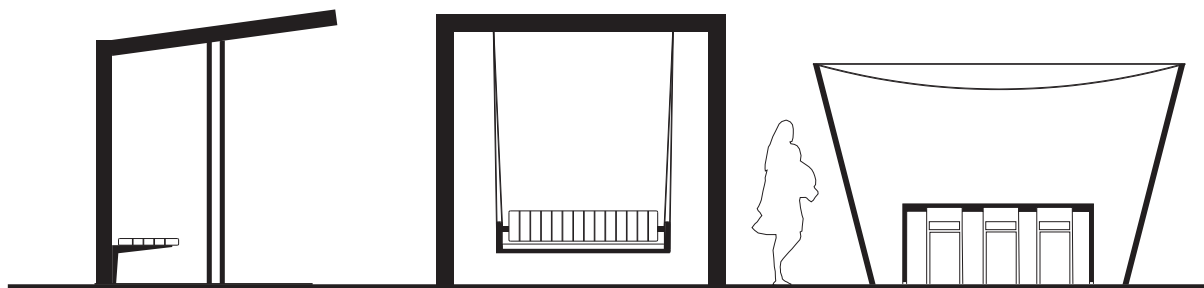
Hierarchical
Pedestrian and Vehicular Zones
Mid-block vs End-of-block
Responsive to activities
Responsive to tree planting
Nodes for special lighting
Holiday, catenary, and facade lighting



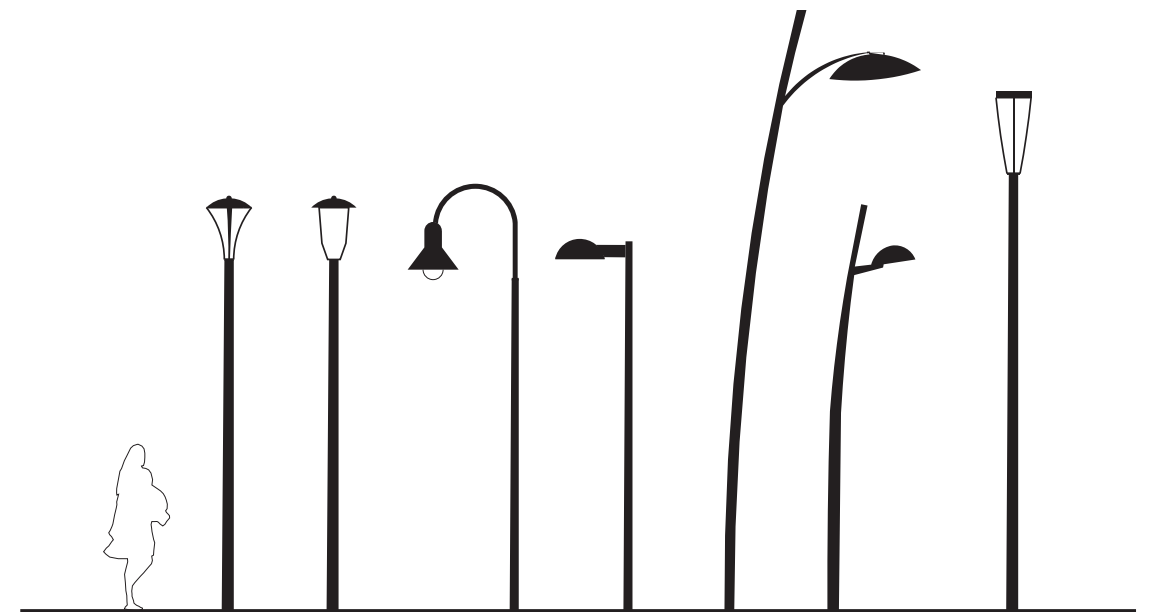
A SEATING



B DINING



C AMENITIES

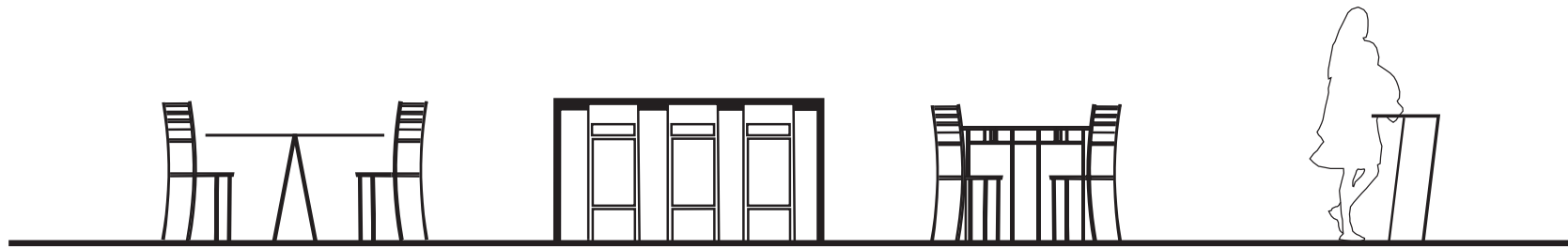


D LIGHTING



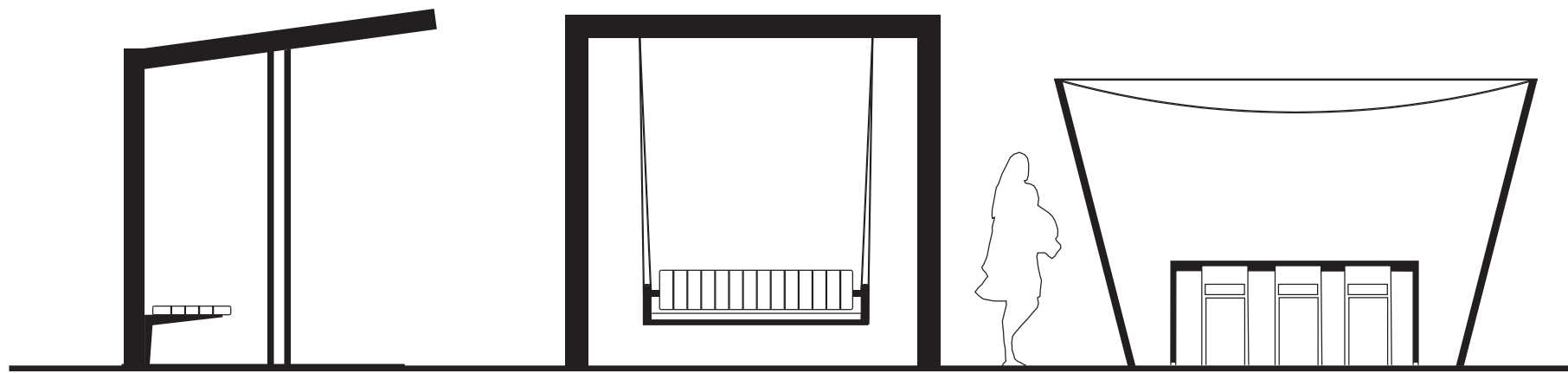
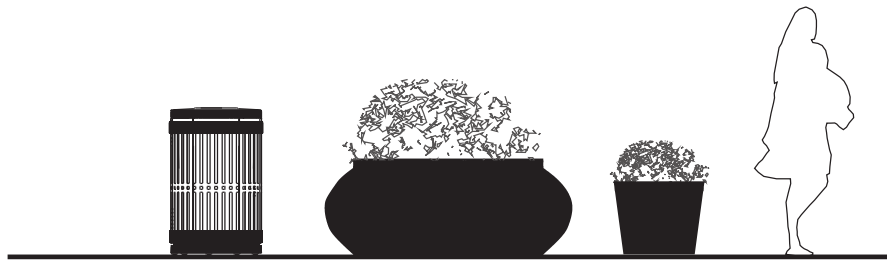
A SEATING





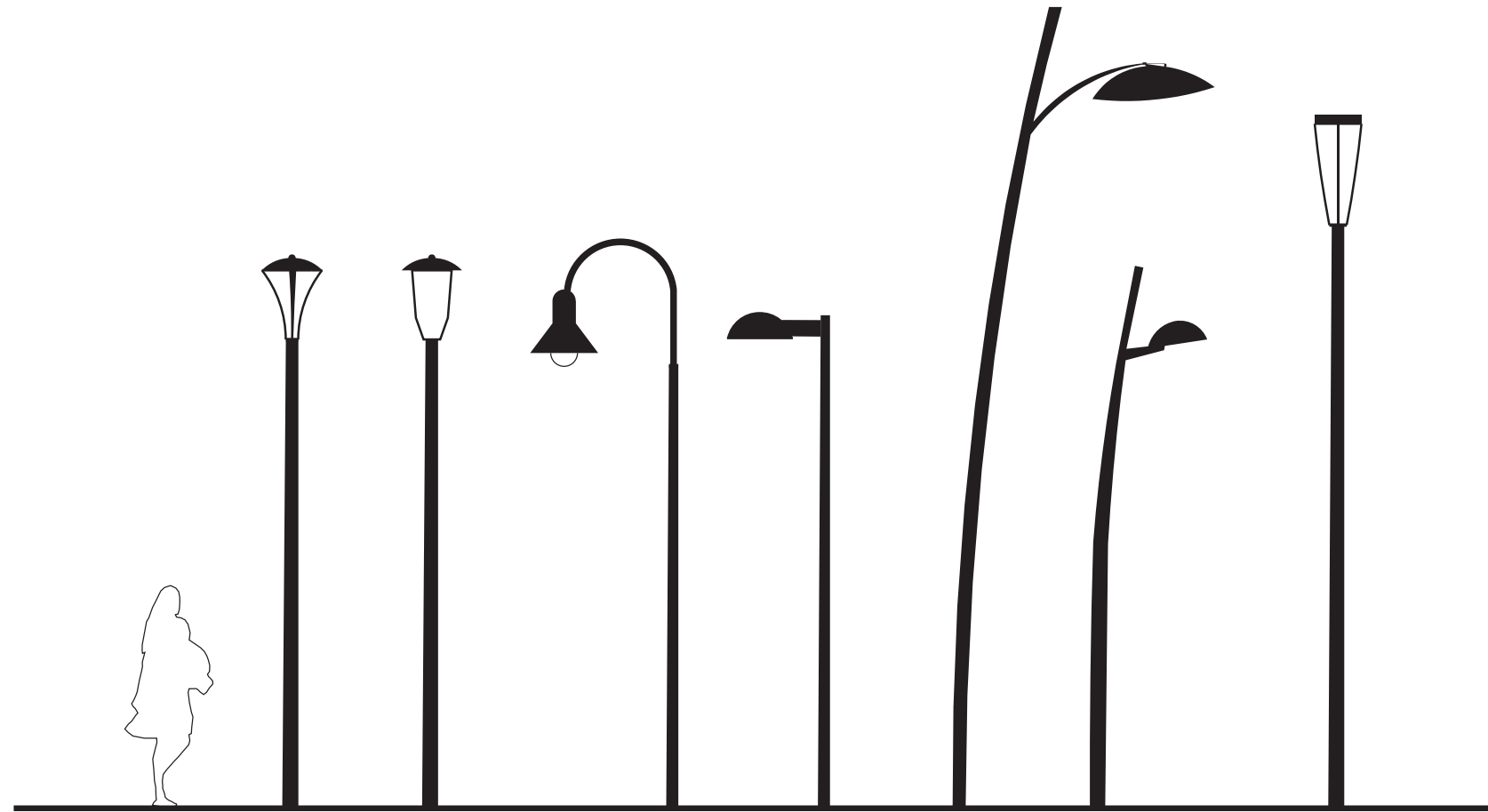
B DINING



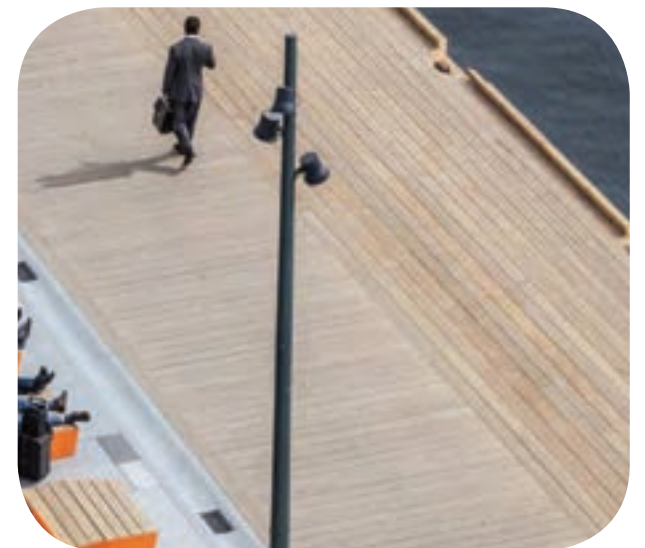


C AMENITIES





D LIGHTING





STREETSCAPE CHARACTER

conceptual rendering and modeling

The in-progress conceptual rendering shows the block along West Main Street looking east from 7th Street towards 6th Street. The visualization begins to define the various paving zones and lighting hierarchy, the nodes of seating, and the street tree clustering.







SCHEMATIC DESIGN

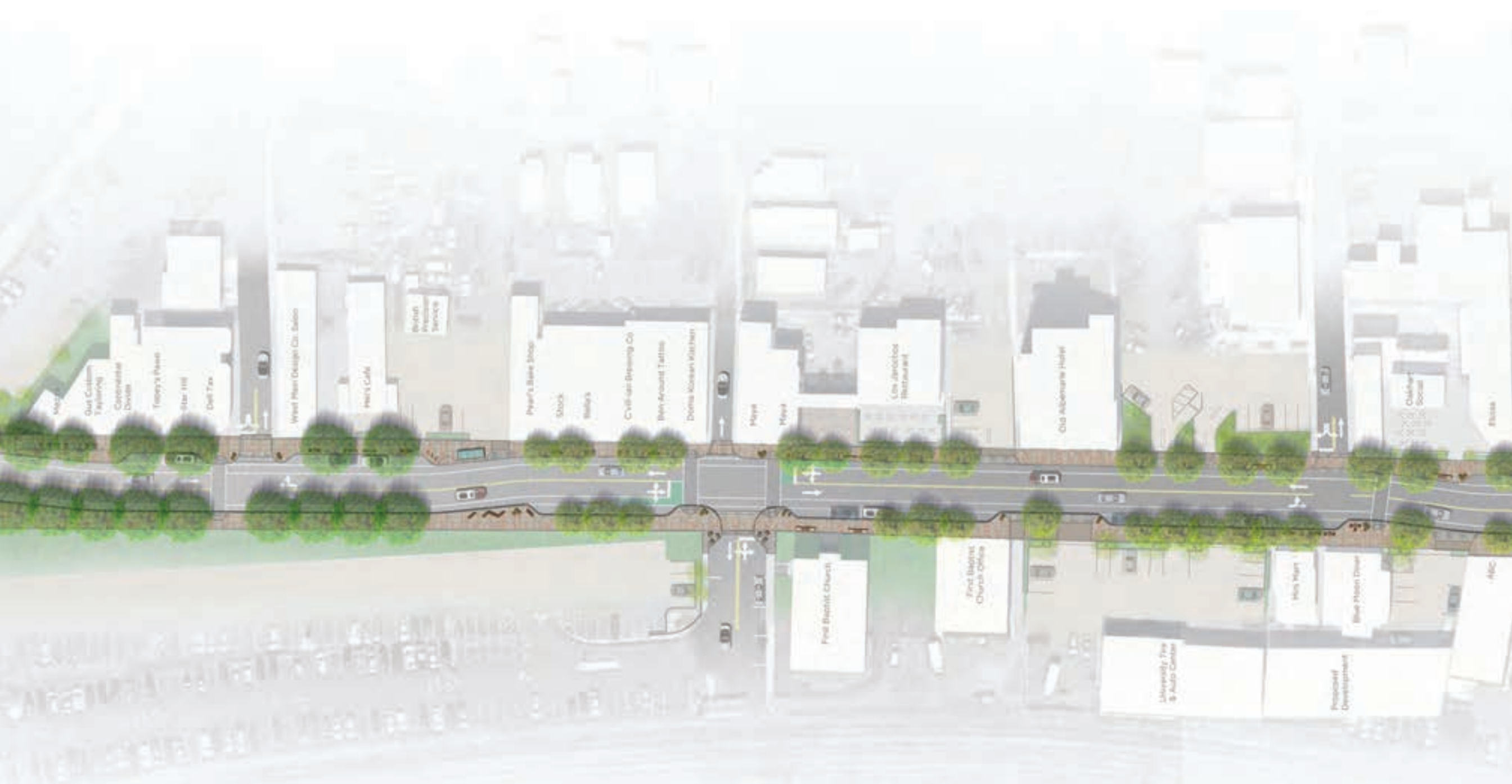


SCHEMATIC DESIGN PLAN

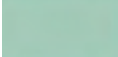
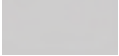





illustrative rendering







LEGEND

-  BIKE LANE
-  TRAVEL LANE
-  SIDEWALK
-  RAISED STREET CROSSING
-  CROSSWALK
-  BUILDINGS
-  STREET TREE





STREETSCAPE EXPERIENCE

visualization at 7th street and west main







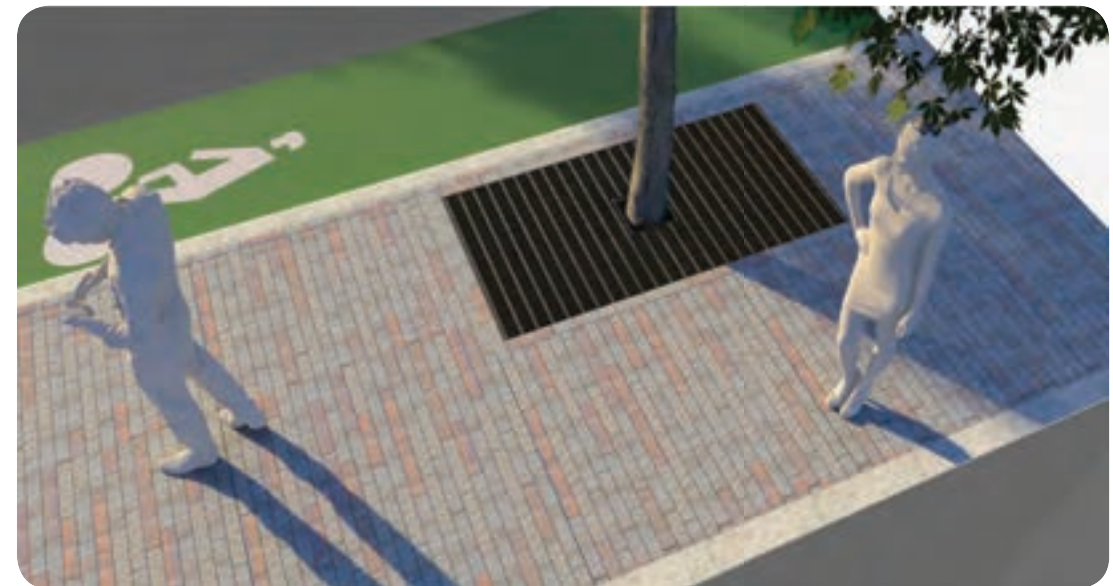
PAVING AND SURFACING

materials and pattern

WARM CONTEMPORARY PALETTE

DEEP, RICH COLORS WITH SUBTLE CHANGES OF TONE, TEXTURE, AND PATTERN

Paved surfaces include concrete unit pavers, and exposed aggregate concrete. The images below illustrate warm toned pavers that evoke a continuous and timeless appearance. The developed paving patterns are simple to create a balanced and harmonious ground plane.



SIDEWALK PAVING



DRIVEWAY PAVING



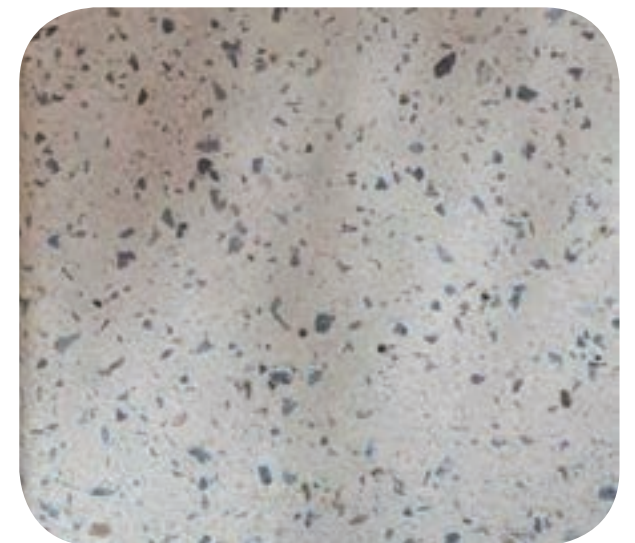
UNILOCK
IL CAMPO BRUSHED FINISH
Granite Color
3" x 12" x 2.5"



UNILOCK
ENDURACOLOR SMOOTH
Warm Grey Color
3" x 12" x 2.5"



UNILOCK
ENDURACOLOR SMOOTH
Almond Grove Color
3" x 12" x 2.5"



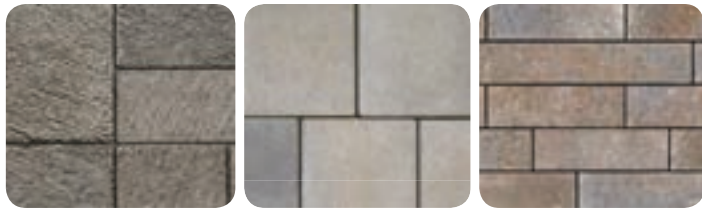
CONCRETE
EXPOSED AGGREGATE
French Grey Color
Poured in Place



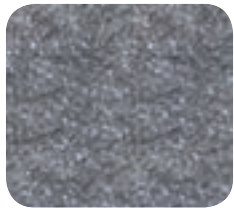
PRECEDENT IMAGE: Worpswede, Germany *GMBH Landscape Architecture*



PRECEDENT IMAGE: Brown University *!MELK Landscape Architects*



UNILOCK UNIT PAVERS
SIDEWALK PEDESTRIAN PAVING
25% Granite / 50% Warm Grey / 25% Almond Grove



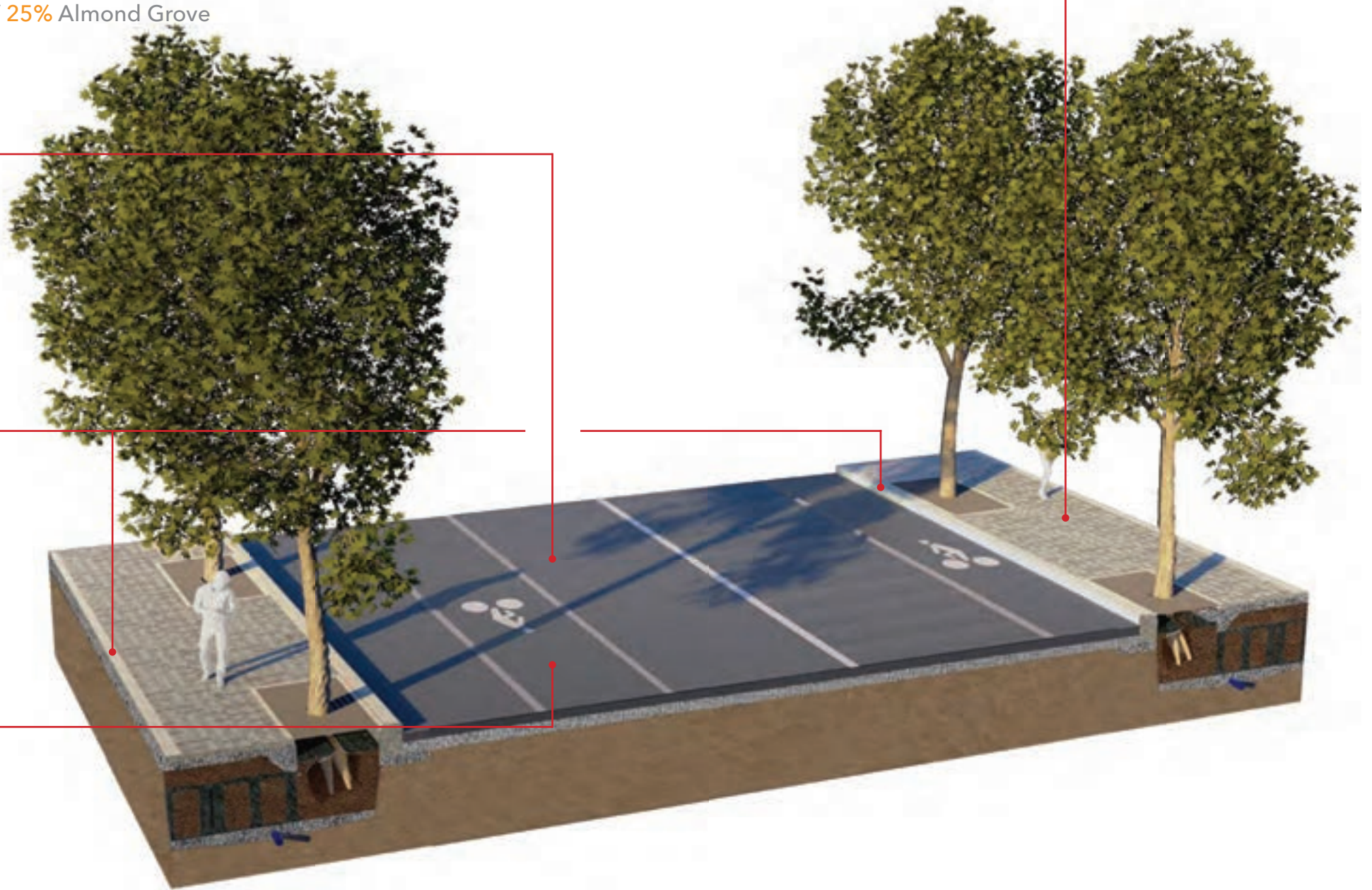
ASPHALT
ROADWAY PAVING
Drive Lanes and Parking Lanes

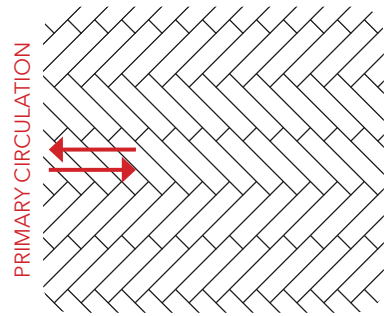


P.I.P. CONCRETE
EXPOSED AGGREGATE
6" Curb, Flex Zone, and
Driveway Aprons

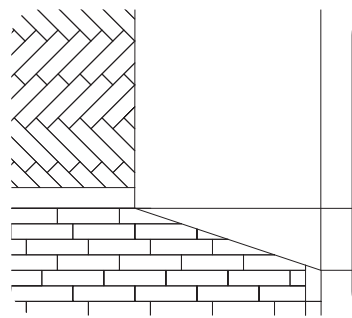


ENNIS FLINT COMPANY
THERMOPLASTIC BIKE LANES
High Visibility Green

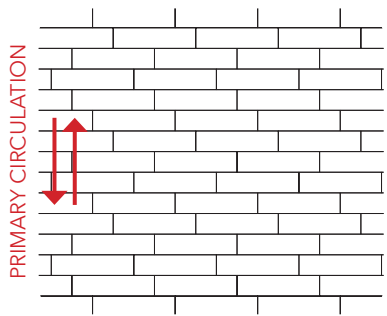




HERRINGBONE
VEHICULAR PAVING



INTERSECTING PATTERNS
DRIVEWAY CROSSING DETAIL



RANDOM BLINNING BOND





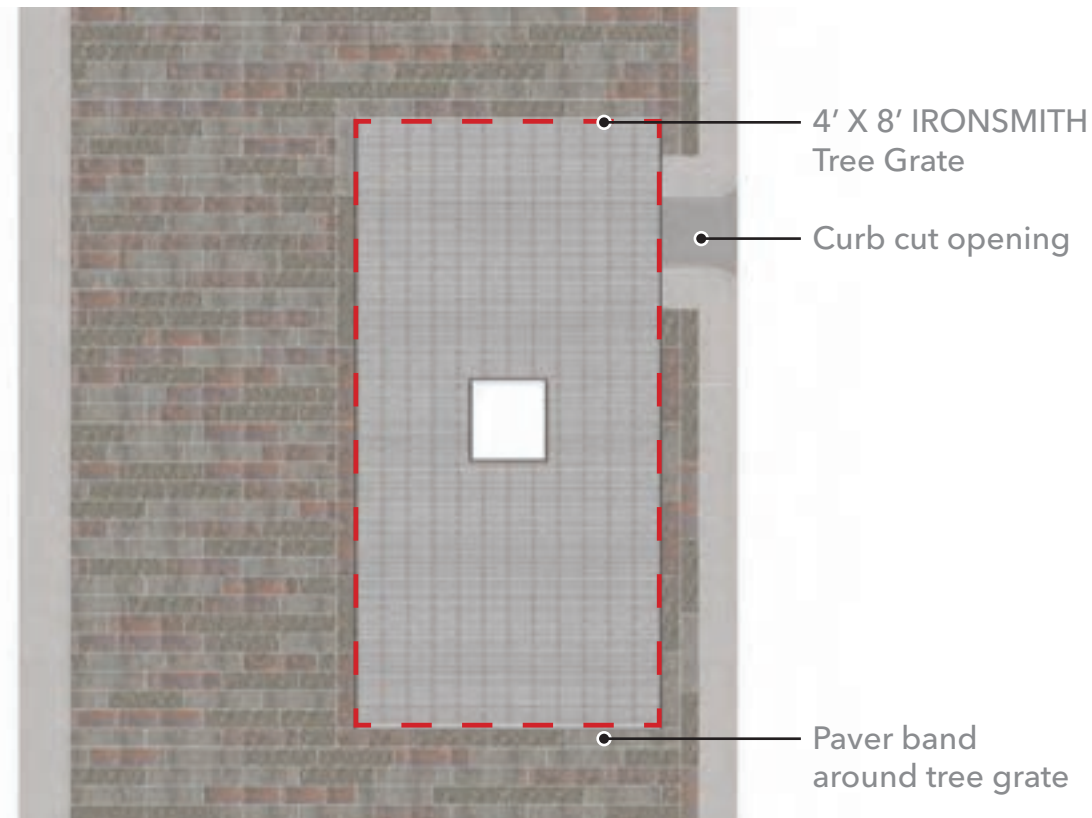
STREET TREE PLANTING

tree planting conditions and techniques

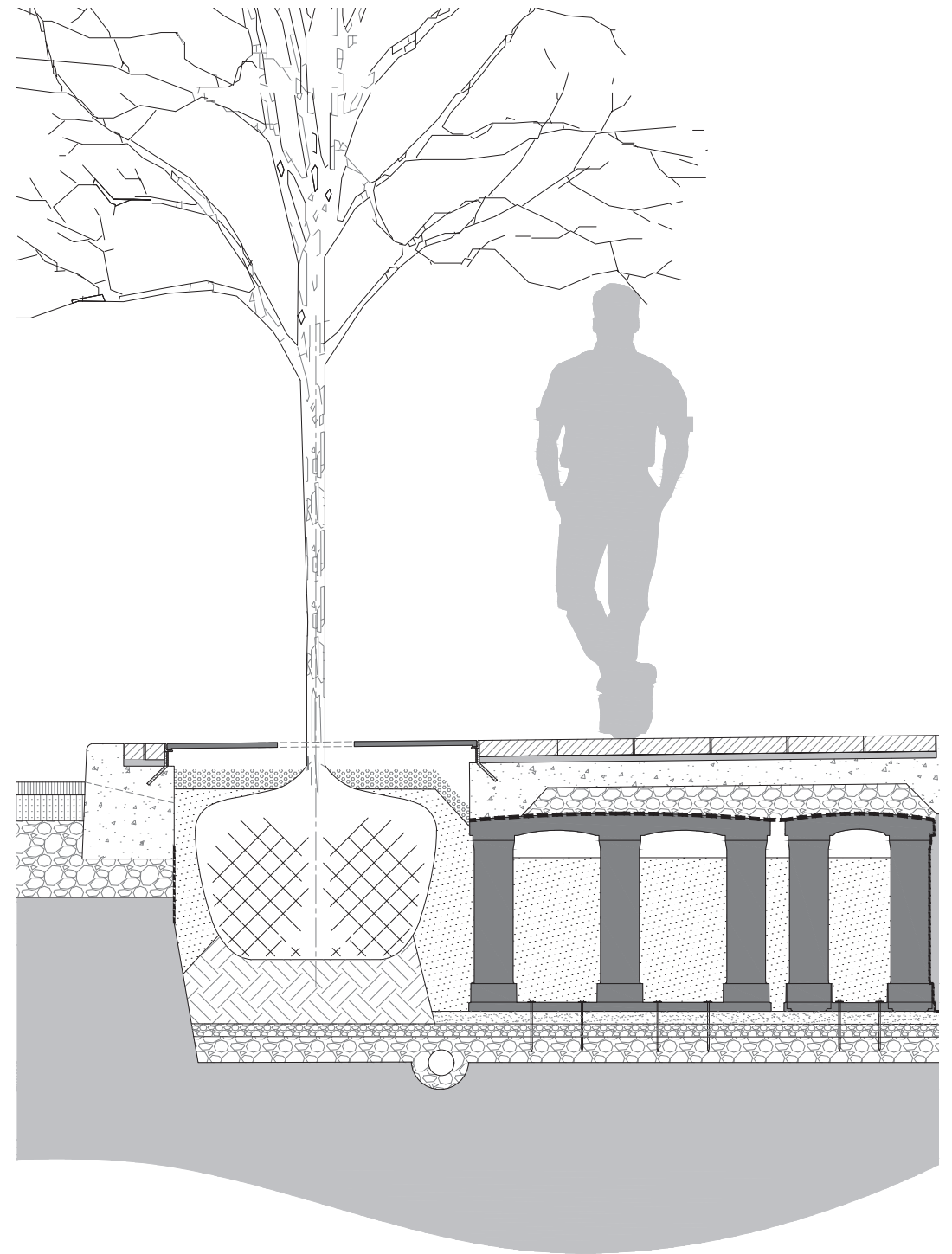
TREE PLANTING WITH SILVA CELLS

STREET TREE PLANTING WITH SILVA CELLS AND GRATED OPENINGS

Tree planters that incorporate tree grates and silva cells and can allow for narrow tree openings that maximize usable pedestrian space while still providing adequate water and oxygen to trees. Tree grates will require proper maintenance to ensure openings are widened to accommodate tree growth.



PAVING CONDITION AT TREE GRATE

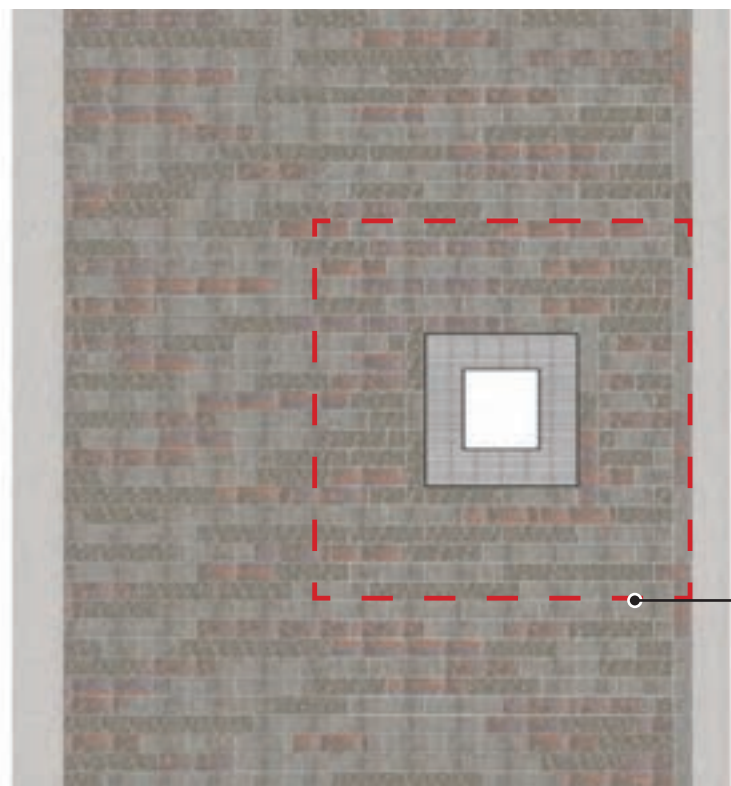


• typical silva cell planter cross section •

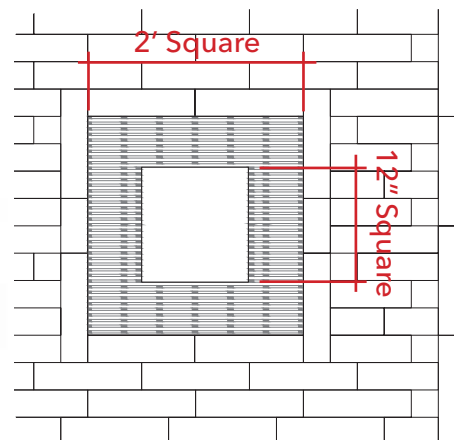
TREE PLANTING WITH REINFORCED PAVEMENT

STREET TREE PLANTING WITH REINFORCED PAVING, UNCOMPACTED SOIL AND IRONSMITH PAVER-GRATE SYSTEM

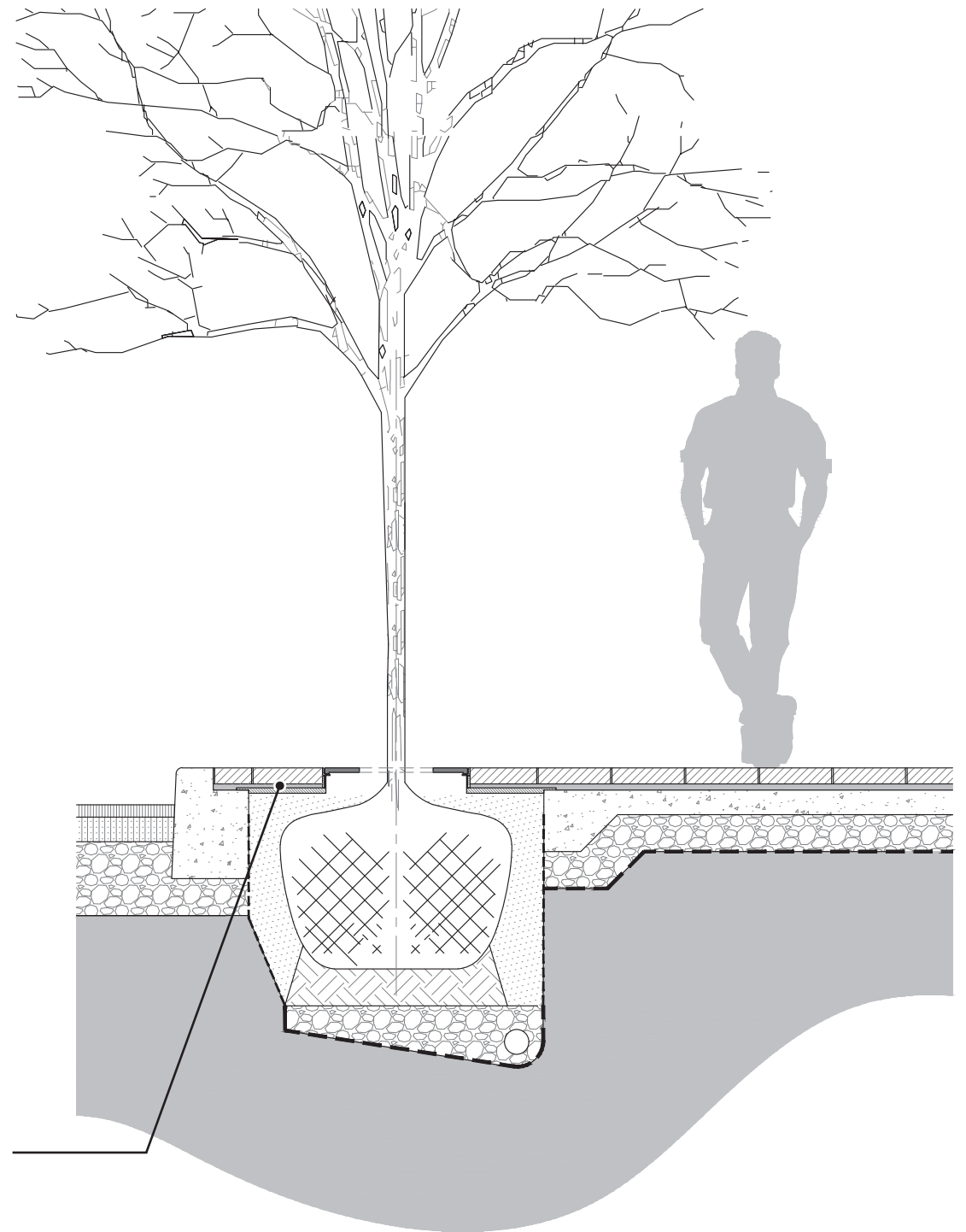
Reinforced paving and pavers held above uncompact soil, via Ironsmith's Paver-Grate Tray system, can provide adequate volumes for water and oxygen to sustain tree growth. These methods allow paving to be extended in close proximity to and/or above the tree root ball to maximize pedestrian space.



PAVING CONDITION AT TREE GRATE



4' X 4' extents of IRONSMITH Paver-Grate Tray system



• typical traditional tree planter cross section •

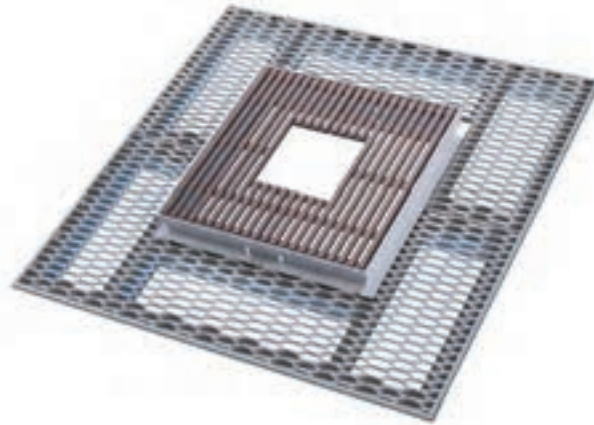
TREE GRATES

GOALS

- 1) EASE OF MAINTENANCE FOR TREE GROWTH
- 2) PANELS FOR EXPANDABILITY AND EASE OF REMOVAL
- 3) CONSISTENT WITH MATERIALS PALETTE



IRONSMITH
METRO Tree Grate
4' W. x 8' L.



IRONSMITH
PAVER-GRATE Tray System
METRO Tree Grate
2' W. x 2' L.

MATERIALS + FINISHES

Cast Ductile Iron - *no finish*
Colors: *Natural patina with age*



MOUNTING OPTIONS

Concrete Anchorage with Steel Frame

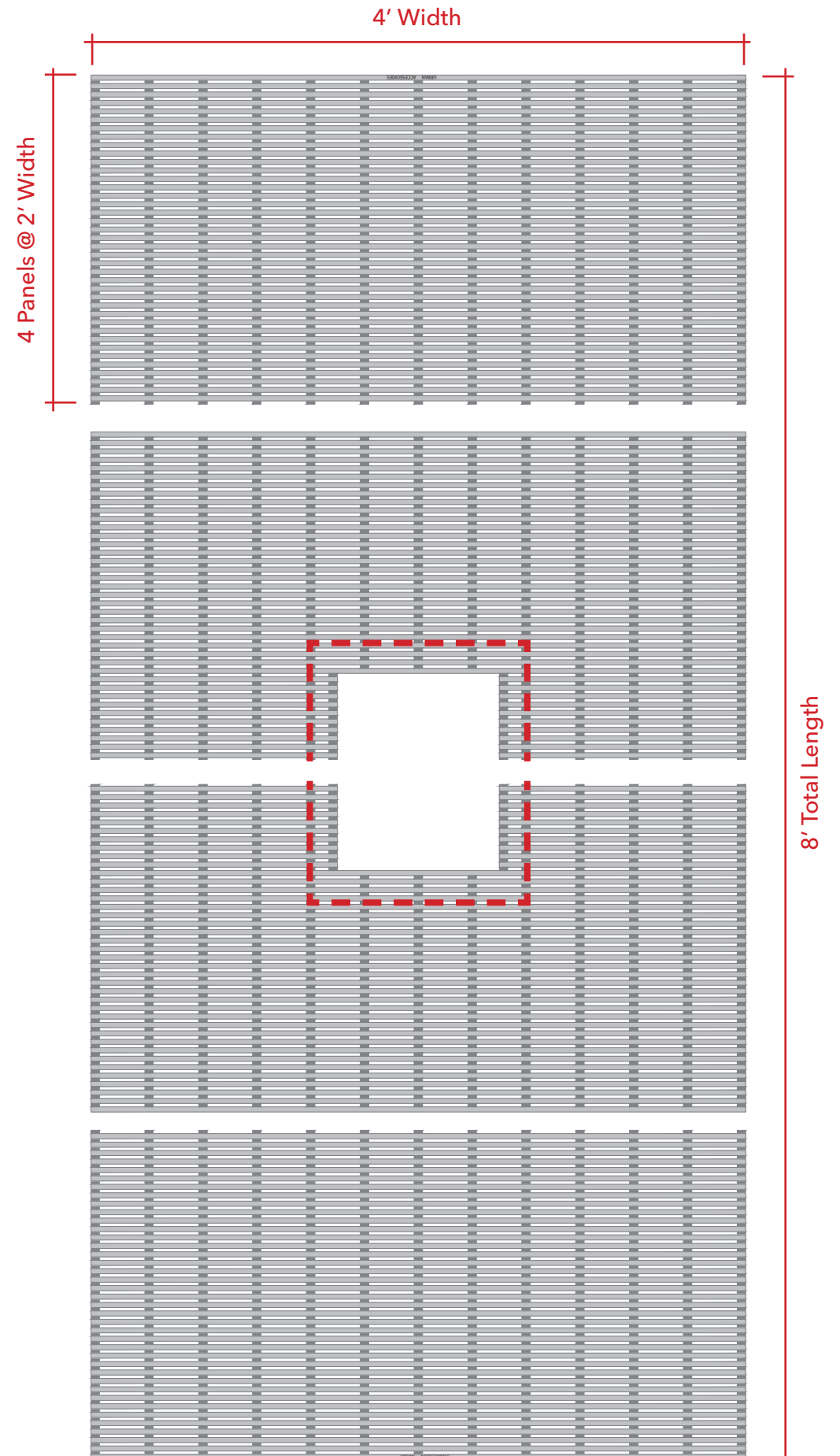
MATERIALS + FINISHES

Cast Ductile Iron - *no finish*
Colors: *Natural patina with age*



MOUNTING OPTIONS

Concrete Anchorage with Steel Frame





STREET TREE PLANTING

tree species selection

Over 130 new trees will be planted along West Main Street which will result in a 500% increase in the tree canopy. Unlike the monoculture of trees that exist along the street today, the proposed palette of street trees will comprise of a dynamic mix of tree species. Proposed street trees will provide critical shade, emphasize gateways and areas of interest, and add seasonal interest.

TREE SPECIES

GENERAL SELECTION CRITERIA

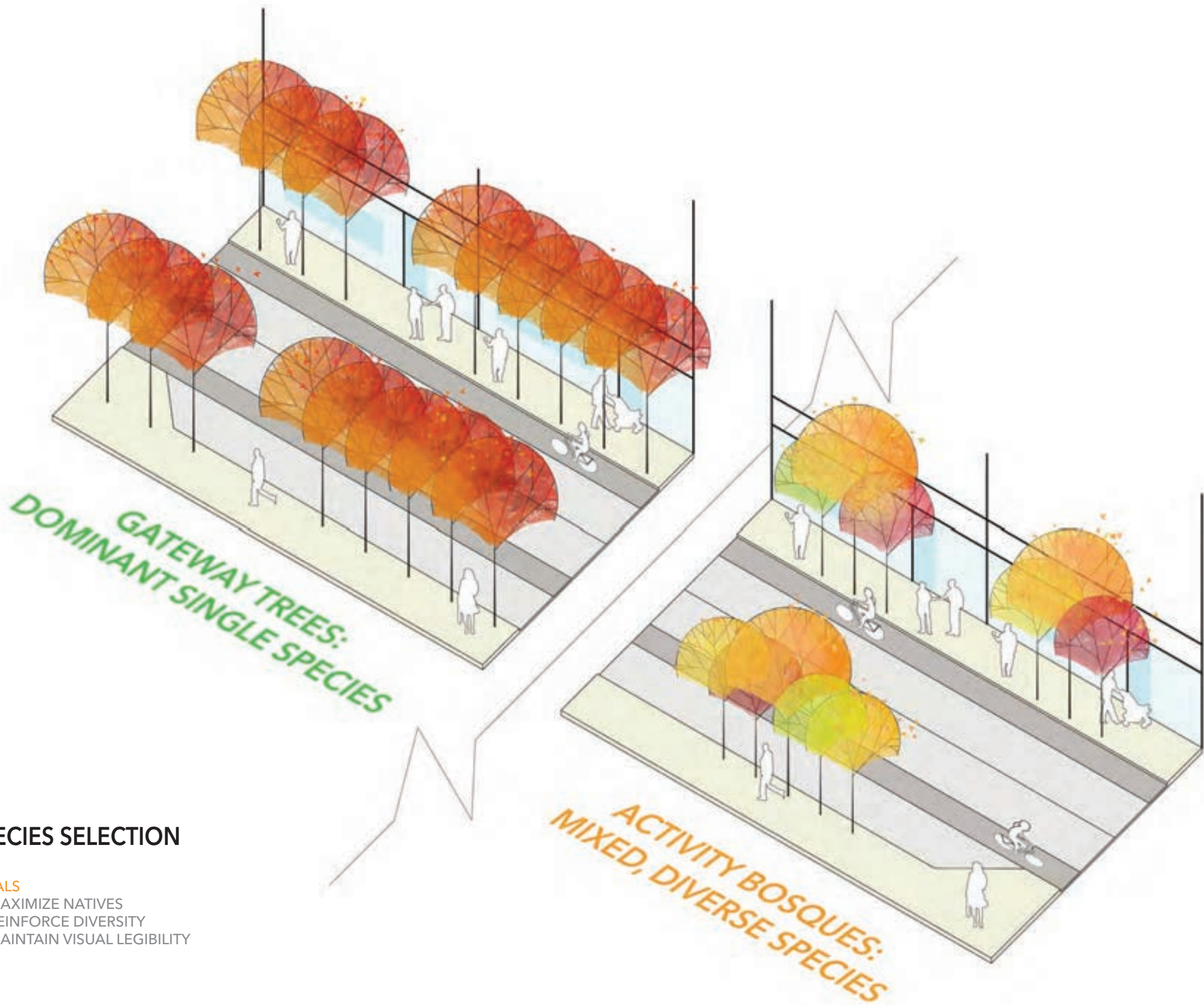
Bioretention Suitability (**BIO**)
Tough, Rugged, Drought Tolerance
Tolerant of Salt, Roadway Pollution
Not Shallow Rooted
Not Disease Prone
Seasonal Interest

GATEWAY TREE SELECTION CRITERIA

Single Species
Dense, Upright Branching
Great Fall Color & Winter Interest
Creates Dappled Light in Sun

ACTIVITY BOSQUE TREE SELECTION CRITERIA

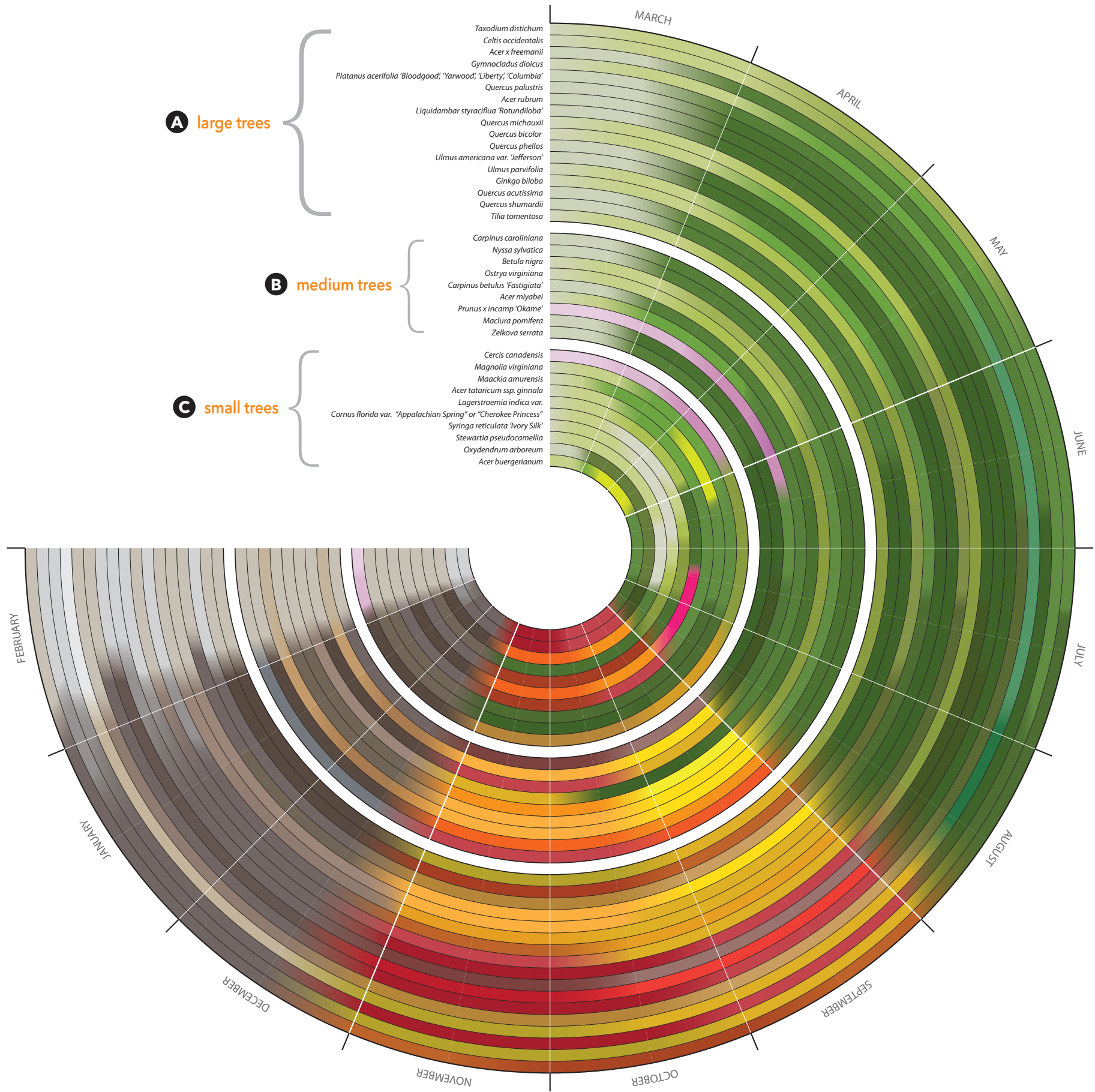
Diversity of Species
Broad-leafed for Shade
Possibly Mixed Forms (i.e. Round, Vase, Columnar)
Great Bark Characteristics & Winter Interest



SPECIES SELECTION

GOALS

- 1) MAXIMIZE NATIVES
- 2) REINFORCE DIVERSITY
- 3) MAINTAIN VISUAL LEGIBILITY



A LARGE TREES



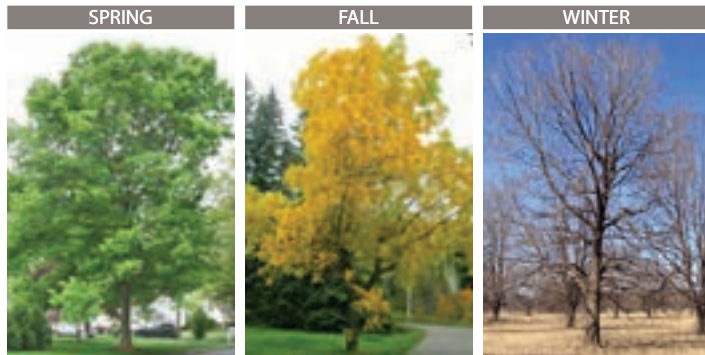
Bald Cypress - *Taxodium distichum* (BIO)



Kentucky Coffeetree - *Gymnocladus dioica* (BIO)



Red Maple - *Acer rubrum* (BIO)



Common Hackberry - *Celtis occidentalis* (BIO)



London Plane Tree - *Platanus acerifolia* 'Bloodgood', 'Yarwood', 'Liberty', 'Columbia' (BIO)



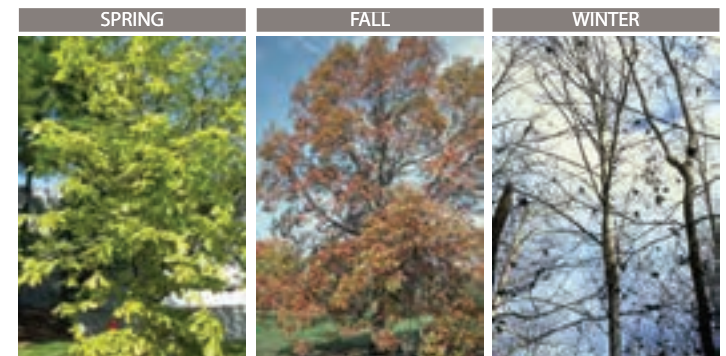
Roundleaf Sweet Gum - *Liquidambar styraciflua* 'Rotundiloba' (BIO)



Freeman Maple - *Acer x freemanii* (BIO)



Pin Oak - *Quercus palustris* (BIO)



Swamp Chestnut Oak - *Quercus michauxii* (BIO)



Willow Oak - *Quercus phellos* (BIO)



Swamp White Oak - *Quercus bicolor* (BIO)



American Elm - *Ulmus americana* var. 'Jefferson'

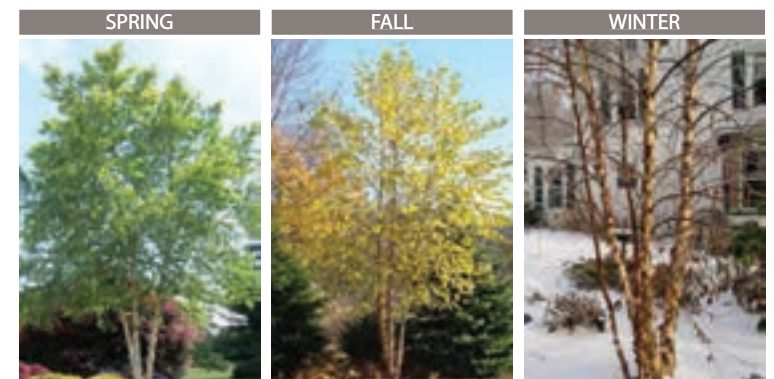
B MEDIUM TREES



American Hornbeam - *Carpinus caroliniana* (BIO)



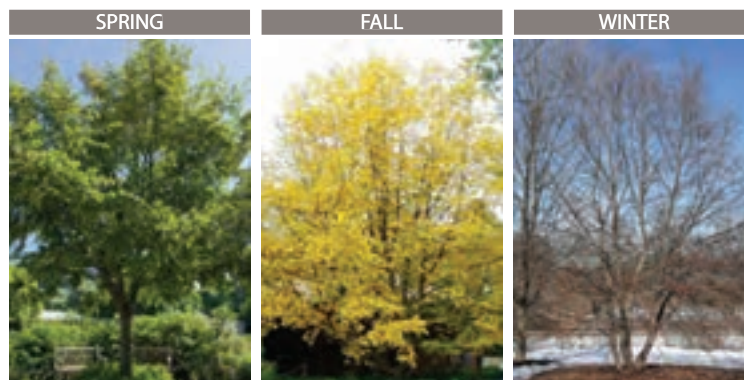
Black Gum - *Nyssa sylvatica* (BIO)



River Birch - *Betula nigra* (BIO)



European Hornbeam - *Carpinus betulus 'Fastigiata'*



Eastern Hop-Hornbeam - *Ostrya virginiana*



Okame Cherry - *Prunus x incamp 'Okame'*



Miyabe Maple - *Acer miyabei*



Osage Orange - *Maclura pomifera*



Zelkova - *Zelkova serrata*

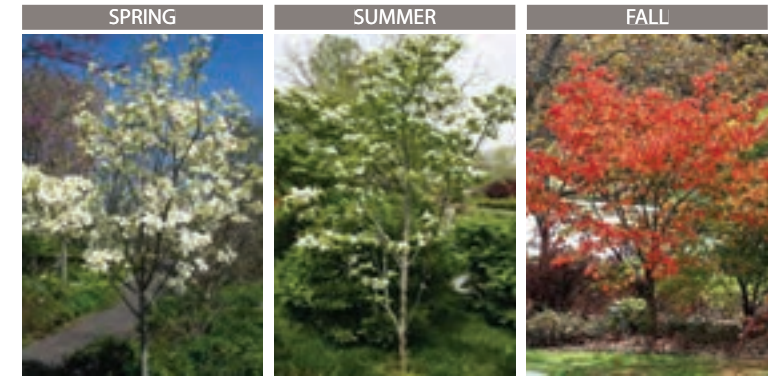
C SMALL TREES



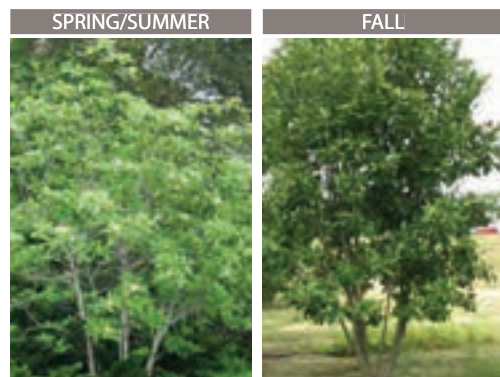
Eastern Redbud - *Cercis canadensis* (BIO)



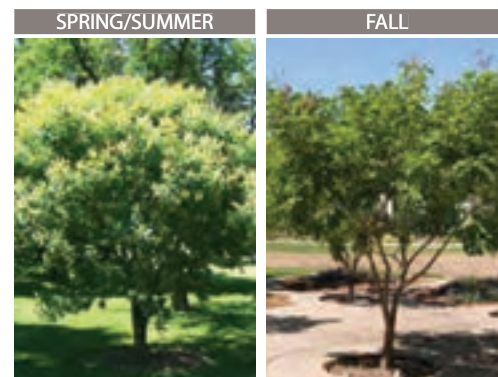
Crape Myrtle - *Lagerstroemia indica* var.



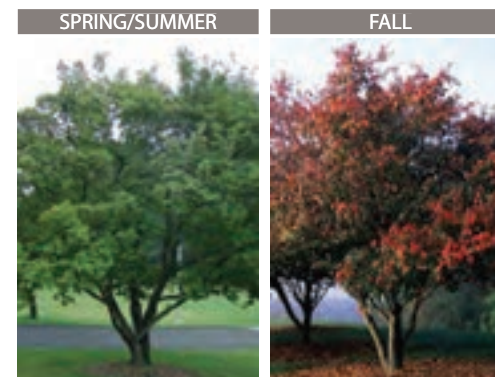
Flowering Dogwood - *Cornus florida* var. "Appalachian Spring" or "Cherokee Princess"



Sweetbay Magnolia - *Magnolia virginiana* (BIO)



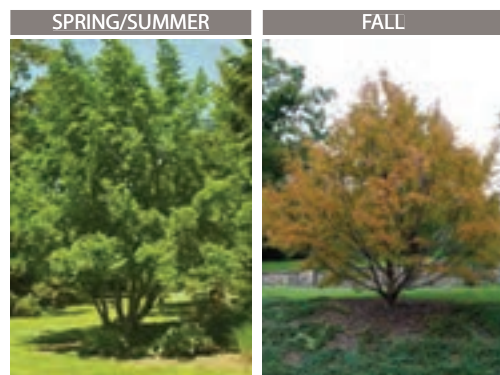
Amur Maackia - *Maackia amurensis*



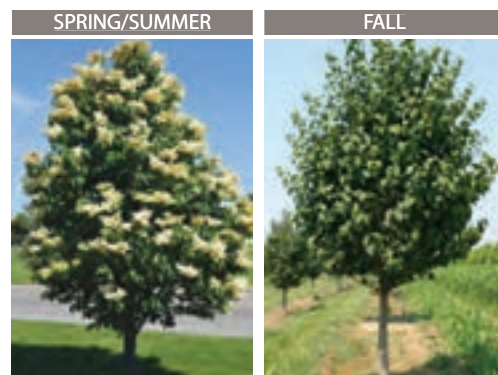
Amur Maple - *Acer tataricum* ssp. *ginnala*



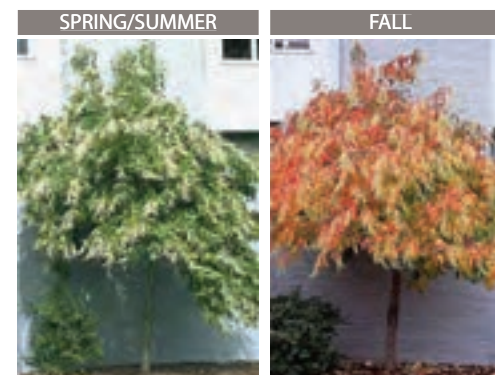
Trident Maple - *Acer buergerianum*



Japanese Stewartia - *Stewartia pseudocamellia*



Ivory Silk Tree - *Syringa reticulata* 'Ivory Silk'



Sourwood - *Oxydendrum arboreum*



STREETSCAPE FURNISHINGS selection and organizational strategies

The incorporation of street furnishings along the corridor will provide places for neighborhood residents and visitors to enjoy the renewed public space. Recommended furnishings are artful, warm, inviting, multi-functional, diverse in size and use, and constructed of lasting materials such as coated hardwood, powder-coated aluminum/steel, and reinforced cast stone or concrete.



LANDSCAPE FORMS

PARALLEL 42 Bench
18" H. x 18" W. x 67" L.
Straight or Angular Units



LANDSCAPE FORMS

FGP Backless Bench
21" H. x 23" W.
6 Foot and 10 Foot Lengths



LANDSCAPE FORMS

FGP Backed Bench
28" H. x 30" W.
6 Foot and 10 Foot Lengths

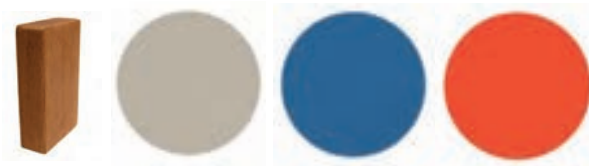


LANDSCAPE FORMS

MultipliCITY Tables and Benches
35" H. x 25" W. x 95" L. Table
18" H. x 23" W. x 95" L. Bench

MATERIALS + FINISHES

Jarrah hardwood - *no finish*
High Performance Proprietary Powdercoated Metal
Colors: *Mercury Ocean Flambe*



MOUNTING OPTIONS

Freestanding or Surface Mount

MATERIALS + FINISHES

Jarrah hardwood - *no finish*
Powdercoated Cast Aluminum and Metal
Colors: *Stormcloud*



MOUNTING OPTIONS

Surface Mount



LANDSCAPE FORMS
 PARC CENTRE Tables and Chairs
 24" Round & 28" Rectangular
 Armed and Armless Chairs



LANDSCAPE FORMS
 JESSIE Standing Rail
 42" H. x 12" W.
 50" Lengths with Expansions



LANDSCAPE FORMS
 METRO 40 Sitting/Leaning Rail
 Sitting: 18" H. x 7" W. x 45" L.
 Leaning: 30" H. x 6" W. x 45" L.

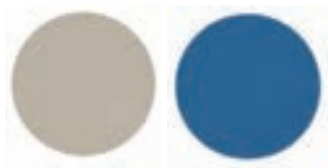


LANDSCAPE FORMS
 MultipliCITY Bike Rack
 36" H. x 24" W.
 6" Wood shelf for setting items



MATERIALS + FINISHES

Powdercoated Metal
 Colors: *Mercury Ocean*



Flambe Stormcloud



MOUNTING OPTIONS
 Freestanding; Moveable



MATERIALS + FINISHES

Powdercoated Metal
 Colors: *Stormcloud*



MOUNTING OPTIONS
 Embedded



MATERIALS + FINISHES

Jarrah hardwood - *no finish*
 Powdercoated Cast Aluminum
 Colors: *Stormcloud*



MOUNTING OPTIONS
 Surface Mount



MATERIALS + FINISHES

Jarrah hardwood - *no finish*
 Powdercoated Cast Aluminum
 Colors: *Bumblebee Parrot Green*



Stormcloud
MOUNTING OPTIONS
 Surface Mount



FORMS AND SURFACES
DISPATCH Trash Receptacle
43" H. @ 36 or 45 Gallon
Litter and Recycling Available



BASIS OF DESIGN:
ESCOFET
LEVIT Cast Stone Bench
17" H. x 28" W. x 158" L.



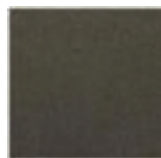
BASIS OF DESIGN:
ESCOFET
EMILIANA Cast Stone Planter
45-87 Cubic Feet Capacity



BASIS OF DESIGN:
CATOCOTIN GREENSTONE
Natural Boulders
Variable Size and Shape

MATERIALS + FINISHES

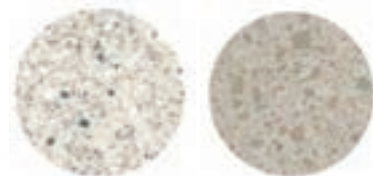
Powdercoated Metal
Colors: *Slate*



MOUNTING OPTIONS
Surface Mount

MATERIALS + FINISHES

Reinforced Cast Stone
Colors: *Calgary Beige*



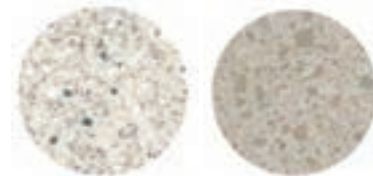
Mist



MOUNTING OPTIONS
Embedded; Custom

MATERIALS + FINISHES

Reinforced Cast Stone
Colors: *Calgary Beige*



Mist



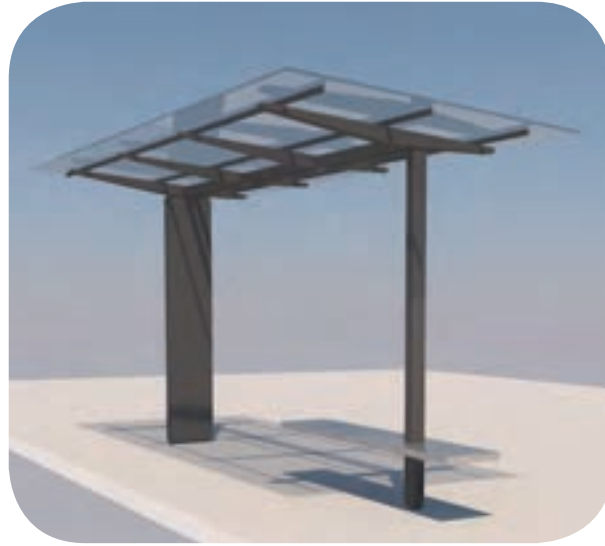
MOUNTING OPTIONS
Freestanding

MATERIALS + FINISHES

Greenstone breccia
Natural Colors: *Green, Grey, Dark Purple*



MOUNTING OPTIONS
Freestanding



**BASIS OF DESIGN:
CUSTOM BUS SHELTER**
Translucent Canopy with Recessed Lighting
Double Post with Integral Bench



BUS SHELTER: Night-time Rendering









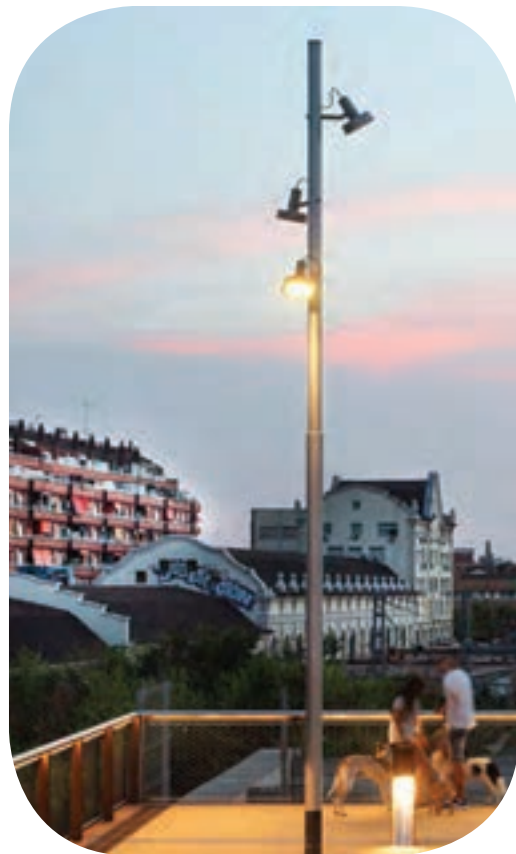
STREETSCAPE LIGHTING

opportunities and fixtures

LIGHTING OPPORTUNITIES

DYNAMIC LIGHTING IN GATHERING AND DINING AREAS

Additional lighting elements at particular nodes of activity will provide distinction between spaces and create a vibrant atmosphere along the street. Catenary, in-ground, facade, and integrated lighting fixtures will provide intriguing night-time visual appeal and foster a sense of safety and activity.



ROADWAY & PEDESTRIAN LIGHTING

GOALS

- 1) ESTABLISH THE FIXTURE AS AN ARCHITECTURAL STATEMENT
- 2) MAXIMIZE SPACING WHILE MINIMIZING CONFLICTS
- 3) INTEGRATE TECHNOLOGY AND LATEST INNOVATIONS



A LANDSCAPE FORMS
Ashbery Luminaire



B LANDSCAPE FORMS
FGP Luminaire



C IGUZZINI
Fiamma Luminaire



D BEGA
84-120 Luminaire



A

LANDSCAPE FORMS LIGHTING
ASHBERRY Luminaire

MATERIALS + FINISHES

Cast Aluminum
Pangard II Polyester Powdercoat Finish
Colors: *Stormcloud*



OPTICS + MOUNTING

LED - 3500K
Surface Anchorage with Base Cover





B

LANDSCAPE FORMS LIGHTING
FGP Luminaire

MATERIALS + FINISHES

Cast Aluminum
Pangard II Polyester Powdercoat Finish
Colors: *Stormcloud*



OPTICS + MOUNTING

LED - 3500K
Surface Anchorage with Base Cover





IGUZZINI LIGHTING
FIAMMA Luminaire

MATERIALS + FINISHES

Die-Cast Aluminum
Polyester Powdercoat Finish
Colors: 15 Grey



OPTICS + MOUNTING

LED - 3000K
Surface Anchorage with Base Cover





D

BEGA LIGHTING
84-120 Luminaire

MATERIALS + FINISHES

Die-Cast Aluminum
3 mil Polyester Powdercoat Finish
Colors: *Black*



OPTICS + MOUNTING

LED - 4000K
Surface Anchorage with Base Cover





STREETSCAPE EXPERIENCE

visualization at 7th street and west main at night







INTERPRETATION OPPORTUNITIES

telling the story of Charlottesville

CREATE A DYNAMIC STREET

Most people move from thing to thing as they walk, always looking for “the next thing”. This strolling along the street can be encouraged by creating a series of interesting nodes or “bread crumbs” that motivate visitors to keep on going. As a means to promote tourism or encourage civic pride, the project could create a very memorable and highly photographable moments that brand West Main Street and Charlottesville.

TOPO MAP ORIENTATION

ENGAGE PASSERSBY WITH MAPS OF THE REGION'S TOPOGRAPHY AND THE TOWN



TACTILE TABLETOP MAPS

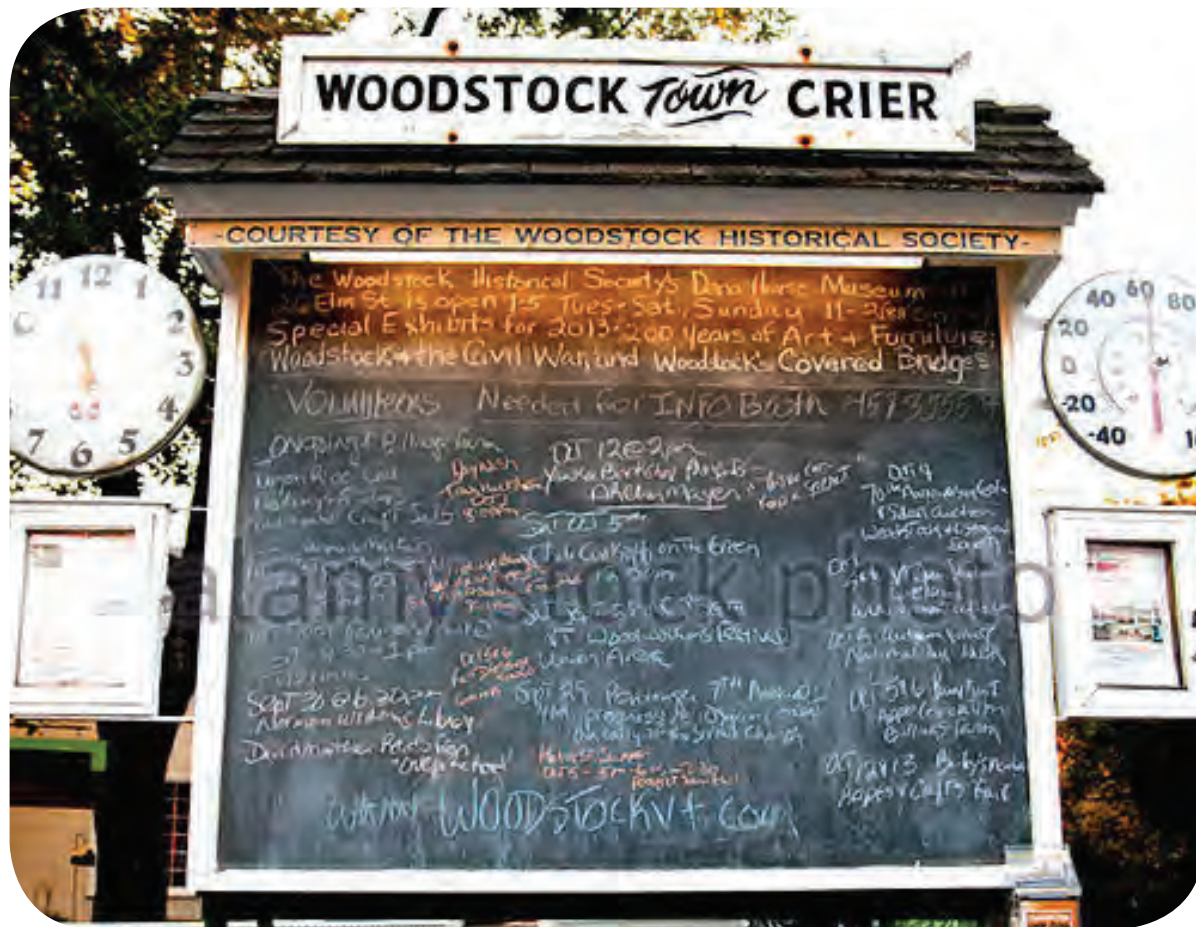
Map 1 shows the relation of the city to the Tidewater region and the Blue Ridge Mountains and Three Notch'd Road as the path west.

Map 2 shows the colonial street network of the city and prominent early buildings and civic features.

Map 3 shows contemporary Charlottesville with an indication of areas which have been substantially altered (e.g., Vinegar Hill and the Downtown Mall).

CHANGEABLE DIRECTORY and COMMUNITY MESSAGE BOARD

PROVIDE GATEWAY AT STARR HILL PARK THAT ORIENTS VISITORS, HELPS BUSINESSES AND CREATES COMMUNITY



COMMUNITY MESSAGE BOARD

may be casual or curated, informal or formal, use chalkboard, corkboard or enclosed weatherproof case



CHANGEABLE DIRECTORY OF STORES AND RESTAURANTS

advertise the street's offerings and point the way

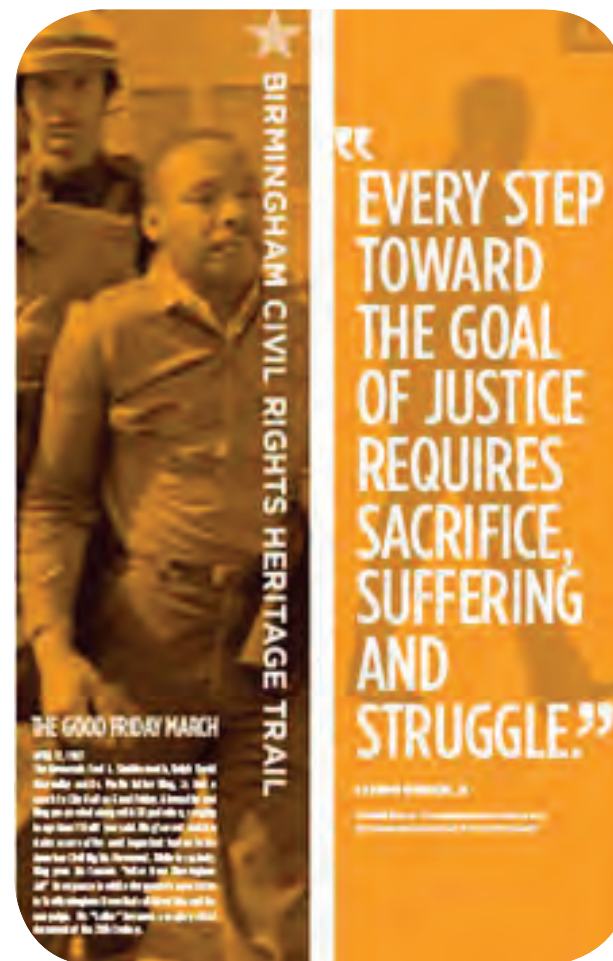


STREET CORNER MARKERS

PROVIDE STREET NAMES, HIGHLIGHT NEARBY CULTURAL AND HISTORIC HOTSPOTS, AND FEATURE VINTAGE PHOTOS OF WEST MAIN



IDENTIFICATION OF NEARBY SITES
with interpretation as incentive to visit and explore



HISTORIC PHOTOS WITH QUOTE
convey street's people and past



STREET NAMES
identified in paving or at top of marker

"GET AROUND" TRANSIT INTERPRETATION

PROVIDE A GLIMPSE OF PAST TRANSIT OPTIONS AT BUS STOPS



INTERPRETATION AT BUS STOPS
show transit options of the past in addition to route information



QUOTES, FUN FACTS OR MAP ARTWORK
at bench extend the interpretation



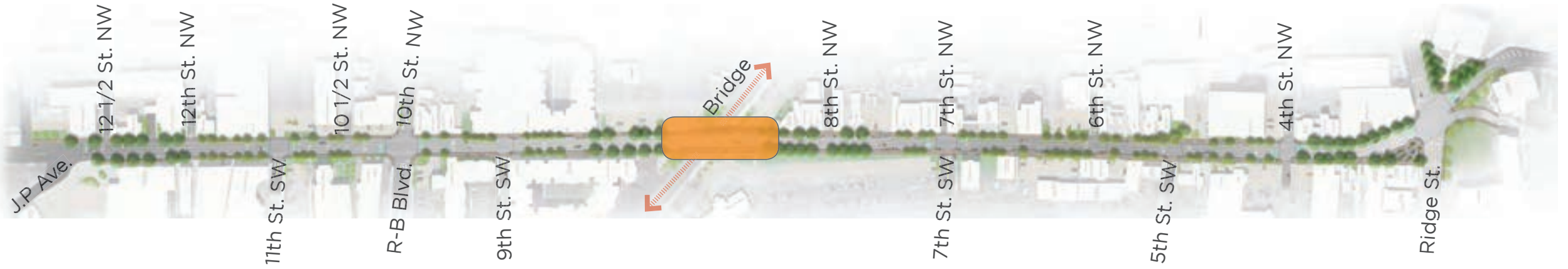
STREETCAR RAIL IN PAVING
accompanies panel on streetcars



REPRESENTATION OF PLANK ROAD
accompanies panel on 19th c. street

BRIDGE BUILDERS COMMEMORATIVE WALK

PROVIDE UPLIFTING EXPRESSIONS OF COMMUNITY AT THE BRIDGE



HONOREE'S NAMES DISPLAYED IN A MORE ARTFUL WAY
so that they are visible day and night



ACCOMPLISHMENTS AT PAVING
enhance appreciation of honorees



PRESENCE OF THE PEOPLE
through shadows, quotes, etc...

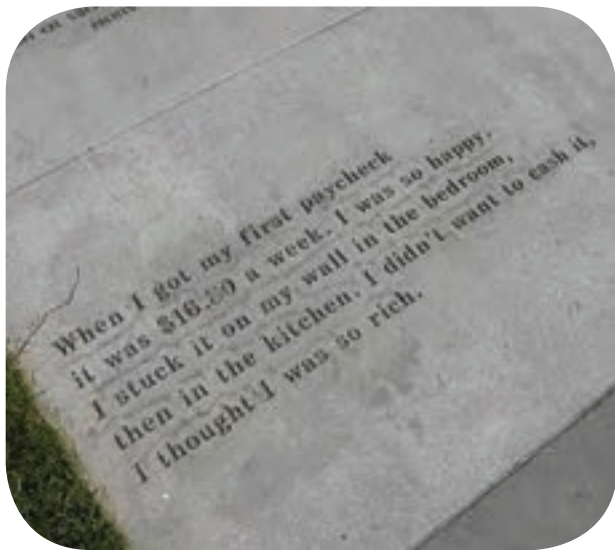


DRAMATIC LIGHTING ABOVE AND BELOW
brings the bridge to life at night and creates safe-feeling public space



MEMORY MARKERS

COMMEMORATE SPECIAL PLACES LIKE VINEGAR HILL, THE INGE STORE, AND ALBEMARLE HOTEL



QUOTATIONS AND TEXT STATEMENTS
 debossed or embossed text etched into paving
 at Vinegar Hill, Inges's Grocery Store, Albemarle Hotel and Gaslight Restaurant

DIMENSIONAL NAMES
 alternate to pavers at Vinegar Hill

NAME PAVERS
 for all Vinegar Hill families relocated
 and select businesses



MIDWAY PARK

history and interpretation

LEARNING FROM HISTORY AND HALPRIN TO RE-CREATE MIDWAY PARK

EXPRESSING VERNACULAR THROUGH GEOLOGICAL INTERPRETATION

Halprin's Mall design contained something every great street needs, an identifiable beginning and ending. The plaza and market designs were a divergence in form from the formal bosques along the Mall, artfully created urban places that reflected aspects of nature. For Midway Park, which has been an identifiable place along West Main since at least 1917, there is an opportunity to mark the gateway onto West Main and to interpret the local context and rich history this road embodies.



C&O Plaza Charlottesville Pedestrian Mall, Lawrence Halprin



Lewis and Clark Statue

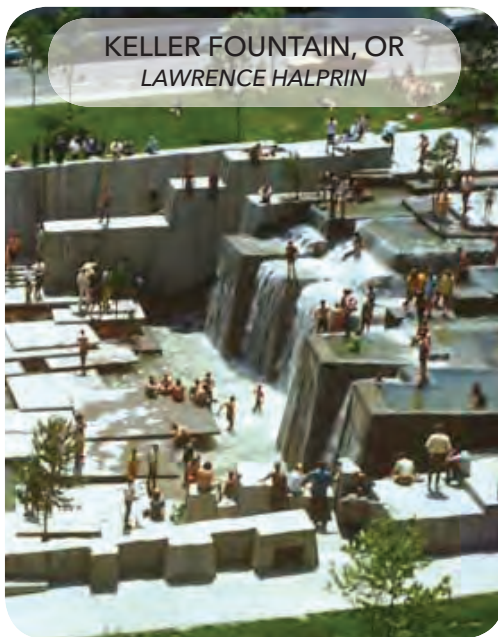
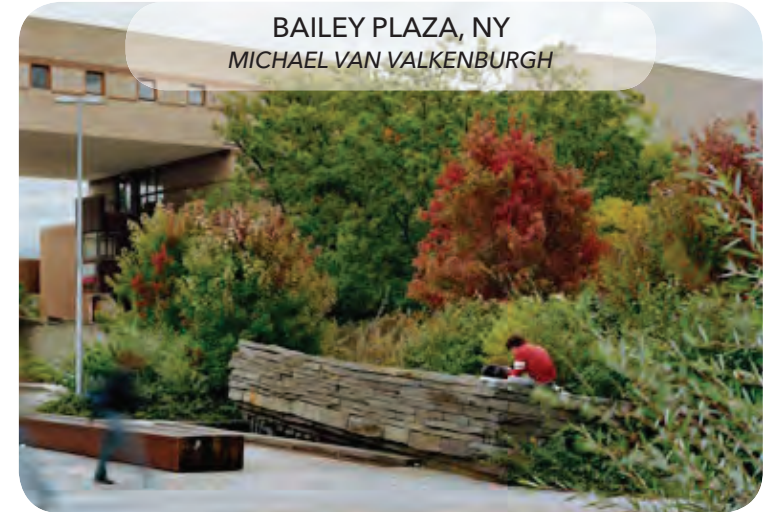


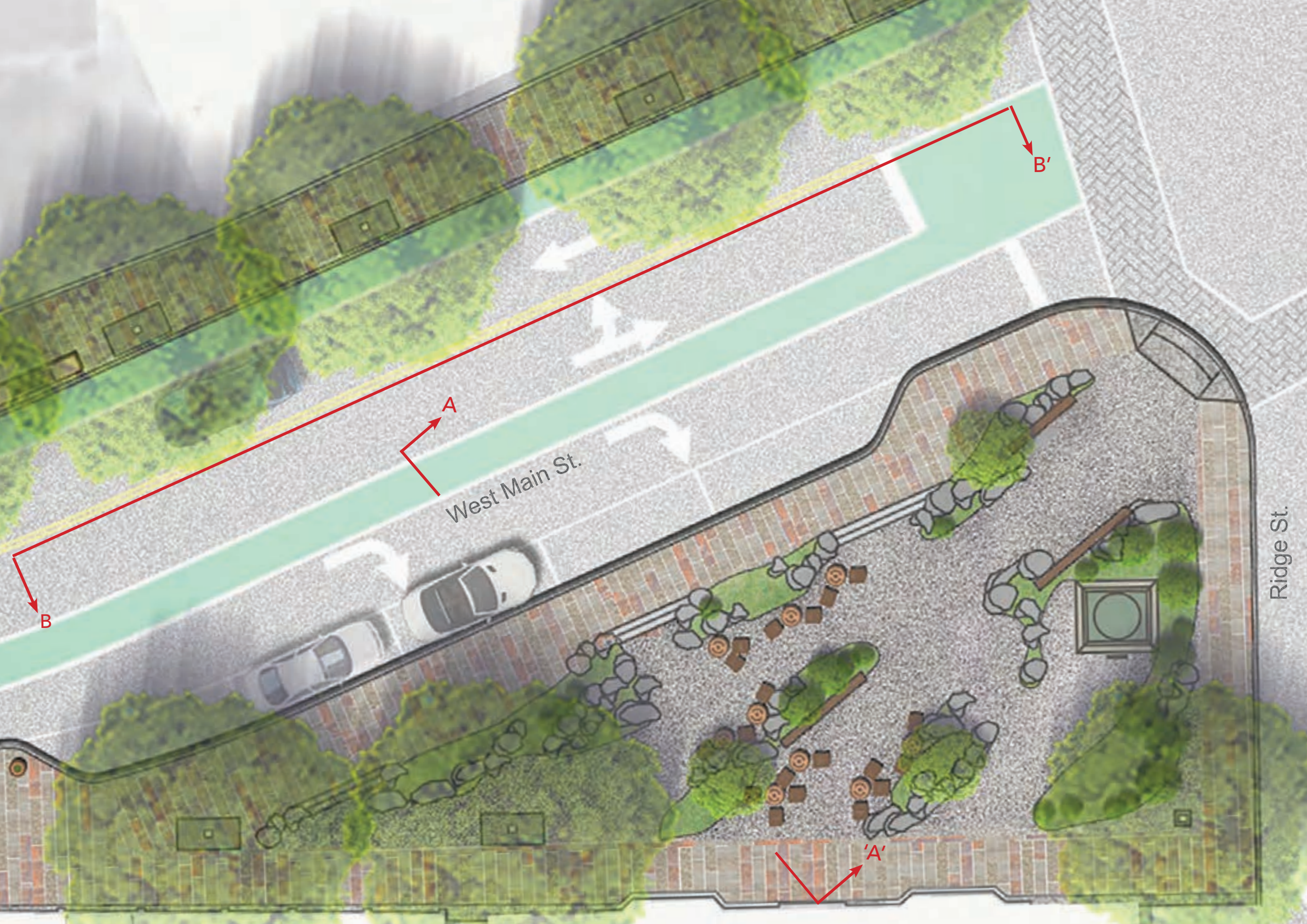
Catoclin Greenstone Formation Map



Appalachian Mountain Ridges and Valleys

CELEBRATE THE REGION'S GEOGRAPHY- PRECEDENTS FROM OTHER PLACES





West Main St.

Ridge St.

Midway Park plan enlargement



SECTION A - A' : SECTION THROUGH PARK LOOKING NORTHEAST



SECTION B-B' : ELEVATION OF PARK LOOKING SOUTH



Visualization of Midway Park at the Ridge Street and West Main Street intersection



DESIGN EVOLUTION

shaping the schematic design

Throughout the 11-month design process, the design team met with key City staff, City Council members, stakeholders, and the general public. Feedback gained from these meetings were used to continually shape critical plan elements including:

- Overall streetscape character and proposed site features
- Management of existing site features (e.g. street trees and relocation of the Lewis & Clark Statue)
- Stormwater management strategies
- Parking management and loading recommendations
- Underground and overhead utilities management (water, gas, electric, and private utilities)
- Maintenance and constructibility
- Roadway geometry (e.g. lane configurations, traffic management, intersection pillows and turning radii)
- Public and private utilities (e.g. water, gas, electric and telecommunications)
- Funding and budget management

PROJECT IMPLEMENTATION TEAM

The design team met with the Project Implementation Team on a monthly basis to review design progress, receive feedback on project recommendations and to guide the overall project process. The Project Implementation Team was comprised of representatives from pertinent City departments including Neighborhood Development Services, Charlottesville Area Transit (CAT), Parks & Recreation, Public Works, City Manager's Office, Economic Development, Fire Department and Police Department. As a critical stakeholder, the University of Virginia was also an integral member of the Project Implementation Team as well.

CITY COUNCIL

The design team engaged City Council at critical junctures during the design process. These engagement sessions included four "2+2+1" work sessions. A public hearing will be held on May 15th to review and approve Schematic Design plans.

BOARD OF ARCHITECTURAL REVIEW (BAR)

Two work sessions were held with the Board of Architectural Review to provide an overview of design progress and to gain feedback on project recommendations.

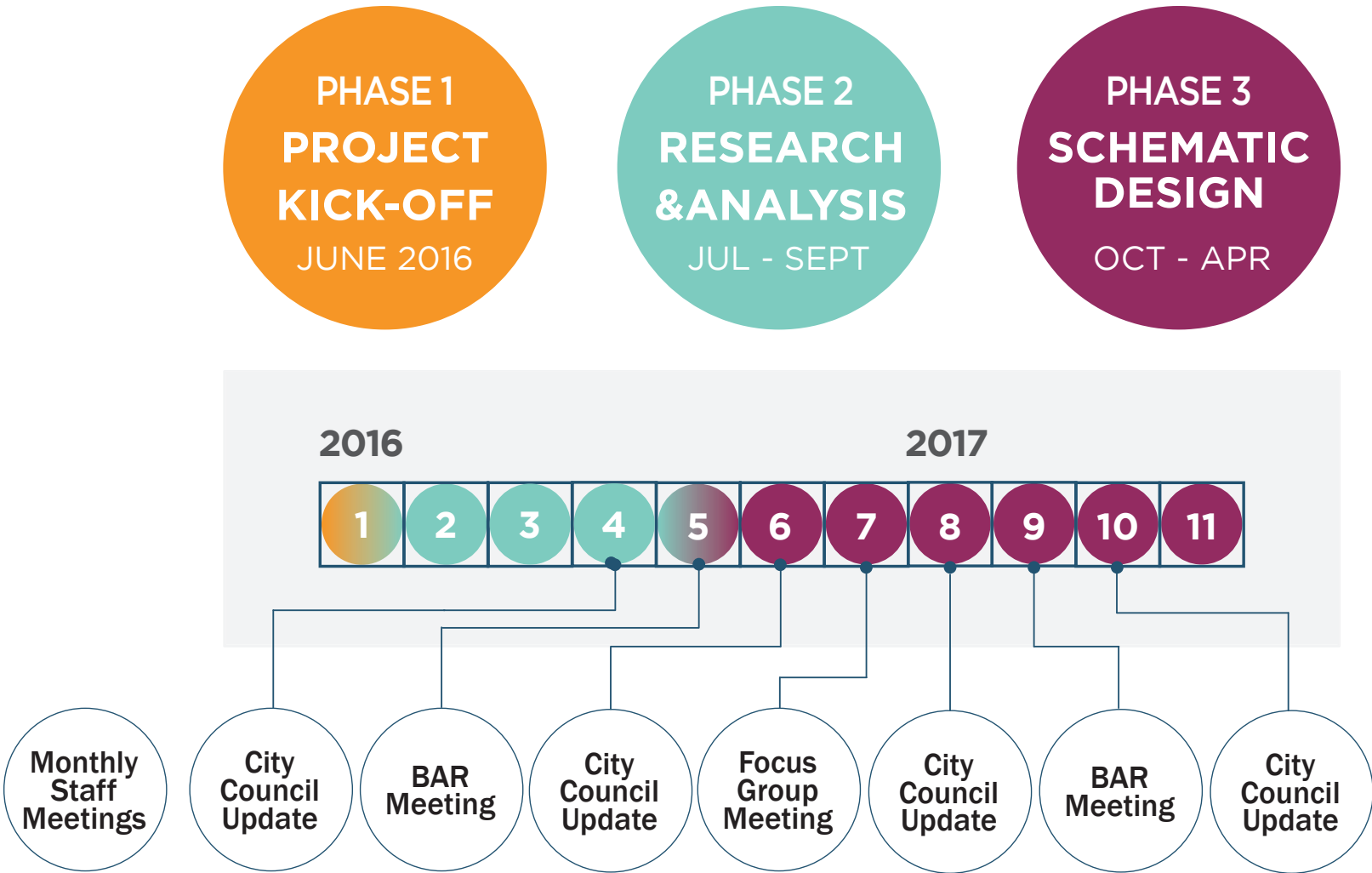
PUBLIC UTILITIES

West Main Street includes numerous utilities both public and private. The design team met with utility owners including Dominion Virginia Power, Comcast, Century Link, and Lumos to understand their current and future needs as well as to coordinate general project progress.

PUBLIC ENGAGEMENT

West Main Street has been an important street both for its surrounding neighborhoods and for the City as a whole. In designing streetscape improvements for West Main, the design team investigated ways that the street can remain an important place for the communities living adjacent to it. To gain insights into the needs of adjacent communities, a public session was held to provide a general project update and to explore the meaning of West Main Street for its neighboring communities, and how this can relate to "making places" along the corridor.

project process



APPENDICES

APPENDIX A: TREE ASSESSMENT AND SUMMARY

provided by...

Wolf | Josey Landscape Architects
with Pitchford Associates

APPENDIX B: CONCEPTUAL UTILITIES LAYOUT PLAN

provided by...

Timmons Group

APPENDIX C: GEOTECHNICAL ENGINEERING REPORT

provided by...

Timmons Group

APPENDIX D: HISTORICAL OVERVIEW AND ARCHAEOLOGICAL ASSESSMENT

provided by...

Rivanna Archaeological Services

APPENDIX E: INTERPRETATION STRATEGIES

provided by...

Howard + Revis



MEMORANDUM

To: Ron Sessoms, Rhodeside & Harwell
From: Nelson\Nygaard Project Team
Date: April 10, 2017
Subject: West Main Street Traffic Analysis

West Main Street is a corridor in demand. It is in demand as a business address, a residential home, an employment opportunity, a connection between destinations, and a destination unto itself. Bicyclists, bus riders, business patrons and pedestrians all compete for space to move, park and linger.

Yet the corridor has only 60 feet of right of way in which to meet these demands. It lacks direct parallel alternative corridors and has limited perpendicular connections that penetrate to the larger city.

The highly valued historic buildings along the corridor were built in eras before automobile dominance. What they have in rich character, they lack in off street parking – a feature still very much in demand by the businesses that occupy these quaint storefronts.

West Main Street is one of the few relatively flat connections between the University and the downtown, making it a highly attractive route for cyclists. It is the shortest and most direct driving route as well and the primary connection for the city's most productive bus routes. And it is a place where pedestrians jockey with strollers and joggers to meet, mingle, look and linger.

As such the corridor has been the subject of a detailed West Main Street Master Plan which recommended the following from a transportation perspective:

- Balanced street that preserves:
 - As much parking as possible.
 - As much vehicular capacity and flow as possible.
- While...
 - Creating an inviting, attractive and safe pedestrian environment
 - Enhancing transit rider amenities and accommodation.
 - Improving bicycle facility safety.
 - Accommodating street trees and green features.

Traffic Analysis Context

Based on the West Main Street Master Plan a number of roadway alternatives were recommended for implementation. Through the design and implementation phase of this study, additional

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

traffic analysis was scoped into order to further detail the potential impacts and mitigation of the proposed recommendations.

Traffic Evaluation Assumptions

The following outlines the assumptions included for evaluating changes to traffic operations along West Main Street based on current and the proposed configuration for future conditions.

Traffic Data

- All traffic data counts included: vehicles, heavy vehicles, pedestrians, and bicycles
- Traffic counts were undertaken during the Fall of 2016 while UVA was in session and no special events were scheduled that would unduly impact West Main Street traffic patterns.

Synchro Modeling

The following settings and assumptions were used for traffic evaluation using Synchro Version 9:

- Traffic volumes for the existing conditions were utilized from Fall 2016 traffic counts.
- For future analysis, the peak hour factor was set in Synchro as per the existing intersection approaches for all future scenarios.
- Synchro enables multiple signal timing optimizations; for existing conditions signal timings were provided by the City. For future scenarios, existing signal timings were utilized and optimized as appropriate and will be field adjusted by the City upon build out.
- Since this analysis is for the area in and around the downtown area, the “area type” selected for analysis was “CBD” for “central business district”.
- Pedestrian volumes from the traffic counts were included as “conflicting pedestrians” volumes in the model.
- Traffic volumes entering the study area were based on existing counts. For the future configuration a 1% additional background traffic growth was assumed along with the detailed trip generation from three approved developments. Pedestrian trips were assumed to grow at 3% annually for a period of 5 years. The forthcoming development growth along the corridor is centered around the demand for proximity to downtown as well as the University of Virginia campus with minimal need for automobile travel.
- Under the future scenario right-turn on red was prohibited throughout the network to accommodate the proposed bicycle boxes at intersections.

Data Collection: Vehicle, Pedestrian, and Bicycle Counts

Nelson\Nygaard contracted with Peggy Malone & Associate, Inc to count the following conditions during the AM and PM peak periods as well as the Saturday midday peak period:

- Vehicles volumes and turn movements;
- Vehicle classification to determine cars, trucks, and buses;
- Pedestrian and bicycle volumes; and
- Determination of the peak hour.

Data was counted and analyzed for the following **12** intersections.

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

West Main Street Intersections
<ul style="list-style-type: none"> ▪ Ridge McIntire at West Main St. ▪ 4th St. at West Main St. ▪ 5th St. at West Main St. ▪ 6th St. at West Main St. ▪ 7th St. at West Main St. ▪ 8th St. at West Main St. ▪ 9th St. at West Main St. ▪ 10th/Roosevelt at West Main St. ▪ 11th St. at West Main St. ▪ 12th St. at West Main St. ▪ Jefferson Park Ave at West Main St. ▪ Ridge McIntire at Monticello Ave.

EXISTING CONDITIONS

Existing Conditions

Utilizing the traffic count data, the existing signal timing data, and the modeling assumptions, a Synchro model was developed for existing conditions of the study area. The Synchro results for the existing conditions are shown in Figure 1 and Figure 2.

LOS is used to analyze roadways and intersections by categorizing traffic flow and assigning quality levels of traffic based on performance measure like speed, density, etc. The Highway Capacity Manual (HCM) defines Level of Service (LOS) for signalized and unsignalized intersections as a function of the average vehicle control delay utilizing letters A through F, with A being the best and F being the worst. The City of Charlottesville has approved LOS D as their design objective for intersection level of service.

LOS	Signalized Intersection (average vehicle delay)	Unsignalized Intersection (average vehicle delay)	Condition
A	≤10 sec	≤ 10 sec	Minimal Delays
B	10 – 20 sec	10-15 sec	Low levels of delay & queuing
C	20-35 sec	15-25 sec	Intermittent queuing, traffic flow stable & acceptable
D	35 – 55 sec	25-35 sec	Delays & queuing with enough clearance to prevent backups
E	55- 80 sec	35-50 sec	Longer queues & delays with vehicles waiting through more than one cycle
F	>80 sec	>50 sec	Over capacity with significant delays & queuing

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Figure 1 Existing Vehicular Conditions Level of Service and Delay

Intersection	AM	AM	PM	PM	Saturday	
	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)
Ridge McIntire at West Main St.	C	33.1	C	30.9	C	29.4
4th St. at West Main St.	B	12.2	C	28.1	B	13.3
5th St. at West Main St.	A	1.6	A	2.3	A	1.8
6th St. at West Main St.	A	0.6	A	1.8	A	0.7
7th St. at West Main St.	B	14.8	B	15.3	B	15.9
8th St. at West Main St.	A	1.2	A	2.0	A	1.1
9th St. at West Main St.	A	1.2	D	31.7	A	1.2
10th/Roosevelt at West Main St.	D	37.3	C	33.9	C	26.7
11th St. at West Main St.	A	8.9	B	19.7	B	14.9
12th St. at West Main St.	A	1.1	A	0.8	A	1.0
Jefferson Park Ave at West Main St.	B	16.4	B	17.3	B	17.0
Ridge McIntire at Monticello Ave	D	35.9	C	32.5	C	28.4

Figure 2 Existing Crosswalk Conditions Level of Service

Intersection	AM	PM
	LOS	LOS
Ridge McIntire at West Main St.	B	B
4th St. at West Main St.	B	B
5th St. at West Main St.	B	B
6th St. at West Main St.	n/a	n/a

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Intersection	AM	PM
	LOS	LOS
7th St. at West Main St.	B	B
8th St. at West Main St.	E	F
9th St. at West Main St.	B	C
10th/Roosevelt at West Main St.	B	B
11th St. at West Main St.	B	B
12th St. at West Main St.	B	B
Jefferson Park Ave at West Main St.	B	B
Ridge McIntire at Monticello Ave	B	B

The key indicator used to analyze the road network is Level of Service (LOS). Level of service (LOS) is a qualitative measure used to relate the quality of traffic service. The City generally recognizes that urban areas are likely to have more congestion than rural areas as this reflects the different characteristics of land use and transportation in these areas. As such Level of Service D is deemed appropriate for the West Main Street corridor particularly when improvements to overall mobility such as bicycle facilities and an enhanced pedestrian environment are being made.

The analysis also enabled review of queue lengths and volume to capacity ratios. Under existing conditions, drivers along the West Main Street corridor currently experience minimal delays with some exceptions including at the intersection of West Main Street at 10th Street/Roosevelt Boulevard and at West Main Street at Ridge McIntire Road. It is noted that in the PM peak hour the intersection of 9th Street at West Main Street experiences notable delays from the southbound parking driveway. From a pedestrian perspective, the signalized intersections have a pedestrian crosswalk Level of Service of B or better but the unsignalized intersections within the middle of the corridor do show poor crosswalk LOS. This poor crosswalk LOS at 8th Street stems from its location within the middle of the corridor and the lack of adjacent traffic signals (specifically to the west) to adequately provide acceptable gaps in traffic during the peak periods.

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Figure 3 Existing Capacity and Queuing

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		LOS	Delay	V/C	Queue(ft) 95 th %	LOS	Delay	V/C	Queue(ft) 95 th %
Ridge McIntire at West Main Street	EB	D	52.9	0.88	260	D	35.7	0.76	205
	WB	C	34.1	0.72	154	D	46.4	0.82	159
	NB	C	24.0	0.68	197	C	20.8	0.47	247
	SB	C	28.6	0.83	265	C	24.9	0.53	238
	Intersection	C	33.1	0.88	-	C	30.9	0.80	-
West Main Street at 4 th Street	EB	B	10.3	0.37	218	A	6.9	0.73	206
	WB	A	8.7	0.54	92	A	6.5	0.37	159
	NB	C	21.3	0.07	20	D	36.6	0.30	20
	SB	C	28.6	0.54	58	F	108.6	1.05	216
	Intersection	B	12.3	0.54	-	C	28.1	1.05	-
Ridge Street at Monticello Avenue	EB	B	19.2	0.06	10	C	24.0	0.02	5
	WB	D	54.6	0.89	358	D	51.8	0.87	336
	NB	C	34.8	0.78	535	C	33.0	0.68	534
	SB	C	26.2	0.78	261	B	18.4	0.64	373
	Intersection	D	35.9	0.89	-	C	32.5	0.87	-
West Main Street at 10 th /Roosevelt	EB	C	26.2	0.60	287	C	23.8	0.73	313
	WB	C	27.3	0.53	265	C	30.2	0.62	232
	NB	D	53.8	0.91	315	D	42.4	0.70	325
	SB	D	42.0	0.76	277	D	41.8	0.72	342
	Intersection	D	37.3	0.91	-	C	33.9	0.73	-

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		LOS	Delay	V/C	Queue(ft) 95 th %	LOS	Delay	V/C	Queue(ft) 95 th %
West Main Street at Jefferson Park Avenue	EB	B	16.1	0.54	190	B	19.0	0.45	221
	WB	C	20.0	0.52	106	B	17.0	0.43	173
	NB	B	12.1	0.47	106	B	16.1	0.54	187
	Intersection	B	16.4	0.54	-	B	17.3	0.54	-

FUTURE CONDITIONS

To assess future conditions along West Main Street, the Synchro model was modified to reflect the proposed design of the corridor including the intersection of Ridge McIntire Road at West Main Street (see Figure 4) and the inclusion of bicycle boxes at the corridor intersections which prohibit right-turn on red maneuvers. Under future conditions, it was assumed that there would be an overall 1% vehicular traffic growth rate along the corridor as well as the specific vehicle trips from planned developments. Additionally, a 3% annual pedestrian trip growth rate for 5 years was included for future analysis to reflect the proximity to downtown as well as the University of Virginia campus with increased pedestrian and bicycle activity.

Figure 4 – Proposed West Main Street/Ridge McIntire Road Intersection Traffic Configuration



West Main Street/Ridge McIntire Road

With the proposed intersection configuration at West Main Street at Ridge McIntire Road the following changes were made to signal and lane operations.

- Closing the separate right-turn lane from eastbound West Main to Ridge Street and moving it to the north side of the Lewis & Clark statue.
- The removal of the right-turn spur lane from West Main Street enabled lane reassignments for the eastbound approach to include a right-turn lane and a thru/left lane.

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

- The removal of the double left turn lane from West Main Street allows for the east-west signal phases to run concurrently rather than split phasing as they are currently. The concurrent phasing provides for more efficient use of the available signal time to reduce overall delay for both vehicles and pedestrians.
- The removal of the right-turn spur lane from Water Street to enable the westbound approach to include a right lane and shared thru/left-turn lane.
- The addition of bicycle lanes and bicycle boxes with right-turn on red maneuvers prohibited.
- Retention of the existing contraflow bike lane on South Street.

Background Growth & Development

To assess the potential impacts of the proposed development projects, an analysis of the future scenario is determined to include the following considerations:

- A 1% vehicle traffic growth rate;
- Inclusion of the specific developments of recently filed, permitted, or completed projects within the Study Area (identified by City staff as 860 West Main Street, Sycamore House Hotel, 600 West Main Street); and
- A 3% annual pedestrian trip growth rate for 5 years. The forthcoming development growth along the corridor is centered around the demand for proximity to downtown as well as the University of Virginia campus with increased pedestrian and bicycle activity.

The specific development projects within the study area that would have peak hour traffic impacts are highlighted below in Figure 5 below.

Figure 5: Study Area Development Projects and Trip Generation

Development	Location	Type	Daily	AM Peak Hour	PM Peak Hour
Sycamore House Hotel	1106 W. Main Street	Hotel	1,226	80	90
600 West Main Street	600 W. Main Street	Mixed-Use	229	13	22
The Standard	860 W. Main Street	Mixed-Use	118	48	70

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

The future conditions were initially modeled for the Ridge McIntire Road/West Main Street to ensure that the proposed configuration operated acceptably and then the remaining intersections along the corridor were modeled to ensure that no subsequent impacts were initiated.

The Synchro results for the future condition scenario are shown below in Figure 5.

Synchro Results

The future conditions were initially modeled for the Ridge McIntire Road/West Main Street to ensure that the proposed configuration operated acceptably and then the remaining intersections along the corridor were modeled to ensure that no subsequent impacts were initiated.

The Synchro results for the future condition scenario are shown below in Figure 6.

Figure 6 Future Conditions Level of Service and Delay

Intersection	AM	AM	PM	PM	Saturday	
	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)
Ridge McIntire at West Main St.	C	28.0	C	27.2	C	27.1
4th St. at West Main St.	B	17.1	C	26.3	B	18.0
5th St. at West Main St.	A	1.6	A	2.3	A	1.9
6th St. at West Main St.	A	0.9	A	2.1	A	0.7
7th St. at West Main St.	B	18.7	B	16.6	B	17.6
8th St. at West Main St.	A	1.4	A	2.3	A	1.1
9th St. at West Main St.	A	5.0	C	20.0	A	1.2
10th/Roosevelt at West Main St.	D	37.3	D	36.6	C	27.9
11th St. at West Main St.	B	12.9	C	23.9	B	16.1
12th St. at West Main St.	A	1.1	A	0.8	A	1.0
Jefferson Park Ave at West Main St.	B	15.3	B	17.9	B	17.3

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Intersection	AM	AM	PM	PM	Saturday	
	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)	LOS	Average Signal Delay (seconds)
Ridge McIntire at Monticello Ave	D	38.0	D	35.3	C	29.5

Figure 7 Future Crosswalk Conditions Level of Service

Intersection	AM	PM
	LOS	LOS
Ridge McIntire at West Main St.	B	B
4th St. at West Main St.	B	B
5th St. at West Main St.	C	C
6th St. at West Main St.	C	D
7th St. at West Main St.	B	B
8th St. at West Main St.	F	F
9th St. at West Main St.	B	F
10th/Roosevelt at West Main St.	B	B
11th St. at West Main St.	B	B
12th St. at West Main St.	B	B
Jefferson Park Ave at West Main St.	B	B
Ridge McIntire at Monticello Ave	B	B

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Under the proposed conditions, drivers along the West Main Street corridor would continue to experience minimal delays with similar exceptions at the intersection of West Main Street at 10th Street/Roosevelt Boulevard and at West Main Street at Ridge McIntire Road.

From a pedestrian perspective, the signalized intersections have a pedestrian crosswalk Level of Service of B or better but the unsignalized intersections within the middle of the corridor do show poor crosswalk LOS. The poor crosswalk LOS at 8th Street and in the future at 6th Street stems from their location within the middle of the corridor and the lack of adjacent traffic signals (specifically to the west) to adequately provide acceptable gaps in traffic during the peak periods. As mitigation it is recommended that these crosswalks be reviewed for implementation of high-visibility crosswalk markings and signage to be more easily detected by all users and to achieve higher compliance.

Figure 8 Future Capacity and Queuing

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		LOS	Delay	V/C	Queue(ft) 95 th %	LOS	Delay	V/C	Queue(ft) 95 th %
Ridge McIntire at West Main Street	EB	C	32.1	0.77	303	C	31.1	0.73	237
	WB	C	24.0	0.40	127	C	29.7	0.71	159
	NB	C	26.1	0.68	228	C	23.5	0.51	241
	SB	C	28.8	0.61	228	C	25.7	0.56	264
	Intersection	C	28.1	0.77	-	C	27.2	0.73	-
West Main Street at 4 th Street	EB	A	8.7	0.42	178	A	9.0	0.56	236
	WB	B	18.8	0.67	146	C	21.6	0.59	241
	NB	C	27.5	0.06	24	C	28.7	0.28	21
	SB	D	38.8	0.57	92	E	78.3	0.97	181
	Intersection	B	17.1	0.67	-	C	26.3	0.97	-
Ridge Street at Monticello Avenue	EB	C	27.8	0.06	13	C	23.6	0.02	6
	WB	E	56.7	0.91	385	D	51.7	0.89	364
	NB	D	43.7	0.87	581	D	39.9	0.77	593
	SB	C	23.2	0.86	151	C	21.2	0.70	544
	Intersection	D	38.0	0.91	-	D	35.3	0.89	-

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

Intersection	Movement	AM Peak Hour				PM Peak Hour			
		LOS	Delay	V/C	Queue(ft) 95 th %	LOS	Delay	V/C	Queue(ft) 95 th %
West Main Street at 10 th /Roosevelt	EB	D	35.9	0.76	360	C	30.5	0.78	466
	WB	D	37.3	0.65	332	C	30.2	0.62	275
	NB	D	36.6	0.73	277	D	42.9	0.70	337
	SB	D	41.4	0.74	289	D	46.7	0.77	386
	Intersection	D	37.3	0.76	-	D	36.6	0.78	-
West Main Street at Jefferson Park Avenue	EB	B	16.7	0.55	200	C	20.5	0.49	237
	WB	B	16.2	0.55	177	B	17.4	0.43	183
	NB	B	12.6	0.52	106	B	16.6	0.60	186
	Intersection	B	15.3	0.55	-	B	17.9	0.60	-

QUEUING ANALYSIS

In order to further analyze the impacts of the proposed intersection reconfiguration at West Main Street and Ridge McIntire Road, a queuing analysis was undertaken to examine the changes between the existing conditions and future conditions at the adjacent intersections (West Main Street at 4th Street, Ridge Road at Monticello Ave and West Main Street at Ridge McIntire Road).

The analysis summarized the queue lengths from Figure 3 and Figure 8 along with two additional scenarios that considered; the future No Build condition (no roadway changes but future growth), and No Build Optimized (optimized traffic signals with future growth but no roadway changes).

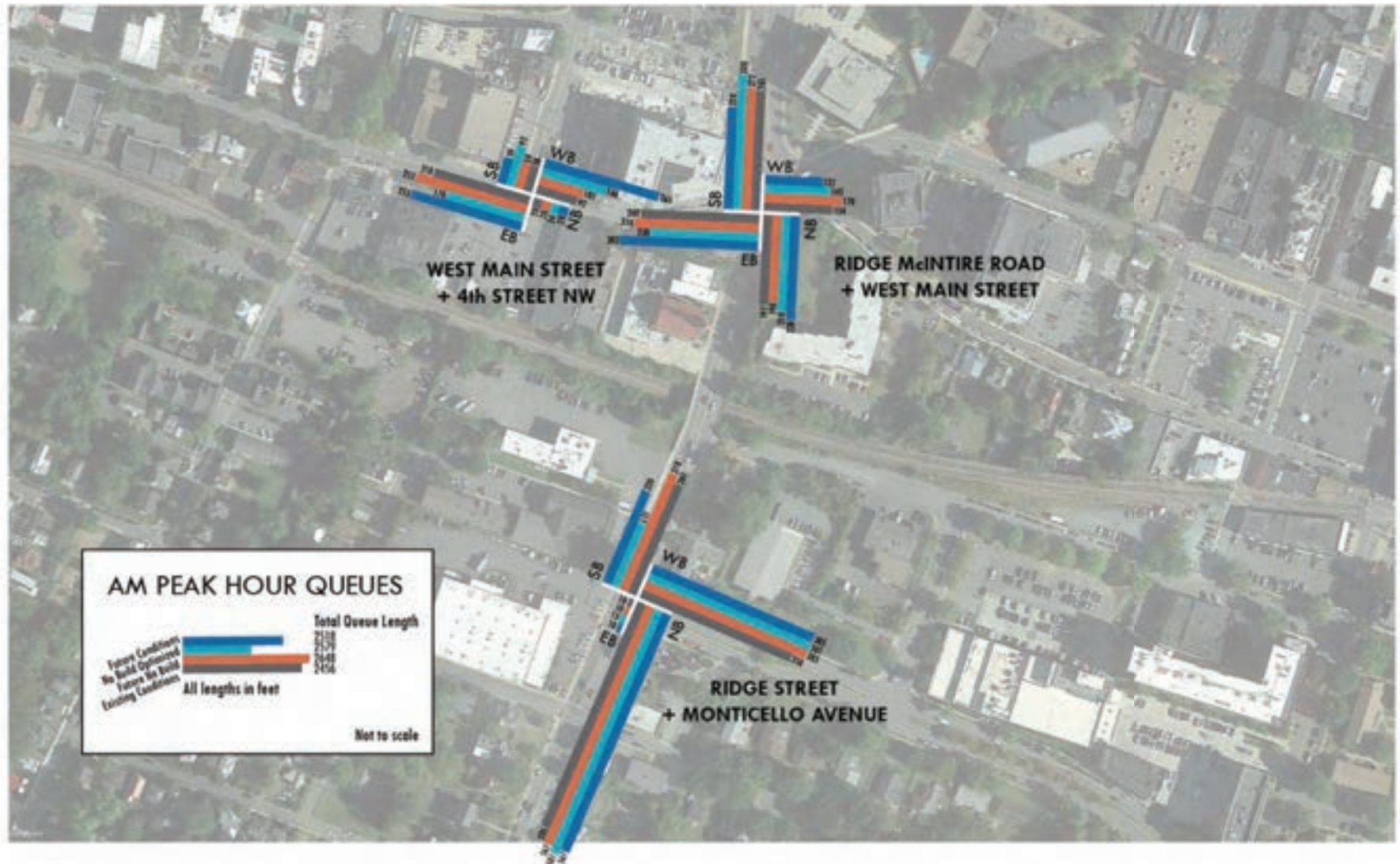
During the AM and PM peak hours the following total queue lengths were calculated from the Synchro software.

Figure 9 Queuing Summary

	AM Peak Hour Total Queue Length (ft)	PM Peak Hour Total Queue Length (ft)
Existing Conditions	2456	2698
Future Conditions	2518	3087
Future No Build	2648	2913
Future No Build (Optimized)	2579	3001

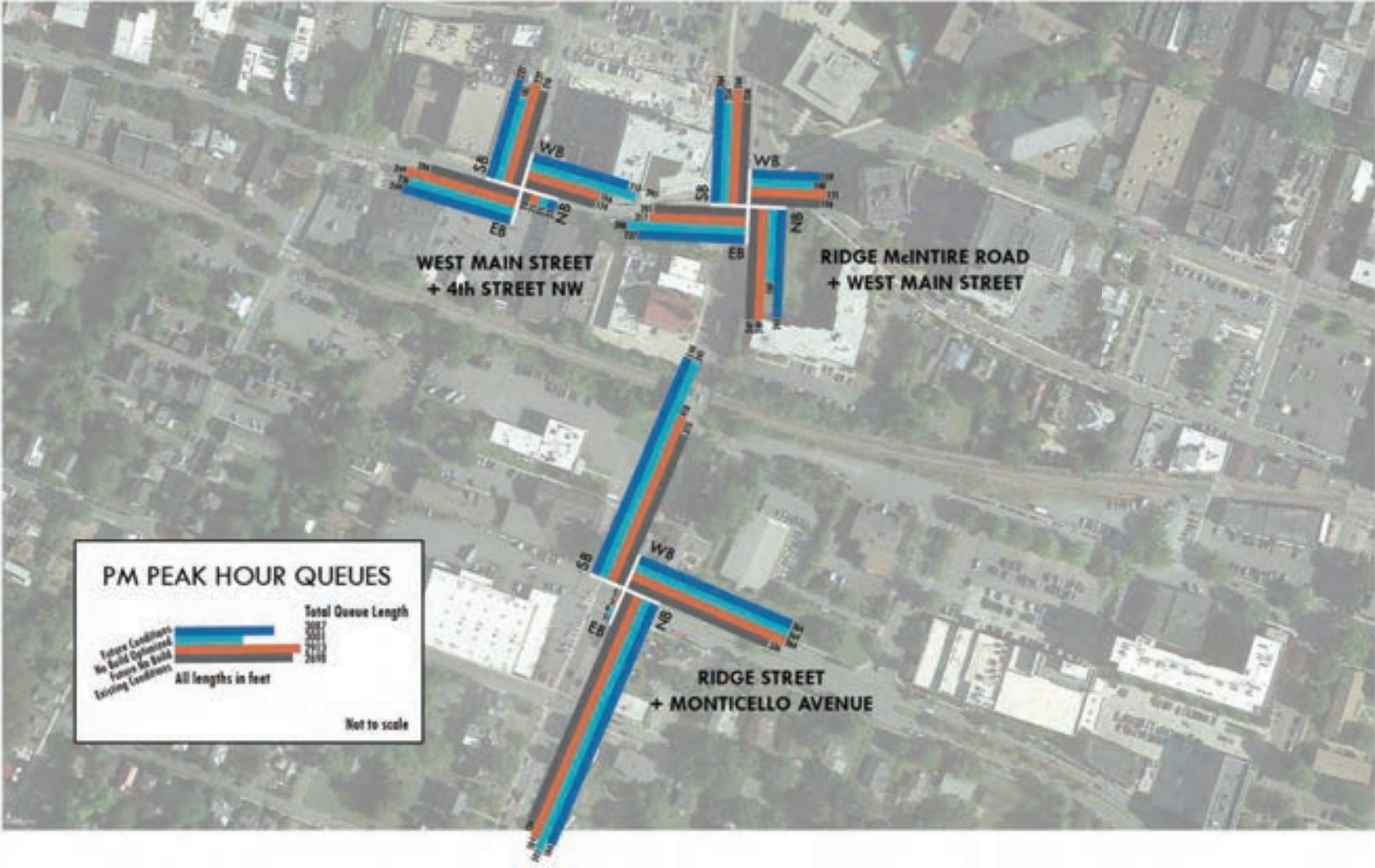
WEST MAIN STREET TRAFFIC ANALYSIS City of Charlottesville, VA

Figure 10 AM Peak Hour Queuing Summary



WEST MAIN STREET TRAFFIC ANALYSIS
 City of Charlottesville, VA

Figure 11 PM Peak Hour Queuing Summary



WEST MAIN STREET TRAFFIC ANALYSIS City of Charlottesville, VA

The analysis shows that in the AM peak hour the total queue length will increase by approximately 62-ft from the existing to future conditions. This would be equal to approximately two (2) additional vehicles over the three intersections. It is noted however, that the future roadway configuration at West Main Street and Ridge McIntire Road would improve the total queue over the future no build condition (i.e., if traffic growth continues under the existing roadway operations).

Under the PM peak hour conditions the total queue length would increase by approximately 390-ft from the existing conditions (an additional 16 vehicles over the three intersections). However, over the future conditions without any roadway changes the change in queue length is much smaller at approximately 165-ft.

In both the AM and PM peak hours the three intersections would continue to operate acceptably and within the City's desired level of service under the future conditions, as shown in Figure 3 and Figure 8. The queuing analysis however does highlight that the City's traffic signal system operates as a network and that changes to one intersection can have impacts on both the adjacent intersection and the network as a whole. The City currently does not have dedicated staff to undertake periodic review and maintenance of the traffic signal system, which comprises over 75 traffic signals. In order to ensure that the West Main Street corridor and the City's roadway network continues to operate efficiently and effectively under existing and future conditions, dedicated city staff should be considered.

TRANSPORTATION DEMAND MANAGEMENT

As recommended in the City's recently approved parking study of 2016, the establishment of a Transportation Demand Management Program and Transportation Management Association was a key recommendation to address both parking and mobility challenges within the City including West Main Street.

A Transportation Management Association (TMA) or Transportation Management Organization (TMO) should be created in concert with the establishment of the Parking Department and be a program of that department. A TMA can help to disseminate information about alternative commuting options, run events and campaigns to encourage workers to try alternative commutes, and develop tailored programs for both employers and employees that meet their needs. The TMA can work closely with the Visitor's Bureau to enhance the visitor experience as well.

TMA's provide an economy of scale and more consistent, pervasive, and impactful message and program compared to TDM programs operated by individual employers or residential buildings. TMA's have demonstrated the ability to positively and substantially increase the awareness and use of alternative commuting options, increase worker satisfaction while decreasing household transportation costs, and enhance the appeal and competitiveness of cities and their downtowns.

The TMA could be funded through parking revenue funds and the required participation of new development projects. TMA's are also eligible for federal transportation funding (granted through the regional planning body) and work closely with area transit providers. In Charlottesville, the TMA could and should be a partnership between the City, University and transit provider and support both populations and their needs.

WEST MAIN STREET TRAFFIC ANALYSIS
City of Charlottesville, VA

The City recently hired a parking manager and it is envisioned that a Citywide TDM program is to be established under their direction in conjunction with an overall City parking strategy.

BIKE BOXES

The proposed streetscape and roadway plan includes bike boxes at all six (6) signalized intersections along West Main Street. A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase. The box is often utilized where the facilitation of bicyclist left-turns and/or vehicle right-turns are required due to the volumes experienced.

The proposed bike boxes locations along West Main Street include the following intersections:

- West Main Street at Ridge McIntire Road
- West Main Street at 4th Street
- West Main Street at 7th Street
- West Main Street at Roosevelt Brown/10th Street
- West Main Street at 11th Street
- West Main Street at Jefferson Park Avenue

All of these locations with the exception of 7th Street have separate left-turn lanes with the associated desire to accommodate left-turn bicycle movements as they provide access to the adjacent communities. Additionally, the bike boxes at Ridge McIntire Road, 10th Street and Jefferson Park Avenue all provide priority for bicyclists as they cross major streets.

SUMMARY OF FINDINGS

Based on the foregoing data and analyses, this memorandum has outlined the projected traffic impacts related to the future configuration of the West Main Street corridor as proposed within the West Main Street Master Plan. The evaluation found that the proposed recommendations including the new lane configurations and signal timings at West Main Street and Ridge McIntire as well as bicycle accommodations and future growth along the corridor would enable the corridor to continue to operate acceptably with minimal capacity impacts.

Principal findings are as follows:

- Existing overall Levels of Service at the study area intersections are at LOS D or better.
- With the proposed recommendations the corridor intersections would continue to operate at LOS D or better with minimal capacity and queuing impacts with the anticipated development growth along the corridor.
- Signal timing optimization at West Main Street at Ridge McIntire Road during both peak periods would enable concurrent eastbound and westbound movements. Further signal optimization along the corridor would continue to enhance vehicular flow.
- Intersections along the corridor would prohibit Right-Turn On Red maneuvers to accommodate bicycle boxes.
- Unsignalized intersections at 8th Street and 6th Street are recommended for implementation of high-visibility crosswalk markings and signage to be more easily detected by all users and to achieve higher compliance.
- The implementation of a Transportation Demand Management program within both the West Main Street corridor and Citywide is recommended as per the 2016 City of Charlottesville Parking Study.
- The City's transportation system would benefit from dedicated city staff to review and perform maintenance on the traffic signal network that totals over 75 signals in the City.

APPENDIX A – TRAFFIC COUNTS

APPENDIX B – SYNCHRO OUTPUTS



West Main Street Corridor Improvements Charlottesville, VA



**100% SD Documents
Dated February 16, 2017**

**ROM Revised Estimate
Dated 4-24-17**



West Main Street Corridor Improvements
Charlottesville, VA

Assumptions and Clarifications

The following Assumptions and Clarifications are provided to convey the basis of the estimate and general approach taken by Kohnen-Starkey, Inc. in the preparation of this estimate. The detailed estimate backup provided for each area of the project shall serve as a reference for all scope of work (work activity, assumed quantity and level of quality) which has been taken into account in this estimate. Work not specifically indicated in this detailed backup should be considered Not Included (NIC).

This ROM estimate has been prepared in accordance with 100% SD Documents, entitled, West Main Street Streetscape and Roadway Improvements, dated February 16, 2017, as prepared by Rhodeside & Harwell.

General Clarifications

1. *Sole-Source Products* - The estimate makes no provisions for sole-source specified items or products. All items are assumed to be openly specified to allow competitive subcontractor and supplier bidding.
2. *Off Hours Work* – It is assumed that some off hours work will be required, however the majority of the work will be completed during normal working hours. This estimate does not include a labor premium for off-hours work.
3. *Wage Rates* – Wage rates are calculated based on Davis Bacon Predetermined Wages, General Decision Numbers VA160034 and VA160138, for Heavy and Highway Construction, dated January 6, 2017, and for Charlottesville County in state of Virginia.
4. *Sales Tax* – Sales tax has been included in the unit pricing of this estimate.
5. *Bonds & Insurance* – Contractor and Subcontractor Bond Cost have been included in this estimate.

6. *General Contractor OH & Fee* – Contractors G&A cost have been calculated at 3% of the cost of work, and the Contractor's Fee at 5%.
7. *Subcontractor OH & Fee* - A 21% overhead and fee has been included on all new Subcontractor scopes of work as applicable.
8. *Design Contingency* – A design contingency has been included at 18% for this estimate.
9. *Construction Contingency* – No construction contingency has been included in this estimate.
10. *Escalation* - The material and labor cost in this estimate is subject to escalation. Escalation has been included at a rate of 2.5% per year to the mid-point of construction.
11. *Owner's Cost* – This estimate does not include right-of-way acquisition costs or cost to relocate existing underground utilities, specifically private utilities or sanitary sewer laterals.
12. *Owner's Cost* – This estimate does not include Design Cost, Professional Liability Insurance Cost, Construction Contingency, Owner's Supervision, Inspection & Overhead Cost (SIOH), or Tap Fees.

General Requirements

1. *General Conditions* – General Conditions cost have been included in this estimate, and are calculated at a rate of 10%.
2. *Safety* – This estimate assumes that the Project Superintendent will perform the duties of the on-site Safety Officer, and that an independent full time Safety Officer with no other duties is not a requirement of this project.
3. *Quality Control* – This estimate assumes that the project manager or superintendent will perform the duties of the on-site Quality Control Officer, and that an independent full time Quality Control Officer with no other duties is not a requirement of this project.
4. *Testing and Inspections* – An allowance for third party testing and inspections of construction materials, (ie., soils, concrete, masonry, steel), has been included in this estimate and has been calculated at 1% of construction cost.
5. *Construction Schedule* – This estimate and the general conditions cost for this estimates is based on an anticipated 9month construction schedule for each area of work. Assuming a total of 36 months for four phases of construction.

6. *Permits / Tap Fees* – This estimate assumes that all cost for impact and development fees, tap/water connection fees and any other fees assessed by City/State agencies are to be the responsibility of the Owner. The contractor will be responsible for obtaining and paying for the building permit, and all trade permits, licenses and fees for its work.

Demolition

1. *Building Demolition* – No building demolition cost are included.
2. *Site Demolition* – Site demolition is included for all hardscape within the project boundaries of the site

Sitework

1. *Site Demolition* – Site demolition has been included for the removal of existing trees, pavements, walks, and curbs within the boundaries of the project site.
2. *Earthwork* – Earthwork is limited to regrading subgrades to match design to elevations.
3. *Undercutting* – A 2' undercutting of unsuitable materials is included beneath proposed subgrade elevations. An allowance for disposal on contaminated materials has been included for up to 2000 cy.
4. *Site Utilities* – Site Utility costs are included for new and re-route of existing storm, sanitary, water, and gas.
5. *Hardscape* – Hardscape is included to the extent identified on drawings.
6. *Landscape* – Landscape is limited to new trees as indicated by drawings. No shrubs, ground cover, or lawns are included.
7. *Irrigation* – No Irrigation cost are included.

Site Furnishings

1. *Site Furnishings* – Site furnishings are included in quantities and as identified within the body of the estimate.

Site Electrical Lighting and Power to Parking Meters

1. *General-* The electrical site lighting estimate (section G4020) estimate is primarily based on document sheets E001, E101, E102, E103, E104, E105, E106, E107, E108 , and E501 by Rhodeside & Harwell (100% SD submission dated 16 FEB 2017).
2. *Electrical Distribution-* The estimate includes underground branch circuit conduit, trenching, and cabling for electric distribution to the street lights. Two exterior lighting control cabinets with panels and devices have been included per detail E501. An allowance has been included for underground branch circuits to electric parking meters TBD.
3. *Exterior Lighting-* The estimate includes the cost to furnish and install exterior LED site light fixtures, including poles with base; as scheduled per E-001.

Traffic Signalization

1. *Phase 1 & Phase 2* – The estimate includes allowances for complete traffic signalization, posts, lights, and controllers for the three following intersections with West Main Street: 7th Street NW/SW, Park Avenue, 4th Street NW, and at Ridge Street/South Street/Water Street.
2. *Phase 3 & Phase 4* – The estimate includes allowances for complete traffic signalization, posts, lights, and controllers for the three following intersections with West Main Street: Jefferson Park Avenue/13th Street NW, 11th Street SW, and 10th Street NW/Roosevelt Brown Blvd.

Estimate Qualification:

Consultant exercises no control over fluctuating market conditions. Consultant shall employ their best judgment in analyzing the subject project and assignments, however, Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from the opinions provided by Consultant from this or subsequent estimates



**West Main Street Corridor Improvements
Charlottesville, VA**

*ROM Estimate
for 100% SD Documents
Dated 2-16-17*

	SCOPE OF WORK	Phase 1 6th Street to Ridge/McIntire Road		Phase 2 Bridge to 6th Street		Phase 3 Roosevelt Brown Blvd to Bridge		Phase 4 Jefferson Park Ave to Roosevelt Brown Blvd		Total Phases 1-4 Jefferson Park Ave to Ridge/McIntire Road	
		935 LF of Road U/P	Amount	925 LF of Road U/P	Amount	1,045 LF of Road U/P	Amount	845 LF of Road U/P	Amount	3,750 LF of Road U/P	Amount
KSI	STREETSCAPE SURFACE IMPROVEMENTS	6,217.40	5,813,270	4,352.38	4,025,951	4,403.13	4,601,266	5,232.83	4,421,740	5,029.93	18,862,227
KSI	UTILITY WORK - (Storm)	148.00	138,377	132.11	122,200	169.74	177,374	131.30	110,945	146.37	548,896
Timmons	UNDERGROUNDING OVERHEAD UTILITIES	5,749.13	5,375,437	4,838.31	4,475,436	0.00	0	2,101.43	1,775,708	3,100.42	11,626,581
	SUBTOTAL (ECC)	12,115	11,327,084	9,323	8,623,586	4,573	4,778,640	7,466	6,308,393	8,277	31,037,703
Timmons	UTILITY WORK - (Routine Improvements)									820.27	3,076,000
	SUBTOTAL (ECC)										3,076,000
	TOTAL ESTIMATED CONTRACT COST (ECC)	12,115	11,327,084	9,323	8,623,586	4,573	4,778,640	7,466	6,308,393	9,097	34,113,703





West Main Street Corridor Improvements Charlottesville, VA

ROM Estimate
for 100% SD Documents
Dated 2-16-17

PROJECT PHASE & SECTOR		West Main Street Corridor Improvements									
		Phase 1 6th Street to Ridge/McEntire Rd		Phase 2 Bridge to 6th Street		Phase 3 Roosevelt Brown Blvd to Bridge		Phase 4 Jefferson Park Ave to Roosevelt Brown Blvd		Total Project Areas A & B	
		935 LF of Road		925 LF of Road		1,045 LF of Road		845 LF of Road		3,750 LF of Road	
SCOPE OF WORK		U/P	Amount	U/P	Amount	U/P	Amount	U/P	Amount	U/P	Amount
KSI	STREETScape SURFACE IMPROVEMENTS	4,132.72	3,864,095	2,839.73	2,626,754	2,820.35	2,947,266	3,290.46	2,780,442	3,258.28	12,218,556
KSI	UTILITY WORK - (Storm)	98.37	91,979	86.19	79,730	108.72	113,614	82.56	69,764	94.69	355,087
Timmons	UNDERGROUNDING OVERHEAD UTILITIES	3,821.46	3,573,066	3,156.78	2,920,023	0.00	0	1,321.40	1,116,586	2,029.25	7,609,675
	Subtotal Cost of Work (COW)	8,052.56	7,529,140	6,082.71	5,626,507	2,929.07	3,060,880	4,694.43	3,966,791	5,382.22	20,183,318
	General Conditions										
	General Conditions	10.00%	752,914	10.00%	562,651	10.00%	306,088	10.00%	396,679	10.00%	2,018,332
	Testing & Inspections	1.00%	75,291	1.00%	56,265	1.00%	30,609	1.00%	39,668	1.00%	201,833
	General Conditions		828,205		618,916		336,697		436,347		2,220,165
	Bonds / Insurance										
	- Performance & Payment Bond	1.05%	87,752	1.05%	65,577	1.05%	35,675	1.05%	46,233	1.05%	235,237
	- Builder's Risk Insurance	0.33%	27,869	0.33%	20,826	0.33%	11,330	0.33%	14,683	0.33%	74,708
	- General Liability Insurance	0.46%	38,976	0.46%	29,126	0.46%	15,845	0.46%	20,535	0.46%	104,482
	Bonds / Insurance		154,597		115,530		62,849		81,451		414,426
	Design Contingency	18.00%	1,532,150	18.00%	1,144,971	18.00%	622,877	18.00%	807,226	18.00%	4,107,224
	Overhead & Fee										
	Contractor's G&A	3.00%	301,323	3.00%	225,178	3.00%	122,499	3.00%	158,754	3.00%	807,754
	Contractor's FEE	5.00%	502,205	5.00%	375,296	5.00%	204,165	5.00%	264,591	5.00%	1,346,257
	Overhead & Fee		803,527		600,474		326,664		423,345		2,154,011
	Subtotal Cost of Work	11,602	10,847,619	8,764	8,106,398	4,220	4,409,967	6,764	5,715,160	7,754.44	29,079,144
	Construction Escalation										
	- Escalation at 2.5%/year:	4.42%	479,465	6.38%	517,188	8.36%	368,673	10.38%	593,234	6.74%	1,958,560
	Anticip. Mid Pt of Construction	1-Jan-19		1-Sep-19		1-Jun-20		1-Mar-21			
	Construction Escalation		479,465		517,188		368,673		593,234		1,958,560
	ESTIMATED CONTRACT COST (ECC)	12,115	\$11,327,084	9,323	\$8,623,586	4,573	\$4,778,640	7,466	\$6,308,393	8,277	\$31,037,703



**West Main Street Corridor Improvements
Charlottesville, VA**

**ROM Estimate
for 100% SD Documents
Dated 2-16-17**

PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
6th Street to Ridge/McEntire Road		935 LF of Road			
G	BUILDING SITEWORK			8,052.56	\$7,529,140
G10	Site Preparations			1,018.16	\$951,977
G1005	Project Set Up / Mobilization			195.78	\$183,050
	Mobilization			2.67	\$2,500
	Equipment Mobilization	1	LS	2,500.00	\$2,500
				0.00	\$0
	** End of Section **				
	Erosion / Sediment Control			37.70	\$35,250
	Erosion / Sedim. Control				
	- Silt Fence	3,500	LF	4.00	\$14,000
	- Inlet Protection	15	EA	250.00	\$3,750
	- Construction Entrance	5	EA	3,500.00	\$17,500
				0.00	\$0
	** End of Section **				
	Traffic Control			134.36	\$125,627
	Traffic Barricades				
	- Conc. Jersey Barriers, (500lf x 4loc x 4 mo/loc)	2,000	LF	10.04	\$20,086
	- Temp Chain Link Fencing	2,000	LF	5.00	\$10,000
	- Traffic Barrels	40	EA	8.53	\$341
	- Traffic Cones	250	EA	3.45	\$862
				0.00	\$0
	Flagmen - (2men x 4mo x 4 locat x 1/2 time)	2,768	MH	20.57	\$56,938
				0.00	\$0
	Pedest. Access to Active Businesses	1,870	LF	20.00	\$37,400
				0.00	\$0
	** End of Section **				
	Protect Existing Structures			21.04	\$19,673
	Protect Adjacent Buildings	4,000	SF	2.72	\$10,890
				0.00	\$0
	Protect Adjacent Structures			0.00	\$0
	- Fencing	468	LF	6.05	\$2,828
	- Planters	468	LF	8.17	\$3,818
	- Curbs/Sidewalks	468	LF	3.33	\$1,556
				0.00	\$0
	Protect Existing Trees to Remain	6	EA	96.80	\$581
				0.00	\$0
	** End of Section **				
G1020	Site Demolition and Relocations			371.80	\$347,628
	Tree Removal			16.04	\$15,000





**West Main Street Corridor Improvements
Charlottesville, VA**

**ROM Estimate
for 100% SD Documents
Dated 2-16-17**

PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Remove Existing Trees		10	EA	1,500.00	\$15,000
				0.00	\$0
** End of Section **					
Above Ground Site Demolition				221.69	\$207,276
Pavement Demo					
- Sawcut Existing Pavement		1,000	LF	5.00	\$5,000
- Demo Exist Asphalt Pavement		38,600	SF	0.92	\$35,497
- Demo Existing Walks (Brick/Conc)		33,023	SF	1.88	\$61,935
- Demo Exist Curb/Gutter		2,250	LF	3.33	\$7,487
- Disposal of Debris		1,710	CY	55.00	\$94,051
				0.00	\$0
Misc. Site Demo				0.00	\$0
- Demo Exist. Site Furnishings Allowance		50	EA	41.14	\$2,057
- Demo Exist. Signage Allowance		1	LS	1,250.00	\$1,250
				0.00	\$0
Total Sqft of Hard Surface Demo		71,623	sf	0.00	\$0
				0.00	\$0
** End of Section **					
Other Site Demolition & Relocations				134.07	\$125,352
Demo Buried Trolley Tracks		935	LF	26.62	\$24,890
Relocate Lewis & Clark Statue					
- Remove/Salvage Statue		1	EA	13,552.00	\$13,552
- Protect/Crate Statue		1	LS	1,936.00	\$1,936
- Dismantle/Salvage Stone Base		1	EA	6,776.00	\$6,776
- Protect/Crate Stone Base		1	LS	1,936.00	\$1,936
- Demo Foundations		1	EA	1,258.40	\$1,258
- New Foundations		1	LS	10,000.00	\$10,000
- Re-install Stone Base		1	EA	7,502.00	\$7,502
- Re-Install Statue		1	EA	7,502.00	\$7,502
- Misc. Repairs Allowance		1	LS	50,000.00	\$50,000
				0.00	\$0
** End of Section **					
G1030 Site Earthwork				450.59	\$421,299
Excavation / Grading				439.89	\$411,299
Undercut Unsuit. Materials					
- Excav. Unsuit Mtrls, at Asph Rds, 30" dpth		3,574	CY	4.24	\$15,136
- Excav. Unsuit Mtrls, at Walks, 30" dpth		3,058	CY	4.24	\$12,949
- Disposal of Materials, Off-Site		6,632	CY	20.00	\$132,635
- Place / Compact Select Fill, Import, 24" dpth		5,305	CY	39.14	\$207,672
- Fine Grade		71,623	SF	0.25	\$17,906





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	Contamin. Soils Disposal Allowance	500	CY	50.00	\$25,000
				0.00	\$0
	** End of Section **				
Temporary Dewatering				10.70	\$10,000
	Localized Dewatering	1	LS	10,000.00	\$10,000
				0.00	\$0
	** End of Section **				
G20	Site Improvements			2,152.79	\$2,012,856
G2010	Roadways			387.02	\$361,865
	Curbs & Gutters			34.94	\$32,670
	Concrete Curb / Gutter at Roads	2,250	LF	14.52	\$32,670
				0.00	\$0
	** End of Section **				
Paved Surfaces				295.11	\$275,930
	New Asphalt Pavement	38,600	SF		
	- 2" VDOT SM-12.5D, Surface Course	476	TN	103.82	\$49,391
	- 2" VDOT IM-19.0A, Intermediate Course	476	TN	96.80	\$46,052
	- 3" VDOT BM-25.0A, Base Course	700	TN	89.78	\$62,814
	- 8" VDOT 21B, Aggregate Base	4,289	CY	8.83	\$37,884
	- Mobilization Charges	15	EA	3,000.00	\$45,000
	Asph Pvmnt Tie-In at Exist. Roads				
	- Mill Exist Asphalt Paving	10,000	SF	2.00	\$20,000
	- 2" Asphalt Surface Cours Overlay at Tie In	123	TN	120.00	\$14,790
	** End of Section **				
Marking & Signage				56.97	\$53,265
	Traffic Markings (Thermo Plastic)				
	- 4" Single White Line (Solid and Striped)	528	LF	1.50	\$792
	- 6" Single White Line (Solid and Striped)	3,455	LF	2.00	\$6,910
	- 4" Double Yellow Solid Lines	1,047	LF	3.00	\$3,141
	- 24" Solid White Line (Stop Bar)	374	LF	8.00	\$2,992
	- 24" Solid Yellow Line (Goring)	100	LF	8.00	\$800
	- Arrow Symbol	8	EA	250.00	\$2,000
	- Bike Lane Symbol		EA	0.00	\$0
	Bike Lane Special Coating (Green Bike Boxes only)	2,442	SF	15.00	\$36,630
	** End of Section **				
G2030	Pedestrian Paving			535.86	\$501,028





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Paved Surfaces				533.19	\$498,528
PCC-1 PC Concrete Pavers					
- 3" x 12" x 2-1/4" PC Paver	20,300	SF	10.41	\$211,242	
- 1" Unilock Chip Stone Setting Bed	20,300	SF	1.00	\$20,300	
- 4" Reinf. Concrete Slab	20,300	SF	4.00	\$81,200	
- 4" Aggregate Base	2,256	SY	5.13	\$11,572	
- Perimeter Slab Turn Down/Up	1,575	LF	15.00	\$23,625	
- Thickened Slab Adjacent to PAV-1	340	LF	10.00	\$3,400	
- Thkd Slab at Perim. Of Tree Grates, A	176	LF	10.00	\$1,760	
- Thkd Slab at Perim. Of Tree Grates, B	528	LF	10.00	\$5,280	
			0.00	\$0	
PCC-1 PC Concrete Pavers at Raised Cross Walks			0.00	\$0	
- 3" x 12" x 2-1/4" PC Paver	500	SF	10.41	\$5,203	
- 1" Unilock Chip Stone Setting Bed	500	SF	1.00	\$500	
- 5" Reinf. Concrete Slab	500	SF	5.00	\$2,500	
- 4" Aggregate Base	56	SY	5.13	\$285	
- 2'5" Wide x 8" Thick Conc Transition Strips	288	SF	10.00	\$2,880	
			0.00	\$0	
PCC-2 PC Concrete Pavers			0.00	\$0	
- 3" x 12" x 4" PC Paver (Herringbone Pattern)	980	SF	15.97	\$15,653	
- 1" Unilock Chip Stone Setting Bed	980	SF	1.00	\$980	
- 6" Reinf. Concrete Slab	980	SF	6.00	\$5,880	
- 4" Aggregate Base	109	SY	5.13	\$559	
- Perimeter Slab Turn Down/Up	140	LF	15.00	\$2,100	
- Concrete Transition Strips	700	SF	10.00	\$7,000	
			0.00	\$0	
Concrete HC Ramps	900	SF	20.00	\$18,000	
			0.00	\$0	
Misc. Concrete Pavements / Infills	340	SF	10.00	\$3,400	
			0.00	\$0	
Concrete Sidewalk	3,500	SF	6.00	\$21,000	
			0.00	\$0	
PAV-1, Resin Bound Aggregate Surfacing			0.00	\$0	
- Decomposed Granite Surfacing, Resin Bound	4,500	SF	10.00	\$45,000	
- Geotextile Filter Fabric	5,400	SF	1.23	\$6,645	
- 4" Aggregate Base	500	SY	5.13	\$2,565	
Total Sqft of New Pedest. Paving	33,023	sf			
** End of Section **					
Other Walks, Steps & Terraces				2.67	\$2,500
Misc. Repairs at Steps / Ret. Walls	1	LS	2,500.00	\$2,500	
			0.00	\$0	





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
** End of Section **					
G2040	Site Development			529.82	\$495,384
	Exterior Furnishings			310.29	\$290,125
	Site Benches				
	- Bench Type A, BTA (Single)		EA	0.00	\$0
	- Bench Type A, BTA ("Z" Pattern, Triple)	1	EA	8,167.50	\$8,168
	- Bench Type B, BTB		EA	0.00	\$0
	- Bench Type C, BTC		EA	0.00	\$0
	- Bench Type D, BTD	6	EA	1,512.50	\$9,075
	- Bench Type E, BTE	7	EA	8,228.00	\$57,596
				0.00	\$0
	Bicycle Rack, Type A, CTA	5	EA	726.00	\$3,630
				0.00	\$0
	Litter Receptacle, Type A, LTA	3	EA	2,934.25	\$8,803
				0.00	\$0
	Planter, Type A, PTA	7	EA	5,033.60	\$35,235
				0.00	\$0
	Site Tables			0.00	\$0
	- Table Type A, TTA		EA	0.00	\$0
	- Table Type B, TTB w/Sgl Chair	1	EA	1,324.95	\$1,325
	- Table Type B, TTB w/(2ea) Chairs	8	EA	1,712.15	\$13,697
	- Table Type B, TTB w/(3ea) Chairs	6	EA	2,099.35	\$12,596
				0.00	\$0
	Bus Shelters	2	EA	60,000.00	\$120,000
	- Foundations	4	EA	5,000.00	\$20,000
				0.00	\$0
** End of Section **					
	Signage			219.53	\$205,259
	Street Signage				
	- Post / Footing	29	EA	90.75	\$2,632
	- Pedestrian Sign	4	EA	43.86	\$175
	- Directional Arrow	5	EA	37.81	\$189
	- No Parking Sign	11	EA	55.96	\$616
	- Tow Away Zone Sign	11	EA	25.71	\$283
	- Emergency Snow Route Sign	17	EA	25.71	\$437
	- One Way Sign		EA	0.00	\$0
	- Bike Lane Sign	8	EA	62.01	\$496
	- Stop Sign	2	EA	43.86	\$88
	- 2 Hour Parking Sign	4	EA	37.81	\$151
	- Dead End Sign		EA	0.00	\$0
	- To I-64 Sign	1	EA	68.06	\$68
	- Reserved Parking Sign	2	EA	31.76	\$64
	- Do Not Enter Sign	2	EA	55.96	\$112





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
	- Begin Turning Sign	2	EA	98.31	\$197
	- Rt Lane Must Turn Right Sign	2	EA	74.11	\$148
	Site Signage Allowances				
	- Custom Concrete Topographical Map	1	EA	35,000.00	\$35,000
	- Community Board / Way Finding		EA	0.00	\$0
	- Corner Markers	2	EA	23,000.00	\$46,000
	- Transit Interpretation at Bus Stop	2	EA	15,000.00	\$30,000
	- Commemorative Walk at Bridge		EA	0.00	\$0
	- Memory Markers	168	EA	328.00	\$55,104
	- Art Panel	1	EA	30,000.00	\$30,000
	- Remembrance Quotes	10	EA	350.00	\$3,500
				0.00	\$0
	** End of Section **				
G2050	Landscaping			700.08	\$654,578
	Plantings			78.22	\$73,140
	Traditional Shade Trees				
	- TMD	14	EA	500.00	\$7,000
	- TSM	2	EA	350.00	\$700
	- TLG	1	EA	800.00	\$800
				0.00	\$0
	Silva Cell Shade Trees			0.00	\$0
	- TMD	4	EA	500.00	\$2,000
	- TSM	3	EA	350.00	\$1,050
	- TLG	13	EA	800.00	\$10,400
				0.00	\$0
	Plantings			0.00	\$0
	- Small	19	EA	25.00	\$475
	- Medium	9	EA	35.00	\$315
	- Large	3	EA	50.00	\$150
				0.00	\$0
	Landscape Boulders	60	EA	800.00	\$48,000
	Ornamental Grasses	1,125	SF	2.00	\$2,250
				0.00	\$0
	** End of Section **				
	Planters			621.86	\$581,438
	Silva Cell Tree Pits, (11 count cluster)	2	EA		
	- Excavation	70.1	CY	9.68	\$678
	- Geotextile Fabric at Bott of Excav	2,244.0	SF	1.92	\$4,304
	- Aggregate Subbase, 4"	8.6	CY	34.97	\$301
	- #8, #89 Stone Choker Layer, 2"	4.3	CY	41.75	\$180
	- Sand Choker Layer, 2"	4.3	CY	47.80	\$206
	- 2x Silva Cells	22	EA	219.31	\$4,825





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PH 1 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier	880	SF	7.56	\$6,655
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	34.2	CY	54.45	\$1,863
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	88.0	LF	12.00	\$1,056
- Overflow Riser	2	EA	121.00	\$242
- 4" Distributer Pipe	30.0	LF	10.00	\$300
- Misc. Backfill	14.7	CY	23.60	\$346
- Haul Off Surplus Materials	66.8	CY	20.00	\$1,336
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (17 count cluster)	1	EA		
- Excavation	27.1	CY	9.68	\$262
- Geotextile Fabric at Bott of Excav	867.0	SF	1.92	\$1,663
- Aggregate Subbase, 4"	3.3	CY	34.97	\$116
- #8, #89 Stone Choker Layer, 2"	1.7	CY	41.75	\$69
- Sand Choker Layer, 2"	1.7	CY	47.80	\$79
- 2x Silva Cells	17	EA	219.31	\$3,728
- Root Barrier	340	SF	7.56	\$2,571
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	13.2	CY	54.45	\$720
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	68.0	LF	12.00	\$816
- Overflow Riser	2	EA	121.00	\$182
- 4" Distributer Pipe	22.5	LF	10.00	\$225
- Misc. Backfill	5.7	CY	23.60	\$134
- Haul Off Surplus Materials	25.8	CY	20.00	\$516
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (18 count cluster)	1	EA		
- Excavation	28.7	CY	9.68	\$277
- Geotextile Fabric at Bott of Excav	918.0	SF	1.92	\$1,761
- Aggregate Subbase, 4"	3.5	CY	34.97	\$123
- #8, #89 Stone Choker Layer, 2"	1.8	CY	41.75	\$73
- Sand Choker Layer, 2"	1.8	CY	47.80	\$84
- 2x Silva Cells	18	EA	219.31	\$3,948
- Root Barrier	360	SF	7.56	\$2,723
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	14.0	CY	54.45	\$762
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	72.0	LF	12.00	\$864
- Overflow Riser	2	EA	121.00	\$194
- 4" Distributer Pipe	24.0	LF	10.00	\$240
- Misc. Backfill	6.0	CY	23.60	\$142
- Haul Off Surplus Materials	27.3	CY	20.00	\$547





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PH 1 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (20 count cluster)	5	EA		
- Excavation	796.3	CY	9.68	\$7,708
- Geotextile Fabric at Bott of Excav	25,500.0	SF	1.92	\$48,905
- Aggregate Subbase, 4"	97.8	CY	34.97	\$3,419
- #8, #89 Stone Choker Layer, 2"	48.9	CY	41.75	\$2,041
- Sand Choker Layer, 2"	48.9	CY	47.80	\$2,337
- 2x Silva Cells	100	EA	219.31	\$21,931
- Root Barrier	10,000	SF	7.56	\$75,625
- Compacted Fill Beneath Tree	10.4	CY	23.60	\$245
- Planting Soil	388.9	CY	54.45	\$21,175
- Washed River Rock over Root Ball	1.0	CY	41.75	\$42
- 6" Under Drain	400.0	LF	12.00	\$4,800
- Overflow Riser	9	EA	121.00	\$1,101
- 4" Distributer Pipe	136.5	LF	10.00	\$1,365
- Misc. Backfill	166.7	CY	23.60	\$3,933
- Haul Off Surplus Materials	759.3	CY	20.00	\$15,185
- Tree Grates	160.0	SF	98.31	\$15,730
			0.00	\$0
Silva Cell Tree Pits, (21 count cluster)	1	EA		
- Excavation	33.4	CY	9.68	\$324
- Geotextile Fabric at Bott of Excav	1,071.0	SF	1.92	\$2,054
- Aggregate Subbase, 4"	4.1	CY	34.97	\$144
- #8, #89 Stone Choker Layer, 2"	2.1	CY	41.75	\$86
- Sand Choker Layer, 2"	2.1	CY	47.80	\$98
- 2x Silva Cells	21	EA	219.31	\$4,606
- Root Barrier	420	SF	7.56	\$3,176
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	16.3	CY	54.45	\$889
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	84.0	LF	12.00	\$1,008
- Overflow Riser	2	EA	121.00	\$230
- 4" Distributer Pipe	28.5	LF	10.00	\$285
- Misc. Backfill	7.0	CY	23.60	\$165
- Haul Off Surplus Materials	31.9	CY	20.00	\$638
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (22 count cluster)	3	EA		
- Excavation	315.3	CY	9.68	\$3,052
- Geotextile Fabric at Bott of Excav	10,098.0	SF	1.92	\$19,366
- Aggregate Subbase, 4"	38.7	CY	34.97	\$1,354
- #8, #89 Stone Choker Layer, 2"	19.4	CY	41.75	\$808
- Sand Choker Layer, 2"	19.4	CY	47.80	\$925
- 2x Silva Cells	66	EA	219.31	\$14,475





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PH 1 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier	3,960	SF	7.56	\$29,948
- Compacted Fill Beneath Tree	6.2	CY	23.60	\$147
- Planting Soil	154.0	CY	54.45	\$8,385
- Washed River Rock over Root Ball	0.6	CY	41.75	\$25
- 6" Under Drain	264.0	LF	12.00	\$3,168
- Overflow Riser	6	EA	121.00	\$726
- 4" Distributer Pipe	90.0	LF	10.00	\$900
- Misc. Backfill	66.0	CY	23.60	\$1,557
- Haul Off Surplus Materials	300.7	CY	20.00	\$6,013
- Tree Grates	96.0	SF	98.31	\$9,438
			0.00	\$0
Silva Cell Tree Pits, (24 count cluster)	1	EA		
- Excavation	38.2	CY	9.68	\$370
- Geotextile Fabric at Bott of Excav	1,224.0	SF	1.92	\$2,347
- Aggregate Subbase, 4"	4.7	CY	34.97	\$164
- #8, #89 Stone Choker Layer, 2"	2.3	CY	41.75	\$98
- Sand Choker Layer, 2"	2.3	CY	47.80	\$112
- 2x Silva Cells	24	EA	219.31	\$5,264
- Root Barrier	480	SF	7.56	\$3,630
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	18.7	CY	54.45	\$1,016
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	96.0	LF	12.00	\$1,152
- Overflow Riser	2	EA	121.00	\$266
- 4" Distributer Pipe	33.0	LF	10.00	\$330
- Misc. Backfill	8.0	CY	23.60	\$189
- Haul Off Surplus Materials	36.4	CY	20.00	\$729
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (25 count cluster)	2	EA		
- Excavation	159.3	CY	9.68	\$1,542
- Geotextile Fabric at Bott of Excav	5,100.0	SF	1.92	\$9,781
- Aggregate Subbase, 4"	19.6	CY	34.97	\$684
- #8, #89 Stone Choker Layer, 2"	9.8	CY	41.75	\$408
- Sand Choker Layer, 2"	9.8	CY	47.80	\$467
- 2x Silva Cells	50	EA	219.31	\$10,966
- Root Barrier	2,000	SF	7.56	\$15,125
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	77.8	CY	54.45	\$4,235
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	200.0	LF	12.00	\$2,400
- Overflow Riser	5	EA	121.00	\$545
- 4" Distributer Pipe	67.5	LF	10.00	\$675
- Misc. Backfill	33.3	CY	23.60	\$787
- Haul Off Surplus Materials	151.9	CY	20.00	\$3,037



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PH 1 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (28 count cluster)	1	EA		
- Excavation	44.6	CY	9.68	\$432
- Geotextile Fabric at Bott of Excav	1,428.0	SF	1.92	\$2,739
- Aggregate Subbase, 4"	5.5	CY	34.97	\$191
- #8, #89 Stone Choker Layer, 2"	2.7	CY	41.75	\$114
- Sand Choker Layer, 2"	2.7	CY	47.80	\$131
- 2x Silva Cells	28	EA	219.31	\$6,141
- Root Barrier	560	SF	7.56	\$4,235
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	21.8	CY	54.45	\$1,186
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	112.0	LF	12.00	\$1,344
- Overflow Riser	3	EA	121.00	\$303
- 4" Distributer Pipe	37.5	LF	10.00	\$375
- Misc. Backfill	9.3	CY	23.60	\$220
- Haul Off Surplus Materials	42.5	CY	20.00	\$850
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (30 count cluster)	1	EA		
- Excavation	47.8	CY	9.68	\$462
- Geotextile Fabric at Bott of Excav	1,530.0	SF	1.92	\$2,934
- Aggregate Subbase, 4"	5.9	CY	34.97	\$205
- #8, #89 Stone Choker Layer, 2"	2.9	CY	41.75	\$122
- Sand Choker Layer, 2"	2.9	CY	47.80	\$140
- 2x Silva Cells	30	EA	219.31	\$6,579
- Root Barrier	600	SF	7.56	\$4,538
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	23.3	CY	54.45	\$1,271
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	120.0	LF	12.00	\$1,440
- Overflow Riser	3	EA	121.00	\$327
- 4" Distributer Pipe	40.5	LF	10.00	\$405
- Misc. Backfill	10.0	CY	23.60	\$236
- Haul Off Surplus Materials	45.6	CY	20.00	\$911
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (34 count cluster)	1	EA		
- Excavation	54.1	CY	9.68	\$524
- Geotextile Fabric at Bott of Excav	1,734.0	SF	1.92	\$3,326
- Aggregate Subbase, 4"	6.6	CY	34.97	\$233
- #8, #89 Stone Choker Layer, 2"	3.3	CY	41.75	\$139
- Sand Choker Layer, 2"	3.3	CY	47.80	\$159
- 2x Silva Cells	34	EA	219.31	\$7,457





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier		680	SF	7.56	\$5,143
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		26.4	CY	54.45	\$1,440
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		136.0	LF	12.00	\$1,632
- Overflow Riser		3	EA	121.00	\$375
- 4" Distributer Pipe		46.5	LF	10.00	\$465
- Misc. Backfill		11.3	CY	23.60	\$267
- Haul Off Surplus Materials		51.6	CY	20.00	\$1,033
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Total Silva Cell Tree Pit Clusters		19	EA	0.00	\$0
				0.00	\$0
Typical Tree Planter		11	EA	0.00	\$0
- Excavation		26	CY	9.68	\$252
- Geotextile Fabric at Bott of Excav		220	SF	1.23	\$271
- Root Barrier		704	SF	7.56	\$5,324
- Planting Soil		26	CY	54.45	\$1,420
- Tree Grates		176	SF	158.81	\$27,951
				0.00	\$0
** End of Section **					
Irrigation Systems				0.00	\$0
Irrigation Systems Allowance - None				0.00	\$0
				0.00	\$0
** End of Section **					
G30 Site Civil / Mechanical Utilities				98.37	\$91,979.47
G3020 Sanitary Sewer				6.42	\$6,000
Sanitary Sewer Piping				6.42	\$6,000
Sanitary Sewer Modifications Allowance					
Adjust Sanit Sewer MH to Grade		1	LS	6,000.00	\$6,000
(from prev estimate)					
** End of Section **					
G3030 Storm Sewer				91.96	\$85,979
Storm Sewer				79.82	\$74,636
New Storm Sewer					
- Excavation		342	CY	6.53	\$2,236
- Trench Box		1	LS	5,000.00	\$5,000
- Pipe Bedding		57	CY	36.91	\$2,105
- 15" Storm Pipe		260	LF	40.54	\$10,539
- 18" Storm Pipe			LF	0.00	\$0
- 24" Storm Pipe		125	LF	59.29	\$7,411
- Curb Inlets		5	EA	3,000.80	\$15,004





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PH 1 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Manholes Complete		7	EA	4,259.20	\$29,814
- Backfill		342	CY	7.38	\$2,526
				0.00	\$0
** End of Section **					
Other Storm Sewer				12.13	\$11,344
Remove Existing Storm Sewer (Assume similar quantities as new)					
- Excavate / Remove Existing Pipe		385	LF	18.15	\$6,988
- Demo/Remove Existing Structures		12	EA	363.00	\$4,356
** End of Section **					
G40 Site Electrical Utilities				4,783.24	\$4,472,327.37
G4010 Undergrounding Overhead Utilities				3,821.46	\$3,573,066
Undergrounding Overhead Utilities				3,821.46	\$3,573,066
Timmons Duct Bank Estimate (See Timmons Detailed Backup)					
Dominion Virginia Power Undergrounding Infrast.		1	LS	2,906,272.00	\$2,906,272
Comcast Undergrounding Infrastructure		1	LS	208,117.00	\$208,117
Lumos Undergrounding Infrastructure		1	LS	267,477.00	\$267,477
Century Link Undergrounding Infrastructure		1	LS	191,200.00	\$191,200
				0.00	\$0
** End of Section **					
G4020 Site Lighting				300.81	\$281,261
Exterior Lighting Fixtures & Controls				300.81	\$281,261
Power conduit/wire for parking meters/spare- allow		2,200	LF	16.17	\$35,574
Lighting Control Cabinet Assembly LP-B					
- Lighting panel 120/240v		1	EA	3,291.20	\$3,291
- Fused safety switch 200a		1	EA	1,306.80	\$1,307
- NEMA 4 Cabinet 72x31x24		1	EA	2,613.60	\$2,614
- Meter socket		1	EA	1,125.30	\$1,125
- Duplex WP		1	EA	151.25	\$151
- Telephone jack		1	EA	127.05	\$127
- Photo cell		1	EA	580.80	\$581
- Ground rod 10'		1	EA	580.80	\$581
- PVC conduit stub outs		40	LF	21.78	\$871
- Concrete pad 43"x36"x30"		1	LS	919.60	\$920
- Anchor bolts		4	EA	84.70	\$339
Site Lighting					
- Remove existing fixtures, poles, base- allow		30	EA	344.85	\$10,346
- Light fixture, type KX1, 115w LED, dual head/arm		25	EA	2,289.32	\$57,233
- Light fixture, type KX1a, 130w LED, dual head/arm		8	EA	2,474.45	\$19,796





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- Light fixture, type KX1b, 65w LED, single head/arm		2	EA	1,357.62	\$2,715
- Light fixture pole, aluminum, 18'		35	EA	1,252.35	\$43,832
- Lighting pole bases		35	EA	1,167.65	\$40,868
- Lighting conduit, 1"		5,090	LF	4.21	\$21,435
- Lighting wire #6		10,180	LF	1.91	\$19,487
- Lighting wire gnd #10		5,090	LF	0.89	\$4,521
- Trenching/backfill		5,090	LF	2.66	\$13,550
				0.00	\$0
** End of Section **					
G4090	Other Site Electrical Utilities			660.96	\$618,000
	Signalization			660.96	\$618,000
Remove Exist. Traffic Signalization - Phase 1		2	EA	5,000.00	\$10,000
New Traffic Signalization. - (@4th 4 dir.)		1	EA	248,000.00	\$248,000
New Traffic Signalization. - (@7th 4 dir.)			PH2	0.00	\$0
New Traffic Signalization - (@Ridge 5 dir.)		1	EA	310,000.00	\$310,000
New Pedestrian Signalization - Phase 1		2	EA	25,000.00	\$50,000
				0.00	\$0
** End of Section **					
Subtotal - Building & Site				8,052.56	\$7,529,140





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Bridge to 6th Street		925 LF of Road			
G	BUILDING SITEWORK			6,082.71	\$5,626,507
G10	Site Preparations			777.17	\$718,881
G1005	Project Set Up / Mobilization			197.36	\$182,562
	Mobilization			2.70	\$2,500
	Equipment Mobilization	1	LS	2,500.00	\$2,500
				0.00	\$0
	** End of Section **				
Erosion / Sediment Control				38.11	\$35,250
	Erosion / Sedim. Control				
	- Silt Fence	3,500	LF	4.00	\$14,000
	- Inlet Protection	15	EA	250.00	\$3,750
	- Construction Entrance	5	EA	3,500.00	\$17,500
				0.00	\$0
	** End of Section **				
Traffic Control				135.38	\$125,227
	Traffic Barricades				
	- Conc. Jersey Barriers, (500lf x 4loc x 4 mo/loc)	2,000	LF	10.04	\$20,086
	- Temp Chain Link Fencing	2,000	LF	5.00	\$10,000
	- Traffic Barrels	40	EA	8.53	\$341
	- Traffic Cones	250	EA	3.45	\$862
				0.00	\$0
	Flagmen - (2men x 4mo x 4 locat x 1/2 time)	2,768	MH	20.57	\$56,938
				0.00	\$0
	Pedest. Access to Active Businesses	1,850	LF	20.00	\$37,000
				0.00	\$0
	** End of Section **				
Protect Existing Structures				21.17	\$19,585
	Protect Adjacent Buildings	4,000	SF	2.72	\$10,890
				0.00	\$0
	Protect Adjacent Structures			0.00	\$0
	- Fencing	463	LF	6.05	\$2,798
	- Planters	463	LF	8.17	\$3,777
	- Curbs/Sidewalks	463	LF	3.33	\$1,539
				0.00	\$0
	Protect Existing Trees to Remain	6	EA	96.80	\$581
				0.00	\$0
	** End of Section **				
G1020	Site Demolition and Relocations			216.97	\$200,695
	Tree Removal			16.22	\$15,000





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
	Remove Existing Trees	10	EA	1,500.00	\$15,000
				0.00	\$0
	** End of Section **				
Above Ground Site Demolition				174.13	\$161,072
	Pavement Demo				
	- Sawcut Existing Pavement	1,000	LF	5.00	\$5,000
	- Demo Exist Asphalt Pavement	33,000	SF	0.92	\$30,347
	- Demo Existing Walks (Brick/Conc)	22,738	SF	1.88	\$42,645
	- Demo Exist Curb/Gutter	1,915	LF	3.33	\$6,372
	- Disposal of Debris	1,335	CY	55.00	\$73,401
				0.00	\$0
	Misc. Site Demo			0.00	\$0
	- Demo Exist. Site Furnishings Allowance	50	EA	41.14	\$2,057
	- Demo Exist. Signage Allowance	1	LS	1,250.00	\$1,250
				0.00	\$0
	Total Sqft of Hard Surface Demo	55,738	sf	0.00	\$0
				0.00	\$0
	** End of Section **				
Other Site Demolition & Relocations				26.62	\$24,624
	Demo Buried Trolley Tracks	925	LF	26.62	\$24,624
				0.00	\$0
	** End of Section **				
G1030	Site Earthwork			362.84	\$335,623
	Excavation / Grading			352.02	\$325,623
	Undercut Unsuit. Materials				
	- Excav. Unsuit Mtrls, at Asph Rds, 30" dpth	3,056	CY	4.24	\$12,940
	- Excav. Unsuit Mtrls, at Walks, 30" dpth	2,105	CY	4.24	\$8,916
	- Disposal of Materials, Off-Site	5,161	CY	20.00	\$103,219
	- Place / Compact Select Fill, Import, 24" dpth	4,129	CY	39.14	\$161,613
	- Fine Grade	55,738	SF	0.25	\$13,935
				0.00	\$0
	Contamin. Soils Disposal Allowance	500	CY	50.00	\$25,000
				0.00	\$0
	** End of Section **				
Temporary Dewatering				10.81	\$10,000
	Localized Dewatering	1	LS	10,000.00	\$10,000
				0.00	\$0
	** End of Section **				
G20	Site Improvements			1,468.50	\$1,358,361
G2010	Roadways			318.60	\$294,709





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Curbs & Gutters				30.06	\$27,806
Concrete Curb / Gutter at Roads		1,915	LF	14.52	\$27,806
				0.00	\$0
** End of Section **					
Paved Surfaces				267.54	\$247,475
New Asphalt Pavement		33,000	SF		
- 2" VDOT SM-12.5D, Surface Course		407	TN	103.82	\$42,225
- 2" VDOT IM-19.0A, Intermediate Course		407	TN	96.80	\$39,371
- 3" VDOT BM-25.0A, Base Course		598	TN	89.78	\$53,701
- 8" VDOT 21B, Aggregate Base		3,667	CY	8.83	\$32,388
- Mobilization Charges		15	EA	3,000.00	\$45,000
Asph Pvmt Tie-In at Exist. Roads					
- Mill Exist Asphalt Paving		10,000	SF	2.00	\$20,000
- 2" Asphalt Surface Cours Overlay at Tie In		123	TN	120.00	\$14,790
** End of Section **					
Marking & Signage				21.00	\$19,429
Traffic Markings (Thermo Plastic)					
- 4" Single White Line (Solid and Striped)		169	LF	1.50	\$254
- 6" Single White Line (Solid and Striped)		2,990	LF	2.00	\$5,980
- 4" Double Yellow Solid Lines		1,805	LF	3.00	\$5,415
- 24" Solid White Line (Stop Bar)		35	LF	8.00	\$280
- 24" Solid Yellow Line (Goring)			LF	0.00	\$0
- Arrow Symbol			EA	0.00	\$0
- Bike Lane Symbol			EA	0.00	\$0
Bike Lane Special Coating (Green Bike Boxes only)		500	SF	15.00	\$7,500
** End of Section **					
G2030 Pedestrian Paving				411.67	\$380,793
Paved Surfaces				411.67	\$380,793
PCC-1 PC Concrete Pavers					
- 3" x 12" x 2-1/4" PC Paver		18,600	SF	10.41	\$193,552
- 1" Unilock Chip Stone Setting Bed		18,600	SF	1.00	\$18,600
- 4" Reinf. Concrete Slab		18,600	SF	4.00	\$74,400
- 4" Aggregate Base		2,067	SY	5.13	\$10,603
- Perimeter Slab Turn Down/Up		1,650	LF	15.00	\$24,750
- Thickened Slab Adjacent to PAV-1			LF	0.00	\$0
- Thkd Slab at Perim. Of Tree Grates, A		256	LF	10.00	\$2,560
- Thkd Slab at Perim. Of Tree Grates, B		600	LF	10.00	\$6,000





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	PCC-1 PC Concrete Pavers at Raised Cross Walks			0.00	\$0
	- 3" x 12" x 2-1/4" PC Paver	700	SF	10.41	\$7,284
	- 1" Unilock Chip Stone Setting Bed	700	SF	1.00	\$700
	- 5" Reinf. Concrete Slab	700	SF	5.00	\$3,500
	- 4" Aggregate Base	78	SY	5.13	\$399
	- 2'5" Wide x 8" Thick Conc Transition Strips	288	SF	10.00	\$2,880
				0.00	\$0
	PCC-2 PC Concrete Pavers			0.00	\$0
	- 3" x 12" x 4" PC Paver (Herringbone Pattern)	710	SF	15.97	\$11,340
	- 1" Unilock Chip Stone Setting Bed	710	SF	1.00	\$710
	- 6" Reinf. Concrete Slab	710	SF	6.00	\$4,260
	- 4" Aggregate Base	79	SY	5.13	\$405
	- Perimeter Slab Turn Down/Up	90	LF	15.00	\$1,350
	- Concrete Transition Strips	750	SF	10.00	\$7,500
				0.00	\$0
	Concrete HC Ramps	300	SF	20.00	\$6,000
				0.00	\$0
	Misc. Concrete Pavements / Infills	400	SF	10.00	\$4,000
				0.00	\$0
	Total Sqft of New Pedest. Paving	22,738	sf		
	** End of Section **				
	Other Walks, Steps & Terraces			0.00	\$0
	Misc. Repairs at Steps / Ret. Walls - Area B		LS	0.00	\$0
				0.00	\$0
	** End of Section **				
G2040	Site Development			328.71	\$304,060
	Exterior Furnishings			230.36	\$213,080
	Site Benches				
	- Bench Type A, BTA (Single)	2	EA	2,722.50	\$5,445
	- Bench Type A, BTA ("Z" Pattern, Triple)	2	EA	8,167.50	\$16,335
	- Bench Type B, BTB		EA	0.00	\$0
	- Bench Type C, BTC	16	EA	2,178.00	\$34,848
	- Bench Type D, BTD	3	EA	1,512.50	\$4,538
	- Bench Type E, BTE	2	EA	8,228.00	\$16,456
				0.00	\$0
	Bicycle Rack, Type A, CTA	5	EA	726.00	\$3,630
				0.00	\$0
	Litter Receptacle, Type A, LTA	3	EA	2,934.25	\$8,803
				0.00	\$0
	Planter, Type A, PTA	8	EA	5,033.60	\$40,269





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	Site Tables			0.00	\$0
	- Table Type A, TTA	4	EA	2,299.00	\$9,196
	- Table Type B, TTB w/Sgl Chair		EA	0.00	\$0
	- Table Type B, TTB w/(2ea) Chairs	5	EA	1,712.15	\$8,561
	- Table Type B, TTB w/(3ea) Chairs		EA	0.00	\$0
				0.00	\$0
	Bus Shelters	1	EA	60,000.00	\$60,000
	- Foundations	1	EA	5,000.00	\$5,000
				0.00	\$0
	** End of Section **				
	Signage			98.36	\$90,981
	Street Signage				
	- Post / Footing	26	EA	90.75	\$2,360
	- Pedestrian Sign	6	EA	43.86	\$263
	- Directional Arrow	6	EA	37.81	\$227
	- No Parking Sign	12	EA	55.96	\$672
	- Tow Away Zone Sign	14	EA	25.71	\$360
	- Emergency Snow Route Sign	19	EA	25.71	\$489
	- One Way Sign	1	EA	31.76	\$32
	- Bike Lane Sign	4	EA	62.01	\$248
	- Stop Sign	1	EA	43.86	\$44
	- 2 Hour Parking Sign	4	EA	37.81	\$151
	- Dead End Sign		EA	0.00	\$0
	- To I-64 Sign	2	EA	68.06	\$136
	- Reserved Parking Sign		EA	0.00	\$0
	- Do Not Enter Sign		EA	0.00	\$0
	- Begin Turning Sign		EA	0.00	\$0
	- Rt Lane Must Turn Right Sign		EA	0.00	\$0
	Site Signage Allowances				
	- Custom Concrete Topographical Map		EA	0.00	\$0
	- Community Board / Way Finding	1	EA	25,000.00	\$25,000
	- Corner Markers	2	EA	23,000.00	\$46,000
	- Transit Interpretation at Bus Stop	1	EA	15,000.00	\$15,000
	- Commemorative Walk at Bridge		EA	0.00	\$0
				0.00	\$0
	** End of Section **				
G2050	Landscaping			409.51	\$378,799
	Plantings			23.35	\$21,600
	Traditional Shade Trees				
	- TMD	2	EA	500.00	\$1,000
	- TSM	2	EA	350.00	\$700





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- TLG		13	EA	800.00	\$10,400
				0.00	\$0
Silva Cell Shade Trees				0.00	\$0
- TMD		12	EA	500.00	\$6,000
- TSM		10	EA	350.00	\$3,500
- TLG			EA	0.00	\$0
				0.00	\$0
				0.00	\$0
** End of Section **					
Planters				386.16	\$357,199
Silva Cell Tree Pits, (7 count cluster)					
		1	EA		
- Excavation		11.1	CY	9.68	\$108
- Geotextile Fabric at Bott of Excav		357.0	SF	1.92	\$685
- Aggregate Subbase, 4"		1.4	CY	34.97	\$48
- #8, #89 Stone Choker Layer, 2"		0.7	CY	41.75	\$29
- Sand Choker Layer, 2"		0.7	CY	47.80	\$33
- 2x Silva Cells		7	EA	219.31	\$1,535
- Root Barrier		140	SF	7.56	\$1,059
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		5.4	CY	54.45	\$296
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		49.0	LF	12.00	\$588
- Overflow Riser		1	EA	121.00	\$121
- 4" Distributer Pipe		15.0	LF	10.00	\$150
- Misc. Backfill		2.3	CY	23.60	\$55
- Haul Off Surplus Materials		10.6	CY	20.00	\$213
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Silva Cell Tree Pits, (10 count cluster)					
		1	EA		
- Excavation		15.9	CY	9.68	\$154
- Geotextile Fabric at Bott of Excav		510.0	SF	1.92	\$978
- Aggregate Subbase, 4"		2.0	CY	34.97	\$68
- #8, #89 Stone Choker Layer, 2"		1.0	CY	41.75	\$41
- Sand Choker Layer, 2"		1.0	CY	47.80	\$47
- 2x Silva Cells		10	EA	219.31	\$2,193
- Root Barrier		200	SF	7.56	\$1,513
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		7.8	CY	54.45	\$424
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		70.0	LF	10.00	\$700
- Overflow Riser		1	EA	121.00	\$169
- 4" Distributer Pipe		21.0	LF	10.00	\$210
- Misc. Backfill		3.3	CY	23.60	\$79
- Haul Off Surplus Materials		15.2	CY	20.00	\$304





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- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (11 count cluster)	1	EA		
- Excavation	17.5	CY	9.68	\$170
- Geotextile Fabric at Bott of Excav	561.0	SF	1.92	\$1,076
- Aggregate Subbase, 4"	2.2	CY	34.97	\$75
- #8, #89 Stone Choker Layer, 2"	1.1	CY	41.75	\$45
- Sand Choker Layer, 2"	1.1	CY	47.80	\$51
- 2x Silva Cells	11	EA	219.31	\$2,412
- Root Barrier	220	SF	7.56	\$1,664
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	8.6	CY	54.45	\$466
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	77.0	LF	10.00	\$770
- Overflow Riser	2	EA	121.00	\$194
- 4" Distributer Pipe	24.0	LF	10.00	\$240
- Misc. Backfill	3.7	CY	23.60	\$87
- Haul Off Surplus Materials	16.7	CY	20.00	\$334
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (13 count cluster)	4	EA		
- Excavation	331.3	CY	9.68	\$3,207
- Geotextile Fabric at Bott of Excav	10,608.0	SF	1.92	\$20,345
- Aggregate Subbase, 4"	40.7	CY	34.97	\$1,422
- #8, #89 Stone Choker Layer, 2"	20.3	CY	41.75	\$849
- Sand Choker Layer, 2"	20.3	CY	47.80	\$972
- 2x Silva Cells	52	EA	219.31	\$11,404
- Root Barrier	4,160	SF	7.56	\$31,460
- Compacted Fill Beneath Tree	8.3	CY	23.60	\$196
- Planting Soil	161.8	CY	54.45	\$8,809
- Washed River Rock over Root Ball	0.8	CY	41.75	\$34
- 6" Under Drain	364.0	LF	10.00	\$3,640
- Overflow Riser	7	EA	121.00	\$895
- 4" Distributer Pipe	111.0	LF	10.00	\$1,110
- Misc. Backfill	69.3	CY	23.60	\$1,636
- Haul Off Surplus Materials	315.9	CY	20.00	\$6,317
- Tree Grates	128.0	SF	98.31	\$12,584
			0.00	\$0
Silva Cell Tree Pits, (14 count cluster)	3	EA		
- Excavation	200.7	CY	9.68	\$1,942
- Geotextile Fabric at Bott of Excav	6,426.0	SF	1.92	\$12,324
- Aggregate Subbase, 4"	24.6	CY	34.97	\$862
- #8, #89 Stone Choker Layer, 2"	12.3	CY	41.75	\$514
- Sand Choker Layer, 2"	12.3	CY	47.80	\$589
- 2x Silva Cells	42	EA	219.31	\$9,211





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PH 2 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier	2,520	SF	7.56	\$19,058
- Compacted Fill Beneath Tree	6.2	CY	23.60	\$147
- Planting Soil	98.0	CY	54.45	\$5,336
- Washed River Rock over Root Ball	0.6	CY	41.75	\$25
- 6" Under Drain	294.0	LF	10.00	\$2,940
- Overflow Riser	6	EA	121.00	\$726
- 4" Distributer Pipe	90.0	LF	10.00	\$900
- Misc. Backfill	42.0	CY	23.60	\$991
- Haul Off Surplus Materials	191.3	CY	20.00	\$3,827
- Tree Grates	96.0	SF	98.31	\$9,438
			0.00	\$0
Silva Cell Tree Pits, (16 count cluster)	2	EA		
- Excavation	101.9	CY	9.68	\$987
- Geotextile Fabric at Bott of Excav	3,264.0	SF	1.92	\$6,260
- Aggregate Subbase, 4"	12.5	CY	34.97	\$438
- #8, #89 Stone Choker Layer, 2"	6.3	CY	41.75	\$261
- Sand Choker Layer, 2"	6.3	CY	47.80	\$299
- 2x Silva Cells	32	EA	219.31	\$7,018
- Root Barrier	1,280	SF	7.56	\$9,680
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	49.8	CY	54.45	\$2,710
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	224.0	LF	10.00	\$2,240
- Overflow Riser	5	EA	121.00	\$557
- 4" Distributer Pipe	69.0	LF	10.00	\$690
- Misc. Backfill	21.3	CY	23.60	\$503
- Haul Off Surplus Materials	97.2	CY	20.00	\$1,944
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (17 count cluster)	1	EA		
- Excavation	27.1	CY	9.68	\$262
- Geotextile Fabric at Bott of Excav	867.0	SF	1.92	\$1,663
- Aggregate Subbase, 4"	3.3	CY	34.97	\$116
- #8, #89 Stone Choker Layer, 2"	1.7	CY	41.75	\$69
- Sand Choker Layer, 2"	1.7	CY	47.80	\$79
- 2x Silva Cells	17	EA	219.31	\$3,728
- Root Barrier	340	SF	7.56	\$2,571
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	13.2	CY	54.45	\$720
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	119.0	LF	10.00	\$1,190
- Overflow Riser	2	EA	121.00	\$290
- 4" Distributer Pipe	36.0	LF	10.00	\$360
- Misc. Backfill	5.7	CY	23.60	\$134
- Haul Off Surplus Materials	25.8	CY	20.00	\$516





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Silva Cell Tree Pits, (20 count cluster)		2	EA		
- Excavation		127.4	CY	9.68	\$1,233
- Geotextile Fabric at Bott of Excav		4,080.0	SF	1.92	\$7,825
- Aggregate Subbase, 4"		15.6	CY	34.97	\$547
- #8, #89 Stone Choker Layer, 2"		7.8	CY	41.75	\$327
- Sand Choker Layer, 2"		7.8	CY	47.80	\$374
- 2x Silva Cells		40	EA	219.31	\$8,773
- Root Barrier		1,600	SF	7.56	\$12,100
- Compacted Fill Beneath Tree		4.1	CY	23.60	\$98
- Planting Soil		62.2	CY	54.45	\$3,388
- Washed River Rock over Root Ball		0.4	CY	41.75	\$17
- 6" Under Drain		280.0	LF	10.00	\$2,800
- Overflow Riser		6	EA	121.00	\$690
- 4" Distributer Pipe		85.5	LF	10.00	\$855
- Misc. Backfill		26.7	CY	23.60	\$629
- Haul Off Surplus Materials		121.5	CY	20.00	\$2,430
- Tree Grates		64.0	SF	98.31	\$6,292
				0.00	\$0
				0.00	\$0
Total Silva Cell Tree Pit Clusters		15	EA	0.00	\$0
				0.00	\$0
Typical Tree Planter		16	EA	0.00	\$0
- Excavation		38	CY	9.68	\$367
- Geotextile Fabric at Bott of Excav		320	SF	1.23	\$394
- Root Barrier		1,024	SF	7.56	\$7,744
- Planting Soil		38	CY	54.45	\$2,065
- Tree Grates		256	SF	158.81	\$40,656
				0.00	\$0
** End of Section **					
Irrigation Systems				0.00	\$0
Irrigation Systems Allowance - None					\$0
					\$0
** End of Section **					
G30 Site Civil / Mechanical Utilities				86.19	\$79,729.90
G3020 Sanitary Sewer				6.49	\$6,000
Sanitary Sewer Piping				6.49	\$6,000
Sanitary Sewer Modifications Allowance					
Adjust Sanit Sewer MH to Grade		1	LS	6,000.00	\$6,000
(from prev estimate)					
** End of Section **					
G3030 Storm Sewer				79.71	\$73,730





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Storm Sewer				67.05	\$62,023
New Storm Sewer					
- Excavation	449	CY	6.53	\$2,933	
- Trench Box	1	LS	5,000.00	\$5,000	
- Pipe Bedding	75	CY	36.91	\$2,761	
- 15" Storm Pipe	30	LF	40.54	\$1,216	
- 18" Storm Pipe	475	LF	49.01	\$23,277	
- 24" Storm Pipe		LF	0.00	\$0	
- Curb Inlets	5	EA	3,000.80	\$15,004	
- Manholes Complete	2	EA	4,259.20	\$8,518	
- Backfill	449	CY	7.38	\$3,313	
			0.00	\$0	
** End of Section **					
Other Storm Sewer				12.66	\$11,707
Remove Existing Storm Sewer (Assume similar quantities as new)					
- Excavate / Remove Existing Pipe	505	LF	18.15	\$9,166	
- Demo/Remove Existing Structures	7	EA	363.00	\$2,541	
** End of Section **					
G40	Site Electrical Utilities			3,750.85	\$3,469,535.40
G4010	Undergrounding Overhead Utilities			3,156.78	\$2,920,023
	Undergrounding Overhead Utilities			3,156.78	\$2,920,023
Timmons Duct Bank Estimate (See Timmons Detailed Backup)					
Dominion Virginia Power Undergrounding Infrast.	1	LS	2,442,228.00	\$2,442,228	
Comcast Undergrounding Infrastructure	1	LS	141,595.00	\$141,595	
Lumos Undergrounding Infrastructure	1	LS	195,100.00	\$195,100	
Century Link Undergrounding Infrastructure	1	LS	141,100.00	\$141,100	
			0.00	\$0	
** End of Section **					
G4020	Site Lighting			293.53	\$271,512
	Exterior Lighting Fixtures & Controls			293.53	\$271,512
Power conduit/wire for parking meters/spare- allow	2,200	LF	16.17	\$35,574	
Lighting Control Cabinet Assembly LP-B (SEE PHASE 1)					
- Lighting panel 120/240v		PH 1	0.00	\$0	
- Fused safety switch 200a		PH 1	0.00	\$0	
- NEMA 4 Cabinet 72x31x24		PH 1	0.00	\$0	
- Meter socket		PH 1	0.00	\$0	
- Duplex WP		PH 1	0.00	\$0	
- Telephone jack		PH 1	0.00	\$0	





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PH 2 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Photo cell			PH 1	0.00	\$0
- Ground rod 10'			PH 1	0.00	\$0
- PVC conduit stub outs			PH 1	0.00	\$0
- Concrete pad 43"x36"x30"			PH 1	0.00	\$0
- Anchor bolts			PH 1	0.00	\$0
Site Lighting					
- Remove existing fixtures, poles, base- allow		33	EA	344.85	\$11,380
- Light fixture, type KX1, 115w LED, dual head/arm		31	EA	2,289.32	\$70,969
- Light fixture, type KX1a, 130w LED, dual head/arm		4	EA	2,474.45	\$9,898
- Light fixture pole, aluminum, 18'		35	EA	1,252.35	\$43,832
- Lighting pole bases-		35	EA	1,167.65	\$40,868
- Lighting conduit, 1"		5,090	LF	4.21	\$21,435
- Lighting wire #6		10,180	LF	1.91	\$19,487
- Lighting wire gnd #10		5,090	LF	0.89	\$4,521
- Trenching/backfill		5,090	LF	2.66	\$13,550
				0.00	\$0
** End of Section **					
G4090	Other Site Electrical Utilities			300.54	\$278,000
	Signalization			300.54	\$278,000
Remove Exist. Traffic Signalization - Ph 2		1	EA	5,000.00	\$5,000
New Traffic Signalization - (@7th 4 dir.)		1	EA	248,000.00	\$248,000
New Traffic Signalization - (@4th 4 dir.)			PH1	0.00	\$0
New Traffic Signalization - (@Ridge 5 dir.)			PH1	0.00	\$0
New Pedestrian Signalization - Phase 2		1	EA	25,000.00	\$25,000
				0.00	\$0
** End of Section **					
Subtotal - Building & Site				6,082.71	\$5,626,507





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Roosevelt Brown Blvd to Bridge		1,045 LF of Road			
G	BUILDING SITEWORK			2,929.07	\$3,060,880
G10	Site Preparations			788.00	\$823,459
G1005	Project Set Up / Mobilization			180.30	\$188,415
	Mobilization			2.39	\$2,500
	Equipment Mobilization	1	LS	2,500.00	\$2,500
				0.00	\$0
	** End of Section **				
Erosion / Sediment Control				33.73	\$35,250
	Erosion / Sedim. Control				
	- Silt Fence	3,500	LF	4.00	\$14,000
	- Inlet Protection	15	EA	250.00	\$3,750
	- Construction Entrance	5	EA	3,500.00	\$17,500
				0.00	\$0
	** End of Section **				
Traffic Control				124.43	\$130,027
	Traffic Barricades				
	- Conc. Jersey Barriers, (500lf x 4loc x 4 mo/loc)	2,000	LF	10.04	\$20,086
	- Temp Chain Link Fencing	2,000	LF	5.00	\$10,000
	- Traffic Barrels	40	EA	8.53	\$341
	- Traffic Cones	250	EA	3.45	\$862
				0.00	\$0
	Flagmen - (2men x 4mo x 4 locat x 1/2 time)	2,768	MH	20.57	\$56,938
				0.00	\$0
	Pedest. Access to Active Businesses	2,090	LF	20.00	\$41,800
				0.00	\$0
	** End of Section **				
Protect Existing Structures				19.75	\$20,638
	Protect Adjacent Buildings	4,000	SF	2.72	\$10,890
				0.00	\$0
	Protect Adjacent Structures			0.00	\$0
	- Fencing	523	LF	6.05	\$3,161
	- Planters	523	LF	8.17	\$4,268
	- Curbs/Sidewalks	523	LF	3.33	\$1,739
				0.00	\$0
	Protect Existing Trees to Remain	6	EA	96.80	\$581
				0.00	\$0
	** End of Section **				
G1020	Site Demolition and Relocations			221.90	\$231,889
	Tree Removal			14.35	\$15,000





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
	Remove Existing Trees	10	EA	1,500.00	\$15,000
				0.00	\$0
	** End of Section **				
Above Ground Site Demolition				180.93	\$189,071
	Pavement Demo				
	- Sawcut Existing Pavement	1,000	LF	5.00	\$5,000
	- Demo Exist Asphalt Pavement	46,300	SF	0.92	\$42,577
	- Demo Existing Walks (Brick/Conc)	21,959	SF	1.88	\$41,184
	- Demo Exist Curb/Gutter	2,195	LF	3.33	\$7,304
	- Disposal of Debris	1,631	CY	55.00	\$89,698
				0.00	\$0
	Misc. Site Demo			0.00	\$0
	- Demo Exist. Site Furnishings Allowance	50	EA	41.14	\$2,057
	- Demo Exist. Signage Allowance	1	LS	1,250.00	\$1,250
				0.00	\$0
	Total Sqft of Hard Surface Demo	68,259	sf	0.00	\$0
				0.00	\$0
	** End of Section **				
Other Site Demolition & Relocations				26.62	\$27,818
	Demo Buried Trolley Tracks	1,045	LF	26.62	\$27,818
				0.00	\$0
	** End of Section **				
G1030	Site Earthwork			385.79	\$403,155
	Excavation / Grading			376.22	\$393,155
	Undercut Unsuit. Materials				
	- Excav. Unsuit Mtrls, at Asph Rds, 30" dpth	4,287	CY	4.24	\$18,156
	- Excav. Unsuit Mtrls, at Walks, 30" dpth	2,033	CY	4.24	\$8,611
	- Disposal of Materials, Off-Site	6,320	CY	20.00	\$126,406
	- Place / Compact Select Fill, Import, 24" dpth	5,056	CY	39.14	\$197,918
	- Fine Grade	68,259	SF	0.25	\$17,065
				0.00	\$0
	Contamin. Soils Disposal Allowance	500	CY	50.00	\$25,000
				0.00	\$0
	** End of Section **				
Temporary Dewatering				9.57	\$10,000
	Localized Dewatering	1	LS	10,000.00	\$10,000
				0.00	\$0
	** End of Section **				
G20	Site Improvements			1,542.54	\$1,611,950
G2010	Roadways			345.02	\$360,551





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Curbs & Gutters				30.50	\$31,871
Concrete Curb / Gutter at Roads		2,195	LF	14.52	\$31,871
				0.00	\$0
** End of Section **					
Paved Surfaces				301.49	\$315,057
New Asphalt Pavement		46,300	SF		
- 2" VDOT SM-12.5D, Surface Course		571	TN	103.82	\$59,243
- 2" VDOT IM-19.0A, Intermediate Course		571	TN	96.80	\$55,239
- 3" VDOT BM-25.0A, Base Course		839	TN	89.78	\$75,344
- 8" VDOT 21B, Aggregate Base		5,144	CY	8.83	\$45,441
- Mobilization Charges		15	EA	3,000.00	\$45,000
Asph Pvmt Tie-In at Exist. Roads					
- Mill Exist Asphalt Paving		10,000	SF	2.00	\$20,000
- 2" Asphalt Surface Cours Overlay at Tie In		123	TN	120.00	\$14,790
** End of Section **					
Marking & Signage				13.04	\$13,623
Traffic Markings (Thermo Plastic)					
- 4" Single White Line (Solid and Striped)		295	LF	1.50	\$443
- 6" Single White Line (Solid and Striped)		3,015	LF	2.00	\$6,030
- 4" Double Yellow Solid Lines		940	LF	3.00	\$2,820
- 24" Solid White Line (Stop Bar)		100	LF	8.00	\$800
- 24" Solid Yellow Line (Goring)			LF	0.00	\$0
- Arrow Symbol		3	EA	250.00	\$750
- Bike Lane Symbol		2	EA	250.00	\$500
Bike Lane Special Coating (Green Bike Boxes only)		152	SF	15.00	\$2,280
** End of Section **					
G2030 Pedestrian Paving				358.40	\$374,524
Paved Surfaces				353.61	\$369,524
PCC-1 PC Concrete Pavers					
- 3" x 12" x 2-1/4" PC Paver		18,100	SF	10.41	\$188,349
- 1" Unilock Chip Stone Setting Bed		18,100	SF	1.00	\$18,100
- 4" Reinf. Concrete Slab		18,100	SF	4.00	\$72,400
- 4" Aggregate Base		2,011	SY	5.13	\$10,318
- Perimeter Slab Turn Down/Up		1,838	LF	15.00	\$27,570
- Thickened Slab Adjacent to PAV-1			LF	0.00	\$0
- Thkd Slab at Perim. Of Tree Grates, A		176	LF	10.00	\$1,760
- Thkd Slab at Perim. Of Tree Grates, B		456	LF	10.00	\$4,560





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				0.00	\$0
	PCC-1 PC Concrete Pavers at Raised Cross Walks			0.00	\$0
	- 3" x 12" x 2-1/4" PC Paver	300	SF	10.41	\$3,122
	- 1" Unilock Chip Stone Setting Bed	300	SF	1.00	\$300
	- 5" Reinf. Concrete Slab	300	SF	5.00	\$1,500
	- 4" Aggregate Base	33	SY	5.13	\$171
	- 2'5" Wide x 8" Thick Conc Transition Strips	213	SF	10.00	\$2,130
				0.00	\$0
	PCC-2 PC Concrete Pavers			0.00	\$0
	- 3" x 12" x 4" PC Paver (Herringbone Pattern)	600	SF	15.97	\$9,583
	- 1" Unilock Chip Stone Setting Bed	600	SF	1.00	\$600
	- 6" Reinf. Concrete Slab	600	SF	6.00	\$3,600
	- 4" Aggregate Base	67	SY	5.13	\$342
	- Perimeter Slab Turn Down/Up	58	LF	15.00	\$870
	- Concrete Transition Strips	975	SF	10.00	\$9,750
				0.00	\$0
	Concrete HC Ramps	600	SF	20.00	\$12,000
				0.00	\$0
	Misc. Concrete Pavements / Infills	250	SF	10.00	\$2,500
				0.00	\$0
	Total Sqft of New Pedest. Paving	21,959	sf		
	** End of Section **				
	Other Walks, Steps & Terraces			4.78	\$5,000
	Misc. Repairs at Steps / Ret. Walls - Area A	1	LS	5,000.00	\$5,000
				0.00	\$0
	** End of Section **				
G2040	Site Development			503.07	\$525,711
	Exterior Furnishings			272.01	\$284,251
	Site Benches				
	- Bench Type A, BTA (Single)	12	EA	2,722.50	\$32,670
	- Bench Type A, BTA ("Z" Pattern, Triple)	1	EA	8,167.50	\$8,168
	- Bench Type B, BTB	11	EA	1,633.50	\$17,969
	- Bench Type C, BTC	5	EA	2,178.00	\$10,890
	- Bench Type D, BTD	2	EA	1,512.50	\$3,025
	- Bench Type E, BTE		EA	0.00	\$0
				0.00	\$0
	Bicycle Rack, Type A, CTA	6	EA	726.00	\$4,356
				0.00	\$0
	Litter Receptacle, Type A, LTA	4	EA	2,934.25	\$11,737
				0.00	\$0
	Planter, Type A, PTA	13	EA	5,033.60	\$65,437





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	Site Tables			0.00	\$0
	- Table Type A, TTA		EA	0.00	\$0
	- Table Type B, TTB w/Sgl Chair		EA	0.00	\$0
	- Table Type B, TTB w/(2ea) Chairs		EA	0.00	\$0
	- Table Type B, TTB w/(3ea) Chairs		EA	0.00	\$0
				0.00	\$0
	Bus Sheltors	2	EA	60,000.00	\$120,000
	- Foundations	2	EA	5,000.00	\$10,000
				0.00	\$0
	** End of Section **				
	Signage			231.06	\$241,461
	Street Signage				
	- Post / Footing	18	EA	90.75	\$1,634
	- Pedestrian Sign	2	EA	43.86	\$88
	- Directional Arrow	3	EA	37.81	\$113
	- No Parking Sign	10	EA	55.96	\$560
	- Tow Away Zone Sign	10	EA	25.71	\$257
	- Emergency Snow Route Sign	14	EA	25.71	\$360
	- One Way Sign		EA	0.00	\$0
	- Bike Lane Sign	3	EA	62.01	\$186
	- Stop Sign	1	EA	43.86	\$44
	- 2 Hour Parking Sign	4	EA	37.81	\$151
	- Dead End Sign		EA	0.00	\$0
	- To I-64 Sign	1	EA	68.06	\$68
	- Reserved Parking Sign		EA	0.00	\$0
	- Do Not Enter Sign		EA	0.00	\$0
	- Begin Turning Sign		EA	0.00	\$0
	- Rt Lane Must Turn Right Sign		EA	0.00	\$0
	Site Signage Allowances				
	- Custom Concrete Topographical Map	1	EA	35,000.00	\$35,000
	- Community Board / Way Finding		EA	0.00	\$0
	- Corner Markers	1	EA	23,000.00	\$23,000
	- Transit Interpretation at Bus Stop	2	EA	15,000.00	\$30,000
	- Commemorative Walk at Bridge	1	EA	150,000.00	\$150,000
				0.00	\$0
	** End of Section **				
G2050	Landscaping			336.04	\$351,163
	Plantings			16.08	\$16,800
	Traditional Shade Trees				
	- TMD	5	EA	500.00	\$2,500





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- TSM		6	EA	350.00	\$2,100
- TLG			EA	0.00	\$0
				0.00	\$0
Silva Cell Shade Trees				0.00	\$0
- TMD		4	EA	500.00	\$2,000
- TSM		4	EA	350.00	\$1,400
- TLG		11	EA	800.00	\$8,800
				0.00	\$0
** End of Section **					
Planters				319.96	\$334,363
Silva Cell Tree Pits, (12 count cluster)					
- Excavation		76.4	CY	9.68	\$740
- Geotextile Fabric at Bott of Excav		2,448.0	SF	1.92	\$4,695
- Aggregate Subbase, 4"		9.4	CY	34.97	\$328
- #8, #89 Stone Choker Layer, 2"		4.7	CY	41.75	\$196
- Sand Choker Layer, 2"		4.7	CY	47.80	\$224
- 2x Silva Cells		24	EA	219.31	\$5,264
- Root Barrier		960	SF	7.56	\$7,260
- Compacted Fill Beneath Tree		4.1	CY	23.60	\$98
- Planting Soil		37.3	CY	54.45	\$2,033
- Washed River Rock over Root Ball		0.4	CY	41.75	\$17
- 6" Under Drain		96.0	LF	12.00	\$1,152
- Overflow Riser		2	EA	121.00	\$266
- 4" Distributer Pipe		33.0	LF	10.00	\$330
- Misc. Backfill		16.0	CY	23.60	\$378
- Haul Off Surplus Materials		72.9	CY	20.00	\$1,458
- Tree Grates		64.0	SF	98.31	\$6,292
				0.00	\$0
Silva Cell Tree Pits, (14 count cluster)					
- Excavation		89.2	CY	9.68	\$863
- Geotextile Fabric at Bott of Excav		2,856.0	SF	1.92	\$5,477
- Aggregate Subbase, 4"		11.0	CY	34.97	\$383
- #8, #89 Stone Choker Layer, 2"		5.5	CY	41.75	\$229
- Sand Choker Layer, 2"		5.5	CY	47.80	\$262
- 2x Silva Cells		28	EA	219.31	\$6,141
- Root Barrier		1,120	SF	7.56	\$8,470
- Compacted Fill Beneath Tree		4.1	CY	23.60	\$98
- Planting Soil		43.6	CY	54.45	\$2,372
- Washed River Rock over Root Ball		0.4	CY	41.75	\$17
- 6" Under Drain		112.0	LF	10.00	\$1,120
- Overflow Riser		3	EA	121.00	\$303
- 4" Distributer Pipe		37.5	LF	10.00	\$375
- Misc. Backfill		18.7	CY	23.60	\$440
- Haul Off Surplus Materials		85.0	CY	20.00	\$1,701





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PH 3 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (15 count cluster)	1	EA		
- Excavation	23.9	CY	9.68	\$231
- Geotextile Fabric at Bott of Excav	765.0	SF	1.92	\$1,467
- Aggregate Subbase, 4"	2.9	CY	34.97	\$103
- #8, #89 Stone Choker Layer, 2"	1.5	CY	41.75	\$61
- Sand Choker Layer, 2"	1.5	CY	47.80	\$70
- 2x Silva Cells	15	EA	219.31	\$3,290
- Root Barrier	300	SF	7.56	\$2,269
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	11.7	CY	54.45	\$635
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	60.0	LF	10.00	\$600
- Overflow Riser	1	EA	121.00	\$169
- 4" Distributer Pipe	21.0	LF	10.00	\$210
- Misc. Backfill	5.0	CY	23.60	\$118
- Haul Off Surplus Materials	22.8	CY	20.00	\$456
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (20 count cluster)	1	EA		
- Excavation	31.9	CY	9.68	\$308
- Geotextile Fabric at Bott of Excav	1,020.0	SF	1.92	\$1,956
- Aggregate Subbase, 4"	3.9	CY	34.97	\$137
- #8, #89 Stone Choker Layer, 2"	2.0	CY	41.75	\$82
- Sand Choker Layer, 2"	2.0	CY	47.80	\$93
- 2x Silva Cells	20	EA	219.31	\$4,386
- Root Barrier	400	SF	7.56	\$3,025
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	15.6	CY	54.45	\$847
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	80.0	LF	10.00	\$800
- Overflow Riser	2	EA	121.00	\$218
- 4" Distributer Pipe	27.0	LF	10.00	\$270
- Misc. Backfill	6.7	CY	23.60	\$157
- Haul Off Surplus Materials	30.4	CY	20.00	\$607
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (23 count cluster)	2	EA		
- Excavation	146.5	CY	9.68	\$1,418
- Geotextile Fabric at Bott of Excav	4,692.0	SF	1.92	\$8,999
- Aggregate Subbase, 4"	18.0	CY	34.97	\$629
- #8, #89 Stone Choker Layer, 2"	9.0	CY	41.75	\$376
- Sand Choker Layer, 2"	9.0	CY	47.80	\$430
- 2x Silva Cells	46	EA	219.31	\$10,088





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PH 3 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier	1,840	SF	7.56	\$13,915
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	71.6	CY	54.45	\$3,896
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	184.0	LF	10.00	\$1,840
- Overflow Riser	4	EA	121.00	\$508
- 4" Distributer Pipe	63.0	LF	10.00	\$630
- Misc. Backfill	30.7	CY	23.60	\$724
- Haul Off Surplus Materials	139.7	CY	20.00	\$2,794
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (24 count cluster)	1	EA		
- Excavation	38.2	CY	9.68	\$370
- Geotextile Fabric at Bott of Excav	1,224.0	SF	1.92	\$2,347
- Aggregate Subbase, 4"	4.7	CY	34.97	\$164
- #8, #89 Stone Choker Layer, 2"	2.3	CY	41.75	\$98
- Sand Choker Layer, 2"	2.3	CY	47.80	\$112
- 2x Silva Cells	24	EA	219.31	\$5,264
- Root Barrier	480	SF	7.56	\$3,630
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	18.7	CY	54.45	\$1,016
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	96.0	LF	10.00	\$960
- Overflow Riser	2	EA	121.00	\$266
- 4" Distributer Pipe	33.0	LF	10.00	\$330
- Misc. Backfill	8.0	CY	23.60	\$189
- Haul Off Surplus Materials	36.4	CY	20.00	\$729
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (25 count cluster)	1	EA		
- Excavation	39.8	CY	9.68	\$385
- Geotextile Fabric at Bott of Excav	1,275.0	SF	1.92	\$2,445
- Aggregate Subbase, 4"	4.9	CY	34.97	\$171
- #8, #89 Stone Choker Layer, 2"	2.4	CY	41.75	\$102
- Sand Choker Layer, 2"	2.4	CY	47.80	\$117
- 2x Silva Cells	25	EA	219.31	\$5,483
- Root Barrier	500	SF	7.56	\$3,781
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	19.4	CY	54.45	\$1,059
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	100.0	LF	10.00	\$1,000
- Overflow Riser	2	EA	121.00	\$278
- 4" Distributer Pipe	34.5	LF	10.00	\$345
- Misc. Backfill	8.3	CY	23.60	\$197
- Haul Off Surplus Materials	38.0	CY	20.00	\$759



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PH 3 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (26 count cluster)	1	EA		
- Excavation	41.4	CY	9.68	\$401
- Geotextile Fabric at Bott of Excav	1,326.0	SF	1.92	\$2,543
- Aggregate Subbase, 4"	5.1	CY	34.97	\$178
- #8, #89 Stone Choker Layer, 2"	2.5	CY	41.75	\$106
- Sand Choker Layer, 2"	2.5	CY	47.80	\$122
- 2x Silva Cells	26	EA	219.31	\$5,702
- Root Barrier	520	SF	7.56	\$3,933
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	20.2	CY	54.45	\$1,101
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	104.0	LF	10.00	\$1,040
- Overflow Riser	2	EA	121.00	\$290
- 4" Distributer Pipe	36.0	LF	10.00	\$360
- Misc. Backfill	8.7	CY	23.60	\$204
- Haul Off Surplus Materials	39.5	CY	20.00	\$790
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (28 count cluster)	2	EA		
- Excavation	178.4	CY	9.68	\$1,727
- Geotextile Fabric at Bott of Excav	5,712.0	SF	1.92	\$10,955
- Aggregate Subbase, 4"	21.9	CY	34.97	\$766
- #8, #89 Stone Choker Layer, 2"	11.0	CY	41.75	\$457
- Sand Choker Layer, 2"	11.0	CY	47.80	\$523
- 2x Silva Cells	56	EA	219.31	\$12,282
- Root Barrier	2,240	SF	7.56	\$16,940
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	87.1	CY	54.45	\$4,743
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	224.0	LF	10.00	\$2,240
- Overflow Riser	5	EA	121.00	\$617
- 4" Distributer Pipe	76.5	LF	10.00	\$765
- Misc. Backfill	37.3	CY	23.60	\$881
- Haul Off Surplus Materials	170.1	CY	20.00	\$3,401
- Tree Grates	64.0	SF	98.31	\$6,292
			0.00	\$0
Silva Cell Tree Pits, (44 count cluster)	1	EA		
- Excavation	70.1	CY	9.68	\$678
- Geotextile Fabric at Bott of Excav	2,244.0	SF	1.92	\$4,304
- Aggregate Subbase, 4"	8.6	CY	34.97	\$301
- #8, #89 Stone Choker Layer, 2"	4.3	CY	41.75	\$180
- Sand Choker Layer, 2"	4.3	CY	47.80	\$206
- 2x Silva Cells	44	EA	219.31	\$9,650





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier		880	SF	7.56	\$6,655
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		34.2	CY	54.45	\$1,863
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		176.0	LF	10.00	\$1,760
- Overflow Riser		4	EA	121.00	\$484
- 4" Distributer Pipe		60.0	LF	10.00	\$600
- Misc. Backfill		14.7	CY	23.60	\$346
- Haul Off Surplus Materials		66.8	CY	20.00	\$1,336
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Total Silva Cell Tree Pit Clusters		14	EA	0.00	\$0
				0.00	\$0
Typical Tree Planter		11	EA	0.00	\$0
- Excavation		26	CY	9.68	\$252
- Geotextile Fabric at Bott of Excav		220	SF	1.23	\$271
- Root Barrier		704	SF	7.56	\$5,324
- Planting Soil		26	CY	54.45	\$1,420
- Tree Grates		176	SF	158.81	\$27,951
				0.00	\$0
** End of Section **					
Irrigation Systems				0.00	\$0
Irrigation Systems Allowance - None				0.00	\$0
				0.00	\$0
** End of Section **					
G30	Site Civil / Mechanical Utilities			108.72	\$113,613.94
G3020	Sanitary Sewer			5.74	\$6,000
	Sanitary Sewer Piping			5.74	\$6,000
Sanitary Sewer Modifications Allowance					
Adjust Sanit Sewer MH to Grade		1	LS	6,000.00	\$6,000
(from prev estimate)					
** End of Section **					
G3030	Storm Sewer			102.98	\$107,614
	Storm Sewer			88.91	\$92,912
New Storm Sewer					
- Excavation		489	CY	6.53	\$3,194
- Trench Box		1	LS	5,000.00	\$5,000
- Pipe Bedding		81	CY	36.91	\$3,007
- 15" Storm Pipe		35	LF	40.54	\$1,419
- 18" Storm Pipe		40	LF	49.01	\$1,960
- 24" Storm Pipe		475	LF	59.29	\$28,163
- Curb Inlets		7	EA	3,000.80	\$21,006





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Manholes Complete		6	EA	4,259.20	\$25,555
- Backfill		489	CY	7.38	\$3,608
				0.00	\$0
** End of Section **					
Other Storm Sewer				14.07	\$14,702
Remove Existing Storm Sewer (Assume similar quantities as new)					
- Excavate / Remove Existing Pipe		550	LF	18.15	\$9,983
- Demo/Remove Existing Structures		13	EA	363.00	\$4,719
** End of Section **					
G40 Site Electrical Utilities				489.82	\$511,857.44
G4010 Undergrouding Overhead Utilities				0.00	\$0
Undergrouding Overhead Utilities				0.00	\$0
Timmons Duct Bank Estimate (See Timmons Detailed Backup)					
None in Phase 3				0.00	\$0
				0.00	\$0
** End of Section **					
G4020 Site Lighting				223.79	\$233,857
Exterior Lighting Fixtures & Controls				223.79	\$233,857
Power conduit/wire for parking meters/spare- allow		1,800	LF	16.17	\$29,106
Lighting Control Cabinet Assembly LP-A					
- Lighting panel 120/240v		1	EA	3,291.20	\$3,291
- Fused safety switch 200a		1	EA	1,306.80	\$1,307
- NEMA 4 Cabinet 72x31x24		1	EA	2,613.60	\$2,614
- Meter socket		1	EA	1,125.30	\$1,125
- Duplex WP		1	EA	151.25	\$151
- Telephone jack		1	EA	127.05	\$127
- Photo cell		1	EA	580.80	\$581
- Ground rod 10'		1	EA	580.80	\$581
- PVC conduit stub outs		40	LF	21.78	\$871
- Concrete pad 43"x36"x30"		1	LS	919.60	\$920
- Anchor bolts		4	EA	84.70	\$339
Site Lighting					
- Remove existing fixtures, poles, base- allow		34	EA	344.85	\$11,725
- Light fixture, type KX1, 115w LED, dual head/arm		19	EA	2,289.32	\$43,497
- Light fixture, type KX1a, 130w LED, dual head/arm		8	EA	2,474.45	\$19,796
- Light fixture pole, aluminum, 18'		27	EA	1,252.35	\$33,813
- Lighting pole bases		27	EA	1,167.65	\$31,527
- Lighting conduit, 1"		4,529	LF	4.21	\$19,070





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PH 3 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Lighting wire #6		9,058	LF	1.91	\$17,339
- Lighting wire gnd #10		4,529	LF	0.89	\$4,022
- Trenching/backfill		4,529	LF	2.66	\$12,056
				0.00	\$0
** End of Section **					
G4090	Other Site Electrical Utilities			266.03	\$278,000
	Signalization			266.03	\$278,000
Remove Exist. Traffic Signalization - Ph 3		1	EA	5,000.00	\$5,000
New Traffic Signalization - (@JPA 4 dir.)			PH 4	0.00	\$0
New Traffic Signalization - (@11th 4 dir.)			PH 4	0.00	\$0
New Traffic Signalization - (@10th 4 dir.)		1	EA	248,000.00	\$248,000
New Pedestrian Signalization -		1	EA	25,000.00	\$25,000
				0.00	\$0
** End of Section **					
Subtotal - Building & Site				2,929.07	\$3,060,880



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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Jefferson Park to Roosevelt Brown Blvd		845 LF of Road			
G	BUILDING SITEWORK			4,694.43	\$3,966,791
G10	Site Preparations			843.44	\$712,703
G1005	Project Set Up / Mobilization			211.43	\$178,661
	Mobilization			2.96	\$2,500
	Equipment Mobilization	1	LS	2,500.00	\$2,500
				0.00	\$0
	** End of Section **				
Erosion / Sediment Control				41.72	\$35,250
	Erosion / Sedim. Control				
	- Silt Fence	3,500	LF	4.00	\$14,000
	- Inlet Protection	15	EA	250.00	\$3,750
	- Construction Entrance	5	EA	3,500.00	\$17,500
				0.00	\$0
	** End of Section **				
Traffic Control				144.41	\$122,027
	Traffic Barricades				
	- Conc. Jersey Barriers, (500lf x 4loc x 4 mo/loc)	2,000	LF	10.04	\$20,086
	- Temp Chain Link Fencing	2,000	LF	5.00	\$10,000
	- Traffic Barrels	40	EA	8.53	\$341
	- Traffic Cones	250	EA	3.45	\$862
				0.00	\$0
	Flagmen - (2men x 4mo x 4 locat x 1/2 time)	2,768	MH	20.57	\$56,938
				0.00	\$0
	Pedest. Access to Active Businesses	1,690	LF	20.00	\$33,800
				0.00	\$0
	** End of Section **				
Protect Existing Structures				22.35	\$18,884
	Protect Adjacent Buildings	4,000	SF	2.72	\$10,890
				0.00	\$0
	Protect Adjacent Structures			0.00	\$0
	- Fencing	423	LF	6.05	\$2,556
	- Planters	423	LF	8.17	\$3,451
	- Curbs/Sidewalks	423	LF	3.33	\$1,406
				0.00	\$0
	Protect Existing Trees to Remain	6	EA	96.80	\$581
				0.00	\$0
	** End of Section **				
G1020	Site Demolition and Relocations			230.69	\$194,936
	Tree Removal			17.75	\$15,000





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	Remove Existing Trees	10	EA	1,500.00	\$15,000
				0.00	\$0
	** End of Section **				
Above Ground Site Demolition				186.32	\$157,442
	Pavement Demo				
	- Sawcut Existing Pavement	1,000	LF	5.00	\$5,000
	- Demo Exist Asphalt Pavement	37,650	SF	0.92	\$34,623
	- Demo Existing Walks (Brick/Conc)	18,734	SF	1.88	\$35,136
	- Demo Exist Curb/Gutter	1,650	LF	3.33	\$5,490
	- Disposal of Debris	1,343	CY	55.00	\$73,886
				0.00	\$0
	Misc. Site Demo			0.00	\$0
	- Demo Exist. Site Furnishings Allowance	50	EA	41.14	\$2,057
	- Demo Exist. Signage Allowance	1	LS	1,250.00	\$1,250
				0.00	\$0
	Total Sqft of Hard Surface Demo	56,384	sf	0.00	\$0
				0.00	\$0
	** End of Section **				
Other Site Demolition & Relocations				26.62	\$22,494
	Demo Buried Trolley Tracks	845	LF	26.62	\$22,494
				0.00	\$0
	** End of Section **				
G1030	Site Earthwork			401.31	\$339,107
	Excavation / Grading			389.48	\$329,107
	Undercut Unsuit. Materials				
	- Excav. Unsuit Mtrls, at Asph Rds, 30" dpth	3,486	CY	4.24	\$14,764
	- Excav. Unsuit Mtrls, at Walks, 30" dpth	1,735	CY	4.24	\$7,346
	- Disposal of Materials, Off-Site	5,221	CY	20.00	\$104,415
	- Place / Compact Select Fill, Import, 24" dpth	4,177	CY	39.14	\$163,486
	- Fine Grade	56,384	SF	0.25	\$14,096
				0.00	\$0
	Contamin. Soils Disposal Allowance	500	CY	50.00	\$25,000
				0.00	\$0
	** End of Section **				
Temporary Dewatering				11.83	\$10,000
	Localized Dewatering	1	LS	10,000.00	\$10,000
				0.00	\$0
	** End of Section **				
G20	Site Improvements			1,557.67	\$1,316,235
G2010	Roadways			387.98	\$327,847





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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
Curbs & Gutters				28.35	\$23,958
Concrete Curb / Gutter at Roads	1,650	LF	14.52	\$23,958	
			0.00	\$0	
** End of Section **					
Paved Surfaces				320.83	\$271,103
New Asphalt Pavement	37,650	SF			
- 2" VDOT SM-12.5D, Surface Course	464	TN	103.82	\$48,175	
- 2" VDOT IM-19.0A, Intermediate Course	464	TN	96.80	\$44,919	
- 3" VDOT BM-25.0A, Base Course	682	TN	89.78	\$61,268	
- 8" VDOT 21B, Aggregate Base	4,183	CY	8.83	\$36,951	
- Mobilization Charges	15	EA	3,000.00	\$45,000	
Asph Pvmt Tie-In at Exist. Roads					
- Mill Exist Asphalt Paving	10,000	SF	2.00	\$20,000	
- 2" Asphalt Surface Cours Overlay at Tie In	123	TN	120.00	\$14,790	
** End of Section **					
Marking & Signage				38.80	\$32,786
Traffic Markings (Thermo Plastic)					
- 4" Single White Line (Solid and Striped)	860	LF	1.50	\$1,290	
- 6" Single White Line (Solid and Striped)	2,285	LF	2.00	\$4,570	
- 4" Double Yellow Solid Lines	735	LF	3.00	\$2,205	
- 24" Solid White Line (Stop Bar)	102	LF	8.00	\$816	
- 24" Solid Yellow Line (Goring)		LF	0.00	\$0	
- Arrow Symbol	10	EA	250.00	\$2,500	
- Bike Lane Symbol		EA	0.00	\$0	
Bike Lane Special Coating (Green Bike Boxes only)	1,427	SF	15.00	\$21,405	
** End of Section **					
G2030 Pedestrian Paving			372.50	\$314,767	
Paved Surfaces				372.50	\$314,767
PCC-1 PC Concrete Pavers					
- 3" x 12" x 2-1/4" PC Paver	15,950	SF	10.41	\$165,976	
- 1" Unilock Chip Stone Setting Bed	15,950	SF	1.00	\$15,950	
- 4" Reinf. Concrete Slab	15,950	SF	4.00	\$63,800	
- 4" Aggregate Base	1,772	SY	5.13	\$9,092	
- Perimeter Slab Turn Down/Up	1,365	LF	15.00	\$20,475	
- Thickened Slab Adjacent to PAV-1		LF	0.00	\$0	
- Thkd Slab at Perim. Of Tree Grates, A	304	LF	10.00	\$3,040	
- Thkd Slab at Perim. Of Tree Grates, B	384	LF	10.00	\$3,840	





**West Main Street Corridor Improvements
Charlottesville, VA**

**ROM Estimate
for 100% SD Documents
Dated 2-16-17**

PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	PCC-1 PC Concrete Pavers at Raised Cross Walks			0.00	\$0
	- 3" x 12" x 2-1/4" PC Paver	300	SF	10.41	\$3,122
	- 1" Unilock Chip Stone Setting Bed	300	SF	1.00	\$300
	- 5" Reinf. Concrete Slab	300	SF	5.00	\$1,500
	- 4" Aggregate Base	33	SY	5.13	\$171
	- 2'5" Wide x 8" Thick Conc Transition Strips	250	SF	10.00	\$2,500
				0.00	\$0
	PCC-2 PC Concrete Pavers			0.00	\$0
	- 3" x 12" x 4" PC Paver (Herringbone Pattern)	435	SF	15.97	\$6,948
	- 1" Unilock Chip Stone Setting Bed	435	SF	1.00	\$435
	- 6" Reinf. Concrete Slab	435	SF	6.00	\$2,610
	- 4" Aggregate Base	48	SY	5.13	\$248
	- Perimeter Slab Turn Down/Up	34	LF	15.00	\$510
	- Concrete Transition Strips	725	SF	10.00	\$7,250
				0.00	\$0
	Concrete HC Ramps	300	SF	20.00	\$6,000
				0.00	\$0
	Misc. Concrete Pavements / Infills	100	SF	10.00	\$1,000
				0.00	\$0
	Total Sqft of New Pedest. Paving	18,734	sf		
	** End of Section **				
	Other Walks, Steps & Terraces			0.00	\$0
	Misc. Repairs at Steps / Ret. Walls - Area A		LS	0.00	\$0
				0.00	\$0
	** End of Section **				
G2040	Site Development			437.38	\$369,583
	Exterior Furnishings			217.91	\$184,131
	Site Benches				
	- Bench Type A, BTA (Single)		EA	0.00	\$0
	- Bench Type A, BTA ("Z" Pattern, Triple)		EA	0.00	\$0
	- Bench Type B, BTB	4	EA	1,633.50	\$6,534
	- Bench Type C, BTC	8	EA	2,178.00	\$17,424
	- Bench Type D, BTD	6	EA	1,512.50	\$9,075
	- Bench Type E, BTE	7	EA	8,228.00	\$57,596
				0.00	\$0
	Bicycle Rack, Type A, CTA		EA	0.00	\$0
				0.00	\$0
	Litter Receptacle, Type A, LTA	3	EA	2,934.25	\$8,803
				0.00	\$0
	Planter, Type A, PTA	3	EA	5,033.60	\$15,101





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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
				0.00	\$0
	Site Tables			0.00	\$0
	- Table Type A, TTA	2	EA	2,299.00	\$4,598
	- Table Type B, TTB w/Sgl Chair		EA	0.00	\$0
	- Table Type B, TTB w/(2ea) Chairs		EA	0.00	\$0
	- Table Type B, TTB w/(3ea) Chairs		EA	0.00	\$0
				0.00	\$0
	Bus Sheltors	1	EA	60,000.00	\$60,000
	- Foundations	1	EA	5,000.00	\$5,000
				0.00	\$0
	** End of Section **				
	Signage			219.47	\$185,453
	Street Signage				
	- Post / Footing	26	EA	90.75	\$2,360
	- Pedestrian Sign	6	EA	43.86	\$263
	- Directional Arrow	6	EA	37.81	\$227
	- No Parking Sign	17	EA	55.96	\$951
	- Tow Away Zone Sign	17	EA	25.71	\$437
	- Emergency Snow Route Sign	15	EA	25.71	\$386
	- One Way Sign	1	EA	31.76	\$32
	- Bike Lane Sign	8	EA	62.01	\$496
	- Stop Sign	3	EA	43.86	\$132
	- 2 Hour Parking Sign	3	EA	37.81	\$113
	- Dead End Sign	1	EA	55.96	\$56
	- To I-64 Sign		EA	0.00	\$0
	- Reserved Parking Sign		EA	0.00	\$0
	- Do Not Enter Sign		EA	0.00	\$0
	- Begin Turning Sign		EA	0.00	\$0
	- Rt Lane Must Turn Right Sign		EA	0.00	\$0
	Site Signage Allowances				
	- Custom Concrete Topographical Map	1	EA	35,000.00	\$35,000
	- Community Board / Way Finding		EA	0.00	\$0
	- Corner Markers	5	EA	23,000.00	\$115,000
	- Transit Interpretation at Bus Stop	2	EA	15,000.00	\$30,000
	- Commemorative Walk at Bridge		EA	0.00	\$0
				0.00	\$0
	** End of Section **				
G2050	Landscaping			359.81	\$304,038
	Plantings			23.55	\$19,900
	Traditional Shade Trees				
	- TMD	9	EA	500.00	\$4,500



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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- TSM		8	EA	350.00	\$2,800
- TLG		2	EA	800.00	\$1,600
				0.00	\$0
Silva Cell Shade Trees				0.00	\$0
- TMD		3	EA	500.00	\$1,500
- TSM		2	EA	350.00	\$700
- TLG		11	EA	800.00	\$8,800
				0.00	\$0
** End of Section **					
Planters				336.26	\$284,138
Silva Cell Tree Pits, (10 count cluster)					
- Excavation		15.9	CY	9.68	\$154
- Geotextile Fabric at Bott of Excav		510.0	SF	1.92	\$978
- Aggregate Subbase, 4"		2.0	CY	34.97	\$68
- #8, #89 Stone Choker Layer, 2"		1.0	CY	41.75	\$41
- Sand Choker Layer, 2"		1.0	CY	47.80	\$47
- 2x Silva Cells		10	EA	219.31	\$2,193
- Root Barrier		200	SF	7.56	\$1,513
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		7.8	CY	54.45	\$424
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		60.0	LF	10.00	\$600
- Overflow Riser		1	EA	121.00	\$121
- 4" Distributer Pipe		15.0	LF	10.00	\$150
- Misc. Backfill		3.3	CY	23.60	\$79
- Haul Off Surplus Materials		15.2	CY	20.00	\$304
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Silva Cell Tree Pits, (12 count cluster)					
- Excavation		19.1	CY	9.68	\$185
- Geotextile Fabric at Bott of Excav		612.0	SF	1.92	\$1,174
- Aggregate Subbase, 4"		2.3	CY	34.97	\$82
- #8, #89 Stone Choker Layer, 2"		1.2	CY	41.75	\$49
- Sand Choker Layer, 2"		1.2	CY	47.80	\$56
- 2x Silva Cells		12	EA	219.31	\$2,632
- Root Barrier		240	SF	7.56	\$1,815
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		9.3	CY	54.45	\$508
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		72.0	LF	10.00	\$720
- Overflow Riser		1	EA	121.00	\$145
- 4" Distributer Pipe		18.0	LF	10.00	\$180
- Misc. Backfill		4.0	CY	23.60	\$94
- Haul Off Surplus Materials		18.2	CY	20.00	\$364





**West Main Street Corridor Improvements
Charlottesville, VA**

**ROM Estimate
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PH 4 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (14 count cluster)	1	EA		
- Excavation	22.3	CY	9.68	\$216
- Geotextile Fabric at Bott of Excav	714.0	SF	1.92	\$1,369
- Aggregate Subbase, 4"	2.7	CY	34.97	\$96
- #8, #89 Stone Choker Layer, 2"	1.4	CY	41.75	\$57
- Sand Choker Layer, 2"	1.4	CY	47.80	\$65
- 2x Silva Cells	14	EA	219.31	\$3,070
- Root Barrier	280	SF	7.56	\$2,118
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	10.9	CY	54.45	\$593
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	84.0	LF	10.00	\$840
- Overflow Riser	1	EA	121.00	\$169
- 4" Distributer Pipe	21.0	LF	10.00	\$210
- Misc. Backfill	4.7	CY	23.60	\$110
- Haul Off Surplus Materials	21.3	CY	20.00	\$425
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (16 count cluster)	3	EA		
- Excavation	229.3	CY	9.68	\$2,220
- Geotextile Fabric at Bott of Excav	7,344.0	SF	1.92	\$14,085
- Aggregate Subbase, 4"	28.2	CY	34.97	\$985
- #8, #89 Stone Choker Layer, 2"	14.1	CY	41.75	\$588
- Sand Choker Layer, 2"	14.1	CY	47.80	\$673
- 2x Silva Cells	48	EA	219.31	\$10,527
- Root Barrier	2,880	SF	7.56	\$21,780
- Compacted Fill Beneath Tree	6.2	CY	23.60	\$147
- Planting Soil	112.0	CY	54.45	\$6,098
- Washed River Rock over Root Ball	0.6	CY	41.75	\$25
- 6" Under Drain	288.0	LF	10.00	\$2,880
- Overflow Riser	5	EA	121.00	\$581
- 4" Distributer Pipe	72.0	LF	10.00	\$720
- Misc. Backfill	48.0	CY	23.60	\$1,133
- Haul Off Surplus Materials	218.7	CY	20.00	\$4,373
- Tree Grates	96.0	SF	98.31	\$9,438
			0.00	\$0
Silva Cell Tree Pits, (18 count cluster)	1	EA		
- Excavation	28.7	CY	9.68	\$277
- Geotextile Fabric at Bott of Excav	918.0	SF	1.92	\$1,761
- Aggregate Subbase, 4"	3.5	CY	34.97	\$123
- #8, #89 Stone Choker Layer, 2"	1.8	CY	41.75	\$73
- Sand Choker Layer, 2"	1.8	CY	47.80	\$84
- 2x Silva Cells	18	EA	219.31	\$3,948





**West Main Street Corridor Improvements
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PH 4 - STREET IMPROVEMENTS	QTY	UNIT	\$/UNIT	TOTAL
- Root Barrier	360	SF	7.56	\$2,723
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	14.0	CY	54.45	\$762
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	108.0	LF	10.00	\$1,080
- Overflow Riser	2	EA	121.00	\$218
- 4" Distributer Pipe	27.0	LF	10.00	\$270
- Misc. Backfill	6.0	CY	23.60	\$142
- Haul Off Surplus Materials	27.3	CY	20.00	\$547
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (23 count cluster)	1	EA		
- Excavation	36.6	CY	9.68	\$355
- Geotextile Fabric at Bott of Excav	1,173.0	SF	1.92	\$2,250
- Aggregate Subbase, 4"	4.5	CY	34.97	\$157
- #8, #89 Stone Choker Layer, 2"	2.2	CY	41.75	\$94
- Sand Choker Layer, 2"	2.2	CY	47.80	\$107
- 2x Silva Cells	23	EA	219.31	\$5,044
- Root Barrier	460	SF	7.56	\$3,479
- Compacted Fill Beneath Tree	2.1	CY	23.60	\$49
- Planting Soil	17.9	CY	54.45	\$974
- Washed River Rock over Root Ball	0.2	CY	41.75	\$8
- 6" Under Drain	138.0	LF	10.00	\$1,380
- Overflow Riser	2	EA	121.00	\$278
- 4" Distributer Pipe	34.5	LF	10.00	\$345
- Misc. Backfill	7.7	CY	23.60	\$181
- Haul Off Surplus Materials	34.9	CY	20.00	\$699
- Tree Grates	32.0	SF	98.31	\$3,146
			0.00	\$0
Silva Cell Tree Pits, (25 count cluster)	2	EA		
- Excavation	159.3	CY	9.68	\$1,542
- Geotextile Fabric at Bott of Excav	5,100.0	SF	1.92	\$9,781
- Aggregate Subbase, 4"	19.6	CY	34.97	\$684
- #8, #89 Stone Choker Layer, 2"	9.8	CY	41.75	\$408
- Sand Choker Layer, 2"	9.8	CY	47.80	\$467
- 2x Silva Cells	50	EA	219.31	\$10,966
- Root Barrier	2,000	SF	7.56	\$15,125
- Compacted Fill Beneath Tree	4.1	CY	23.60	\$98
- Planting Soil	77.8	CY	54.45	\$4,235
- Washed River Rock over Root Ball	0.4	CY	41.75	\$17
- 6" Under Drain	300.0	LF	10.00	\$3,000
- Overflow Riser	5	EA	121.00	\$605
- 4" Distributer Pipe	75.0	LF	10.00	\$750
- Misc. Backfill	33.3	CY	23.60	\$787
- Haul Off Surplus Materials	151.9	CY	20.00	\$3,037



**West Main Street Corridor Improvements
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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Tree Grates		64.0	SF	98.31	\$6,292
				0.00	\$0
Silva Cell Tree Pits, (28 count cluster)		1	EA		
- Excavation		44.6	CY	9.68	\$432
- Geotextile Fabric at Bott of Excav		1,428.0	SF	1.92	\$2,739
- Aggregate Subbase, 4"		5.5	CY	34.97	\$191
- #8, #89 Stone Choker Layer, 2"		2.7	CY	41.75	\$114
- Sand Choker Layer, 2"		2.7	CY	47.80	\$131
- 2x Silva Cells		28	EA	219.31	\$6,141
- Root Barrier		560	SF	7.56	\$4,235
- Compacted Fill Beneath Tree		2.1	CY	23.60	\$49
- Planting Soil		21.8	CY	54.45	\$1,186
- Washed River Rock over Root Ball		0.2	CY	41.75	\$8
- 6" Under Drain		168.0	LF	10.00	\$1,680
- Overflow Riser		3	EA	121.00	\$339
- 4" Distributer Pipe		42.0	LF	10.00	\$420
- Misc. Backfill		9.3	CY	23.60	\$220
- Haul Off Surplus Materials		42.5	CY	20.00	\$850
- Tree Grates		32.0	SF	98.31	\$3,146
				0.00	\$0
Total Silva Cell Tree Pit Clusters		11	EA	0.00	\$0
				0.00	\$0
Typical Tree Planter		19	EA	0.00	\$0
- Excavation		45	CY	9.68	\$436
- Geotextile Fabric at Bott of Excav		380	SF	1.23	\$468
- Root Barrier		1,216	SF	7.56	\$9,196
- Planting Soil		45	CY	54.45	\$2,452
- Tree Grates		304	SF	158.81	\$48,279
				0.00	\$0
** End of Section **					
Irrigation Systems				0.00	\$0
Irrigation Systems Allowance - None				0.00	\$0
				0.00	\$0
** End of Section **					
G30 Site Civil / Mechanical Utilities				82.56	\$69,763.54
G3020 Sanitary Sewer				7.10	\$6,000
Sanitary Sewer Piping				7.10	\$6,000
Sanitary Sewer Modifications Allowance					
Adjust Sanit Sewer MH to Grade		1	LS	6,000.00	\$6,000
(from prev estimate)					
** End of Section **					
G3030 Storm Sewer				75.46	\$63,764
Storm Sewer				63.97	\$54,053





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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
New Storm Sewer					
- Excavation		369	CY	6.53	\$2,410
- Trench Box		1	LS	5,000.00	\$5,000
- Pipe Bedding		61	CY	36.91	\$2,269
- 15" Storm Pipe		55	LF	40.54	\$2,229
- 18" Storm Pipe		360	LF	49.01	\$17,642
- 24" Storm Pipe			LF	0.00	\$0
- Curb Inlets		3	EA	3,000.80	\$9,002
- Manholes Complete		3	EA	4,259.20	\$12,778
- Backfill		369	CY	7.38	\$2,723
				0.00	\$0
** End of Section **					
Other Storm Sewer				11.49	\$9,710
Remove Existing Storm Sewer (Assume similar quantities as new)					
- Excavate / Remove Existing Pipe		415	LF	18.15	\$7,532
- Demo/Remove Existing Structures		6	EA	363.00	\$2,178
** End of Section **					
G40	Site Electrical Utilities			2,210.76	\$1,868,089.07
G4010	Undergrounding Overhead Utilities			1,321.40	\$1,116,586
	Undergrounding Overhead Utilities			1,321.40	\$1,116,586
Timmons Duct Bank Estimate (See Timmons Detailed Backup)					
	Dominion Virginia Power Undergrounding Infrast.	1	LS	922,260.00	\$922,260
	Comcast Undergrounding Infrastructure	1	LS	63,800.00	\$63,800
	Lumos Undergrounding Infrastructure	1	LS	71,774.00	\$71,774
	Century Link Undergrounding Infrastructure	1	LS	58,752.00	\$58,752
				0.00	\$0
** End of Section **					
G4020	Site Lighting			231.36	\$195,503
	Exterior Lighting Fixtures & Controls			231.36	\$195,503
	Power conduit/wire for parking meters/spare- allow	1,800	LF	16.17	\$29,106
	Lighting Control Cabinet Assembly LP-A (SEE PHASE 3)				
	- Lighting panel 120/240v		PH 3	0.00	\$0
	- Fused safety switch 200a		PH 3	0.00	\$0
	- NEMA 4 Cabinet 72x31x24		PH 3	0.00	\$0
	- Meter socket		PH 3	0.00	\$0
	- Duplex WP		PH 3	0.00	\$0
	- Telephone jack		PH 3	0.00	\$0
	- Photo cell		PH 3	0.00	\$0





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PH 4 - STREET IMPROVEMENTS		QTY	UNIT	\$/UNIT	TOTAL
- Ground rod 10'			PH 3	0.00	\$0
- PVC conduit stub outs			PH 3	0.00	\$0
- Concrete pad 43"x36"x30"			PH 3	0.00	\$0
- Anchor bolts			PH 3	0.00	\$0
Site Lighting					
- Remove existing fixtures, poles, base- allow	4	EA		344.85	\$1,379
- Light fixture, type KX1, 115w LED, dual head/arm	25	EA		2,289.32	\$57,233
- Light fixture pole, aluminum, 18'	25	EA		1,252.35	\$31,309
- Lighting pole bases-	25	EA		1,167.65	\$29,191
- Lighting conduit, 1"	4,080	LF		4.21	\$17,180
- Lighting wire #6	8,160	LF		1.91	\$15,620
- Lighting wire gnd #10	4,080	LF		0.89	\$3,624
- Trenching/backfill	4,080	LF		2.66	\$10,861
				0.00	\$0
** End of Section **					
G4090 Other Site Electrical Utilities				657.99	\$556,000
Signalization				657.99	\$556,000
Remove Exist. Traffic Signalization -	2	EA		5,000.00	\$10,000
New Traffic Signalization - (@JPA 4 dir.)	1	EA		248,000.00	\$248,000
New Traffic Signalization - (@11th 4 dir.)	1	EA		248,000.00	\$248,000
New Traffic Signalization - (@10th 4 dir.)		PH 3		0.00	\$0
New Pedestrian Signalization - Ph 4	2	EA		25,000.00	\$50,000
				0.00	\$0
** End of Section **					
Subtotal - Building & Site				4,694.43	\$3,966,791



PROJECT BUDGET
WEST MAIN STREET - OVERALL SCHEMATIC DESIGN DUCT BANK ESTIMATE
CITY OF CHARLOTTESVILLE, VA
2/13/2017

	PHASE I	PHASE II	PHASE IV
CONSTRUCTION BID COSTS			
DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE	\$ 2,906,272	\$ 2,442,228	\$ 922,260
COMCAST UNDERGROUNDING INFRASTRCTURE	\$ 208,117	\$ 141,595	\$ 63,800
LUMOS UNDERGROUNDING INFRASTRCTURE	\$ 267,477	\$ 195,100	\$ 71,774
CENTURY LINK UNDERGROUNDING INFRASTRCTURE	\$ 191,200	\$ 141,100	\$ 58,752
Sub-Total:	\$ 3,573,066	\$ 2,920,023	\$ 1,116,586
TOTAL:	\$ 3,573,066	\$ 2,920,023	\$ 1,116,586

Notes:

**PROJECT BUDGET - PHASE I DETAILED BREAKDOWN
WEST MAIN STREET - OVERALL SCHEMATIC DESIGN DUCT BANK ESTIMATE
CITY OF CHARLOTTESVILLE, VA**

ENGINEER'S OPINION OF PROBABLE COSTS					
Item	Quantity	Unit	Unit Price	Total	
DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE					
2" PVC Conduit	484	LF	\$ 8.00	\$ 3,872.00	
4" PVC Conduit	8085	LF	\$ 12.00	\$ 97,020.00	
6" PVC Conduit	5855	LF	\$ 16.00	\$ 93,680.00	
8" PVC Conduit	3561	LF	\$ 20.00	\$ 71,220.00	
Open trenching/backfill	2266	LF	\$ 30.00	\$ 67,980.00	
Terminal pole connections	5	EA	\$ 3,000.00	\$ 15,000.00	
Splice Boxes	4	EA	\$ 1,000.00	\$ 4,000.00	
Concrete Vault	7	EA	\$ 20,000.00	\$ 140,000.00	
Concrete Class A3 (concrete encasement)	400	CY	\$ 1,200.00	\$ 480,000.00	
pre-cast concrete slab for pad-mounted equipment	11	EA	\$ 3,500.00	\$ 38,500.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 50,000.00	\$ 50,000.00	
Cable/Equipment installation by DVP	1	LS	\$ 1,500,000.00	\$ 1,500,000.00	
Private Service Connection to each property/building	23	EA	\$ 15,000.00	\$ 345,000.00	
Sub-Total for DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE:				\$ 2,906,272.00	
COMCAST UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	1,671	LF	\$ 12.00	\$ 20,052.00	
Open trenching/backfill	1671	LF	\$ 15.00	\$ 25,065.00	
Handholes	13	EA	\$ 1,000.00	\$ 13,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 10,000.00	\$ 10,000.00	
Cable/Equipment installation by Comcast	1	LS	\$ 25,000.00	\$ 25,000.00	
Private Service Connection to each property/building	23	EA	\$ 5,000.00	\$ 115,000.00	
Sub-Total for COMCAST UNDERGROUNDING INFRASTRUCTURE:				\$ 208,117.00	
LUMOS UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	1,351	LF	\$ 12.00	\$ 16,212.00	
Open trenching/backfill	1351	LF	\$ 15.00	\$ 20,265.00	
Handholes	6	EA	\$ 1,000.00	\$ 6,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 10,000.00	\$ 10,000.00	
Cable/Equipment installation by Lumos	1	LS	\$ 100,000.00	\$ 100,000.00	
Private Service Connection to each property/building	23	EA	\$ 5,000.00	\$ 115,000.00	
Sub-Total for LUMOS UNDERGROUNDING INFRASTRUCTURE:				\$ 267,477.00	
CENTURY LINK UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	600	LF	\$ 12.00	\$ 7,200.00	
Open trenching/backfill	600	LF	\$ 15.00	\$ 9,000.00	
Handholes	4	EA	\$ 1,000.00	\$ 4,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 6,000.00	\$ 6,000.00	
Cable/Equipment installation by Century Link	1	LS	\$ 50,000.00	\$ 50,000.00	
Private Service Connection to each property/building	23	EA	\$ 5,000.00	\$ 115,000.00	
Sub-Total for CENTURY LINK UNDERGROUNDING INFRASTRUCTURE:				\$ 191,200.00	

PROJECT BUDGET - PHASE II DETAILED BREAKDOWN
WEST MAIN STREET - OVERALL SCHEMATIC DESIGN DUCT BANK ESTIMATE
CITY OF CHARLOTTESVILLE, VA

ENGINEER'S OPINION OF PROBABLE COSTS					
Item	Quantity	Unit	Unit Price	Total	
DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE					
2" PVC Conduit	0	LF	\$ 8.00	\$ -	
4" PVC Conduit	6809	LF	\$ 12.00	\$ 81,708.00	
6" PVC Conduit	3370	LF	\$ 16.00	\$ 53,920.00	
8" PVC Conduit	2636	LF	\$ 20.00	\$ 52,720.00	
Open trenching/backfill	996	LF	\$ 30.00	\$ 29,880.00	
Terminal pole connections	3	EA	\$ 3,000.00	\$ 9,000.00	
Splice Boxes	6	EA	\$ 1,000.00	\$ 6,000.00	
Concrete Vault	3	EA	\$ 20,000.00	\$ 60,000.00	
Concrete Class A3 (concrete encasement)	300	CY	\$ 1,200.00	\$ 360,000.00	
pre-cast concrete slab for pad-mounted equipment	4	EA	\$ 3,500.00	\$ 14,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 50,000.00	\$ 50,000.00	
Cable/Equipment installation by DVP	1	LS	\$ 1,500,000.00	\$ 1,500,000.00	
Private Service Connection to each property/building	15	EA	\$ 15,000.00	\$ 225,000.00	
Sub-Total for DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE:				\$ 2,442,228.00	
COMCAST UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	985	LF	\$ 12.00	\$ 11,820.00	
Open trenching/backfill	985	LF	\$ 15.00	\$ 14,775.00	
Handholes	5	EA	\$ 1,000.00	\$ 5,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 10,000.00	\$ 10,000.00	
Cable/Equipment installation by Comcast	1	LS	\$ 25,000.00	\$ 25,000.00	
Private Service Connection to each property/building	15	EA	\$ 5,000.00	\$ 75,000.00	
Sub-Total for COMCAST UNDERGROUNDING INFRASTRUCTURE:				\$ 141,595.00	
LUMOS UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	300	LF	\$ 12.00	\$ 3,600.00	
Open trenching/backfill	300	LF	\$ 15.00	\$ 4,500.00	
Handholes	2	EA	\$ 1,000.00	\$ 2,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 10,000.00	\$ 10,000.00	
Cable/Equipment installation by Lumos	1	LS	\$ 100,000.00	\$ 100,000.00	
Private Service Connection to each property/building	15	EA	\$ 5,000.00	\$ 75,000.00	
Sub-Total for LUMOS UNDERGROUNDING INFRASTRUCTURE:				\$ 195,100.00	
CENTURY LINK UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	300	LF	\$ 12.00	\$ 3,600.00	
Open trenching/backfill	300	LF	\$ 15.00	\$ 4,500.00	
Handholes	2	EA	\$ 1,000.00	\$ 2,000.00	
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 6,000.00	\$ 6,000.00	
Cable/Equipment installation by Century Link	1	LS	\$ 50,000.00	\$ 50,000.00	
Private Service Connection to each property/building	15	EA	\$ 5,000.00	\$ 75,000.00	
Sub-Total for CENTURY LINK UNDERGROUNDING INFRASTRUCTURE:				\$ 141,100.00	

**PROJECT BUDGET - PHASE IV DETAILED BREAKDOWN
WEST MAIN STREET - OVERALL SCHEMATIC DESIGN DUCT BANK ESTIMATE
CITY OF CHARLOTTESVILLE, VA**

ENGINEER'S OPINION OF PROBABLE COSTS					
Item	Quantity	Unit	Unit Price	Total	
DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE					
2" PVC Conduit	0	LF	\$ 8.00	\$	-
4" PVC Conduit	2035	LF	\$ 12.00	\$	24,420.00
6" PVC Conduit	940	LF	\$ 16.00	\$	15,040.00
8" PVC Conduit	740	LF	\$ 20.00	\$	14,800.00
Open trenching/backfill	200	LF	\$ 30.00	\$	6,000.00
Terminal pole connections	3	EA	\$ 3,000.00	\$	9,000.00
Splice Boxes	4	EA	\$ 1,000.00	\$	4,000.00
Concrete Vault	4	EA	\$ 20,000.00	\$	80,000.00
Concrete Class A3 (concrete encasement)	100	CY	\$ 1,200.00	\$	120,000.00
pre-cast concrete slab for pad-mounted equipment	4	EA	\$ 3,500.00	\$	14,000.00
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 30,000.00	\$	30,000.00
Cable/Equipment installation by DVP	1	LS	\$ 500,000.00	\$	500,000.00
Private Service Connection to each property/building	7	EA	\$ 15,000.00	\$	105,000.00
Sub-Total for DOMINION VIRGINIA POWER UNDERGROUNDING INFRASTRUCTURE:				\$	922,260.00
COMCAST UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	400	LF	\$ 12.00	\$	4,800.00
Open trenching/backfill	400	LF	\$ 15.00	\$	6,000.00
Handholes	3	EA	\$ 1,000.00	\$	3,000.00
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 5,000.00	\$	5,000.00
Cable/Equipment installation by Comcast	1	LS	\$ 10,000.00	\$	10,000.00
Private Service Connection to each property/building	7	EA	\$ 5,000.00	\$	35,000.00
Sub-Total for COMCAST UNDERGROUNDING INFRASTRUCTURE:				\$	63,800.00
LUMOS UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	362	LF	\$ 12.00	\$	4,344.00
Open trenching/backfill	362	LF	\$ 15.00	\$	5,430.00
Handholes	2	EA	\$ 1,000.00	\$	2,000.00
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 5,000.00	\$	5,000.00
Cable/Equipment installation by Lumos	1	LS	\$ 20,000.00	\$	20,000.00
Private Service Connection to each property/building	7	EA	\$ 5,000.00	\$	35,000.00
Sub-Total for LUMOS UNDERGROUNDING INFRASTRUCTURE:				\$	71,774.00
CENTURY LINK UNDERGROUNDING INFRASTRUCTURE					
4" PVC Conduit	176	LF	\$ 12.00	\$	2,112.00
Open trenching/backfill	176	LF	\$ 15.00	\$	2,640.00
Handholes	1	EA	\$ 1,000.00	\$	1,000.00
Incidental Items (tracer wire, conduit bracing, shoring, etc.)	1	LS	\$ 3,000.00	\$	3,000.00
Cable/Equipment installation by Century Link	1	LS	\$ 15,000.00	\$	15,000.00
Private Service Connection to each property/building	7	EA	\$ 5,000.00	\$	35,000.00
Sub-Total for CENTURY LINK UNDERGROUNDING INFRASTRUCTURE:				\$	58,752.00

WEST MAIN STREET CORRIDOR IMPROVEMENTS
PROJECT: GAS LINE REPLACEMENT WEST OF JEFFERSON PARK AVENUE
PRELIMINARY COST ESTIMATE - CONSTRUCTION YEAR 2017
DATE: 02/14/2017

<u>Item</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Cost</u>	<u>Total Cost</u>
Job Set-Up				
Maintenance of Traffic	2,000	LF	80.00	\$ 160,000
Erosion Control				
Inlet Protection	30	EA	250.00	\$ 7,500
Clearing/Grading				
General Excavation/Earthwork	1	LS	5,000.00	\$ 5,000
Demolition				
Demo Asphalt	750	SY	18.00	\$ 13,500
Demo Curb and Gutter	150	LF	10.00	\$ 1,500
Demo Sidewalks	200	SY	54.00	\$ 10,800
Vehicular Paving - Asphalt				
Saw Cut Existing Pavement	15,000	LF	15.00	\$ 225,000
Asphalt Concrete Surface 2" (SM-9.5A)	65	Ton	120.00	\$ 7,800
Asphalt Concrete Base 2.5" (IM-19.0D)	80	Ton	110.00	\$ 8,800
Asphalt Concrete Base 3.5" (BM-25.0)	125	Ton	100.00	\$ 12,500
Aggregate Base Material 8" (No. 21B)	275	Ton	25.00	\$ 6,875
Concrete Curb	100	LF	20.00	\$ 2,000
Pedestrian Paving				
Sidewalk-Poured In Place Concrete	150	SF	8.00	\$ 1,200
Aggr. Base Material 6" (No. 21B)	10	Ton	25.00	\$ 250
Betterment Utilities (Gas Relocation)				
4" PE Gas Main	2,100	LF	40.00	\$ 84,000

2" PE Gas Main	3,700	LF	30.00	\$	111,000
Main Line Excavation	1,600	CY	65.00	\$	104,000
Tie-in To Existing Main	9	EA	5,000.00	\$	45,000
Valves	21	EA	2,000.00	\$	42,000
1/2" Service Connections	45	EA	1,500.00	\$	67,500
Test Stations	6	EA	2,500.00	\$	15,000
Select Backfill	1,600	CY	40.00	\$	64,000
			Subtotal:	\$	995,000
			Design Contengency (10%)	\$	99,500
			<u>Additional Costs (Betterment Utilities):</u>		
			Construction Contingency (20%)	\$	199,000
			PROJECT A (BETTERMENT UTILITIES) TOTAL:	\$	1,294,000

WEST MAIN STREET CORRIDOR IMPROVEMENTS
PROJECT: WATER AND GAS REPLACEMENT EAST OF JEFFERSON PARK AVENUE
PRELIMINARY COST ESTIMATE - CONSTRUCTION YEAR 2017
DATE: 02/14/2017

Betterment Utilities (Water & Gas Relocation)

WATER

12" DI Water Main	3,250	LF	80.00	\$	260,000
Main Line Excavation	2,200	CY	75.00	\$	165,000
Tie-in To Existing Main	23	EA	6,500.00	\$	149,500
12" Valves	18	EA	2,500.00	\$	45,000
Service Connections	53	EA	1,500.00	\$	79,500
Relocate Water Meters	3	EA	1,200.00	\$	3,600
Fire Hydrant Assemblies	19	EA	3,000.00	\$	57,000
Select Backfill	2,200	CY	40.00	\$	88,000
			Water Improvements Subtotal:	\$	848,000

GAS

4" PE Gas Main	3,650	LF	40.00	\$	146,000
Main Line Excavation	1,100	CY	65.00	\$	71,500
Tie-in To Existing Main	24	EA	5,000.00	\$	120,000
Valves	43	EA	2,000.00	\$	86,000
Service Connections	27	EA	1,500.00	\$	40,500
Test Stations	6	EA	2,500.00	\$	15,000
Select Backfill	1,100	CY	40.00	\$	44,000
			On Site Gas Subtotal:	\$	523,000

Subtotal Betterment Utilities Cost: \$ 1,371,000

Design Contengency (10%) \$ 137,000

Additional Costs

Construction Contingency (20%) \$ 274,000

BETTERMENT UTILITIES TOTAL: \$ 1,782,000

Maintenance Estimate - Parks & Recreation

WEST MAIN STREET MAINTENANCE TAKEOFF

April 28 2017

Task	Frequency	Occurrences	Duration per unit	Units	Staff Hours per Occurrence	Total Hours	Cost Per Hour	Total Cost
Trash Removal	Daily	365	0.12	10	1.20	438.0	\$ 26.00	\$ 11,388
Blowing	Daily	365	1.50	1	2.00	730.0	\$ 26.00	\$ 18,980
Sweeping	Daily	365	1.50	1	2.00	730.0	\$ 26.00	\$ 18,980
Tree Watering	Weekly During Season	30	0.12	151	18.12	543.6	\$ 26.00	\$ 14,134
Tree Grate Maintenance	Annually	1	1.00	144	144.00	144.0	\$ 26.00	\$ 3,744
Planters	Weekly During Season	40	0.12	86	10.32	412.8	\$ 26.00	\$ 10,733
Bench Inspection & Repair	Weekly During Season	52	0.25	1	0.25	13.0	\$ 26.00	\$ 338
Planting beds	Weekly During Season	40	2.00	1	2.00	80.0	\$ 26.00	\$ 2,080
Paver Repairs	As Needed	250	0.50	1	0.50	125.0	\$ 26.00	\$ 3,250
Table Inspection & Repair	Weekly During Season	52	0.25	1	0.25	13.0	\$ 26.00	\$ 338
Tree Pruning	Annually	1	0.50	151	75.50	75.5	\$ 26.00	\$ 1,963
Travel Time	Daily	365	1.00	3	3.00	1,095.0	\$ 26.00	\$ 28,470
TOTAL HOURS						4,399.9	Total Additional Salary	\$ 114,397
ANNUAL HOURS						1,272.0	FICA	\$ 8,751
ADDITIONAL FTE						3.46	Benefits (38% of FT Salary)	\$ 43,471
							Custodial Supplies	\$ 7,500
							Other Supplies	\$ 7,500
							Fuel	\$ 2,000
							Total Salary & Operations	\$ 183,620

Additional Equipment Required (Initial Capital Expense)	
Crew Vehicle	\$ 55,000
Water Truck	\$ 60,000
Additional Sweeper	\$ 75,000
Small Engine Equipment	\$ 20,000
Total Equipment	\$ 210,000

Total 1st Year Expense	\$ 393,620
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West Main Street Project - Maintenance Cost Estimates
Public Works Infrastructure Responsibilities
Summary - All Phases

EXISTING INFRASTRUCTURE					
	Phase 1	Phase 2	Phase 3	Phase 4	ALL PHASES
Marking and Signage	\$ 4,680.53	\$ 4,165.87	\$ 2,874.13	\$ 5,137.60	\$ 16,858.13
Raised Crosswalks	\$ -	\$ -	\$ -	\$ -	\$ -
Transit Amenities	\$ 530.67	\$ 165.83	\$ 1,125.00	\$ 2,250.00	\$ 4,071.50
Signage	\$ 840.00	\$ 1,470.00	\$ 1,050.00	\$ 1,260.00	\$ 4,620.00
Exterior Lighting Fixtures	\$ 10,773.00	\$ 10,443.00	\$ 7,920.00	\$ 2,305.80	\$ 31,441.80
Total	\$ 16,824.20	\$ 16,244.70	\$ 12,969.13	\$ 10,953.40	\$ 56,991.43

NEW DESIGN INFRASTRUCTURE					
	Phase 1	Phase 2	Phase 3	Phase 4	ALL PHASES
Marking and Signage	\$ 14,990.67	\$ 5,914.27	\$ 3,832.75	\$ 9,342.93	\$ 34,080.62
Raised Crosswalks	\$ 2,329.50	\$ 2,953.80	\$ 1,504.80	\$ 1,603.57	\$ 8,391.67
Transit Amenities	\$ 20,000.00	\$ 7,000.00	\$ 14,000.00	\$ 7,000.00	\$ 48,000.00
Signage	\$ 21,490.40	\$ 9,320.00	\$ 25,240.00	\$ 20,310.00	\$ 76,360.40
Exterior Lighting Fixtures	\$ 14,850.00	\$ 12,130.02	\$ 9,493.92	\$ 8,584.95	\$ 45,058.89
Total	\$ 73,660.57	\$ 37,318.09	\$ 54,071.47	\$ 46,841.45	\$ 211,891.57

VARIANCE SUMMARY					
	Phase 1	Phase 2	Phase 3	Phase 4	ALL PHASES
Marking and Signage	\$ 10,310.13	\$ 1,748.40	\$ 958.62	\$ 4,205.33	\$ 17,222.48
Raised Crosswalks	\$ 2,329.50	\$ 2,953.80	\$ 1,504.80	\$ 1,603.57	\$ 8,391.67
Transit Amenities	\$ 19,469.33	\$ 6,834.17	\$ 12,875.00	\$ 4,750.00	\$ 43,928.50
Signage	\$ 20,650.40	\$ 7,850.00	\$ 24,190.00	\$ 19,050.00	\$ 71,740.40
Exterior Lighting Fixtures	\$ 4,077.00	\$ 1,687.02	\$ 1,573.92	\$ 6,279.15	\$ 13,617.09
Total	\$ 56,836.37	\$ 21,073.39	\$ 41,102.33	\$ 35,888.05	\$ 154,900.14

PERCENT CHANGE SUMMARY					
	Phase 1	Phase 2	Phase 3	Phase 4	ALL PHASES
Marking and Signage	220%	42%	33%	82%	102%
Raised Crosswalks	100%	100%	100%	100%	100%
Transit Amenities	3669%	4121%	1144%	211%	1079%
Signage	2458%	534%	2304%	1512%	1553%
Exterior Lighting Fixtures	38%	16%	20%	272%	43%
Total	338%	130%	317%	328%	272%

West Main Street Project Cost Estimates

Phase 1

6th Street to Ridge/McIntire Road - 935 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
			REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR *				REPLACEMENT			MAINT/YR		TOTAL/YR *
ITEM	QTY	UNIT	Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL	ITEM	QTY	UNIT	Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
Traffic Markings **									Traffic Marking								
4" Single White Line (Solid and Striped)	1714	LF	6	\$ 1.50	\$ 2,571.00	\$ 0.15	\$ 257.10	\$ 685.60	- 4" Single White Line (Solid and Striped)	528	LF	6	\$ 1.50	\$ 792.00	\$ 0.15	\$ 79.20	\$ 211.20
4" Double Yellow	877	LF	6	\$ 3.00	\$ 2,631.00	\$ 0.30	\$ 263.10	\$ 701.60	- 6" Single White Line (Solid and Striped)	3455	LF	6	\$ 2.00	\$ 6,910.00	\$ 0.20	\$ 691.00	\$ 1,842.67
Stop Bar	7	EA	6	\$ 500.00	\$ 3,500.00	\$ 50.00	\$ 350.00	\$ 933.33	- 4" Double Yellow Solid Lines	1047	LF	6	\$ 3.00	\$ 3,141.00	\$ 0.30	\$ 314.10	\$ 837.60
Crosswalk	6	EA	6	\$ 850.00	\$ 5,100.00	\$ 85.00	\$ 510.00	\$ 1,360.00	- 24" Solid White Line (Stop Bar)	374	LF	6	\$ 8.00	\$ 2,992.00	\$ 0.80	\$ 299.20	\$ 797.87
Arrow Symbol	9	EA	6	\$ 250.00	\$ 2,250.00	\$ 25.00	\$ 225.00	\$ 600.00	- 24" Solid Yellow Line (Goring)	100	LF	6	\$ 8.00	\$ 800.00	\$ 0.80	\$ 80.00	\$ 213.33
Bike Lane Symbol	6	EA	6	\$ 250.00	\$ 1,500.00	\$ 25.00	\$ 150.00	\$ 400.00	- Arrow Symbol	8	EA	6	\$ 250.00	\$ 2,000.00	\$ 25.00	\$ 200.00	\$ 533.33
									- Bike Lane Symbol	13	EA	6	\$ 250.00	\$ 3,250.00	\$ 25.00	\$ 325.00	\$ 866.67
									- Bike Boxes	2,422	SF	6	\$ 15.00	\$ 36,330.00	\$ 1.50	\$ 3,633.00	\$ 9,688.00
					\$ 17,552.00		\$ 1,755.20	\$ 4,680.53						\$ 56,215.00			\$ 14,990.67
Raised Crosswalks									Raised Crosswalks								
								\$ -	PCC-1 PC Concrete Pavers at Raised Cross Walks								
									- 3" x 12" x 2-1/4" PC Paver	500	SF	10	\$ 10.41	\$ 5,205.00	\$ 2.08	\$ 1,041.00	\$ 1,561.50
									- 2'5" Wide x 8" Thick Conc Transition Strips	288	SF	15	\$ 10.00	\$ 2,880.00	\$ 2.00	\$ 576.00	\$ 768.00
																	\$ 2,329.50
Transit Amenities									Transit Amenities								
Bus Bench	2	EA	15	\$ 995.00	\$ 1,990.00	\$ 199.00	\$ 398.00	\$ 530.67	Bus Shelters	2	EA	15	\$ 60,000.00	\$ 120,000.00	\$ 6,000.00	\$ 12,000.00	\$ 20,000.00
								\$ 530.67									\$ 20,000.00
Signage									Signage +								
- Pedestrian Sign		EA							Street Signage								
- Directional Arrow		EA							- Pedestrian Sign	4	EA		\$ 43.86				
- No Parking Sign	10	EA							- Directional Arrow	5	EA		\$ 37.81				
- Tow Away Zone Sign	8	EA							- No Parking Sign	11	EA		\$ 55.96				
- Emergency Snow Route Sign	14	EA							- Tow Away Zone Sign	11	EA		\$ 25.71				
- One Way Sign		EA							- Emergency Snow Route Sign	17	EA		\$ 25.71				
- Bike Lane Sign	8	EA							- One Way Sign		EA		\$ -				
- Stop Sign	2	EA							- Bike Lane Sign	8	EA		\$ 62.01				
- 2 Hour Parking Sign		EA							- Stop Sign	2	EA		\$ 43.86				
- Dead End Sign		EA							- 2 Hour Parking Sign	4	EA		\$ 37.81				
- To I-64 Sign	1	EA							- Dead End Sign		EA		\$ -				
- Reserved Parking Sign		EA							- To I-64 Sign	1	EA		\$ 68.06				
- Do Not Enter Sign	2	EA							- Reserved Parking Sign	2	EA		\$ 31.76				
- Begin Turning Sign		EA							- Do Not Enter Sign	2	EA		\$ 55.96				
- Rt Lane Must Turn Right Sign	1	EA							- Begin Turning Sign	2	EA		\$ 93.81				
									- Rt Lane Must Turn Right Sign	2	EA		\$ 74.11				
TOTAL ALL (averaged cost/sign)	28	EA	10	150	\$ 4,200.00	\$ 15.00	\$ 420.00	\$ 840.00	TOTAL ALL (averaged cost/sign)	51	EA	10	150	\$ 7,650.00	\$ 15.00	\$ 765.00	\$ 1,530.00
									Site Signage Allowances								
									- Custom Concrete Topographical Map	1	EA	20	\$ 35,000.00	\$ 35,000.00	\$ 1,750.00	\$ 1,750.00	\$ 3,500.00
									- Community Board / Way Finding		EA		\$ -	\$ -	\$ -	\$ -	\$ -
									- Corner Markers	2	EA	20	\$ 23,000.00	\$ 46,000.00	\$ 1,150.00	\$ 2,300.00	\$ 4,600.00
									- Transit Interpretation at Bus Stop	2	EA	20	\$ 15,000.00	\$ 30,000.00	\$ 750.00	\$ 1,500.00	\$ 3,000.00
									- Commemorative Walk at Bridge		EA		\$ -	\$ -	\$ -	\$ -	\$ -
									- Memory Markers	168	EA	20	\$ 328.00	\$ 55,104.00	\$ 16.40	\$ 2,755.20	\$ 5,510.40
									- Art Panel	1	EA	20	\$ 30,000.00	\$ 30,000.00	\$ 1,500.00	\$ 1,500.00	\$ 3,000.00
									- Remembrance Quotes	10	EA	20	\$ 350.00	\$ 3,500.00	\$ 17.50	\$ 175.00	\$ 350.00
					\$ 4,200.00		\$ 420.00	\$ 840.00						\$ 207,254.00			\$ 21,490.40

West Main Street Project Cost Estimates

Phase 1

6th Street to Ridge/McIntire Road - 935 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE									
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR *	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR *	
			Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL	
Exterior Lighting Fixtures ***									Exterior Lighting Fixtures									
Dominion-Owned Street Light	5	EA	0	0	0	\$ 108.60	\$ 543.00	\$ 543.00	- Light fixture, type KX1, 115w LED, dual head/arm	25	EA	20	\$ 2,800.00	\$ 70,000	\$ 280.00	\$ 7,000.00	\$ 10,500.00	
City-Owned Ped Light	31	EA	20	\$ 2,200	\$ 68,200	\$ 220.00	\$ 6,820.00	\$ 10,230.00	- Light fixture, type KX1a, 130w LED, dual head/a	8	EA	20	\$ 3,000.00	\$ 24,000	\$ 300.00	\$ 2,400.00	\$ 3,600.00	
									- Light fixture, type KX1b, 65w LED, single head/a	2	EA	20	\$ 2,500.00	\$ 5,000	\$ 250.00	\$ 500.00	\$ 750.00	
								\$ 10,773.00									\$ 99,000.00	\$ 14,850.00
								\$ 16,824.20									\$ 73,660.57	

* Total/YR = Annual Maintenance-Utilities Cost + (Replacement Value divided by Life Cycle)

** Markings Annual Maintenance Cost - 10% assumed to refresh advanced wearing and repair following street cuts -- accelerated by heavy winter snow hauling

*** Light Fixtural Annual Maintenance Cost - Dominion lights = unit cost per VEPGA contract -- City ped lights = 10% relamping, painting, repairs

+ Standard Sign Maintenance 10% -- Fixed site signage 5%

West Main Street Project Cost Estimates

Phase 2

Bridge to 6th Street - 925 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR*	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR*
			Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
Traffic Markings **									Traffic Markings								
4" Single White Line (Solid and Striped)	1,774	LF	6	\$ 1.50	\$ 2,661.00	\$ 0.15	\$ 266.10	\$ 709.60	Traffic Markings (Thermo Plastic)								
4" Double Yellow	887	LF	6	\$ 3.00	\$ 2,661.00	\$ 0.30	\$ 266.10	\$ 709.60	- 4" Single White Line (Solid and Striped)	169	LF	6	\$ 1.50	\$ 253.50	\$ 0.15	\$ 25.35	\$ 67.60
Stop Bar	4	EA	6	\$ 500.00	\$ 2,000.00	\$ 50.00	\$ 200.00	\$ 533.33	- 6" Single White Line (Solid and Striped)	2990	LF	6	\$ 2.00	\$ 5,980.00	\$ 0.20	\$ 598.00	\$ 1,594.67
Crosswalk	8	EA	6	\$ 850.00	\$ 6,800.00	\$ 85.00	\$ 680.00	\$ 1,813.33	- 4" Double Yellow Solid Lines	1805	LF	6	\$ 3.00	\$ 5,415.00	\$ 0.30	\$ 541.50	\$ 1,444.00
Arrow Symbol		EA	6	\$ 250.00	\$ -	\$ 25.00	\$ -	\$ -	- 24" Solid White Line (Stop Bar)	35	LF	6	\$ 8.00	\$ 280.00	\$ 0.80	\$ 28.00	\$ 74.67
Bike Lane Symbol	6	EA	6	\$ 250.00	\$ 1,500.00	\$ 25.00	\$ 150.00	\$ 400.00	- 24" Solid Yellow Line (Goring)	0	LF	6	\$ 8.00	\$ -	\$ 0.80	\$ -	\$ -
									- Arrow Symbol	0	EA	6	\$ 250.00	\$ -	\$ 25.00	\$ -	\$ -
									- Bike Lane Symbol	11	EA	6	\$ 250.00	\$ 2,750.00	\$ 25.00	\$ 275.00	\$ 733.33
									- Bike Boxes	500	SF	6	\$ 15.00	\$ 7,500.00	\$ 1.50	\$ 750.00	\$ 2,000.00
					\$ 15,622.00		\$ 1,562.20	\$ 4,165.87					\$ 11,929.00		\$ 2,217.85	\$ 5,914.27	
Paved Surfaces									Paved Surfaces								
									PCC-1 PC Concrete Pavers at Raised Cross Walks								
									- 3" x 12" x 2-1/4" PC Paver	700	SF	10	\$ 10.41	\$ 7,284.00	\$ 2.08	\$ 1,457.40	\$ 2,185.80
									- 2'5" Wide x 8" Thick Conc Transition Strips	288	SF	15	\$ 10.00	\$ 2,880.00	\$ 2.00	\$ 576.00	\$ 768.00
					\$ -								\$ 10,164.00		\$ 2,033.40	\$ 2,953.80	
Exterior Furnishings									Exterior Furnishings								
Bus Bench	1	EA	15	\$ 995.00	\$ 995.00	\$ 99.50	\$ 99.50	\$ 165.83	Bus Shelters	1	EA	15	\$ 60,000.00	\$ 60,000.00	\$ 3,000.00	\$ 3,000.00	\$ 7,000.00
					\$ 995.00		\$ 99.50	\$ 165.83					\$ 60,000.00		\$ 3,000.00	\$ 7,000.00	
Signage									Signage +								
- Pedestrian Sign	2	EA							Street Signage								
- Directional Arrow		EA							- Post / Footing	26	EA		\$ 90.75	\$ 2,360.00			
- No Parking Sign	11	EA							- Pedestrian Sign	6	EA		\$ 43.86	\$ 263.00			
- Tow Away Zone Sign	12	EA							- Directional Arrow	6	EA		\$ 37.81	\$ 227.00			
- Emergency Snow Route Sign	12	EA							- No Parking Sign	12	EA		\$ 55.96	\$ 672.00			
- One Way Sign	1	EA							- Tow Away Zone Sign	14	EA		\$ 25.71	\$ 360.00			
- Bike Lane Sign	6	EA							- Emergency Snow Route Sign	19	EA		\$ 25.71	\$ 489.00			
- Stop Sign	1	EA							- One Way Sign	1	EA		\$ -	\$ 32.00			
- 2 Hour Parking Sign	4	EA							- Bike Lane Sign	4	EA		\$ 62.01	\$ 248.00			
- Dead End Sign		EA							- Stop Sign	1	EA		\$ 43.86	\$ 44.00			
- To I-64 Sign		EA							- 2 Hour Parking Sign	4	EA		\$ 37.81	\$ 151.00			
- Reserved Parking Sign		EA							- Dead End Sign	0	EA		\$ -	\$ -			
- Do Not Enter Sign		EA							- To I-64 Sign	2	EA		\$ 68.06	\$ 136.00			
- Begin Turning Sign		EA							- Reserved Parking Sign	0	EA		\$ 31.76	\$ -			
- Rt Lane Must Turn Right Sign		EA							- Do Not Enter Sign	0	EA		\$ 55.96	\$ -			
									- Begin Turning Sign	0	EA		\$ 93.81	\$ -			
									- Rt Lane Must Turn Right Sign	0	EA		\$ 74.11	\$ -			
TOTAL ALL (averaged cost/sign)	49	EA	10	\$ 150.00	\$ 7,350.00	\$ 15.00	\$ 735.00	\$ 1,470.00	TOTAL ALL (averaged cost/sign)	69	EA	10	\$ 150.00	\$ 10,350.00	\$ 15.00	\$ 1,035.00	\$ 2,070.00
					\$ 7,350.00			\$ 1,470.00	Site Signage Allowances								
									- Custom Concrete Topographical Map	0	EA	20	\$ 35,000.00	\$ -	\$ 1,750.00	\$ -	\$ -
									- Community Board / Way Finding	1	EA	20	\$ 25,000.00	\$ 25,000.00	\$ 1,250.00	\$ 1,250.00	\$ 2,500.00
									- Corner Markers	2	EA	20	\$ 23,000.00	\$ 46,000.00	\$ 1,150.00	\$ 2,300.00	\$ 4,600.00
									- Transit Interpretation at Bus Stop	1	EA	20	\$ 1,500.00	\$ 1,500.00	\$ 75.00	\$ 75.00	\$ 150.00
									- Commemorative Walk at Bridge	0	EA	20	\$ -	\$ -	\$ -	\$ -	\$ -
									- Memory Markers	0	EA	20	\$ 328.00	\$ -	\$ 16.40	\$ -	\$ -
									- Art Panel	0	EA	20	\$ 30,000.00	\$ -	\$ 1,500.00	\$ -	\$ -
									- Remembrance Quotes	0	EA	20	\$ 350.00	\$ -	\$ 17.50	\$ -	\$ -
					\$ 7,350.00			\$ 1,470.00					\$ 82,850.00		\$ 3,625.00	\$ 9,320.00	
Exterior Lighting Fixtures ***									Exterior Lighting Fixtures								
Dominion-Owned Street Light	5	EA	0	\$ -	\$ -	\$ 108.60	\$ 543.00	\$ 543.00	Site Lighting								
City-Owned Ped Light	30	EA	20	\$ 2,200.00	\$ 66,000.00	\$ 220.00	\$ 6,600.00	\$ 9,900.00	- Remove existing fixtures, poles, base- allow	33	EA		\$ 344.85	\$ 11,380.00			
									- Light fixture, type KX1, 115w LED, dual head/arm	31	EA	20	\$ 2,289.32	\$ 70,969.00	\$ 228.93	\$ 7,096.89	\$ 10,645.34
									- Light fixture, type KX1a, 130w LED, dual head/arm	4	EA	20	\$ 2,474.45	\$ 9,898.00	\$ 247.45	\$ 989.78	\$ 1,484.68

West Main Street Project Cost Estimates

Phase 2

Bridge to 6th Street - 925 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR*	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR*
			Cycle (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
									- Light fixture, type KX1b, 65w LED, single head/arm	0	EA	20	\$ 1,357.62	\$ -	\$ 135.76	\$ -	\$ -
					\$ 66,000.00			\$ 10,443.00						\$ 92,247.00		\$ 8,086.67	\$ 12,130.02
					\$ 89,967.00									\$ 257,190.00			\$ 37,318.09

* Total/YR = Annual Maintenance-Utilities Cost + (Replacement Value divided by Life Cycle)

** Markings Annual Maintenance Cost - 10% assumed to refresh advanced wearing and repair following street cuts -- accelerated by heavy winter snow hauling

*** Light Fixtural Annual Maintenance Cost - Dominion lights = unit cost per VEPGA contract -- City ped lights = 10% relamping, painting, repairs

+ Standard Sign Maintenance 10% -- Fixed site signage 5%

West Main Street Project Cost Estimates

Phase 3

Roosevelt Brown Blvd to Bridge - 1,045 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR *
			CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
Traffic Markings **									Traffic Markings								
Single White Line (Solid and Striped)	1,426	LF	6	\$ 1.50	\$ 2,139.00	\$ 0.15	\$ 213.90	\$ 570.40	Traffic Markings (Thermo Plastic)								
Double Yellow	713	LF	6	\$ 3.00	\$ 2,139.00	\$ 0.30	\$ 213.90	\$ 570.40	- 4" Single White Line (Solid and Striped)	295	LF	6	\$ 1.50	\$ 443.00	\$ 0.15	\$ 44.25	\$ 118.08
Crosswalk		EA	6	\$ 850.00	\$ -	\$ 85.00	\$ -	\$ -	- 6" Single White Line (Solid and Striped)	3015	LF	6	\$ 2.00	\$ 6,030.00	\$ 0.20	\$ 603.00	\$ 1,608.00
Stop Bar	7	EA	6	\$ 500.00	\$ 3,500.00	\$ 50.00	\$ 350.00	\$ 933.33	- 4" Double Yellow Solid Lines	940	LF	6	\$ 3.00	\$ 2,820.00	\$ 0.30	\$ 282.00	\$ 752.00
Arrow Symbol	5	EA	6	\$ 250.00	\$ 1,250.00	\$ 25.00	\$ 125.00	\$ 333.33	- 24" Solid White Line (Stop Bar)	100	LF	6	\$ 8.00	\$ 800.00	\$ 0.80	\$ 80.00	\$ 213.33
Bike Lane Symbol	7	EA	6	\$ 250.00	\$ 1,750.00	\$ 25.00	\$ 175.00	\$ 466.67	- 24" Solid Yellow Line (Goring)	0	LF	6	\$ 8.00	\$ -	\$ 0.80	\$ -	\$ -
									- Arrow Symbol	3	EA	6	\$ 250.00	\$ 750.00	\$ 25.00	\$ 75.00	\$ 200.00
									- Bike Lane Symbol	10	EA	6	\$ 250.00	\$ 500.00	\$ 25.00	\$ 250.00	\$ 333.33
									- Bike Box	152	SF	6	\$ 15.00	\$ 2,280.00	\$ 1.50	\$ 228.00	\$ 608.00
					\$ 10,778.00		\$ 1,077.80	\$ 2,874.13						\$ 13,623.00		\$ 1,562.25	\$ 3,832.75
Paved Surfaces									Paved Surfaces								
									PCC-1 PC Concrete Pavers at Raised Cross Walks								
									- 3" x 12" x 2-1/4" PC Paver	300	SF	10	\$ 10.41	\$ 3,122.00	\$ 2.08	\$ 624.60	\$ 936.80
									- 2'5" Wide x 8" Thick Conc Transition Strips	213	SF	15	\$ 10.00	\$ 2,130.00	\$ 2.00	\$ 426.00	\$ 568.00
								\$ -						\$ 5,252.00		\$ 1,050.60	\$ 1,504.80
Exterior Furnishings									Exterior Furnishings								
Bus Shelter	1	EA	10	\$ 7,500.00	\$ 7,500.00	\$ 375.00	\$ 375.00	\$ 1,125.00	Bus Shelters	2	EA	15	\$ 60,000.00	\$ 120,000.00	\$ 3,000.00	\$ 6,000.00	\$ 14,000.00
					\$ 7,500.00		\$ 375.00	\$ 1,125.00						\$ 120,000.00		\$ 6,000.00	\$ 14,000.00
Signage									Signage +								
- Pedestrian Sign		EA							Street Signage								
- Directional Arrow	4	EA							- Post / Footing	18	EA		\$ 90.75	\$ 1,634.00			
- No Parking Sign	10	EA							- Pedestrian Sign	2	EA		\$ 43.86	\$ 88.00			
- Tow Away Zone Sign	10	EA							- Directional Arrow	3	EA		\$ 37.81	\$ 113.00			
- Emergency Snow Route Sign	5	EA							- No Parking Sign	10	EA		\$ 55.96	\$ 560.00			
- One Way Sign		EA							- Tow Away Zone Sign	10	EA		\$ 25.71	\$ 257.00			
- Bike Lane Sign	2	EA							- Emergency Snow Route Sign	14	EA		\$ 25.71	\$ 360.00			
- Stop Sign	1	EA							- One Way Sign	0	EA		\$ -	\$ -			
- 2 Hour Parking Sign	2	EA							- Bike Lane Sign	3	EA		\$ 62.01	\$ 186.00			
- Dead End Sign		EA							- Stop Sign	1	EA		\$ 43.86	\$ 44.00			
- To I-64 Sign	1	EA							- 2 Hour Parking Sign	4	EA		\$ 37.81	\$ 151.00			
- Reserved Parking Sign		EA							- Dead End Sign	0	EA		\$ -	\$ -			
- Do Not Enter Sign		EA							- To I-64 Sign	1	EA		\$ 68.06	\$ 68.00			
- Begin Turning Sign		EA							- Reserved Parking Sign	0	EA		\$ 31.76	\$ -			
- Rt Lane Must Turn Right Sign		EA							- Do Not Enter Sign	0	EA		\$ 55.96	\$ -			
									- Begin Turning Sign	0	EA		\$ 93.81	\$ -			
									- Rt Lane Must Turn Right Sign	0	EA		\$ 74.11	\$ -			
TOTAL ALL (averaged cost/sign)	35	EA	10	\$ 150.00	\$ 5,250.00	\$ 15.00	\$ 525.00	\$ 1,050.00	TOTAL ALL (averaged cost/sign)	48	EA	10	\$ 150.00	\$ 7,200.00	\$ 15.00	\$ 720.00	\$ 1,440.00
								\$ 1,050.00	Site Signage Allowances								
									- Custom Concrete Topographical Map	1	EA	20	\$ 35,000.00	\$ 35,000.00	\$ 1,750.00	\$ 1,750.00	\$ 3,500.00
									- Community Board / Way Finding	0	EA	20	\$ -	\$ -	\$ -	\$ -	\$ -
									- Corner Markers	1	EA	20	\$ 23,000.00	\$ 23,000.00	\$ 1,150.00	\$ 1,150.00	\$ 2,300.00
									- Transit Interpretation at Bus Stop	2	EA	20	\$ 15,000.00	\$ 30,000.00	\$ 750.00	\$ 1,500.00	\$ 3,000.00
									- Commemorative Walk at Bridge	1	EA	20	\$ 150,000.00	\$ 150,000.00	\$ 7,500.00	\$ 7,500.00	\$ 15,000.00
									- Memory Markers	0	EA	20	\$ 328.00	\$ -	\$ 16.40	\$ -	\$ -
									- Art Panel	0	EA	20	\$ 30,000.00	\$ -	\$ 1,500.00	\$ -	\$ -
									- Remembrance Quotes	0	EA	20	\$ 350.00	\$ -	\$ 17.50	\$ -	\$ -
								\$ 1,050.00						\$ 248,661.00			\$ 25,240.00
Exterior Lighting Fixtures ***									Exterior Lighting Fixtures								
Dominion-Owned Street Light	0	EA	0	\$ -	\$ -	\$ 108.60	\$ -	\$ -	Site Lighting								
City-Owned Ped Light	24	EA	20	\$ 2,200.00	\$ 52,800.00	\$ 220.00	\$ 5,280.00	\$ 7,920.00	- Remove existing fixtures, poles, base- allow	34	EA		\$ 344.85	\$ 11,725.00			
									- Light fixture, type KX1, 115w LED, dual head/arm	19	EA	20	\$ 2,289.32	\$ 43,497.00	\$ 228.93	\$ 4,349.71	\$ 6,524.56

West Main Street Project Cost Estimates

Phase 3

Roosevelt Brown Blvd to Bridge - 1,045 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR *
			CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (YRS)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
									- Light fixture, type KX1a, 130w LED, dual head/arm	8	EA	20	\$ 2,474.45	\$ 19,796.00	\$ 247.45	\$ 1,979.56	\$ 2,969.36
									- Light fixture, type KX1b, 65w LED, single head/arm		EA	20	\$ 1,357.62	\$ -	\$ 135.76	\$ -	\$ -
								\$ 7,920.00						\$ 75,018.00		\$ 6,329.27	\$ 9,493.92
								\$ 12,969.13						\$ 462,554.00			\$ 54,071.47

* Total/YR = Annual Maintenance-Utilities Cost + (Replacement Value divided by Life Cycle)

** Markings Annual Maintenance Cost - 10% assumed to refresh advanced wearing and repair following street cuts -- accelerated by heavy winter snow hauling

*** Light Fixtural Annual Maintenance Cost - Dominion lights = unit cost per VEPGA contract -- City ped lights = 10% relamping, painting, repairs

+ Standard Sign Maintenance 10% -- Fixed site signage 5%

West Main Street Project Cost Estimates

Phase 4

Jefferson Park to Roosevelt Brown Blvd - 845 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE								
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR*	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR*
			CYCLE (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL
Traffic Markings **									Traffic Markings								
Single White Line (Solid and Striped)	3296		6	\$ 1.50	\$ 4,944.00	\$ 0.15	\$ 494.40	\$ 1,318.40	Traffic Markings (Thermo Plastic)								
Double Yellow	824		6	\$ 3.00	\$ 2,472.00	\$ 0.30	\$ 247.20	\$ 659.20	- 4" Single White Line (Solid and Striped)	860	LF	6	\$ 1.50	\$ 1,290.00	\$ 0.15	\$ 129.00	\$ 344.00
Crosswalk	6		6	\$ 850.00	\$ 5,100.00	\$ 85.00	\$ 510.00	\$ 1,360.00	- 6" Single White Line (Solid and Striped)	2,285	LF	6	\$ 2.00	\$ 4,570.00	\$ 0.20	\$ 457.00	\$ 1,218.67
Stop Bar	9		6	\$ 500.00	\$ 4,500.00	\$ 50.00	\$ 450.00	\$ 1,200.00	- 4" Double Yellow Solid Lines	735	LF	6	\$ 3.00	\$ 2,205.00	\$ 0.30	\$ 220.50	\$ 588.00
Arrow Symbol	8	EA	6	\$ 250.00	\$ 2,000.00	\$ 25.00	\$ 200.00	\$ 533.33	- 24" Solid White Line (Stop Bar)	102	LF	6	\$ 8.00	\$ 816.00	\$ 0.80	\$ 81.60	\$ 217.60
Bike Lane Symbol	1	EA	6	\$ 250.00	\$ 250.00	\$ 25.00	\$ 25.00	\$ 66.67	- 24" Solid Yellow Line (Goring)	-	LF	6	\$ 8.00	\$ -	\$ 0.80	\$ -	\$ -
									- Arrow Symbol	10	EA	6	\$ 250.00	\$ 2,500.00	\$ 25.00	\$ 250.00	\$ 666.67
									- Bike Lane Symbol	9	EA	6	\$ 250.00	\$ 2,250.00	\$ 25.00	\$ 225.00	\$ 600.00
									- Bike Box	1,427	SF	6	\$ 15.00	\$ 21,405.00	\$ 1.50	\$ 2,140.50	\$ 5,708.00
					\$ 19,266.00		\$ 1,926.60	\$ 5,137.60					\$ 35,036.00		\$ 3,374.60	\$ 9,342.93	
Paved Surfaces									Paved Surfaces								
									PCC-1 PC Concrete Pavers at Raised Cross Walks								
									- 3" x 12" x 2-1/4" PC Paver	300	SF	10	\$ 10.41	\$ 3,123.00	\$ 2.08	\$ 624.60	\$ 936.90
									- 2'5" Wide x 8" Thick Conc Transition Strips	250	SF	15	\$ 10.00	\$ 2,500.00	\$ 2.00	\$ 500.00	\$ 666.67
								\$ -					\$ 5,623.00		\$ 1,124.60	\$ 1,603.57	
Exterior Furnishings									Exterior Furnishings								
Bus Shelter	2	EA	10	\$ 7,500.00	\$ 15,000.00	\$ 375.00	\$ 750.00	\$ 2,250.00	Bus Shelters	1	EA	15	\$ 60,000.00	\$ 60,000.00	\$ 3,000.00	\$ 3,000.00	\$ 7,000.00
					\$ 15,000.00		\$ 750.00	\$ 2,250.00					\$ 60,000.00		\$ 3,000.00	\$ 7,000.00	
Signage									Signage +								
- Pedestrian Sign		EA							Street Signage								
- Directional Arrow		EA							- Post / Footing	26	EA		\$ 90.75				
- No Parking Sign	12	EA							- Pedestrian Sign	6	EA		\$ 43.86				
- Tow Away Zone Sign	10	EA							- Directional Arrow	6	EA		\$ 37.81				
- Emergency Snow Route Sign	8	EA							- No Parking Sign	17	EA		\$ 55.96				
- One Way Sign	1	EA							- Tow Away Zone Sign	17	EA		\$ 25.71				
- Bike Lane Sign	6	EA							- Emergency Snow Route Sign	15	EA		\$ 25.71				
- Stop Sign	2	EA							- One Way Sign	1	EA		\$ -				
- 2 Hour Parking Sign	2	EA							- Bike Lane Sign	8	EA		\$ 62.01				
- Dead End Sign		EA							- Stop Sign	3	EA		\$ 43.86				
- To I-64 Sign	1	EA							- 2 Hour Parking Sign	3	EA		\$ 37.81				
- Reserved Parking Sign		EA							- Dead End Sign	1	EA		\$ -				
- Do Not Enter Sign		EA							- To I-64 Sign	0	EA		\$ 68.06				
- Begin Turning Sign		EA							- Reserved Parking Sign	0	EA		\$ 31.76				
- Rt Lane Must Turn Right Sign		EA							- Do Not Enter Sign	0	EA		\$ 55.96				
									- Begin Turning Sign	0	EA		\$ 93.81				
									- Rt Lane Must Turn Right Sign	0	EA		\$ 74.11				
TOTAL ALL (averaged cost/sign)	42	EA	10	\$ 150.00	\$ 6,300.00	\$ 15.00	\$ 630.00	\$ 1,260.00	TOTAL ALL (averaged cost/sign)	77	EA	10	\$ 150.00	\$ 11,550.00	\$ 15.00	\$ 1,155.00	\$ 2,310.00
					\$ 6,300.00		\$ 630.00	\$ 1,260.00	Site Signage Allowances								
									- Custom Concrete Topographical Map	1	EA	20	\$ 35,000.00	\$ 35,000.00	\$ 1,750.00	\$ 1,750.00	\$ 3,500.00
									- Community Board / Way Finding	0	EA	20	\$ -	\$ -	\$ -	\$ -	\$ -
									- Corner Markers	5	EA	20	\$ 23,000.00	\$ 115,000.00	\$ 1,150.00	\$ 5,750.00	\$ 11,500.00
									- Transit Interpretation at Bus Stop	2	EA	20	\$ 15,000.00	\$ 30,000.00	\$ 750.00	\$ 1,500.00	\$ 3,000.00
									- Commemorative Walk at Bridge	0	EA	20	\$ -	\$ -	\$ -	\$ -	\$ -
									- Memory Markers	0	EA	20	\$ 328.00	\$ -	\$ 16.40	\$ -	\$ -
									- Art Panel	0	EA	20	\$ 30,000.00	\$ -	\$ 1,500.00	\$ -	\$ -
									- Remembrance Quotes	0	EA	20	\$ 350.00	\$ -	\$ 17.50	\$ -	\$ -
					\$ 6,300.00		\$ 630.00	\$ 1,260.00					\$ 180,000.00		\$ 9,000.00	\$ 20,310.00	
Exterior Lighting Fixtures ***									Exterior Lighting Fixtures								
Dominion-Owned Street Light	3	EA	0	\$ -	\$ -	\$ 108.60	\$ 325.80	\$ 325.80	Site Lighting								
City-Owned Ped Light	6	EA	20	\$ 2,200.00	\$ 13,200.00	\$ 220.00	\$ 1,320.00	\$ 1,980.00	- Remove existing fixtures, poles, base- allow	4	EA		\$ 344.85	\$ 1,379.40			
									- Light fixture, type KX1, 115w LED, dual head/arm	25	EA	20	\$ 2,289.32	\$ 57,233.00	\$ 228.93	\$ 5,723.30	\$ 8,584.95

West Main Street Project Cost Estimates

Phase 4

Jefferson Park to Roosevelt Brown Blvd - 845 LF of Road

EXISTING INFRASTRUCTURE									NEW DESIGN INFRASTRUCTURE									
ITEM	QTY	UNIT	REPLACEMENT			MAINT-UTILITIES/YR		TOTAL/YR*	ITEM	QTY	UNIT	REPLACEMENT			MAINT/YR		TOTAL/YR*	
			CYCLE (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL				CYCLE (Yrs)	\$/UNIT	TOTAL	\$/UNIT	TOTAL	TOTAL	
									- Light fixture, type KX1a, 130w LED, dual head/arm	0	EA	20	\$ 2,474.45	\$ -	\$ 247.45	\$ -	\$ -	
									- Light fixture, type KX1b, 65w LED, single head/arm	0	EA	20	\$ 1,357.62	\$ -	\$ 135.76	\$ -	\$ -	
								\$ 13,200.00									\$ 1,645.80	\$ 2,305.80
																		\$ 10,953.40
																		\$ 339,271.40
																		\$ 46,841.45

* Total/YR = Annual Maintenance-Utilities Cost + (Replacement Value divided by Life Cycle)

** Markings Annual Maintenance Cost - 10% assumed to refresh advanced wearing and repair following street cuts -- accelerated by heavy winter snow hauling

*** Light Fixtural Annual Maintenance Cost - Dominion lights = unit cost per VEPGA contract -- City ped lights = 10% relamping, painting, repairs

+ Standard Sign Maintenance 10% -- Fixed site signage 5%

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date:	May 15, 2017
Action Required:	Amendments to Retirement Plan
Presenter:	Maurice Jones, City Manager
Staff Contacts:	Allyson Manson Davies, Deputy City Attorney Chris Cullinan, Finance Director Jason Vandever, City Treasurer
Title:	Retirement Fund Sustainability Recommendations

Background:

The City of Charlottesville offers two retirement plan options to regular employees working at least 20 hours per week, 36 weeks per year. The plan options are a Defined Contribution 401a (DC) and a Defined Benefit Pension Plan (DB). Upon hire, employees have 30 days to elect either the DC or DB Plan.

A Defined Contribution (DC) 401a plan by definition is a plan in which fixed contributions are paid into an individual's account by the employer. The contributions are then invested and returns on the investments (which can be positive or negative) are credited to the individual's account. Upon retirement, the employee's account balance is used to provide retirement benefits.

A Defined Benefit (DB) Pension plan by definition is a traditional pension plan that pays a monthly benefit in retirement using a defined formula based on the employee's earnings, tenure of service, and age.

A voluntary Deferred Compensation 457 Plan is available for employees to invest their own monies for additional retirement savings. Deferred Compensation Plans allow contributions on a tax-deferred basis as savings toward retirement.

Recently, due to national attention focused on the underfunding of pension and retirement systems in the public sector, the City committed to ensuring that there are sufficient funds available to meet promised obligations made to City employees. Rising health care costs and improved life spans over the past decades have made employer retirement costs rise dramatically. This has in many cases negatively affected the retirement funds that are established to assist employers meet their long term obligations.

In an effort to ensure the City is taking necessary steps now, so that in the future, our employees'

retirements will be secure, the Retirement Commission, whose duty as outlined by City Code is to administer the City retirement plan, commissioned a Retirement Sustainability Study in 2015 to review the City's Defined Benefit (DB) Plan benefits and funding strategies, and to offer recommendations for future investments.

Most financial experts consider a funded status of 80% for public pensions to be a healthy funding level. The City's plan was funded at 54.4% prior to the study. After an initial review of the Sustainability Study in early 2016, the Retirement Commission and City Manager committed to reaching an 80% funded status in the next 10 years.

In the summer of 2016, the City Manager and members of the Retirement Commission held 13 meetings with over 420 employees to discuss the options for reaching sustainability. Ideas generated during those discussions were reviewed by representatives from SageView Consulting to determine feasibility and impact.

Discussion:

In October, the Retirement Commission met to discuss several options before voting on a preferred plan. On February 6th, the City Manager presented three options to City Council for consideration. The City Manager recommended the following changes to the retirement plan to promote the plan's sustainability:

- Phased in 2% Contribution for Plan 1 employees (hired before 7-1-12)
- 5% Employee contribution for new hires starting 7/1/17
- Retiree COLA requires 15 years of service
- COLA requires retirement from the City and becomes effective after 1 full year of retirement
- Capping the public safety supplement at the estimated full Social Security benefit for all Public Safety Employees
- Capping the public safety supplement at 17 years prior to Social Security eligibility (current benefit)

City Council agreed with the City Manager's proposal and directed staff to return to Council at a later date for approval of the necessary ordinance changes. This proposal is projected to meet the Retirement Commission's goal of reaching 80% funded status in the next ten to twelve years.

Each approved change can be found in the following sections of the attached ordinance:

- (1) The phased in 2% Contribution for employees hired before 7-1-12 is located in **Sec. 19-92(a)(1)** in the attached ordinance. This section applies the new contribution rate to all participating employees including police officers, firefighters, sheriffs or sheriff's deputies. After July 1, 2018, all employees in this class will contribute two-percent each pay period.
- (2) A 5% Employee contribution for new hires starting 7/1/17 can be found under **Sec. 19-92(a)(3)**. This section establishes the five percent contribution rate for city employees hired after June 30, 2017.
- (3) The amendment to require 15 years of service and retirement from the city to be eligible for cost of living increases can be found in **Sec. 19-107(a)**.

- (4) The one year delay in eligibility for a cost of living adjustment is established in **Sec. 19-107(c)**.
- (5) The change to capping the public safety supplement at the estimated full Social Security benefit for all Public Safety Employees can be found in **Sec. 19-96(c)**. This section makes it clear that the effective date is delayed until after June 30, 2020.
- (6) The change to capping the public safety supplement at 17 years prior to Social Security eligibility can be found under **Sec. 19-96(c)**. This is the current practice and it is now expressly established by ordinance.

Since Council addressed this issue in February, some additional administrative updates have been made to Chapter 19, Article IV of the Supplemental Retirement and Pension Plan as follows:

- Several code updates are included in order to comply with the most recent tax determination letter received for the plan from the Internal Revenue Service. These updates are required by the IRS and can be found in **Section 19-63; Section 19-95; and Section 19-111**.
- Pursuant to a review of the actuarial standards currently being applied to the defined benefit retirement fund, the city was advised to amend **Section 19-92 (d), (e), & (f)** to reflect the current method for establishing contribution rates for that plan.
- **Sec. 19-94 (a)** now clarifies the components of the contribution rate in that section.
- A three year “grandfathering” clause has been added to the provision that caps the public safety supplement at the estimated full Social Security benefit level for employees who were hired before July 1, 2012 (“Plan 1” employees). Public safety employees who were hired before July 1, 2012 who retire before July 1, 2020 will not be subject to this new provision. This can be found in **Sec. 19-96(c)** as discussed above.

Alignment with City Council’s Vision and Strategic Plan:

Smart, Citizen-Focused Government

The delivery of quality services is at the heart of Charlottesville’s social compact with its citizens. This action is consistent with Goal 4 of the Strategic Plan – Be a Well-Managed and Successful Organization, by maintaining strong fiscal policies and helping to recruit and cultivate quality employees.

Budgetary Impact:

There will be no impact on the General Fund. It is anticipated that the savings created in the Retirement Sustainability Plan would be reinvested in the City’s Defined Benefit (Pension) Plan to help the City reach its goal of an 80% funded status for its retirement fund.

Recommendation: Approval of the ordinance changes.

Alternatives: Council could decide to not support the proposed changes and request that the staff and Retirement Commission return with other alternatives in the future.

Attachments: Ordinance

AN ORDINANCE
AMENDING AND REORDAINING SECTION 19-63 OF ARTICLE III, AND
SECTIONS 19-92, 19-93, 19-94, 19-95, 19-96, 19-98, 19-104, 19-104.1, 19-107 AND
19-111 OF ARTICLE IV, OF CHAPTER 19 (PERSONNEL), OF THE CODE OF
THE CITY OF CHARLOTTESVILLE, 1990, AS AMENDED, RELATING TO
CHANGES TO THE SUPPLEMENTAL RETIREMENT OR PENSION PLAN

BE IT ORDAINED by the Council of the City of Charlottesville, Virginia that Section 19-63 of Article III, and Sections 19-92, 19-93, 19-94, 19-95, 19-96, 19-98, 19-104, 19-104.1, 19-107 and 19-111 of Article IV, of Chapter 19 of the Charlottesville City Code, 1990, as amended, are hereby amended and reordained, as follows:

ARTICLE III. RETIREMENT PLAN COMMISSION

Sec. 19-63. Retirement fund generally.

All of the funds and assets of the city's supplemental retirement or pension plan shall be maintained by the commission in a fund to be known as the retirement fund. In the retirement fund shall be accumulated all contributions made by the city pursuant to the provisions of section 19-92 and all income from the invested assets of the retirement fund. From the retirement fund shall be paid the retirement allowances and other benefits provided for under the terms of the retirement plan as set forth in article IV of this chapter and reasonable expenses therefore. The fund and the retirement plan shall be maintained for the exclusive benefit of employees or their beneficiaries.

ARTICLE IV. SUPPLEMENTAL RETIREMENT OR PENSION PLAN

Sec. 19-92. Contributions and members' contribution account.

(a) Each member, including a police officer, firefighter, sheriff or sheriff's deputy, shall contribute a percentage of his creditable compensation each pay period as follows:

- (1) Each member, except a person who becomes a member after July 1, 2012 as defined in Section 19-91, shall contribute one percent (1%) of his creditable compensation each pay period beginning on or after July 1, 2017, until the first pay period beginning on or after July 1, 2018. For each pay period beginning on or after July 1, 2018, said member shall contribute two percent (2%) of his creditable compensation.
- (2) Each person who becomes a member after June 30, 2012 and who is hired or rehired before July 1, 2017 shall contribute three percent (3%) of his creditable compensation each pay period.

(3) Each person who becomes a member after June 30, 2012 and who is hired or rehired after June 30, 2017 shall contribute five percent (5%) of his creditable compensation each pay period.

~~(a) Beginning June 30, 2012, each person who becomes a member after June 30, 2012 including a police officer, firefighter, sheriff or sheriff's deputy, shall contribute 3% of his creditable compensation each pay period. No contributions shall be deducted from the compensation of any member who is not a person who became a member after June 30, 2012.~~

The city and any other employer adopting the plan shall deduct the applicable contribution payable by the member and every employee accepting or continuing employment shall be deemed to consent and agree to any deductions from his creditable compensation required by this section.

Notwithstanding the foregoing, the employee contributions, although designated as employee contributions hereunder, will be paid by the city and any other employer adopting the plan and shall be treated as employer contributions pursuant to Section 414(h) of the Internal Revenue Code of 1986, as amended, and shall not be included as gross income of the employee until such time as they are distributed or made available to the employee. The city and any other employer adopting the plan shall "pick-up" the employee contributions by reducing the amount payable to each employee by the amount of his required employee contribution on a salary reduction basis.

(b) Beginning July 1, 1992, the city council shall appropriate, and the city shall contribute annually to the retirement fund established pursuant to section 19-63, an amount equal to the sum of the normal contribution, and the accrued liability contribution, if any.

(c) The normal contribution for any year shall be determined as a percentage, equal to the normal contribution rate, of the total creditable compensation of the members for such year. Similarly, the accrued liability contribution rate for any year shall be determined as a percentage, equal to the accrued liability contribution rate, of such total creditable compensation. In determining the amount of any contribution, a reasonable approximation to the exactly computed amount may be used.

(d) The normal contribution rate shall be determined as the percentage of the total annual creditable compensation of the members ~~that is represented by the sum of the annual service cost determined under the projected unit credit funding method,~~ computed in accordance with recognized actuarial principles on the basis of methods and assumptions approved by the commission. The normal contribution rate shall be determined from the results of each valuation which shall be made as directed by the commission not less frequently than biennially.

(e) The accrued liability contribution rate shall be determined as the percentage of the total annual creditable compensation of the members that is represented by the level annual contribution necessary to:

- (1) ~~Amortize the unfunded actuarial accrued liability as of July 1, 1992 over thirty (30) years from July 1, 1992 with payments increasing four (4) percent each year, as a level percentage of covered payroll over a closed period not to exceed thirty (30) years as directed by the Commission; and~~
- (2) ~~Amortize any increase or decrease in the actuarial accrued liability due to the plan changes, actuarial gains, and/or actuarial losses incurred after January 1, 1992 over twenty (20) years from the date of the actuarial valuation first recognizing such increase or decrease with payments increasing four (4) percent each year as a level percent of covered payroll over a closed period not to exceed thirty (30) years as directed by the Commission.~~

The unfunded actuarial accrued liability as of any valuation date shall be determined ~~in accordance with the projected unit credit funding method~~, in accordance with recognized actuarial principles on the basis of methods and assumptions approved by the commission.

The accrued liability contribution rate shall be determined from the results of each valuation, which shall be made as directed by the commission not less frequently than biennially.

(f) The commission shall certify to city council the normal contribution rate, the accrued liability contribution rate and every change made from time to time in any of such rates.

(g) All members' contributions and interest allowances shall be credited to the member's contribution account. Accumulated contributions required to be returned to the member or required to be paid on account of the member's death shall be paid from the member's contribution account. As of each June 30, the member contribution account of each active member shall be credited with interest at a rate to be determined annually by the retirement commission. Initially, the rate shall be three percent (3%) annually. Interest shall accrue on any contribution beginning on the first day of the fiscal year following the year in which the contribution was made. No interest shall be credited to the member contribution account after the effective date of the member's retirement.

Sec. 19-93. Membership; cessation.

- (a) Membership in the plan as of any date shall consist of the following:
 - (1) All employees at such date, inclusive of those on authorized leave from service.

(2) All former employees who have not retired under the provisions of the plan and who either:

- a. Have five (5) years or more of creditable service and were in service at some time after June 30, 1975, and who have not received a refund of such member's accumulated contributions pursuant to section 19-104.1 or
- b. Have twenty (20) years or more of creditable service and were included in the membership of the plan on June 30, 1975.

(b) The membership of any person in the plan shall cease upon:

(1) Termination of service as an employee prior to the completion of five (5) years of creditable service, or in the case of a person who becomes a member after June 30, 2012, the refund of such member's accumulated contributions pursuant to section 19-104.1; or

(2) Retirement; or

(3) Death.

(c) When membership ceases, except in the case of retirement or of death under circumstances calling for the payment of benefits hereunder, an employee shall thereafter lose all right to any retirement allowance or benefits under this article arising from service prior to the date of such cessation of membership except for any vested deferred retirement benefits such employee might be entitled to receive, provided that if any such employee should subsequently again be in service, his previous period or periods of creditable service shall be reinstated. ~~In the case of a person who becomes a member after June 30, 2012, if~~ Any such person that received a refund of his accumulated contributions pursuant to section 19-104.1, ~~he~~ shall be treated as a new member upon subsequent reemployment. If no refund was made, ~~his~~ all previous period or periods of creditable service shall be reinstated.

Sec. 19-94. Participation in defined contribution and deferred compensation plans.

(a) The city manager may approve the withdrawal from membership in the plan of any employee who is exempt from the personnel appeals system as set forth in section 19-36(b) and may execute an agreement for such employee to participate in an optional defined contribution plan approved by the Internal Revenue Service as a qualified plan within the meaning of Section 401(a) of the Internal Revenue Code of 1986, as amended. Such agreement may provide that the city shall contribute to such plan an annual amount no greater than the total amount which the city would contribute to the city plan on behalf of such employee for such year pursuant to section 19-92(b). The contribution shall not include any contribution made to fund the City's post-employment benefits trust in accordance with section 19-141. Any employee who enters into such an agreement shall be deemed to have terminated all membership in the supplemental retirement or pension

plan of the city and to have waived any rights whatsoever to any benefits thereunder. Upon execution of any such agreement, the retirement plan commission is authorized to make the payments called for therein, but in no event shall the payment for any period exceed the amount contributed by the city to the city plan for such employee for such period. A copy of such plan shall be kept on file in the city's personnel department, and it may be amended from time to time.

(b) The city council may likewise approve participation by the city manager in a supplemental defined contribution plan approved by the Internal Revenue Service as a qualified plan within the meaning of Section 401(a) of the Internal Revenue Code of 1986, as amended, in which case the city's annual contribution thereto shall likewise equal the amount which would have been contributed to the city plan, unless the council shall determine a greater or lesser amount. A copy of such plan shall be kept on file in the city's personnel department, and it may be amended from time to time.

(c) Effective July 1, 2001, the city manager may approve the withdrawal from membership in the plan of any employee and may execute an agreement for such employee to participate in an optional defined contribution plan approved by the Internal Revenue Service as a qualified plan within the meaning of Section 401(a) of the Internal Revenue Code of 1986, as amended. Such agreement may provide that the city shall contribute to such plan an annual amount determined by the retirement commission with the approval of the city manager on behalf of such employee for such year. Any employee who enters into such an agreement shall be deemed to have terminated all active membership in the supplemental retirement or pension plan of the city and to have waived any rights whatsoever to accrue additional benefits thereunder. Upon execution of any such agreement, the retirement plan commission is authorized to make the payments called for therein. A copy of such plan shall be kept on file in the city's personnel department, and it may be amended from time to time.

(d) Effective November 1, 1987, all regular city employees, including city council members, who work at least twenty (20) hours per week shall be eligible to participate in a deferred compensation plan, whether or not they participate in the supplemental retirement or pension plan of the city or the defined contribution plans described in subsections (a) through (c) of this section. Such new plan shall enable employees to defer part of their compensation if they choose to do so to provide for their retirement. Participation in this new plan shall have no effect on eligibility for participation in the supplemental retirement or pension plan of the city or the defined contribution plans described in subsections (a) through (c) of this section. A copy of such plan shall be kept on file in the city's human resources department, and it may be amended from time to time.

Sec. 19-95. Service retirement--Mandatory retirement dates.

(a) Any member who is in service at his normal retirement date may retire then or at any time thereafter, provided he has completed five (5) or more years of creditable service, upon written notification to the commission made by the member or by his

appointing authority setting forth at what date the retirement is to become effective. Such effective date shall be after the member's last day of service and shall not be more than ninety (90) days prior to the filing of such notification.

(b) No member who is a police officer, fire fighter or sheriff's deputy shall be permitted to continue in service after his normal retirement date, unless the member's appointing authority, upon a determination that organizational needs so require, grants the member an exemption from such mandatory retirement requirements. Any such member who continues in service under such an exemption from the appointing authority, may be retired by that authority at any time thereafter. Such retirement shall be initiated by the appointing authority by notification to the commission setting forth at what date the retirement is to become effective. Such effective date shall be after the member's last day of service and shall not be more than ninety (90) days prior to the filing of such notification.

(c) The commissioner of revenue, city treasurer, city sheriff, clerk of the circuit court and commonwealth's attorney may continue in service so long as they hold office.

(d) The appointing authority of any member not listed in subsection (b) or (c) of this section, subsequent to the member's normal retirement date, upon a determination that age is a bona fide occupational qualification reasonably necessary to the normal operation of the city, and that such member has reached the age limit, or upon a determination that such member is incapable of performing his duties in a safe and efficient manner, may require the service retirement of such member upon written notification to the commission setting forth at what date the retirement is to become effective. Such effective date shall be after the member's last day of service and shall not be more than ninety (90) days prior to the filing of such notification. Notwithstanding the foregoing, if such member lacks five (5) years of creditable service, such member shall be discharged and shall be ineligible for a retirement allowance.

(e) Any member who is in service and who has completed five (5) or more years of creditable service may retire at any time after the fifty-fifth (55th) birthday of the member or, in the case of a person who becomes a member after June 30, 2012 other than a police officer, firefighter, sheriff or sheriff's deputy, after the sixtieth (60th) birthday of the member, or at any time thereafter, upon written notification to the commission, made by the member, setting forth at what date the retirement to become effective. Such effective date shall be after the member's last day of service and shall not be more than ninety (90) days prior to the filing of such notification.

(f) Any member who terminates service after completing five (5) or more years of creditable service may retire under the provisions of either subsection (a) or subsection (c) of this section; provided, that the requirement as to such member being in service shall not apply.

(g) Any member who is in service and who has completed thirty (30) or more years of creditable service may retire at age fifty (50), or, in the case of a person who

becomes a member after June 30, 2012, at age sixty (60), or at any time thereafter, upon written notification to the commission, made by the member, setting forth at what date the retirement is to be effective, without suffering the penalty imposed by section 19-96(d). Such effective date shall be after the member's last day of service and shall not be more than ninety (90) days prior to the filing of such notification.

(h) Any member who is a police officer, firefighter, sheriff or sheriff's deputy, and has completed twenty-five (25) or more years in service may retire at age fifty (50), or at any time thereafter until the mandatory retirement date is reached, without suffering the penalty imposed by section 19-96(e).

(i) Notwithstanding the forgoing, on or after January 1, 1989, the retirement allowance of a member who has terminated employment shall begin no later April 1 of the calendar year following the later of (i) the calendar year in which the member attains seventy and one-half (70 1/2) years of age, or (ii) the calendar year in which the member terminates employment.

(j) Upon attaining normal retirement age and completion of the required years of service, each employee's interest shall be fully vested.

...

Sec. 19-96. Same--Allowance.

(a) Upon service retirement on or after July 1, 2000, a member with creditable service which commenced prior to July 1, 2000, shall receive an annual retirement allowance payable monthly to him for life commencing on the first day of the month coinciding with or next following his date of retirement, in an amount computed as the larger of (1) and (2) following:

- (1) The excess, if any, of 2% of such member's average final compensation multiplied by the number of years of his creditable service, over 2.5% of such member's annual primary social security benefit, multiplied by the number of years of his creditable service up to a maximum of twenty (20) years.
- (2) 1.60% of such member's average final compensation multiplied by the total number of years of his creditable service.

(b) Upon service retirement after July 1, 2000, a member whose employment commenced after June 30, 2000, shall receive an annual retirement allowance payable monthly to him for life commencing on the first day of the month coinciding with or next following his date of retirement, in an amount computed as follows:

- (1) 1.60% of such member's average final compensation multiplied by the total number of years of his creditable service.

(c) In addition to the retirement allowance to which a member is entitled under the provisions of subsections (a) and (b) of this section, a retired member who at the date of his retirement was in service as a police officer, firefighter, sheriff or sheriff's deputy and who has completed twenty (20) years or more of creditable service shall receive an additional annual allowance, payable monthly, during the period after the member's date of retirement and until his attainment of full retirement age, as in effect on July 1, 2005, for purposes of qualifying for unreduced social security benefits, equal to one (1) percent of average final compensation multiplied by the number of years of his creditable service. In no event shall a police officer, firefighter, sheriff or sheriff's deputy receive both the supplement under this section and social security benefits. Effective for service retirements after June 30, 2017, the additional annual allowance shall be limited to a period of time that does not exceed seventeen (17) years prior to social security eligibility and effective for service retirements after June 30, 2020, this additional annual allowance shall be limited to the estimated unreduced primary social security benefit determined under section 19-97.

Notwithstanding the foregoing However, a person who becomes a member after June 30, 2012, shall be entitled to this additional, supplemental annual allowance only if such person has completed at least twenty (20) years of creditable service in a position of a police officer, firefighter, sheriff or sheriff's deputy and such person shall not be entitled to a supplement for a period of time that exceeds 17 years prior to social security eligibility. This additional annual allowance shall be limited in the case of a person who becomes a member after June 30, 2012, to his estimated unreduced primary social security benefit determined under section 19-97.

(d) The provisions of subsections (a) and (b) of this section to the contrary notwithstanding, if the retirement date of a member with less than thirty (30) years of creditable service precedes his normal retirement date, the retirement allowance amount as computed in accordance with subsections (a) and (b) of this section, as appropriate, shall be reduced by one-half (0.5) percent for each complete month in the period between the member's retirement date and the earlier of his normal retirement date or the date on which the member would have completed thirty (30) years of creditable service had he remained an employee continuously until such date.

(e) The provisions of subsections (a) and (b) of this section to the contrary notwithstanding, if the retirement date of a member who is a police officer, firefighter, or sheriff's deputy with less than twenty-five (25) years of creditable service precedes his normal retirement date, the retirement allowance amount as computed in accordance with subsections (a) and (b) of this section, as appropriate, shall be reduced by 0.5% for each complete month in the period between the member's retirement date and the earlier of his normal retirement date or the date on which the member would have completed twenty-five (25) years of creditable service had he remained an employee continuously until such date.

Sec. 19-98. Determination of retirement allowance.

(a) For the purposes of any provision of this article, the retirement allowance of any member shall be determined on the assumption that the retirement allowance is payable to the member alone and that no optional retirement allowance is elected.

(b) After a member has retired, and the amount of his retirement allowance has been determined under the provisions of this article, the amount of the member's retirement allowance shall be unaffected by any changes in the actual amount of the primary social security benefit to which the member is or becomes entitled under the federal Social Security Act.

(c) Notwithstanding any other provisions of this article, the annual benefit under the supplemental retirement or pension plan of the city of any member and any related death or other benefit, shall, if necessary, be reduced to the extent required by Section 415(b) of the Internal Revenue Code of 1986, as amended, as adjusted by the Secretary of the Treasury pursuant to Section 415(d) of the Internal Revenue Code of 1986, as amended.

(d) Notwithstanding any other provisions of this article, for plan years beginning before January 1, 2000, if a member participates in both the supplemental retirement or pension plan of the city and a qualified defined contribution plan maintained by the city, the annual benefits under the supplemental retirement or pension plan of the city and the annual additions to any qualified defined contribution plan maintained by the city shall not exceed the combined limit test described in Section 415(e) of the Internal Revenue Code of 1986, as amended. If necessary, the annual additions under the qualified defined contribution plan shall be reduced before benefits under supplemental retirement or pension plan of the city are reduced in order to comply with such combined limit test.

(e) Notwithstanding any provision of this article to the contrary, benefits and service credit with respect to qualified military service will be provided in accordance with section 414(u) of the Internal Revenue Code of 1986, as amended.

(f) To the extent required by Section 401(a)(37) of the Internal Revenue Code for purposes of determining a member's entitlement to a retirement allowance or death benefits under the Plan, in the event a member ceases to be an employee in order to perform qualified military service within the meaning of section 414(u) of the Internal Revenue Code and dies on or after January 1, 2007 while performing qualified military service, the member's death shall be considered to have occurred while the member was an employee so that his beneficiaries are entitled to any additional benefits provided under the Plan (other than benefit accruals relating to the period of qualified military service), including without limitation any additional or enhanced vesting or death benefits, had the member resumed employment with the employer and then terminated employment on account of death.

...

Sec. 19-104. Optional benefits.

...

(g) Effective January 1, 1993, notwithstanding anything to the contrary in this article, but subject to any de minimis or other exceptions or limitations provided for under Section 401(a)(31) of the Internal Revenue Code of 1986, as amended, any prospective recipient ~~any prospective recipient~~ (whether a member, a surviving spouse, a current or former spouse who is an alternate payee under a qualified domestic relations order or any other person eligible to make a rollover) of a distribution from the plan which constitutes an "eligible rollover distribution" (to the extent otherwise includible in the recipient's gross income) may direct the commission to pay the distribution directly to an "eligible retirement plan". For purposes hereof, the following terms have the meanings assigned to them in Section 401(a)(31) of the Internal Revenue Code of 1986, as amended, and, to the extent not inconsistent therewith, shall have the following meanings:

...

Sec. 19-104.1. Refund of accumulated contributions before retirement.

(a) Any member ~~hired after June 30, 2012~~ who has five (5) or more years of creditable service, who ceases to be a member other than by death or retirement may request and receive a refund of the balance in the member's contribution account reduced by the amount of any retirement allowance previously received by him under the provisions of this article.

(b) Any person who becomes a member hired after June 30, 2012 who has less than five (5) years of creditable service who ceases to be an employee other than by death shall be paid the balance in the member's contribution account in a mandatory cash-out as soon as administratively practical following his ceasing to be employed by the City or any other employer adopting the plan.

(c) Upon receipt of a refund of the balance in the member's contribution account, pursuant to (a) and (b) herein:

(1) Any person who becomes a member hired after June 30, 2012 ~~the member~~ shall cease to be a member and shall not be entitled to any future benefits. If the person again becomes a member, no creditable service attributable to the refund shall be counted in determining the benefit to be accrued following rehire; and

(2) Each member, except a person who becomes a member after July 1, 2012 as defined in Section 19-91, shall not be entitled to any benefit attributable to creditable service or increases in average final compensation after June 30, 2017.

Sec. 19-107. Post retirement supplements.

(a) In addition to the monthly allowances payable under sections 19-96, 19-101, 19-104, 19-105 and 19-152 post retirement supplements shall be payable in accordance with the provisions of this section to the recipients of such allowances.

Such supplements shall be subject to the same conditions of payment as are such allowances. Notwithstanding the foregoing, in the case of monthly allowances that begin after June 30, 2017, post retirement supplements shall be payable pursuant to the provisions hereof only if the member is credited with at least fifteen (15) years of credible service and the monthly allowance begins immediately following termination of employment in the case of a service retirement or upon the cessation of disability benefits.

(b) The amounts of the post retirement supplements provided for hereunder shall be determined as percentages of the allowances then being paid, including any applicable previous supplements.

(c) Amounts of post retirement supplements shall be determined initially as of July 1, 1976, and subsequently as of any July 1 as of which the city council shall have determined a further adjustment to be needed, provided an amount sufficient to pay the cost of any necessary increase in the amount of the post retirement supplements being paid shall have been appropriated. No change in the amount of any post retirement supplement shall be effected between determination dates except as necessary to reflect changes in the amount of the allowance being supplemented, to the end that any post retirement supplement shall remain a constant percentage of the respective allowance being supplemented, nor shall any new post retirement supplement be commenced except as of a determination date. The post retirement supplement determined shall become effective as of the payment date next following such determination date for members who have retired on or before the determination date, except that, in the case of monthly allowances that begin after June 30, 2017, the post retirement supplement shall not be effective earlier than the first anniversary of the payment commencement date.

(d) The city council shall make an annual review of the post retirement supplements being paid in accordance with this section and shall determine whether or not the following July 1 shall be a determination date as of which the amounts of such supplements shall be recomputed.

...

Sec. 19-111. Alteration, amendment or repeal.

(a) The city council reserves the right to alter, amend or repeal any provision of this article or any application thereof to any person; provided, however, that the amount of benefits which at the time of any alteration, amendment or repeal shall have accrued for the members or beneficiaries shall not be affected thereby, except as otherwise provided under subsection (c) of this section.

(b) If the city council repeals the provisions of this article, the commission shall continue to administer the plan in accordance with the provisions of this article for the sole benefit of the then members, any beneficiaries then receiving retirement allowances

and any person, entitled to receive benefits in the future under one (1) of the options provided for in this article, who is designated by any of such members.

(c) In the event of repeal as provided in subsection (b) of this section, if the plan is not to be replaced by another retirement program, the assets of the retirement fund shall be allocated by the commission in an equitable manner to provide benefits for the persons designated in subsection (b) of this section in accordance with the provisions of this article, and in the following order:

- (1) For the benefit of the beneficiaries and persons already designated by former members who are then beneficiaries under one (1) of the options provided for in this article to the extent of the then actuarial value of their retirement allowances. If any funds remain; then,
- (2) For the benefit of members and persons, if any, designated by the members under one (1) of the options provided for in this article, to the extent not provided under paragraph (1) above, of the then actuarial value of their accrued retirement allowances, based on years of creditable service, average final compensation and anticipated social security benefits as of the date of repeal. The allocation under paragraph (2) shall be on the basis of the oldest ages first method.

In the event the assets at such date of repeal are insufficient to provide all of the benefits of paragraph (1) above, then the city shall contribute to the assets from time to time, as and when required, the amount necessary to make up such insufficiency.

(d) The allocation of assets of the retirement fund provided for in subsection (c) of this section shall be carried out through payment by the commission of the benefits provided for in this section as they become due. Any funds remaining in the retirement fund after all of the vested benefits provided by this section have been paid shall revert to the city.

(e) Any allocation of assets made in accordance with the provisions of subsection (c) of this section shall be final and binding on all persons entitled to benefits under such provisions.

(f) In the event of repeal as provided in subsection (b) of this section, if the plan is to be replaced by another retirement program, the assets of the retirement fund shall be transferred to such other program.

(g) In the event of repeal, or termination or complete discontinuance of contributions under the plan, the rights of all employees to benefits accrued to the date of such repeal, termination or discontinuance, to the extent then funded, or the amounts then credited to the employees' accounts, shall be non-forfeitable.

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CITY OF CHARLOTTESVILLE, VIRGINIA

CITY COUNCIL AGENDA

Agenda Date:	May 15, 2017
Action Required:	None
Presenters:	Paul Josey, Chair, Tree Commission
Staff Contacts:	Doug Ehman, Parks Division Manager & Mike Ronayne, Urban Forester
Title:	Annual State of the Forest Report

Background:

The Tree Commission Chair will provide an update on activities over the past year and some thoughts on issues the Commission intends to work on in the coming year.

Discussion:

The Tree Commission has continued to be the City's advocacy voice for trees and the urban forest, responding to citizen inquiries/concern and weighing in when tree related issues arose in the community. Highlights this year include implementation and update of Charlottesville's Master Tree List and continued advocacy for the need of trees in a larger citywide effort by exploring potential to plant trees on Charlottesville Redevelopment Housing property and underutilized right-of-way among other projects.

Alignment with City Council's Vision and Strategic Plan:

The Tree Commission activities support the City Council's "Green City" vision.

Charlottesville City Council Vision 2025: A Green City :

"Charlottesville citizens live in a community with a vibrant urban forest, tree-lined streets, and lush green neighborhoods. We have an extensive natural trail system, along with healthy rivers and streams. We have clean air and water, we emphasize recycling and reuse, and we minimize stormwater runoff. Our homes and buildings are sustainably designed and energy efficient."

Community Engagement:

Tree Commission meetings are open to the public.

Budgetary Impact:

This report has no impact on the General Fund.

Recommendation:

Report only

Attachments:

Tree Commission Activities for the past year

Charlottesville Tree Commission Highlights of 2016 Activities

Tree Protection and Planting

- **Updated the Charlottesville Master Tree List** to the city website and Tree Packet for all new development. This places emphasis on diversifying our city canopy and planting regional species while also including more information regarding species for urban and utility conditions.
- **Surveyed and identified tree planting opportunities on Charlottesville Redevelopment and Housing Authority property** and started talks with CRHA for possible planting opportunities in areas with insufficient tree canopy. Advocated for the city to create a Memoranda of Understanding (MOU) with CRHA to allow future tree planting opportunities to be installed as early as this fall.
- **Continued coordination on a long-term tree planting plan** with the Public Works and Parks & Rec staff. Based on the 2015 Urban Canopy Study, initial results suggest conservatively space for over 8,000 new trees within public right of way that we hope to start guiding future plantings as early as this fall.
- **Reviewed Mall tree report with UVA:** Met with design advocates for the preservation of the downtown mall, Beth Meyer (Architecture school) and Mary Hughes (Office of the Architect) from the University of Virginia, to gain their input from the Mall Tree Report recommendations. (see attached)
- **Partnered with the Charlottesville/Albemarle Tree Stewards**, Monticello, VDOT, National Guard and the Journey Through Hallowed Ground to design and plant the final 60 of 70 new trees in the Route 20 entrance corridor from Monticello to the city limits last fall.
- **Installation of 40 new trees within the median of 29/250 interchange** near Best Buy ramp went in this spring that was a design collaboration between the Tree Commission, VDOT and city staff.

Tree Advocacy

- **Participated in the recent Belmont Bridge Redesign meetings** advocating for a smaller bridge to create more at grade public space to allow for greater shade and connectivity between Belmont and the downtown Mall.
- **Commented on the Ridge St. rezoning proposal**, advocating for larger setbacks concurrent with existing Ridge St setbacks that would allow continued planting of large shade trees at this vital intersection.
- **Commented on city sidewalk maintenance practices** that lead to a great discussion and new Sidewalk and Tree Recommendations handbook for the Department of Public Works that prioritizes tree health and safety in sidewalk repair.
- **Requested and received from staff a breakdown of projected expenses annually for new trees** to help assist staff communicate financial implications of new tree maintenance.
- **Advocated for \$ 125,000 for urban forest management** in this year's Capital Improvement budget to begin implementing needed tree care and maintenance on the Mall and increase current annual tree planting (100/year).

Other items and Next Steps for trees in our community

- **Welcomed 3 new members** after the final terms of 3 original exceptional members, Bitsy Waters, Maynard Ferguson and Dorothy Smith, were complete. New members Peggy Van Yahres, Brian Menard, Lynn Rush and Mark Rylander bring a significant level of experience in architecture, landscape architecture, public policy, and arboriculture that we are excited to have on the commission.
- **Support Cultural Landscape Report for downtown Mall** to create a clear stakeholder group made up of business owners, NDS, Parks & Rec DPW and others to assist with vital maintenance and funding decisions.
- **Advocate for an increased goals of new tree planting** in city performance measures from 100 new plantings/year to 200 new plantings/year.

April 30, 2017

To: Members of Charlottesville City Council
From: Charlottesville Tree Commission
Subj: **Summary of Mall Report review meeting with UVA representatives**

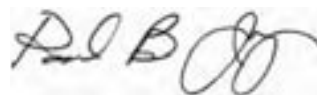
Last September, the Tree Commission met with University of Virginia representatives Mary Hughes, Campus Landscape Architect at the University of Virginia, and Elizabeth Meyer, active faculty and former dean of University of Virginia School of Architecture to review the proposed 2015 Mall Tree Report . A summary of their comments are included below.

As the primary economic driver and identity of the downtown district, the importance of planning for the future health of the groves of trees is vital to the continued success of the downtown Mall. The below comments were the summary of our discussion with Mary Hughes and Elizabeth Meyer. Both have a significant knowledge of the Lawrence Halprin designed downtown Mall and interest in its preservation.

Summary of comments, September 2016:

1. Request for the 2015 Mall report to be consolidated into a clear action plan and schedule that is presented to council for approval.
2. Agreement with the report findings in regards to tree health and recommendations, particularly the primary assessment that the metal grates should be removed (see attached for specific report reference).
3. In favor of a proposed 15 year grove replacement model over individual tree removals.
4. Replacement of the Norway maples within Central Place to be studied with multiple options of single species replacements for further approval. Preferable species to have a unique fall color to the willow oaks, similar size to red maples and compaction tolerance.
5. If advisable, suggest raising rents on the mall seating.
6. Request earmarking the current Mall seating rental revenue to be spent on mall maintenance and tree care/replacements rather than having it revert to general city fund.

Kind regards,



Paul B. Josey, RLA, ISA
Chair, Charlottesville Tree Commission

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**CITY OF CHARLOTTESVILLE, VIRGINIA
CITY COUNCIL AGENDA**



Agenda Date: May 15, 2017

Action Required: None

Presenter: Hollie Lee, Chief of Workforce Development Strategies

Staff Contacts: Hollie Lee, Chief of Workforce Development Strategies

Title: **Growing Opportunities Update & Apprentice Resolution Review**

Background: In July 2013, staff issued a report to City Council on workforce development entitled, *Growing Opportunity: A Path to Self-Sufficiency in Charlottesville* (often referred to as the GO report). Now, almost four years later, significant progress has been made towards many of the action items recommended in this report. The update provided includes highlights of major accomplishments that have taken place, with particular focus on the City's Growing Opportunities (GO) programs. The full 2017 update is available online by clicking [HERE](#) or visiting (https://issuu.com/2012oedannualreport/docs/2017_workforce_development_update_0). Hard copies have been provided to Council.

One example from the update is the City's efforts to promote skilled trades workforce training to City residents as means of helping them obtain career ladder employment opportunities. On December 5, 2016, Council passed a resolution to expand career pipelines and paid apprenticeships in infrastructure building and repair within the City of Charlottesville for local residents. Staff was asked to explore this possibility, as well as other options to ensure that residents have access to skilled trades apprenticeships. A report analyzing various options is also included.

Discussion: In regards to the apprenticeship resolution, four options are explored in detail in the attached report. These include: 1.) Skilled Trades Training & Apprenticeships through City Infrastructure Projects, 2.) a City of Charlottesville Apprenticeship Program, 3.) GO Programs with On-the-Job Apprenticeship Tracks, and 4.) a GO Skilled Trades Academy. Of these four options, staff believes that the most economical, effective, and sustainable option would be to continue offering GO programs with on-the-job apprenticeship tracks (such as GO Utilities). Other options were not recommended based on factors related to: budgetary impact/cost, impact on existing workforce, job sustainability, program length, number of City residents served, overall lack of program viability, etc.

Alignment with City Council’s Vision and Priority Areas: This agenda item aligns with Council’s vision for Economic Sustainability. It also addresses two goals in the City’s Strategic Plan that were recently adopted by Council: Goal 1: Enhance self-sufficiency of residents and Goal 4: Have a strong and diversified economy.

Community Engagement: Practically all of the SAT’s workforce development efforts involve community engagement. From the Workforce Advisory Council (WAC), which is comprised of 15 community partners and guides the City on its workforce development initiatives, to the Downtown Job Center, which is a satellite of the Virginia Workforce Center – Charlottesville and relies on more than 30 workforce services providers for referrals and collaboration, to the City’s various employment training programs, such as GO Driver, which is supported by more than 10 agencies and organizations, none of the work that is currently being done could be possible without strong community engagement.

Budgetary Impact: There is no budget impact or request associated with this update unless Council would like to move forward with an apprenticeship program option that requires additional funding.

Recommendation: In regards to the apprenticeship resolution, staff recommends Option #3 – GO Programs with On-the-Job Apprenticeship Tracks for the following reasons:

1. GO program model has proven to be successful over the last three years in getting City residents the training they need to obtain jobs paying a self-sufficient wage.
2. Ability to customize GO programs based on specific industries determined by employer demand (e.g., GO Utilities, GO Electric, etc.).
3. Development of job candidates with basic level training in a specific skilled trades industry that is in high demand.
4. Ability to place individuals into jobs that pay a self-sufficient wage because they have industry specific training.
5. Clear career ladder for individuals as they progress from entry level to journeyman in a specific industry over a four-year period through participation in a registered apprenticeship program.
6. A workforce for employers that is progressively improving its knowledge, skills, and abilities.
7. A more loyal workforce for employers who invest in the growth and development of their staff.

Alternatives: Council could choose one or more of the other options to implement.

Attachments: 1.) Growing Opportunities: Workforce Development Update – Spring 2017
2.) Review of City Council Resolution: Expand Career Pipelines and Paid Apprenticeships in Infrastructure Building and Repair within the City of Charlottesville for Local Residents

GO DRIVER
Get Trained. Get Hired



GO Driver Graduates—Charlottesville Area Transit & Pupil Transportation

The City of Charlottesville, Office of Economic Development, and the Downtown Job Center would like to recognize and thank all of our community partners who have helped make the workforce development efforts highlighted in this update possible.

Produced by the
Office of Economic Development
& Downtown Job Center

610 East Market Street
Charlottesville, VA 22902



GROWING OPPORTUNITIES

Since the last workforce development update, even further progress has been made on the City's Growing Opportunities (GO) efforts. With two full-time staff in the Downtown Job Center (DJC), customized services are now being offered on a more regular and consistent basis. This has allowed resources to be allocated to the expansion of the GO pre-employment training programs, and in particular, the award-winning GO Driver program. In fact, over the past two years, almost 100 City residents have completed one of twelve GO programs, and about 90 of these individuals have obtained employment paying a self-sufficient wage as a result of the training.

Additionally, the Office of Economic Development (OED) has worked to further align economic and workforce development efforts, thus bridging the gap between job creation/businesses and training/individuals. Primarily, this has been done through the OED's business outreach program, which links local government with businesses in order to address their workforce development needs. In 2016, the OED developed GO Hire as a tool to assist with this by offering wage subsidies for the hiring of new employees and funds for training up incumbent staff. Since launching the GO Hire program, 13 companies and 24 employees have been assisted.

Over the next year, the OED and DJC will continue to enhance the City's workforce development efforts and reevaluate them, as well as our future direction, in light of the current economic climate. We are excited about the accomplishments that have been made since the GO report was first presented to City Council in July of 2013, and we hope that you enjoy the report that follows.



Tom Tom Food & Tech Mixer Sponsored by the Downtown Job Center—
October 2016 (Photo Courtesy of Tom Tom)

WORKFORCE OVERVIEW

In 2011, the Greater Charlottesville Area Development Corporation released the Orange Dot report, which explored poverty in the Charlottesville community. This report sparked the creation of the Growing Opportunities report, which was presented by staff to City Council in July 2013. According to a recent update of the Orange Dot report, there are 7,340 families living in Charlottesville, and of these families, 1,800 (25%) still do not make enough money to pay for the essentials of life—food, shelter, clothing and utilities—and the added costs associated with working—childcare and transportation. In fact, the 2016 Virginia Department of Social Services Local Profile Report estimates that almost 15% (6,877) of City residents received Supplemental Nutrition Assistance Program help (SNAP or food stamps) in 2016. Sometimes, employment can actually make families' financial situations even worse if wages are high enough to disqualify them for government benefits such as childcare subsidies, SNAP, Temporary Assistance for Needy Families (TANF), etc.

Over the last seven years however, the City of Charlottesville's labor force has seen consistent growth, experiencing an average increase of 1.35% per year. In February 2017, Charlottesville's labor force included 25,339 residents, with 780 residents unemployed. During this same time period, Charlottesville's unemployment rate has been better than the state average, with the greatest separation of 1.4% in April and December 2010. When the GO report was issued in July of 2013, the unemployment rate was 5.1%, which is the highest it has been since this time. In fact, for much of 2016, the unemployment rate was around 3.5%, with a high of 3.9% (January) and a low of 2.7% (April). The unemployment rate is presently 3.1%. Charlottesville also continues to maintain a highly educated population, with over 70% of adult residents having some college or higher education. Additionally, almost 70% of the labor force is between the ages of 25 and 54 and about 10% are between the ages of 55 and 64.

In the third quarter of 2016, 39,121 jobs were reported in the City of Charlottesville. The diversity of Charlottesville's occupations and jobs is similar to other Virginia cities such as Roanoke and Lynchburg. The table to the right represents the percentage of jobs by industry in the City of Charlottesville.

Employment by Industry

City of Charlottesville, VA
3rd Quarter, 2016

Industry	#	% of Total
Education & Health Services	12,529	32.0%
Leisure & Hospitality	6,683	17.5%
Professional & Business Services	5,957	15.2%
Trade, Transportation & Utilities	4,984	12.7%
Other Services	1,853	4.7%
Construction	1,579	4.0%
Public Administration	1,523	3.9%
Information	1,533	3.9%
Financial Activities	1,356	3.5%
Manufacturing	802	2.1%
Natural Resources & Mining	11	0.0%
Total*	39,121	100.0%

Source: Virginia Employment Commission, "Quarterly Census of Employment and Wages"

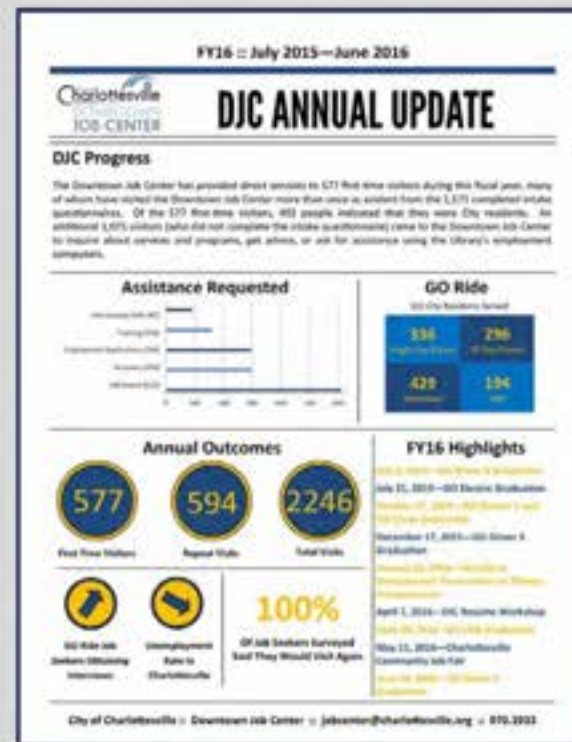
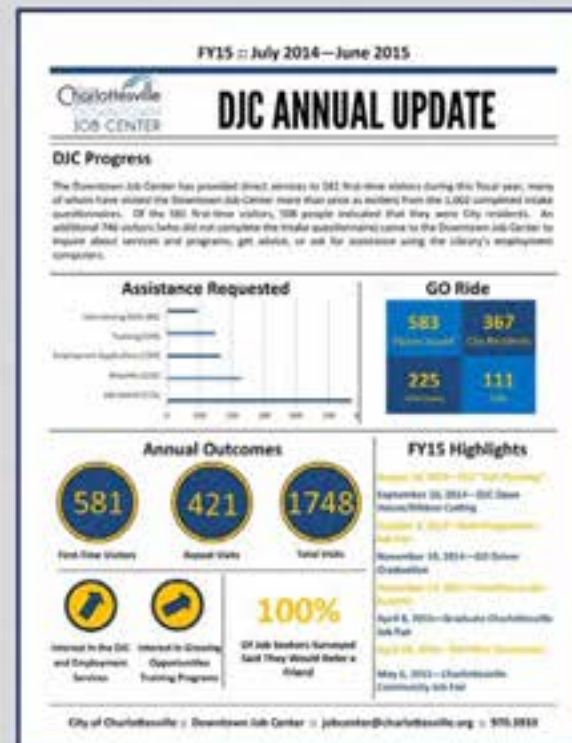
*Note: Totals may not reconcile due to disclosure issues and rounding.

"I came to the Downtown Job Center expecting a long process before I would have specific job prospects. Thanks to the Job Center, within two days, I was talking with a recruiter at a staffing agency and was able to obtain a position with a surprisingly good wage at an excellent and ethical nonprofit."

—Joseph Gerber, CFA Institute



Matthew Murphy, Community Outreach Specialist—Downtown Job Center



The establishment of the Downtown Job Center (DJC), located in the lower level of the Jefferson-Madison Regional Library at 201 East Market Street, was one of three overarching recommendations made by the Strategic Action Team (SAT) in the Growing Opportunities report that was submitted to City Council in July 2013. Now in its third year of operation, the DJC has served over 4,000 job seekers by offering employment services such as job search assistance, help completing employment applications, résumé review and creation, and mock interviewing. The DJC currently has two full-time staff members, a Job Center Manager and a Community Outreach Specialist. In Fiscal Year 2018, a part-time person will be added to the team to offer an even more customized and user-friendly experience for those visiting the DJC.

In addition to direct employment services, the DJC also administers the GO Ride transportation assistance program that provides subsidized bus passes to City residents for employment purposes, serves as the point of contact for recruiting participants in the City's GO workforce development training programs, and is home to BankOn of Greater Charlottesville, a program that provides financial literacy education and training to the unbanked and underbanked in our community.

For up-to-date information on DJC services, programs, and events, visit our website and follow us on Facebook and Twitter.



@cvljobcenter | @jobcentercvl

www.charlottesville.org/jobcenter

CITY OF CHARLOTTESVILLE



GROWING OPPORTUNITIES

JOBS-DRIVEN PRE-EMPLOYMENT
TRAINING PROGRAMS

Since the Growing Opportunities report was issued in July 2013, the City has given a lot of attention to job creation as a means of creating opportunities for City residents to achieve self-sufficiency through employment that pays a self-sufficient wage. The main goal has been to ensure that training programs are jobs-driven and align with the needs of the business community in the Charlottesville area. The strategy in developing these training programs includes employer involvement at the ground level to ensure that their exact workforce needs are being addressed during training, thus producing a highly qualified, competitive job candidate.

The City piloted this jobs-driven, pre-employment training model in October 2014 with the creation of Growing Opportunity (GO) Driver, in response to an expressed need for bus drivers by Charlottesville Area Transit (CAT). Based on the success of the pilot, several other GO training programs have been developed and implemented over the past three years including: GO Office, GO Electric, GO CNA, GO Clean, GO Driver Class A, and GO Utilities. Additionally, GO Driver has been run four more times.

In total, 93 City residents have graduated from a GO training program. Eighty-seven (87) individuals were offered employment based on their participation in the program. The intent moving forward is to continue offering GO training programs that provide credentials that are in high demand among area employers. Specifically, plans are underway to offer another GO Driver program in partnership with CAT and Pupil Transportation, as well as GO CNA in partnership with UVA Health System. There are also discussions about offering programs that provide training in skilled trades.

1



GO DRIVER
Get Trained. Get Hired.

November 2014

2



GO OFFICE
Get Trained. Get Hired.

April 2015

3



GO DRIVER
Get Trained. Get Hired.

June 2015

4



GO ELECTRIC
Get Trained. Get Hired.

June 2015

5



GO ELECTRIC
Get Trained. Get Hired.

September 2015

6



GO CLEAN
Get Trained. Get Hired.

September 2015

7



GO DRIVER
Get Trained. Get Hired.

December 2015

8



GO CNA
Get Trained. Get Hired.

April 2016

9



GO DRIVER
Get Trained. Get Hired.

June 2016

10



GO DRIVER
Get Trained. Get Hired.

August 2016

11



GO DRIVER
Get Trained. Get Hired.

March 2017

12

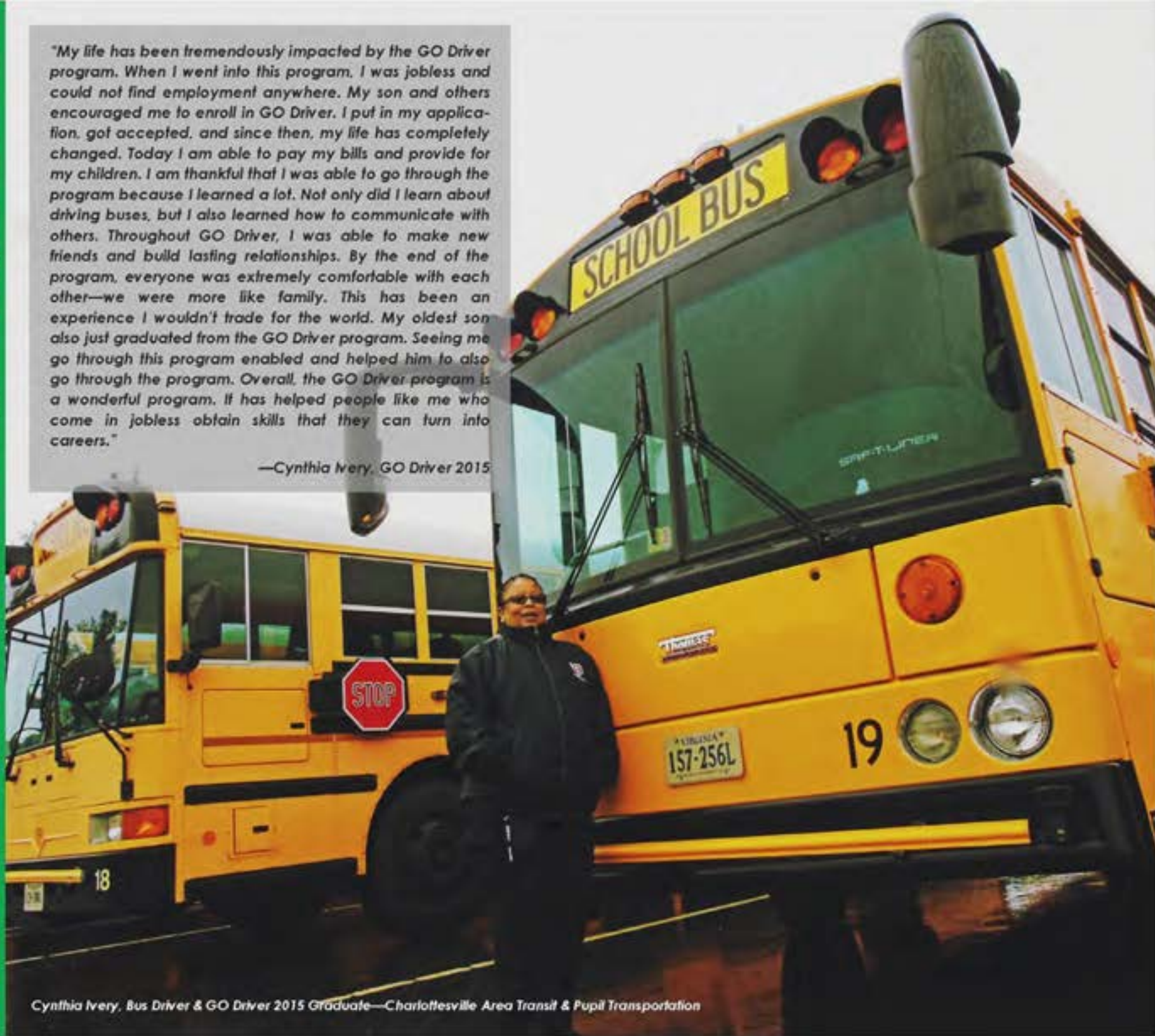


GO UTILITIES
Get Trained. Get Hired.

March 2017

"My life has been tremendously impacted by the GO Driver program. When I went into this program, I was jobless and could not find employment anywhere. My son and others encouraged me to enroll in GO Driver. I put in my application, got accepted, and since then, my life has completely changed. Today I am able to pay my bills and provide for my children. I am thankful that I was able to go through the program because I learned a lot. Not only did I learn about driving buses, but I also learned how to communicate with others. Throughout GO Driver, I was able to make new friends and build lasting relationships. By the end of the program, everyone was extremely comfortable with each other—we were more like family. This has been an experience I wouldn't trade for the world. My oldest son also just graduated from the GO Driver program. Seeing me go through this program enabled and helped him to also go through the program. Overall, the GO Driver program is a wonderful program. It has helped people like me who come in jobless obtain skills that they can turn into careers."

—Cynthia Ivery, GO Driver 2015



Cynthia Ivery, Bus Driver & GO Driver 2015 Graduate—Charlottesville Area Transit & Pupil Transportation



On March 10, 2017, the Downtown Job Center graduated its fifth GO Driver cohort, bringing the total number of graduates to 42 since the pilot was conducted in October 2014. GO Driver, which prepares City residents for a career as a bus driver with Charlottesville Area Transit (CAT) and Charlottesville City Schools Pupil Transportation, uses the job-driven workforce development training model that focuses on training individuals for an in-demand job rather than training "for the sake of training." In 2016, the GO Driver program was recognized with awards from four national, state, and local organizations for this innovative model. These awards include the:

Virginia Economic Developer's Association Community Economic Development Award—recognizes outstanding communities in Virginia for their efforts in advancing the economic viability of their community through economic and community development programs (March 2016)

Alliance for Innovation Outstanding Achievement in Local Government Innovation Award—awarded to a local government and its program/initiative/project that successfully addressed an important dilemma of public service delivery concerns that had a positive impact and tremendous benefit to the community (June 2016)

Charlottesville Society for Human Resource Management Hoo-Ray Human Resource Excellence Award—recognizes exceptional human resource efforts of deserving organizations, departments, teams, and initiatives (September 2016)

International City/County Management Association Strategic Leadership & Governance Award—recognizes innovative and successful local government programs or processes that have significantly affected a local government organizations' culture or strategic direction (September 2016)

GO DRIVER

Get Trained. Get Hired.

"My name is Meer Meerkhail. I am a husband and father of three kids. I was born in Kabul, Afghanistan in 1991. After graduating high school in 2006, I started attending college, but due to certain situations, I was unable to continue pursuing my education so I started working. Later on, the situation became worse and subsequently forced me to leave my country and move to the United States. I came to the United States in 2014 through the International Organization for Migration (IOM). After moving to the United States, I landed my first job at the Hampton Inn in Charlottesville. When I found out about the GO Driver program, I applied for it and was accepted. This program has been exceptionally helpful. Through the GO Driver program, we learned a lot. We learned customer service skills and driving skills, and it has helped us prepare for our future. Without a doubt, the GO Driver program was a great experience. After finishing the program, I was able to be employed by CAT. Working for CAT changed my life; CAT not only gave me an opportunity to serve myself, but also allowed me to serve my family financially and my community. CAT has such a great environment and has truly been a great place to work with very kind people. I really love working for CAT. I would like to thank the City of Charlottesville and the GO Driver team for such a great social program. Going through the GO Driver program was a great experience for me. We had a very successful team and professional instructors that helped us learn valuable lessons, earn our license and become employed. Through this program, we were able to serve ourselves and serve the community as well!"

—Meer Meerkhail, Bus Driver & GO Driver 2016 Graduate—
Charlottesville Area Transit & Pupil Transportation



The Office of Economic Development's business outreach program continues to be a vital conduit linking local government with businesses in order to address their workforce development needs. The business visitation program offers several programs to strengthen City businesses. In addition to the City's local match for the Virginia Jobs Investment Program (VJIP), the City has targeted the assistance of City businesses. The GO Hire program helps businesses looking to hire new staff with wage subsidies and also helps create and support training programs for incumbent employees. Most instances of training have been specific to the business industry as identified by business owners, including carpentry and renewable energy. In 2016, the OED responded to reoccurring comments from local businesses regarding the need for leadership and management training for those new to supervising. The training developed focused on frontline supervisors and provided hands on instruction on how to effectively communicate, respond to upset customers, and other vital communication skills. Since the program started in early 2016, GO Hire has assisted 13 companies and supported 24 employees.

CITY BUSINESSES ASSISTED THROUGH GO HIRE

- Alloy Workshop • Blue Moon Diner • Cardboard Safari
- Central VA Small Business Development Center
- Cloud Cabin Arts • Design Electric • GovSmart
- Jones Heating & Air • Mill Coffee Roasters • Residence Inn
- Skyline Tent Company • Sun Tribe • Wild Wing Café



"Our crew thought the classes were valuable, and they have started to think about leadership as a SKILL they can learn about, work on, and improve."

—GO Hire Business



"Thanks to the Go Hire program, we were able to send our Frontline Office Staff to a Customer Service Training that truly paid off. We implemented the things learned from the training and have received great feedback on our excellence in this area. We appreciate this program and the responsiveness of the Charlottesville Economic Development staff; they have been a pleasure to work with."

—Sedora Jones, Jones Heating & Air



In April of 2015, nine City residents graduated from GO Office, which offered training in Microsoft Office, general office administration, workplace readiness and customer service. Program participants were placed into various positions with local employers including GovSmart, a growing City business offering IT products and related services to the federal government and its prime contractors. As part of the hiring process, GovSmart participated in the OED's GO Hire program, which provides wage subsidies to City businesses hiring City residents in order to offset new employee training costs. A special thank you to GovSmart for being a terrific employer partner with the OED by placing City residents into office jobs that pay a self-sufficient wage.

WAFI NAIZI

Sales Operations Admin—GovSmart

"My name is Wafullah Naizi, and I am from Afghanistan. Prior to coming to the United States, I worked as a translator for the Youth Armed Forces. Eventually, I accepted another position as a program manager for a construction company. In October of 2014, I moved to the United States under a program called the SIY (Special Immigration Visa). Today, I have two kids, one daughter and one son. The GO Office program is a great program for people in similar situations as me. This program has been very helpful to me in so many aspects, and I am truly grateful for the opportunity. The program provided such a welcoming environment for me. I would like to thank the City of Charlottesville for launching this program because many of my friends are also seeking other opportunities like this. If it wasn't for GO Office, I would not be employed at GovSmart. Through GO Office, I was able to learn computer programs, such as Microsoft Office, as well as customer service skills. The skills I attained helped me to be able to get my position at GovSmart. Since I started working at GovSmart, I have been very welcomed into the environment. It's great working here; everyone is so nice. I'm very glad that we have great leadership that recognizes our advancements."

TONI DOWELL

Inside Sales Rep—GovSmart

"My name is Toni Dowell. I have two daughters who have gone to college and received their masters and three granddaughters who I am very proud of. I was out of the workforce for a while, and it was difficult to land another job because I did not have the skills that were needed for employment these days. Thanks to GO Office, I was able to learn those skills and better market myself. GO Office was a great experience. I was able to attain a career readiness certificate and computer skills such as using Microsoft Word and Excel. GO Office also provided me with customer service, communication, and interview skills. GO Office was very diligent and sincere in helping each of us find employment. I started working at GovSmart in April of 2016. The company was very welcoming and supportive from the beginning. I am currently an inside sales rep mainly responsible for cold calls to federal contractors, IT staff, purchasing agents, and contracting officers. This is an opportunity for me to work hard and make a lasting impression. With pride and pleasure, I wanted to proclaim a better future, and GO Office has helped to make that possible. My job is truly rewarding—GovSmart has provided me with great pay and stability."



BRENT LILLARD
CEO—GovSmart

"Hamza Durani and I started GovSmart in the kitchen of our apartment. We were roommates in Northern Virginia and best friends. We decided to move to a business location in Charlottesville once we grew to about six people. We eventually expanded the office space as we continued to grow. To give a little background about myself, I was born in Charlottesville and grew up in Madison County about half an hour north of Charlottesville. I got into the computer field at a very early age. Prior to starting GovSmart, I started a company called Tech-4 with a few investors from California. I was able to grow Tech-4 to about \$4 million in sales within a year. I eventually left Tech-4 to start GovSmart. At the time, Hamza was my roommate. He had seen me grow Tech-4 and thought that it was a great business model. It was not long after that he decided to move to Charlottesville with me to start our business. We started out selling basic computer technology and continued to build our company to be able to sell the type of technology that we sell today. In this past year alone, we've exceeded \$100 million in sales. I've had a great experience working with the OED to fill open positions at GovSmart. The people that they've provided have been very reliable and have been able to do what's asked of them. They've been very ideal employees at GovSmart. Working with the OED has provided a positive impact for our company. They have had a very great pool of individuals to fill entry level roles for us. The council has done a great job, and if I had a need for 10 more entry level positions, I would certainly go to the OED. This is a really great opportunity for not only us, but for individuals like Toni and Wafi as well. This has been a great environment for them to find their way and gain office experience."



RIDE

Get Trained. Get Hired.



Photo Courtesy of Charlottesville Area Transit

Transportation is another barrier identified in the GO report. To address this issue, the GO Ride program, which offers subsidized bus passes to City residents for employment purposes, was piloted in the spring of 2014. Eligibility criteria for the program include: being a City resident, having a valid ID, and having a resume (or being willing to work with staff to create one). Since GO Ride's initial launch, the program has changed slightly, and in particular, with the opening of the Downtown Job Center in August of 2014. When the GO Ride program became a service of the Job Center, the eligibility criteria remained the same and individuals were able to receive three 30-day bus passes whether they were seeking employment or employed.

In January of 2016, the GO Ride program was revamped again in order to better serve the needs of job seekers and to be more fiscally responsible so that the GO Ride funds can serve as many individuals as possible. The criteria for eligibility are the same; however, job seekers are now issued up to six single day passes in groups of three to be able to go to interviews. Once they obtain employment, they are then eligible for one thirty-day pass to be able to get to and from work.

GO Ride Stats

May 2014—March 2017

732

of people receiving bus passes

898

of 30-day passes distributed

477

of 1-day passes distributed

378

of jobs reported



Photo Courtesy of United Way

Childcare in Charlottesville continues to be a challenge facing working families. To ease the burden of the expenses surrounding childcare, the Job Center has partnered with United Way-Thomas Jefferson Area to offer childcare scholarships to GO training program participants. The cost of childcare is fully subsidized during training, and the subsidy is gradually reduced once the participant graduates, begins work, and starts earning an income.

Since the release of the GO report, the Office of Economic Development and Downtown Job Center have also conducted several studies about the accessibility, affordability, and availability of childcare in Charlottesville. These include: a market analysis of daycare facilities, a market analysis of in-home childcare providers, and several focus groups with City residents about their childcare needs. To further determine need, the OED recently released a survey to the community that assesses the childcare needs of individuals. The survey will help staff better understand how people are utilizing childcare, how they learn about childcare options, any problems they may face surrounding childcare, and the ideal hours they would need to have childcare available. Once this information is collected, reviewed, and examined in conjunction with prior studies, it will help to shed light on the childcare needs of the community so that staff can identify any opportunities to create new options or supplement existing offerings.



Screenshot of 2017 Childcare Needs Survey released in April 2017

January

February

March

April

May

June

July

August

September

October

November

December

January 2016–March 2016—Recruitment for GO CIV and community outreach for the Reentry Resource Fair and Charlottesville Community Job Fair

April 30, 2016—GO CIV Graduation (17 Graduates, 40 Attendees)—graduation ceremony for seven-week pre-employment training program that prepared City residents to become Certified Nurse Assistants for the University of Virginia Health System and other health care agencies

April 30, 2016—Reentry Resource Fair (70 Attendees)—resource fair to provide information to individuals who have had contact with the criminal justice system

May 11, 2016—Charlottesville Community Job Fair (100 Exhibitors, 1,000 Job Seekers)—annual job fair at John Paul Jones Arena featuring over 1,000 open positions with the area's largest employers

June 10, 2016—GO Drive-A Graduation (7 Graduates, 40 Attendees)—graduation ceremony for seven-week pre-employment training program that prepared City residents to be Fleet Transit Operators with CAT and Fuel Transportation

July 2016–September 2016—Community outreach for upcoming targeted hiring events and recruitment for GO Drive Class A training class

September 9, 2016—Ting Hiring Event (30 Attendees)—recruitment event held specifically for Ting, which was in need of cable installers to expand service in the area

September 16, 2016—5th Street Station Hiring Event (20 Attendees)—recruitment event held specifically for new store opening of 5th Street Station including A.C. Moore, Field & Stream and Dick's Sporting Goods, Pottery Barn, Timberwood Taphouse, and Pizzeria's

September 23, 2016—Tom Tom Refuel Tech Meet—sponsored by the Downtown Job Center, which was onsite to discuss employment services with those looking for careers in the technology field

October 20, 2016—GO Drive Class A Graduation (7 Graduates, 40 Attendees)—graduation ceremony for seven-week pre-employment training program that prepared City residents to become tractor trailer truck drivers, but first offering Class A training

December 2016—Recruitment for GO Drive Training program being offered in January 2017



"Of course it was hard to find a job with my background, but I persevered and overcame those obstacles. Thanks to the help that I got at the Downtown Job Center and the GO Utilities training program, I've been able to get a full time job working for the City!"

—Raejon Curry, City of Charlottesville—Public Utilities

More than 60% of the individuals served through the Downtown Job Center and the City's GO programs have some form of criminal history. This oftentimes creates a barrier for career ladder employment opportunities paying a self-sufficient wage. However, through staff connections with local employers and strong partnerships with GO program employers, headway has been made in helping these individuals attain meaningful employment.

As a City of Second Chances, the City also makes an effort to ensure that residents, and in particular, those with criminal histories, are aware of and have access to resources. On Saturday, April 30, 2016, the City held a Reentry Resource Fair at Carver Recreation Center in order to provide information to individuals who have had contact with the criminal justice system, including those who have been previously incarcerated. Twenty-two community resource providers participated in the event including: the Downtown Job Center, the Virginia Workforce Center-Charlottesville, the Adult Learning Center, Piedmont Virginia Community College, etc. Approximately 40 job seekers attended the event.

"I came into the Job Center to get help with an application. Nobody would give me a job because of my criminal record. Cory and Matthew helped me with the application on the computer and helped me look up my criminal record. Cory and Matthew called their contact at Jiffy Lube and were able to get me an interview. When I got upset and quit my job, they were able to talk to my employer and help me get rehired. I have been there ever since."

—Jerry Hall, Jiffy Lube

COMMUNITY OUTREACH EFFORTS

REVIEW OF CITY COUNCIL RESOLUTION:

Expand Career Pipelines and Paid Apprenticeships in Infrastructure Building and Repair within the City of Charlottesville for Local Residents

Submitted by the Office of Economic Development
May 1, 2017

➔BACKGROUND

On December 5, 2016, Charlottesville City Council passed a resolution to explore expanding career pipelines and paid apprenticeships in infrastructure building and repair within the City of Charlottesville for local residents. Across the United States, there has been a similar push to explore such opportunities in communities as a means of bridging employment, poverty, and skills gaps concerns. As outlined in the report released by the U.S. Department of Labor in 2014, *21st Century Registered Apprenticeship: A Shared Vision for Increasing Opportunity, Innovation, and Competitiveness for American Workers and Employers*,¹ a registered apprenticeship program provides advantages for an increasing number of businesses and industries by creating valuable post-secondary pathways to rewarding careers, promoting growing opportunities to diverse populations, and addressing economic and workforce challenges. These challenges oftentimes include, but are not limited to: worker skill shortages, gaps in educational attainment, credentialing deficits, and aging workforces. Therefore, from a workforce development standpoint, an apprenticeship program can be instrumental in reducing the unemployment rate among the least educated and skilled residents in a community, as such programs provide upward mobility through on-the-job learning and education – a method more amenable to this demographic.

Additionally, from an economic development perspective, businesses also benefit greatly from registered apprenticeships, especially those needing workforce in high-demand jobs that do not require higher education and those experiencing the loss of experienced workforce as they age out employment. To illustrate this point, in 2015, *Virginia Executive Order 49 – Expanding Registered Apprenticeships*² estimated that by 2022 nearly 500,000 new jobs will be created in the Commonwealth, thus producing a workforce of about 930,000 workers to replace the current aging workforce. Approximately 50% to 60% of these jobs will require training in trade skills. Today, rising costs of higher education and the lack of skills available in the employment sector have opened opportunities for a robust apprenticeship model to be applied in localities across the country. Still, many companies in the area are in need of workers who are willing to learn the skills necessary in these high-demand careers. In general, apprenticeship programs not only help to develop a skilled workforce, but also provide employers with the tools to help them grow.

➔OVERVIEW

After the abovementioned resolution was passed by Council, City staff from various departments including the City Manager's Office, the Office of Economic Development, Neighborhood Development Services, Public Works, Public Utilities, Facilities Maintenance, and the Division of Procurement & Risk Management met to discuss options for apprenticeships within the City of Charlottesville. At this meeting, the following topics were discussed: 1.) What employment opportunities will result from upcoming City projects? 2.) What is the need for and turnover of

¹ Seleznow, E. M. (2014, January 2). *21st Century Registered Apprenticeship: A Shared Vision for Increasing Opportunity, Innovation, and Competitiveness for American Workers and Employers*. Retrieved April 28, 2017, from https://wdr.doleta.gov/directives/attach/TEN/TEN_18_13.pdf

² McAuliffe, T. R. (2015, October 6). *Executive Order 49: Expanding Registered Apprenticeships in Virginia*. Retrieved April 28, 2017, from <https://governor.virginia.gov/media/4664/eo-49-for-apprenticeship-program.pdf>

workforce in skilled trades jobs that currently exist within City departments? 3.) What would be the impact of an apprenticeship program (either stand alone or linked to capital improvement projects) on the City's existing workforce? Additionally, staff from City departments engaging most heavily in the skilled trades had another meeting with a representative from the Virginia Department of Labor & Industry (VDOLI) and Piedmont Virginia Community College (PVCC) to discuss the City's current participation in the VDOLI registered apprenticeship program and how a more formal apprenticeship program approach could benefit the City as an employer. After these meetings, Office of Economic Development (OED) staff then conducted research into various programs available in the area and across the state.

In Virginia, there are 167 active registered apprenticeship programs, from painting, electrical, and bricklaying, to cooking, cosmetology, and meat cutting; all of which range from 2,000 to 10,000 hours. Currently, in the City of Charlottesville, there are 72 registered apprenticeship programs, with the City of Charlottesville being a registered apprenticeship provider for plumbing (Facilities Maintenance), building maintenance repair (Parks & Recreation), and maintenance mechanic (Charlottesville Redevelopment & Housing Association (CRHA)). In recent years, the City has had two employees who have completed a registered apprenticeship program, with one individual actually completing two apprenticeships. In the meetings, there did not seem to be too much knowledge of the City's participation in the VDOLI registered apprenticeship program, and in fact, most people were not aware that they City is a registered apprenticeship provider in several industries already. Overall, a majority of the registered apprenticeship providers in Charlottesville are in the private sector (e.g., Design Electric, Beck-Cohen, Robertson Electric, W.E. Brown, Albemarle Heating & Air, Michael & Sons, Colonial Webb, etc.), and none of the programs appear to be "formal" training programs. Employees who work at the companies enter the registered apprenticeship program if they are interested, and the classroom training is provided by either Charlottesville Albemarle Technical Education Center (CATEC) or PVCC.

However, one example of a formal apprenticeship program that could potentially be used as a model for the City is offered through the University of Virginia Facilities Management. Established in 1982, UVA Facilities Management offers a highly competitive apprenticeship program to individuals who are willing to learn a skilled trade in plumbing, electrical, carpentry, masonry, plastering, and heating, ventilation, and air conditioning (HVAC). As the first apprentice program to be started by a state agency in Virginia, this program today employs diverse and responsible employees who provide an environment that supports learning, research, and growth at the University. Each year, typically six to nine individuals are accepted into the apprenticeship program. Each of these employees receives full-time salary and benefits from the University. Apprentices train with skilled and licensed journeymen, mentors, and supervisors who help them gain the skills and knowledge that they need to be successful. The apprenticeship program takes about four years, and in that time, participants are able to learn a select skill through on-the-job training, technical education, and classroom instruction. The application process is somewhat formal; interested applicants are asked to attend a job fair where they learn about the job requirements and opportunities. Individuals fill out an application and if selected are asked to interview with the

University. As of June 2015, nearly 26 apprentices have been hired from a pool of nearly 300 to 500 individuals that have applied for the program.³

The following section provides an overview of four options for apprenticeship programs that have been analyzed by City staff and could potentially address the Council's resolution to expand career pipelines and paid apprenticeships in infrastructure building and repair within the City of Charlottesville for local residents. These options include:

1. Skilled Trades Training & Apprenticeships through City Infrastructure Projects
2. City of Charlottesville Apprenticeship Program
3. Growing Opportunities (GO) Programs with On-the-Job Apprenticeship Tracks
4. Growing Opportunities (GO) Skilled Trades Academy

Benefits and challenges for the options are provided, and a recommendation is made regarding each based on factors such as: budgetary impact/cost, impact on existing workforce, program length, and job sustainability.

➡ APPRENTICESHIP PROGRAM OPTIONS & STAFF RECOMMENDATIONS

Option #1: Skilled Trades Training & Apprenticeships through City Infrastructure Projects

The resolution requests an exploration of how major public infrastructure projects could allow for workforce training and potentially the development of a full City apprenticeship program. *(Please note that a full City apprenticeship program is explored in detail under Option #2 as it relates to the overall skilled trades work of the City – not just public infrastructure projects.)* For most public infrastructure projects, the City typically contracts with a single general contractor following a solicitation of bids. This is to the benefit of both parties, as there is a clear understanding of the project requirements and responsibilities and the compensation for completing these tasks. General contractors commonly engage sub-contractors that have a particular trade or expertise to work on the project, and it is not unusual for large projects to have a series of sub-contractors. The City's contractual relationship remains with the general contractor, and the City has limited ability to determine who the sub-contractors will be or how they are selected. This process follows Virginia's proscribed procurement process and provides the City with the most qualified and available contractor at the most advantageous price.

➡ Option #1 Benefits

1. Opportunity for City residents to obtain a position with the City of Charlottesville that provides skilled trades training and a self-sufficient wage.

➡ Option #1 Challenges

1. Most public infrastructure projects (structures, roads, bridges, etc.) require specific skill sets and experience levels in order to be completed on time and on budget. As such, these projects do not lend themselves to be done by City employees who typically have more general skills that are focused on project management and performing basic maintenance on existing infrastructure.

Continued on Page 4

³ UVA Facilities Management Apprenticeship Program. (n.d.). Retrieved April 28, 2017, from <https://www.fm.virginia.edu/depts/humanresources/apprenticeship/index.html>

2. Major infrastructure projects last for many years, and as a result, only need replacement on a set schedule that can be every 20 to 30 years or more. This leads to a very cyclical level of demand which is most efficiently met by private sector contractors that have the expertise and can more easily flex the size of their workforce to meet project demands.
3. While City staff could conceivably perform some of the work needed to complete these types of projects, attempting to mix private sector contractor employees with City employees or apprentices, raises at a minimum, legal, liability, and safety concerns.
4. Very costly and will require a significant budgetary commitment from City Council for personnel (i.e., the creation of new positions and increased compensation for incumbent staff to account for any inequities in pay). *(Please note that potential budgetary impacts of a City apprenticeship program are explored in more detail under Option #2.)*

➡ Option #1 Staff Recommendations

Staff does not believe it is feasible to create an apprenticeship program that connects directly to major City infrastructure projects. An option the City does have, if the contractor is amenable, is to provide funding above the contract amount to allow the contractor to hire additional staff for the purpose of a workforce development project. This approach was used on the Downtown Mall renovation project completed in 2009. In this case, a change order for an additional \$50,000 was allocated to hire six employees to help the construction manager complete the \$7.5 million dollar project. It was also believed that the individuals employed would gain useful skills and some work experience as part of the process. Five laborers and one bookkeeper were employed in this manner for the duration of the six month project, but these individuals are no longer employed with the contractor, and there is no evidence that the laborers received structured, skilled trades training.

It should be noted that this process typically cannot be required, or mandated, as part of the procurement process, but only entered into by agreement of both parties. Another shortfall of this approach is that absent a formal apprentice program or process, very limited skill development can occur within the normal duration of a public infrastructure project. While a few individuals do benefit from some earned income and work experience during the project, it does not lead to sustainable employment. In fact, it can serve to perpetuate the cyclical nature of employment that many low skilled individuals can experience. **Given the additional cost and limited benefit for participants, staff does not recommend further consideration of this option as a viable path forward.**

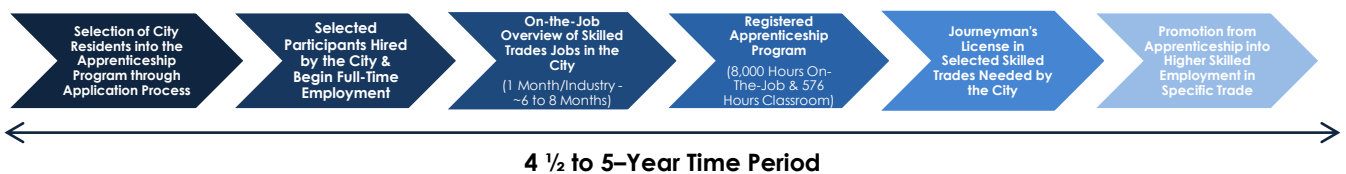
Option #2: City of Charlottesville Apprenticeship Program

As mentioned above, another option would be to explore the creation of a city-wide apprenticeship program that is not directly tied to public infrastructure projects. The City of Charlottesville is currently a registered apprenticeship provider through VDOLI for the following industries: building maintenance repair, maintenance mechanic, and plumbing. Additionally, the City can become a registered apprenticeship provider in other industries that are in high demand within the organization (e.g., positions that tend to be difficult to fill, positions where there is currently a shortage and new apprenticeship opportunities could be created, and/or positions that are estimated to become vacant in the future due to an aging/retiring workforce). Therefore, a second option would be to create an apprenticeship program similar to that of UVA Facilities Management (see description on page 2). For this option, City residents would be accepted into the Apprenticeship Program through a competitive application process. Due to the smaller size of the City compared to UVA Facilities Management, the number of apprentices selected and hired during each cycle would be approximately two to four with the process taking place on a biennial basis.

Selected individuals would be hired by the City as apprentices (full-time with benefits) and then trained under an experienced journeyman or master in the various skilled trades most utilized by the City. This would require participation from City departments that engage in skilled trades activities as part of their regular work including: Public Works, Public Utilities, Facilities Maintenance, and Parks and Recreation. There would also be great benefit in

partnering with CRHA as a possible apprenticeship provider in the Apprenticeship Program. While receiving on-the-job training from seasoned City staff, apprentices would also begin the classroom portion of a specific registered apprenticeship through PVCC. Again, the industries from which they could chose would be based on identified City needs. The timeline for the program would be approximately four and half to five years, with the basic overview of the City's skilled trades positions being provided during the first six to eight months of employment (one month per field) and individuals working towards their 8,000 hours of on-the-job training and 576 hours of classroom work over a four-year period. Once the apprentices complete the registered apprenticeship and receive their journeyman's license, they would retain their employment within the City, moving out of apprenticeship/entry level jobs into higher level positions. (Please see Figure 1.1 for a progression timeline for the Apprenticeship Program.)

Figure 1.1 – City of Charlottesville Apprenticeship Program Pathway



Option #3 would obviously be costly and require a significant budgetary contribution by City Council. First, there would be the cost associated with putting those accepted into the program through a registered apprenticeship program. As is the case with other options that have a registered apprenticeship component, the cost per individual would be approximately \$6,500. However, with VDOL's Registered Apprenticeship Related Instruction Incentive Program (ARIP) for employers which provides \$1,000 per year for each year of the apprenticeship, the cost could be reduced to \$2,500. Second, there would be substantial cost associated with creating two to four full-time, benefited apprenticeship positions every other year. If apprentices are full-time employees with benefits making the minimum wage allowed by the City, presently \$13.52 but increasing to \$13.79 on July 1, 2017, each position would potentially cost the City around \$35,000 annually. Related to this, there could also be increased costs due to compression if apprentices are hired in at the same wage as incumbent employees who have higher level skills and seniority over the apprentices. These employees' wages would possibly need to be readjusted to address any inequities in pay. Along these same lines, there could be additional costs associated with increasing the compensation for existing City employees who will be providing the on-the-job apprenticeship training, as it would be difficult to assign such responsibilities to staff without providing adequate compensation for higher level work. Finally, the establishment of a City Apprenticeship Program would more than likely require the creation of a new position to staff the program. (Please note that UVA Facilities Maintenance has at least three staff persons who have the management/oversight of the apprenticeship program as part of their job duties.) This individual would be responsible for coordination of the program including such things as participant recruitment and selection, case management of apprentices over the program time period, instruction of a bi-monthly workplace readiness training class for apprentices, and coordination across departments for the initial six to eight month industry overviews. A full-time position of this nature could cost the City up to about \$60,000 (including base pay and benefits).

Option #2 Benefits

1. Provides City residents entry into employment with the City of Charlottesville in a skilled trades position.
2. Provides a clear career path for City residents seeking employment that will move them towards self-sufficiency.
3. Addresses City workforce needs for skilled trades positions that are hard to hire, experiencing a shortage, or facing a loss of senior staff due to aging/retirement.
4. Although the process is long for this option, participants will receive a full-time, benefited job paying a self-sufficient wage throughout the entire five-year timeline.

Option #2 Challenges

1. Lack of existing master level staff to train apprentices hired through the program.
2. Very costly and will require a significant budgetary commitment from City Council for personnel (i.e., the creation of new positions and increased compensation for incumbent staff to account for any inequities in pay).
3. Requires a significant amount of time to plan and implement (e.g., coordination among key City departments, training of City staff that will be providing training to apprentices, development of on-the-job training curriculum, registered apprenticeship certification by VDOL in additional skilled trades industries, etc.).
4. Serves a relatively low number of City residents when compared to other options that will be detailed below.

Staff Recommendations

While creating a city-wide apprenticeship program focusing on the City's overall skilled trades work would be a better option than creating a program linked entirely to public infrastructure projects, staff believes that an option of this magnitude would require further study and analysis before being formally recommended. In both City meetings held about the apprenticeship resolution, concerns were immediately raised by staff across all departments about the impact that such a program would have on existing workforce, and in particular, compression issues associated with hiring in apprentices at the same rate of more senior workers and concerns about a lack of master level staff to actually provide the on-the-job training. Additionally, as mentioned above, the budgetary impact would be significant due to the creation of new positions and increased compensation of incumbent workers. **Therefore, at this time, staff does not recommend this option unless further analysis is conducted regarding the human resources and budgetary impacts of such a program.**

Option #3: Growing Opportunities (GO) Programs with On-the-Job Apprenticeship Tracks

Since 2014, the City of Charlottesville has been offering Growing Opportunities (GO) jobs-driven workforce development training programs in order to help City residents get the skills and training they need in order to obtain employment paying a self-sufficient wage. Over the past two and half years, almost 100 individuals have graduated from one of twelve GO training programs, and several of these programs have focused on skilled trades. The most recent example of this is GO Utilities, which ran Monday through Friday from 8:00am to 1:00pm for six weeks from February 13, 2017 to March 23, 2017 and offered 147 hours of training in the area listed below. Training was provided through PVCC Workforce Services.

- National Center for Construction Education and Research (NCCER) Pipefitting Certification—40 hours
- Flagger Certification and OSHA 10 Certification—20 hours
- Department of Motor Vehicles Class A Learner's Permit—40 hours
- Virginia Career Readiness Certificate—15 hours
- Workplace Readiness/Working in Teams Training—32 hours

GO Utilities consisted of four male, City residents between the ages of 27 and 50. All were employed but looking for better employment; three had entry level experience in the construction field. These individuals were recruited primarily through word-of-mouth from past GO program participants and/or family members. All four individuals successfully graduated from the program and obtained full-time,



GO Utilities Graduation – March 27, 2017

benefited Maintenance Technician II positions with the City of Charlottesville Department of Public Utilities. Each has started employment at a rate of \$13.52 per hour and is under a six-month probationary period with eligibility for an increase up to 3% at the end of the probationary period as long as it does not affect internal equity.

For those who are interested in further pursuing their education and training, the City, as an employer, will offer these individuals the opportunities to enter into a registered plumbing apprenticeship program offered through PVCC. *(Please note that plumbing is the most closely aligned apprenticeship with utilities work.)* In order to complete the program, participants will have to complete 8,000 on-the-job hours and 576 hours of classroom coursework over a four-year period. Since GO Utilities graduates have already completed 40 hours of NCCER pipefitting training, the number of classroom hours will be reduced to 536 hours over four years. In order to better serve the needs of the employer, the curriculum can be customized to include more public/commercial utilities related topics. After completing the on-the-job and classroom hour requirements, individuals will then earn their journeyman's license in plumbing, thus resulting in better employment opportunities for the individual and higher skilled employees for the employer (i.e., the City of Charlottesville Department of Public Utilities). *(Please see Figure 1.2 for a progression timeline for this option.)*

Figure 1.2 – GO Program with On-the-Job Apprenticeship Track Pathway



The cost of GO Utilities was \$3,560 per student (\$14,240 for all four students), which includes pre-program drug testing and physicals and training. The cost for this program was relatively high due to the fact that the NCCER pipefitting curriculum was not approved by the Virginia Community College System (VCCS) for the Workforce Credential Grant, which reduces the cost for in-demand credentialed training by two-thirds. If GO Utilities (or a similar skilled trades program) is run again, PVCC will attempt to get the credential certified to reduce training costs. Now that the four GO Utilities graduates are employed, they will be given an option to enter into a plumbing apprenticeship program offered through PVCC. The estimate cost per individual for the four-year apprenticeship program is \$6,500. However, in an effort to encourage more apprenticeships in both the public and private sectors, *Virginia Executive Order 49* provides the Registered Apprenticeship Related Instruction Incentive Program (ARIP), which is administered by the VDOLI. VDOLI may reimburse the sponsor/employer and state agency, up to a maximum of \$1,000 annually, per apprentice, for a maximum of 10 apprentices per sponsor. With this incentive, the cost per individual for participating in the four-year apprenticeship program will be approximately \$2,500. This expense is generally paid for by the employer.

Option #3 Benefits

1. Ability to customize GO programs based on specific industries determined by employer demand (e.g., GO Utilities, GO Electric, etc.).
2. Development of job candidates with basic level training in a specific skilled trades industry that is in high demand.
3. Ability to place these individuals into jobs that pay a self-sufficient wage because they have industry specific training.

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4. Clear career ladder for individuals as they progress from entry level to journeyman in a specific industry over a four-year period through participation in a registered apprenticeship program.
5. A workforce for employers that is progressively improving its knowledge, skills, and abilities.
6. A more loyal workforce for employers who invest in the growth and development of their staff.

➡ Option #3 Challenges

1. Cost of program if the training needed by the employer is not approved by VCCS for the Workforce Credential Grant.
2. Lack of private sector employers interested in partnering with the City to provide employment for GO program graduates.
3. Employer must be an approved apprenticeship provider or willing to become one.
4. Responsibility of the employer to pay for each individual's participation in an apprenticeship program once they are on-the-job. *(This could possibly be subsidized through the City of Charlottesville Office of Economic Development's GO Hire program, which provides funding to City businesses for incumbent worker training.)*

➡ Option #3 Staff Recommendations

The City's GO programs use a jobs-driven workforce development model that has proven to be successful. As illustrated with GO Utilities, there was expressed need for qualified candidates in a hard-to-hire, skilled trades position within the City of Charlottesville. Program participants were trained on exactly what the employer indicated it wanted, and as a result, all four individuals who successfully completed the program were ultimately hired by the City. With the added element of the registered plumbing apprenticeship program, there will be a clear career path for those interested in pursuing further education and training. **In light of this, and the grants and incentives available for program costs, staff recommends this option to help improve City residents' access to apprenticeship opportunities.**

Additionally, staff recommends this option because people who successfully complete the skilled trades GO programs will automatically be placed into high-demand jobs paying a self-sufficient wage, thus lessening the chance that they will get low level, general labor employment that is simply not sustainable.

Option #4: Growing Opportunities (GO) Skilled Trades Academy

The GO Skilled Trades Academy would be designed as a potential pre-cursor to Option #3 (GO Programs with On-the-Job Apprenticeship Tracks) and would be intended more for individuals who are unsure about which skilled trades industry would be the best fit for them. With this option, City residents would begin by receiving a basic overview of the skilled trades instead of training in one specific industry (e.g., pipefitting, electrical, carpentry, etc.). In recent months, the NCCER Core Craft skills curriculum has been accepted as an approved, in-demand credential by VCCS for the Workforce Credential Grant. This curriculum would serve as the foundation for the GO Skilled Trades Academy, as Core Craft is focused specifically on the skilled trades and offers 60 hours of classroom and lab training in nine modules. These modules include:

1. Basic Safety
2. Introduction to Construction Math
3. Introduction to Hand and Power Tools
4. Introduction to Construction Drawing s
5. Basic Rigging
6. Basic Communication Skills
7. Basic Employability Skills
8. Introduction to Material Handling
9. Basic Communication Skills and Employability Skills

In addition to Core Craft, the Academy would include an introduction to various high-demand skilled trade occupations in the Charlottesville area such as: electrical, plumbing, heating and air, carpentry, and facilities maintenance. Approximately two hours would be spent on each industry, with participants receiving an overview and possible tour/site visit to a local business specializing in these areas. Upon completion of the Academy, participants would be placed into basic entry level, general labor positions not requiring specific industry

knowledge. At this time, individuals could continue with their employment or identify a specific industry in which they have the most interest and then enter into a GO program offering more technical training in this industry. Upon completion of the GO program they could then potentially be placed into new employment offering the opportunity to be in an apprenticeship program or stay with the same employer if that employer is a registered apprenticeship provider in their industry of choice. Essentially, the Academy offers pre-GO program training to create a basic foundation in skilled trades work, thus allowing individuals to get a better idea about the industry that most interests them. *(Please see Figure 1.3 for a progression timeline, which is estimated to be approximately five years but would be dependent upon the individual and the availability of GO programming.)*

Figure 1.3 – GO Skilled Trades Academy Pathway



For the Academy, the cost will be approximately \$1,500 per individual, as the cost for Core Craft alone is \$1,100 per person based on minimum of seven individuals and includes books and tests. However, with the Workforce Credential Grant, the cost per person would be reduced to about \$768 upon successful completion of the program. If individuals decide to continue on the pathway illustrated in Figure 1.3, additional costs would be incurred when entering into a GO program and ultimately a registered apprenticeship program through an employer. The total investment for the Academy pathway could range anywhere between \$4,500 and \$10,000, depending upon whether or not the Workforce Credential Grant and/or the state ARIP incentive for employers applies to the credentialing and apprenticeship respectively.

Option #4 Benefits

1. Provides entry into the skilled trades despite being at a general labor level.
2. Opportunity for individuals to get introduced to the skilled trades and determine which industry they prefer.
3. Cost of Academy training alone is relatively inexpensive due to the fact that Core Craft is an approved Workforce Credential Grant curriculum.
4. Potential pipeline of candidates for GO programs.

Option #4 Challenges

1. Employment after completion of the GO Skilled Trades Academy will result in low level jobs, which will more than likely not pay a self-sufficient wage (estimated wage \$9 to \$11/hour).
2. Employment at this level will be more unstable and require transportation to and from jobsites, thus impacting job retention. *(This was a significant issue with GO Electric in which people were hired by the employer partner but could not maintain employment because jobsites were constantly changing and well outside of the Charlottesville area.)*
3. May be a significant wait time to enter into an industry specific GO program (such as GO Utilities or GO Electric) if there employer demand does not exist upon completion of the Academy.
4. The entire pathway for this option is long (approximately five years) and could potentially be costly based on eligibility and availability of grants and incentives.

Option #4 Staff Recommendations

The GO Skilled Trades Academy would be a good opportunity for individuals within the community to learn about the various fields within the industry. At the same time, participants who successfully graduate from the program would obtain some form of employment, even if it is a lower wage, general labor position. The Academy is also fairly low in cost relative to the other options due to grant availability. For those wanting to pursue their training and education beyond the Academy, a GO program specializing in one particular field could be an option. The main concern with this is that GO programs will only be

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offered when there is employer demand, and therefore, the wait could be long. This in turn could lengthen the entire pathway timeline, which is already estimated to be about five years. **For these reasons, staff recommends the Skilled Trades Academy option only in situations where GO programs will be offered in the near future (no more than one year out).** However, an issue still remains with this suggestion – the GO program or programs being offered might not be in the skilled trades field that the individual prefers after having gone through the Academy.

CONCLUSION

Since City Council passed the apprenticeship resolution in December, City staff from all departments engaging the skilled trades work has met on at least two occasions to discuss possible options to expand career pipelines and paid apprenticeships within the City of Charlottesville for local residents. Additionally, OED staff has researched other programs across the Commonwealth of Virginia to determine if there is a best practice that could be replicated in Charlottesville. As part of this report, four options were presented in detail including: 1.) Skilled Trades Training & Apprenticeships through City Infrastructure Projects, 2.) a City of Charlottesville Apprenticeship Program, 3.) GO Programs with On-the-Job Apprenticeship Tracks, and 4.) a GO Skilled Trades Academy. Of these four options, staff believes that the most economical, effective, and sustainable option would be to continue offering GO programs with on-the-job apprenticeship tracks (such as GO Utilities). In light of this, OED staff will continue its outreach to employers in both the public and private sector to determine need, and in turn, GO programs within the skilled trades that could potentially be offered in the future. Additionally, staff will work with PVCC to get credentials for the most in-demand skilled trades occupations approved for the Workforce Credential Grant so that when the time comes to offer the training, the curriculum will already be grant eligible. Finally, there will be a continued effort by staff to encourage City residents' interest in the skilled trades, as there is typically not as much interest in GO programs offering this type of instruction. Alerting individuals to a clear career pathway through participation in an apprenticeship program will be critical.

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