



We Are Columbia

The Columbia City Council will conduct a Work Session & Council Meeting at 2:00 p.m. and 6:00 p.m. on Tuesday, November 1, 2016 at City Hall, Council Chambers, 1737 Main Street, 3rd Floor, Columbia, SC 29201. The full agenda packet can be viewed online at www.columbiasc.net/city-council/agendas.

The Honorable Mayor Stephen K. Benjamin ▪ The Honorable Sam Davis, District I
The Honorable Tameika Isaac Devine, At-Large ▪ The Honorable Moe Baddourah, District III
The Honorable Howard Duvall, Jr., At-Large ▪ The Honorable Edward McDowell, Jr., District II

Prior to entering the meeting please turn all electronic communication devices to the silent, vibrate or off position. All presenters are asked to speak directly into the microphone for recording purposes.

WORK SESSION - 2:00 P.M.

ROLL CALL

INVOCATION

CITY COUNCIL DISCUSSION

1. Gateway to the Army Centennial Park Project Update - Retired Command Sergeant Major Marty Wells, President of the Gateway to the Army Association
2. Business License Update – Ms. Melissa Carter, Research and Legislative Liaison for the Municipal Association of South Carolina
3. Report on Disadvantaged and Local Business Enterprises - Ms. Tina Herbert, Executive Director of the Office of Business Opportunities and Ms. Sandra Wright, Purchasing Agent
4. Community Redevelopment Projects Update - Ms. Diane E. Sumpter, Owner of DESA, Inc.

EXECUTIVE SESSION

5. Discussion of negotiations incident to proposed contractual arrangements pursuant to §30-4-70(a)(2)

Horizon Garage

DESA, Inc.



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6. Discussion of matters relating to the proposed location, expansion or the provision of services encouraging location or expansion of industries or other businesses in the area served by the public body pursuant to §30-4-70(a)(5)

Barbershop

7. Receipt of legal advice which relates to matters covered by attorney-client privilege pursuant to §30-4-70(a)(2)

*West Gevais District Plan
Canalside deed restriction*

COUNCIL MEETING - 6:00 P.M.

ROLL CALL

PLEDGE OF ALLEGIANCE

INVOCATION

Mr. S. Allison Baker, Senior Assistant City Manager

ADOPTION OF THE AGENDA

PUBLIC INPUT RELATED TO AGENDA ITEMS

APPROVAL OF MINUTES

8. January 19, 2016 Council Meeting Minutes
9. September 20, 2016 Work Session and Council Meeting Minutes

CONSENT AGENDA ITEMS 10 THROUGH 17

CONSIDERATION OF BIDS & AGREEMENTS

10. Council is asked to approve an Annual Maintenance Agreement for Mobile Area Routing and Vehicle Location Information System Software Support, as requested by the Police Department. Award to Bradshaw Consulting Services, Inc. in the amount of \$56,879.86. This firm is located in Aiken, SC.

Funding Source: Police Administrative Services- Maintenance and Service Contract, 1012402-638200. The original budgeted amount is \$56,879.86.



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11. Council is asked to approve the Purchase of Energov Software for Stormwater Migration, as requested by the Utilities and Engineering Department. Award to Tyler Technologies, Inc. located in Duluth, GA as a Sole Source in the amount of \$88,343.00.

Funding Source: Storm Water Engineering/Computer License, 5534202-627510. The original budgeted amount is \$90,000.00.

12. Council is asked to approve the Banner CIS Annual Support Renewal, as requested by the Budget and Program Management Office. Award to Hansen Technologies in the amount of \$144,089.53. This vendor is located in Atlanta, Georgia with offices in Columbia, SC.

Funding Source: 6218950-638200. The original budgeted amount is \$150,000.00.

13. Council is asked to approve Contract Amendment #2 for Project SS7300; Engineering Services Agreement for the Metro Gap Analysis Implementation for Fiscal Year 2016/2017, as requested by the Utilities & Engineering Department. Award to Atlantic South Consulting Services, LLC, a Minority Business Enterprise in the amount of \$267,000.00. This firm is located in Columbia, SC.

Funding Source: Metro Wastewater Treatment Plant Operations & Management Budget, 5516208-638305. This is a Clean Water 2020 Program Project and a Protégé Led Project. The original budgeted amount is \$500,000.00.

Sub consulting services will be \$120,150.000 (45.0%) of the contract value; awarded to EMA of St. Paul, MN to provide support to the project.

14. Council is asked to approve an Engineering Services Agreement for Force Main Condition Assessment and SCADA Improvements, as requested by the Utilities and Engineering Department. Award to Brown & Caldwell in an amount not to exceed \$1,632,000.00. This firm is located in Columbia, SC.

Funding Source: 29999-SS733301-658650. This is a Clean Water 2020 Program Project. The original budgeted amount is \$1,800,000.00.

The following subcontractors will provide additional services at \$843,750.00 (51.7%) of the contract value.

\$210,750.00 (12.9%) - M.B. Kahn Construction Company, Inc., of Columbia, SC, will provide civil contractor support services.

\$633,000.00 (38.8%) - Pure Technologies of Atlanta, GA, will provide Broad River Force Main Assessment and Saluda River Force Main Assessment services.

ORDINANCES - SECOND READING



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15. Ordinance No.: 2016-067 - Amending Ordinance No.: 2016-029 Granting an encroachment to the Knights of Columbus for installation and maintenance of brick pavers and sod within the right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street, Richland County TMS #09014-05-05 changing the Grantee's name to 1623 Marion St., Inc.
16. Ordinance No.: 2016-094 - Authorizing the City Manager to execute a Contract of Sale between the City of Columbia and Jarvais Javon Jackson for the property known as 5301 Holmes Avenue, Richland County TMS #11705-12-18

EVENT RESOLUTIONS

17. Resolution No.: R-2016-080 - Authorizing consumption of beer and wine beverages only at the Five Points Farm to Table Dinner at the Fountain on November 1, 2016

PRESENTATIONS

18. Recognition of the September 2016 Employee of the Month - Mr. Robert Anderson, Public Works Director
Ms. Samatha Yager, Recycling Coordinator for the Public Works Department
19. Recognition of the October 2016 Employee of the Month - Mr. William "Skip" Holbrook, Columbia Police Chief
Officer Jason VanValkenburg, West Region Patrolman
20. City LIGHTs Employee Recognition - Ms. Teresa Wilson, City Manager
21. Justice 360 Event - Ms. Mandy Medlock, Executive Director

ORDINANCES - FIRST READING

22. Ordinance No.: 2016-065 - Granting encroachment to Judy H. Tighe for installation and maintenance of a slag parking area and two stone knee walls within the right of way area of the 1700 block of Bannockburn Drive adjacent to her property located at 1729 Bannockburn Drive, Richland County TMS#13911-08-02
23. Ordinance No.: 2016-095 - Authorizing the City Manager to execute a Partial Release of Right of Reverter by the City of Columbia to allow for the transfer of 0.870 acre (37,893 SF) of the SC State Fairgrounds Property Identified as Richland County TMS #11207-03-01 along Rosewood Drive and Bluff Road (SC Hwy. 48) to Richland County for Sidewalk Improvements



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24. Ordinance No.: 2016-102 - Authorizing consumption of beer and wine beverages only at the 2017 Famously Hot New Year Event
25. Ordinance No.: 2016-111 - Adopting Amendments to the Commercial Revolving Loan Fund ("CRLF") Code
26. Ordinance No.: 2016-113 - Authorizing the City Manager to execute a Termination of Restriction to Beach Canalside, LLC

COMPREHENSIVE PLAN AMENDMENT - FIRST READING

27. West Gervais District Plan

Ordinance No.: 2016-081 - Adopting the West Gervais District Plan as an addendum to The Columbia Plan 2018

City Council District: 2

Proposal: Request that City Council adopt the West Gervais District Plan as an addendum to the City of Columbia's Comprehensive Plan.

Applicant: City of Columbia

Staff Recommendation: Approval

PC Recommendation: 07/11/2016; Deferred; 08/01/2016; Approval with Modification (6-1)

AMENDMENT TO THE GUIDELINES - FIRST READING

28. Pursuant to §17-654(B), Amend the Design Guidelines for the West Gervais Historic Commercial District (§17-681(D)(1)) and the West Gervais Historic Protection Area District (§17-681(C)(6))

Council District: 2

Proposal: Request the adoption of revised guidelines for the West Gervais Historic Commercial District (§17-681(d)(1)) and the West Gervais Historic Protection Area District (§17-681(c)(6)) pursuant to §17-654(b).

Applicant: Krista Hampton, Planning & Development Services Director, City of Columbia

Staff Recommendation: Approval

D/DRC Recommendation: 07/14/2016; Approval (7-0)

PC Recommendation: 07/11/2016; Deferred; 08/01/2016; Approval (6-1)



We Are Columbia

OTHER MATTERS

29. Council is asked to approve ten (10) additional street lights in the Olympia Neighborhood and one (1) additional street light on Jennings Court for a total year-to-date expenditure in the amount of \$2,575.56, as requested by the Traffic Engineering Division.

APPOINTMENTS

30. Council is asked to approve the appointment of two (2) individuals to the Board of Zoning Appeals.
31. Council is asked to approve the appointment of one (1) individual to the Midlands Authority for Conventions, Sports and Tourism Board.
32. Council is asked to approve an appointment of one (1) individual to the Riverbanks Park Commission.

CONSIDERATION OF MATTERS DISCUSSED DURING THE WORK SESSION

CITY COUNCIL COMMITTEE REPORTS / REFERRALS

APPEARANCE OF THE PUBLIC



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: Gateway to the Army Centennial Park Project Update -
Retired Command Sergeant Major Marty Wells, President of
the Gateway to the Army Association

FINANCIAL IMPACT:

ATTACHMENTS:

- CentennialParkConceptBrief18Oct16 (PDF)

Gateway to the Army Association



Commemorating Fort Jackson's 100th Birthday





Gateway to the Army Association



Centennial Park Information Brief & Request for Funding

Columbia City Council



Fort Jackson History



(Business Leaders Lead the Way!)

- March 14, 1917 – Columbians, led by Chamber of Commerce, raised \$5K to buy & donate 1200 acres of land for Army cantonment in Columbia
- June 2, 1917 – War Dpt granted final approval for Army Tng Ctr in Columbia
- June 8, 1917 – Columbia Chamber of Commerce honors Edwin Robertson for leading effort to secure cantonment in Columbia
- June 25, 1917 – Construction of first buildings started
- July 18, 1917 – Columbia cantonment designated as “Camp Jackson”
- September 5, 1917 – First Soldiers arrive at Camp Jackson





Fort Jackson Facts



- Largest Initial Entry Training (IET) Site in the Army
- Trains over 72,000 Personnel per year
 - ✓ 54% of Army Basic Combat Training (BCT) Load
 - ✓ 64% of Army Female Soldiers
 - ✓ 27,000 in AG, Finance, Drill Sergeant Academy, Chaplain Schools & Mechanic courses
 - ✓ 2,000 Navy personnel for deployments in FY15





SC Military Economic Impact

Branch	Economic Impact
SC Military	\$19.0 Billion
Fort Jackson	\$2.3 Billion
Military Visitors	\$40 Million (Midlands)



Centennial Park Value



- Serves as a testament of support for future BRACs
- Continues the Legacy of Columbia's citizenry & business leaders from 1917
- Provides gathering place for 3000-5000 weekly visitors
- Educates visitors on wartime service of American Patriots
- Improves quality of life of Fort Jackson Soldiers, Employees and Residents



Centennial Park “BRAC STRONG!”

- Base Realignment and Closure process (BRAC) determines which military installations grow and which ones are shut down
 - BRAC Committee looks for “military-supportive” communities during BRAC decision-making process
 - FT Jackson’s annual economic impact benefits businesses, corporations and legislative bodies in Columbia, the Midlands and SC





Park Overview





Soldier Statue



Gateway to the Army Association



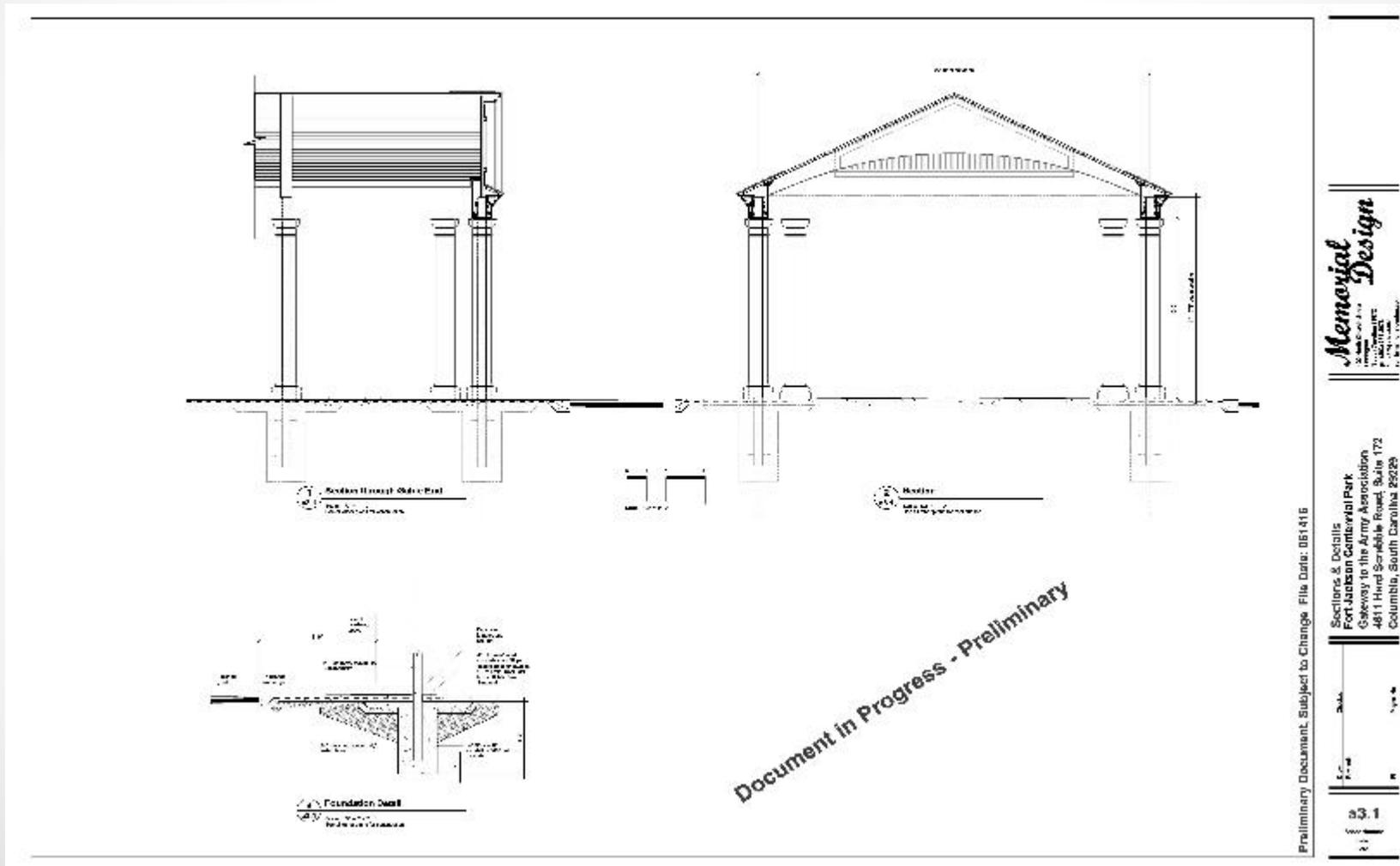
Pathway of Patriots



Gateway to the Army Association



Pathway of Patriots



Pavilion Recognition

(Proposed)



Major General Charles H. Barth Pavilion

Wells Construction Company
Salutes MG Barth's honored service to
Camp Jackson, the U.S. Army
and the
United States of America



Administration

- GTTA established as a 501-C3 organization
- Estimated project cost is \$2.7 million
- Donations from community members, veterans, patriots, area businesses, philanthropists, & defense contractors
- Granite pavers for \$99 (4"x 8") & \$199 (8"x 8")
- Website www.gatewaytothearmy.org
- Facebook site
- Groundbreaking fall 2016
- Primary designer: Ron Clamp

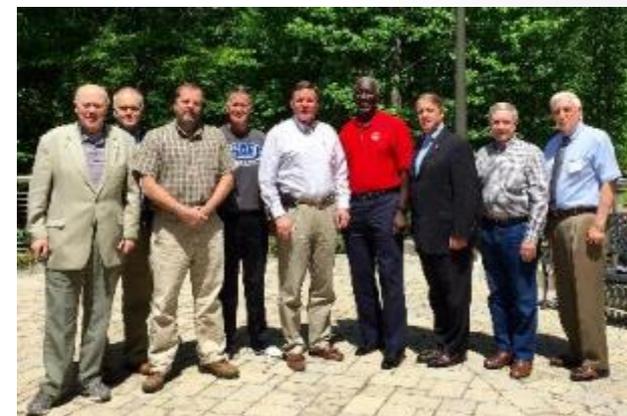




GTTA Board



- CSM (ret) Marty Wells, president
- Bill Eisele, vice president
- Col. (ret) Sam Brick, secretary
- Col. (ret) Gene Gordon, treasurer
- Maj. Gen (ret) George Goldsmith
- Maj. Gen. (ret) Abe Turner
- Dan Hennigan, executive officer
- Tom Sliker
- Col. (ret) Bryan Hilferty
- CSM (ret) Ron Friday (not pictured)
- Ted Stambolitis (not pictured)



GTTA Honorary Board



- GEN (ret) Fred Woerner, SOUTHCOM & History board
- Sgt. Maj. of the Army (ret) Jack Tilley
- Sherriff Leon Lott, Richland County Sheriff
- Mayor Steve Benjamin
- Jennifer Harding, Russell & Jeffcoat Realtors
- Alex English, NBA Hall of Famer
- Joe Pinner, TV Personality
- Otis Rawl, President/CEO, Lexington Chamber of Commerce





Centennial Park Corporate Sponsors





Centennial Park In-Kind Sponsors





Sponsor Recognition



- Corporate name and logo to be placed on the Centennial Park "Title Stone"
- Corporate logo and link to corporate website will be displayed (and meta tagged/indexed) as a link on GTTA's website
- Periodic iHeart Media PSAs mentioning sponsors
- Corporate name and logo place on a 8X8 commemorative brick conspicuously placed on our "Pathway of Patriots".
- Regular notice on our social media posts
- Corporate name and logo place in our printed material such as invitations, programs, brochures etc.



Sponsor Recognition Cont.



- Corporate name and logo placed in our newspaper advertisements
- Corporate name will be featured in a official news release to all electronic and print media in South Carolina
- Corporation will be recognized at all GTTA events and activities
- Invitation to and recognition at the Centennial Park dedication



How Columbia City Council Can Help

- Provide \$500,000 over 3 years for the construction of Centennial Park
- Talk About Centennial Park in Your Work Places and Community
- Help GTTAA Identify Potential Partners



Questions?





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: ACM for Finance & Economic Services

FROM: *Jeff Palen, Chief Financial Officer*

SUBJECT: Business License Update – Ms. Melissa Carter, Research and Legislative Liaison for the Municipal Association of South Carolina

FINANCIAL IMPACT:

STRATEGIC GOALS: Business Growth & Investment



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Office of Business Opportunities

FROM: *Tina Herbert,*

SUBJECT: **Report on Disadvantaged and Local Business Enterprises - Ms. Tina Herbert, Executive Director of the Office of Business Opportunities and Ms. Sandra Wright, Purchasing Agent**

PRESENTER: Tina Herbert

FINANCIAL IMPACT:

BUSINESS PROGRAM: Local Business Enterprise Program

CLEAN WATER 2020?: No

STRATEGIC GOALS: Business Growth & Investment

The Office of Business Opportunities and the Purchasing Department would like to provide City Council with an update on a proposed Disadvantaged Business Enterprise (DBE) policy. This policy is being developed to allow the City Manager to set procurement and contract goals that can be enforced, and therefore encourage greater minority and women owned enterprise participation in City procurement.



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: Community Redevelopment Projects Update - Ms. Diane E. Sumpter, Owner of DESA, Inc.

PRESENTER: Ms. Diane E. Sumpter, Owner

FINANCIAL IMPACT:



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: Discussion of negotiations incident to proposed contractual arrangements pursuant to §30-4-70(a)(2)

FINANCIAL IMPACT: Horizon Garage

DESA, Inc.



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Economic Development

FROM: *Ryan Coleman,*

SUBJECT: Discussion of matters relating to the proposed location, expansion or the provision of services encouraging location or expansion of industries or other businesses in the area served by the public body pursuant to §30-4-70(a)(5)

FINANCIAL IMPACT: Barbershop



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: Receipt of legal advice which relates to matters covered by attorney-client privilege pursuant to §30-4-70(a)(2)

FINANCIAL IMPACT: West Gevais District Plan
Canalside deed restriction



We Are Columbia

MEETING DATE: November 1, 2016
DEPARTMENT: City Clerk
FROM: *Erika Moore, City Clerk*
SUBJECT: Mr. S. Allison Baker, Senior Assistant City Manager
FINANCIAL IMPACT:



We Are Columbia

MEETING DATE: November 1, 2016
DEPARTMENT: City Clerk
FROM: *Erika Moore, City Clerk*
SUBJECT: January 19, 2016 Council Meeting Minutes
FINANCIAL IMPACT:

ATTACHMENTS:

- ZPH_MN_01_19_2016_Draft (PDF)



CITY COUNCIL MEETING / ZONING PUBLIC HEARING MINUTES

TUESDAY, JANUARY 19, 2016 - 6:00 P.M.

CITY HALL - 1737 MAIN STREET

COUNCIL CHAMBERS - 3RD FLOOR

The Columbia City Council conducted a Council Meeting and a Zoning Public Hearing on Tuesday, January 19, 2016 at City Hall, 1737 Main Street, Columbia, South Carolina. The Honorable Mayor Stephen K. Benjamin called the meeting to order at 6:03 p.m. and the following members of Council were present: The Honorable Sam Davis, The Honorable Tameika Isaac Devine, The Honorable Leona K. Plough, The Honorable Moe Baddourah, The Honorable Howard E. Duvall and The Honorable Edward McDowell, Jr. Also present were Ms. Teresa Wilson, City Manager and Ms. Erika D. Moore, City Clerk. *This meeting was advertised in accordance with the Freedom of Information Act. The minutes are numbered to coincide with the order of the meeting.*

PLEDGE OF ALLEGIANCE

Master Corbin Riffenburg led the audience in the Pledge of Allegiance.

INVOCATION

Chaplain Byron Powers, Columbia Police Department offered the Invocation.

ADOPTION OF THE AGENDA

Upon a motion made by Mr. McDowell and seconded by Mr. Davis, Council voted unanimously to adopt the agenda, subject to the following amendments:

- Defer **Item 1** (*Approval of Minutes*)
- Withdraw **Item 22** (*315 South Maple Street*)
- Withdraw **Item 28** (*Resolution No.: R-2016-005*)
- Defer **Item 30** (*Hospitality Tax Funding Requests*)
- Add **Item 32** (*Discussion of Chambers*) from the Work Session Agenda

PUBLIC INPUT RELATED TO AGENDA ITEMS

No one appeared at this time.

APPROVAL OF MINUTES

1. [December 15, 2015 Council Meeting](#) and [January 5, 2016 Council Meeting](#) – *Consideration of the minutes was deferred.*

CONSENT AGENDA

Upon a single motion made by Mr. Baddourah and seconded by Ms. Plaugh, Council voted unanimously to approve the **Consent Agenda Items 2** through **14**.

CONSIDERATION OF BIDS and AGREEMENTS

2. Council is asked to approve the [Purchase of Assessment, Testing and Promotion Services](#), as requested by the Columbia Police Department. Award to the College of Charleston in the amount of \$60,000.00. This vendor is located in Charleston, SC. *Funding Source: Police Administration Services-Professional Services, 1012402-63660 – **Note:** The original budgeted amount is \$60,000.00. - Approved*
3. Council is asked to approve the [Purchase of seventy-five \(75\) Body Armor Packages](#), as requested by the Columbia Police Department. Award to Lawmen’s, using the SC State Contract in the amount of \$62,775.00. This vendor is located in Columbia, SC. *Funding Source: Police Department-Uniforms and Clothing, 1012402-6241 – **Note:** The original budgeted amount for this purchase is \$62,775.00. - Approved*
4. Council is asked to approve the [Purchase of one \(1\) Dump Truck](#), as requested by the Street Division. Award to Carolina International Trucks, Inc., a certified Local Business Enterprise, using the SC State Contract in the amount of \$78,174.00. This vendor is located in Columbia, SC. *Funding Source: Streets Water & Sewer Repair-Auto, Trucks, Heavy Equipment Capital, 5513202-658500 – **Note:** The original budgeted amount for this purchase is \$80,000.00. – Approved*
5. Council is asked to approve a [Contract Renewal for City-works Software and License Support](#) effective January 2016 through January 2017, as requested by the Information Technology Department. Award to Azteca Systems, Inc., for the following departments in the amount of \$100,000.00. This vendor is located in Sandy, UT. *Funding Source: Public Works Admin-Computer Equipment/Hardware, 1011124-627500; Public Works Admin-Maintenance and Service Contract, 1011124-638200; Forestry Horticulture-Maintenance and Service Contract, 1011217-638200; Streets & Side Walks-Maintenance and Service Contract, 1013201-638200; Traffic Operations-Maintenance and Service Contract, 1013204-638200; Street Storm Drain-Maintenance and Service Contract, 5534203-638200; Water & Sewer Repairs-Maintenance and Service Contract, 5513202-638200; Finance Customer Service-Maintenance and Service Contract, 5511407-638200; Utilities Water Customer Service-Maintenance and Service Contract, 5516202-638200; Utilities Wastewater-Maintenance and Service Contract, 5516205-638200; and Solid Waste Street Sweeping-Maintenance and Service Contract, 5534408-638200 – **Note:** The original budgeted amount is \$100,000.00. **CIO Comment:** The City-works software and licenses are required to support Clean Water 2020. - Approved*

Quantity	Department	Amount
1	Public Works – Administration	\$1,990.00
1	Public Works – Administration	\$5,000.00
1	Forestry & Beautification – Horticulture	\$7,500.00
1	Streets Division – Street & Sidewalks	\$2,000.00
1	Traffic Division – Operations	\$3,000.00
1	Streets Division – Storm Drain Maintenance	\$1,500.00
1	Streets Division – Water & Sewer	\$2,000.00
1	Finance – Customer Services	\$3,000.00
1	Utilities and Engineering – Water Customer Services	\$15,000.00
1	Utilities and Engineering – Wastewater Maintenance	\$49,010.00
1	Solid Waste Division – Street Sweeping	\$10,000.00

6. Council is asked to approve [Purchase of Planning Services for the Capital Mill District Area](#), as requested by the Planning and Development Services Department. Award to The Boudreaux Group in an amount not to exceed \$150,000.00. This firm is located in Columbia, SC. *Funding Source: Development Services-Professional Services, 1014101-636600 – Note: This plan is in collaboration with Richland County who has funded \$75,000 of the total amount. The original budgeted amount is \$150,000.00. - Approved*
7. Council is asked to approve the [Purchase of one \(1\) Concrete Mixer Truck](#) for the Wastewater Maintenance, as requested by Fleet Services Division. Award to Carolina International Trucks, Inc. in the amount of \$154,287.00. This vendor is located in Columbia, SC. *Funding Source: Utilities Wastewater Maintenance-Auto, Trucks, Heavy Equipment Capital, 5516205-658500 – Note: The original budgeted amount for this purchase is \$172,800.00. - Approved*
8. Council is asked to approve a [Contract for Compost Grinding](#), as requested by the Solid Waste Division. Award to Martin Edwards & Associates, Inc., the lowest responsive bidder in the amount of \$205,269.51. This firm is located in Erwin, NC. *Funding Source: Solid Waste Compost-Special Projects, 1014406-638500 – Note: This is a six (6) month contract ending June 30, 2016 with an option to extend for two (2) additional years. The original budgeted amount is \$206,000.00. - Approved*
9. Council is asked to approve an [Agreement for Water Quality Monitoring Operation and Maintenance Services for Gills Creek, Kinley Creek, Rocky Branch and Smith Branch Phase I, Phase II and Phase III Stations](#), as requested by the Utilities and Engineering Department. Award to Woolpert in the amount of \$283,514.00. This firm has headquarters in Dayton, OH and a local office in Columbia, SC. *Funding Source: Storm Drain Operating and Maintenance, 5534202-SD8385(3)-638305 – Note: The original budgeted amount for this project is \$283,514.00. The following sub-consultants will receive \$34,562.00 or 12.19% of the contract value: - Approved*

Sub-consultants	Locations	Services	Contract %	Amount
Rogers & Callcott	Columbia, SC	Stormwater runoff sample analysis and general laboratory services	5.64%	\$16,002.00
YSI, Inc.	Yellow Springs, OH	Monitoring equipment sales and monitoring site installation services	6.55%	\$18,560.00

10. Council is asked to approve the [Purchase of Magnesium Hydroxide](#), as requested by the Metro Wastewater Treatment Plant. Award to Premier Magnesia in the amount of \$867,024.00. This vendor is located in West Conshohocken, PA. *Funding Source: Utilities Metro Wastewater Plant/Chemicals, 5516208-624800 – **Note:** The original budgeted amount for this purchase is \$867,024.00. - Approved*
11. Council is asked to approve a [Contract Renewal for the Dental Benefits Plan](#) effective January 2016 through December 2016, as requested by the Human Resources Department. Award to Delta Dental of Missouri, as a third party administrator in the amount of \$60,000.00. This vendor is located in Columbia, SC. *Funding Source: Dental Insurance Fund GL-6028931 – **Note:** There are no changes to the contract for plan administration. The original budgeted amount was \$60,000.00. - Approved*
12. Council is asked to approve a [Contract Renewal for the Pharmacy Benefits Plan](#) effective January 2016 through December 2016, as requested by the Human Resources Department. Award to Medco/Express Scripts, as the third party administrator in the amount of \$138,000.00. This vendor is located in St. Louis, MO. *Funding Source: Health Insurance Fund GL-6048933 – **Note:** There are no changes to the contract for plan administration. The original budgeted amount was \$138,000.00. - Approved*
13. Council is asked to approve a [Contract Renewal for the Medicare Supplement and Prescription Coverage Plan](#) effective January 2016 through December 2016, as requested by the Human Resources Department. Award to United Healthcare in the amount of \$1,350,000.00. This vendor is located in Minneapolis, MN. *Funding Source: Health Insurance Fund GL-6048933 – **Note:** The eligible participants are Post-65 and Medicare eligible retirees and dependents. There are no changes to the contract for plan administration. The original budgeted amount was \$1,350,000.00. - Approved*

ORDINANCES – SECOND READING

14. [Ordinance No.: 2016-001](#) – Granting an easement to South Carolina Electric & Gas Company (SCE&C) along a portion of City-owned property identified as Richland County TMS#08915-05-07 (The Colonial Life Arena) for utilities to serve the Greene Street, Phase I/Foundation Square Streetscape Project; CF#250-385 – *Approved on second reading.*

PRESENTATIONS

15. [Introduction of the 2015 Employee of the Year \(Ms. Danielle Riffenburg, Reforestation Program Coordinator\)](#) – Mr. Robert Anderson, Director of Public Works

Mr. Robert Anderson, Director of Public Works introduced Ms. Danielle Riffenburg as the City of Columbia 2015 Employee of the Year. Ms. Riffenburg was the September 2015 employee of the month. He said unless you've worked with her it is hard to describe her; she is set apart by her perfectionism.

Ms. Teresa Wilson, City Manager presented Danielle Riffenburg with a token of appreciation and Mayor Benjamin presented Danielle Riffenburg with a plaque for being selected as the City of Columbia 2015 Employee of the Year.

16. [Centennial Park Project at Fort Jackson](#) – Command Sergeant Major (R) Marty Wells, President of the Gateway to the Army Association

Command Sergeant Major (R) Marty Wells, President of the Gateway to the Army Association announced that May 27, 2017 will mark the 100th anniversary of Fort Jackson. He reported that since 1917, over five million Americans have been trained at Fort Jackson. He explained that Centennial Park will memorialize the past and serve as an education venue. It will be located near the post museum and the central feature will be a 20' granite statute of a male and female drill sergeant standing at attention and surrounded by an amphitheater. There will be a wartime theater memorial, the pathway of patriots, and seven covered pavilions for families to gather. He requested City Council support in the amount of \$500,000 over two to three years. The plan is to have the first phase completed in 2017. He announced that several yearlong events will kick-off in June 2016 leading up to the capstone event in June 2017. The total monetary and in-kind donations for this project are estimated at \$2.7 million.

Mayor Benjamin agreed to take this under advisement. He said this is a clear demonstration of our full commitment to seeing Fort Jackson continue to grow. He asked that staff come back with ideas as to how we can meet some of or the entire request.

17. Update on [Lester Drive Traffic Counts](#) – Mr. David Brewer, Traffic Engineer

Mr. David Brewer, Traffic Engineer recalled that staff was asked to review traffic volumes for the reopened portion of Lester Drive. He presented traffic counts from November 2015 and January 2016. He reported that 1,150 cars traveled down Lester Drive from Bayberry Mews and 500 of those cars continued down Lester Drive through High Circle. He reported that 500 cars come down Lester Drive from Bailey Street towards High Circle and the houses on High Circle generate another 250 cars coming out onto Beltline Boulevard. He added that approximately 400 cars go up Lester Drive towards Bayberry Mews.

Mr. Robert Anderson, Director of Public Works noted that Lester Drive and Bailey Street are owned by the City of Columbia, but Randolph Street and High Circle are owned by SCDOT. He recalled that there was a proposed roadway on property owned by the Two Notch Development Corporation along the railroad tracks, but the terrain is sloped making it costly to install the road.

Mayor Benjamin explained that this would be a separate route to the east of the property. He said that might not be the highest and best use of prospective funding. He expressed concerns with the traffic on Randolph Street. He asked if there are alternative ways to direct traffic directly onto Interstate 277.

Mr. David Brewer, Traffic Engineer said traffic would come out at 277 and Farrow Road. He agreed to ask SCDOT about accessing that property.

Councilor McDowell also expressed concerns about speeding on Randolph Street.

Ms. Regina E. Williams, Vice President of the Historic Booker Washington Heights Neighborhood Association said before Lester Drive was opened there were fifty cars traveling in that area; there is an increase of 600 to 700 cars based on a study from 1996. She suggested that the City of Columbia close Lester Drive.

Mr. David Brewer, Traffic Engineer agreed that there has been an increase in traffic.

Councilor Duvall asked if the City could close the road using §5-27-150.

Ms. Natalie Armstrong, Assistant City Attorney said City Council can decide to file a petition to close the road based on an articulable reason. She agreed to review the Code.

Ms. Katie Bolden pled with Council to do something with Lester Drive. She said drivers go around the speed humps and come into the yards; crime will increase; and the kids have no place to play. She sought Council's support for youth jobs.

Councilor Plough asked to be briefed at the next Executive Session on the closing, prohibiting thru-traffic and to see what relief they can bring to the residents on Randolph Circle.

Mayor Benjamin asked staff to start conversations with SCDOT and to receive advice from the Fire and Police Departments. He stated for the record that 500 youth were employed in the City of Columbia last summer and we will continue to do that.

PUBLIC HEARING

ORDINANCES – FIRST READING

Council opened the Public Hearing at 7:01 p.m.

18. [Ordinance No.: 2016-004](#) – Annexing 201 Club Ridge Road, Parcel A (0.41 acres) 5W/5 Club Ridge Road and Parcel 8 (0.28 acres) 5W/5 Club Ridge Road, Richland County TMS # 28900-01-15 (p) – *Approved on first reading.*

No one appeared in support of or in opposition to this matter.

Upon a motion made by Ms. Plough and seconded by Mr. Baddourah, Council voted unanimously to give first reading approval to Ordinance No.: 2016-004 – Annexing 201 Club Ridge Road, Parcel A (0.41 acres) 5W/5 Club Ridge Road and Parcel 8 (0.28 acres) 5W/5 Club Ridge Road, Richland County TMS # 28900-01-15 (p).

19. [Ordinance No.: 2016-005](#) – Annexing The Crossing at Woodcreek, Phases One and Two, Richland County TMS# 28910-04-01, 28910-04-02, 28910-04-03, 28910-04-04, 28910-04-05, 28910-04-06, 28910-04-07, 28910-04-08, 28910-04-09, 28910-04-10, 28910-04-11, 28910-04-12, 28910-04-13, 28910-04-14, 28910-04-15, 28910-04-16, 28910-04-17, 28910-05-01, 28910-05-02, 28910-05-03, 28910-05-04, 28910-05-05, 28910-05-06, 28910-05-07, 28910-05-08, 28910-05-09, 28910-05-10, 28910-05-11, 28910-05-12, 28910-05-13, 28910-05-14, 28910-05-15, 28910-05-16, 28910-05-17, 28910-05-18, 28910-05-19, 28910-05-20, 28910-05-21, 28910-05-22, 28910-05-23, 28910-05-24, 28910-05-25, 28910-05-26, 28910-05-27, 28910-05-28, 28911-04-02, 28911-05-01, 28911-05-02, 28911-05-03, 28911-05-04, 28911-05-05, 28911-05-06, 28911-06-01, 28911-06-02, 28911-06-03, 28911-06-04, 28911-06-05, 28911-06-06, 28911-06-07, 28911-06-08, 28911-06-09, 28911-06-10, 28911-07-01, 28911-07-02, 28911-07-03, 28911-07-04, 28911-07-05, 28911-07-06, and 28911-07-07 – *Approved on first reading.*

No one appeared in support of or in opposition to this matter.

Upon a motion made by Ms. Plough and seconded by Mr. Baddourah, Council voted unanimously to give first reading approval to Ordinance No.: 2016-005 – Annexing The Crossing at Woodcreek, Phases One and Two, Richland County TMS# 28910-04-01, 28910-04-02, 28910-04-03, 28910-04-04, 28910-04-05, 28910-04-06, 28910-04-07, 28910-04-08, 28910-04-09, 28910-04-10, 28910-04-11, 28910-04-12, 28910-04-13, 28910-04-14, 28910-04-15, 28910-04-16, 28910-04-17, 28910-05-01, 28910-05-02, 28910-05-03, 28910-05-04, 28910-05-05, 28910-05-06, 28910-05-07, 28910-05-08, 28910-05-09, 28910-05-10, 28910-05-11, 28910-05-12, 28910-05-13, 28910-05-14, 28910-05-15, 28910-05-16, 28910-05-17, 28910-05-18, 28910-05-19, 28910-05-20, 28910-05-21, 28910-05-22, 28910-05-23, 28910-05-24, 28910-05-25, 28910-05-26, 28910-05-27, 28910-05-28, 28911-04-02, 28911-05-01, 28911-05-02, 28911-05-03, 28911-05-04, 28911-05-05, 28911-05-06, 28911-06-01, 28911-06-02, 28911-06-03, 28911-06-04, 28911-06-05, 28911-06-06, 28911-06-07, 28911-06-08, 28911-06-09, 28911-06-10, 28911-07-01, 28911-07-02, 28911-07-03, 28911-07-04, 28911-07-05, 28911-07-06, and 28911-07-07.

Council closed the Public Hearing at 7:02 p.m.

ZONING PUBLIC HEARING

Council opened the Zoning Public Hearing at 7:02 p.m.

ANNEXATION, COMPREHENSIVE PLAN MAP AMENDMENT & ZONING MAP AMENDMENT – FIRST READING

- 20. 1850 Pineview Road, TMS#19000-01-03; request to annex, assign land use classification IND (Industrial), and zone the property M-1 (Light Industrial). The property is currently classified as Economic Development Center/Corridor and zoned GC (Commercial) in Richland County. – *Approved on first reading.*

Council District: 3
 Proposal: Annex, assign land use classification IND and zone the property M-1
 Applicant: Jeremy Wilson, Pineview Associates
 PC Recommendation: Approve (6-0); 12/07/15
 Staff Recommendation: Annex, assign IND Land Use Classification and M-1 Zoning

Ordinance No.: 2015-111 – Annexing and Incorporating 1850 Pineview Road, Richland County TMS #19000-01-03 into the Plan Columbia Land Use Plan Putting the Pieces Together adopted by Ordinance No.: 2015-014 on February 17, 2015 – *Approved on first reading.*

Upon a motion made by Mr. Baddourah and seconded by Ms. Plough, Council voted unanimously to give first reading approval to the *Comprehensive Plan Map Amendment & Zoning Map Amendment* for 1850 Pineview Road, TMS#19000-01-03; request to annex, assign land use classification IND (Industrial), and zone the property M-1 (Light Industrial). The property is currently classified as Economic Development Center/Corridor and zoned GC (Commercial) in Richland County **and** Ordinance No.: 2015-111 – Annexing and Incorporating 1850 Pineview Road, Richland County TMS #19000-01-03 into the Plan Columbia Land Use Plan Putting the Pieces Together adopted by Ordinance No.: 2015-014 on February 17, 2015.

ZONING MAP AMENDMENT – FIRST READING

- 21. 1000/1010 Lady Street, 1218 Park Street, TMS#09013-09-01, -02, -22; request recommendation to rezone from M-1, -DD (Light Industrial, Design Development Overlay) to C-4, -DD (Central Area Commercial, Design Development Overlay). - *Denied*

Council District: 2
 Proposal: Rezone parcel from M-1, -DD to C-4, -DD
 Applicant: William H. Bailey
 PC Recommendation: Deny (7-2), 04/06/15
 Staff Recommendation: Approve

No one appeared in support of or in opposition to this matter.

Mayor Benjamin said we've endeavored to no avail to have a meeting of the minds between the parties. He asked staff to reach out to the developer and express an interest in seeing that parcel developed at its highest and best use.

Upon a motion made by Mayor Benjamin and seconded by Mr. McDowell, Council voted unanimously to deny approval of the *Zoning Map Amendment* for 1000/1010 Lady Street, 1218 Park Street, TMS#09013-09-01, -02, -22; request recommendation to rezone from M-1, -DD (Light Industrial, Design Development Overlay) to C-4, -DD (Central Area Commercial, Design Development Overlay).

- 22. [315 South Maple Street](#), TMS#11313-04-02; request to rezone from RS-3, CC-1 (Single Family Residential District, Community Character) to C-1 (Office and Institutional District). -- *Consideration of this item was deferred on December 1, 2015. – This item was withdrawn from the agenda.*

Council District: 3
 Proposal: Rezone parcel from RS-3/CC1 to C-1
 Applicant: Michael Pate
 PC Recommendation: Deny (8-0), 08/03/15
 Staff Recommendation: Deny

ZONING MAP AND TEXT AMENDMENT – FIRST READING

- 23. [1325 Park Street](#), TMS# 09013-12-09; request to rezone from C-4 (Central Area Commercial) to C-4, -DP (Central Area Commercial, Design Preservation). Amend Sec. 17-691 (c) to establish 1325 Park Street as a Group II individual historic landmark in the City of Columbia. – *Approved on first reading.*

Council District: 2
 Proposal: Rezone parcel from C-4 to C-4, DP and Amend Chapter 17 – Article V, Division 3 - §17-691 (c) to designate structure as a Group II Landmark
 Applicant: Krista Hampton, Director of Planning and Development Services
 D/DRC Recommendation: Approve (9-0); 11/12/15 Landmark Status
 PC Recommendation: Approve (6-0); 12/07/15
 Staff Recommendation: Approve

[Ordinance No.: 2016-002](#) – Amending the 1998 Code of Ordinances of the City of Columbia, South Carolina, Chapter 17, Planning, Land Development and Zoning, Article V, Historic Preservation and Architectural Review, Division 4, Landmarks, Sec. 17-691 Buildings and sites list, (c), to add 1325 Park Street, TMS# 09013-12-09 – *Approved on first reading.*

No one appeared in support of or in opposition to this matter.

Ms. Krista Hampton, Planning and Development Services Director explained that the property owner wants to pursue this designation, but there are no concrete plans at this time.

Upon a motion made by Mr. McDowell and seconded by Mr. Baddourah, Council voted unanimously to give first reading approval to the *Zoning Map Amendment* for 1325 Park Street, TMS# 09013-12-09; request to rezone from C-4 (Central Area Commercial) to C-4, -DP (Central Area Commercial, Design Preservation). Amend Sec. 17-691 (c) to establish 1325 Park Street as a Group II individual historic landmark in the City of Columbia **and** Ordinance No.: 2016-002 – Amending the 1998 Code of Ordinances of the City of Columbia, South Carolina, Chapter 1 7, Planning, Land Development and Zoning, Article V, Historic Preservation and Architectural Review, Division 4, Landmarks, Sec. 17-691 Buildings and sites list, (c), to add 1325 Park Street, TMS# 09013-12-09.

Council closed the Zoning Public Hearing at 7:06 p.m.

ORDINANCES – FIRST READING

24. [Ordinance No.: 2016-003](#) – Granting encroachment to Lisa Hosti for installation and maintenance of an ornamental iron fence within the right of way area of the 2300 block of Blossom Street adjacent to her property located at 2303 Lowndes Street, Richland County TMS #1312-11-06 – *Approved on first reading.*

Upon a motion made by Mayor Benjamin and seconded by Mr. Baddourah, Council voted unanimously to give first reading approval to Ordinance No.: 2016-003 – Granting encroachment to Lisa Hosti for installation and maintenance of an ornamental iron fence within the right of way area of the 2300 block of Blossom Street adjacent to her property located at 2303 Lowndes Street, Richland County TMS #1312-11-06.

25. [Ordinance No.: 2016-006](#) – Consenting to the Inclusion of Property in a Multi-County Industrial/Business Park (Dominion Carolina Gas Transmission, 121 Moore Hopkins Lane, Richland County TMS# 07309-02-06) – *Approved on first reading.*

Upon a motion made by Ms. Devine and seconded by Mr. Baddourah, Council voted unanimously to give first reading approval to Ordinance No.: 2016-006 – Consenting to the Inclusion of Property in a Multi-County Industrial/Business Park (Dominion Carolina Gas Transmission, 121 Moore Hopkins Lane, Richland County TMS# 07309-02-06).

RESOLUTIONS

26. [Resolution No.: R-2016-003](#) – Authorizing the City Manager to execute a Release of Parking Restrictions between the City of Columbia and Devine Station, LLC for property known as 0.72 acres and 0.56 acres on northwestern corner of Maple Street and Devine Street - *Approved*

Upon a motion made by Mr. Baddourah and seconded by Ms. Devine, Council voted unanimously to approve Resolution No.: R-2016-003 – Authorizing the City Manager to execute a Release of Parking Restrictions between the City of Columbia and Devine Station, LLC for property known as 0.72 acres and 0.56 acres on northwestern corner of Maple Street and Devine Street.

27. [Resolution No.: R-2016-004](#) – Certifying Twelve (12) Building Sites as Abandoned Buildings Pursuant to the South Carolina Abandoned Buildings Revitalization Act, Title 12, Chapter 67, Section 12-67-100 et seq., of the Code of Laws of South Carolina (1976), as amended, regarding property located at 2150 Harden Street, Richland County TMS #11501-01-01(p)

Ms. Krista Hampton, Director of Planning and Development Services explained that the Legislature enacted a law providing a state income tax or property tax credit as an incentive for rehabilitating abandoned buildings. The amendment allowed for local government to certify that the structure and site meet the definition of abandoned. She stated that Clachan Properties, the proposed developer has asked City Council to certify the Babcock Building and associated buildings. She noted that the Hughes Development Company's Design Review Board has signed off on the application.

Upon a motion made by Ms. Devine and seconded by Mr. McDowell, Council voted unanimously to approve Resolution No.: R-2016-004 – Certifying Twelve (12) Building Sites as Abandoned Buildings Pursuant to the South Carolina Abandoned Buildings Revitalization Act, Title 12, Chapter 67, Section 12-67-100 et seq., of the Code of Laws of South Carolina (1976), as amended, regarding property located at 2150 Harden Street, Richland County TMS #11501-01-01(p).

28. [Resolution No.: R-2016-005](#) – Repealing Resolution R-207 3-045 Setting a Policy that the City of Columbia will not Exceed Five (5%) of the Cross Revenue of the Water and Sewer System – *This item was withdrawn from the agenda.*

APPEAL HEARING

29. [People for the Ethical Treatment of Animals \(PETA\) Parade Permit Appeal](#)

Ms. Teresa Wilson, City Manager explained that the parade permit has been approved and the appeal is for the placement of a statue in the right of way.

Ms. Rosemary Thompson, Local Animal Advocate appealed to Council to allow PETA to place a mechanical life sized elephant in the right of way outside of the Colonial Life Arena during the circus on January 21-22, 2016 for two hours. She explained that the mechanical elephant would be manned by a PETA representative during that time. She said the sidewalk there is a lot larger than typical city sidewalks. She said there is little foot traffic on the sidewalk along Lincoln Street. The mechanical elephant is six feet tall and nine feet long.

Ms. Teresa Wilson, City Manager noted that there is a lot of construction going on in that area.

Mr. Temple Ligon told Ms. Thompson that Barnum and Bailey dropped the elephants last week and they are being placed in retirement.

Councilor Plough inquired about the objective for having the mechanical elephant.

Ms. Rosemary Thompson, Local Animal Advocate said it provides education by telling a story about the life of a circus elephant.

Ms. Teresa Wilson, City Manager asked how sound is produced.

Ms. Rosemary Thompson, Local Animal Advocate said it will be controlled by a PETA representative through recordings; it doesn't speak continuously.

Mr. William "Skip" Holbrook, Columbia Police Chief said anyone has the right to assemble; the permit is used for planning purposes. The permit was approved with the caveat of not placing the apparatus where it obstructs the roadway or the sidewalk. Their request doesn't present imminent danger, but they want to deviate from the ordinance and Council will need to decide whether to allow that or not.

Mayor Benjamin made a motion to grant the appeal for Ellie the Elephant to be placed at a location at the discretion of the City Manager in consultation with the Police Chief and other staff.

The motion failed for the lack of a second.

Ms. Melissa Gentry, P.E., Assistant City Manager for Operations inquired about the amount of time needed for the setup and breakdown of the elephant.

Ms. Rosemary Thompson, Local Animal Advocate said she is unsure about the setup and breakdown of the elephant.

Mayor Benjamin said we have to be thoughtful careful about freedom of speech and the right to assemble.

Upon a motion made by Ms. Devine and seconded by Mr. Davis, Council voted five (5) to two (2) to support staff's denial of the request from PETA to place a mechanical elephant in the right of way. Voting aye were Mr. McDowell, Mr. Duvall, Mr. Baddourah, Ms. Devine and Mr. Davis. Voting nay were Ms. Plough and Mayor Benjamin.

CITY COUNCIL DISCUSSION / ACTION

30. Hospitality Tax Funding Requests – *Consideration of this item was deferred.*
- Columbia Classical Ballet
 - Columbia Museum of Art
 - [Columbia Open Studios 2016](#)
 - [Devine Street Merchants Association](#)
 - North Columbia Business Association
 - [Yellow Shirts Program](#)

APPOINTMENTS

31. [Bicycle Pedestrian Advisory Committee](#)

Upon a motion made by Mr. McDowell and seconded by Mr. Baddourah, Council voted unanimously to appoint Ms. Julie Ann Hartwell to the Bicycle Pedestrian Advisory Committee.

Upon a motion made by Mr. McDowell and seconded by Mr. Baddourah, Council voted unanimously to authorize staff to re-open the application process for the Board of Zoning Appeals for a two-week period.

32. City Council Chambers / Reconfiguration of Desk – Mr. David Knoche, Director of General Services

Ms. Teresa Wilson, City Manager asked Council for direction on the location, date and time for work sessions. She said all of this will impact the proposal, because it will require additional renovations in Chambers.

Mr. David Knoche, Director of General Services presented a schematic of the proposed desk, which moves the center section back two feet. This is the same setup that was used in 1951. He explained that proposal one is to reconfigure the existing desk at a cost of \$12,540 or proposal two is to construct a new desk at a cost of \$14,198. He described options for enhancing the sound for Council members at a cost of \$3,208.

Mayor Benjamin said the genesis of the discussion is considering whether or not we move the work session upstairs.

Mr. David Knoche, General Services Director suggested that two 10'x4' conference tables be built for the work session in Council Chambers in the amount of \$3,235 and that sound be added to a table at a cost of \$5,717.

Mr. Aubrey Jenkins, Columbia Fire Chief said the capacity will be less than 250.

Councilor Duvall moved to adopt the proposal to reconfigure the existing desk with improved sound; authorize staff to build two tables for work sessions; and move work sessions upstairs when the renovations are complete.

Mr. David Knoche, General Services Director said it would cost \$24,790.

Mayor Benjamin suggested that the podium be lowered so that everyone can view the Council from around the room. He agreed with reconfiguring the dais. He suggested that Mr. Duvall, Ms. Devine and Mr. Baddourah meet to come up with recommendations for the reconfiguration of Council Chambers prior to the next Council Meeting.

Ms. Teresa Wilson, City Manager suggested that funding come from the Council Contingency Fund.

Upon a motion made by Mr. Duvall and seconded by Mr. Baddourah, Council voted unanimously to cancel the Work Session scheduled for February 2, 2016.

CITY COUNCIL COMMITTEE REPORTS/REFERALS

33. Administrative Policy Committee Report

Councilor Plough reported that the Administrative Policy Committee met on January 12, 2016 to review the suggested procedures and several items were held for discussion by Council.

Councilor Davis asked that the Economic and Community Development Committee review the updated Rental Housing Ordinance and then schedule a time to meet with the public.

Mayor Benjamin clarified that the reopening of Lester Drive was pursuant to a court order and staff wasn't operating independently. He also encouraged everyone to read Edwards vs. South Carolina where a lawsuit was filed by approximately 187 students whose right to petition and right to assemble were violated.

APPEARANCE OF THE PUBLIC

No one appeared at this time.

Upon a motion made by Mr. Baddourah and seconded by Mr. McDowell, Council voted unanimously to adjourn the meeting at 8:09 p.m.

Respectfully submitted by,

Erika D. Moore
City Clerk



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: September 20, 2016 Work Session and Council Meeting Minutes

FINANCIAL IMPACT:



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Procurement and Contracts

FROM: *Sandra Wright, Purchasing Agent*

SUBJECT: Council is asked to approve an Annual Maintenance Agreement for Mobile Area Routing and Vehicle Location Information System Software Support, as requested by the Police Department. Award to Bradshaw Consulting Services, Inc. in the amount of \$56,879.86. This firm is located in Aiken, SC.

FINANCIAL IMPACT: Funding Source: Police Administrative Services-Maintenance and Service Contract,1012402-638200. The original budgeted amount is \$56,879.86.

ORIGINAL BUDGET: 56879.86

Qty.	Description	Unit Price	Extended Total
1	Software Maintenance/Support	\$56,879.86	\$56,879.86

Sec. 2-204. - Competitive sealed bidding required; exceptions. All city contracts shall be awarded by competitive sealed bidding except the following as determined pursuant to definitions and standards set by regulations, or except as otherwise provided in this article: (7)Procurement of information technology.

ATTACHMENTS:

- Bradshaw Consulting Services Inc (PDF)

Bradshaw Consulting Services, Inc.

Please remit payment to:

2170 Woodside Executive Ct.
 Aiken, SC 29803
 TEL: 803.641.0960
 FAX: 803.641.1919

INVOICE**INVOICE NUMBER: 7426****INVOICE DATE: 9/16/2016****CUSTOMER BILL TO:**

City of Columbia
 Attn: Accounting Dept.
 PO Box 147
 Columbia, SC 29217

CUSTOMER SHIP TO:

City of Columbia
 Police Department
 #1 Justice Square
 Columbia, SC 29201
 Ref.: MARVLIS Maintenance

CUST P.O. NUMBER		TERMS	SALESPERSON	DUE DATE	SHIP VIA	BCS Cust. #
MARVLIS Maint		Net 45	ETB	11/2/2016	Service	E-0014
Qty.	ITEM	DESCRIPTION		MAINT/Month ...	Months Due	AMOUNT
		Annual MARVLIS Maintenance + Pro-rated MARVLIS Maintenance to cover service period: 11/2/2016 - 11/1/2017				
75	MARVLIS Maint...	MARVLIS Software Maintenance: Esri Runtime Software Ref. PO# 137991		6.4375	12 months	5,793.75
75	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# 137991		15.45	12 months	13,905.00
35	MARVLIS Maint...	MARVLIS Software Maintenance: Esri Runtime Software Ref. PO# 142367		6.4375	12 months	2,703.75
35	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# 142367		15.45	12 months	6,489.00
22	MARVLIS Maint...	MARVLIS Software Maintenance: Esri Runtime Software Ref. PO# P145930		6.5135984	12 months	1,719.59
<i>Please make all checks payable to BCS.</i>					<u>TOTAL:</u>	

Bradshaw Consulting Services, Inc.

Please remit payment to:

2170 Woodside Executive Ct.
 Aiken, SC 29803
 TEL: 803.641.0960
 FAX: 803.641.1919

INVOICE**INVOICE NUMBER: 7426****INVOICE DATE: 9/16/2016****CUSTOMER BILL TO:**

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City of Columbia
 Police Department
 #1 Justice Square
 Columbia, SC 29201
 Ref.: MARVLIS Maintenance

CUST P.O. NUMBER		TERMS	SALESPERSON	DUE DATE	SHIP VIA	BCS Cust. #
MARVLIS Maint		Net 45	ETB	11/2/2016	Service	E-0014
Qty.	ITEM	DESCRIPTION		MAINT/Month ...	Months Due	AMOUNT
22	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# P145930		15.913523	12 months	4,201.17
3	MARVLIS Maint...	MARVLIS Software Maintenance: Esri Runtime Software Ref. PO# P147778 Pro-rated Period: 12/10/2016 - 11/1/2017		.205480	327 days	201.58
3	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# P147778 Pro-rated Period: 12/10/2016 - 11/1/2017		.493151	327 days	483.78
33	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Runtime Software Re. PO# 147999 Pro-rated Period: 12/12/2016 - 11/1/2017		.205480	325 days	2,203.78
<i>Please make all checks payable to BCS.</i>					<u>TOTAL:</u>	

Bradshaw Consulting Services, Inc.

Please remit payment to:

2170 Woodside Executive Ct.
 Aiken, SC 29803
 TEL: 803.641.0960
 FAX: 803.641.1919

INVOICE**INVOICE NUMBER: 7426****INVOICE DATE: 9/16/2016****CUSTOMER BILL TO:**

City of Columbia
 Attn: Accounting Dept.
 PO Box 147
 Columbia, SC 29217

CUSTOMER SHIP TO:

City of Columbia
 Police Department
 #1 Justice Square
 Columbia, SC 29201
 Ref.: MARVLIS Maintenance

CUST P.O. NUMBER		TERMS	SALESPERSON	DUE DATE	SHIP VIA	BCS Cust. #
MARVLIS Maint		Net 45	ETB	11/2/2016	Service	E-0014
Qty.	ITEM	DESCRIPTION		MAINT/Month ...	Months Due	AMOUNT
33	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# 147999 Pro-rated Period: 12/12/2016 - 11/1/2017		.493151	325 days	5,289.05
4	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Esri Runtime Software Ref. PO# P148240 Pro-rated Period: 1/15/2017 - 11/1/2017		.205480	291 days	239.18
4	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# P148240 Pro-rated Period: 1/15/2017 - 11/1/2017		.493151	291 days	574.03
2	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Esri Runtime Software Ref. PO# P147744 Pro-rated Period: 2/2/2017 - 11/1/2017		.205480	273 days	112.19
2	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# 147744 Pro-rated Period: 2/2/2017 - 11/1/2017		.493151	273 days	269.26
<i>Please make all checks payable to BCS.</i>					<u>TOTAL:</u>	

Bradshaw Consulting Services, Inc.

Please remit payment to:

2170 Woodside Executive Ct.
 Aiken, SC 29803
 TEL: 803.641.0960
 FAX: 803.641.1919

INVOICE**INVOICE NUMBER: 7426****INVOICE DATE: 9/16/2016****CUSTOMER BILL TO:**

City of Columbia
 Attn: Accounting Dept.
 PO Box 147
 Columbia, SC 29217

CUSTOMER SHIP TO:

City of Columbia
 Police Department
 #1 Justice Square
 Columbia, SC 29201
 Ref.: MARVLIS Maintenance

CUST P.O. NUMBER		TERMS	SALESPERSON	DUE DATE	SHIP VIA	BCS Cust. #
MARVLIS Maint		Net 45	ETB	11/2/2016	Service	E-0014
Qty.	ITEM	DESCRIPTION		MAINT/Month ...	Months Due	AMOUNT
35	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Esri Runtime Software Ref. PO# P111702		6.4375	12 months	2,703.75
35	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS Client Ref. PO# P111702		12.01666	12 months	5,047.00
2	MARVLIS Maint...	MARVLIS Software Maintenance: MARVLIS AVL Secondary Server		206.00	12 months	4,944.00
<p>Please Note: BCS has been able to maintain fixed maintenance cost for many years but, because of increasing cost of doing business, we have recently had to institute a policy of increasing software maintenance prices by 3% a year. Current annual billings reflect this increase. Please note, each annual renewal year billing hereafter, will then also increase by 3%.</p>						
<i>Please make all checks payable to BCS.</i>					<u>TOTAL:</u> \$56,879.86	



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Procurement and Contracts

FROM: *Sandra Wright, Purchasing Agent*

SUBJECT: Council is asked to approve the Purchase of Energov Software for Stormwater Migration, as requested by the Utilities and Engineering Department. Award to Tyler Technologies, Inc. located in Duluth, GA as a Sole Source in the amount of \$88,343.00.

FINANCIAL IMPACT: Funding Source: Storm Water Engineering/Computer License, 5534202-627510. The original budgeted amount is \$90,000.00.

ORIGINAL BUDGET: \$90,000.00

CLEAN WATER 2020?: No

Sec 1.16 of Appendix G, Finance Department, Procurement Regulation authorizes to Sole Source procurement of goods where there is only a single supplier (1) where the compatibility of equipment, accessories, or replacement parts is paramount.

ATTACHMENTS:

- Statement of Work Tyler Technologies (PDF)

**Exhibit B
Statement of Work**

Statement of Work

Stormwater Migration to EnerGov

Prepared for:

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DATE

7/20/2016

Exhibit A Investment Summary

EnerGov Software

Description	License	Users/Units	Module Total	Year One Maintenance
Core Software:				
EnerGov PLM Users	\$2,999.00	4	\$11,996.00	\$2,400.00
Extensions:				
EnerGov IG Workforce Apps	\$999.00	3	\$2,997.00	\$600.00
EnerGov Report Toolkit	\$7,000.00	1	\$7,000.00	\$1,400.00
			Sub-Total:	\$21,993.00
			<i>Less Discount:</i>	<i>\$1,100.00</i>
			TOTAL:	\$4,400.00

EnerGov Professional Services

Description	Hours	Unit Price	Extended Price	Year One Maintenance
EnerGov Data Conversion Services	40	\$250.00	\$10,000.00	\$0.00
EnerGov Estimated Travel Expenses	5	\$1,700.00	\$8,500.00	\$0.00
EnerGov Fundamentals Training	24	\$175.00	\$4,200.00	\$0.00
EnerGov Onsite Training & Production Support Services	16	\$175.00	\$2,800.00	\$0.00
EnerGov Professional Implementation Services	112	\$175.00	\$19,600.00	\$0.00
EnerGov Project Management Services	34	\$175.00	\$5,950.00	\$0.00
EnerGov Report Development Services	40	\$250.00	\$10,000.00	\$2,000.00
	TOTAL:		\$61,050.00	\$2,000.00

Summary

	One Time Fees	Recurring Fees
Total Tyler Software	\$20,893.00	\$4,400.00
Total Tyler Services	\$61,050.00	\$2,000.00
Total 3rd Party Hardware, Software and Services	\$0.00	\$0.00
Summary Total	\$81,943.00	\$6,400.00
Contract Total	\$88,343.00	

EnerGov Discount Detail

Description	License	License Discount	License Net	Maintenance Basis	Year One Maintenance Discount	Year One Maintenance Net
EnerGov IG Workforce Apps	\$2,997.00	\$150.00	\$2,847.00	\$600.00	\$0.00	\$600.00
EnerGov PLM Users	\$11,996.00	\$600.00	\$11,396.00	\$2,400.00	\$0.00	\$2,400.00
EnerGov Report Toolkit	\$7,000.00	\$350.00	\$6,650.00	\$1,400.00	\$0.00	\$1,400.00
TOTAL:	\$21,993.00	\$1,100.00	\$20,893.00	\$6,400.00	\$0.00	\$6,400.00

Comments

Pro Services includes Setup and Configuration of 7 Business Case Transaction Types, 3 GeoRules and 3 IOs

Project Overview

The intent of this project is to replace the StormPro Max application, currently supporting the City of Columbia Stormwater Program in the management of Municipal Separate Storm Sewer System (MS4) Permit and City Stormwater Ordinance compliance, with an EnerGov solution. The stormwater program is housed in the Utilities & Engineering Department, Engineering Division.

This effort is driven by the need to integrate the Stormwater Program database with a common solution utilized by other City departments, e.g., Planning & Development. Migration to EnerGov will provide enhancements to field capabilities and provide communication with the City's current GIS System not currently available with the StormPro application. Overall, this implementation will reduce the number of applications required to support and maintain the Stormwater Program's management of government compliance and regulatory obligations.

The decision to proceed with the EnerGov solution, versus an alternate solution, was based on anticipated reduction in long-term maintenance costs, ability to eliminate paper inspection forms for inspectors, capability of the system to communicate geospatially with the City's GIS system, and simplification of land disturbance permit due to the fact that Planning & Development will be on the same system.

Tyler Resources Purchased

The total professional services hours set forth in the Investment Summary have been allocated to the project as follows:

Billable Hours and Expenses in Scope

- Project Management Services = 34 resource hours
- System Configuration Services = 112 resource hours
- System Administration / Fundamentals Training = 24 resource hours
- End User Training & Production Support = 16 resource hours
- Report Development Services = 40 resource hours
- Data Conversion Services = 40 resource hours
- Travel Expense Estimate based on 5 on-site trips (where a "trip" is defined as onsite travel of up to five business days)
 - The project plan, addressed below, will give detail on when Tyler expects to be traveling onsite over the course of the project.
 - Tyler will utilize an iterative process around business transactions during the appropriate stages.
 - NOTE: A typical "onsite week" is onsite at the customer site Monday – Thursday at an expected duration of 8 hours per day. Exceptions may apply to best serve the needs of the project.

Business Scope (Transactions and Automation)

- Unique Business Transactions in Scope = up to 7 Transactions

- Template Business Transactions in Scope = up to 0 Transactions
- Geo-Rules within Scope = up to 3 Geo-Rules
- Intelligent Objects and IAA's within Scope = up to 3 IO/IAA
- Custom Reports/Output documents within scope = up to 5 reports
- Integrations within scope = 0 No integrations within Scope (agency to leverage EnerGov SDK/API)
- Data Conversion Sources within scope = 1 (per data source)

“Business transaction” is defined by:

- Unique workflow or business process steps & actions (including output actions)
- Unique Automation logic (IO logic etc)
- Unique Fee assessment / configuration definition
- Unique Custom fields/forms definition

Uniqueness of any of these mentioned parameters regulates the need for a unique business case transaction design document and configuration event

“Template” transaction is defined by:

- A pre-defined and pre-configured EnerGov best management business process.

“Geo-Rule” is defined by:

- An automation event that is triggered by a condition configured around the source Esri geodatabase. Current geo-rule events are:

<ul style="list-style-type: none"> • Alert 	<ul style="list-style-type: none"> • Displays a pop-up with a custom message to the user, notifying them of certain spatial data (i.e. noise abatement zones; flood zones; etc.).
<ul style="list-style-type: none"> • Block 	<ul style="list-style-type: none"> • Places a block on the case and prevents any progress or updates from occurring on the record (i.e. no status changes can be completed, no fees can be paid, the workflow cannot be managed, etc.)
<ul style="list-style-type: none"> • Block with Override 	<ul style="list-style-type: none"> • Places a block on the case and prevents any progress or updates from occurring on the record (i.e. no status changes can be completed, no fees can be paid, the workflow cannot be managed, etc.) However, the block can be overridden by end-users who have been given the proper securities.
<ul style="list-style-type: none"> • Fee Date 	<ul style="list-style-type: none"> • Populates the CPI vesting date on the record if vesting maps are used by the jurisdiction.
<ul style="list-style-type: none"> • Filed Mapping 	<ul style="list-style-type: none"> • A custom field or any field inherent in the EnerGov application can automatically populate with information based on spatial data.
<ul style="list-style-type: none"> • Required Action 	<ul style="list-style-type: none"> • A workflow action can automatically populate in the workflow details for the particular record (i.e. plan, permit, code case, etc.) that requires the action based on certain spatial data related to the case.
<ul style="list-style-type: none"> • Required Step 	<ul style="list-style-type: none"> • A workflow step can automatically populate in the workflow details for

the particular record (i.e. plan, permit, code case, etc.) that requires the step based on certain spatial data related to the case.

- **Zone Mapping**
- The zone(s) automatically populate on the “Zones” tab of the record (i.e. plan, permit, code case, etc.).

“Intelligent Object (IO)” is defined by:

- Key components for automatically and reactively triggering geo-rules, computing fees, and generating emails, alerts and other notifications.

“Intelligent Automation Agent (IAA)” is defined by:

- A tool designed to automate task in a proactive manner by setting values and generating emails and other tasks. On a nightly basis, a Windows service sweeps the EnerGov system looking for IAA conditions that have been met, and the associated actions are then performed. The IAA does not generate alerts or errors.

“EnerGov SDK API (Toolkits)” are defined by:

- API’s developed by Tyler Technologies for the purpose of extending the EnerGov Framework and functionality to external agencies and systems. Full documentation is available for each toolkit upon request.

Note: The EnerGov toolkits and related documentation are simply tools that allow clients to create applications and integrations. The purchase of a toolkit does not imply any development related services from Tyler Technologies. The client is responsible for working with their IT staff and VAR’s to develop any necessary applications and integrations except as otherwise noted in the Investment Summary for any “in-scope” integrations.

Key Project Assumptions

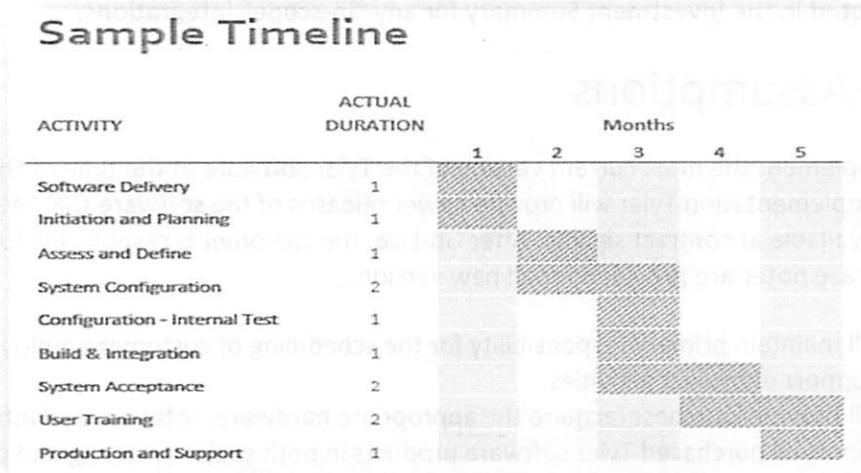
Tyler shall initially implement the most current version of the Tyler software at the time of the contract signing. During the implementation Tyler will provide newer releases of the software that meet or exceed the version available at contract signing. After Go-Live, the customer is responsible for installing newer releases. Release notes are provided for all new versions.

- Customer will maintain primary responsibility for the scheduling of customer employees and facilities in support of project activities.
- Customer will provide/purchase/acquire the appropriate hardware, software and infrastructure assets to support all purchased Tyler software products in both support/testing and production environments.
- Customer is responsible for proper site preparation, hardware, software and network configuration in accordance with Tyler specifications.

- Customer has, or will provide, access licenses and documentation of existing system to which Tyler will read, write or exchange data with the exception of direct access to City of Columbia Servers unless otherwise explicitly granted and / or monitored.
- Customer has, or will provide, a development/testing environment for import and interface testing as they are developed by Tyler.
- When possible and appropriate, configuration changes will be made in the designated test environment prior to production.
- Tyler will provide Customer with a weekly status reports that outline the tasks completed. Tyler will also provide details regarding the upcoming tasks that need to be completed during the coming weeks, the resources needed (from customer) to complete the tasks, a current or updated version of the project plan, and a listing of any issues that may be placing the project at risk (e.g., issues that may delay the project or jeopardize one or more of the production dates) as needed.
- Tyler personnel shall attend executive project review committee meetings (internal) as needed.
- Out of scope deliverables will only be provided via a change order that is mutually agreed to.
- Customer and Tyler acknowledge that the goal for cutover to production is on or before July 2017.

Estimated Timeline

An estimated timeline for the EnerGov implementation has been provided below. The estimates provided below are for the Customer’s initial planning and resource allocation purposes. Timelines will be baselined during the project planning process and adjusted over the course of the project if need arises. The estimated timeline is currently projected at **4-6 months from the project “kick-off” event through to the start of the production stage for a single project phase**. This timeline is estimated only based on scope of services included in the Investment Summary and is subject to change based on project factors uncovered during project planning activities and mutually available resource levels from



both the customer and Tyler Technologies at the time of project initiation.

Tasks

The following tasks have been arranged for this project, with responsibility definitions for both Tyler and Customer as follows:

- **Own** – Ownership of the task throughout
- **Participate** – Active, ongoing participation in the task throughout
- **Advise** – Advisory role as needed by the other party
- **None** – No planned/required involvement by the designated party

Upon completion of a task, the customer will have an opportunity to review the deliverable, if any, associated with the task. The customer will have a five-day business window within which to identify to Tyler a deviation from the warranties provided in the parties' agreement. In the event a deviation is identified and confirmed, Tyler will address the deviation according the services warranty provision set forth in the Agreement, as applicable. When a corrected deliverable has been resubmitted for review, that process shall repeat. Upon Stage completion, Tyler will provide the customer with a Work Acceptance Form to document that all tasks within the Stage have been successfully delivered. The customer must return the completed Work Acceptance form within five business days of receipt, or the Stage will be deemed "accepted."

Each stage is dependent on the results of the previous stage and therefore, each stage of the methodology cannot begin until the previous stage is completed and approved.

Stage 0 - Software Delivery

Objectives:

- Tyler software is made available the customer

Tasks:

Software Delivery		
Tasks	Tyler	Customer
Perpetual License: Tyler makes the licensed software available on the project SharePoint site for downloading.	Own	None

Stage 1 - Initiation & Planning

Objectives:

- Introduction to project and detailed review of Stages, Tasks and Milestones/Deliverables
- Distribution of forms and gathering of high-level organizational and process information
- Establishment of Customer Governance Structure as outlined below - Please see Attachment D for further details on the responsibilities of the various resources involved in the customer's project team
- Establishment of communication channels (Project Manager, SMEs, Permitting Systems Coordinator, etc.)
- Assessment of IT infrastructure and needs

- Planning for staff mobilization & allocation
- High-level timeline review
- Create project plan, including baseline project schedule
- Review and communicate Tyler's expectations for Customer Project Team and Governance as detailed in Attachment D: Customer Roles and Skills Requirements
- Review and communicate Customer's expectations for Tyler's Project Team and Governance as detailed in the Project Guidebook.

Tasks:

Initiation & Planning		
Tasks	Tyler	Customer
Conduct Planning/Initiation Introductory Phone Call	Own	Participate
Assign Tyler Project Team Members and Establish Governance Structure	Own	None
Assign Client Project Team Members and Establish Governance Structure	None	Own
Provide/Assign facilities for Tyler on-site activities	Advise	Own
Identify non-working days (i.e. vacations, holidays, etc.)	Own	Participate
Define procurement and configuration plan for necessary hardware, non-EnerGov systems software and networking infrastructure by the customer as specified by SOW Attachment C	Advise	Own
Provide Tyler remote access (when needed) to required server for Tyler software installation and system configuration	Advise	Own
Deliver and review Process and Configuration Collection Templates	Own	Participate
Create SharePoint site to manage project deliverables, documents, and UAT	Own	None
Deliver and review Project Status Report Template	Own	Participate
Deliver and review Sample Signoff Form	Own	Participate
Deliver and review GIS requirements and best practices documentation	Own	Participate
Deliver and Discuss EnerGov API Documentation and Ownership of Programming Against the API	Own	Participate
Deliver and review Data Conversion Template Database (DCT-DB), ERDs and usage documentation	Own	Participate
Prepare programs/databases for integration	Advise	Own
Identify and document project risks and resolutions	Own	Participate
Amend project scope/SOW as needed	Own	Participate
Deliver and review Project Plan (including project schedule)	Own	Participate
Other tasks as identified	Own for respective team	Own for respective team

Deliver Project Planning & Initiation Stage Sign Off to Customer	Own	None
Return Project Planning & Initiation Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Initiation and Planning Stage

Stage 2 - Assess & Define

Objectives:

- Team Training –System Admin /EnerGov Fundamentals
- Tyler to gain an understanding about how customer conducts business
- Translate business understanding into the “to-be” documented EnerGov configuration definition documentation
- Define custom report requirements and prioritize custom report requirements to prepare or refine customer report hours estimate or to determine whether additional hours are needed via a change order
- Define and map data conversion requirements (see section titled Data Conversion)
- Define integration specifications, as applicable
- Define and map, based on provided API’s, interface requirements, as applicable

Data Conversion within scope		
System Name	Details	Comments
See investment summary		

System Integrations within scope	
System Name	Comments
See investment summary	

Tasks:

Assess & Define		
Tasks	Tyler	Customer
Team Training	Own	Participate
Identify Business Transactions / Case Types (i.e. Permit Types, Plan Types, Inspection Types, etc.)	Participate	Own
Scope and document EnerGov configuration design document per business transaction / process	Own	Participate
Deliver ArcGIS base map service(s) to Tyler	Advise	Own
Develop Case Type documentation to include comprehensive collection of business processes, configuration and other details identified during this Stage	Own	Participate
Deliver and review Project Definition Documents	Own	Participate
Determine which EnerGov API’s will be utilized (if	Advise	Own

applicable)		
Confirm whether EnerGov API's will be developed against by client or via 3 rd party vendor (if applicable)	Advise	Own
Deliver and review list of out-of-the-box standard reports, documents, dashboards and search consoles in order to identify any gaps in report coverage that may require custom report development	Own	Participate
Develop Report Specifications	Own	Participate
Deliver Custom Report Development estimate (hours and cost) and accompanying Change Order (if necessary)	Own	Participate
Develop integration specifications (if applicable)	None	None
Deliver and review integration specifications to Customer (if applicable)	None	None
Other tasks as identified	Own for respective team	Own for respective team
Deliver Assess & Define Stage Sign Off to Customer	Own	None
Return Assess & Define Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Assess & Define Stage

Stage 3a –System Configuration

Objectives:

- Configure the core EnerGov software in accordance with configuration definitions from Assess & Define stage

Tasks:

System Configuration		
Tasks	Tyler	Customer
Deploy Pre-production environment to house the configuration system as defined by Tyler's Hardware / Infrastructure requirements documentation	Advise	Own
Configure the software based upon the EnerGov configuration definitions established in the previous Assess & Define stage	Own	Participate
Perform ongoing reviews with customer as configuration progresses	Own	Participate
Deliver populated Data Conversion Template Database (DCT-DB)	None	Own
Complete Basic Configuration Reviews	Own	Participate
Deliver System Configuration Stage Sign Off to Customer	Own	None
Return System Configuration Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of System Configuration Stage

Stage 3b – Configuration - Internal Test

Objectives:

- Conduct initial operational test to ensure that Tyler has the information and configurations necessary to complete report development and data conversions
- Confirm basic system configuration to ensure proper operation

Tasks:

Internal Test		
Tasks	Tyler	Customer
Provide users logins for key Customer staff	Own	None
Conduct basic system configuration testing/retesting walkthrough	Own	Participate
Record testing results in SharePoint	None	Own
Resolve any system issues identified	Own	None
Other tasks as identified	Own for respective team	Own for respective team
Deliver Internal Testing Stage Sign Off to Customer	Own	None
Return Internal Testing Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Internal Test Stage

Stage 4 - Build

Objectives:

- Develop Custom Reports per defined requirements, if any
- Import data from Data Conversion Template Database (DCT-DB) into master EnerGov database
- Development of scoped and defined integrations, as applicable
- Development against EnerGov API's through in-house or 3rd party developer (if applicable)

Tasks:

Build		
Tasks	Tyler	Customer
Review populated Data Conversion Template Database (DCT-DB) with EnerGov Data Services team member(s)	Advise	Own
Import data into EnerGov master database from populated Data Conversion Template Database (DCT-DB)	Own	None
Produce, deliver and review internally tested import of legacy data into EnerGov master database	Own	Participate
Produce, deliver and review internally tested custom reports per defined requirements (if applicable)	Own	Participate
Produce, deliver and review internally tested integrations	None	None

per defined requirements (if applicable)		
Provide and review the documented cut over strategy	Own	Participate
Develop against EnerGov API	Advise	Own
Other tasks as identified	Own for respective team	Own for respective team
Deliver Build Stage Sign Off to Customer	Own	None
Return Build Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Build Stage

Stage 5a - System Acceptance Planning

Objectives:

- Create test scripts based on pre-determined functionality requirements criteria
- Provide system overview and administrator training for power users (i.e. customer testers, administrators and IT) (if applicable)
- Conduct testing and system validation for promotion to end user training

Tasks:

System Acceptance Planning		
Tasks	Tyler	Customer
Develop and review acceptance schedule and criteria	Own	Participate
Coordinate training logistics and schedule	Own	Participate
Provide facilities suitable to training and testing needs	Advise	Own
Provide, if requested by Customer, Tyler's training lab	Own	Advise
Recommend test strategies, scenarios and best acceptance practices	Own	Participate
Provide sample test scripts, as requested	Own	Advise
Develop test scripts and testing criteria (based on documented business processes, interfaces, imports, reporting, etc.)	Advise	Own
Provide standard training documentation, as available	Own	None
Create customer-specific training or business process documentation	None	Own
Provide System Overview and Administrator training for Power Users (if applicable)	Own	Participate
Deliver fully configured database for pre-System Acceptance Testing data import to EnerGov	None	Own
Populate Data Conversion Template Database (DCT-DB) with latest iteration for System Acceptance Testing	None	Own
Conduct pre-System Acceptance Testing import of data from Data Conversion Template Database (DCT-DB) in master EnerGov database and deliver to Customer	Own	None

Deploy fully configured and imported master EnerGov database into the Production testing environment	None	Own
Other tasks as identified	Own for respective team	Own for respective team
Deliver System Acceptance Planning Stage Sign Off to Customer	Own	None
Return System Acceptance Planning Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of System Acceptance Planning Stage

Stage 5B – Verification and System Acceptance

Objectives:

- Test and signoff on each delivered business process, suite or component based on criteria and scope
- System ready for production and promoted to a production and/or training environment
- “Ready for production” means that items that are not features enhancement or bugs that will allow the customer to move forward to User Training (Stage 6) and then go-live are addressed

Tasks:

Verification and System Acceptance		
Tasks	Tyler	Customer
Conduct testing of custom (if necessary) and standard reports	Advise	Own
Conduct testing of main EnerGov forms and end-to-end system functionality	Advise	Own
Conduct testing of produced integrations, if applicable	Advise	Own
Conduct testing of imported data	Advise	Own
Record testing results in SharePoint	None	Own
Resolve material System Acceptance Testing issues	Own	Participate
Retest until acceptance criteria developed in Stage 5A are met such that go-live can occur	Participate	Own
Identify out-of-scope configuration changes that do not impact System Acceptance based on predefined scope for post go-live change order	Own	Participate
Other tasks as identified	Own for respective team	Own for respective team
Deliver Verification and System Acceptance Stage Sign Off to Customer	Own	None
Return Verification and System Acceptance Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Verification and System Acceptance Stage

Stage 6 - User Training

Objectives:

- Provide requisite hours of classroom and one-on-one training and knowledge transfer

Tasks:

User Training		
Tasks	Tyler	Customer
Coordinate training logistics and schedule	Own	Participate
Provide facilities suitable to training needs	Advise	Own
Provide, if requested by Customer, Tyler's training lab	Own	Advise
Deliver fully configured database for pre-User Training data import to EnerGov.	None	Own
Populate Data Conversion Template Database (DCT-DB) with latest iteration for User Training	None	Own
Conduct pre-User Training import of data from Data Conversion Template Database (DCT-DB) in master EnerGov database and deliver to Customer	Own	None
Deploy fully configured and imported master EnerGov database into the Production testing environment	None	Own
Provide standard training documentation, as available	Own	None
Conduct customer training	Own	Participate
Provide business process training to ensure end users understand impact of process/practice changes decided upon during course of implementation	None	Own
If "train the trainer" approach, conduct end-user training	None	Own
Other tasks as identified	Own for respective team	Own for respective team
Deliver User Training Stage Sign Off to Customer	Own	None
Return User Training Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of User Training Stage

Stage 7 – Production & Production Support

Objectives:

- Conduct final data import cutover
- Conduct final integration deployment

- Tyler to provide on-site production support prior to cutover to Help Desk (Maintenance and Support)

Tasks:

Production & Production Support		
Tasks	Tyler	Customer
Deliver fully configured database for Production data import to EnerGov	None	Own
Populate Data Conversion Template Database (DCT-DB) with latest iteration for Production	None	Own
Conduct Production import of data from Data Conversion Template Database (DCT-DB) in master EnerGov database and deliver to Customer	Own	None
Deploy fully configured and imported master EnerGov database into the Production environment	None	Own
Provide onsite pre and post production support	Participate	Own
Define support logistics and schedule	Own	Advise
Assist customer as production issues arise	Own	Participate
Provide technical and functional user support	Participate	Own
Develop and maintain post-production issues list in SharePoint	Participate	Own
Ensure key/critical personnel are present and available to participate	Advise	Own
Other tasks as identified	Own for respective team	Own for respective team
Deliver Production & Production Support Stage Sign Off to Customer	Own	None
Return Production & Production Support Stage Sign Off to Tyler	None	Own

Milestone/Deliverable: Signoff of Production & Production Support Stage

Data Conversion

(See tasks associated with data transfer, above)

The following criteria are applied to Data Conversion

Data Format

The customer must provide data to Tyler in the Data Conversion Template Database (DCT-DB) structure, as set forth in the SOW Attachments. Providing data in this format will ensure that data is properly imported into the system. Data not provided in this structure will not be considered for import.

Data scrubbing/cleansing

Any data scrubbing should be done by the customer prior to populating the DCT-DB. Data scrubbing and cleansing is not included in the EnerGov proposal.

Required Fields

There are certain fields in the EnerGov software which are required fields, and we cannot write records to the EnerGov master DB without populating these columns. Sometimes, these required fields will not be available in the legacy source data, so a simple default value can be written to the DCT-DB to fulfill the NOT NULL constraint. Tyler would write the default value as part of the conversion process.

Custom Fields

Most legacy systems will have some attribute fields that are not specified in the corresponding master table within DCT-DB. In the EnerGov software, we will refer to these as custom fields. Within each module, there will be a child table for such custom fields. Since these are specific to the legacy system(s), the customer may add columns to these tables in DCT-DB to accommodate any needed custom fields in the migration.

Parsing data

The data format is defined based on the fields that exist in the EnerGov module (street number and street name, for example). If the customer would like that data to be converted, the customer will have to break out its legacy data so that it matches the EnerGov data fields.

Address Data: Tyler does not parse out address information for optimization purposes. Rather the customer is responsible to deliver the address information in the requested (preferred format). Tyler will import the address data delivered (format) and map the fields to the best possible location in the EnerGov system. Tyler is not responsible for cleanup of inconsistent addressing.

Phone Numbers: Phone numbers are imported in the format in which the data is delivered to Tyler. Tyler is not responsible for cleanup of inconsistent numbering or sequencing.

Individuals / Names: Individual names are imported in the format in which the data is delivered to Tyler. Tyler is not responsible for parsing out single name fields into First, Last, Middle, Company, etc.

Contacts Data: If contact data is not keyed in such a way that each instance of a person has one, and only one, contact record (the record with all of their attributes such as name, address, company, phone, etc.) in the data source, then the contacts associated with a record will typically be imported into a general information tab rather than into the EnerGov Enterprise Contacts Manager.

Business-Specific Rules

Business specific rules are handled in the software configuration process and cannot typically be mapped within the data conversion process. This includes but is not limited to EnerGov Intelligent Objects and EnerGov Case Workflows.

Calendars & Scheduling

EnerGov software can import scheduled hearings and meeting details; however any data residing on an actual calendar control is excluded from the scope of the data conversion.

Risk / Mitigation Strategy

The following are samples of common risks experienced during implementations of EnerGov and are provided herein to both educate the customer and set expectations around typical approaches Tyler will take to risk mitigation. Actual management of a risks/issue log will be handled through our project management plans developed by the Tyler Project Manager.

Project Schedule

Risk: Impact of various factors on baseline project schedule.

Mitigation: Given the fact that project schedules are working documents that change over the course of the project, Tyler will work closely with the customer to update, monitor, agree, and communicate any required changes to the project schedule.

Activity Focus

Risk: Minor activities consume time that should be dedicated to major activities of the project with the end result that time and/or costs overruns budget. Examples include meetings of little substance, or time spent investigating undocumented functionality or other activities not in scope.

Mitigation: Project Managers for both parties must focus squarely on meeting deadlines, services, and configuration requirements of the implementation as planned and documented in the planning, assessment and definition stages.

Incomplete Legacy Interface Documentation

Risk: During the project, certain third party documentation will be required for such tasks as interface development and import of legacy data and others.

Mitigation: Customer should insure that APIs for interfacing to other systems, and/or a customer expert that understands the legacy database, are available to Tyler. If no such documentation or customer expertise exists, the customer will be responsible for coordinating with the third-party vendor to advise Tyler, at a potential additional expense to the customer (although not necessarily from Tyler).

Technology Age

Risk: This risk is highly dependent on the choice of Tyler products and whether the customer is hosting any of those products. If the customer will be hosting the Tyler software, then the technology hosting that software should be robust and durable. Technology that barely meets minimum requirements today will be insufficient as the needs of the system grow.

Mitigation: Tyler will assist the customer in determining optimal technology and plans to guard against pre-mature obsolescence. The customer will also complete a hardware survey, initiated by our deployment team, to confirm that the customer's hardware is sufficient for the upcoming implementation.

Critical Success Factors

In order to successfully execute the services described herein, there are several critical success factors for the project that must be closely monitored.

- **Knowledge Transfer** - While Tyler cannot guarantee specific expertise for customer staff as a result of participating in the project, Tyler shall make reasonable efforts to transfer knowledge to the customer. Customer personnel must participate in the analysis, configuration and deployment of the Tyler software in order to ensure success and to transfer knowledge across the organization. After completion of the production phase (Stage 7), the customer will be responsible for administering the configuration and introduction of new processes in the Tyler system.
- **Dedicated Customer Participation** – Tyler understands that customer staff members have daily responsibilities that compete with the amount of time that can be dedicated to the Tyler implementation project. However, it is critical that the customer acknowledges that its staff must be actively involved throughout the entire duration of the project as defined in the Project Plan. Tyler will communicate insufficient participation in Project Status Reports.
- **Managing Project Scope** - To implement the project on time and within budget, both the customer must acknowledge the scope of the project set forth in the parties' agreement, and, for services, refined over the course of the early project Stages described in this Statement of Work. Change Orders for additional items outside the scope must be submitted in advanced and signed by project stakeholders before work can begin on those items. Likewise, reductions of the defined scope will also require a Change Order.

Project Management

Tyler performs ongoing project management services throughout the implementation in order to plan and monitor execution of the project. Project Management includes the following tasks:

- Risk management
- Monitoring project budget
- Project Plan management using our expense and time-tracking tool/Excel
- Project document management using SharePoint
- Issue log management and escalation
- Status reporting
- Change order management
- Project workspace management
- Resource management
- Executive project oversight
- Bi-Weekly status reports are required to be delivered by Tyler's PM to the customer. Due Close of Business Thursday. The updated project schedule is required to be delivered with the bi-weekly status report

- Budget Status updates are required to be delivered monthly, following invoicing
- A risk/issue/action tracking log will be maintained across the lifecycle of the project

By mutual agreement, some project management tasks are shared between the Tyler project team and the customer Project Manager/stakeholders.

Development Tools

Configuration tools (the same ones Tyler will use to implement the system) are built-into the software. The customer has full access to them, and its administrators will be trained on them. EnerGov reports are developed in Crystal Reports, so any changes to customer reports does require a licensed copy of Crystal Reports. The EnerGov system does include a Crystal Report reader, so view-only users do not require a Crystal Reports license. In addition, if applicable, the customer and/or their 3rd party vendor will need to utilize industry-standard programming tools for any development against the EnerGov API toolkits.

Documentation

Tyler-provided documentation

Over the course of the staged implementation lifecycle, the Tyler project team will provide stage-specific documentation in a range of formats (both editable and non-editable). Examples include:

- Data Collection docs (MS Excel) for configuration
- Data Mapping docs (MS Excel) for data conversion
- ERDs & Data Dictionaries for IT (PDF and CHM)
- API Documentation (PDF)
- Training Documentation Templates (MS Word and MS PowerPoint)
- Release Notes for Service Packs (PDF)
- Other documentation as required for the specifics of the project.

Customer-Provided Documentation

A definitive list of Customer-provide documentation is not possible until all aspects of the implementation are determined, usually in the beginning stages of the project. Tyler does not expect the customer to general documents that do not exist in the regular course of customer's business. Customer's assistance in completing the Tyler-provided forms and requests for configuration information is essential to a successful project.

Documentation originated by the Customer may include:

- API's for any third-party software system to which the Tyler software will interface and exchange data
- Import data documentation and in a format suitable for import into the Tyler software (please see section titled Data Conversion)
- Workflow documentation on the customer's current business processes
- Copies of pertinent ordinances or other controlling authorities

- Fee schedules
- Copies of existing permits, licenses, other documents presented to the public and expected to be derived from the Tyler software

Attachment A. Acceptance Sign-off Form

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Acceptance Sign Off

Client: _____

Date: _____

Visit/Deliverable: _____

<p>Tyler Technologies Use Only</p> <input type="checkbox"/> Deliverable does NOT denote a payment milestone
<input type="checkbox"/> This deliverable denotes a payable milestone. Amount Due: \$0.00

Deliverables	Performed By	Notes
Additional Signoff Notes:		

- I am satisfied with the work performed for this stage, and/or deliverable.
- I am NOT satisfied with the work performed for this stage, and/or deliverable.

In an effort to ensure quality and complete satisfaction with each phase of the project Tyler Technologies' Professional Services division has established the following rules:

- Projects will not be allowed to move from one phase to another without a sign off indicating satisfaction with the work performed. The Tyler Technologies' project team will immediately stop all other tasks, complete the phase at hand, and obtain sign off before moving to the next phase.
- Customer understands that any payment not received within 30 days of invoice will result in work stoppage. All related project tasks will be stopped until payment is received.

Print Name: _____

Signature: _____

Date: _____

(Please return signed copy to the Tyler Technologies project team)

Customer Notes:

Attachment B. Change Order Request Form

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Change Order Form

Client: _____ **Date:** _____

Generated By: _____

Authorized By: _____

Change Overview:

Narrative Description of Change:

Impact of Change:

Schedule Impact: Delay of milestone & sub-tasks on Tyler Technologies Implementation Project Plan including:

Task	Proposed Date Changes

Cost Impact:

Change Detail	Credit	Debit	Total

Revision No.: _____

No changes may be made to this project without the agreement of the Project Manager(s), and must be approved by the Project Director. Submit endorsed Change Order to the Tyler Technologies' Project Manager

Date Approved	Comments	Approved By	Signature

Attachment C. System Requirements

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Hardware and Network Requirements

System Requirements

Tyler's software is designed to operate on networks and operating systems that meet certain requirements. Systems that do not meet the required specifications may not provide reliable or adequate performance, and Tyler cannot guarantee acceptable results.

Site Assessment

Site assessments are an automated process. Each site is required to complete the automated process and submit results to their assigned project manager before any work can be completed on the project. While the automated process may be run prior to contract signature, the results submitted to Tyler must be dated after the Effective Date of the contract.

To complete your site assessment log in to <http://check.tylertech.com>

Enter your email address and the password "Tyler".

Select the product purchased to begin your system assessment. You will also be able to download PDF copies of hardware requirements from within the process. We strongly recommend that you download and keep a copy of the full hardware requirements as this document also covers recommended data backup procedures.

The link above is a generic login and password. During implementation, your project manager will provide you with a unique site and password to test your site and log results.

Attachment D. Customer Roles & Skills Requirements

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Customer Roles/Skills Requirements

Project Collaboration

A successful Tyler enterprise implementation is a collaborative endeavor in which both Tyler Project Team members and agency personnel occupy specific roles (and the responsibilities associated therewith). While definitive client-side roles and skills may vary from project to project (depending on the agency's resource availability) the following designations represent the typical and recommended resource involvement for most agencies.

Executive Sponsor:

This role is typically an executive or managerial sponsor of either the IT group or a dominate business group that is ultimately responsible for the success of the project.

Typical positions: IT Director / Department or Division Director

Responsibilities include:

- Ultimate responsibility for the success of the project; serves as project champion.
- Creating a positive environment that promotes project buy-in.
- Driving the project through all levels of the agency.
- High-level oversight throughout the stages of the project; ROI initiatives oversight.

Project Steering Committee:

This committee is formed by executive or managerial staff of every affected business group to be implemented.

Typical individuals include a committee of the following: CIO / Community Development Director / Finance Director / CBO / Planning Director / Public Works Director etc...

Responsibilities include:

- Ensure proper change management and leadership to departmental staff.
- Determine beneficial process change through automation as it is presented cross-departmentally.
- Monitor project from high level.

Customer Project Manager:

This role is typically a non-business group member (IT or support staff) of the agency's project team.

Typical positions: IT or applications support project manager

Responsibilities include:

- Serve as coordinator of the agency's Implementation team / subject matter experts.
- Assist in managing the project scope, deliverables and timeline with assistance from the Tyler Project Manager.
- Ensure that the project team stays focused, tasks are completed on schedule, and that the project stays on track.
- Develop and maintain the project resource plan in conjunction with the Tyler Project Manager.
- Schedule and coordinate project tasks with assistance from the Tyler Project Manager.
- Coordinate agency's Implementation team resources with all departments.
- Participate in daily project activities and track progress on project tasks.
- Hold meetings with project stakeholders to update on project status and to reach verdict on any escalated process decisions that need to be made.
- High-level oversight throughout the stages of the project; ROI initiatives oversight.

Desired Skills/Experience:

- Previous project management experience as project manager
- Strong IT technical background
- Bachelor's Degree in Computer Science or equivalent experience
- Experienced with an iterative-based development approach
- SharePoint & Microsoft Project experience a plus
- Excellent knowledge of Customer Business Practices and Processes

Departmental System Administrators:

A user representative for each affected department is typically appointed for the entire lifecycle of the implementation and to serve as ongoing configuration support or "Systems Administrator" post the production phase of the EnerGov system.

Typical positions: Departmental or division subject matter expert and typically a direct member of the business group or of the business applications support group.

Responsibilities include:

- Being trained on the EnerGov .NET system at a System Administration level.
- Being fully engaged in the business analysis system configuration, reviews and UAT activities.
- Assist internal efforts towards the creation of reports, interfaces & conversions.
- Actively participate in the full implementation of Tyler's EnerGov software solution.
- Serve as ongoing departmental or division system configuration support post the production phase of the project

Desired Skills/Experience:

- Proficient in Crystal Reports
- Analytical/Problem Solving Skills
- Experience with other "configurable" enterprise applications such as PeopleSoft, SAP, etc.

Departmental Business Leads:

A user representative for each affected department must be appointed for the entire lifecycle of the implementation. Assigning competent business leads to assist in the project is highly recommended and can often determine the success of the implementation for their respective areas. These Business Leads are typically transitioned into Tyler "Power Users".

Typical positions: Departmental or division "power user" and member of the business group.

Responsibilities include:

- Attending assessment workshop sessions.
- Willing and able to gather data and make decisions about business processes.
- Assist as a knowledge-base in the creation of specifications for reports, interfaces & conversions.
- Review and test the system configuration.

Technical Lead:

A technical individual from the Information technology group that is responsible for the technical infrastructure support of the implementation and to serve as ongoing technical infrastructure support post the production phase of the EnerGov software system.

Typical positions: Network / IT Administrator

Responsibilities include:

- Primary responsibility for the technical environment during the software implementation
- Ensure that servers, databases, network, desktops, printers, are available for system implementation and meet minimum standards
- Work with Tyler's technical personnel during implementation
- Maintain the testing and production databases
- Install software updates and releases
- Act as the primary technical resource for troubleshooting technical problems
- Establish and maintain backup, archival, and other maintenance activities

Attachment E. Custom Programming Request Form

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Custom Programming Request Form

Client:	
Date of Request:	
Contact Name:	
Expiration Date:	(Quote is valid for 30 days)

Feature Request

[Short Narrative Here]

Option 1 – [Custom Programming Item Name], [Hour Estimate]

[Details here]

Tyler Technologies Use Only

Development Hours: 0
 Estimated Release Date: See Dates Below
 Estimated Release Version: See Dates Below

Impact Fee: \$0
 Development: \$0
 Implementation Cost: \$0
 Training Cost: \$0
 Documentation Cost: \$0
 Total Cost: \$0

R&D Authorization: _____
 Sales Rep Authorization: _____
 Authorized: _____

Total Cost: \$0

Release Schedule

Release Schedule	Estimated Date
[EnerGov Software Beta Release date]	DATE
[EnerGov Software RC Release date]	DATE
[EnerGov Software Gold Release date]	DATE
* Release dates are subject to change	

Accepted and Ordered by Customer:

Signature:	
Name (print):	
Title:	
Date:	

Please sign, date and return by fax:

Tyler Technologies, Inc.

Phone: 888-355-1093
Fax: 678-474-1002



Attachment F. Custom Report and Forms Form

City of Columbia

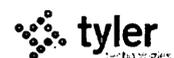
Statement of Work

Tuesday, May 31, 2016

EnerGov Custom Request Form

Fill out this form as completely and with as much detail as possible. Please attach any sample reports or other supporting documentation and be sure to save a copy for your records. The more detail provided, the better the report designer can develop the report without additional follow-up. Not all items will apply to each report; you need only complete those items that are relevant to the request. Exceptions to these requirements may be noted under Additional Details. To save time for a large number of similar report requests, save basic information as a template.

Client Name:		Report Requestor/Point of Contact:		Request Date:
EnerGov Module: <input type="checkbox"/> Application Management <input type="checkbox"/> Business License <input type="checkbox"/> Cashier <input type="checkbox"/> Code Management <input type="checkbox"/> Contact Management		<input type="checkbox"/> Impact Management <input type="checkbox"/> Inspection Management <input type="checkbox"/> Object Management <input type="checkbox"/> Permit Management <input type="checkbox"/> Plan Management <input type="checkbox"/> Professional License	<input type="checkbox"/> Project Management <input type="checkbox"/> Rental Prop Management <input type="checkbox"/> Request Management <input type="checkbox"/> Tax Remittance System <input type="checkbox"/> Other	Requested Completion Date: Priority (1=High, 5=Low) <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5
Report Name:			Report Type: <input type="checkbox"/> Report <input type="checkbox"/> Document	
Report Description/Business Need:			Request Type: <input type="checkbox"/> New <input type="checkbox"/> Modification	
Based on Similar or Existing Standard or Custom Report:			Report Target: <input type="checkbox"/> Client <input type="checkbox"/> Customer <input type="checkbox"/> EnerGov	
Format Design:				
Report Style: <input type="checkbox"/> Replicate Sample Exactly OR <input type="checkbox"/> Listing <input type="checkbox"/> Letter <input type="checkbox"/> Free Form <input type="checkbox"/> Certificate <input type="checkbox"/> Dashboard				
Report Orientation: <input type="checkbox"/> Portrait <input type="checkbox"/> Landscape		Report Output: <input type="checkbox"/> Print/PDF <input type="checkbox"/> Excel/CSV		Paper Type: <input type="checkbox"/> Letter <input type="checkbox"/> Legal <input type="checkbox"/> Ledger <input type="checkbox"/> Printed Form <input type="checkbox"/> Other
Include Print Date/Time: <input type="checkbox"/> Time <input type="checkbox"/> Header <input type="checkbox"/> Left <input type="checkbox"/> Date <input type="checkbox"/> Footer <input type="checkbox"/> Center <input type="checkbox"/> Right		Include Page Numbers: <input type="checkbox"/> Page N <input type="checkbox"/> Header <input type="checkbox"/> Left <input type="checkbox"/> Page N of M <input type="checkbox"/> Footer <input type="checkbox"/> Center <input type="checkbox"/> Right		Date/Time Formats: <input type="checkbox"/> MM/DD/YYYY <input type="checkbox"/> HH:MM?M <input type="checkbox"/> M/D/YY <input type="checkbox"/> HH:MM?m <input type="checkbox"/> MMM D, YYYY <input type="checkbox"/> H:MM?M <input type="checkbox"/> MMM, YYYY <input type="checkbox"/> H:MM?m <input type="checkbox"/> DD/MM/YY <input type="checkbox"/> HH:MM <input type="checkbox"/> MM/DD/YY <input type="checkbox"/> HHMM (24)
Default Font Information: (Times New Roman, 10 point, Black if not specified):				
Font Name:		Font Size:		Font Color: Black or
Technical Design:				
Identify Attached Specifications/Sample Documents (XLS, DOC, PDF, etc.):				
Primary SQL Stored Procedure (for existing reports):			EnerGov Parameter: <input type="checkbox"/> Date Range <input type="checkbox"/> Module ID <input type="checkbox"/> Other	
Record Selection Inclusion/Exclusion Filter or Parameters (please put additional filters in the Notes for Developer):				
Filter #1	Filter#2	Filter#3		
Parameter: <input type="checkbox"/> User <input type="checkbox"/> Static <input type="checkbox"/> Dynamic		Parameter: <input type="checkbox"/> User <input type="checkbox"/> Static <input type="checkbox"/> Dynamic		
How Report Data is to be Stored or Grouped (please put additional sort/groupings in the Notes for Developer):				
Primary Sort:		Secondary Sort:		Tertiary Sort:
<input type="checkbox"/> Group		<input type="checkbox"/> Group		<input type="checkbox"/> Group



Additional Details			
Notes For Developer:			
QA Instructions/Test Case Scenarios:			
Client Services Notes:			
Client Notes:			
Approvals			
Ready To Develop Checklist			
<input type="checkbox"/>	All static and data elements have been identified in the report specification		
<input type="checkbox"/>	All formatting requirements have been identified in the report specification		
<input type="checkbox"/>	Indicate in the report specification whether to list one address type, all address types, or prioritization of address types		
<input type="checkbox"/>	Indicate in the report specification whether to list one contact type, all contact types or prioritization of contact types		
<input type="checkbox"/>	Indicate in the report specification whether to list one phone number, all phone numbers or prioritization of phone numbers		
<input type="checkbox"/>	All custom fields have been created in the client database		
<input type="checkbox"/>	All custom fields have been configured on appropriate Additional Info dialogs		
<input type="checkbox"/>	All record types, classes, statuses, etc. necessary to the report have been configured		
<input type="checkbox"/>	All fees and fee templates necessary to the report have been configured		
<input type="checkbox"/>	All address types necessary to the report have been configured		
<input type="checkbox"/>	All contact types necessary to the report have been configured		
<input type="checkbox"/>	All objects, impact conditions, certifications, and other elements necessary to the report have been configured		
<input type="checkbox"/>	All workflow steps and actions necessary to the report have been configured		
<input type="checkbox"/>	All support data (Bonds, Hearings, Parcels, Tasks, Users, Zones, etc.) necessary to the report have been configured		
<input type="checkbox"/>	Client has approved custom report request specification		
<hr/>			
Specification Report Developer	Specification Date	Estimated Initial Dev/QA Hours	Estimated Initial Dev/QA Cost
Client Services Representative		Submitted Date	Billable Type: <input type="checkbox"/> Contracted <input type="checkbox"/> Purchase Order
Client Approval			
I agree that the above and associated documents accurately reflect the requirements for this Custom Report Request.			
_____	_____	_____	
Client Name	Client Signature	Date	



Understanding the EnerGov Custom Report Request Form

The following describes each item on the EnerGov Custom Report Form. Tyler will support customer in completing these forms.

General Information

- **Client Name** – Name of the project client.
- **Report Requestor/Point of Contact** – Name of original customer or Tyler source of report requirements.
- **Request Date** – The date the request form is filled out.
- **EnerGov Module** – Check the box for the module for which the report is being developed.
- **Requested Completion Date** – The date the report has been promised to the customer.
- **Priority** – The importance of the report to the client (high priorities will be completed first).
- **Report Name** – The name the report is to be called (will be used for the RPT and SQL file names).
- **Report Type** – Whether the report is a batch-style report or single case document.
- **Report Description/Business Need** - Describe the purpose or use of the report.
- **Request Type** – Whether request is based on, or modification to, an existing report or a new report.
- **Based On Or Similar To Existing Standard or Custom Report** – Identify an existing report that should be used as a starting point for further development.
- **Report Target** – Indicate if this report is for EnerGov use, internal Client use, or will be delivered to end Customers.

Format Design

- **Report Style** – Whether the report style is a listing format (table), Letter (to be mailed), Form (completed or to be filled out), Certificate (such as license or permit), Dashboard (summary analysis of data) or Exact (identical to the sample report).
- **Report Orientation** – Whether the report page orientation is Portrait or Landscape.
- **Report Output** – Whether report is intended to be read (Print/PDF) or exported (Excel/CSV).
- **Paper Type** – Select the type of paper the report will be printed on (letter, legal, ledger, pre-printed form, or other paper size). If selecting other, please identify in Additional Notes.
- **Include Print Date/Time** – Select whether to include the print date and/or time in the report header/footer and to justify it center, left or right.
- **Include Page Numbers** – Select whether to include Page Number and or Page Total in the report header/footer and to justify it center, left or right.
- **Date/Time Formats** – Select the default style of date and time to be used in the report.
- **Default Font Information** – If the default font size, style and color not specified: Times New Roman, 10pt, Black.

Technical Design

- **Identify Attached Specification/Sample Documents** - List the file names of additional requirements specifications or sample documents.
- **Primary SQL Stored Procedure** – The name of any existing stored procedure to be used for the report.

- **EnerGov Parameter** – Indicate if the key report parameter is a date range, an EnerGov Module ID or other field.
- **Record Selection Inclusion/Exclusion Filter Or Parameters** – List any filters to include or exclude records, in addition to any EnerGov Parameter, that should be applied to the data record selection or SQL Stored Procedure. If the filter is to be a user-prompted parameter, indicate whether the user will enter a value, select from a list of static values, or select from a dynamic list of values. If more than three, please list in *Notes For Developer*.
- **How The Report Is To Be Sorted or Grouped** – List any primary, secondary or tertiary sorting. Note if the report should be grouped by the sort value. If any group summary totals and/or if more than three sort/group levels are required, please list in *Notes For Developer*.

Additional Details

- **Notes for Developer** – Any additional information that will aid in the design and development of the report.
- **QA Instructions/Test Case Scenarios** – Special testing information to facilitate report testing and validation.
- **Client Services Notes** – Any additional comments about the report for the Implementation Team.
- **Client Notes** – Any additional comments about the report for the client.

Approval

- **Ready To Develop Checklist** – List of items for Implementation to make sure are complete before submitting the Report Request.
 - All static and data elements have been identified in the report specification
 - All formatting requirements have been identified in the report specification
 - Indicate in the report specification whether to list one address type, all address types, or prioritization of address types
 - Indicate in the report specification whether to list one contact type, all contact types or prioritization of contact types
 - Indicate in the report specification whether to list one phone number, all phone numbers or prioritization of phone numbers
 - All custom fields have been created in the client database
 - All custom fields have been configured on appropriate Additional Info dialogs
 - All record types, classes, statuses, etc. necessary to the report have been configured
 - All fees and fee templates necessary to the report have been configured
 - All address types necessary to the report have been configured
 - All contact types necessary to the report have been configured
 - All objects, impact conditions, certifications, and other elements necessary to the report have been configured
 - All workflow steps and actions necessary to the report have been configured
 - All support data (Bonds, Hearings, Parcels, Tasks, Users, Zones, etc.) necessary to the report have been configured
 - Client has approved custom report request specification
- **Specification Report Developer** – The name of the Report Developer assisting in the requirements gathering and report specification.

- **Specification Date** – The date the specification was completed.
- **Estimated Initial Development/QA Hours** – The number of hours expected for initial report development and QA. Revisions and subsequent changes to the specification may require additional hours.
- **Estimated Initial Development/QA Cost** – The expected billable cost for initial report development and QA. Revisions and subsequent changes to the specification may lead to additional billable costs.
- **Client Services Representative** – The name of the Client Services Representative working with the client.
- **Submitted Date** – The date the approved Custom Report Request is submitted to the Report Development Team.
- **Billable Type** – Whether this report is part of a contracted set of development hours, or will be billed against a client purchase order.
- **Client Approval** – Authorization by the client verifying that the report requirements are correct.

Attachment G. DB Data Model and Guide

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Data Conversion for EnerGov Enterprise Server Template DB Data Model and Guide

The tables in the EG_Template db are grouped together and named such that they correspond closely with the structure of the EnerGov core product, which is broken out into different units/modules. Below, each module will contain a listing of the tables, a brief description, and an ERD diagram. All of these ERD diagrams are present within the EG_Template db (under the Database Diagrams folder in SQL Server).

Contact Repository:

contact

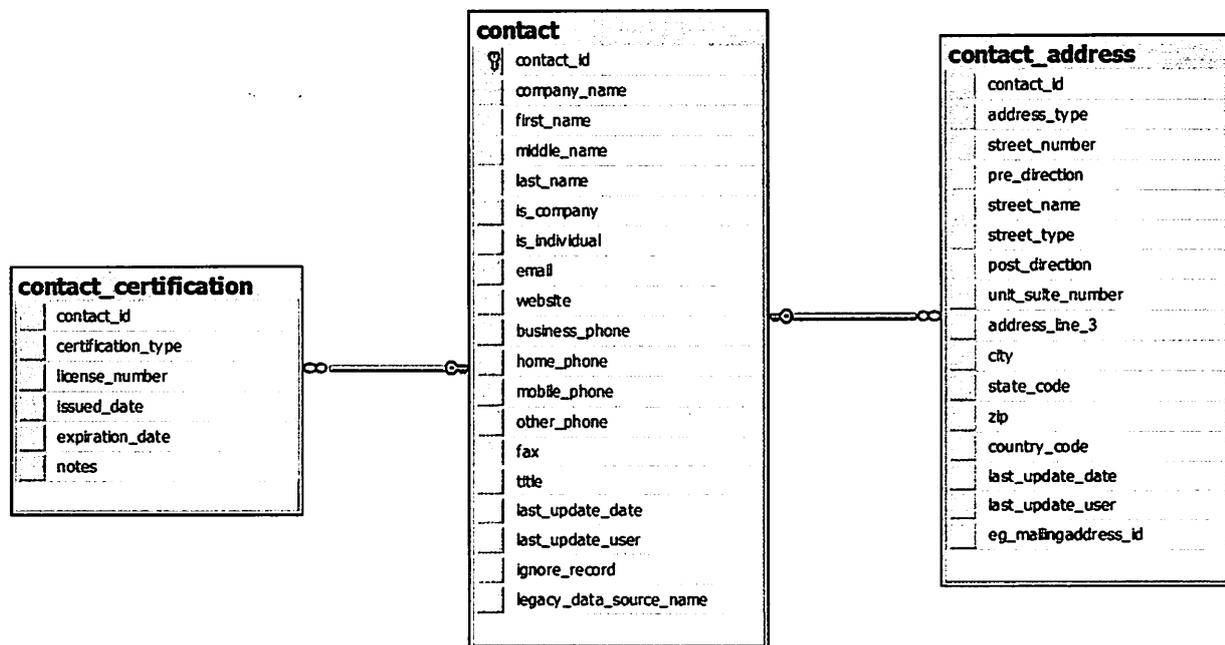
This contains the master list of contacts to convert. Duplicates should be kept to a minimum. The goal would be to have one contact record for each actual person or company. Every module within EnerGov will utilize this same contact master table for its case contacts.

contact_address

The various addresses associated to the contact. Address_type is available to distinguish different addresses (mailing, location, billing, etc.).

contact_certification

This is used to hold certifications or licenses that are desired for historical purposes, but are not being managed in EnerGov with Professional Licensing or Business Licensing.



Professional Licensing:

contact

See Contact Repository.

professional_license

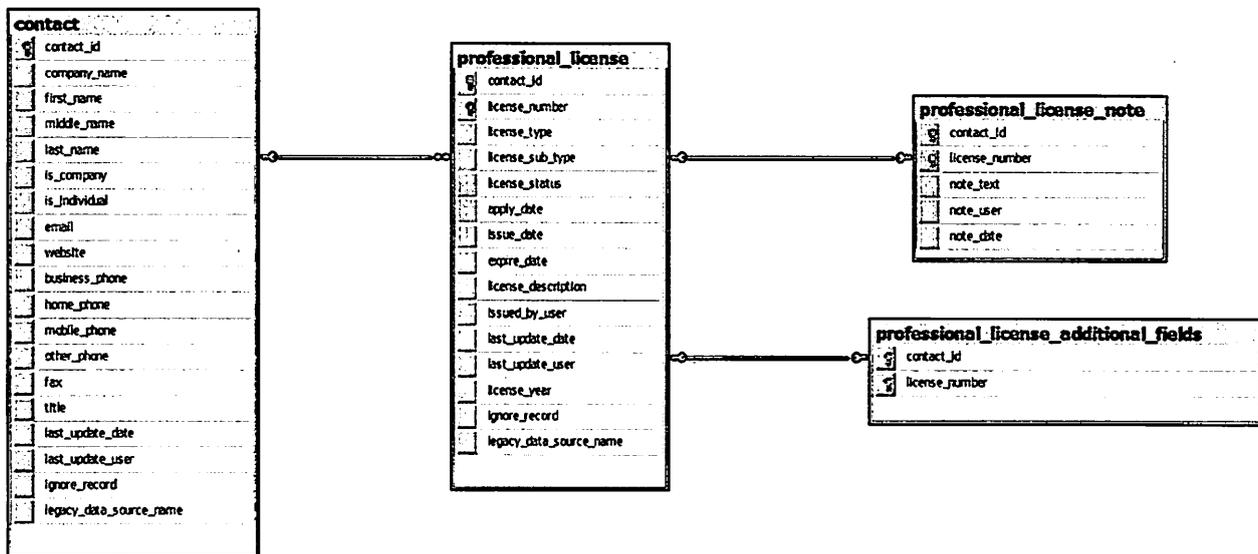
Usually a license related to an individual or contractor of some sort.

professional_license_note

Simply a place for logging memos on the license.

professional_license_additional_fields

Add any other fields which are not provided in the template model.



Business Licensing:

contact

See Contact Repository.

Business

The business table relates 1-to-1 with the contact table. This table simply holds extra attributes of the contact, and allows the contact to interact with the business license module of EnerGov as a business entity.

business_parcel

For integration with GIS, simply provide the parcel number (or PID) of the business location.

business_contact

For business contacts that link up to the master contact repository.

business_contact_no_key

For contacts that are not part of the master contact repository. These are usually stored as attributes of the business record in the legacy db (Applicant, Owner, Manager, President, etc.).

business_inspection

For routine inspections associated to business licenses.

business_license

Holds licenses related to a company.

business_license_note

Simply a place for logging memos on the license.

business_license_additional_fields

Add any other fields which are not provided in the template model (at the license level).

Code Enforcement:

code_case

Self-explanatory.

code_case_address

The various addresses associated to the case. Address_type is available to distinguish different addresses (location, owner, etc.). code_parcel - For integration with GIS, simply provide the parcel number (or PID) of the case location.

code_case_contact

For case contacts that link up to the master contact repository.

code_contact_no_key

For contacts that are not part of the master contact repository. These are usually stored as attributes of the case record in the legacy db (Complainant, Owner, Tenant, etc.).

code_inspection

For inspections associated to code cases.

code_case_history_log

If history of updates to the case are really needed, they can be logged here.

code_case_note

Simply a place for logging memos on the case.

code_case_additional_fields

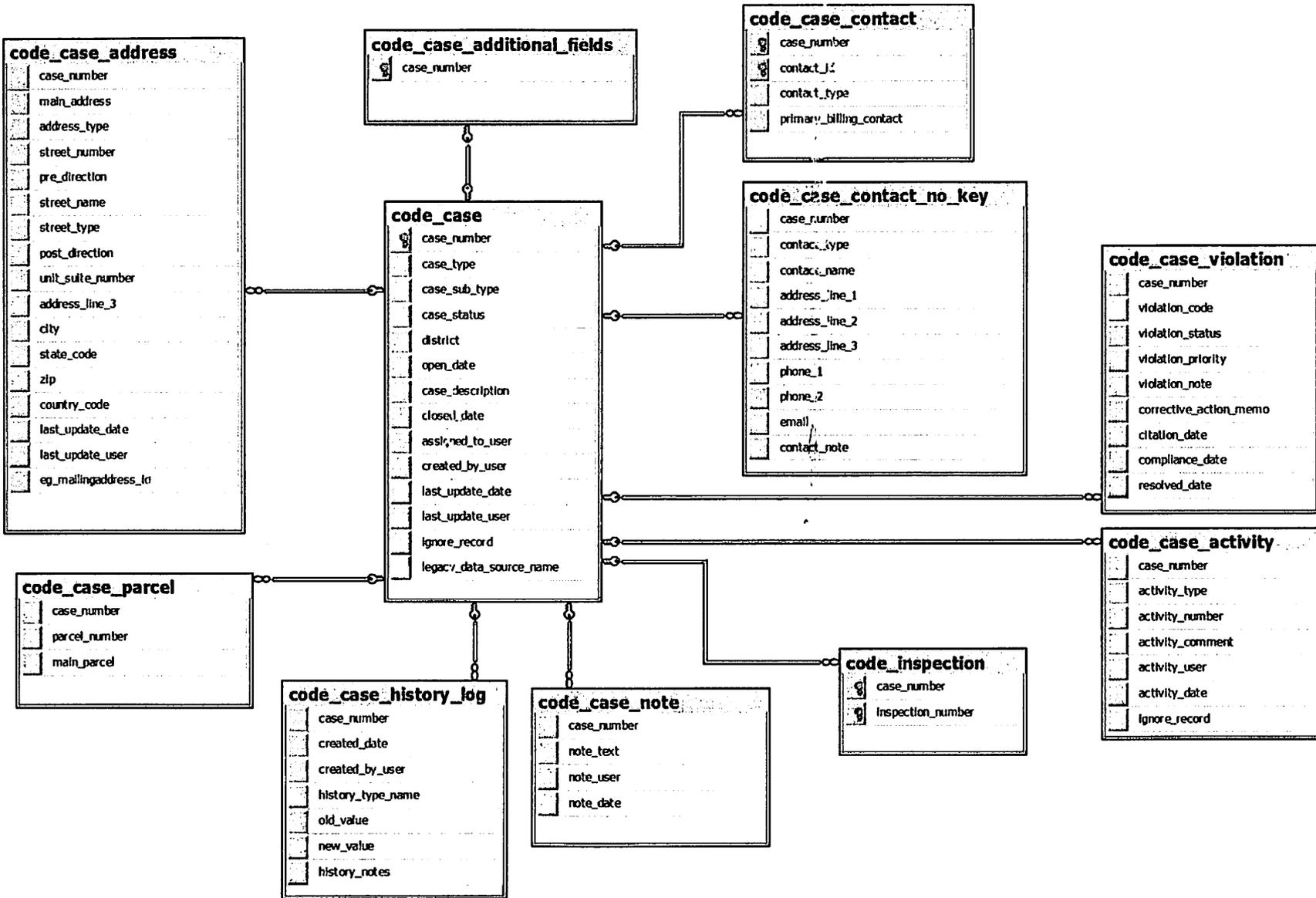
Add any other fields which are not provided in the template model (at the case level).

code_case_violation

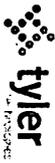
Violations associated to the case. These usually reference city/county code numbers.

code_case_activity

A place to log various events that have occurred against the case.



48



Permits:

Permit

Self-explanatory. There is a parent-child relationship available within this table (for sub-permits).

permit_address

The various addresses associated to the permit. Address_type is available to distinguish different addresses.

permit_parcel

For integration with GIS, simply provide the parcel number (or PID) of the permit location.

permit_contact

For case contacts that link up to the master contact repository.

permit_contact_no_key

For contacts that are not part of the master contact repository. These are usually stored as attributes of the permit record in the legacy db (Applicant, Owner, Contractor, etc.).

permit_inspection

For inspections associated to permits.

permit_history_log

If history of updates to the permit are really needed, they can be logged here.

permit_note

Simply a place for logging memos on the permit.

permit_additional_fields

Add any other fields which are not provided in the template model (at the permit level).

permit_activity

A place to log various events that have occurred against the permit.

permit_hold

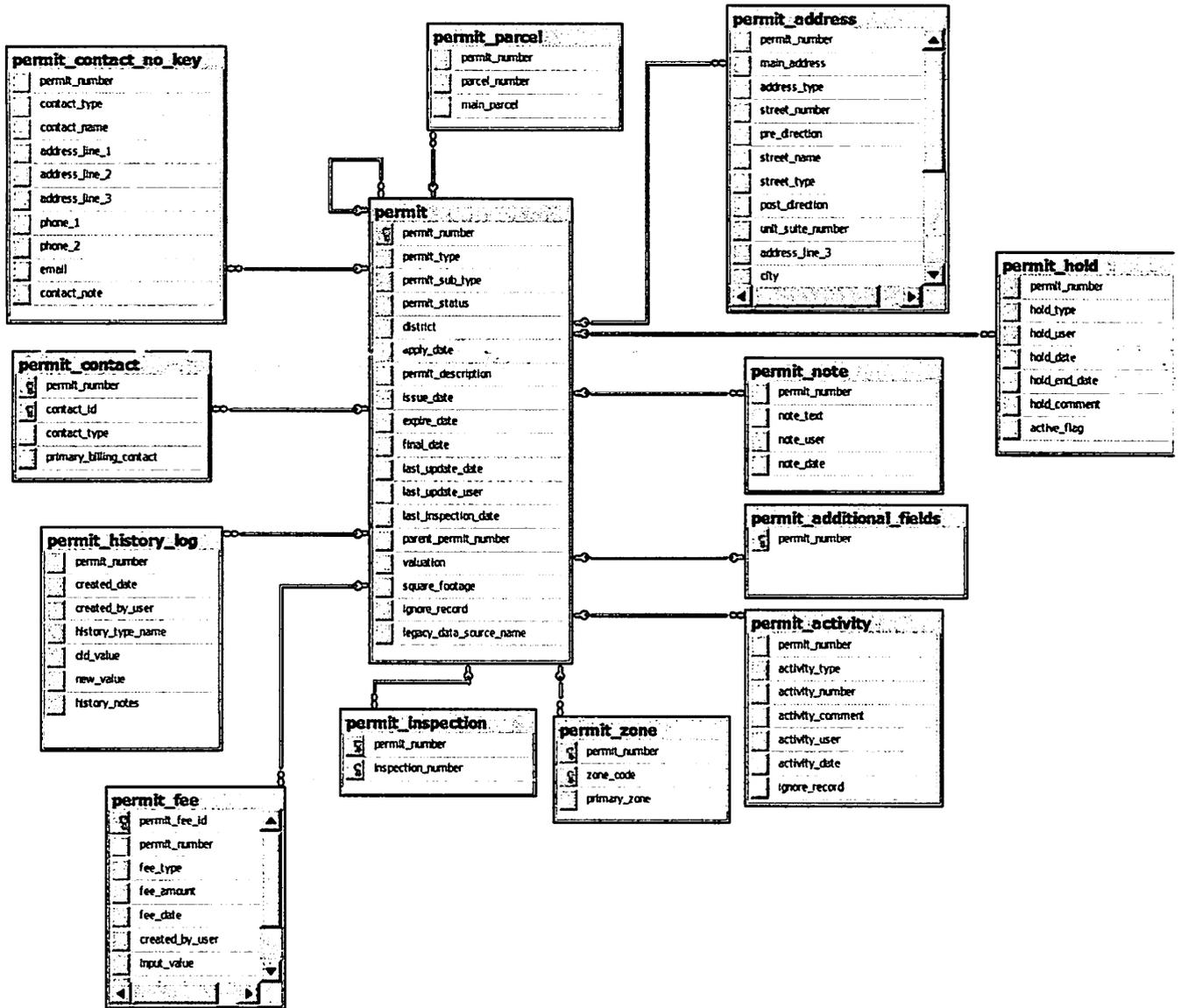
For instances where a stop work, or a hold was/is issued against a permit.

permit_zone

Simply provides a place to link zones to a permit. This is available, but is usually not used (custom fields are usually setup in EnerGov to hold zone codes of various types).

permit_fee

Simply shown for reference here. Also see the Financial Tables section.



Plans:

plan_case

Self-explanatory.

plan_address

The various addresses associated to the case. Address_type is available to distinguish different addresses.

plan_parcel

For integration with GIS, simply provide the parcel number (or PID) of the plan location. Where multiple parcels are on a case, one should be designated as the main parcel.

plan_contact

For case contacts that link up to the master contact repository.

plan_contact_no_key

For contacts that are not part of the master contact repository. These are usually stored as attributes of the case record in the legacy db (Applicant, Owner, Contractor, etc.).

plan_inspection

For inspections associated to cases.

plan_history_log

If history of updates to the case are really needed, they can be logged here.

plan_note

Simply a place for logging memos on the case.

plan_additional_fields

Add any other fields which are not provided in the template model (at the case level).

plan_activity

A place to log various events that have occurred against the case. For conversions, reviews would likely go here.

plan_hold

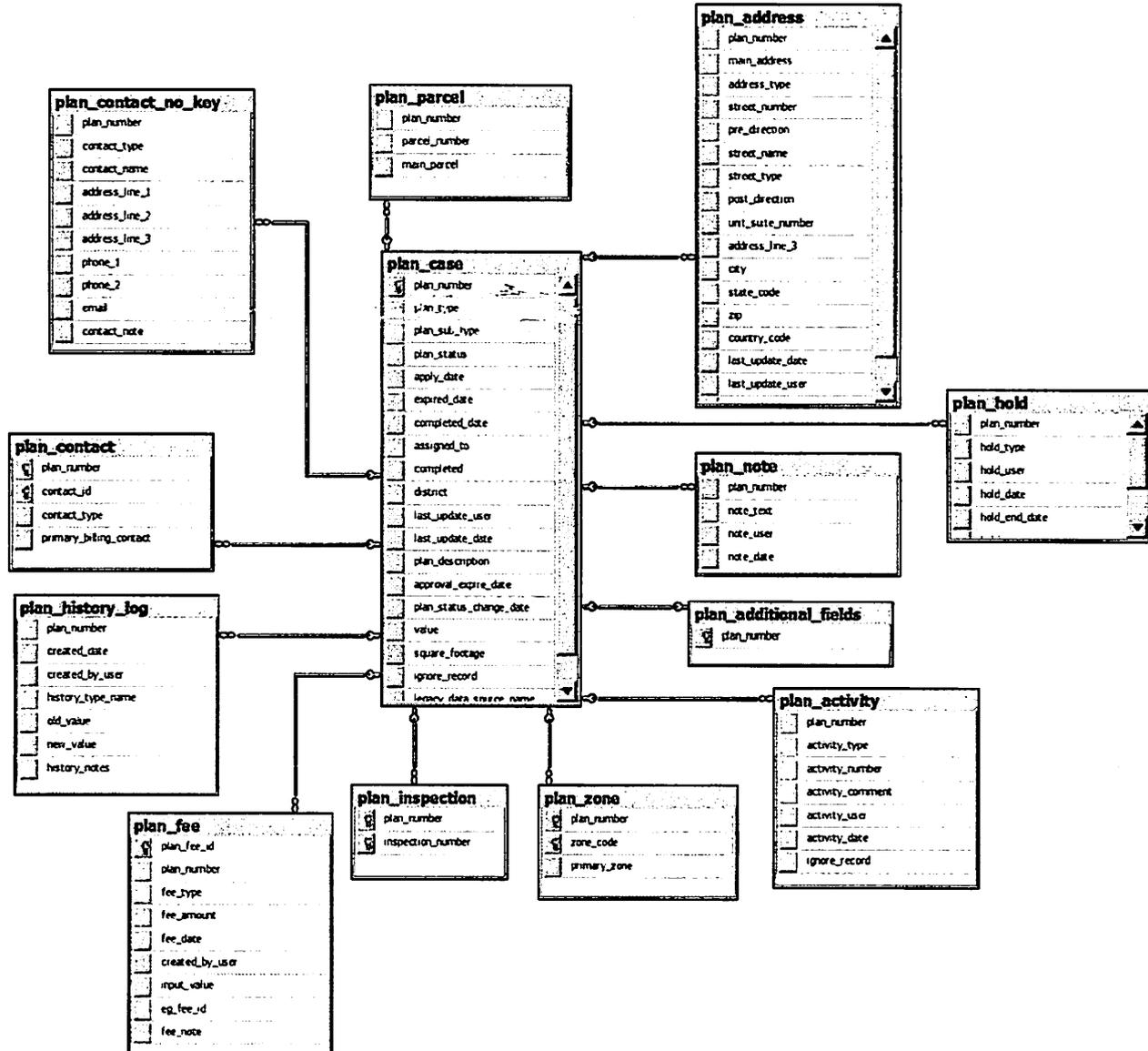
For instances where a stop work, or a hold was/is issued against a case.

plan_zone

Simply provides a place to link zones to a case. This is available, but is usually not used (custom fields are usually setup in EnerGov to hold zone codes of various types).

plan_fee

Simply shown for reference here. Also see the Financial Tables section.



Inspections:

Inspection

This holds the details of each inspection occurrence. Each inspection should be linked to the case that it relates to by using the cross reference tables below.

plan_inspection

For inspections associated to plan cases.

permit_inspection

For inspections associated to permits.

code_inspection

For inspections associated to code cases.

business_inspection

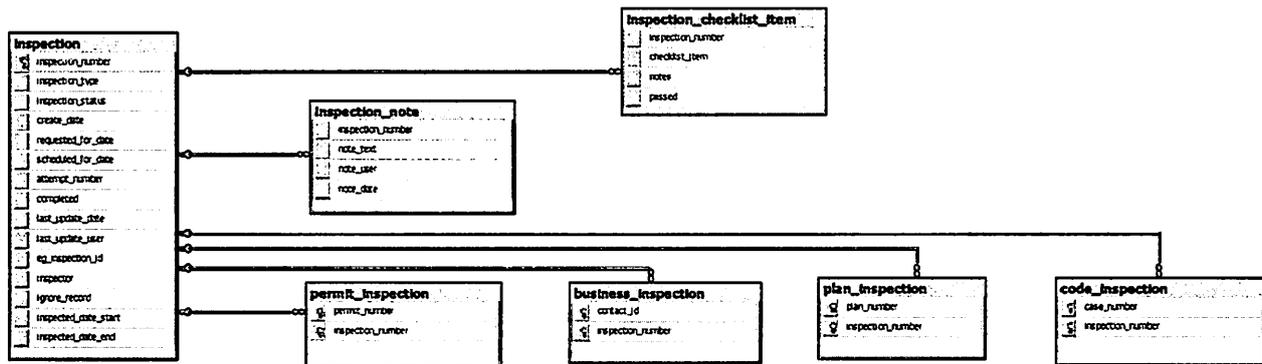
For inspections associated to businesses.

inspection_note

Simply a place for logging memos on the inspection.

inspection_checklist_item

These can be used for categorized checklist info, violations, etc.



Financial Tables:

permit fee

Holds the details for fees associated to permits.

plan fee

Holds the details for fees associated to plans.

payment

Records representing funds received.

payment_reversal

Records representing funds going back to a customer (or voided). The types of transactions here would likely be voids, NSF's, and refunds. These should be linked back to the original payment record that they are reversing.

permit_payment_detail

records the amount applied to each individual fee (line item) within a payment.

plan_payment_detail

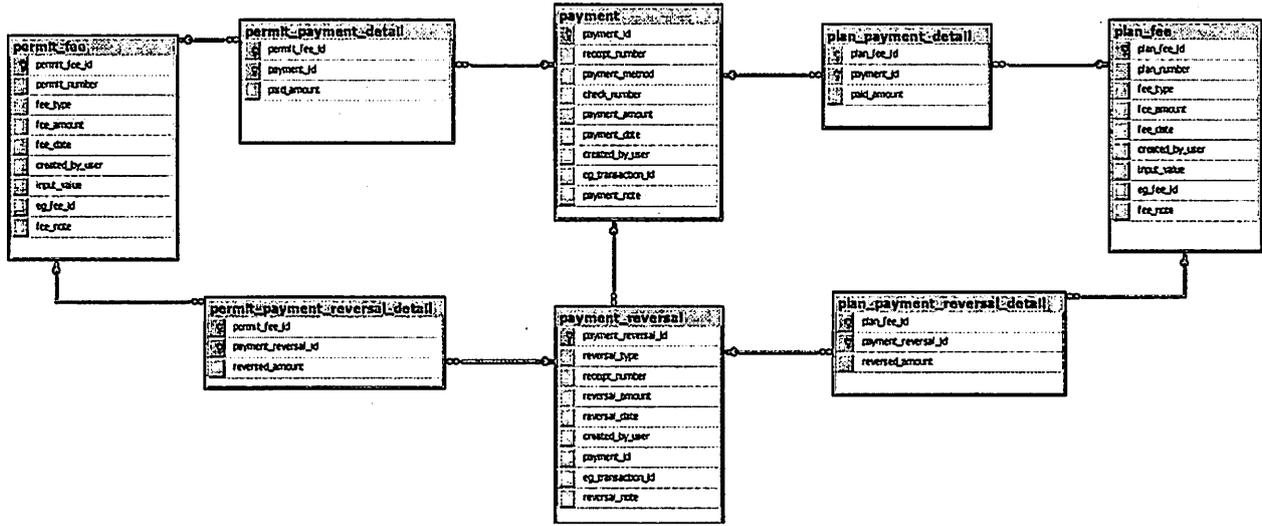
records the amount applied to each individual fee (line item) within a payment.

permit_payment_reversal_detail

records the amount applied to each individual fee (line item) within a reversal.

plan_payment_reversal_detail

records the amount applied to each individual fee (line item) within a reversal.



Attachment H. Data Conversion Process

City of Columbia

Statement of Work

Tuesday, May 31, 2016

Data Conversion Process for EnerGov Enterprise Server (Template DB Option)

Overview:

This document is an intro to the SQL Server EG_Template database and how to populate it.

Modularized Design:

As with the EnerGov software, the EG_Template db is sectioned off into modules. Each contains one master table at the top of the chain (ex. 'permit' for the Permit module). Within each module, there will be various child tables branching out below the master table for that module (ex. 'permit_address', 'permit_note', etc.).

There are tables that cross multiple modules. The most notable of these involve inspections and payment transactions.

Database diagrams have been included in the EG_Template database. These show the tables and their relationships for each module.

Required Fields:

There are certain fields in the EnerGov software which are required fields, and we cannot write records to the EnerGov db without populating these columns. Sometimes, these required fields will not be available in the legacy source data, so a simple default value can be written to the EG_Template db to fulfill any NOT NULL constraint.

Some of these fields are drop-down lists in EnerGov, which means that we will be restricted in the values that we can write to these required fields in the EnerGov db. For drop-down fields, there is no restriction on what can be written in the EG_Template db. So, exact spelling or careful matching to the EnerGov configured values is not an issue for fields that are destined for EnerGov drop-down fields. We will run these through a separate mapping table to translate the values to the appropriate EnerGov value during conversion. These mappings will be negotiated during the development phase of the conversion.

Custom Fields (any fields not available in the master table for the module in question):

Most legacy systems will have some attribute fields that are not specified in the corresponding master table within EG_Template. In EnerGov, we will refer to these as custom fields. Within each module, there will be a child table for such custom fields. Since these are specific to the legacy system(s), you may add columns to these tables in EG_Template to accommodate any needed custom fields in the migration. For example, 'permit_additional_fields' is the table for extra fields relating to the 'permit' records.

Gap Handling (where legacy data doesn't fit anywhere within EG_Template):

There are sometimes special features of a legacy system which EnerGov does not account for in the EG_Template db. We may have to work out a custom solution to handle these special cases.

Contacts:

This is always a big topic for data migrations. These generally fall into two categories:

3. Those contacts that were managed with each person/company having one contact record, which is kept up to date over time. As this person/company is associated with records over time (getting a business license, pulling permits, being associated to a code violation), that one contact record is attached to the permit, license, code case, etc. With this model, there is generally no duplication of contact records (except when created by mistake).
4. Contacts where the user keys the contact attribute info on each permit, case, license, etc. With this model, there is no single master record representing the contact itself. So, if a contact has been associated to 10 different permits over time, there would be 10 records with the contact attributes (each one will likely have slightly different values in the various fields like name, address, phone, etc.). With this model, there is considerable duplication of contacts.

In the EnerGov model, contacts are stored as in category 1 above. Those contacts put into EG_Template without a master 'contact' record link (category 2 above) will be migrated into custom field memo boxes to avoid duplication of contacts within the EnerGov contact repository.

For example, when populating the permit contacts, those contacts for category 1 should go into the 'permit_contact' table. Those contacts for category 2 should go into the 'permit_contact_no_key' table.

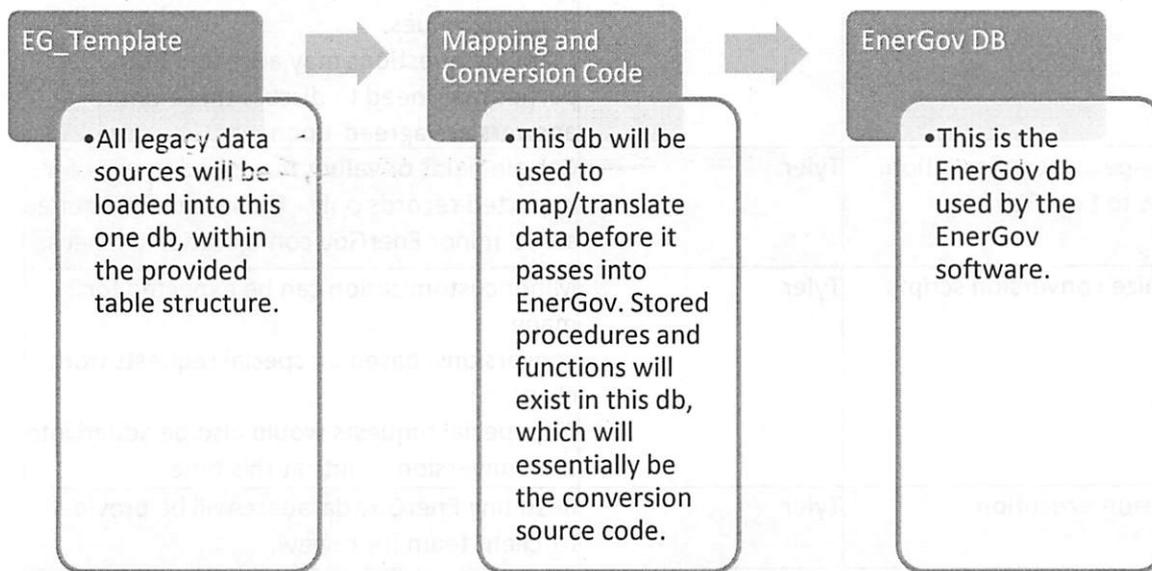
Multiple Legacy Data Sources:

There are usually multiple data sources to convert in a project. The plan is to have all data sources populated into the EG_Template db. At the main table level, there is an optional column where the legacy data source can be populated for reference. This is provided as a way to easily count up or research records originating from a particular legacy data source.

Overall Architecture of Conversion:

There are 3 SQL Server databases involved in the conversion process.

1. EG_Template (for legacy data)
2. EnerGov (the production EnerGov db)
3. A database containing all conversion processes and mapping tables. This is maintained by Tyler's data conversion team. This db takes the data from EG_Template, translates it, and populates it into the EnerGov db.



Progression of Conversion Development Process:

Step	Step Name	Responsible Party	Notes
1	Provide empty EG_Template database to client	Tyler	Database format will be SQL Server
2	Load legacy data into template database	Client	If there are multiple legacy data sources, all should be loaded into the one template SQL database.
3	Mapping process	Tyler /Client	Dependent on completed EnerGov configuration Spreadsheets will be used to communicate mapping values. Mapping questions may arise and both parties may need to discuss these until answers are agreed upon.
4	Import specific configuration changes to EnerGov	Tyler	Certain fields or values may need to exist for imported records only. These usually require some minor EnerGov configuration changes.
5	Customize conversion scripts	Tyler	Minor customization can be expected for many conversions, based on special requests from client. Any special requests would also be added into the conversion scripts at this time.
6	Conversion execution	Tyler	Resulting EnerGov database will be provided to client team for review.
7	Review and either sign-off or request changes	Client	Client team will review the data and the interaction with it in the EnerGov software. If it meets the client's needs, sign-off will occur. If not, certain steps above may need to be repeated until client signs off on the conversion.

Progression of Final Conversion Cutover Process (Go-Live):

Step	Step Name	Responsible Party	Notes
1	Load legacy data into template database	Client	This should just be an up-to-date extract of the legacy data into the template db.
2	Conversion execution	Tyler	Resulting EnerGov database will be provided to client team. This will be the production EnerGov db.
3	Go Live	Tyler /Client	Verification of EnerGov db and site functionality - Data Conversion sign-off Move to production phase



AMENDMENT #2

This Amendment #2 ("Amendment") is effective as of the date of signature of the last party to sign as indicated below ("Amendment Effective Date"), by and between Tyler Technologies, Inc. ("Tyler"), a Delaware corporation with offices at 5519 53rd Street, Lubbock, TX 79414, and the City of Columbia, South Carolina ("Client") with a mailing address at PO Box 147, Columbia, SC 29217-0147.

WHEREAS, Tyler and Client are parties to an agreement effective August 20, 2011, as previously amended, (the "Agreement"), under which Client acquired licenses to the software described therein ("Tyler Software") as well as related professional services and maintenance and support; and

WHEREAS, Client desires to amend the Agreement to adjust the licenses, services, and maintenance and support acquired according to the terms contained herein;

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants and promises set forth herein, Tyler and Client agree as follows:

1. The components of the Tyler Software, related professional services, related maintenance and support set forth in the attached Exhibit A ("Investment Summary") are hereby added to the Agreement.
2. Tyler will provide you the various implementation-related services itemized in the Investment Summary and described in the attached Exhibit B ("Statement of Work").
3. Payment Terms. Tyler shall invoice Client, and Client agrees to timely pay, the fees set forth in the attached Investment Summary, with payment due within forty-five (45) days of receipt of invoice, as follows:
 - a. Software License. Software license fees will be invoiced on the Amendment Effective Date.
 - b. Maintenance and Support. Maintenance and support fees will be invoiced on the Amendment Effective Date at the rates set forth in the Investment Summary for the period from the Amendment Effective Date through the end of Client's then-current maintenance term. Thereafter, maintenance and support will be invoiced annually in advance at Tyler's then-current rates.
 - c. Professional Services. Implementation and other professional services (including training) are billed and invoiced as delivered at the rates set forth in the Investment Summary.
 - d. Travel Expenses. Travel expenses are billed and invoiced as incurred.
4. All terms and conditions of the Agreement not herein amended remain in full force and effect.

[Signature Page to Follow]

IN WITNESS WHEREOF, persons having been duly authorized and empowered to enter into this amendment hereunto executed this Amendment as of the Amendment Effective Date.

Tyler Technologies, Inc.
Local Government Division

City of Columbia, South Carolina

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Budget & Program Management

FROM: *Missy Caughman,*

SUBJECT: Council is asked to approve the Banner CIS Annual Support Renewal, as requested by the Budget and Program Management Office. Award to Hansen Technologies in the amount of \$144,089.53. This vendor is located in Atlanta, Georgia with offices in Columbia, SC.

FINANCIAL IMPACT: Funding Source: 6218950-638200. The original budgeted amount is \$150,000.00.

ORIGINAL BUDGET: \$150,000

CLEAN WATER 2020?: No

STRATEGIC GOALS: Invest in Infrastructure

We are seeking City Council's approval for the City's annual maintenance and support agreement with Hansen Technologies for the Banner CIS utility billing software which is responsible for the billing and customer management for water and sewer, parking garages and solid waste. Funds for this agreement are included in the FY 16/17 annual budget.

ATTACHMENTS:

- FY 2016-2017 Banner Invoices (PDF)



Hansen Banner, LLC
 1180 West Peachtree Street
 Suite 2460
 Atlanta GA 30309
 Tel: 404-348-4440

TAX ID:	46-5651020	12.a
Invoice No.	B001650	
Date	6/30/2016	
Due Date	7/30/2016	

Bill To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Ship To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Attention	Customer Number	Purchase Order No.
	COL001	

Description	Quantity	Unit Price	Total Amount
BANNER CIS Annual Maintenance, July 1, 2016 - June 30, 2017 Total licenses- 150,000	1.00	98,523.45	98,523.45

Account Manager - Kristy Dickens

SUBTOTAL:	Z-US\$	98,523.45
SALES TAX:	Z-US\$	0.00
INVOICE TOTAL:	Z-US\$	98,523.45

Remit Checks to: Hansen Banner, LLC The Empire State Building 350 Fifth Avenue, Suite 6510 New York NY 10118 HansenNAAR@hsntech.com	Direct Payments to: Hansen Banner, LLC Routing: ACH 031202084 / Wire 026009593 Acct: 383013763174 / SWIFT # BOFAUS3N Bank of America, NA 350 5th Ave, New York, NY 10118
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Hansen Banner, LLC
 1180 West Peachtree Street
 Suite 2460
 Atlanta GA 30309
 Tel: 404-348-4440

TAX ID:	46-5651020	12.a
Invoice No.	B001649	
Date	6/30/2016	
Due Date	7/30/2016	

Bill To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Ship To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Attention	Customer Number	Purchase Order No.
	COL001	

Description	Quantity	Unit Price	Total Amount
MICROFOCUS Annual Maintenance Fee July 1, 2016 - June 30, 2017	1.00	15,131.08	15,131.08

Account Manager - Kristy Dickens

SUBTOTAL:	Z-US\$	15,131.08
SALES TAX:	Z-US\$	0.00
INVOICE TOTAL:	Z-US\$	15,131.08

<p>Remit Checks to: Hansen Banner, LLC The Empire State Building 350 Fifth Avenue, Suite 6510 New York NY 10118 HansenNAAR@hsntech.com</p>	<p>Direct Payments to: Hansen Banner, LLC Routing: ACH 031202084 / Wire 026009593 Acct: 383013763174 / SWIFT # BOFAUS3N Bank of America, NA 350 5th Ave, New York, NY 10118</p>
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Hansen Banner, LLC
 1180 West Peachtree Street
 Suite 2460
 Atlanta GA 30309
 Tel: 404-348-4440

TAX ID:	46-5651020	12.a
Invoice No.	B001702	
Date	9/7/2016	
Due Date	10/7/2016	

Bill To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Ship To:
 City of Columbia
 1401 Main St FL 10
 Columbia SC 29201

Attention	Customer Number	Purchase Order No.
	COL001	

Description	Quantity	Unit Price	Total Amount
LICENSE Additional MicroFocus Licenses Moving from Tier 5 to Tier 6 (100k+ customers)	1.00	30,435.00	30,435.00

Account Manager - Kristy Dickens

SUBTOTAL:	Z-US\$	30,435.00
SALES TAX:	Z-US\$	0.00
INVOICE TOTAL:	Z-US\$	30,435.00

Remit Checks to: Hansen Banner, LLC The Empire State Building 350 Fifth Avenue, Suite 6510 New York NY 10118 HansenNAAR@hsntech.com	Direct Payments to: Hansen Banner, LLC Routing: ACH 031202084 / Wire 026009593 Acct: 383013763174 / SWIFT # BOFAUS3N Bank of America, NA 350 5th Ave, New York, NY 10118
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We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Procurement and Contracts

FROM: *Sandra Wright, Purchasing Agent*

SUBJECT: Council is asked to approve Contract Amendment #2 for Project SS7300; Engineering Services Agreement for the Metro Gap Analysis Implementation for Fiscal Year 2016/2017, as requested by the Utilities & Engineering Department. Award to Atlantic South Consulting Services, LLC, a Minority Business Enterprise in the amount of \$267,000.00. This firm is located in Columbia, SC.

PRESENTER: Joseph D. Jaco, P.E., Director of Utilities & Engineering

FINANCIAL IMPACT: Funding Source: Metro Wastewater Treatment Plant Operations & Management Budget, 5516208-638305. This is a Clean Water 2020 Program Project and a Protégé Led Project. The original budgeted amount is \$500,000.00.

Sub consulting services will be \$120,150.000 (45.0%) of the contract value; awarded to EMA of St. Paul, MN to provide support to the project.

ORIGINAL BUDGET: \$500,000.00

BUSINESS PROGRAM: Protege Led Project

CLEAN WATER 2020?: Yes

STRATEGIC GOALS: Invest in Infrastructure

The above referenced Contract Amendment is to extend the term from November 30, 2016 to June 30, 2017. In addition to, enabling a continuation of Task 6 and adding to Task 7 of the initial Agreement dated November 18, 2014. Items identified in Task 6 are progress meetings, reporting and site visits. Task 7 identifies a transition from the Water Wastewater Treatment Plant needs to other divisions within the Utilities & Engineering Department such as,

Engineering, Real Estate, Construction Management and Administration. This is a Clean Water 2020 project and Services to be performed will impact all City Council Districts.

Staff has negotiated a fee totaling Two Hundred and Sixty Seven Thousand Dollars and No/100 (\$267,000.00) for the specified needs above with Atlantic South Consulting Services, LLC, a MBE firm headquartered in Charleston, SC with a local office in Columbia, SC.

Funding for this Amendment has been identified from the Metro Wastewater Treatment Plant Operations & Management Budget 5516208-SS7300-638305.

Original Contract Amount:	\$ 500,000.00
Contract Amendments #1 (add):	\$ 500,000.00
This Amendment (add):	\$ 267,000.00
New Agreement total:	\$ 1,267,000.00

The Legal Department has reviewed the Agreement.

ATTACHMENTS:

- Atlantic South Consulting Services 2016 SS7300 Metro Gap Analysis CA2. (PDF)
- Atlantic South Consulting Services Approved Protege Lead Imp. Plan. (PDF)
- MWWTP Map (PDF)

Agreement for Engineering Services for
Metro Gap Analysis Implementation FY 16/17
CIP SS7300

Atlantic South Consulting Services, LLC and the City of Columbia, SC

Contract Amendment 2

September 27, 2016

Description of Change: Request change in Agreement for Engineering Services between the City of Columbia (City) and Atlantic South Consulting Services, LLC, (Engineer) dated November 18, 2014 (Agreement); amended by Contract Amendment #1 dated September 1, 2015. This Amendment is to enable continuation of Task 6 and to add to Task 7 in addition to, extending the term from November 30, 2016 to June 30, 2017 more fully described in the attached Exhibit.

All other provisions of the Agreement, except as herein modified or changed, remain in full force and effect.

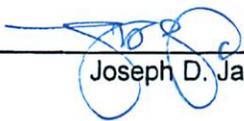
Proposed Change and Basis for Payment:

Original Contract Price:	\$ 500,000.00
Previous Change Order(s):	\$ 500,000.00
This Change (addition):	\$ 267,000.00
Revised Contract Price:	\$1,267,000.00

Additional funds are to be provided in the following manner: 5516208-SS7300-638305

This Change is Acceptable:

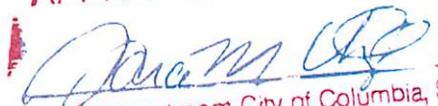
By:  Atlantic South Consulting Services, LLC
Title: PRESIDENT

Recommended for Approval:  Director of Utilities and Engineering
Joseph D. Jaco, P.E.

Recommended for Approval: _____ Purchasing Agent
Sandra A. Wright

Recommended for Approval: _____ Assistant City Manager for Operations
Melissa Gentry, P.E.

Approval of Change: _____ City Manager
Teresa Wilson

APPROVED AS TO FORM

Legal Department City of Columbia, SC



Professional Civil Engineers,
Consultants, Planners, and
Surveyors offering design and
surveying for

Transportation



Water/Waste Water



Water Resources



Site Development &
Land Planning



Construction Inspection,
Management Services



Easement & R/W
Acquisition

COST CHANGE AMENDMENT

John Riggs
Assistant Wastewater Engineer
City of Columbia
Utilities and Engineering
1136 Washington Street
Columbia, South Carolina 29201

Subject: **PROJECT NAME: Metro Treatment Plant GAP Analysis Implementation**
CIP NUMBER: SS7300

Dear Mr. Riggs,

Under a previously executed City of Columbia contract for SS7300, Atlantic South Consulting Services provided services related to the implementation of the GAP analysis for the Metro Treatment Plant. As provisioned in the contract, the term could be extended for up to four one-year terms. The first extension of the contract occurred with Amendment 1, defining the term through the 2015-2016 fiscal year. This Amendment 2 is the second of the four possible extensions and extends the term through June 30, 2017.

Noted on the attached amendment detail pages are the Scope Addition/Deletion, Compensation, and Schedule associated with this change. The purpose of this amendment is to enable continuation of Task 6 and to add Task 7 in order to achieve efficiency within the Utilities and Engineering Department. Task 7 Involves the following activities:

1. Understand and articulate the existing functions of the utility.
2. Understand how these functions are carried out.
3. Compare function achievement to best utility practices.
4. Develop plan with recommendations on any organizational or process improvements.

Atlantic South Consulting Services appreciates the opportunity to provide this highly technical modification to the City of Columbia for the Metro Treatment Plant GAP Analysis project. If you should have any questions please feel free to contact me.

Sincerely,

A handwritten signature in cursive script that reads 'Adison R. Williams'.

cc: Fred Yandle



Professional Civil Engineers,
Consultants, Planners, and
Surveyors offering design and
surveying for

Transportation



Water/Waste Water



Water Resources



Site Development &
Land Planning



Construction Inspection,
Management Services



Easement & R/W
Acquisition

COST CHANGE AMENDMENT DETAILS

Contract Amendment #2

PROJECT NAME: Metro Treatment Plant GAP Analysis Implementation

CIP NUMBER: SS7300

I. SCOPE ADDITION/DELETION

In order to achieve efficiency within the Utilities and Engineering Department, the following task is added to the scope of this contract.

Task 7 - EMA U & E GAP REPORT

We intend to perform this in a collaborative method and involve staff in each activity.

The City shall provide through its representatives or its Program Manager all documentation and reports as needed to execute the work.

It is recognized the City and its consultant teams have made significant progress in developing document formats, content, and programs for use by plant and system personnel. These documents will be incorporated into the applicable plan.

Phase 1: Understand and articulate the existing functions of the utility

We intend to interview managers throughout the EU department and document the functions that are within their responsibilities. We also will gather an understanding from them about their successes and challenges in meeting those functions.

We will then conduct a workshop with the EU department managers to clearly identify each of the functions that are carried out. We will also gain an understanding of the criticality of each function (e.g., what is the consequence of not (or poorly) carrying out each function). In addition we will identify the interrelations of all department functions.

Phase 2: Understand how each functions are carried out

With the information from phase 1, we will gain a greater understanding of how each function is completed. We will do this by interviewing and/or shadowing personnel that carry out each function. While doing this we will use flowcharts and other tools to understand and document the processes to carry-out the functions. The flowcharts will show the relationships and the hand-offs between different groups to accomplish the functions. We will also identify any software systems used to achieve the functions.

Phase 3: Compare functions to best utility practices

Once the functions are documented we can compare them to best utility practices to determine gaps in providing the most efficient and effective service. EMA has developed a

set of best practices over the years based on observing several water/wastewater utility organizations as well as tracking other businesses. In addition, best practices references from utility research organizations such as the EUM (Effective Utility Management) will be used. We expect to perform these comparisons in workshop settings with EU managers. We will strive for consensus on where the gaps exist and build momentum for achieving change.

Phase 4: Develop plan with recommendations on any organizational or process improvements

With an understanding of the gaps of the present organization, a plan will be developed to address the issues. The plan will be developed in workshop settings with EU managers. Based on information gathered in phases 1-3, workshops will be held to develop agreements on the gaps between the present utility practices and organization, and the desired or vision practices and organization. This will lead to specific recommendations for changes. We expect 1 or 2 workshops within this phase, however, more may be needed based on the number of issuers identified. The plan will include potential organization, practice, and technology use changes. Organization changes may include new positions, elimination of vacant positions, changes in reporting structure. Practice changes might include different work flows, changes in the way work is accomplished or who is performing work.

The plan will be documented in a draft gap report and this report will be discussed in workshops and modified as needed. The draft gap report will document the information gathered and discussed in the preceding phases and the workshops within phase 4. This includes a summary of the existing functions the department currently executes and how they are performed; a comparison of the functions to best practices; identification of the gaps between the present management and best practices; and a set of agreed-upon changes as well as an implementation plan for the changes. After acceptance, an action plan will be developed to structure the implementation phase.

Assumptions

- **Monthly progress reports and other meetings, including site visits, will be as scheduled in accordance with the schedule with the Program Manager.**
- **Deliverable(s) Format - The deliverables will provided electronically in an agreed upon format. No hard copies will be provided.**
- **Documentation from Others - Information being developed by others will be needed under this contract. The level of effort is based on such documentation being provided in a timely manner with no unreasonable delays, if available. The format of such documents provided to ASCS is to be in a ready-to-use electronic format (MS Office, 2010) suitable for inserting in the documents under development and formatted in accordance with the City's standards for project documentation.**

II. COMPENSATION

The following changes to the hourly rates in the initial SS7300 contract are proposed.

- o Project Principal - \$185
- o Project Manager (ASCS) - \$155
- o Project Support (ASCS) - \$70

The unchanged rates are as follows:

- o Administrative (ASCS) - \$45
- o Principal Consultant (EMA) - \$225
- o Consultant (EMA) - \$150
- o Project Support (EMA) - \$101

1. The above rates include salary rates, fringe benefits, all expenses, overhead and profit.
2. Hourly rates shall be reviewed in June of each year by PM, and adjusted, subject to City's approval, to reflect the appropriate rates and charges for the next fiscal year beginning in July

The new contract values based on the above recommended changes are presented below (Not-to-Exceed):

Task Number	Task Title	Original Contract	Previous Amendments	Current Amendment	Previously Invoiced	New Contract Value (Not-to-Exceed)
Task 1	Maintenance Plan	\$50,346	\$0	\$0	\$49,032	\$50,346
Task 2	Operations Plan	\$113,861	\$66,915	\$0	\$137,733	\$180,776
Task 3	Process Control Plan	\$103,979	\$67,245	\$0	\$51,054	\$171,224
Task 4	Compliance Monitoring Plan	\$113,583	\$66,915	\$0	\$43,494	\$180,498
Task 5	Training Plan	\$54,109	\$168,585	\$0	\$132,003	\$222,694
Task 6	EMA GAP Report Work Plan	\$64,122	\$130,340	\$173,550	\$113,708	\$368,012
Task 7	EMA U&E GAP Report	\$0	\$0	\$93,450	\$0	\$93,450
Total Fee		\$500,000	\$500,000	\$267,000	\$527,024	\$1,267,000

III. SCHEDULE

Year 3 Services are intended to fund efforts from July 1, 2016 to June 30, 2017.

Tasks 1-5 are essentially complete at this time. There may be remaining work to assure that requirements identified in each of the plans developed in these tasks are carried out.

Task 6 and 7 will begin concurrently. Task 6 is expected to run through the entire contract period as there are several GAP recommendations that are yet to be fully implemented. Task 7 is expected to be between 3 to 5 months.

The schedule will be further developed upon contract execution. The intent is to meet all deadlines as defined in the current and/or future schedules as they are updated.

IV. SUBCONSULTANT FIRM INFORMATION

The original contract included Atlantic South Consulting Services as a Protégé Firm, EMA as a sub-consultant Firm, for a Protégé percentage of 70% and total combined Protégé/Sub-consultant fee of \$500,000.00. The updated Protégé and sub-consultant percentages and amounts are listed in the table below for the original contract and each contract amendment, as well as the updated total. This amendment will decrease the 68% Protégé participation from the original contract to 60%.

	Total Contract Amount	Protégé		Sub-consultant		Sub-consultant	
		ASCS Amount	ASCS %	EMA Amount	EMA %	CEPS Amount	CEPS %
Original Contract	\$500,000	\$341,326	68%	\$152,174	30%	\$6,500	1%
CA#1	\$500,00	\$275,000	55%	\$225,000	45%	\$0	0%
CA#2	\$267,000	\$146,850	55%	\$120,150	45%	\$0	0%
New Total Contract Amount	\$1,267,000	\$763,176	60.2%	\$497,324	39.3%	\$6,500	0.5%

SUBCONSULTANT FIRM INFORMATION RECORDS – Exhibit A

City of Columbia

CIP # SS7300 Metro Gap Analysis Implementation

The Engineer shall list all firms, including minority and female owned firms, providing sub consulting services under this Agreement. The list shall be submitted in the format provided below. Any proposed changes must be submitted in writing to the City, including the reason(s) for the proposed changes, prior to initiation of any action by the Engineer. Any invoices submitted for payment under this Agreement must include the dollar amount to be paid to each firm listed below for the invoice period.

Firm Name and Address	Contact Name and Telephone Number	Group (MBE, FBE, Non- MBE/WBE/SBE)	Services to be Provided	Dollar Value of Services*
EMA 2355 Highway 36 West Suite 200 Saint Paul, MN 55113-3819	Jack Geisenhoff (651) 639-5600	NON- MBE/WBE/SBE	EMA will support ASCS in the delivery of project deliverables.	\$120,150

* Estimated fee; fee may vary based on actual services provided.



CITY OF COLUMBIA

Department of Utilities and Engineering
Compliance Division
P.O. Box 147 | Columbia, South Carolina 29217
Phone: 803-545-3049 Fax: 803-545-4130

MENTOR PROTÉGÉ PROGRAM Implementation Plan- Protégé Project

Project Type: Protégé Only or Protégé Lead (Circle One)

Date: July 6, 2016

Protégé: Atlantic South Consulting Services

Mentor: CDM Smith

Project Contract Amount: \$1,500,000

Project Number: SS7300

Project Name: Metro Gap Analysis Implementation

Duration of the Project: 3 Years

Protégé Amount: \$763,176

*If Protégé Lead project, a minimum 51% of contract to Protégé.

Statement of Commitment: The Protégé is committed to providing an adequate amount of resources and effort to execute the plan below.

1. What skills has the Protégé learned from their Mentor that will be utilized on this project?

Comprehensive communication and documentation methodology for successful project management.

2. What specific goals and milestones do you have for this project?

Our goal is to successfully complete this project for the City. Our desire is to complete this project satisfactorily and in a timely manner to assist the City in complying with their EPA consent decree and by doing so, strengthen our credentials and position ourselves to assist the City with similar projects in the future.

3. List proposed manpower and resources required for the project. List primary point of contact.

Atlantic South Consulting Services
Primary Contact/Project Manager: Adrian Williams, P.E.

4. What is the anticipated duration (in months) of each major phase of the project?

Deliverable 1 – 9 Months
Deliverable 2 – 6 Months

5. List the Subcontractors that will be used on this project, as well as the information requested below: (The Subcontractor(s) listed below will NOT consist of your Protégé.)

Subcontractor's Name	Telephone	Address	Who will they report to?	Contract Amount	MPP MBE, WBE, SBE	Percentage of Contact
EMA	(651) 639-5600	2355 Highway 36 West Suite 200 Saint Paul, MN 55113-3819	Adrian Williams, P.E. Atlantic South Consulting Services	\$120,150	N/A	45%



CITY OF COLUMBIA

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6. What capacity will the Mentor be used on this project?

N/A

7. List bonding capacity and insurance coverage, etc. (if applicable)

Bonding: N/A
Insurance: \$1M

8. Do you currently have your WL or WP License (if applicable)?

N/A

9. Other Comments.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their proper officials thereunto duly authorized as of the dates below indicated:

EXECUTED by Atlantic South Consulting Services (Protégé Firm) this 18th day of August 2015.
Corporate SEAL

By: Adrian Williams, P.E. *Adrian Williams*
Title: President



CITY OF COLUMBIA

Department of Utilities and Engineering
Compliance Division
P.O. Box 147 | Columbia, South Carolina 29217
Phone: 803-545-3049 Fax: 803-545-4130

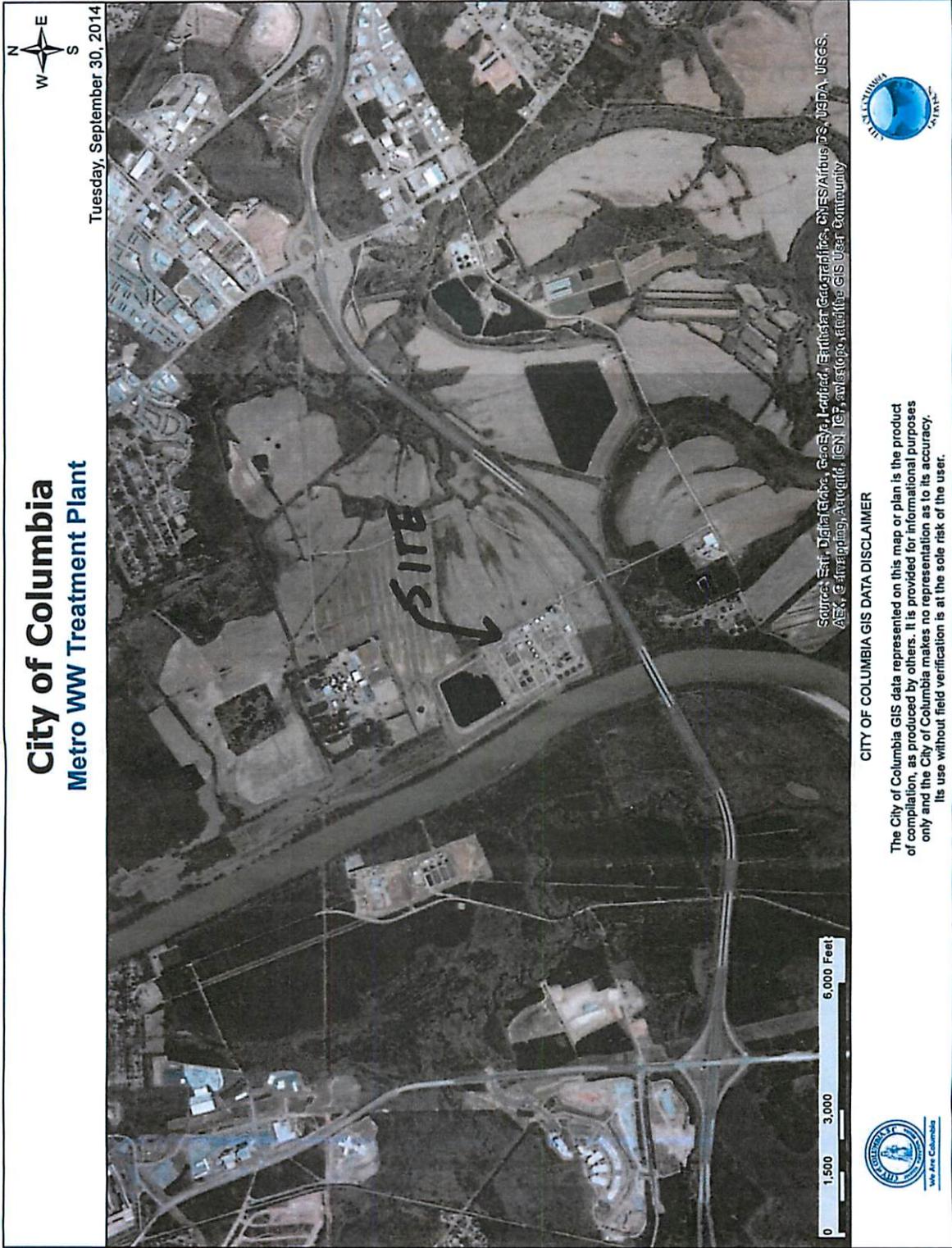
ATTEST:

By: Bryan L. Cully, P.E.
Title: Program Director

RECOMMENDED FOR APPROVAL:

EXECUTED by the Department of Utilities & Engineering, Compliance Division on this
4th day of October, 2016.

By: Ayesha Driggers
Title: Compliance Administrator





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Procurement and Contracts

FROM: *Sandra Wright, Purchasing Agent*

SUBJECT: Council is asked to approve an Engineering Services Agreement for Force Main Condition Assessment and SCADA Improvements, as requested by the Utilities and Engineering Department. Award to Brown & Caldwell in an amount not to exceed \$1,632,000.00. This firm is located in Columbia, SC.

PRESENTER: Joseph D. Jaco, P.E.

FINANCIAL IMPACT: Funding Source: 29999-SS733301-658650. This is a Clean Water 2020 Program Project. The original budgeted amount is \$1,800,000.00.

The following subcontractors will provide additional services at \$843,750.00 (51.7%) of the contract value.

\$210,750.00 (12.9%) - M.B. Kahn Construction Company, Inc., of Columbia, SC, will provide civil contractor support services.

\$633,000.00 (38.8%) - Pure Technologies of Atlanta, GA, will provide Broad River Force Main Assessment and Saluda River Force Main Assessment services.

ORIGINAL BUDGET: \$1,800,000.00

CLEAN WATER 2020?: Yes

STRATEGIC GOALS: Invest in Infrastructure

The above referenced Agreement is to compensate Brown and Caldwell for providing the implementation of a force main condition assessment identified in the Force Main Condition

Assessment Plan (August 2015) and SCADA improvements identified in the Transmission System Operation and Maintenance Program (TSOMP).

This is a Clean Water 2020 project and directly related to the EPA Consent Decree deliverable. Services to be performed will impact all City Council Districts.

The Legal Department has reviewed the Agreement. The Procurement & Contracts Director, Utilities and Engineering Director, and ACM for Operations recommend its approval.

ATTACHMENTS:

- Brown& Caldwell.2016.ForceMainConditionAssessmentandScadaImprovements.SS728801.SS733301.nj.doc (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.ExhibitA (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.ExhibitB (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.ExhibitC (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.ExhibitD (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixA (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixB (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixC (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixE (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixF (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixH (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.AppendixI (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.CivilActionNo313-2429-TLW (PDF)
- Brown&Caldwell.2016.SS7333.ForceMainConditionAssessment.Acknowledgement (PDF)

AGREEMENT FOR ENGINEERING SERVICES

THIS AGREEMENT is made this ____ day of _____, 20__, by and between the City of Columbia, South Carolina (hereinafter referred to as the "City") and Brown and Caldwell, (hereinafter referred to as the "Engineer"), for Engineer to render services for the implementation of force main condition assessments identified in the Force Main Condition Assessment Plan and SCADA improvements identified in the Transmission System Operation and Maintenance Program (TSOMP). Funding for this project has been identified as 5529999-SS728801-658650 and 5529999-SS733301-658650.

For and in consideration of the mutual covenants and promises contained herein, the parties agree as follows:

I. Scope of Services

Upon written notification by the City to proceed, the Engineer shall complete the scope of services more fully described in Exhibit A, attached hereto. The Engineer shall perform any and all incidental services not specifically set forth in Exhibit A, which are necessary to fully complete the scope of services described in Exhibit A.

II. Supplemental or Additional Services

Supplemental or Additional Services may be required of the Engineer by the City or recommended by the Engineer and approved by the City in writing.

The Engineer must obtain written approval from the City for any Supplemental or Additional Services prior to the work being performed. If the Engineer fails to obtain prior written approval to perform the work, the City is under no obligation to compensate the Engineer for services performed.

III. Term of Agreement

This Agreement shall expire, unless terminated earlier as provided for herein, on June 30, 2018, or at such time the total compensation provided for herein is reached, whichever is earlier.

The City, at its option may renew the contract for two (2) additional one year term(s).

IV. Schedule for Completion of Services

Time is of the essence. The Engineer shall complete any and all services performed under this Agreement within the timeframes as outlined in Exhibit C, attached hereto.

V. Compensation

A. The compensation to be paid by the City to the Engineer under this Agreement shown on Exhibit B attached hereto, and identify the subcontractor(s) shall not exceed fee of One Million, Six Hundred and Thirty-Two Thousand Dollars and No/100 (\$1,632,000.00). Use of contingency funds for additional services is dependent upon written authorization of the City.

B. The Engineer shall submit invoices no more frequently than monthly for services rendered during each phase of the Project. Each invoice submitted must describe the services for which payment is requested, show payment calculations and specify the person(s) rendering such service(s). **Each invoice must also clearly identify any portion of the fee invoiced for subcontracted services, including any such services that are specified in the Summary of Proposed Sub-consultants shown on Exhibit D hereto, and identify if the subcontractor is a Minority or Female Business Enterprise.** Each invoice shall bear the signature of the Engineer, which signature shall certify that the information contained in the invoice is true and accurate and that the invoice amount is currently due and owing. The City will not pay interest or penalty on any past due amount.

VI. Indemnification, Hold Harmless And Insurance

A. The Engineer shall provide to the City evidence of Professional Liability Insurance in an amount not less than One Million and no/100 (\$1,000,000.00) Dollars per occurrence and Two Million and no/100 (\$2,000,000.00) Dollars Aggregate and General Liability Insurance in accordance with the current Columbia Code of Ordinances, which can be located at www.columbiasc.net.

B. The Engineer shall furnish the City with a certificate showing satisfactory proof of carriage of the insurance required hereunder and such insurance shall be approved by the City prior to the Engineer and any subcontractor of the Engineer commencing any services under this Agreement. The City of Columbia shall be the Certificate Holder and shall be named as an Additional Insured.

C. The Engineer shall hold harmless, defend and indemnify the City from any and all claims, actions, suits, charges and judgments whatsoever that arise out of the Engineer's performance or nonperformance of the services or subject matter called for in this Agreement.

VII. Subcontracting Outreach Program (<http://www.columbiasc.net/business-outreach/>)

The attention of the Engineer is directed to the Subcontracting Outreach Program. The Engineer is required to comply with the terms and conditions of this policy which can be located at www.columbiasc.net/business-outreach/. The Engineer shall, in performance of the Agreement, only use those subcontractors and/or vendors upon which the Engineer's scope of services was based. Subcontractor and/or vendor substitutions shall only be made upon the Owner's approval. The Engineer shall enter into contracts with those subcontractors and/or vendors, in the same dollar amount upon which the Engineers scope of services was based, prior to award of the Agreement. Such Agreements shall be contingent upon award of the Agreement by the Owner and the Owner's Notice to Proceed to the Engineer. Each invoice shall identify the dollar amount that will be paid to each subcontractor and/or

vendor for services performed and/or materials/products furnished under the Agreement. The Engineer shall provide the name of each subcontractor and/or vendor and a description of the services performed and materials/products furnished by each subcontractor and/or vendor and the dollar amount to be paid to each subcontractor and/or vendor.

VIII. Mentor-Protégé Program (<http://www.columbiasc.net/business-outreach/>)

The City of Columbia shall encourage, where economically feasible, establishment of mentor-protégé relationships to ensure contracting opportunities for all businesses, including minority / women / small business enterprises. The Mentor-Protégé Program (MPP) helps develop private sector business relationships and enhances the contracting capabilities of minority-owned business enterprises (MBE), women-owned business enterprises (WBE), and small business enterprises (SBE). In order to provide opportunities for growth and to encourage hands-on business relationships, certain capital improvement projects may be designated by the City of Columbia as Mentor-Protégé Program projects. The City of Columbia has determined that participation in the City's Mentor-Protégé Program is not required for this project. The Engineer must comply with Mentor-Protégé Program Guidelines. The Engineer agrees that the Mentor Protégé Program does not create any contractual rights and/or duties between the City and the Protégé and that the City is not a party to the Implementation Plan. The Engineer agrees that it has or will enter into a separate contractual Agreement with the Protégé to which the City is not a party.

IX. Permits and Licenses

A. The Engineer shall be responsible for obtaining any approvals, permits and/or licenses as may be required of the Engineer in performing the services required under this Agreement. The Engineer shall be responsible for any costs relating to same.

B. The Engineer shall be responsible for identifying and providing any applications and supporting documentation to the City for any approvals and/or permits required of the City in order for the Engineer to perform the services required under this Agreement. Such approvals and/or permits may include, but not necessarily be limited to, SCDHEC Construction Permits, SCDHEC Stormwater Management for Construction Sites Permits, SCDHEC Water Resources Permits, Corps of Engineers Permits, City/County/SCDOT Encroachment Permits, Encroachment Permits for other utility rights-of-way and Railroad Right-of-Way Encroachment Permits/Agreements. The City shall obtain the approvals and/or permits identified by the Engineer and pay any costs relating to same.

C. The Engineer shall answer questions and consult with the City and/or appropriate authorities as necessary to assist the City's efforts in obtaining required permits/approvals.

D. The Engineer shall procure a City of Columbia business license while performing services under this Agreement.

X. Duties Upon Termination

At termination of this Agreement, the Engineer shall immediately provide the City with all records

and data in any format the Engineer is capable of producing and at no cost to the City, which were generated, created or received by the Engineer in performance of the services required by this Agreement or as the City may deem necessary to perform the required services by the City or the Engineer's successor. All records shall be free from any proprietary claims or interest. The Engineer agrees to fully cooperate with the City and any successor to ensure an effective transition to continuously provide the required services.

XI. Termination of Agreement

The City may terminate this Agreement at any time upon any of the following grounds:

A. Failure by the City to appropriate funds for the performance of any of the services required in this Agreement in any annual budget;

B. The Engineer fails to perform any of the services required in this Agreement and does not correct such deficiency within fifteen (15) days having been notified by the City of such deficiency;

C. Force Majeure;

D. The City shall, at its sole option and discretion, have the right to terminate this contract for any reason whatsoever. A termination for default under this Agreement, if wrongfully made, shall be treated as a termination for convenience under this clause;

E. Upon expiration of the term of this Agreement; and

F. By mutual agreement.

Notice of termination shall be sent by registered mail, return receipt requested. In the event of termination, the Engineer shall only be entitled to the actual direct costs of all labor and material expended on the services required under this Agreement prior to the effective date of the termination or the Engineer shall be entitled to be paid a pro-rata percentage of the total Agreement price which is equal to its percent of completion, whichever of the two methods provides the lowest sum to be paid to the Engineer. In no event shall the Engineer be entitled to anticipatory profit or damages for any termination under this Agreement. In no event shall the Engineer be entitled to assert a claim in quantum meruit or any other measure of damages other than that stated herein.

XII. Ownership of Project Documents

All data, documents or other information of any description generated by or used by the Engineer or any subcontractor retained by the Engineer and related to the services required by this Agreement shall be the property of the City and shall not be used by the Engineer for any purpose whatsoever except to perform the services required by this Agreement.

XIII. Notice

A. Written notice to the City shall be made by placing such notice in the United States Mail, postage prepaid and addressed to: Director of Utilities and Engineering, City of Columbia, Post Office Box 147, Columbia, South Carolina 29217.

B. Written notice to the Engineer shall be made by placing such notice in the United States Mail, postage prepaid and addressed to: Brown and Caldwell, 250 Berryhill Road, Suite 104, Columbia, SC 29210.

XIV. Consent Decree

A. The services performed by the Engineer pursuant to this Agreement are required in whole or in part to satisfy the terms of the Consent Decree entered by the United States District Court for the District of South Carolina on May 21, 2014, in the case captioned *The United States of America and State of South Carolina by and through the Department of Health and Environmental Control v. City of Columbia*, Civil Action No. 3:13-2429-TLW (the "Consent Decree"), a copy of which has been provided to the Engineer by the City and is incorporated by reference herein. The Engineer shall perform the services pursuant to this Agreement in conformity with the terms of the Consent Decree as required by Paragraph 5 therein.

B. In addition to the requirements above, the Engineer shall comply with the document retention requirements of Paragraph 68 of the Consent Decree which includes, but is not limited to, the obligation to preserve all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in the Engineer's possession or control that relate in any manner to the Engineer's performance under this Agreement ("Preserved Documents"). Upon the Engineer's performance of all services required under this Agreement, the Engineer shall provide the City with all Preserved Documents. In addition to the requirements above, the Engineer shall provide the City with all Preserved Documents upon termination of this Agreement.

C. Upon the occurrence of a force majeure event as defined in Paragraph 55 of the Consent Decree, the Engineer shall provide notice to the City's Director of Utilities and Engineering in person, by phone, or by electronic mail within twenty-four (24) hours of when the Engineer first knew or should have known that the event might cause a delay. Within three (3) days thereafter, the Engineer shall provide written notice in accordance with Section XIII above to include the following information: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken in an effort to prevent or minimize the delay; a schedule for implementation of any measures to be taken in an effort to prevent or mitigate the delay or the effect of the delay; and the Engineer's rationale for attributing such delay to a force majeure event. The Engineer shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure event.

D. The Engineer shall reimburse the City the amount of any stipulated penalties imposed on the City pursuant to Paragraph 47 of the Consent Decree if the Engineer neglects, fails, or refuses to meet the deadlines set forth in Exhibit C attached hereto. The Engineer agrees that any failure to meet such deadlines will result in the City's failure to meet the deadlines set forth in the Consent Decree except in the event of force majeure notice by the Engineer which results in the extension of said deadline by the U.S.

Environmental Protection Agency under the Consent Decree. The City reserves all other remedies available for the Engineer's failure to perform pursuant to the Agreement.

E. The Engineer shall perform the services pursuant to this Agreement using sound engineering practices as set forth in Paragraph 9 of the Consent Decree.

XV. Miscellaneous

A. Nothing in this Agreement shall be construed to give any rights or benefits to anyone other than the City and the Engineer.

B. The Engineer shall be responsible for performance of all services required by this Agreement. The Engineer does not act as the City's agent or employee.

C. The Engineer will not assign or sublet its obligations to perform the services required by this Agreement without the written consent of the City.

D. In the event there are any disagreements between the City and the Engineer with regard to any of the requirements, specifications or interpretation of this Agreement, the Engineer agrees to defer to the reasonable interpretations of the City as, from time to time may be made by the City. Ambiguities in the terms of this Agreement, if any, shall not be construed against the City.

E. This Agreement shall be construed in accordance with the laws of the State of South Carolina. The Engineer agrees to subject itself to the jurisdiction and venue of the Circuit Courts of Richland County, State of South Carolina as to all matters and disputes arising or to arise under this Agreement and the performance thereof. The City may seek attorney's fees and the Engineer agrees to pay such fees as awarded by the Court or other body. No attorney's fees may be sought by, nor will be paid to, the Engineer.

F. This Agreement represents the entire agreement between the City and the Engineer and supersedes all prior communications, negotiations, representations or agreements, either written or oral. Only written Change Order signed by both the City and the Engineer may amend this Agreement.

G. The failure of either the Engineer or the City to insist upon the strict performance of any provision of this Agreement shall not be deemed to be a waiver of the right to insist upon strict performance of such provision or of any other provision of this Agreement at any time. Partial payment by the City shall not be construed as a waiver. Waiver of any breach of this Agreement shall not constitute waiver of a subsequent breach.

H. In the event any provision of this Agreement is determined to be void or unenforceable, all other provisions shall remain in full force and effect.

I. This Agreement is subject to City Council approval.

J. The Engineer is subject to the provisions of the 1991 Ethics Reform Act (8-13-100, et seq, South Carolina Code of Laws, 1976, as amended). Under this Act, City employees are prohibited from accepting anything of value from any person. "Anything of value" includes, but is not limited to, lodging, transportation, entertainment, food, meals, beverages, money, gifts, honorariums, discounts and interest-free loans.

Witness the parties' respective hands and seals on the date first written above.

CITY OF COLUMBIA, SOUTH CAROLINA

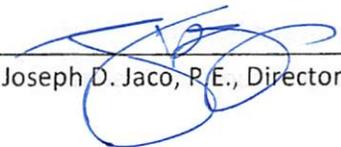
Witness

By: _____
Teresa Wilson, City Manager

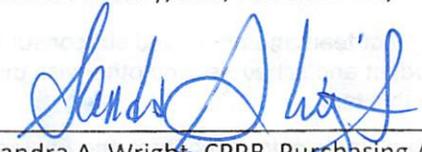


Witness

Brown and Caldwell
By: 
Title: Vice President

RECOMMENDED BY: 
Joseph D. Jaco, P.E., Director of Utilities and Engineering

RECOMMENDED BY: _____
Melissa Gentry, P.E., Assistant City Manager for Operations

RECOMMENDED BY: 
Sandra A. Wright, CPPB, Purchasing Agent/Director of Procurement and Contracts

APPROVAL DATE: _____

APPROVED AS TO FORM



Legal Department City of Columbia, SC

EXHIBIT A
SCOPE OF SERVICES
City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

INTRODUCTION

The purpose of this project is to assist the City of Columbia (Owner) in the implementation of force main condition assessments identified in the Force Main Condition Assessment Plan (August 2015) and SCADA improvements identified in the Transmission System Operation and Maintenance Program (TSOMP).

Brown and Caldwell (Engineer) will perform force main condition assessments as identified in the Condition Assessment Plan, provide data management, and recommendations for rehabilitation, repair, or replacement based on the findings of the condition assessment. The force main condition assessment will be conducted by various force main condition assessment consultants (FC) contracted directly with Engineer. Civil related construction work will be performed by a Civil Contractor (CC) contracted directly with Engineer.

The Engineer will provide procurement support and provide construction administration services for the identified SCADA improvements to the Owner's wastewater pump stations. The SCADA improvements will be conducted by a selected contractor. The design documents are being developed under SS7257.

The project will include the following Tasks.

- Task 1 – Project Administration
- Task 2 – Force Main Field Condition Assessment and Reports
- Task 3 – SCADA Improvements Bidding and Construction Administration
- Task 4 – Additional Services

SCOPE OF SERVICES

Task 1 – Project Administration

The Engineer will manage the efforts of its project team members and subconsultants, assign manpower, review work progress, monitor budget and schedule, and otherwise direct the progress of work. The following activities are included in this task:

- Communicate with the Owner through a single point of contact, the Engineer's Project Manager.
- Conduct a project kick-off meeting to review project goals, deliverables, schedule, and field assessment approaches.
- Development of a baseline project schedule (MS Project or P6).
- Facilitate up to 12 progress meetings with the Owner, 4 associated with the FMCA and 8 with the SCADA work.
- Provide monthly schedule updates pertaining to Engineer's portion of the work to the Owner. The schedule shall be included with an updated Monthly Progress Report to be submitted with a draft invoice to the Owner for review. A project schedule shall be created and updated not less than monthly in MS Project or Primavera P6. The initial detailed project schedule shall be

reviewed by the Owner before proceeding with the Scope of Service. The schedule shall begin based on the date on the Notice to Proceed and shall use the calendar days as outlined in Exhibit C. All documents provided to the Owner for review and approval shall be provided in hardcopy and electronically in PDF format at a minimum.

- Notify the Owner point of contacts determined at the kick-off meeting on a weekly basis of upcoming work for the week so that the Owner will have staff/inspectors available to monitor the work as deemed necessary by the Owner. Any changes to this weekly schedule shall be made a minimum of 24 hours in advance and shall allow the Owner the ability to deny the change in schedule if Owner staff are unavailable to monitor the work if deemed as necessary by the Owner.
- Use the Owner's SharePoint site as a means of document sharing and project document retention. All project files, deliverables, correspondence, agreements, emails, etc. shall be loaded into Sharepoint in the appropriate categories using the City's document naming convention.
- Perform preliminary planning and scope development in support of this Scope of Services.
- Implement and adhere to internal quality control and quality assurance procedures and also ensure all work performed by subconsultants and subcontractors meets these quality control and quality assurance procedures prior to issuance of all deliverables.

Task 2 – Force Main Condition Assessment

Condition assessment of the Broad River PS 335 and Saluda River PS 195 force mains will be conducted under this task. The following assessment technologies will be deployed as noted in the detailed scope of work.

- **Transient pressure monitoring** will continuously monitor pressure at 50 milliseconds intervals to detect short duration pressure transients. Collection of the transient data is critical for the hydraulic evaluation of the force main and ultimately the condition assessment of the pipeline.
- **Pure's SmartBall acoustic technology** will be used for detection of air pockets and leaks. SmartBall is an internal free-swimming tool well suited for force mains. SmartBall is composed of a water-tight, aluminum core that contains the power source, electronic components and instrumentation (including an acoustic sensor, accelerometer, magnetometer, GPS synchronized ultrasonic transmitter, and temperature sensor). The core is encapsulated inside a protective outer foam shell or sphere. The outer foam shell provides additional surface area to propel the device and it also eliminates any noise the device might generate while traversing the pipeline. The SmartBall is inserted into the water flow of a pipeline and it simply travels the pipeline – propelled by the hydraulic flow - and is captured at a point downstream. The device records acoustic activity and positional data as it traverses the pipeline, which is evaluated to report the presence, approximate size, and location of leaks and gas pockets. The SmartBall instrument contains sensors needed to produce reliable, reproducible data in normal pipeline operating conditions. SmartBall can identify leaks at force main minimum pressures of 15 psi and flowrates above 0.028 gpm. Leaks are not quantified or volume / flowrates given. Additional details regarding the type and accuracy of data collected by Pure's SmartBall acoustic technology are included in Attachment 1.
- **Pure's SmartBall PWA technology** will be used to perform a pipe wall assessment (PWA). The PWA tool functions in metallic pipes including steel, ductile iron, and cast iron by detecting anomalies resulting from changing levels of stress in the pipe wall. Stress is increased wherever the wall is thinned, where cracks have developed even if they are not completely through the wall, where the pipe has been damaged or pitted externally or internally, where the pipe is under severe bending, compressive, tensile or torsional stress, where the original construction of the pipe wall is anomalously thin, or where a pipe is under-designed for its current operating pressure. The

instrument can detect joints, material changes, some appurtenances, and many other features relevant to the operation and mapping of the pipe. Estimates of the position of the damage, such as at the crown, or at the invert can also be made and the longitudinal extent of the damage can be estimated. Identification of stress points (e.g. point loads or bending stress) can be detected by the PWA technology. Figures 1 and 2 provide example data taken from a SmartBall PWA survey of a 24-inch diameter ferrous pipeline. Several of the defects identified along the main were validated through excavation, sandblasting, and quantifying the extent of corrosion.

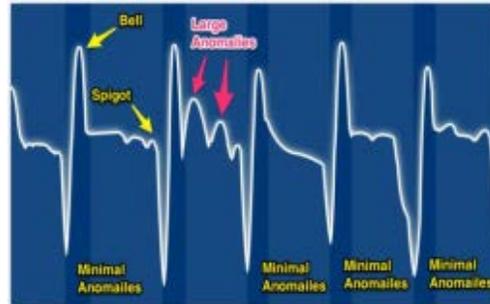


Figure 1 SmartBall PWS Data for Several Pipes

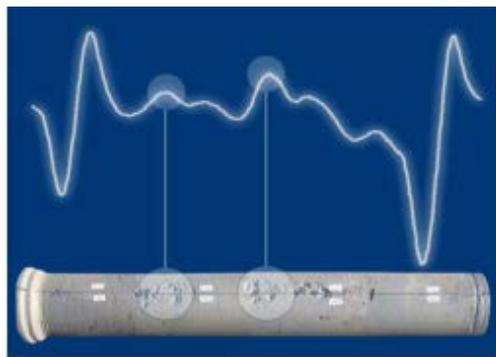


Figure 2 Correlation Between SmartBall PWA Data and Validation for a Single Pipe

PWA data will be collected and analyzed to provide qualitative information regarding the condition of each pipe section (joint to joint). Ideally, several of the anomalous pipes will be validated and this information will then be extrapolated to the remainder of the survey data allowing for informed decisions to be made on the remaining life of the assets. Data will be provided to the Owner in tabular and spatial format.

- Pure's PipeDiver technology** will perform a non-destructive, electromagnetic inspection of pre-stressed concrete cylinder pipe (PCCP) forcemain. The assessment will evaluate the current condition of pre-stressing wire wraps by detecting anomalies produced in the magnetic signature that are caused by broken pre-stressing wire wraps. PipeDiver is a free-swimming tool that provides condition data by surveying relative wall loss along the entire length of the pipeline. The platform consists of a battery module, electromagnetic module and a tracking module. The system is neutrally buoyant and has flexible fins that are used to center the tool within the pipe and provide propulsion. Its flexible design allows PipeDiver to navigate in-line valves and bends in the pipeline while traveling long distances. Sensors located on the PipeDiver inspection tool located around the pipe circumference and will continuously scan the pipe wall as it moves through the force main. The tool is tracked above ground during the entire data collection process by an acoustic tracking module. The receiver, located at the surface, tracks movement of the tool correlating its continued position in time in reference to acoustic events recorded on the sensor contained within the PipeDiver. Data is recorded and interpreted offsite by analysts to pinpoint and locate areas of distress. Analysts determine pipe wall loss

relative to other pipe sections identified. The actual wall thickness will be validated through a minimum of two test pipes, as described in the detailed scope of services.

Under specified inspection conditions for this project, the anticipated data collection over the length of the pipeline is over 95 percent, and will provide a minimum detectable defect for ductile iron pipe (DIP) of approximately 3" x 3" anomaly with 30 percent wall loss with a 90 percent probability of detection. For PCCP, the minimum detectable defect is approximately five wire breaks with a 95 percent probability of detection. All data shall be captured in full and to the anticipated level of accuracy for the equipment. It should be noted that limitations exist within the technology that may impact the detection of wire breaks or wall loss defects near joints and appurtenances. Results may also be affected by conditions outside of Pure Technologies' control including but not limited to flow, pressure, pipe manufacturing or construction. Prior to demobilizing from the site, Pure Technologies staff will download and perform a preliminary review of the data for quality and completeness. A re-inspection will be performed if all information is not captured due to failure of the equipment, sensors, or poor quality of information. Re-inspections, if needed to gather complete and accurate data, will be conducted at no additional cost to the Owner.

Pure Technologies will deploy the in-line condition assessment tools which will collect data continuously along the length of the pipeline. All equipment shall perform, operate, and collect complete and accurate data over the length of the pipe being assessed, and be of sufficient quality for conducting a remaining useful life and rehabilitation analysis.

All force main condition assessments as a part of this scope shall be completed in their entirety. Impacts to the schedule due to Engineer or Engineer's subcontractor delays or issues in the field are not a basis for additional payment. No additional payment shall be made for completing the identified scope due to a force main break or other issue causing delays in the work completion, except for expenses due to the resulting repair delay, such as down time, travel, demobilization and remobilization. No additional costs will be considered by the owner in the event that a force main failure occurs due to causes that are reasonably in the control of the Engineer or its subcontractor. Should a break occur during the work, the Engineer shall restart work from where it was left off at the time of the break to complete the scope of work as defined.

Subtask 2.1 – Support by Civil Contractor. The Engineer, by association of a Civil Contractor (CC), will implement such force main piping modifications as required for the insertion and propulsion of the identified condition assessment tools associated with Tasks 2.2 through 2.4. The Engineer will conduct a coordination meeting with the Owner to discuss items of responsibilities of the Engineer, CC, and Owner, site access, arrangements for when stations can be taken off-line to perform the Work, and public notifications (if needed).

Subtask 211/212. Broad River PS 335 Force Main

- Excavate and expose existing 16" FM in the southeastern corner of the fenced PS site, depth estimated at 6'.
- During PS shutdown period not to exceed 6 hours, install a permanent 16" Tool Launching station. Provide all labor, equipment, and materials to install the station. Station shall be constructed generally in accordance with the Attachment 2 – Tool Launching Station. Bypass pumping activities during force main testing will draw water from the PS 335 wet well and connect to the launch station to propel the tools.
- Backfill and install a 6" concrete pad under the installation.
- Provide a portable pump with a pumping capacity of 2250 gpm (estimated velocity of 3.5 fps for the 16" pipe and 2.25 fps for the 20" pipe) and all necessary piping and fittings for use during the testing period.

- Provide a testing support crew during the testing. This crew will assist with the operation of by-pass pumping equipment, tool insertion and capture generally associated with the condition assessment activities. This crew is not intended to take a lead role with any force main failure events that may occur due to poor pipe condition.
- Provide excavations, dewatering, shoring, and/or job scaffolding of the work area as may be required to comply with OSHA standards.
- Provide traffic control as may be required.

Subtask 213/214 Saluda River PS 195 Force Main

- Provide labor, equipment, piping, and valves to demolish and replace one side of the exiting 12" HDPE pumped bypass with 12" wye with blind flange access.
- Provide pump and all necessary piping and fittings to aid in propelling tools into the 30" FM. Propulsion through the 30" FM is by station main pumps.
- Provide a testing support crew during the testing. This crew will assist with the operation of by-pass pumping equipment, tool insertion and capture generally associated with the condition assessment activities. This crew is not intended to take a lead role with any force main failure events that may occur due to poor pipe condition.
- Provide excavations, dewatering, shoring, and/or job scaffolding of the work area as may be required to comply with OSHA standards.
- Provide traffic control as may be required.

Deliverables will include:

- Record Drawings at each station to reflect tool insertion modifications

Subtask 2.2 – Assessment of Broad River PS 335 FM. The Engineer will contract with PURE Technologies to perform an internal inspection and condition assessment of approximately 9000 linear feet of force main, consisting of 16" and 20" ductile iron pipe, beginning at the Broad River Pump Station and discharging into the gravity collection system downstream of the North Columbia Pump Station along Northwood Street. This force main is generally identified by three segments: (1) 2960 LF of 16" DI FM from the PS to the Highway 176 bridge, (2) 1140 LF of 20" DI FM mounted under the Highway 176 Bridge Structure, and (3) 4800 LF of 20" DI FM from the Highway 176 Bridge to the discharge manhole.

Work performed under this Task will include:

- **Subtask 2.20.** A Project Planning Document (PPD) will be prepared. Following-up to previous site inspections, a site visit and planning meeting will be performed to verify and inspect access locations and identify challenges in order to finalize a PPD. This PPD will address responsibilities of the Engineer, CC, FC, and the Owner, will note site access issues, and identify requirements for taking station PS 335 off-line to perform the Work. The PPD shall include the following elements at a minimum: Owner responsibilities, final work sites including mapping and GIS work, internal project processes and communication including form, public communication plan, access issues, insertion and extraction locations, transient pressure monitor installations, schedule of assessments, contingency plan to cover potential scenarios and responses (including critical pipe sections such as aerial crossings, major road crossings, close proximity to surface water, high points, ARVs, and any other critical elements for the work completion.

A meeting will be held with the Owner for Engineer to review the PPD, present the methodology to be used for assigning ratings from field assessments back to pipe segments, prioritization approach, and approach to developing recommendations for repair/rehab/replacement, proposed schedule etc.

- **Subtask 2.21.** A transient pressure monitoring device will be installed to record transient pressure variations, generally detected within millisecond intervals. This recording will continue for a 30-day window, generally occurring during the other planning windows, minimizing project schedule impacts. Engineer to include and coordinate an acceptable method for installation, location of installation with the Owner before completing this task as a part of the PPD. Engineer shall prepare record drawings for this installation if any portion will remain permanently after the monitoring is over.

Using one pass of FC's SmartBall technology along the full length of the FM, the presence of gas pockets or leaks along the three identified segments of the force main will be determined.

A pipe wall assessment will be performed along the Bridge Section of the pipeline using the SmartBall technology, and simultaneously with the Gas Pocket and Leak Detection

Relative wall loss along the 16" DI FM from the PS to the Highway 176 bridge will be determined using two passes of FC's PipeDiver 16" platform tool.

Relative wall loss along the 20" DI FM from the Highway 176 Bridge to the discharge manhole will be determined using two passes of FC's PipeDiver 20" platform.

- **Subtask 2.22.** External test validations of EM results will be performed to determine wall thickness, areas of internal and external corrosion, and calibrate the analysis of remaining useful life. This will be done using one or more of the following techniques; external MFL, pulsed-eddy current, ultrasonic thickness testing, magnetic particle testing or dye penetrant testing. The Engineer and FC will coordinate verification/validation test pit location site preparation with the Owner prior to mobilizing to the project site. For the purpose of estimating this project cost, a total of three test pit locations are anticipated. The preferred means to accomplish the remaining useful life calculations is via test pits that are chosen at statistically significant locations. Additional ultrasonic thickness measurements can be taken at existing ARV locations or where leaks or pockets of trapped gas are being externally repaired.
- **Subtask 2.23.** The Engineer will conduct an evaluation that includes review and analysis of the field data collected. The Engineer will provide QA/QC of data based on field assessments from Pure Technologies and make sure the data is correct, accurate, and complete. Based on review of the data, each force main segment in the Owner's GIS (developed as part of the TSOMP) will be assigned a condition rating. If additional segmentation of force mains in the GIS is warranted based on condition data, the Engineer will recommend such segmentation to the Owner. The Engineer will develop recommendations for repair/replacement/rehabilitation.

Findings of the field investigation will be presented to the Owner in a workshop within 12 weeks of conclusion of the field work. Preliminary recommendations for repair/replacement/rehab, schedule, and prioritization will be presented.
- **Subtask 2.24.** Following the presentation of findings and preliminary recommendations, a Draft Report will be delivered to the Owner for review and comments. Engineer will conduct a workshop with the Owner to review the Draft Report comments.
- **Subtask 2.25.** A Final Report will be issued following the Draft Reports review workshop.

Deliverables will include:

- A detailed PPD will be submitted by the Engineer for review, comment, modification, and approval by all parties prior to the condition assessment efforts, outlining full obligations of Engineer, FC, CC, and the Owner.
- Meeting with Owner to confirm the PPD.
- Presentation of the summarized finding to stakeholders prior to delivery of the draft report.

- Draft Report including, at a minimum:
 - **Table of Contents**
 - **Certification of QA/QC compliance**, a signed QA/QC page by the company who prepared the report and data.
 - **Executive Summary**
 - **Methodology**. Discussion of each technology chosen including advantages, disadvantages, accuracy and limits of technology, insertion/extraction/tracking, calibration, specific field parameters measured, exceptions to the level of accuracy with details of expected accuracy and why there are exceptions that are specific to the project and areas of lower accuracy (if any). Methodology for assigning ratings from field assessment, relating data from field work back to pipe segments, and prioritizing.
 - **Inspection Results**. Pressure monitoring, PipeDiver electromagnetic inspection results identifying relative wall loss along the length for the force main, Smartball leak and gas pocket detection, and test pipe verification data. Findings (leaks or gas pockets found identification and discussion of any pipe wall condition anomalies detected, thicker cylinder pipes, or anything specific for that section). Data will be provided in tabular and graphical format.
 - **Analysis Results**. Summary structural and hydraulic analyses. Pipeline condition rating/categorization of the structural damage found allowing for the prioritization of rehabilitation program efforts. Minimum wall thickness for yield / strength limits of the force main, and statistical analysis of remaining useful life of the pipeline. Calculated information including parameter, methods for calculation, etc. will be provided.
 - **Conclusions and Recommendations**. Pipeline condition rating, proposed repairs/rehabilitation/replacement, proposed schedule for implementation and prioritization as presented and finalized in the workshop in Task 2.23, information for conducting a root-cause analysis to extend pipeline life, should the segment be identified for subsequent rehabilitation or repair as part of a future design and construction project. Modifications to the existing system will be submitted to the Owner for review and approval in the form of construction details. This shall include things such as bedding, pipe material, backfill, details of pipe fittings, etc. for each installation/pipe repair. ARV installation recommendations will be included.
 - **Appendices**. Final report and data from the FC. Analysis and calculations as appropriate.

- Draft Report review meeting.
- Final Report.

Subtask 2.3 – Assessment of Saluda River PS 195 FM. Engineer will contract with PURE Technologies, as FC, to perform an internal inspection and condition assessment of approximately 22,300 linear feet of force main, consisting of 30" pre-stressed concrete cylinder pipe (PCCP), beginning at the Saluda River Pump Station and discharging into the gravity collection system.

Work performed under this Task will include:

- **Subtask 2.30.** Prepare a Project Planning Document (PPD): Following-up with previous site inspections, a site visit and planning meeting will be performed to verify and inspect access locations and identify challenges in order to finalize a PPD. This PPD will address responsibilities of the Engineer, CC, FC, and the Owner, will note site access issues, and identify requirements for utilizing station PS 195 to propel the SmartBall and PipeDiver tools along the length of the pipeline. The PPD shall include the following elements at a minimum: Owner responsibilities, final work sites

including mapping and GIS work, internal project processes and communication including form, public communication plan, access issues, insertion and extraction locations, transient pressure monitor installations, schedule of assessments, contingency plan to cover potential scenarios and responses (including critical pipe sections such as aerial crossings, major road crossings, close proximity to surface water, high points, ARVs, and any other critical elements for the work completion.

A meeting will be held with the Owner for Engineer to review the PPD, present the methodology to be used for assigning ratings from field assessments back to pipe segments, prioritization approach, and approach to developing recommendations for repair/rehab/replacement, proposed schedule etc.

- **Subtask 2.31.** A transient pressure monitoring device will be installed to record transient pressure variations, generally detected within millisecond intervals. This recording will continue for a 30-day window, generally occurring during the other planning windows, minimizing project schedule impacts. Engineer to include and coordinate an acceptable method for installation, location of installation with the Owner before completing this task as a part of the PPD. Engineer shall prepare record drawings for this installation if any portion will remain permanently after the monitoring is over.

Conduct one pass with FC's SmartBall technology to detect the presence of gas pockets and/or leaks along the length of the force main.

Conduct non-destructive, electromagnetic inspection of the pipeline using Pure Technologies PipeDiver 30" platform. One pass is assumed along the PCCP segments of the pipeline. Results will be analyzed to locate areas of distress. Pipe wall loss relative to other pipe sections identified will be determined.

Recent repairs that have occurred along the force main length, with differing pipe materials utilized, will not be evaluated for material condition but will be noted for record purposes. Condition assessment of these alternate materials would require a separate pass of the tool with a sensor configuration specific to the alternate materials, and is not believed to be necessary at this time.

- **Subtask 2.32.** External test validations of EM results will be performed to determine wall thickness, areas of internal and external corrosion, and analysis of remaining useful life via Monte Carlo simulations. This will be done using one or more of the following techniques; external MFL, pulsed-eddy current, ultrasonic thickness testing, magnetic particle testing or dye penetrant testing. The Engineer and FC will coordinate verification/validation test pit location site preparation with the Owner prior to mobilizing to the project site. For the purpose of estimating this project cost, a total of three test pit locations are anticipated. The preferred means to accomplish the remaining useful life calculations is via test pits that are chosen at statistically significant locations. Additional ultrasonic thickness measurements can be taken at existing ARV locations or where leaks or pockets of trapped gas are being externally repaired.
- **Subtask 2.33.** Engineer will conduct an evaluation that includes the review and analysis of the field data collected. Engineer will QA/QC information provided based on field assessments from Pure Technologies and make sure the data is correct, accurate, and complete. Based on review of the data, each pipe will be assigned a condition rating. Engineer will develop recommendations for repair/replacement/rehabilitation.

Findings of the field investigation will be presented to the Owner in a workshop within 12 weeks of conclusion of the field work. Preliminary recommendations for repair/replacement/rehab, schedule, and prioritization will be presented.

- **Subtask 2.34.** Following the presentation of findings and preliminary recommendations, a Draft Report will be delivered to the Owner for review and comments. Engineer will conduct a workshop with the Owner to review the Draft Report comments.

- **Subtask 2.35.** A Final Report will be issued following the Draft Reports review workshop.

Deliverables will include:

- A detailed PPD will be submitted by the Engineer for review, comment, modification, and approval by all parties prior to the condition assessment efforts, outlining full obligations of Engineer, FC, CC, and the Owner.
- Meeting with Owner to confirm the PPD.
- The Draft Report including, at a minimum:
 - **Table of Contents**
 - **Certification of QA/QC compliance**, a signed QA/QC page by the company who prepared the report and data.
 - **Executive Summary**
 - **Methodology.** Discussion of each technology chosen including advantages, disadvantages, accuracy and limits of technology, insertion/extraction/tracking, calibration, specific field parameters measured, exceptions to the level of accuracy with details of expected accuracy and why there are exceptions that are specific to the project and areas of lower accuracy (if any). Methodology for assigning ratings from field assessment, relating data from field work back to pipe segments, and prioritizing.
 - **Inspection Results.** Pressure monitoring, PipeDiver electromagnetic inspection results identifying relative wall loss along the length for the force main, Smartball leak and gas pocket detection, and test pipe verification data. Findings (the number of broken pre-stressing wires in each inspected pipe section, leaks or gas pockets found identification and discussion of any pipe wall condition anomalies detected, thicker cylinder pipes, or anything specific for that section). Data will be provided in tabular and spatial format.
 - **Analysis Results.** Summary structural and hydraulic analyses. Pipeline condition rating/categorization of the structural damage found allowing for the prioritization of rehabilitation program efforts. Minimum wall thickness for yield / strength limits of the force main, and statistical analysis of remaining useful life of the pipeline. A performance curve for each design class soil depth combination for each pipe with broken pre-stressing wires calculated using a 3-D non-linear finite element analysis will be provided to confirm the pipe can sustain design loads and current operation conditions. A structural engineering analysis detailing the repair priority for each pipe section with broken pre-stressing wires. The current operating conditions are used to determine what level of distress, particularly the number of broken pre-stressing wires, require action for renewal / replacement of a given pipe segment. Calculated information including parameter, methods for calculation, etc. will be provided.
 - **Conclusions and Recommendations.** Pipeline condition rating, proposed repairs/rehabilitation/replacement, proposed schedule for implementation and prioritization as presented and finalized in the workshop in Task 2.33, information for conducting a root-cause analysis to extend pipeline life, should the segment be identified for subsequent rehabilitation or repair as part of a future design and construction project. Modifications to the existing system will be submitted to the Owner for review and approval in the form of construction details. This shall include things such as bedding, pipe material, backfill, details of pipe fittings, etc. for each installation/pipe repair. ARV installation recommendations will be included.
 - **Appendices.** Final report and data from the FC. Analysis and calculations as appropriate.

- Draft Report review meeting.
- Final Report.

Subtask 2.4 – Property Owner Meetings. The Engineer will attend up to 4 public meetings to notify property owners of the work and answer questions. These meetings may be eliminated if no or minimal property owner impacts are identified. These meetings will be coordinated by the Owner; the Engineer will schedule and facilitate, and will present technical and schedule information at the meetings.

Deliverables will include:

- Meeting materials, minutes, and notes provided as a PDF

Subtask 2.5 – Data Management. The Engineer will manage the force main condition data using Innovyse's InfoNet software. The basis of the asset information will be the Owner's current GIS database. Condition data will be imported to InfoNet and mapped to the existing asset information.

At the conclusion of the force main condition assessment work, the Engineer will assemble a GIS database containing updates to the GIS files with regards to connectivity, diameter, material, location, location of appurtenances such as valves, fittings, etc. Locations shall be to the location accuracy available for the equipment being used. Improved information will be migrated to the current GIS database. The Owner will then migrate this information into their computerized maintenance management system (CMMS). The GIS deliverable will be formatted per the Owner's GIS and CMMS standards for condition data.

Deliverables will include:

- Locations of wire breaks and other findings (air pockets, etc), where different pipe materials exist, ARVs, PVs, etc).
- Data captured directly in the field, and other values and ratings calculated shall be provided to the Owner in compatible digital format for use by the Owner. Format options will be coordinated with the Owner. This includes data captured from Smartball, PipeDiver, CCTV, pressure monitoring and hydraulic analysis, etc.
- For any numbers provided that are not in raw collected form (ie, calculated values), samples of the calculation methods will be provided.
- Draft and Final Geodatabases
- Using the results of the field inspection and the revised condition ratings for the force main segments, Engineer will update the force main condition and criticality analysis recently performed under the TSOMP. This includes updating the Force Main Condition Assessment Plan developed by Brown and Caldwell as part of the TSOMP. The update shall at a minimum include the following:
 - Documentation of the revised condition ratings
 - Re-prioritization of future force main inspection for the next 10-years using the condition and criticality analysis. This shall generate a prioritized list of force mains to be inspected, the driver for the inspection, and the proposed inspection techniques
 - Estimation of force main inspection costs over the 10-year period
 - Estimation of the rehabilitation costs of the force mains to be inspected (based on assumptions)
 - Recommendations for future updates of the condition and criticality tool and the cost, schedule of the updates

- The revised documentation and prioritization shall be provided in electronic format to the Owner for their use going forward for reprioritization as needed based on future field assessments, repairs, etc.

Subtask 2.6 – Regulatory Agency Notification, Permitting, and Temporary Easements. The Engineer will coordinate with the Owner in notifying the SCDHEC at least two weeks in advance of beginning force main testing activities. The Engineer will submit all required permits for performing the work. This includes but is not limited to SCDOT, etc. No new permanent or temporary construction easements are envisioned as required for this work. Access to existing easements may be desired via the crossing of private property and such access will be coordinated by the Engineer. Should the property owner require special consideration in exchange for permission to access the City’s easement, then such consideration shall be managed as an Additional Service and require prior authorization by the Owner

Task 3 – SCADA Improvements Bidding and Construction Administration

Subtask 3.1 – Bidding Services. The Engineer will assist the Owner in administering the bid advertisement phase. Work under this task includes:

- Provide a digital version of Final Bidding Documents, in PDF format, for the Owner’s use in uploading to their Bid Online system
- Attend the Pre-Bid Meeting, and facilitate the technical discussion
- Answering contractor questions during bidding
- Issuing addenda
- Evaluate bids, follow up on contractor references, and issue Recommendation of Award
- Prepare up to 5 sets of conformed contract documents (i.e.; bidding documents that incorporate addenda) for the contractor’s use

Subtask 3.2 – Construction Administration. The construction duration is expected to last 270 days. Engineer will provide the following construction administration services during this period:

- Review submittals
- Facilitate pre-construction meeting with selected contractor and the Owner
- Facilitate monthly progress meetings and one final closeout meeting with the contractor and the Owner
- Respond to Requests for Information (RFIs)
- Issue design clarifications
- Recommend and prepare Change Orders
- Weekly visits to construction sites to observe progress and provide written summary to the Owner.
- Review Applications for Payment. This will include a review of the reported versus field observed progress of work and recommendation to the Owner for payment
- Weekly phone calls with the Owner to review construction progress
- Participate in functional/SCADA testing
- Record drawing preparation and submittals

At substantial completion, The Engineer will visit each site to review the completed improvements. The Engineer expects this inspection to be done over the course of 5 consecutive days. If deficiencies are identified the Engineer will issue a punch list to the contractor.

After final completion, the Engineer will make a final visit to the sites and confirm that the punch list items have been completed. The Engineer will also review and issue record drawings, documenting changes to the design document during construction.

Project deliverables will include: Weekly progress summaries, Responses to RFIs, Submittal Reviews, Pay Application Reviews, Change Orders, Record Drawings, and Meeting Notes.

Task 4 – Additional Services

Due to the nature of the work described in this SCOPE document, and during the performance of the work, a need to modify or add services to the SCOPE may be encountered. In anticipation of such occurrences, the following items have been identified as potentially arising, and a budget has been established for addressing the cost of these additions. These budgeted funds shall not be committed without direct written authorization by the Owner and agreement as to pricing and schedule between the Owner and the Engineer has been established. This listing is not considered as restrictive. Other identified items of need may be substituted or added as the Project progresses and applied against these budgets.

Subtask 4.1 – Repair of Force Main Failures. With the nature of the work including the internal insertion and propelling of inspection tools, acknowledgement is made that failure of force mains already in compromised structural conditions may occur through no fault of the testing party. The Owner has agreed to take primary responsibility for response, SSO mitigation and follow-up in the event that a force main failure occurs during the course of this work. In support of these efforts by the Engineer and its subcontractors, a budget of \$100,000 is established for repair or remediation of such events.

During the course of the investigations, due to potential for encountering conditions suggesting imminent pipe failures, there may arise a need to immediately pursue design activities. In support of the Owner pursuing the acquisition or contracting of design activities, the development of preliminary engineering parameters, or a Basis of Design Report (BODR) may be authorized by the Owner as an Additional Service.

Subtask 4.2 – Resurfacing Requirements. Roadways damaged during the performance of this work, either by the anticipated access to force mains as part of the envisioned scope or as the result of unanticipated force main repair resulting from the performance of the work, may trigger resurfacing requirements by the owner of the roadway. A budget of \$100,000 is established for this activity.

Subtask 4.3 – Contingencies. A budget of \$100,000 is established for this activity. A potential application of contingency budget may be additional SCADA design services pumping stations not initially included in the design services contract.

SCOPE ASSUMPTIONS

The following assumptions were used in the development of the scope and fee:

- The Owner will have primary responsibility for the repair and remediation of failing of leaking forcemains that may be encountered as a result of these assessment activities. The Owner shall provide, at its own expense, required equipment, materials, and labor to accomplish such repair or remediation. Owner-controlled contingency funds established under Task 4.1 are intended to support such efforts if needed.
- The Owner will provide assistance of staff for pumping station operations, planning, and support of FMCA activities.
- The Owner will provide access to and operation of valves, ARVs, and manholes.
- The Engineer will use available record drawings of the pump stations and force mains as the basis for the planned activities.

- Legal right-to-entry on existing City easements for the insertion, installation, or extraction of testing devices will be provided by the Owner.
- Associated with the Force Main Cleaning and CCTV, Subtask 2.4
 - Owner will provide fire hydrant meters and all water used at no charge to the FC.
 - Disposal of FC's vac-truck contents and other collected wastewater will be via nearby discharge points into the Owner's collection system, at locations approved by the Owner staff, and at no cost to the FC.
 - Work will be performed while the stations are off-line. Bypass pumping or Pump /Haul requirements will be provided by the FC.
 - Restoration of extensive landscaping, such as shrubbery, walkways, drives, and fencing, is not included in this Scope of Work. Such locations will be avoided for pit locations to the extent possible.
 - Ground markings of force main locations via standard Utility Locate procedures will be requested by the FC in advance of initiating work. It is assumed that these locates will be adequate for initiating the pit excavations. Should such locate efforts prove ineffective, enhanced locate efforts, such as the use of ground penetrating radar, vacuum excavation, or such exploratory efforts are not included in the Scope.
- The Owner will conduct training classes to prepare representatives of the Engineer, FC, and CC in the sanitary sewer overflow response. Classes are anticipated to last 2 hours.
- The SCADA improvements will be bid as a single construction contract.
- Prequalification of SCADA bidders may be provided as an additional service.
- Project administration is limited to the Engineers scope of work and does not include management of contractors or outside vendors except as defined in the scope of work.
- Invoices will be issued first to the Program Manager for review and comment; and upon approval, invoices will be submitted to City Accounts Payable.
- For project review deliverables, the Engineer will compile all comments received during review meetings and respond to one consolidated set of review comments from the Owner using the City's Standard Comment Form. Responses to comments will be checked for acceptance by individual commenters before being accepted and closing out the individual comment.

Attachments:

Attachment 1 – Data Collection Details for Pure's SmartBall Technology

Attachment 2 - Tool Launching Station for Broad River PS 335

Attachment 1

Data Collection Details for Pure's SmartBall Technology

SMARTBALL TECHNOLOGY OVERVIEW AND DATA COLLECTION DETAILS

1 Overview

Pure Technologies' SmartBall is a free-swimming, acoustic-based technology that detects anomalous acoustic activity associated with leaks or gas pockets in pressurized pipelines. The SmartBall is comprised of a water-tight aluminum alloy core that contains a power source, electronic components and instrumentation including an acoustic sensor, triaxial accelerometer, tri-axial magnetometer, GPS synchronized ultrasonic transmitter and temperature sensor. The aluminum core is encapsulated by a protective outer foam shell. The compressible foam outer shell provides a larger surface area by which the device is pushed by the hydraulic flow of the fluid product while reducing low frequency ambient noise that is typically present in the pipeline. The SmartBall assembly is deployed into the flow of a pipeline, traverses the pipeline, and is captured and extracted at a point downstream. During the inspection the SmartBall device's location is tracked at known points along the pipeline to correlate the inspection data with inspected distance.



Figure 1: SmartBall core and foam shell with SmartBall Receiver (SBR)

2 Identifying Leaks and Gas Pockets

2.1 Acoustic Anomalies Representing Leaks

A leak inside a pressurized pipeline produces an acoustic signal. This acoustic signal is created when the pressurized product inside the pipeline escapes into the lower pressure atmosphere outside the pipe. While the SmartBall traverses the pipeline it continuously records this acoustic data and is evaluated later to identify acoustic activity that may be associated with leaks along the pipeline. As the SmartBall is rolling along the bottom of the pipeline, it will always pass within one pipe diameter of the leak.

As the SmartBall approaches a leak the acoustic signal detected by the SmartBall will increase. The acoustic signal will peak and reach a crescendo at the point at which the SmartBall passes the point of the leak and will then diminish as the SmartBall continues away from the leak. This is clearly evident in Figure 2.

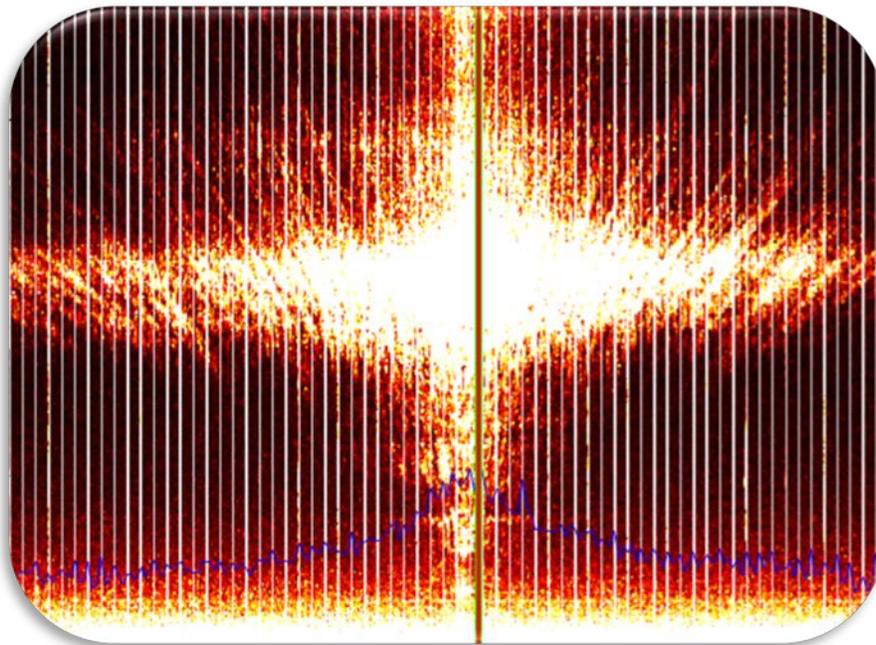


Figure 2: Leak detected in Analysis Software

The acoustic properties of potential leaks are further evaluated to estimate the approximate magnitude of a leak. Pure Technologies reports leaks in three categories: small, medium and large. Small leaks are estimated to be in the range of than 0-2 Imperial gallons per minute (GPM)0 - 7.5 Liters per minute (L/min). Medium leaks are estimated to be in the range of 2-10 GPM7 - 37.5 L/min and large leaks are estimated to be greater than 10 GPM37.5 L/min.

Pure Technologies has invested heavily into identifying the characteristics of an acoustic anomaly that would be representative of a leak. The characteristics typical of a real leak are:



- The range of frequencies present increases as the ball approaches the leak
- The frequencies that appear first, grow in intensity as the SmartBall approaches the leak
- The frequencies that appear to indicate a leak are consistent as the SmartBall approaches the leak.

2.2 Acoustic Anomalies Representing Gas Trapped in a Pipeline

Gas trapped in a pipeline has (3) three distinct acoustic signals that are detectable using SmartBall.

- Entrained Air: This classification of trapped gas is characterized by small, moving bubbles of gas within the pipeline. Entrained air is not typically static in the force main and frequently migrates with the flow. These moving pockets of gas can be introduced in three ways: at the pumping station as a result of air becoming entrained in the sewage as it plunges into the wet well and/or inefficiencies within the pump station, at the tail of a hydraulic jump at the end of a fully developed gas pocket whereby small pockets of gas diffuse into the liquid phase and are carried downstream with the flow, or by the biochemical processes inherent to sewer mains.

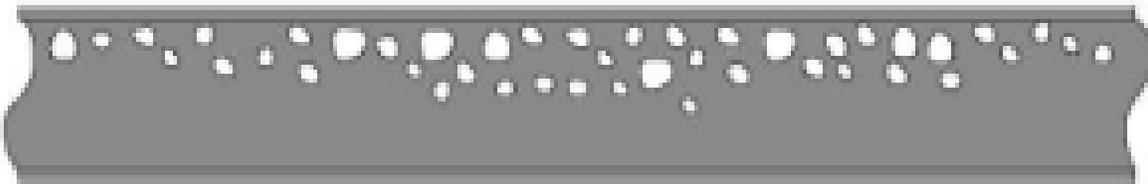


Figure 3: Entrained Air

- Slug or Developing Gas Pockets: This classification can be characterized as small pockets of trapped gas that often develop as a result of an amalgamation of bubbles or are introduced via Air/Vacuum Release Valves (ARVs). Slugs can be either static or migratory. If they are found at a localized high point they are likely static, if not they are likely migrating towards a high point.



Figure 4: Gas Slugs

- Fully Developed Gas Pockets:** Fully Developed Gas Pockets are usually located at localized high points along a force main. These develop as a result of slugs that have accumulated at a high point to the point that they extend into the downward slope of the pipe. A fully developed gas pocket typically has a hydraulic jump prior to the re-submergence of the pipe creating an area of turbulent flow and gas dissolution into the liquid phase. Due to the turbulent nature of the hydraulic jump and frequent wet/dry cycles at these locations from changes in flow condition, these areas are at a higher risk of failure than other portions of the gas pocket.

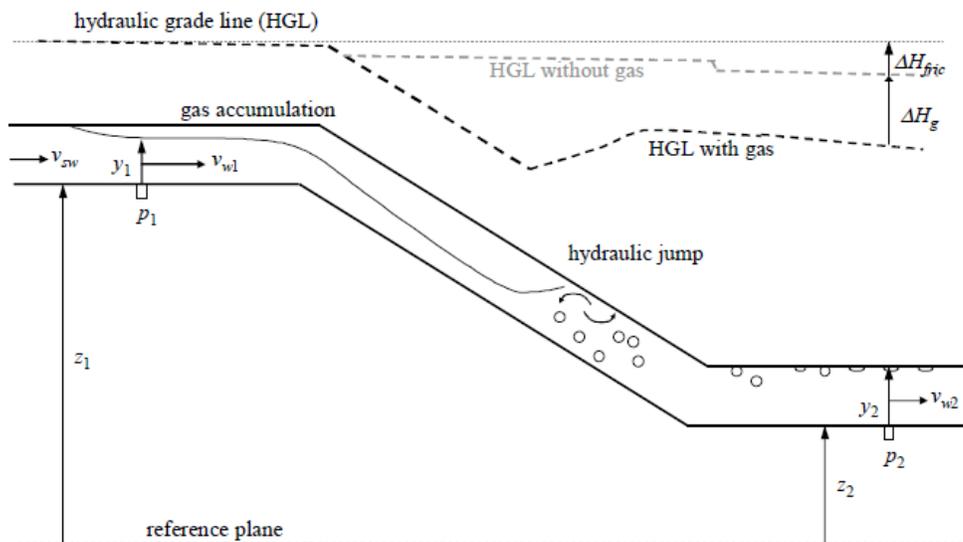


Figure 5: Diagram of a fully developed gas pocket

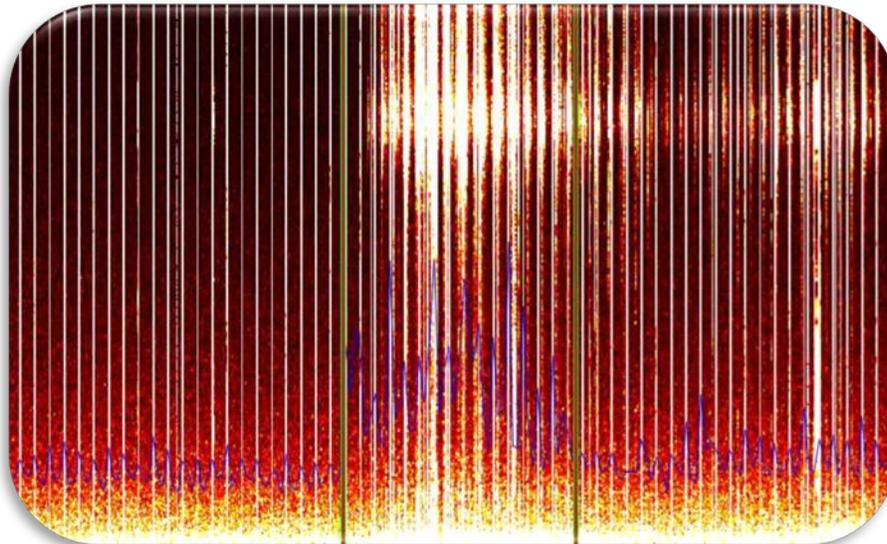


Figure 6: Gas Pocket detected in Analysis Software

3 SmartBall Tracking

The on-board accelerometer records the rotation of the SmartBall whereby this data can be translated to a rate of rotation and from there to a velocity profile of the device as it travels the entire length of the pipeline. This data is aligned with the acoustic recordings to give a precise location of any recorded anomaly. To correlate the accelerometer data to an absolute position and time a reference point is required. Tracking the position of the SmartBall via SmartBall Receivers (SBRs) provides a time and position to be stamped on the velocity profile resulting in a position



Figure 4: SMS Adhered to Flange

versus time relationship for the entire run of the device that is used to report the location of the leak of gas pocket. The SBR is a device that is used to track the position of the SmartBall as it traverses the pipeline. The SBR is comprised of a surface mounted sensor (SMS), GPS receiver, and a processing computer. Both the SmartBall and the SBR are synchronized to standard GPS time.

A Surface Mounted Sensors (SMS) is mounted to the pipeline at planned locations and is connected to a SBR via coaxial cable. The SBR and SMS combination detect ultrasonic pulses emitted from the SmartBall. The SBRs determine the time taken for the pulse to travel from the SmartBall to the SBR, and calculate the location of the SmartBall at any given time.

This locational data is paralleled with the data extracted from the SmartBall which is then used to identify the locations of leaks and gas pockets. Figure 4 shows a SMS, which is typically mounted to the pipeline itself or pipeline appurtenance.

4 Advantages of SmartBall

The SmartBall acquires high quality acoustic data which is then evaluated to identify leaks and pockets of trapped gas. While other leak detection techniques such as noise loggers and correlators may identify a single leak of gas pocket between each sensor, they cannot accurately locate the limits of the anomaly nor identify multiple anomalies whereas the SmartBall travels directly past each acoustic anomaly of interest, and thus significant advantages are recognized:

- Medium and Large Diameter Pipe: The SmartBall device has successfully inspected and detected leaks on a wide range of medium and large diameter pipelines (>12 inches and

over 96 inch diameter). Many conventional leak detection technologies (e.g. correlators) have limitations that preclude their use on medium and large diameter pipe.

- Pipe Material: The SmartBall device's leak detection ability is not affected by pipe material. Because the tool passes by the point at which the acoustic event is being created, the pipe wall is not relied on to transmit the acoustic event through the line to a sensor located far away from the actual event of interest. This greatly increases the device's sensitivity and ability to distinguish between separate acoustic events.
- Sensitivity: The sensitivity of all leak detection technologies is a function of several variables and as a result, no resolute thresholds can be established. However, the acoustic sensor inside the SmartBall always passes within one pipe diameter of an acoustic anomaly and therefore it can be used to identify very small leaks due to the proximity of the SmartBall to the leak. It should be noted, the SmartBall cannot differentiate between a true leak, a simulated leak, and/or the potential noise of a pressure reducing valve. As such, the acoustic anomalies corresponding to features on the main should be investigated further in the field.
- Length of Survey: The SmartBall device has the ability to record acoustic data for over 12 hours. Depending on flow rates, the tool can inspect long lengths of pipe during a single deployment. The longest single recording within a pipeline with a single deployment had the SmartBall record acoustic data and inspect a length of pipeline exceeding 30 miles/48 kilometers.

All non-destructive testing technologies have unique capabilities and limitations that affect the accuracy and efficacy of the technology. SmartBall has the following limitations:

- 4) Minimum Pressure: The acoustic activity associated with a leak is derived from the pressure differential across the pipe wall. With little to no pressure differential the SmartBall will not detect leakage as there will be no associated acoustic activity. A minimum pressure of 15 PSI is required to detect small leaks. Pressure is not required to detect pockets of trapped gas.
- 5) Ambient Noise: SmartBall detects and reports anomalies that have acoustic characteristics similar to leaks or gas pockets on pressurized pipelines. However, other forms of ambient noise may be identified during the data analysis. For medium and large leaks and fully developed gas pockets there is very little that can match these acoustic characteristics and therefore, these events are clearly identified. For small leaks and entrained air, there may be other forms of ambient noise that are difficult to evaluate. Pure Technologies has invested

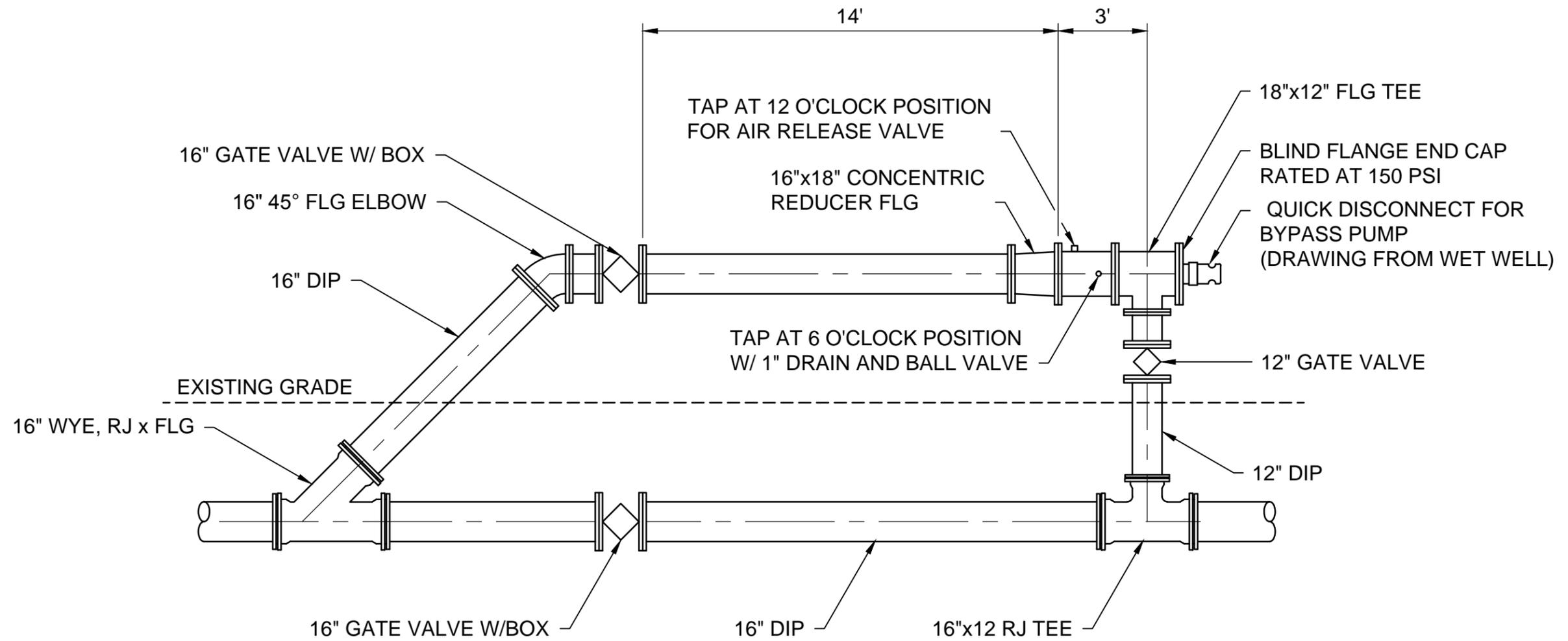


significant resources into characterizing acoustic anomalies and consequently believes leaks and gas pockets described in this report are true and accurate, unless otherwise noted. However, unknown pressure reducing valves, cracked valves in close proximity, interconnected pipelines that have not been completely isolated and leaks in pipelines immediately adjacent to the subject pipe do contain a similar acoustic signature and could be reported as leaks in this report. Cars, pumps, boat traffic and other forms of common ambient noise should not be reported as leaks or gas pockets as they contain different acoustic signatures.



Attachment 2

Tool Launching Station for Broad River PS 335



SCALE: 1/4" = 1'-0"
 149275
 DATE: June 8, 2016

CITY OF COLUMBIA FORCE MAIN CONDITION AND ASSESSMENT
 TOOL LAUNCHING STATION
 SECTION

FIGURE
F1

**EXHIBIT B
COMPENSATION**

City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

Compensation for services provided under Tasks 1 through 4 as outlined in Exhibit A, Scope of Services, will be as outlined below. Compensation shall be on a ~~lump sum~~ not to exceed basis ^{NJS} for professional services. Project Management will be billed based upon the percentage of work completed. The total project effort represents the upper limit fee of this authorization.

The total fee for the agreement is \$1,632,000.00. The breakdown of the fee is shown in Table 1.

Table 1.. Fee Schedule		
Task	Description	Effort (\$)
Task 1	Project Administration, including: Scheduling; Project management of testing activities; Budget management, invoicing, QA/QC; Progress Reporting; Scope and Budget Preparation. This task will be billed monthly based on the percent of the overall project administration effort completed.	\$115,000
Task 2 – Force Main Condition Assessment		
Subtask 2.1	Support by Civil Contractor for the insertion and propulsion of force main testing tools associated with Tasks 2.2. and 2.3. Disaggregation is as follows:	\$227,000
	211. Broad River Site construction	\$142,000
	212. Broad River Site support crew	\$17,000
	213. Saluda River Site construction	\$60,000
	214. Saluda River Site support crew	\$8,000
Subtask 2.2	Assessment of the Broad River PS 335 Force Main. Disaggregation is as follows:	\$337,000
	220. Delivery of Project Planning Document (PPD)	\$90,000
	221. 16-inch and 20-inch FM Field Inspection: pressure transient monitoring, leak detection, gas pocket detection, electromagnetic (wall thickness) analysis (20% upon completion of field activities, 70% upon BC's satisfactory review of initial report, 10% once Final Report issued by BC)	\$111,000
	222. External Field Test Verifications of EM Results	\$46,000
	223. Analyses and Workshop to Present Findings	\$35,000
	224. Draft Report	\$15,000
	225. Final Report	\$8,000
Subtask 2.3	Assessment of the Saluda River PS 195 Force Main. Disaggregation is as follows:	\$465,000
	230. Delivery of Project Planning Document (PPD)	\$75,000
	231. 30-inch PCCP FM Field Inspection: pressure transient monitoring, leak detection, gas pocket detection, electromagnetic (wall thickness) analysis (20% upon completion of field activities, 70% upon BC's satisfactory review of initial report, 10% once Final Report issued by BC)	\$282,000
	232. External Field Test Verifications of EM Results	\$50,000
	233. Analyses and Workshop to Present Findings	\$35,000
	234. Draft Report	\$15,000
	235. Final Report	\$8,000

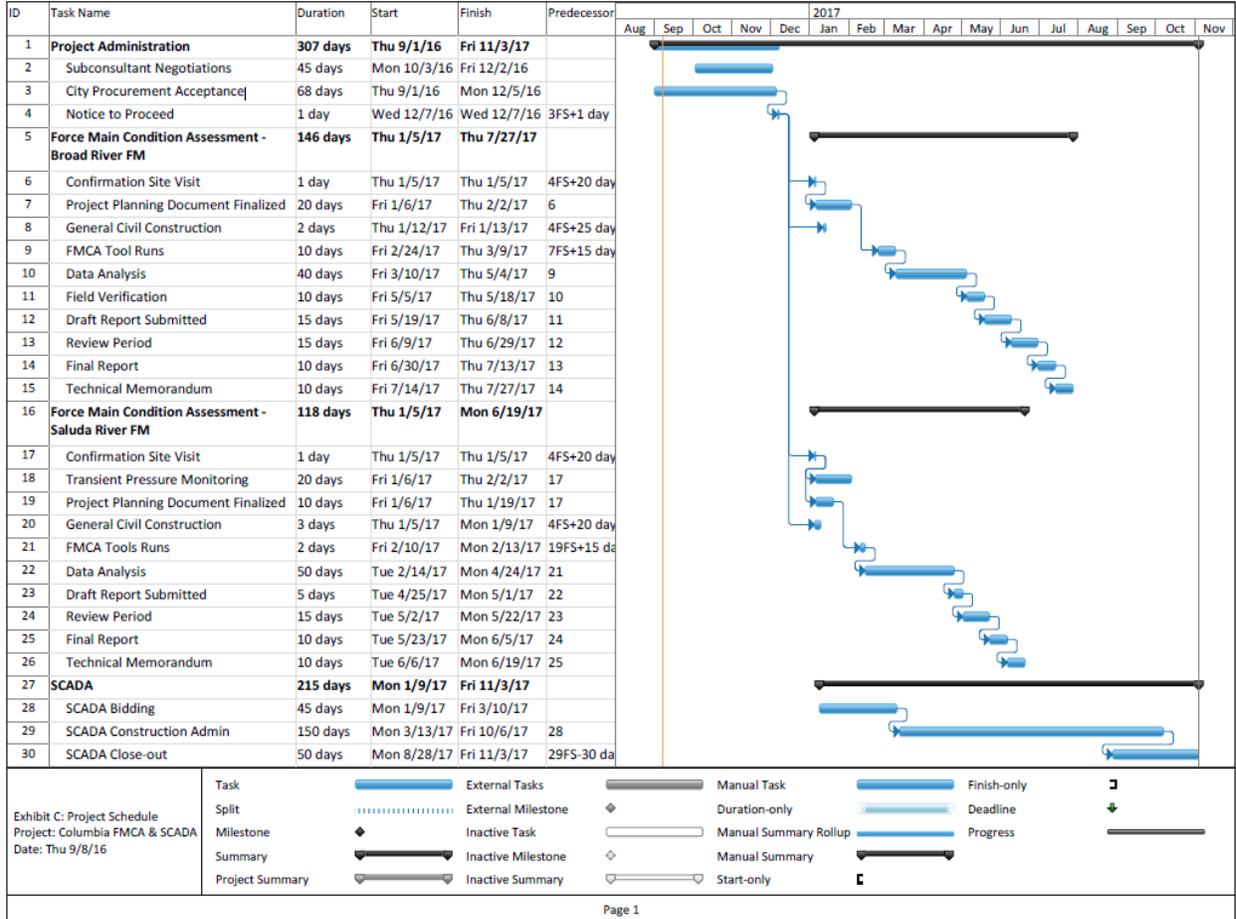
Task	Description	Effort (\$)
Subtask 2.4	Property Owner Meetings	\$10,000
Subtask 2.5	Data Management	\$32,000
Subtask 2.6	Regulatory Agency Notifications	\$5,000
Task 3 SCADA Improvements Bidding and Construction Administration		
Subtask 3.1	Bidding Services	\$22,000
Subtask 3.2	Construction Administration	\$119,000
Task 4 – Additional Services (Client Controlled Contingency)		
Subtask 4.1	Repair of Force Main Failures	\$100,000
Subtask 4.2	Resurfacing Requirements	\$100,000
Subtask 4.3	Contingency Items	\$100,000
Total		\$1,632,000

The Engineer has agreed to subcontract a portion of the work, as outlined in Exhibit D. The total subconsultant utilization is 51.7%.

EXHIBIT C

City of Columbia CIP # SS7333

Force Main Condition Assessment and SCADA Improvements Schedule



**EXHIBIT D
SUBCONSULTANT FIRM INFORMATION**

City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

This listing represents all firms proposed to provide subconsulting services under this agreement.

Subconsultant Information				
Firm Name and Address	Contact Name and Telephone Number	% of Contract	Services to be Provided	Dollar Value of Service
M. B. Kahn Construction Company, Inc. P.O. Box 1179 Columbia, SC 29202	Jared McMullan (803) 227-1279	12.9	Civil Contractor Support	\$210,750
Pure Technologies 3399 Peachtree Road, NE Suite 400 Atlanta GA	William Craven (407) 408-7631	14.7	Broad River FM Assessment	\$240,000
Pure Technologies 3399 Peachtree Road, NE Suite 400 Atlanta GA	William Craven (407) 408-7631	24.1	Saluda River FM Assessment	\$393,000

EXHIBIT A
SCOPE OF SERVICES
City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

INTRODUCTION

The purpose of this project is to assist the City of Columbia (Owner) in the implementation of force main condition assessments identified in the Force Main Condition Assessment Plan (August 2015) and SCADA improvements identified in the Transmission System Operation and Maintenance Program (TSOMP).

Brown and Caldwell (Engineer) will perform force main condition assessments as identified in the Condition Assessment Plan, provide data management, and recommendations for rehabilitation, repair, or replacement based on the findings of the condition assessment. The force main condition assessment will be conducted by various force main condition assessment consultants (FC) contracted directly with Engineer. Civil related construction work will be performed by a Civil Contractor (CC) contracted directly with Engineer.

The Engineer will provide procurement support and provide construction administration services for the identified SCADA improvements to the Owner's wastewater pump stations. The SCADA improvements will be conducted by a selected contractor. The design documents are being developed under SS7257.

The project will include the following Tasks.

- Task 1 - Project Administration
- Task 2 - Force Main Field Condition Assessment and Reports
- Task 3 - SCADA Improvements Bidding and Construction Administration
- Task 4 - Additional Services

SCOPE OF SERVICES

Task 1 - Project Administration

The Engineer will manage the efforts of its project team members and subconsultants, assign manpower, review work progress, monitor budget and schedule, and otherwise direct the progress of work. The following activities are included in this task:

- Communicate with the Owner through a single point of contact, the Engineer's Project Manager.
- Conduct a project kick-off meeting to review project goals, deliverables, schedule, and field assessment approaches.
- Development of a baseline project schedule (MS Project or P6).
- Facilitate up to 12 progress meetings with the Owner, 4 associated with the FMCA and 8 with the SCADA work.
- Provide monthly schedule updates pertaining to Engineer's portion of the work to the Owner. The schedule shall be included with an updated Monthly Progress Report to be submitted with a draft invoice to the Owner for review. A project schedule shall be created and updated not less than monthly in MS Project or Primavera P6. The initial detailed project schedule shall be



reviewed by the Owner before proceeding with the Scope of Service. The schedule shall begin based on the date on the Notice to Proceed and shall use the calendar days as outlined in Exhibit C. All documents provided to the Owner for review and approval shall be provided in hardcopy and electronically in PDF format at a minimum.

- Notify the Owner point of contacts determined at the kick-off meeting on a weekly basis of upcoming work for the week so that the Owner will have staff/inspectors available to monitor the work as deemed necessary by the Owner. Any changes to this weekly schedule shall be made a minimum of 24 hours in advance and shall allow the Owner the ability to deny the change in schedule if Owner staff are unavailable to monitor the work if deemed as necessary by the Owner.
- Use the Owner's SharePoint site as a means of document sharing and project document retention. All project files, deliverables, correspondence, agreements, emails, etc. shall be loaded into Sharepoint in the appropriate categories using the City's document naming convention.
- Perform preliminary planning and scope development in support of this Scope of Services.
- Implement and adhere to internal quality control and quality assurance procedures and also ensure all work performed by subconsultants and subcontractors meets these quality control and quality assurance procedures prior to issuance of all deliverables.

Task 2 – Force Main Condition Assessment

Condition assessment of the Broad River PS 335 and Saluda River PS 195 force mains will be conducted under this task. The following assessment technologies will be deployed as noted in the detailed scope of work.

- **Transient pressure monitoring** will continuously monitor pressure at 50 milliseconds intervals to detect short duration pressure transients. Collection of the transient data is critical for the hydraulic evaluation of the force main and ultimately the condition assessment of the pipeline.
- **Pure's SmartBall acoustic technology** will be used for detection of air pockets and leaks. SmartBall is an internal free-swimming tool well suited for force mains. SmartBall is composed of a water-tight, aluminum core that contains the power source, electronic components and instrumentation (including an acoustic sensor, accelerometer, magnetometer, GPS synchronized ultrasonic transmitter, and temperature sensor). The core is encapsulated inside a protective outer foam shell or sphere. The outer foam shell provides additional surface area to propel the device and it also eliminates any noise the device might generate while traversing the pipeline. The SmartBall is inserted into the water flow of a pipeline and it simply travels the pipeline – propelled by the hydraulic flow - and is captured at a point downstream. The device records acoustic activity and positional data as it traverses the pipeline, which is evaluated to report the presence, approximate size, and location of leaks and gas pockets. The SmartBall instrument contains sensors needed to produce reliable, reproducible data in normal pipeline operating conditions. SmartBall can identify leaks at force main minimum pressures of 15 psi and flowrates above 0.028 gpm. Leaks are not quantified or volume / flowrates given. Additional details regarding the type and accuracy of data collected by Pure's SmartBall acoustic technology are included in Attachment 1.
- **Pure's SmartBall PWA technology** will be used to perform a pipe wall assessment (PWA). The PWA tool functions in metallic pipes including steel, ductile iron, and cast iron by detecting anomalies resulting from changing levels of stress in the pipe wall. Stress is increased wherever the wall is thinned, where cracks have developed even if they are not completely through the wall, where the pipe has been damaged or pitted externally or internally, where the pipe is under severe bending, compressive, tensile or torsional stress, where the original construction of the pipe wall is anomalously thin, or where a pipe is under-designed for its current operating pressure. The



instrument can detect joints, material changes, some appurtenances, and many other features relevant to the operation and mapping of the pipe. Estimates of the position of the damage, such as at the crown, or at the invert can also be made and the longitudinal extent of the damage can be estimated. Identification of stress points (e.g. point loads or bending stress) can be detected by the PWA technology. Figures 1 and 2 provide example data taken from a SmartBall PWA survey of a 24-inch diameter ferrous pipeline. Several of the defects identified along the main were validated through excavation, sandblasting, and quantifying the extent of corrosion.

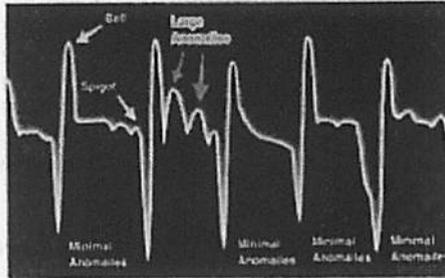


Figure 1 SmartBall PWS Data for Several Pipes

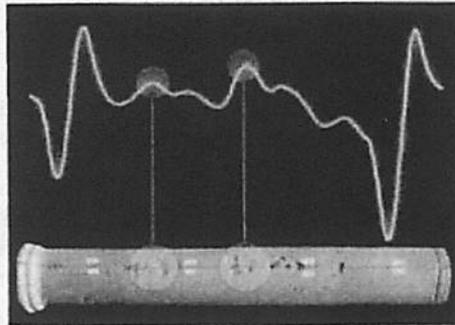


Figure 2 Correlation Between SmartBall PWA Data and Validation for a Single Pipe

PWA data will be collected and analyzed to provide qualitative information regarding the condition of each pipe section (joint to joint). Ideally, several of the anomalous pipes will be validated and this information will then be extrapolated to the remainder of the survey data allowing for informed decisions to be made on the remaining life of the assets. Data will be provided to the Owner in tabular and spatial format.

- **Pure's PipeDiver technology** will perform a non-destructive, electromagnetic inspection of pre-stressed concrete cylinder pipe (PCCP) forcemain. The assessment will evaluate the current condition of pre-stressing wire wraps by detecting anomalies produced in the magnetic signature that are caused by broken pre-stressing wire wraps. PipeDiver is a free-swimming tool that provides condition data by surveying relative wall loss along the entire length of the pipeline. The platform consists of a battery module, electromagnetic module and a tracking module. The system is neutrally buoyant and has flexible fins that are used to center the tool within the pipe and provide propulsion. Its flexible design allows PipeDiver to navigate in-line valves and bends in the pipeline while traveling long distances. Sensors located on the PipeDiver inspection tool located around the pipe circumference and will continuously scan the pipe wall as it moves through the force main. The tool is tracked above ground during the entire data collection process by an acoustic tracking module. The receiver, located at the surface, tracks movement of the tool correlating its continued position in time in reference to acoustic events recorded on the sensor contained within the PipeDiver. Data is recorded and interpreted offsite by analysts to pinpoint and locate areas of distress. Analysts determine pipe wall loss

relative to other pipe sections identified. The actual wall thickness will be validated through a minimum of two test pipes, as described in the detailed scope of services.

Under specified inspection conditions for this project, the anticipated data collection over the length of the pipeline is over 95 percent, and will provide a minimum detectable defect for ductile iron pipe (DIP) of approximately 3" x 3" anomaly with 30 percent wall loss with a 90 percent probability of detection. For PCCP, the minimum detectable defect is approximately five wire breaks with a 95 percent probability of detection. All data shall be captured in full and to the anticipated level of accuracy for the equipment. It should be noted that limitations exist within the technology that may impact the detection of wire breaks or wall loss defects near joints and appurtenances. Results may also be affected by conditions outside of Pure Technologies' control including but not limited to flow, pressure, pipe manufacturing or construction. Prior to demobilizing from the site, Pure Technologies staff will download and perform a preliminary review of the data for quality and completeness. A re-inspection will be performed if all information is not captured due to failure of the equipment, sensors, or poor quality of information. Re-inspections, if needed to gather complete and accurate data, will be conducted at no additional cost to the Owner.

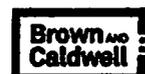
Pure Technologies will deploy the in-line condition assessment tools which will collect data continuously along the length of the pipeline. All equipment shall perform, operate, and collect complete and accurate data over the length of the pipe being assessed, and be of sufficient quality for conducting a remaining useful life and rehabilitation analysis.

All force main condition assessments as a part of this scope shall be completed in their entirety. Impacts to the schedule due to Engineer or Engineer's subcontractor delays or issues in the field are not a basis for additional payment. No additional payment shall be made for completing the identified scope due to a force main break or other issue causing delays in the work completion, except for expenses due to the resulting repair delay, such as down time, travel, demobilization and remobilization. No additional costs will be considered by the owner in the event that a force main failure occurs due to causes that are reasonably in the control of the Engineer or its subcontractor. Should a break occur during the work, the Engineer shall restart work from where it was left off at the time of the break to complete the scope of work as defined.

Subtask 2.1 - Support by Civil Contractor. The Engineer, by association of a Civil Contractor (CC), will implement such force main piping modifications as required for the insertion and propulsion of the identified condition assessment tools associated with Tasks 2.2 through 2.4. The Engineer will conduct a coordination meeting with the Owner to discuss items of responsibilities of the Engineer, CC, and Owner, site access, arrangements for when stations can be taken off-line to perform the Work, and public notifications (if needed).

Subtask 211/212. Broad River PS 335 Force Main

- Excavate and expose existing 16" FM in the southeastern corner of the fenced PS site, depth estimated at 6'.
- During PS shutdown period not to exceed 6 hours, install a permanent 16" Tool Launching station. Provide all labor, equipment, and materials to install the station. Station shall be constructed generally in accordance with the Attachment 2 - Tool Launching Station. Bypass pumping activities during force main testing will draw water from the PS 335 wet well and connect to the launch station to propel the tools.
- Backfill and install a 6" concrete pad under the installation.
- Provide a portable pump with a pumping capacity of 2250 gpm (estimated velocity of 3.5 fps for the 16" pipe and 2.25 fps for the 20" pipe) and all necessary piping and fittings for use during the testing period.



- Provide a testing support crew during the testing. This crew will assist with the operation of by-pass pumping equipment, tool insertion and capture generally associated with the condition assessment activities. This crew is not intended to take a lead role with any force main failure events that may occur due to poor pipe condition.
- Provide excavations, dewatering, shoring, and/or job scaffolding of the work area as may be required to comply with OSHA standards.
- Provide traffic control as may be required.

Subtask 213/214 Saluda River PS 195 Force Main

- Provide labor, equipment, piping, and valves to demolish and replace one side of the exiting 12" HDPE pumped bypass with 12" wye with blind flange access.
- Provide pump and all necessary piping and fittings to aid in propelling tools into the 30" FM. Propulsion through the 30" FM is by station main pumps.
- Provide a testing support crew during the testing. This crew will assist with the operation of by-pass pumping equipment, tool insertion and capture generally associated with the condition assessment activities. This crew is not intended to take a lead role with any force main failure events that may occur due to poor pipe condition.
- Provide excavations, dewatering, shoring, and/or job scaffolding of the work area as may be required to comply with OSHA standards.
- Provide traffic control as may be required.

Deliverables will include:

- Record Drawings at each station to reflect tool insertion modifications

Subtask 2.2 – Assessment of Broad River PS 335 FM. The Engineer will contract with PURE Technologies to perform an internal inspection and condition assessment of approximately 9000 linear feet of force main, consisting of 16" and 20" ductile iron pipe, beginning at the Broad River Pump Station and discharging into the gravity collection system downstream of the North Columbia Pump Station along Northwood Street. This force main is generally identified by three segments: (1) 2960 LF of 16" DI FM from the PS to the Highway 176 bridge, (2) 1140 LF of 20" DI FM mounted under the Highway 176 Bridge Structure, and (3) 4800 LF of 20" DI FM from the Highway 176 Bridge to the discharge manhole.

Work performed under this Task will include:

- **Subtask 2.20.** A Project Planning Document (PPD) will be prepared. Following-up to previous site inspections, a site visit and planning meeting will be performed to verify and inspect access locations and identify challenges in order to finalize a PPD. This PPD will address responsibilities of the Engineer, CC, FC, and the Owner, will note site access issues, and identify requirements for taking station PS 335 off-line to perform the Work. The PPD shall include the following elements at a minimum: Owner responsibilities, final work sites including mapping and GIS work, internal project processes and communication including form, public communication plan, access issues, insertion and extraction locations, transient pressure monitor installations, schedule of assessments, contingency plan to cover potential scenarios and responses (including critical pipe sections such as aerial crossings, major road crossings, close proximity to surface water, high points, ARVs, and any other critical elements for the work completion.

A meeting will be held with the Owner for Engineer to review the PPD, present the methodology to be used for assigning ratings from field assessments back to pipe segments, prioritization approach, and approach to developing recommendations for repair/rehab/replacement, proposed schedule etc.



- **Subtask 2.21.** A transient pressure monitoring device will be installed to record transient pressure variations, generally detected within millisecond intervals. This recording will continue for a 30-day window, generally occurring during the other planning windows, minimizing project schedule impacts. Engineer to include and coordinate an acceptable method for installation, location of installation with the Owner before completing this task as a part of the PPD. Engineer shall prepare record drawings for this installation if any portion will remain permanently after the monitoring is over.

Using one pass of FC's SmartBall technology along the full length of the FM, the presence of gas pockets or leaks along the three identified segments of the force main will be determined.

A pipe wall assessment will be performed along the Bridge Section of the pipeline using the SmartBall technology, and simultaneously with the Gas Pocket and Leak Detection

Relative wall loss along the 16" DI FM from the PS to the Highway 176 bridge will be determined using two passes of FC's PipeDiver 16" platform tool.

Relative wall loss along the 20" DI FM from the Highway 176 Bridge to the discharge manhole will be determined using two passes of FC's PipeDiver 20" platform.

- **Subtask 2.22.** External test validations of EM results will be performed to determine wall thickness, areas of internal and external corrosion, and calibrate the analysis of remaining useful life. This will be done using one or more of the following techniques; external MFL, pulsed-eddy current, ultrasonic thickness testing, magnetic particle testing or dye penetrant testing. The Engineer and FC will coordinate verification/validation test pit location site preparation with the Owner prior to mobilizing to the project site. For the purpose of estimating this project cost, a total of three test pit locations are anticipated. The preferred means to accomplish the remaining useful life calculations is via test pits that are chosen at statistically significant locations. Additional ultrasonic thickness measurements can be taken at existing ARV locations or where leaks or pockets of trapped gas are being externally repaired.
- **Subtask 2.23.** The Engineer will conduct an evaluation that includes review and analysis of the field data collected. The Engineer will provide QA/QC of data based on field assessments from Pure Technologies and make sure the data is correct, accurate, and complete. Based on review of the data, each force main segment in the Owner's GIS (developed as part of the TSOMP) will be assigned a condition rating. If additional segmentation of force mains in the GIS is warranted based on condition data, the Engineer will recommend such segmentation to the Owner. The Engineer will develop recommendations for repair/replacement/rehabilitation.

Findings of the field investigation will be presented to the Owner in a workshop within 12 weeks of conclusion of the field work. Preliminary recommendations for repair/replacement/rehab, schedule, and prioritization will be presented.
- **Subtask 2.24.** Following the presentation of findings and preliminary recommendations, a Draft Report will be delivered to the Owner for review and comments. Engineer will conduct a workshop with the Owner to review the Draft Report comments.
- **Subtask 2.25.** A Final Report will be issued following the Draft Reports review workshop.

Deliverables will include:

- A detailed PPD will be submitted by the Engineer for review, comment, modification, and approval by all parties prior to the condition assessment efforts, outlining full obligations of Engineer, FC, CC, and the Owner.
- Meeting with Owner to confirm the PPD.
- Presentation of the summarized finding to stakeholders prior to delivery of the draft report.



- Draft Report including, at a minimum:
 - Table of Contents
 - Certification of QA/QC compliance, a signed QA/QC page by the company who prepared the report and data.
 - Executive Summary
 - Methodology. Discussion of each technology chosen including advantages, disadvantages, accuracy and limits of technology, insertion/extraction/tracking, calibration, specific field parameters measured, exceptions to the level of accuracy with details of expected accuracy and why there are exceptions that are specific to the project and areas of lower accuracy (if any). Methodology for assigning ratings from field assessment, relating data from field work back to pipe segments, and prioritizing.
 - Inspection Results. Pressure monitoring, PipeDiver electromagnetic inspection results identifying relative wall loss along the length for the force main, Smartball leak and gas pocket detection, and test pipe verification data. Findings (leaks or gas pockets found identification and discussion of any pipe wall condition anomalies detected, thicker cylinder pipes, or anything specific for that section). Data will be provided in tabular and graphical format.
 - Analysis Results. Summary structural and hydraulic analyses. Pipeline condition rating/categorization of the structural damage found allowing for the prioritization of rehabilitation program efforts. Minimum wall thickness for yield / strength limits of the force main, and statistical analysis of remaining useful life of the pipeline. Calculated information including parameter, methods for calculation, etc. will be provided.
 - Conclusions and Recommendations. Pipeline condition rating, proposed repairs/rehabilitation/replacement, proposed schedule for implementation and prioritization as presented and finalized in the workshop in Task 2.23, information for conducting a root-cause analysis to extend pipeline life, should the segment be identified for subsequent rehabilitation or repair as part of a future design and construction project. Modifications to the existing system will be submitted to the Owner for review and approval in the form of construction details. This shall include things such as bedding, pipe material, backfill, details of pipe fittings, etc. for each installation/pipe repair. ARV installation recommendations will be included.
 - Appendices. Final report and data from the FC. Analysis and calculations as appropriate.
- Draft Report review meeting.
- Final Report.

Subtask 2.3 – Assessment of Saluda River PS 195 FM. Engineer will contract with PURE Technologies, as FC, to perform an internal inspection and condition assessment of approximately 22,300 linear feet of force main, consisting of 30" pre-stressed concrete cylinder pipe (PCCP), beginning at the Saluda River Pump Station and discharging into the gravity collection system.

Work performed under this Task will include:

- **Subtask 2.30.** Prepare a Project Planning Document (PPD): Following-up with previous site inspections, a site visit and planning meeting will be performed to verify and inspect access locations and identify challenges in order to finalize a PPD. This PPD will address responsibilities of the Engineer, CC, FC, and the Owner, will note site access issues, and identify requirements for utilizing station PS 195 to propel the SmartBall and PipeDiver tools along the length of the pipeline. The PPD shall include the following elements at a minimum: Owner responsibilities, final work sites



including mapping and GIS work, internal project processes and communication including form, public communication plan, access issues, insertion and extraction locations, transient pressure monitor installations, schedule of assessments, contingency plan to cover potential scenarios and responses (including critical pipe sections such as aerial crossings, major road crossings, close proximity to surface water, high points, ARVs, and any other critical elements for the work completion.

A meeting will be held with the Owner for Engineer to review the PPD, present the methodology to be used for assigning ratings from field assessments back to pipe segments, prioritization approach, and approach to developing recommendations for repair/rehab/replacement, proposed schedule etc.

- **Subtask 2.31.** A transient pressure monitoring device will be installed to record transient pressure variations, generally detected within millisecond intervals. This recording will continue for a 30-day window, generally occurring during the other planning windows, minimizing project schedule impacts. Engineer to include and coordinate an acceptable method for installation, location of installation with the Owner before completing this task as a part of the PPD. Engineer shall prepare record drawings for this installation if any portion will remain permanently after the monitoring is over.

Conduct one pass with FC's SmartBall technology to detect the presence of gas pockets and/or leaks along the length of the force main.

Conduct non-destructive, electromagnetic inspection of the pipeline using Pure Technologies PipeDiver 30" platform. One pass is assumed along the PCCP segments of the pipeline. Results will be analyzed to locate areas of distress. Pipe wall loss relative to other pipe sections identified will be determined.

Recent repairs that have occurred along the force main length, with differing pipe materials utilized, will not be evaluated for material condition but will be noted for record purposes. Condition assessment of these alternate materials would require a separate pass of the tool with a sensor configuration specific to the alternate materials, and is not believed to be necessary at this time.

- **Subtask 2.32.** External test validations of EM results will be performed to determine wall thickness, areas of internal and external corrosion, and analysis of remaining useful life via Monte Carlo simulations. This will be done using one or more of the following techniques; external MFL, pulsed-eddy current, ultrasonic thickness testing, magnetic particle testing or dye penetrant testing. The Engineer and FC will coordinate verification/validation test pit location site preparation with the Owner prior to mobilizing to the project site. For the purpose of estimating this project cost, a total of three test pit locations are anticipated. The preferred means to accomplish the remaining useful life calculations is via test pits that are chosen at statistically significant locations. Additional ultrasonic thickness measurements can be taken at existing ARV locations or where leaks or pockets of trapped gas are being externally repaired.
- **Subtask 2.33.** Engineer will conduct an evaluation that includes the review and analysis of the field data collected. Engineer will QA/QC information provided based on field assessments from Pure Technologies and make sure the data is correct, accurate, and complete. Based on review of the data, each pipe will be assigned a condition rating. Engineer will develop recommendations for repair/replacement/rehabilitation.

Findings of the field investigation will be presented to the Owner in a workshop within 12 weeks of conclusion of the field work. Preliminary recommendations for repair/replacement/rehab, schedule, and prioritization will be presented.

- **Subtask 2.34.** Following the presentation of findings and preliminary recommendations, a Draft Report will be delivered to the Owner for review and comments. Engineer will conduct a workshop with the Owner to review the Draft Report comments.



- **Subtask 2.35.** A Final Report will be issued following the Draft Reports review workshop.

Deliverables will include:

- A detailed PPD will be submitted by the Engineer for review, comment, modification, and approval by all parties prior to the condition assessment efforts, outlining full obligations of Engineer, FC, CC, and the Owner.
- Meeting with Owner to confirm the PPD.
- The Draft Report including, at a minimum:
 - **Table of Contents**
 - **Certification of QA/QC compliance**, a signed QA/QC page by the company who prepared the report and data.
 - **Executive Summary**
 - **Methodology.** Discussion of each technology chosen including advantages, disadvantages, accuracy and limits of technology, insertion/extraction/tracking, calibration, specific field parameters measured, exceptions to the level of accuracy with details of expected accuracy and why there are exceptions that are specific to the project and areas of lower accuracy (if any). Methodology for assigning ratings from field assessment, relating data from field work back to pipe segments, and prioritizing.
 - **Inspection Results.** Pressure monitoring, PipeDiver electromagnetic inspection results identifying relative wall loss along the length for the force main, Smartball leak and gas pocket detection, and test pipe verification data. Findings (the number of broken pre-stressing wires in each inspected pipe section, leaks or gas pockets found identification and discussion of any pipe wall condition anomalies detected, thicker cylinder pipes, or anything specific for that section). Data will be provided in tabular and spatial format.
 - **Analysis Results.** Summary structural and hydraulic analyses. Pipeline condition rating/categorization of the structural damage found allowing for the prioritization of rehabilitation program efforts. Minimum wall thickness for yield / strength limits of the force main, and statistical analysis of remaining useful life of the pipeline. A performance curve for each design class soil depth combination for each pipe with broken pre-stressing wires calculated using a 3-D non-linear finite element analysis will be provided to confirm the pipe can sustain design loads and current operation conditions. A structural engineering analysis detailing the repair priority for each pipe section with broken pre-stressing wires. The current operating conditions are used to determine what level of distress, particularly the number of broken pre-stressing wires, require action for renewal / replacement of a given pipe segment. Calculated information including parameter, methods for calculation, etc. will be provided.
 - **Conclusions and Recommendations.** Pipeline condition rating, proposed repairs/rehabilitation/replacement, proposed schedule for implementation and prioritization as presented and finalized in the workshop in Task 2.33, information for conducting a root-cause analysis to extend pipeline life, should the segment be identified for subsequent rehabilitation or repair as part of a future design and construction project. Modifications to the existing system will be submitted to the Owner for review and approval in the form of construction details. This shall include things such as bedding, pipe material, backfill, details of pipe fittings, etc. for each installation/pipe repair. ARV installation recommendations will be included.
 - **Appendices.** Final report and data from the FC. Analysis and calculations as appropriate.



- Draft Report review meeting.
- Final Report.

Subtask 2.4 – Property Owner Meetings. The Engineer will attend up to 4 public meetings to notify property owners of the work and answer questions. These meetings may be eliminated if no or minimal property owner impacts are identified. These meetings will be coordinated by the Owner; the Engineer will schedule and facilitate, and will present technical and schedule information at the meetings.

Deliverables will include:

- Meeting materials, minutes, and notes provided as a PDF

Subtask 2.5 – Data Management. The Engineer will manage the force main condition data using Innovyse's InfoNet software. The basis of the asset information will be the Owner's current GIS database. Condition data will be imported to InfoNet and mapped to the existing asset information.

At the conclusion of the force main condition assessment work, the Engineer will assemble a GIS database containing updates to the GIS files with regards to connectivity, diameter, material, location, location of appurtenances such as valves, fittings, etc. Locations shall be to the location accuracy available for the equipment being used. Improved information will be migrated to the current GIS database. The Owner will then migrate this information into their computerized maintenance management system (CMMS). The GIS deliverable will be formatted per the Owner's GIS and CMMS standards for condition data.

Deliverables will include:

- Locations of wire breaks and other findings (air pockets, etc), where different pipe materials exist, ARVs, PVs, etc).
- Data captured directly in the field, and other values and ratings calculated shall be provided to the Owner in compatible digital format for use by the Owner. Format options will be coordinated with the Owner. This includes data captured from Smartball, PipeDiver, CCTV, pressure monitoring and hydraulic analysis, etc.
- For any numbers provided that are not in raw collected form (ie, calculated values), samples of the calculation methods will be provided.
- Draft and Final Geodatabases
- Using the results of the field inspection and the revised condition ratings for the force main segments, Engineer will update the force main condition and criticality analysis recently performed under the TSOMP. This includes updating the Force Main Condition Assessment Plan developed by Brown and Caldwell as part of the TSOMP. The update shall at a minimum include the following:
 - Documentation of the revised condition ratings
 - Re-prioritization of future force main inspection for the next 10-years using the condition and criticality analysis. This shall generate a prioritized list of force mains to be inspected, the driver for the inspection, and the proposed inspection techniques
 - Estimation of force main inspection costs over the 10-year period
 - Estimation of the rehabilitation costs of the force mains to be inspected (based on assumptions)
 - Recommendations for future updates of the condition and criticality tool and the cost, schedule of the updates



- The revised documentation and prioritization shall be provided in electronic format to the Owner for their use going forward for reprioritization as needed based on future field assessments, repairs, etc.

Subtask 2.6 – Regulatory Agency Notification, Permitting, and Temporary Easements. The Engineer will coordinate with the Owner in notifying the SCDHEC at least two weeks in advance of beginning force main testing activities. The Engineer will submit all required permits for performing the work. This includes but is not limited to SCDOT, etc. No new permanent or temporary construction easements are envisioned as required for this work. Access to existing easements may be desired via the crossing of private property and such access will be coordinated by the Engineer. Should the property owner require special consideration in exchange for permission to access the City's easement, then such consideration shall be managed as an Additional Service and require prior authorization by the Owner

Task 3 – SCADA Improvements Bidding and Construction Administration

Subtask 3.1 – Bidding Services. The Engineer will assist the Owner in administering the bid advertisement phase. Work under this task includes:

- Provide a digital version of Final Bidding Documents, in PDF format, for the Owner's use in uploading to their Bid Online system
- Attend the Pre-Bid Meeting, and facilitate the technical discussion
- Answering contractor questions during bidding
- Issuing addenda
- Evaluate bids, follow up on contractor references, and issue Recommendation of Award
- Prepare up to 5 sets of conformed contract documents (i.e.; bidding documents that incorporate addenda) for the contractor's use

Subtask 3.2 – Construction Administration. The construction duration is expected to last 270 days. Engineer will provide the following construction administration services during this period:

- Review submittals
- Facilitate pre-construction meeting with selected contractor and the Owner
- Facilitate monthly progress meetings and one final closeout meeting with the contractor and the Owner
- Respond to Requests for Information (RFIs)
- Issue design clarifications
- Recommend and prepare Change Orders
- Weekly visits to construction sites to observe progress and provide written summary to the Owner.
- Review Applications for Payment. This will include a review of the reported versus field observed progress of work and recommendation to the Owner for payment
- Weekly phone calls with the Owner to review construction progress
- Participate in functional/SCADA testing
- Record drawing preparation and submittals

At substantial completion, The Engineer will visit each site to review the completed improvements. The Engineer expects this inspection to be done over the course of 5 consecutive days. If deficiencies are identified the Engineer will issue a punch list to the contractor.



After final completion, the Engineer will make a final visit to the sites and confirm that the punch list items have been completed. The Engineer will also review and issue record drawings, documenting changes to the design document during construction.

Project deliverables will include: Weekly progress summaries, Responses to RFIs, Submittal Reviews, Pay Application Reviews, Change Orders, Record Drawings, and Meeting Notes.

Task 4 – Additional Services

Due to the nature of the work described in this SCOPE document, and during the performance of the work, a need to modify or add services to the SCOPE may be encountered. In anticipation of such occurrences, the following items have been identified as potentially arising, and a budget has been established for addressing the cost of these additions. These budgeted funds shall not be committed without direct written authorization by the Owner and agreement as to pricing and schedule between the Owner and the Engineer has been established. This listing is not considered as restrictive. Other identified items of need may be substituted or added as the Project progresses and applied against these budgets.

Subtask 4.1 – Repair of Force Main Failures. With the nature of the work including the internal insertion and propelling of inspection tools, acknowledgement is made that failure of force mains already in compromised structural conditions may occur through no fault of the testing party. The Owner has agreed to take primary responsibility for response, SSO mitigation and follow-up in the event that a force main failure occurs during the course of this work. In support of these efforts by the Engineer and its subcontractors, a budget of \$100,000 is established for repair or remediation of such events.

During the course of the investigations, due to potential for encountering conditions suggesting imminent pipe failures, there may arise a need to immediately pursue design activities. In support of the Owner pursuing the acquisition or contracting of design activities, the development of preliminary engineering parameters, or a Basis of Design Report (BODR) may be authorized by the Owner as an Additional Service.

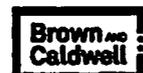
Subtask 4.2 – Resurfacing Requirements. Roadways damaged during the performance of this work, either by the anticipated access to force mains as part of the envisioned scope or as the result of unanticipated force main repair resulting from the performance of the work, may trigger resurfacing requirements by the owner of the roadway. A budget of \$100,000 is established for this activity.

Subtask 4.3 – Contingencies. A budget of \$100,000 is established for this activity. A potential application of contingency budget may be additional SCADA design services pumping stations not initially included in the design services contract.

SCOPE ASSUMPTIONS

The following assumptions were used in the development of the scope and fee:

- The Owner will have primary responsibility for the repair and remediation of failing or leaking forcemains that may be encountered as a result of these assessment activities. The Owner shall provide, at its own expense, required equipment, materials, and labor to accomplish such repair or remediation. Owner-controlled contingency funds established under Task 4.1 are intended to support such efforts if needed.
- The Owner will provide assistance of staff for pumping station operations, planning, and support of FMCA activities.
- The Owner will provide access to and operation of valves, ARVs, and manholes.
- The Engineer will use available record drawings of the pump stations and force mains as the basis for the planned activities.



- Legal right-to-entry on existing City easements for the insertion, installation, or extraction of testing devices will be provided by the Owner.
- Associated with the Force Main Cleaning and CCTV, Subtask 2.4
 - Owner will provide fire hydrant meters and all water used at no charge to the FC.
 - Disposal of FC's vac-truck contents and other collected wastewater will be via nearby discharge points into the Owner's collection system, at locations approved by the Owner staff, and at no cost to the FC.
 - Work will be performed while the stations are off-line. Bypass pumping or Pump /Haul requirements will be provided by the FC.
 - Restoration of extensive landscaping, such as shrubbery, walkways, drives, and fencing, is not included in this Scope of Work. Such locations will be avoided for pit locations to the extent possible.
 - Ground markings of force main locations via standard Utility Locate procedures will be requested by the FC in advance of initiating work. It is assumed that these locates will be adequate for initiating the pit excavations. Should such locate efforts prove ineffective, enhanced locate efforts, such as the use of ground penetrating radar, vacuum excavation, or such exploratory efforts are not included in the Scope.
- The Owner will conduct training classes to prepare representatives of the Engineer, FC, and CC in the sanitary sewer overflow response. Classes are anticipated to last 2 hours.
- The SCADA improvements will be bid as a single construction contract.
- Prequalification of SCADA bidders may be provided as an additional service.
- Project administration is limited to the Engineers scope of work and does not include management of contractors or outside vendors except as defined in the scope of work.
- Invoices will be issued first to the Program Manager for review and comment; and upon approval, invoices will be submitted to City Accounts Payable.
- For project review deliverables, the Engineer will compile all comments received during review meetings and respond to one consolidated set of review comments from the Owner using the City's Standard Comment Form. Responses to comments will be checked for acceptance by individual commenters before being accepted and closing out the individual comment.

Attachments:

Attachment 1 - Data Collection Details for Pure's SmartBall Technology

Attachment 2 - Tool Launching Station for Broad River PS 335



Attachment 1
Data Collection Details for Pure's SmartBall Technology



SMARTBALL TECHNOLOGY OVERVIEW AND DATA COLLECTION DETAILS

1 Overview

Pure Technologies' SmartBall is a free-swimming, acoustic-based technology that detects anomalous acoustic activity associated with leaks or gas pockets in pressurized pipelines. The SmartBall is comprised of a water-tight aluminum alloy core that contains a power source, electronic components and instrumentation including an acoustic sensor, triaxial accelerometer, tri-axial magnetometer, GPS synchronized ultrasonic transmitter and temperature sensor. The aluminum core is encapsulated by a protective outer foam shell. The compressible foam outer shell provides a larger surface area by which the device is pushed by the hydraulic flow of the fluid product while reducing low frequency ambient noise that is typically present in the pipeline. The SmartBall assembly is deployed into the flow of a pipeline, traverses the pipeline, and is captured and extracted at a point downstream. During the inspection the SmartBall device's location is tracked at known points along the pipeline to correlate the inspection data with inspected distance.



Figure 1: SmartBall core and foam shell with SmartBall Receiver (SBR)

2 Identifying Leaks and Gas Pockets

2.1 Acoustic Anomalies Representing Leaks

A leak inside a pressurized pipeline produces an acoustic signal. This acoustic signal is created when the pressurized product inside the pipeline escapes into the lower pressure atmosphere outside the pipe. While the SmartBall traverses the pipeline it continuously records this acoustic data and is evaluated later to identify acoustic activity that may be associated with leaks along the pipeline. As the SmartBall is rolling along the bottom of the pipeline, it will always pass within one pipe diameter of the leak.

As the SmartBall approaches a leak the acoustic signal detected by the SmartBall will increase. The acoustic signal will peak and reach a crescendo at the point at which the SmartBall passes the point of the leak and will then diminish as the SmartBall continues away from the leak. This is clearly evident in Figure 2.

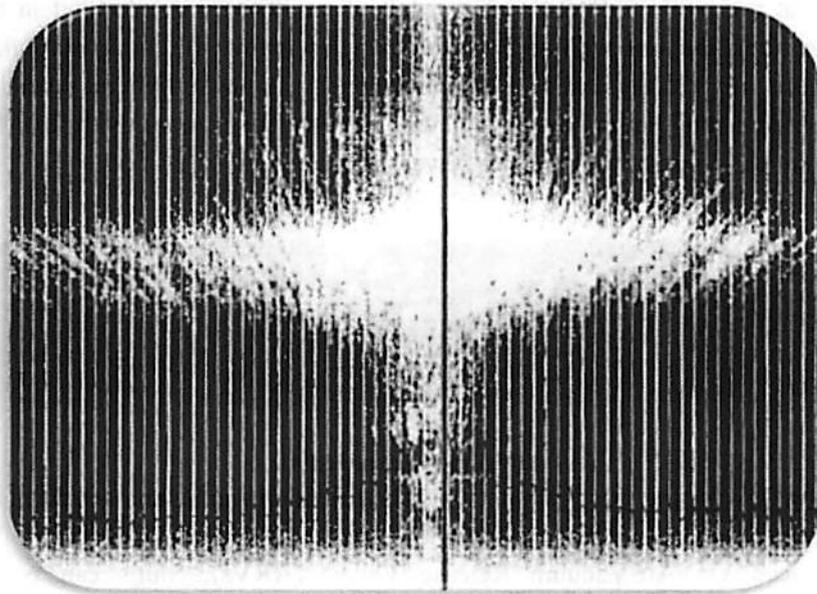


Figure 2: Leak detected in Analysis Software

The acoustic properties of potential leaks are further evaluated to estimate the approximate magnitude of a leak. Pure Technologies reports leaks in three categories: small, medium and large. Small leaks are estimated to be in the range of than 0-2 Imperial gallons per minute (GPM)0 - 7.5 Liters per minute (L/min). Medium leaks are estimated to be in the range of 2-10 GPM7 - 37.5 L/min and large leaks are estimated to be greater than 10 GPM37.5 L/min.

Pure Technologies has invested heavily into identifying the characteristics of an acoustic anomaly that would be representative of a leak. The characteristics typical of a real leak are:



- The range of frequencies present increases as the ball approaches the leak
- The frequencies that appear first, grow in intensity as the SmartBall approaches the leak
- The frequencies that appear to indicate a leak are consistent as the SmartBall approaches the leak.

2.2 Acoustic Anomalies Representing Gas Trapped in a Pipeline

Gas trapped in a pipeline has (3) three distinct acoustic signals that are detectable using SmartBall.

- **Entrained Air:** This classification of trapped gas is characterized by small, moving bubbles of gas within the pipeline. Entrained air is not typically static in the force main and frequently migrates with the flow. These moving pockets of gas can be introduced in three ways: at the pumping station as a result of air becoming entrained in the sewage as it plunges into the wet well and/or inefficiencies within the pump station, at the tail of a hydraulic jump at the end of a fully developed gas pocket whereby small pockets of gas diffuse into the liquid phase and are carried downstream with the flow, or by the biochemical processes inherent to sewer mains.

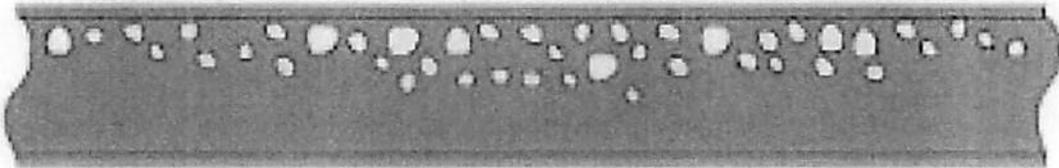


Figure 3: Entrained Air

- **Slug or Developing Gas Pockets:** This classification can be characterized as small pockets of trapped gas that often develop as a result of an amalgamation of bubbles or are introduced via Air/Vacuum Release Valves (ARVs). Slugs can be either static or migratory. If they are found at a localized high point they are likely static, if not they are likely migrating towards a high point.

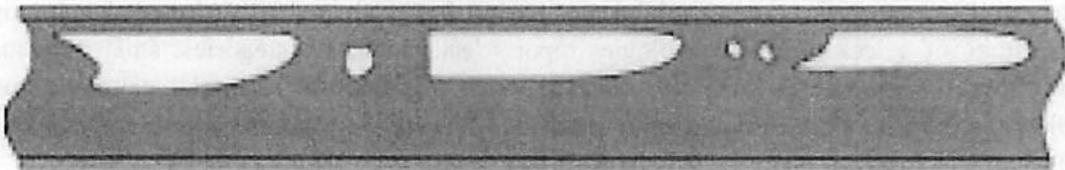


Figure 4: Gas Slugs



- Fully Developed Gas Pockets:** Fully Developed Gas Pockets are usually located at localized high points along a force main. These develop as a result of slugs that have accumulated at a high point to the point that they extend into the downward slope of the pipe. A fully developed gas pocket typically has a hydraulic jump prior to the re-submergence of the pipe creating an area of turbulent flow and gas dissolution into the liquid phase. Due to the turbulent nature of the hydraulic jump and frequent wet/dry cycles at these locations from changes in flow condition, these areas are at a higher risk of failure than other portions of the gas pocket.

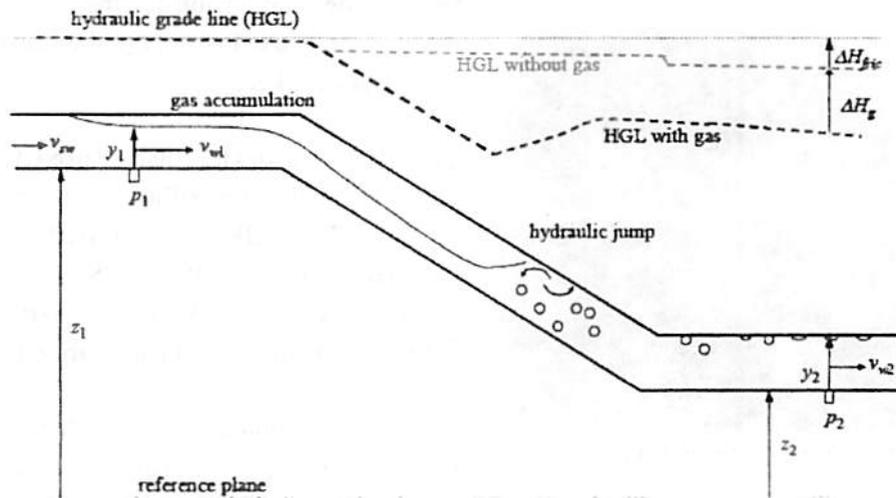


Figure 5: Diagram of a fully developed gas pocket

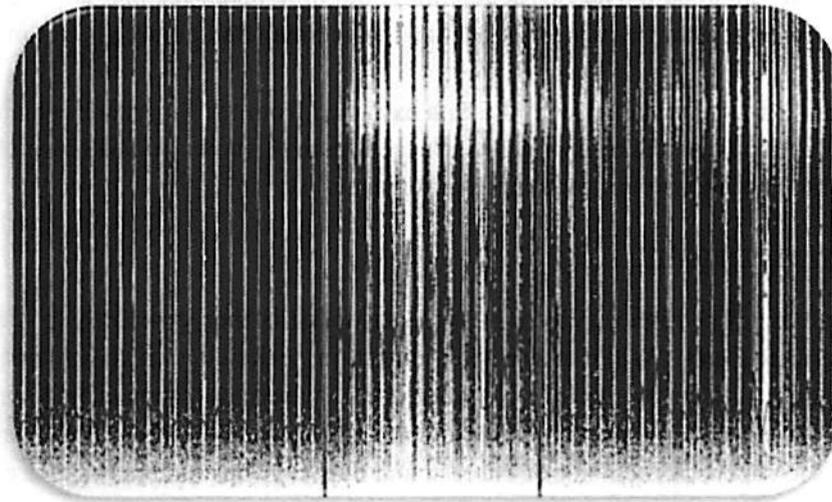


Figure 6: Gas Pocket detected in Analysis Software

3 SmartBall Tracking

The on-board accelerometer records the rotation of the SmartBall whereby this data can be translated to a rate of rotation and from there to a velocity profile of the device as it travels the entire length of the pipeline. This data is aligned with the acoustic recordings to give a precise location of any recorded anomaly. To correlate the accelerometer data to an absolute position and time a reference point is required. Tracking the position of the SmartBall via SmartBall Receivers (SBRs) provides a time and position to be stamped on the velocity profile resulting in a position

versus time relationship for the entire run of the device that is used to report the location of the leak of gas pocket.

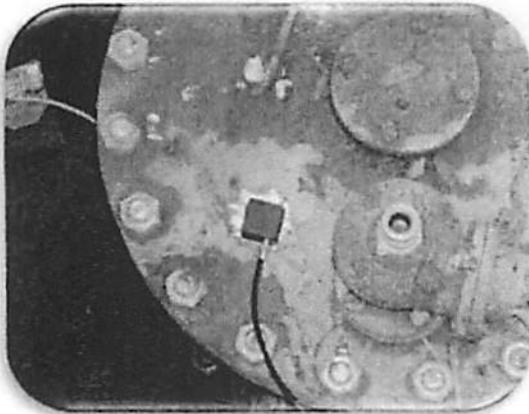


Figure 4: SMS Adhered to Flange

The SBR is a device that is used to track the position of the SmartBall as it traverses the pipeline. The SBR is comprised of a surface mounted sensor (SMS), GPS receiver, and a processing computer. Both the SmartBall and the SBR are synchronized to standard GPS time.

A Surface Mounted Sensors (SMS) is mounted to the pipeline at planned locations and is connected to a SBR via coaxial cable. The SBR and SMS combination detect ultrasonic pulses emitted from the SmartBall. The SBRs determine the time taken for the pulse to travel from the SmartBall to the SBR, and calculate the location of the SmartBall at any given time.

This locational data is paralleled with the data extracted from the SmartBall which is then used to identify the locations of leaks and gas pockets. Figure 4 shows a SMS, which is typically mounted to the pipeline itself or pipeline appurtenance.

4 Advantages of SmartBall

The SmartBall acquires high quality acoustic data which is then evaluated to identify leaks and pockets of trapped gas. While other leak detection techniques such as noise loggers and correlators may identify a single leak of gas pocket between each sensor, they cannot accurately locate the limits of the anomaly nor identify multiple anomalies whereas the SmartBall travels directly past each acoustic anomaly of interest, and thus significant advantages are recognized:

- Medium and Large Diameter Pipe: The SmartBall device has successfully inspected and detected leaks on a wide range of medium and large diameter pipelines (>12 inches and



over 96 inch diameter). Many conventional leak detection technologies (e.g. correlators) have limitations that preclude their use on medium and large diameter pipe.

- **Pipe Material:** The SmartBall device's leak detection ability is not affected by pipe material. Because the tool passes by the point at which the acoustic event is being created, the pipe wall is not relied on to transmit the acoustic event through the line to a sensor located far away from the actual event of interest. This greatly increases the device's sensitivity and ability to distinguish between separate acoustic events.
- **Sensitivity:** The sensitivity of all leak detection technologies is a function of several variables and as a result, no resolute thresholds can be established. However, the acoustic sensor inside the SmartBall always passes within one pipe diameter of an acoustic anomaly and therefore it can be used to identify very small leaks due to the proximity of the SmartBall to the leak. It should be noted, the SmartBall cannot differentiate between a true leak, a simulated leak, and/or the potential noise of a pressure reducing valve. As such, the acoustic anomalies corresponding to features on the main should be investigated further in the field.
- **Length of Survey:** The SmartBall device has the ability to record acoustic data for over 12 hours. Depending on flow rates, the tool can inspect long lengths of pipe during a single deployment. The longest single recording within a pipeline with a single deployment had the SmartBall record acoustic data and inspect a length of pipeline exceeding 30 miles/48 kilometers.

All non-destructive testing technologies have unique capabilities and limitations that affect the accuracy and efficacy of the technology. SmartBall has the following limitations:

- 4) **Minimum Pressure:** The acoustic activity associated with a leak is derived from the pressure differential across the pipe wall. With little to no pressure differential the SmartBall will not detect leakage as there will be no associated acoustic activity. A minimum pressure of 15 PSI is required to detect small leaks. Pressure is not required to detect pockets of trapped gas.
- 5) **Ambient Noise:** SmartBall detects and reports anomalies that have acoustic characteristics similar to leaks or gas pockets on pressurized pipelines. However, other forms of ambient noise may be identified during the data analysis. For medium and large leaks and fully developed gas pockets there is very little that can match these acoustic characteristics and therefore, these events are clearly identified. For small leaks and entrained air, there may be other forms of ambient noise that are difficult to evaluate. Pure Technologies has invested



significant resources into characterizing acoustic anomalies and consequently believes leaks and gas pockets described in this report are true and accurate, unless otherwise noted. However, unknown pressure reducing valves, cracked valves in close proximity, interconnected pipelines that have not been completely isolated and leaks in pipelines immediately adjacent to the subject pipe do contain a similar acoustic signature and could be reported as leaks in this report. Cars, pumps, boat traffic and other forms of common ambient noise should not be reported as leaks or gas pockets as they contain different acoustic signatures.



Attachment 2
Tool Launching Station for Broad River PS 335



**EXHIBIT B
COMPENSATION**

City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

Compensation for services provided under Tasks 1 through 4 as outlined in Exhibit A, Scope of Services, will be as outlined below. Compensation shall be on a ~~lump-sum~~ not to exceed basis for professional services. Project Management will be billed based upon the percentage of work completed. The total project effort represents the upper limit fee of this authorization. WED

The total fee for the agreement is \$1,632,000.00. The breakdown of the fee is shown in Table 1.

Table 1.. Fee Schedule		
Task	Description	Effort (\$)
Task 1	Project Administration, including: Scheduling; Project management of testing activities; Budget management, invoicing, QA/QC; Progress Reporting; Scope and Budget Preparation. This task will be billed monthly based on the percent of the overall project administration effort completed.	\$115,000
Task 2 – Force Main Condition Assessment		
Subtask 2.1	Support by Civil Contractor for the insertion and propulsion of force main testing tools associated with Tasks 2.2. and 2.3. Disaggregation is as follows:	\$227,000
	211. Broad River Site construction	\$142,000
	212. Broad River Site support crew	\$17,000
	213. Saluda River Site construction	\$60,000
	214. Saluda River Site support crew	\$8,000
Subtask 2.2	Assessment of the Broad River PS 335 Force Main. Disaggregation is as follows:	\$337,000
	220. Delivery of Project Planning Document (PPD)	\$90,000
	221. 16-inch and 20-inch FM Field Inspection: pressure transient monitoring, leak detection, gas pocket detection, electromagnetic (wall thickness) analysis (20% upon completion of field activities, 70% upon BC's satisfactory review of initial report, 10% once Final Report issued by BC)	\$111,000
	222. External Field Test Verifications of EM Results	\$46,000
	223. Analyses and Workshop to Present Findings	\$35,000
	224. Draft Report	\$15,000
	225. Final Report	\$8,000
Subtask 2.3	Assessment of the Saluda River PS 195 Force Main. Disaggregation is as follows:	\$465,000
	230. Delivery of Project Planning Document (PPD)	\$75,000
	231. 30-inch PCCP FM Field Inspection: pressure transient monitoring, leak detection, gas pocket detection, electromagnetic (wall thickness) analysis (20% upon completion of field activities, 70% upon BC's satisfactory review of initial report, 10% once Final Report issued by BC)	\$282,000
	232. External Field Test Verifications of EM Results	\$50,000
	233. Analyses and Workshop to Present Findings	\$35,000
	234. Draft Report	\$15,000
	235. Final Report	\$8,000

Task	Description	Effort (\$)
Subtask 2.4	Property Owner Meetings	\$10,000
Subtask 2.5	Data Management	\$32,000
Subtask 2.6	Regulatory Agency Notifications	\$5,000
Task 3 SCADA Improvements Bidding and Construction Administration		
Subtask 3.1	Bidding Services	\$22,000
Subtask 3.2	Construction Administration	\$119,000
Task 4 - Additional Services (Client Controlled Contingency)		
Subtask 4.1	Repair of Force Main Failures	\$100,000
Subtask 4.2	Resurfacing Requirements	\$100,000
Subtask 4.3	Contingency Items	\$100,000
Total		\$1,632,000

The Engineer has agreed to subcontract a portion of the work, as outlined in Exhibit D. The total subconsultant utilization is 51.7%.

**EXHIBIT D
SUBCONSULTANT FIRM INFORMATION**

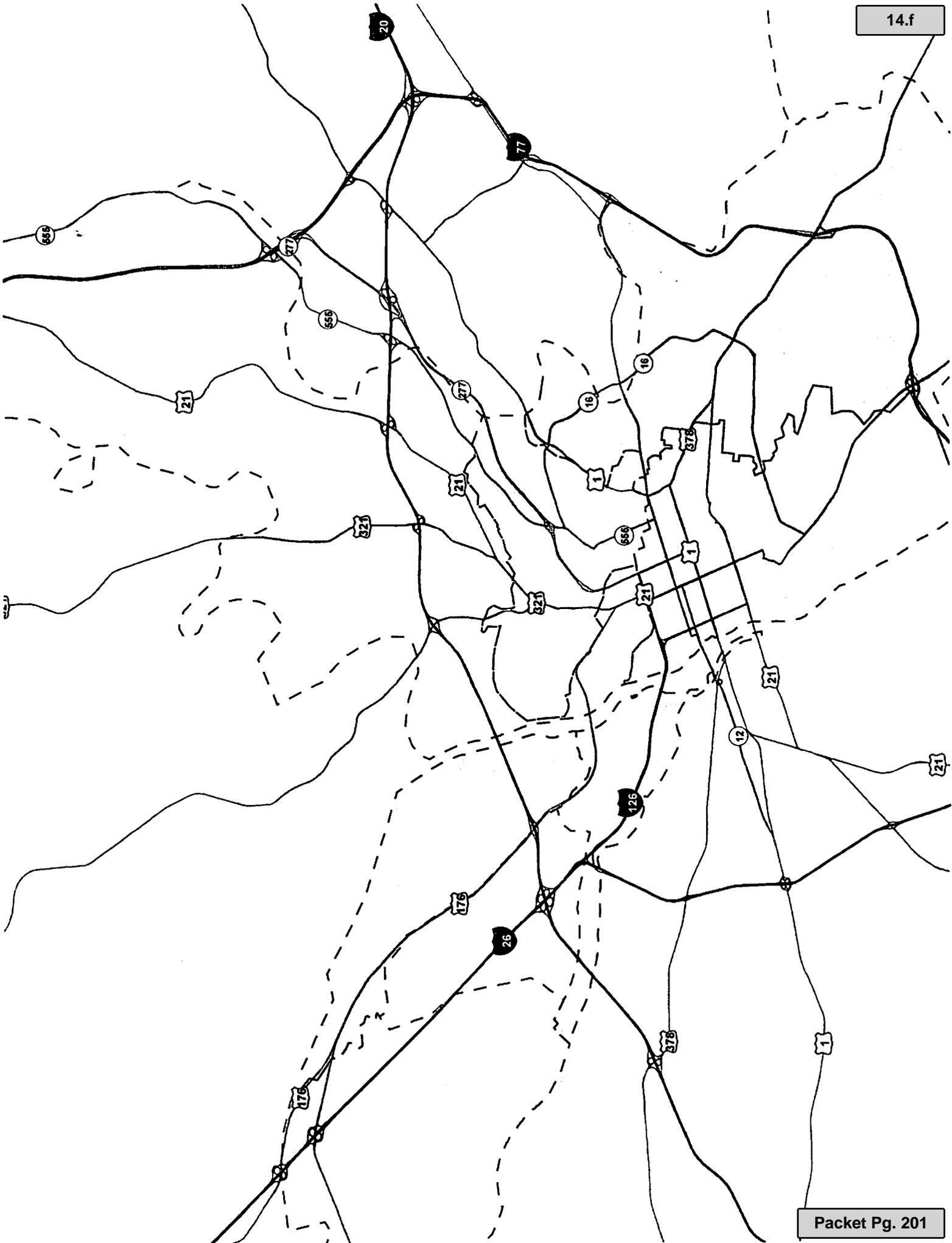
City of Columbia
CIP Project # SS7333

Force Main Condition Assessment and SCADA Improvements

This listing represents all firms proposed to provide subconsulting services under this agreement.

Subconsultant Information				
Firm Name and Address	Contact Name and Telephone Number	% of Contract	Services to be Provided	Dollar Value of Service
M. B. Kahn Construction Company, Inc. P.O. Box 1179 Columbia, SC 29202	Jared McMullan (803) 227-1279	12.9	Civil Contractor Support	\$210,750
Pure Technologies 3399 Peachtree Road, NE Suite 400 Atlanta GA	William Craven (407) 408-7631	14.7	Broad River FM Assessment	\$240,000
Pure Technologies 3399 Peachtree Road, NE Suite 400 Atlanta GA	William Craven (407) 408-7631	24.1	Saluda River FM Assessment	\$393,000

Appendix A



Appendix B

RESOLUTION NO.: R-2010-091

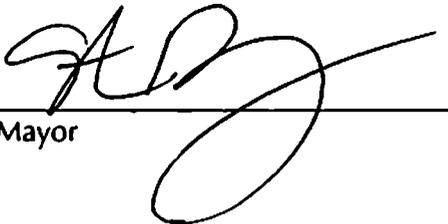
Authorizing the City Manager to execute an agreement between the City of Columbia and Richland County for sewer service to certain properties within Richland County's 208 service area

ORIGINAL
STAMPED IN REC

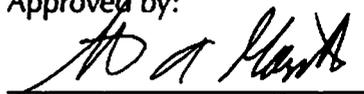
BE IT RESOLVED by the Mayor and City Council this 19th day of October, 2010, that the City Manager is authorized to execute the attached Lower Richland Sewer Service Agreement between the City of Columbia and Richland County to provide sewer service to certain properties located within Richland County's 208 service area.

Requested by:

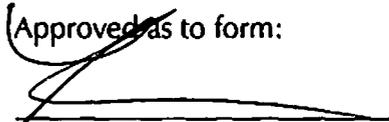
City Manager _____



Mayor

Approved by:


City Manager

Approved as to form:


City Attorney

ATTEST:


City Clerk

Introduced: 10/19/2010
Final Reading: 10/19/2010

County may pay the fair market value as a lump sum within thirty days after notifying the City of Columbia that it will acquire the sewer system serving the Additional Properties or the Properties. For the purchase of the sewer system serving the Properties, Richland County agrees to pay the City of Columbia a one-time fee for the transfer of the sewer system serving the Properties. The one-time fee will be based on an annual average of the utility fees for the preceding two years of the sewer utility fees generated from the Properties and will be due and payable within thirty days after Richland County notifies the City of Columbia that it will acquire the sewer system serving the Properties or the Additional Properties.

4. The City of Columbia, in its sole and exclusive discretion, will determine and approve by City Ordinances the sewer tap rate for any taps sold, sewer service fees or any other fees for sewer service to the Properties. Any of these City Ordinances may be amended from time to time in the sole and exclusive discretion of Columbia City Council. The Properties shall be subject to and fully comply with all applicable rules, regulations and ordinances of the City of Columbia, which may be amended from time to time in the sole and exclusive discretion of Columbia City Council or the City of Columbia. The City of Columbia, through its City Manager or his/her designee, agrees to notify the Richland County Administrator concerning any proposed and/or pending changes to any applicable rules, regulations and ordinances of the City of Columbia concerning sewer tap rates, sewer service fees or any other fees for sewer service.

5. Until such time as the sewer system serving the Properties and the Additional Properties is transferred to Richland County, the City of Columbia will collect and retain all charges for sewer taps and sewer service to the Properties and the Additional Properties.

6. If Richland County has not acquired the Certificate to Operate from DHEC on or before October 1, 2017, Richland County agrees to make a request for and consents to an amendment to the 208 plan by Central Midlands Council of Governments which would add the sewer system serving or to serve the Properties and the Additional Properties to the City of Columbia's 208 sewer service area. The City of Columbia reserves the right to extend the date Richland County must acquire the Certificate to Operate, in its sole and exclusive discretion. The City of Columbia shall grant such an extension, not to exceed two years, if Richland County has completed the design of the aforesaid sewer collection system and treatment plant as is necessary to serve the Properties and the Additional Properties within two (2) years of the date of this Agreement and if Richland County has commenced construction of the aforesaid sewer collection system and treatment plant. Any Agreement to extend the date must be in writing and signed by the parties. Richland County agrees to provide to the City of Columbia semi-annual reports detailing Richland County's progress in meeting the required timelines and deadlines set forth in this Agreement.

7. All costs of design and construction of the sewer system, as well as any upgrades required to the City of Columbia's existing sewer system necessary to provide adequate sewer service to the Properties, in the City of Columbia's sole and exclusive discretion, will be the sole responsibility of the owners of the Properties requesting sewer service and shall be in accordance with all applicable rules, regulations and ordinances of the City of Columbia, which may be amended from time to time in the sole and exclusive discretion of Columbia City Council or the City of Columbia. The design and construction of the sewer system, as well as any upgrades required to the City of Columbia's existing sewer system necessary to provide adequate sewer service to the Properties is subject to the City's approval; however, the City of Columbia will provide and make available to Richland County all design and construction plans approved as a part of this Agreement. The City of Columbia, through its City Manager or his/her designee, agrees to notify the Richland County Administrator concerning any proposed and/or pending changes to any applicable rules, regulations and ordinances of the City of Columbia concerning sewer tap rates, sewer service fees or any other fees for sewer service.

8. Both parties hereby acknowledge that the timelines and deadlines set forth in this Agreement are important to the proper planning and operation of the services outlined herein and, as such, time is of the essence. Failure of either party to meet the required deadlines will be deemed a breach of the Agreement and

is hereby acknowledged by both parties to be material. No extension or waiver of such deadlines shall be enforceable absent written agreement among all parties hereto. In the event either party shall fail to comply with its obligations set forth in the Agreement, and such default shall continue for a period of thirty (30) days after written notice of default has been provided by the other party, then the complaining party shall be entitled to pursue any and all remedies provided under South Carolina law and/or terminate this Agreement.

9. The failure of either party to insist upon the strict performance of any provision of this Agreement shall not be deemed to be a waiver of the right to insist upon strict performance of such provisions or of any other provision of this Agreement at any time. Waiver of any breach of this Agreement by either party shall not constitute waiver of subsequent breach.

10. Written notice to the City shall be made by placing such notice in the United States Mail, Certified, Return Receipt Requested, postage prepaid and addressed to:

City of Columbia
Attention: City Manager
Post Office Box 147
Columbia, SC 29217

With a copy to:

Columbia City Attorney
Post Office Box 667
Columbia, SC 29201

Written notice to the County shall be made by placing such notice in the United States Mail, Certified, Return Receipt Requested, postage prepaid and addressed to:

Richland County
Attention: County Administrator
Post Office Box 192
Columbia, SC 29202

11. The transfer of ownership from the City of Columbia to Richland County of the sewer system serving the Properties and the Additional Properties is contingent upon compliance with, and shall be made only in conformity with any applicable bond ordinances and/or any and all applicable bond covenants; which may require, among other things, consent and/or approval from one or more parties not made a party to this Agreement prior to transferring ownership of the sewer system serving the Properties and the Additional Properties. In the event the transfer of ownership of the sewer system serving the Properties and the Additional Properties will violate any applicable bond ordinances and/or any and all applicable bond covenants, the City of Columbia will have no obligation to transfer to Richland County the sewer system serving the Properties or the Additional Properties.

12. This Agreement represents the entire understanding and Agreement between the parties hereto and supersedes any and all prior negotiations, discussions, and Agreements, whether written or oral, between the parties regarding the same. No amendment or modification to this Agreement or any waiver of any provisions hereof shall be effective unless in writing, signed by both parties.

13. This Agreement shall be interpreted pursuant to the laws of the State of South Carolina.

14. If any provision of this Agreement is determined to be void or unenforceable, all other provisions shall remain in full force and effect.

15. The captions and headings throughout this Agreement, if any, are for convenience and reference only, and the words contained therein shall in no way be held or deemed to define, limit, describe, modify, or add to the interpretation, construction, or meaning of any provision of or scope or intent of this Agreement.

16. This Agreement does not and shall not require the City of Columbia to provide sewer service to the Properties or to any other property.

17. This Agreement shall not be binding upon the City until such time as City Council has approved this Agreement and has authorized the City Manager to execute this Agreement. This Agreement is subject to change until such time as City Council has approved this Agreement and has authorized the City Manager to execute this Agreement.

IN WITNESS WHEREOF, the parties have this __ day of _____, 2010, set their respective hands and seals.

WITNESSES:

Carri G. Amico
Eric D. Salley

CITY OF COLUMBIA

BY: Steven A. Gantt
ITS: City Manager

Deather Brown
John J. Salley

RICHLAND COUNTY

BY: J. Milton Pope
ITS: County Administrator



EXHIBIT C**61-67, Appendix A; Unit Contributory Loadings to All Domestic Wastewater Treatment Facilities**

Type of Establishment	Hydraulic Loading (GPD)
A. Airport:	
1. Per Employee	10
2. Per Passenger	5
B. Apartments, Condominiums, Patio Homes:	
1. Three (3) Bedrooms (Per Unit)	400
2. Two (2) Bedrooms (Per Unit)	300
3. One (1) Bedroom (Per Unit)	200
C. Assembly Halls: (Per Seat)	5
D. Barber Shop:	
1. Per Employee	10
2. Per Chair	100
E. Bars, Taverns:	
1. Per Employee	10
2. Per Seat, Excluding Restaurant	40
F. Beauty Shop:	
1. Per Employee	10
2. Per Chair	125
G. Boarding House, Dormitory: (Per Resident)	50
H. Bowling Alley:	
1. Per Employee	10
2. Per Lane, No Restaurant, Bar or Lounge	125
I. Camps:	
1. Resort, Luxury (Per Person)	100
2. Summer (Per Person)	50
3. Day, with Central Bathhouse (Per Person)	35
4. Travel Trailer (Per Site)	175
J. Car Wash: (Per Car Washed)	75
K. Churches: (Per Seat)	3
L. Clinics, Doctor's Office:	
1. Per Employee	15
2. Per Patient	5
M. Country Club, Fitness Center, Spa: (Per Member)	50
N. Dentist Office:	
1. Per Employee	15
2. Per Chair	8
3. Per Suction Unit; Standard Unit	370

	4. Per Suction Unit; Recycling Unit	95
	5. Per Suction Unit; Air Generated Unit	0
O.	Factories, Industries:	
	1. Per Employee	25
	2. Per Employee, with Showers	35
	3. Per Employee, with Kitchen	40
	4. Per Employee, with Showers and Kitchen	45
P.	Fairgrounds: (Average Attendance, Per Person)	5
Q.	Grocery Stores: (Per one thousand (1,000) Square Feet, No Restaurant)	200
R.	Hospitals:	
	1. Per Resident Staff	100
	2. Per Bed	200
S.	Hotels: (Per Bedroom, No Restaurant)	100
T.	Institutions: (Per Resident)	100
U.	Laundries: (Self Service, Per Machine)	400
V.	Marinas: (Per Slip)	30
W.	Mobile Homes: (Per Unit)	300
X.	Motels: (Per Unit, No Restaurant)	100
Y.	Nursing Homes:	
	1. Per Bed	100
	2. Per Bed, with Laundry	150
Z.	Offices, Small Stores, Business, Administration Buildings: (Per Person, No Restaurant)	25
AA.	Picnic Parks: (Average Attendance, Per Person)	10
BB.	Prison/Jail:	
	1. Per Employee	15
	2. Per Inmate	125
CC.	Residences: (Per House, Unit)	400
DD.	Rest Areas, Welcome Centers:	
	1. Per Person	5
	2. Per Person, with Showers	10
EE.	Rest Homes:	
	1. Per Bed	100
	2. Per Bed, with Laundry	150
FF.	Restaurants:	
	1. Fast Food Type, Not Twenty Four (24) Hours (Per Seat)	40
	2. Twenty Four (24) Hour Restaurant (Per Seat)	70
	3. Drive-In (Per Car Served)	40
	4. Vending Machine, Walk-up Deli (Per Person)	40
GG.	Schools, Day Care:	
	1. Per Person	10

	2. Per Person, with Cafeteria	15
	3. Per Person, with Cafeteria, Gym and Showers	20
HH.	Service Stations:	
	1. Per Employee	10
	2. Per Car Served	10
	3. Car Wash (Per Car Washed)	75
II.	Shopping Centers, Large Department Stores, Malls: (Per one thousand (1,000) Square Feet, No Restaurant)	200
JJ.	Stadiums, Coliseums: (Per Seat, No Restaurant)	5
KK.	Swimming Pools: (Per Person, with Sewer Facilities and Showers)	10
LL.	Theaters: Indoor (Per Seat), Drive In (Per Stall)	5

SC ADC 61-67

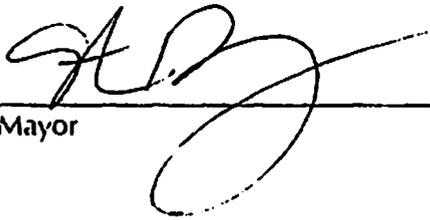
RESOLUTION NO.: R-2010-091

Authorizing the City Manager to execute an agreement between the City of Columbia and Richland County for sewer service to certain properties within Richland County's 208 service area

BE IT RESOLVED by the Mayor and City Council this 19th day of October, 2010, that the City Manager is authorized to execute the attached Lower Richland Sewer Service Agreement between the City of Columbia and Richland County to provide sewer service to certain properties located within Richland County's 208 service area.

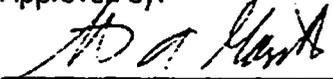
Requested by:

City Manager _____



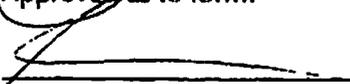
Mayor

Approved by:



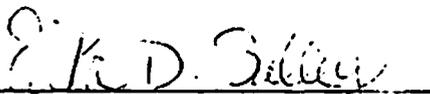
City Manager

Approved as to form:



City Attorney

ATTEST:



City Clerk

Introduced: 10/19/2010

Final Reading: 10/19/2010

MEMORANDUM
Office of the City Attorney

TO: Erika Salley, City Clerk

FROM:  Shari Lynn Ardis, Legal Admin. Coordinator

DATE: November 8, 2010

RE: RESOLUTION NO.: R-2010-091
Authorizing the City Manager to execute an agreement between the City of Columbia and Richland County for sewer service to certain properties within Richland County's 208 service area

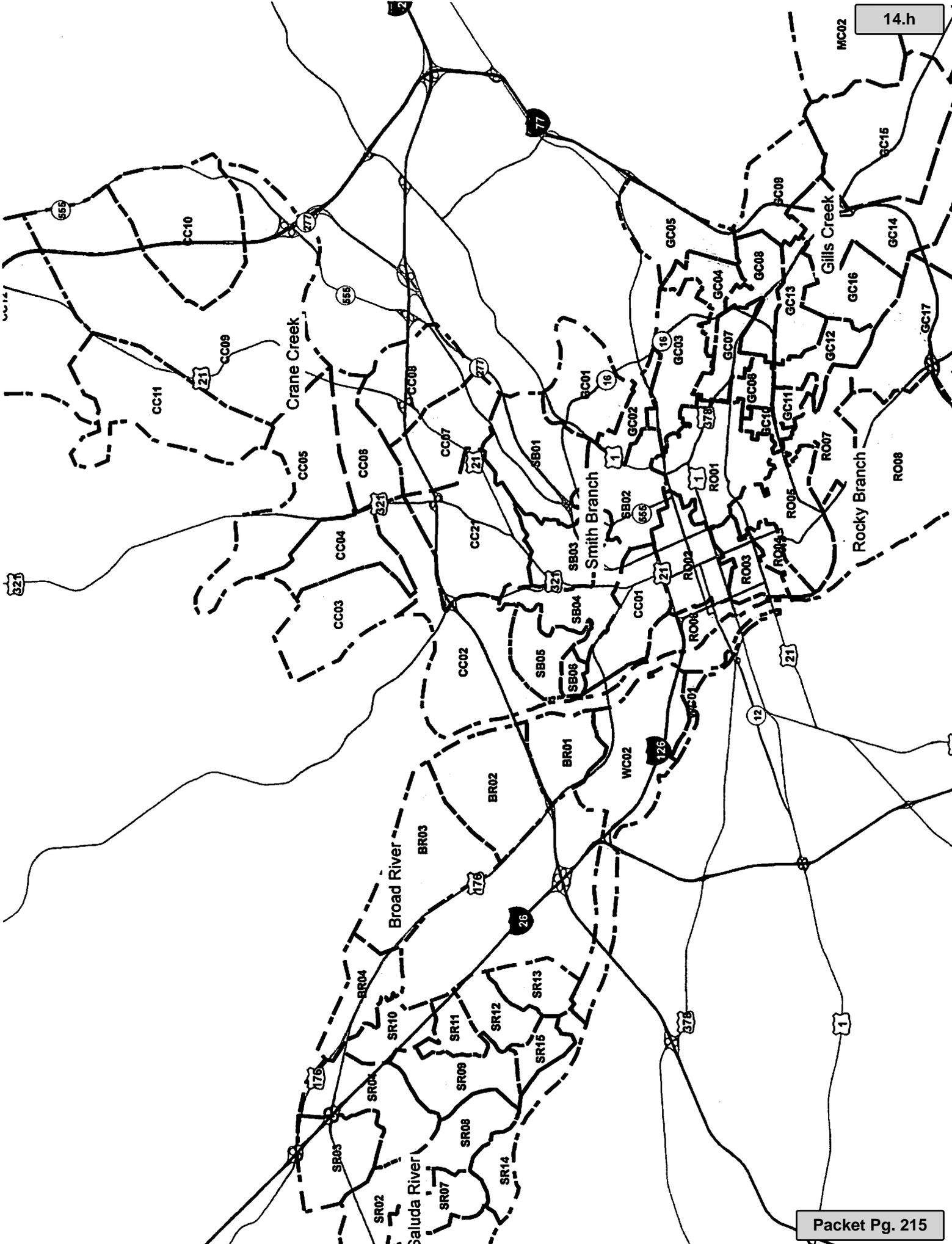
Please place the attached document in the City's permanent records with the corresponding resolution.

Thank you.

/sla
Attachment



Appendix C



14.h

Wayne Iseman

From: Johnson, Nadia M <nmjohnson@columbiasc.net>
Sent: Tuesday, October 18, 2016 4:45 PM
To: Wayne Iseman
Cc: Lizewski, Shannon
Subject: Request for Signatures for Force Main Condition Assessment and SCADA Improvements Agreement
Attachments: Acknowledgement of Receipt.Consent Decree.doc; Appendix A to CD_20140529085030_668113.pdf; Appendix B to CD_20140529085030_820026.pdf; Appendix C to CD_20140529085030_919756.pdf; Appendix D to CD_20140529085031_130578.pdf; Appendix E to CD_20140529085031_191234.pdf; Appendix F to CD_20140529085031_251284.pdf; Appendix G to CD_20140529085031_434858.pdf; Appendix H to CD_20140529085031_508370.pdf; Appendix I to CD_20140529085032_472195.pdf; Final Consent Decree_20140529085032_628295.pdf; 1617100841 - Brown and Caldwell Engineering Agreement.pdf

Hello Mr. Iseman – please see the attached Contract referenced above for Force Main Condition Assessment and SCADA Improvements. If you would please, review the Contract if it meets with your approval, please sign and return two originals to me at the below referenced address. I will have to have two original signatures (blue ink) to proceed with execution. On Exhibit B “lump sum” was changed to “not to exceed” please acknowledge by initialing. If you have any questions, please give me a call at 545-4071.

Also, please sign the attached Acknowledge of Receipt form for Consent Decree, scan and return to me.

Shannon Lizewski has been copied on this to keep this moving as I will be out of the office until Monday, October 24, 2016.

Thank you
Nadia



We Are Columbia

Nadia M. Johnson
Contracts Specialist II
 Procurement and Contracts Department
 1136 Washington Street, 7th Floor
 Columbia, SC 29201
nmjohnson@columbiasc.net
 (803) 545-4071 phone
 (803) 545-3322 fax

Appendix E

APPENDIX E
City of Columbia Metro WWTP
Capital Improvement Program for Columbia Metro WWTP

Columbia has underway a Capital Improvement Program for the Columbia Metro WWTP, as described further below. The projects included in this Program are: (1) Metro WWTP Headworks Project (Capital Improvement Project (“CIP”) SS6722); (2) Aeration Improvements (CIP No. SS7182); (3) Metro WWTP Disinfection Improvements (CIP No. 7058); (4) Metro WWTP Secondary Clarifier Improvements (CIP No. SS6871); (5) Metro WWTP Train 2 Pump Station Improvements (CIP No. SS7155); and (6) Metro WWTP DAF Improvements (CIP No. SS7197). These capital improvements include construction of new Equipment as well as the upgrade and rehabilitation of existing Equipment. The schedule for the Capital Improvement Program for Columbia Metro WWTP is as follows:

Project 1: SS6722 – Metro WWTP Headworks Project

Project Description: Construction is underway of a new 150 mgd (firm capacity) influent pump station (IPS) and preliminary treatment facility (PTF) at the Metro WWTP. The IPS consists of a 2-stage lift station with screw pumps. The PTF includes mechanical barscreens and vortex grit tanks. Flow distribution is also provided to split flow to Liquid Treatment Trains 1 and 2, and to divert flow to the flow equalization lagoon.

Construction Start Date:

July 2010

Construction Completion Date:

June 30, 2014

Project 2: SS7182 – Aeration Improvements

Project Description: This project includes aeration tank improvements which are designed to upgrade the older existing components. This project will focus on the replacement of the diffuser heads within the Train 2 aeration tanks. Complete replacement of the aeration diffusers rather than partial replacement is critical for maintaining a working balance between the aeration blower pressures/air flows and fine bubble diffusers for optimal system performance. Approximately 2,700 diffuser heads will be replaced.

Start Date:

January 2014

Completion Date:

December 31, 2015

Project 3: SS7058 – Metro WWTP Disinfection Improvements

Construction Completed – SCDHEC Permit to Operate in process

Project 4: SS6871 – Secondary Clarifier Improvements at the WWTP

Project Description: This project involves improvements within Treatment Trains Nos. 1 and 2 and includes the refurbishment of existing secondary clarifiers Nos. 1 through 10. Existing mechanical equipment will be replaced, and new electrical and instrumentation work and miscellaneous other work tasks will be included in this area.

Construction Start Date:

November 2011

Construction Completion Date:

June 30, 2014

Project 5: SS7155 – Metro WWTP Train 2 Pump Station Improvements

Construction Completed – SCDHEC Permit to Operate in process

Project 6: SS7197 – Metro WWTP DAF Improvements

Project Description: Replace flights in Train 2 DAF basins. As part of this project, other ancillary equipment in the basins will be assessed.

Construction Start Date:

July 2012

Construction Completion Date:

December 31, 2013

Appendix F

APPENDIX F
City of Columbia WCTS
Capital Improvement Program for Wastewater
Collection and Transmission System

Columbia has underway a Capital Improvement Program for the Wastewater Collection and Transmission System, as described further below. The projects included in this Program are: (1) Broad River Pump Station Improvements (CIP No. SS7101); (2) North Columbia Pump Station Improvements (CIP No. SS7102); (3) West Columbia Pump Station Improvements (CIP No. SS711501); (4) Installation of 20,000 Linear Feet of 42-inch Forcemain from West Columbia Pump Station to WWTP (CIP No. SS711502); and (5) Saluda River Pump Station Improvements (CIP No. SS7116). The schedule for the Capital Improvement Program for Columbia's WCTS is as follows:

Project 1: SS7101 – Broad River Pump Station Improvements

Project Description: Expand pump station capacity from 5 MGD to 9 MGD. Project includes new piping, new dry pit sewage pumps, new pump control valves, hydraulic surge protection, flow metering, new bypass connections and sump, generator, new electrical conduits and associated power and control wiring, channel grinders, SCADA improvements, a new liner system for the wetwell, and rehabilitation of influent manholes.

Construction Start Date:

June 2010

Construction Completion Date:

June 30, 2013

Project 2: SS7702- North Columbia Pump Station Improvements

Project Description: Modifications and rehabilitation to the North Columbia Pump Station including incorporation of VFDs for each pump and a new control system; relocation of all electrical equipment to a new electrical building; addition of two channel

grinders; modifications to the existing pump station building to improve access for pump removal including a new bridge crane system; and SCADA improvements.

Construction Start Date:

June 2010

Construction Completion Date:

December 31, 2013

Project 3: SS711501 – West Columbia Pump Station Improvements

Project Description: The project consists of rebuilding the existing West Columbia Pump Station. Work includes construction of a new trench style wet-well, above grade structural steel platforms for power, I&C and transformer equipment, monorail and hoist systems, influent cast-in-place reinforced concrete channel, junction and vault structures, four 8 MGD submersible pumps and one grinder, yard piping, electrical and instrumentation and control equipment, and a standby power generator.

Construction Start Date:

June 2011

Construction Completion Date:

December 31, 2013

Project 4: SS711502 – Installation of 20,000 Linear Feet of 42-Inch Force Main from West Columbia Pump Station to Metro WWTP

Project Description: A new 42-inch force main from the City of Columbia's West Columbia Pump Station, and approximately 21,000 feet of force main to the City's Metro Wastewater Treatment Plant. The route of the force main generally follows the alignment of the existing 60" gravity sewer interceptor and the Congaree River. The force main will convey sewage from the discharge of the West Columbia Pump Station to the Metro WWTP new Headworks.

Construction Start Date:

July 2012

Construction Completion Date:

December 31, 2013

Project 5: SS7116 – Saluda River Pump Station Improvements

Project Description: The project includes refurbishing the existing Saluda River Pump Station to provide increased reliability, capacity, and wet weather storage. The work consists of constructing a new export pump station in a trench style wet well with four 5 MGD submersible pumps, a new grinder structure, and two storage tanks, and converting the existing station into a storage pump station with four 10 MGD dry-pit submersible pumps. All new electrical, instrumentation and control equipment will be located within the existing pump station structure, in a newly enclosed control room. The existing pumping equipment will remain in service during the construction of the new pumping station in order to minimize, or eliminate, the need for temporary by-pass pumping.

Construction Start Date:

July 2012

Construction Completion Date:

June 30, 2015

Appendix G

FATS, OILS, AND GREASE MANAGEMENT REGULATION**PART 29****1. PURPOSE**

This regulation will be enforced in conjunction with the City of Columbia, South Carolina, Code of Ordinances, Chapter 23 (Chapter 23), and establishes uniform registration, operating, maintenance, cleaning, and inspection requirements designed to limit and control the discharge of fats, oils, and grease from Food Service Establishments (FSEs) into the City's wastewater collection system. The objectives of this regulation include the following:

- 1.1. To reduce the introduction of excessive amounts of fats, oils, and grease into City of Columbia (City) wastewater collection system;
- 1.2. To reduce fats, oils, and grease related build-up to the City's wastewater collection system that could lead to clogging or blocking of the sewer lines, causing backup and flooding of streets, residences, and commercial buildings, resulting in potential liability to the City;
- 1.3. To establish uniform identification numbers along with registration procedures and Global Positioning System Coordinates to be input into GIS to identify food service establishments located within the City wastewater service area;
- 1.4. To establish operation, cleaning, and maintenance requirements for food service establishments with grease traps and/or grease interceptors;
- 1.5. To establish inspection procedures and requirements for food service establishments with grease traps and/or grease interceptors;
- 1.6. To establish review procedures and reporting requirements for food service establishments installing new grease traps and/or grease interceptors; and

- 1.7. To establish enforcement procedures for violations of Chapter 23 and any provision of this regulation.

2. **DEFINITIONS**

- 2.1. *Director* means the City's Director of Utilities and Engineering.
- 2.2. *Fats, Oils, and Grease (FOG)* means any material, either liquid or solid, composed primarily of fats, oils, and grease from animal or vegetable sources.
- 2.3. *Food Service Establishment (FSE)* means any commercial facility, including, by way of example and without limitation, restaurants, motels, hotels, cafeterias, hospitals, schools, bars, and any other facility which, in the sole discretion of the City, must install a Grease Trap or Grease Interceptor prior to discharging kitchen or food preparation wastewater into the City's wastewater collection system. This definition includes, but is not limited to, any establishment which is required to have a South Carolina Department of Health and Environmental Control (SCDHEC) food service license and/or permit.
- 2.4. *FSE Owner or Owner* means, in the case of an individually owned FSE, the Owner(s) and/or proprietor(s) of the FSE. Where the FSE is a franchise operation, the Owner of the franchise is the responsible person and/or entity and is considered the FSE Owner. Where the FSE is owned by a corporation, the corporate representative, as designated on the FOG Registration form, is deemed to be authorized to act on behalf of the corporation. Where two or more FSEs share a common Grease Interceptor, the FSE Owner is any individual and/or entity who owns and/or assumes, maintains, or exercises control of the Grease Interceptor or the property on which the Grease Interceptor is located, as well as any individual and/or entity who utilizes or will utilize the shared Grease Interceptor.
- 2.5. *Gray Water* means all of the liquid contained in a Grease Trap or Grease Interceptor that lies below the floating grease layer and above the bottom solids layer.
- 2.6. *Grease* means a material, either liquid or solid, composed primarily of fats, oils, and grease from animal or vegetable sources. The terms "FOG," "oil and grease," and "oil and grease substances" shall all be included within this definition and these terms may be used interchangeably.
- 2.7. *Grease Hauler* means a person or entity that collects the contents of Grease Traps and/or Grease Interceptors and transports the contents to an approved recycling or disposal facility. A Grease Hauler may also provide other

services to FSEs related to Grease Trap and/or Grease Interceptor cleaning and maintenance.

- 2.8. *Grease Interceptor* means a large underground concrete vault located outside of an FSE designed to collect, contain, or remove Grease from the waste stream while allowing the sub-straight or Gray Water to discharge to the wastewater collection system by gravity.
- 2.9. *Grease Trap* means a device located within an FSE designed to collect, contain, separate, or remove Grease from the waste stream while allowing the sub-straight waste or Gray Water to discharge to the wastewater collection system by gravity.
- 2.10. *Inspector* or *City Staff* means an employee of the City, who under the authority of the Director, has responsibility for implementing and who does implement any FOG management regulations.
- 2.11. *Program* means the contents of this regulation, Part 29, as implemented by the Director, Inspectors, and City Staff.

3. GREASE TRAPS AND GREASE INTERCEPTORS

- 3.1. **Requirements:** All FSEs located within the City of Columbia wastewater service area are required to have a Grease Trap and/or Grease Interceptor properly installed and maintained in accordance with the following: this regulation - *Fats, Oils, and Grease Management – Part 29; Specifications for Grease Traps and Grease Interceptors Regulation - Part 30*; and all applicable requirements of the City's most recently adopted version of the International Plumbing Code.
- 3.2. **New FSEs:** FSEs which are proposed or newly constructed, and existing FSEs undergoing a change of use which necessitates the issuance of a new SCDHEC food service permit, expansion, or renovation to provide food services, are considered New FSEs. All New FSEs are required to install Grease Traps and/or Grease Interceptors, as appropriate, in compliance with the *City of Columbia Grease Trap and Interceptor Sizing Guide* (located at *Specifications for Grease Traps and Interceptors Regulation - Part 30, Attachment C*). New FSEs are required to operate, maintain, clean, and repair their Grease Traps and Grease Interceptors according to and in compliance with all applicable provisions contained in this regulation. In situations where it is not feasible for a New FSE to install an underground Grease Interceptor, the New FSE is required to install adequate and approved Grease Traps for use on individual fixtures, including, but not limited to: pot sinks, mop sinks, pre-rinse sinks, wok ovens, floor drains, and

any other drains where the potential for introduction of Grease exists. In such cases, Grease Traps will be considered adequate and will be approved by the City only if a flow control device is placed on the inlet that prevent overloading and a sample port is placed on the outlet of each Grease Trap.

- 3.3. **Existing FSEs:** Except as provided in Subsection 3.3.1 below, Existing FSEs, which are those FSEs already operating with Grease Traps and/or Grease Interceptors that were installed prior to the effective date of this regulation, will generally be permitted to operate and maintain existing Grease Traps and Grease Interceptors provided they are in proper operating condition and are maintained, cleaned, and repaired in accordance with all applicable provisions contained in this regulation and/or Chapter 23. In the event of noncompliance with this regulation or Chapter 23, the City may, in its sole discretion: (1) allow modifications to be made by the FSE, at the FSE's own expense, to the existing Grease Trap or Grease Interceptor in order to bring it into compliance; or (2) require that the existing FSE install, at its own expense, a new Grease Trap and/or Grease Interceptor that meets the requirements of this and all other applicable laws and regulations including, without limitation, *Specifications for Grease Traps and Interceptors Regulation - Part 30* and Chapter 23.

3.3.1 Grease Traps and Grease Interceptors installed prior to the effective date of this regulation. If a Grease Trap or Grease Interceptor installed prior to the effective date of this regulation does not allow for measurement and sampling to demonstrate that the Grease Trap or Grease Interceptor is in compliance with this regulation and Chapter 23, the FSE must modify or replace the Grease Trap or Grease Interceptor as provided below no later than December 31, 2018:

- (a) The City, in its sole discretion, may approve a proposed modification of an existing Grease Trap or Grease Interceptor which allows for measurement and sampling of the existing Grease Trap or Grease Interceptor to demonstrate that the Grease Trap or Grease Interceptor is in compliance with this regulation and Chapter 23. Any proposed modification to meet this requirement must be submitted to the City for review no later than June 30, 2018; or
- (b) If not modified pursuant to (a) above, the existing Grease Trap or Grease Interceptor must be replaced with a new Grease Trap or Grease Interceptor, as appropriate, in compliance with the *City of Columbia Grease Trap and Interceptor Sizing Guide* (located at *Specifications for Grease Traps and Interceptors Regulation - Part 30, Attachment C*).

- 3.4. **Plumbing Connections:** Grease Traps and Grease Interceptors shall be installed in accordance with the requirements contained in all applicable local

plumbing codes. Any Grease Trap and/or Grease Interceptor shall be located in the FSE's lateral sewer line between all fixtures which may introduce Grease into the City's wastewater collection system. Wastewater from domestic facilities and other similar fixtures shall not be introduced into a Grease Trap and/or Grease Interceptor by the FSE under any circumstances.

3.5. **Grease Traps.** All Grease Traps shall be installed in accordance with the City's most recently adopted version of the International Plumbing Code. Each FSE shall operate and maintain its Grease Trap in accordance with the following criteria:

3.5.1 **Sizing.** All Grease Traps shall be sized in accordance with the City of Columbia Grease Trap and Interceptor Sizing Guide (located at *Specifications for Grease Traps and Grease Interceptors Regulation - Part 30, Attachment C*).

3.5.2 **Flow control device and sample port.** FSEs are responsible for equipping Grease Traps with a device on the inlet side to control the rate of flow through the Grease Trap. The rate of flow shall not exceed the manufacturer's rated capacity in gallons per minute for each Grease Trap. FSEs are also responsible for equipping Grease Traps with a sample port on the outlet side.

3.5.3 **Installation, inspection, cleaning, and maintenance.** Each FSE shall be solely responsible for the cost of Grease Trap installation, inspection, cleaning, and maintenance. Each FSE must either contract with a Grease Hauler cleaning service or develop a written protocol for and perform its own Grease Trap cleaning and maintenance procedures that meet the requirements of this Program. Cleaning shall include the complete removal of all floating materials, Gray Water, and bottom solids from the Grease Trap. The return of Gray Water back into the Grease Trap or into the City's the wastewater collection system is prohibited. Grease Trap cleaning must include removing/scraping excess solids from walls, floors, baffles, and inlet and outlet piping. It is the responsibility of each FSE to inspect its Grease Trap during and after the pumping and cleaning procedure to ensure that the Grease Trap is properly cleaned out and that the structure is sound and all fittings and fixtures inside the Grease Trap are in working condition and are functioning properly. The FSE Owner must have documentation consisting of inspection, cleaning, and maintenance logs on site in accordance with and demonstrating compliance with this regulation and must be able to produce the documentation immediately upon request of the Inspector and/or City Staff.

3.5.4 *Grease Trap Cleaning Frequency.* Cleaning and maintenance should generally be performed in accordance with the Grease Trap manufacturer's recommendations. However, despite this provision, cleaning and maintenance must be performed as often as and in the manner necessary to achieve full compliance with Chapter 23 and this regulation, even if such cleaning and maintenance exceeds that recommended by the manufacturer.

3.5.5 *Inspection.* Grease Traps shall be inspected by the Inspector as often as necessary in the City's sole discretion to ensure compliance with Chapter 23, and this regulation, and to determine if proper cleaning and maintenance schedules as set forth herein are being adhered to by the FSE. FSEs with Grease Traps are responsible for having qualified staff on hand during any inspection to open and close the Grease Trap.

3.5.6 *Repairs and replacement.* Each FSE shall be solely responsible for the cost, scheduling, and performance of all repairs and replacements to its Grease Trap(s), including, without limitation, any and all repairs and replacements that may be required by the Inspector and/or City Staff under this Program.

3.6. ~~*Grease Interceptors:*~~ Grease Interceptors shall be designed and installed in accordance with *Specifications for Grease Traps and Interceptors – Part 30* and the City's most recently adopted version of the International Plumbing Code. In the event of a conflict between the two, the most stringent requirements shall apply. Each FSE shall operate and maintain its Grease Interceptor in accordance with the following criteria:

3.6.1 *Installation, inspection, cleaning, and maintenance.* Each FSE shall be solely responsible for the costs of installing, inspecting, pumping, cleaning, and maintaining its Grease Interceptor(s). All FSEs that have Grease Interceptors shall utilize a Grease Hauler to properly dispose of Grease Interceptor contents. Cleaning shall include the complete removal of all Grease Interceptor contents including floating materials, Gray Water, and bottom solids. The return of Gray Water back into the Grease Interceptor or into the City's wastewater collection system is prohibited. Grease Interceptor cleaning must be performed as often as and in a manner necessary to achieve compliance with Chapter 23 and this regulation. Such cleaning may include removing/scraping and/or hydroscrubbing excessive solids from the walls, floors, baffles and all interior plumbing. It shall be the responsibility of each FSE to inspect its Grease Interceptor during the pumping and cleaning procedure to ensure that the Grease Interceptor is properly cleaned out and that the structure is sound and all fittings and fixtures inside the Grease Interceptor are in working

condition and functioning properly. The FSE Owner must have documentation consisting of inspection, cleaning, and maintenance logs on site in accordance with and demonstrating compliance with this regulation and must be able to produce the documentation immediately upon request of the Inspector and/or City Staff.

3.6.2 *Grease Interceptor cleaning frequency.* Each FSE shall have its Grease Interceptor(s) cleaned at a minimum frequency of twice per year. In addition to this required cleaning, each FSE shall determine an additional frequency at which its Grease Interceptor(s) shall be cleaned in accordance and in compliance with each of the following criteria:

3.6.2.1 When the floatable Grease layer exceeds six inches in depth as measured with an approved dipping method;

3.6.2.2 When the settleable solids layer exceeds eight inches in depth as measured with an approved dipping method;

3.6.2.3 When the total volume of captured Grease and solid material displaces more than 25 percent of the capacity of the Grease Interceptor as calculated with an approved dipping method;
or

3.6.2.4 When the Grease Interceptor is not retaining/capturing FOG so as to comply with the requirements of Chapter 23 and this regulation.

3.6.3 *Inspection.* Grease Interceptors may be inspected by the Inspector as often as necessary in the City's sole discretion to ensure compliance with this Program, including, without limitation, to determine if proper cleaning and maintenance schedules are being adhered to by the FSE. FSEs with Grease Interceptors that are inaccessible to the Inspector are responsible for having staff readily available during any inspection to provide access to and to open and close the Grease Interceptor for the Inspector. It is the sole responsibility of the FSE to provide the City with access to any inaccessible Grease Interceptor.

3.6.4 *Repairs and replacement.* Each FSE shall be responsible for the cost, scheduling, and performance of all repairs and replacements to its Grease Interceptor(s), including, without limitation, any and all repairs and replacements that may be required by the Inspector and/or City Staff under the Program.

- 3.7 **Additives.** The introduction of chemicals, enzymes, emulsifiers, live bacteria or other grease cutters or additives into the wastewater collection system is generally prohibited by the City. On very rare occasions the City may, in its sole discretion, approve an FSE's use of additives. FSEs seeking to introduce additives must, prior to their introduction into Grease Traps or Grease Interceptors, submit the following information to the Department of Utilities and Engineering Wastewater Compliance Section for review and consideration: Material Safety Data Sheets and any other applicable information concerning the composition, frequency of use, and mode of action of the proposed additive(s) and a written statement outlining the FSE's proposed use of the additive(s). The FSE may only use the additives if and when the City grants the FSE permission to do so in writing and then may only do so in accordance with the specific parameters set forth by the City therein. Permission to use any specific additive may be withdrawn by the City at any time, upon the City's providing written notice to the FSE.
- 3.8 **Alternative Grease Removal Devices or Technologies.** The use of alternative Grease removal devices and technologies, such as automatic grease removal systems, are generally prohibited by the City. On rare occasions, the City may, in its sole discretion, approve the use of this technology and these devices on a case-by-case basis. An FSE may only use alternative Grease removal devices or technologies after receiving permission to do so in writing from the City and then may only do so in accordance with the specific parameters set forth by the City therein. Permission to use any alternative Grease removal devices or technologies may be withdrawn by the City at any time, upon the City's providing written notice to the FSE.
- 3.9 **Recordkeeping.** Each FSE shall maintain records required hereunder in a bound logbook kept on site at the FSE describing and documenting all cleaning, maintenance, and repairs performed for each Grease Trap and Grease Interceptor including the date and time of each pump out or cleaning and details regarding same; records documenting and detailing any maintenance and/or repairs, and the dates on which such maintenance and/or repairs were performed and completed; and any other records documenting and related to the cleaning, maintenance, and/or repairs for each Grease Trap or Grease Interceptor. The logbook must be made available by the FSE for review by the Inspector and/or City Staff upon request during an inspection. In addition to the records specified above, each FSE shall also maintain a file on-site which contains the following information:
- 3.9.1 A copy of the FSE's FOG Registration form submitted to the City pursuant to Section 4.0 below; and

3.9.2 Receipts evidencing and identifying (at least by name, address, and service(s) provided) any individuals and/or entities performing cleaning, maintenance, and/or repairs on each Grease Trap and/or Grease Interceptor including, without limitation, Grease pumpers, Grease Haulers, plumbers, and parts suppliers.

Failure to maintain complete records in accordance with the Program as specified herein or to provide such records to the Inspector and/or City Staff upon request constitutes a violation of this regulation. All records required of an FSE under this regulation must be maintained for the time period consisting of the two (2) years immediately preceding the date of the most recent inspection of the FSE by the City, and for any time period thereafter.

3.10 **Disposal.** It is the responsibility of each FSE Owner to ensure that wastes removed from each of its Grease Traps and/or Grease Interceptors are properly disposed of at a facility permitted to receive such wastes.

4.0 **FOG REGISTRATION AND NEW GREASE TRAP/GREASE INTERCEPTOR INSPECTION PROCEDURE**

4.1 **Registration Requirements for FSEs.** Each FSE shall be subject to the FOG Registration requirements in this Section 4.0. This FOG Registration is required in addition to any other permits, registrations, or business license(s) which may be required of the FSE by federal, state, or local law or regulation.

4.2 **Registration Form.** The City shall provide or make available a FOG Registration form for all FSEs located within the City's wastewater service area. All Existing FSEs are required to submit a completed FOG Registration to the City at the address shown on the form no later than thirty (30) calendar days after receiving notification by the City that registration is required. Failure to do so will constitute a violation of this regulation. New FSEs are required to submit a completed FOG Registration to the City at the address shown on the form prior to beginning construction as described in Section 4.5 below. Each FOG Registration form submitted shall include the following information:

4.2.1 FSE Owner's name, title, and contact information; FSE contact name, title, and contact information, if different from the FSE Owner; FSE water and sewer account holder contact information; name of FSE; physical address of FSE; telephone number of FSE; and business mailing address of FSE if different from physical address;

4.2.2 A description of the type of food service activities to be performed at the FSE;

4.2.3 Seating capacity of the FSE;

- 4.2.4 A copy of calculations demonstrating how the size of each Grease Trap and/or Grease Interceptor was determined; a set of plumbing drawings or sketches, including floor plans and riser diagrams; and a site plan showing the location of the sewer discharge(s) and the location of any exterior Grease Interceptors, where applicable (drawings or sketches must have sufficient enough detail to show the location of all kitchen equipment and plumbing fixtures with drains, floor drains, sewer connections, and all Grease Traps and Grease Interceptors);
- 4.2.5 For FSEs with Grease Traps, documentation demonstrating that (a) the Grease Trap is equipped with a device on the inlet side to control the rate of flow through the Grease Trap such that the rate of flow does not exceed the manufacturer's rated capacity in gallons per minute for each Grease Trap; and (b) the Grease Trap is equipped with a sample port on the outlet side;
- 4.2.6 Total hours of operation each day;
- 4.2.7 Executed statement of the FSE Owner certifying that the FSE Owner has received, read, understands, and agrees to abide by *Fats, Oils, and Grease Management – Part 29; Specifications for Grease Traps and Grease Interceptors Regulation - Part 30*; Chapter 23, as well as any other applicable federal, state, and local laws and regulations governing the FSE; that the information provided in the FOG Registration form is accurate; that the FOG Registration form was completed at the FSE Owner's direction and with the FSE Owner's approval; that the FSE Owner understands that providing false information or violating the provisions of the above-stated laws and/or regulations may result in termination of the FSE's water and/or sewer service, and/or revocation of the FSE's permitted water and/or sewer capacity; and that if the FSE's water and/or sewer service is terminated, the FSE will have to submit a new FOG Registration form and/or reapply for water and/or sewer service with the City and bear all associated costs; and
- 4.2.8 All other information regarding the description of the FSE's operations, including, without limitation, information regarding the FSE's Grease Traps and Grease Interceptors, and treatment of same, as identified on the FOG Registration form.
- 4.3 ***FSEs with Shared Grease Interceptor(s)***. In situations where FSEs share one or more Grease Interceptors, the owner of each Grease Interceptor and any FSE and FSE Owner who utilizes or will utilize the shared Grease

Interceptor are collectively responsible for completion and submission of the FOG Registration form to the City within the time period required in this regulation, for identifying all FSEs connected to each Grease Interceptor in the FOG Registration form, and for ensuring that all FSEs connected to that Grease Interceptor comply with this regulation, as well as Chapter 23. All FSEs connected to the shared Grease Interceptor shall be subject to inspections under this regulation. In the event the identity of an FSE connected to the shared Grease Interceptor changes or in the event that an additional FSE connects to the shared Grease Interceptor, the owner of the shared Grease Interceptor, the FSE Owner, and any FSE utilizing or who will utilize the shared Grease Interceptor must submit an updated FOG Registration form identifying the change or the additional FSE to the City at least thirty (30) calendar days prior to the change and prior to the additional FSE connecting to the shared Grease Interceptor.

4.4 *New Grease Trap/Grease Interceptor Inspection Procedure.*

4.4.1 FSE – New Facilities. After a completed and satisfactory FOG Registration form has been submitted to the City, the FSE may proceed with installation and/or construction of the Grease Trap and/or Grease Interceptor. When installation and/or construction of the Grease Trap and/or Grease Interceptor is completed, the FSE Owner shall notify the City that the FSE is ready for inspection. The FSE Owner shall notify the City prior to covering any exterior Grease Interceptors. During the inspection, the information contained in the FOG Registration form will be verified and the FSE's Grease Traps and/or Grease Interceptors will be inspected. If any Grease Trap or Grease Interceptor requires maintenance or repairs, if any incorrect information has been given, or in the event of noncompliance with any portion of this regulation, the Inspector will issue a written notice requiring that the FSE correct any deficiencies, including a required time schedule for repairs to be effected prior to a second inspection. Second inspections will be performed after a minimum of ten (10) calendar days have elapsed to allow the FSE to implement appropriate and necessary corrective action(s) to correct the deficiencies. If the FSE is not in compliance at the second inspection, the FSE Owner must complete any additional maintenance and/or repairs or take whatever other action may be required for compliance, and resubmit the FOG Registration form. Failure to comply with any portion of this regulation after resubmission of the FOG Registration form may result in enforcement action pursuant to Chapter 23, including, but not limited to, termination or denial of the FSE's water and/or sewer service.

4.4.2 *FSE – Existing Facilities.* All Existing FSEs are required to submit a completed FOG Registration form to the City at the address shown on the form no later than thirty (30) calendar days after receiving notification by the City that registration is required. Failure to do so will constitute a violation of this regulation. A new FOG Registration form must be submitted upon change in ownership of the FSE or changes in operations or plumbing changes or additions, including, without limitation, a change of use which necessitates the issuance of a new SCDHEC food service permit; remodeling or expansion of the food preparation area; and/or modifications to the kitchen waste plumbing system. No new Grease Trap or Grease Interceptor may be placed into service until the City has conducted an inspection pursuant to the procedures set forth in Section 4.5.1 above.

5. ***Inspection Procedure.*** All FSEs are subject to inspection as follows:

5.1 ***Inspections.*** The Inspector and City Staff may inspect FSEs at any time during business hours in order to verify continued compliance with all applicable laws and regulations, including, without limitation, requirements of this regulation and Chapter 23. All FSEs which have submitted a FOG Registration will be inspected on a regular basis. Inspections shall include, without limitation, all equipment, food processing and storage areas that discharge into the Grease Traps and/or Grease Interceptors at the FSE. The Inspector and/or City Staff shall also inspect the FSE's logbook and other records and data required to be kept hereunder; Grease Trap(s) and/or Grease Interceptor(s); and may check the level of the Grease Trap and/or Grease Interceptor contents and take samples and/or photographs as deemed necessary in the Inspector's sole discretion. If noncompliance is identified by the Inspector and/or City Staff during an inspection, the Inspector will, after the inspection, issue the FSE a written notice of violation directing the FSE to correct any deficiency. The FSE will be scheduled for re-inspection at the time denoted in the notice of violation.

5.2 ***Re-inspections.*** The Inspector and City Staff will re-inspect FSEs that are issued a notice of violation within the time period specified in the notice of violation. The Inspector shall inspect, without limitation, any repairs made or other corrective measures taken by the FSE with regard to any noted violations and will subsequently provide written notice of compliance or non-compliance to the FSE as the case may be. If, upon re-inspection, the FSE has corrected all of the deficiencies which resulted in the issuance of the notice of violation and the FSE is in full compliance with all other requirements of the Program, the FSE will be notified by the City that it is in compliance.

- 5.3 ***Access and Cooperation During Inspections.*** Upon the request of the Inspector and other duly authorized employees or agents of the City, each FSE shall allow the Inspector and other duly authorized employees or agents of the City, including, without limitation, City Staff, access to all parts of the FSE premises for inspection, observation, records examination, measurement, sampling, testing and for other purposes in accordance with the provisions of this regulation. The refusal of any FSE to allow the Inspector and/or City Staff entry to or upon the FSE's premises, or an FSE's failure to cooperate in any manner during the course of an inspection, shall constitute an immediate violation of this regulation, which may result in enforcement action pursuant to Section 6.4 of this regulation.
- 5.4 ***Non-Compliance:*** In the event of continuing non-compliance after re-inspection, the FSE Owner will be notified that continued failure to comply within the time period designated by the City may result in enforcement action pursuant to Chapter 23, including, but not limited to, termination of water and/or sewer service.

6. **VIOLATIONS**

6.1 ~~*Notices of Violation:*~~ Deficiencies that will result in a finding of noncompliance and issuance of a notice of violation under this Program include the following:

- 6.1.1 Failure of the FSE to allow the Inspector or City Staff access to all parts of the FSE premises for inspection, observation, records examination, measurement, sampling, testing and for other purposes in accordance with the provisions of this regulation shall constitute an immediate violation;
- 6.1.2 Failure of the FSE to properly operate, maintain, clean, and/or repair a Grease Interceptor and/or Grease Trap in accordance with this regulation;
- 6.1.3 Failure of the FSE to report changes in operations or plumbing changes or additions, including, without limitation, a change of use which necessitates the issuance of a new SCDHEC food service permit; remodeling or expansion of the food preparation area; and/or modifications to the kitchen waste plumbing system;
- 6.1.4 Where the FSE is operating an irreparable or defective Grease Trap and/or Grease Interceptor that is in need of replacement;

- 6.1.5 Failure to report a sale or change in ownership of the FSE by submitting a new FOG Registration form within the thirty (30) days and in accordance with the procedures set forth in this regulation;
- 6.1.6 Failure of the FSE to have or maintain plumbing connections to a Grease Trap or Grease Interceptor in compliance with the requirements of this regulation;
- 6.1.7 Failure of the FSE to submit a completed FOG Registration within thirty (30) days after the date of notification by the City that such an application is required to be submitted;
- 6.1.8 Where the FSE is contributing FOG to the City's wastewater collection system in quantities in excess of the allowable limits as established in Chapter 23;
- 6.1.9 Failure of the FSE to maintain and/or retain, or to produce upon the Inspector or City Staff's request, records as required under this regulation for the time period delineated in this Program;
- 6.1.10 Where the FSE has no Grease management in place;
- 6.1.11 Where the FSE Owner and/or any user of a shared Grease Interceptor has failed to identify to the City all FSEs connected to the shared Grease Interceptor in the FOG Registration form in accordance with the requirements of this regulation;
- 6.1.12 Where the FSE previously received a notice of violation under this Program and, upon re-inspection, the FSE remained in noncompliance;
- 6.1.13 Where the FSE, in the sole discretion of the City, has engaged in bad-faith failure or has refused to comply with a notice of violation issued under this Program or has failed to otherwise cooperate with the Inspector and/or City Staff as required by this regulation; and
- 6.1.14 Any other noncompliance with the Program, this regulation, or Chapter 23.

6.2 *Schedules of Compliance.* Failure to comply with this regulation may result in the following notices of violation with the compliance schedules noted. However, nothing in this Section 6.2 precludes the City from taking

immediate enforcement against an FSE in violation of this regulation or Chapter 23:

6.2.1 A notice of violation may be issued to the FSE by the City with the following compliance schedule in situations where an Inspector determines:

- (a) that the FSE's Grease Trap and/or Grease Interceptor is irreparable or defective and must be replaced.
- (b) that an FSE has no Grease management in place;
- (c) that the FSE has undergone a change of use which necessitates the issuance of a new SCDHEC food service license and/or permit, remodeling, expansion of the food preparation area, or modifications to the kitchen waste plumbing system and has failed to comply with the requirements of Section 3.2 of this regulation;
- (d) that the FSE does not have or does not properly maintain plumbing connections to a Grease Trap or Grease Interceptor in compliance with this regulation.

FSEs receiving a notice of violation for any deficiency identified above will be required, within fifteen (15) days of the date of the notice of violation, to submit a corrective action plan to the City for consideration, outlining and detailing the scope of work, including a timeline for completion, that meets the requirements set forth in this Program, *Specifications for Grease Traps and Grease Interceptors Regulation - Part 30*, and Chapter 23. If the City approves the corrective action plan, the FSE must construct the improvements at its own expense. Construction must be complete within forty-five (45) days of the date of the City's written approval of the corrective action plan. A pre-construction inspection will be scheduled by the City and the FSE is responsible for notifying the City at least twenty-four (24) hours in advance of the start of construction in order that this inspection can be scheduled.

6.2.2 A notice of violation may be issued to the FSE by the City with a fifteen (15) day compliance schedule in situations where an Inspector determines:

- (a) that the FSE has failed to adequately clean, maintain, repair, or replace a Grease Trap or Grease Interceptor as determined by the City in accordance with this Program;

- (b) that the FSE is contributing FOG to the City's wastewater collection system in quantities in excess of the allowable limits as established by the City in Chapter 23;
- (c) that the FSE has been sold or undergoes a change of ownership or in operations and a new FOG Registration form is not submitted by the New FSE Owner in accordance with the requirements of this regulation;
- (d) that the FSE has been notified by the City that it must submit a completed FOG Registration form and the FSE has failed to do so within thirty (30) days of the date of notification;
- (e) that the FSE Owner and/or any user of a shared Grease Interceptor has failed to identify to the City all FSEs connected to the shared Grease Interceptor in the FOG Registration form in accordance with the requirements of this regulation;
- (f) that the FSE has failed to produce, maintain, or retain maintenance logs, files, or other records required to be kept under this regulation for the time period consisting of the two (2) years immediately preceding the date of the most recent inspection at the FSE and any time period thereafter; or
- (g) that the FSE has otherwise failed to comply with the Program in any other manner set forth in this regulation.

6.2.3 A notice of violation will be issued to the FSE by the City with a seven (7) day compliance schedule in situations where an Inspector determines:

- (a) that the FSE previously received a notice of violation under this Program and, upon re-inspection, the FSE remained in noncompliance; or
- (b) that the FSE is, in the sole discretion of the City, has engaged in bad-faith failure or has refused to comply with a notice of violation issued under this Program or has failed to otherwise cooperate with the Inspector and/or City Staff as required by this regulation.

6.3 *Corrective Action.* Where a FSE receives three (3) notices of violation within a one-year time period under this Program, the FSE will be automatically placed on a corrective action plan by the City that is designed to bring the Grease Trap and/or Grease Interceptor into compliance within the period of time specified in the corrective action plan. An FSE may be placed on a corrective action plan for a single violation or combination of violations when, in the discretion of the City, such violation(s) are of a nature or severity which

warrants the imposition of a corrective action plan to bring the FSE into compliance with this regulation.

6.4 ***Other Enforcement Action.*** Any FSE which violates Chapter 23 or this regulation shall be subject to such other enforcement action as allowed by and in accordance with Chapter 23 and applicable state law, including, but not limited to:

- (a) A civil penalty not to exceed two thousand dollars for each day of violation;
- (b) Termination of water or wastewater service pursuant to Section 23-111 of Chapter 23; and
- (c) Criminal penalties pursuant to Section 23-112 of Chapter 23.

**SPECIFICATIONS FOR
GREASE TRAPS AND GREASE INTERCEPTORS**

PART 30

1. GENERAL

1.1 This section includes guidelines and requirements for design and installing Grease Traps and Grease Interceptors. Construction details GR #1 and GR #2 attached hereto as Attachment A and Attachment B, respectively, are part of these specifications.

1.2 Grease Traps or Grease Interceptors shall be provided by each Food Service Establishment (FSE) for the proper handling of liquid wastes containing significant amounts of fats, oils, and grease as specified in the *Fats, Oils, and Grease Management Regulation - Part 29* (Part 29). All Grease Traps and Grease Interceptors installed by FSEs must be in compliance with Part 29 and the specifications herein and shall be located so as to be readily and easily accessible for cleaning and inspection. All Grease Traps and Grease Interceptors shall be supplied by and properly cleaned and maintained by the FSE Owner at its own expense in accordance with and as provided in Part 29.

1.3 All FSEs, new or existing, requesting sewer service from the City of Columbia (the City), shall submit a FOG Registration form in accordance with Part 29 prior to receiving sewer service.

1.4 It is the intent of this specification to provide specific standards for the location, design, installation and construction of Grease Traps and Grease Interceptors in accordance with the requirements stated herein. Failure to comply with this specification shall result in the denial or discontinuance of water and/or sewer service.

2. DEFINITIONS

2.1. *Fats, Oils, and Grease (FOG)* means any material, either liquid or solid, composed primarily of fats, oils, and grease from animal or vegetable sources.

2.2. *Food Service Establishment (FSE)* means any commercial facility, including, by way of example and without limitation, restaurants, motels, hotels, cafeterias, hospitals, schools, bars, and any other facility which, in the sole discretion of the City, must install a Grease Trap or Grease Interceptor prior to discharging kitchen or food preparation wastewater into the City's wastewater collection system. This definition includes, but is not limited to, any establishment which is required to have a South Carolina

Department of Health and Environmental Control (SCDHEC) food service license and/or permit.

- 2.3. *FSE Owner or Owner* means, in the case of an individually owned FSE, the Owner(s) and/or proprietor(s) of the FSE. Where the FSE is a franchise operation, the Owner of the franchise is the responsible person and/or entity and is considered the FSE Owner. Where the FSE is owned by a corporation, the corporate representative, as designated on the FOG Registration form, is deemed to be authorized to act on behalf of the corporation. Where two or more FSEs share a common Grease Interceptor, the FSE Owner is any individual and/or entity who owns and/or assumes, maintains, or exercises control of the Grease Interceptor or the property on which the Grease Interceptor is located, as well as any individual and/or entity who utilizes or will utilize the shared Grease Interceptor.
- 2.4. *Gray Water* means all of the liquid contained in a Grease Trap or Grease Interceptor that lies below the floating grease layer and above the bottom solids layer.
- 2.5. *Grease* means a material, either liquid or solid, composed primarily of fats, oils, and grease from animal or vegetable sources. The terms "FOG", "oil and grease," and "oil and grease substances" shall all be included within this definition and may be used interchangeably.
- 2.6. *Grease Interceptor* means a large underground concrete vault located outside of an FSE designed to collect, contain, or remove FOG from the waste stream while allowing the sub-straight or Gray Water to discharge to the wastewater collection system by gravity.
- 2.7. *Grease Trap* means device located within an FSE that is designed to collect, contain, separate, or remove FOG from the waste stream while allowing the sub-straight waste or Gray Water to discharge to the wastewater collection system by gravity.

3. DESIGN AND CONSTRUCTION REQUIREMENTS

3.1 NEW FSEs

3.1.1 Non-cooking intensive FSEs, as determined by the City, may be allowed to utilize Grease Traps. Examples of FSEs which might be determined to be non-cooking intensive FSEs are identified in *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (attached hereto as Attachment C)*; however, these FSEs are provided by way of example only. The City will make a determination on the applicable sizing guide formula for an FSE on a case-by-case basis.

3.1.2 All New FSEs (as defined in Section 3.2 of Part 29), with the exception of non-cooking intensive FSEs as determined by the City, are required to install a Grease Interceptor sized in accordance with the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)*. A Grease Trap or Grease Interceptor must be sized in accordance with the formulae set forth in (A), (B), or (C) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)* unless the City approves sizing calculations signed and sealed by a registered professional engineer in accordance with the Fixture Unit Calculation Method set forth in (D) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)*. No Grease Interceptor less than 1,000 gallons total capacity will be approved for installation by the City unless acceptable engineering calculations sealed by a professional engineer registered in the state of South Carolina and demonstrating that a smaller size has satisfactory capacity are provided by the FSE Owner to the City and are approved by the City. The City retains sole discretion to approve or deny approval of a Grease Interceptor less than 1,000 gallons total capacity in all circumstances, even in the event such engineering calculations are provided.

3.1.3 All New FSEs must submit, for each Grease Trap and Grease Interceptor, cut sheets, plans, and specifications. These documents must be submitted to the City prior to the FSE's installation of the Grease Trap and/or Grease Interceptor. An approval letter for each new Grease Trap or Grease Interceptor must be issued by the City to the FSE prior to construction and/or installation of the Grease Trap and/or Grease Interceptor by the new FSE.

3.1.4 The construction and location criteria for Grease Interceptors must be in accordance with Environmental Protection Agency (EPA) Guidance Document, "On site Wastewater Treatment and Disposal Systems," Chapter 8.

3.1.5 No New FSE will be allowed to initiate operations until proper Grease Traps and/or Grease Interceptors, as appropriate, are installed by the FSE in accordance with this Part 30 and Part 29, and are approved by the City.

3.1.6 For cases in which underground-type Grease Interceptors are appropriate but not feasible to install in the City's sole discretion, new FSEs must install approved Grease Traps in accordance with this Part 30 and Part 29 for use on individual fixtures, including, without limitation, pot sinks, mop sinks, pre-rinse sinks, wok ovens, floor drains and other potentially grease containing drains. In such cases, Grease Traps will be considered acceptable by the City only if approved flow control fittings are placed on the inlet that prevent overloading and a sample port is placed on the outlet of each Grease Trap.

3.1.7 FSE's shall not connect dishwashers, garbage grinders, or domestic sewer to any Grease Trap or Grease Interceptor.

3.1.8 All Grease Traps and Grease Interceptors must be installed by a properly licensed plumbing contractor.

3.2 EXISTING FSEs

3.2.1 All existing FSEs (as defined in Section 3.2 of Part 29) must have Grease Traps and Grease Interceptors approved by the City in accordance with Part 29.

3.2.2 In cases where existing FSEs do not already have a Grease Interceptor installed and where the installation of an outdoor Grease Interceptor is feasible in the City's sole discretion, the Grease Interceptor must be installed by the FSE in accordance with this Part 30 and must be approved by the City in writing in advance of installation.

3.2.3 Sizing of any Grease Trap or Grease Interceptor must be in accordance with the *City of Columbia Grease Trap and Interceptor Sizing Guide (attached as Attachment C)*.

3.2.4 Grease Interceptors must be located as close to the source of the wastewater service line at the building as physically possible, while remaining accessible for maintenance.

3.2.5 Existing FSEs shall not connect new dishwashers, garbage grinders, or domestic sewer to any Grease Trap or Grease Interceptor. The City, in its sole discretion, may grant a variance to this requirement in circumstances in which the City determines that compliance with this requirement would be unduly burdensome or impractical due to physical condition or layout of the FSE.

3.2.6 New flow control devices, Grease Traps, or Grease Interceptors must be pre-approved prior to installation.

3.3 GREASE TRAPS

3.3.1 Prior to installation, design for all Grease Traps must be submitted by the FSE to the City for approval with supporting calculations, cut sheets, and/or sizing charts, including a sizing chart similar to requirements set forth in the *City of Columbia Grease Trap Specification Sheet Example (attached as Attachment D)*. Satisfactory proof of minimum Grease Trap capacity, as specified in the *City of Columbia Grease Trap and Interceptor Sizing Guide (attached as Attachment C)* must also be provided to the City by the FSE for all Grease Traps prior to installation. A Grease Trap must be sized in accordance with the formulae set forth in (A), (B), or (C) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)* unless the City approves sizing calculations signed and sealed by a registered professional engineer in

accordance with the Fixture Unit Calculation Method set forth in (D) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)*.

3.4 GREASE INTERCEPTORS

All FSE's Grease Interceptors must meet each of the following requirements:

3.4.1 A Grease Interceptor must be sized in accordance with the formulae set forth in (A), (B), or (C) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)* unless the City approves sizing calculations signed and sealed by a registered professional engineer in accordance with the Fixture Unit Calculation Method set forth in (D) of the *City of Columbia Grease Trap and Grease Interceptor Tank Sizing Guide (Attachment C)*.

3.4.2 Provide precast or cast in place minimum 4000 psi concrete vaults; The City, in its sole discretion, may allow the use of other materials upon written request for approval prior to installation.

3.4.3 Open top inlet tee must extend to 24" from the bottom of the vault;

3.4.4 The vault shall have a baffle wall with a minimum 3" air gap for venting at the top and an open top tee extending to 12" from the bottom of the vault;

3.4.5 Open top outlet tee must extend to 12" from the bottom of the vault;

3.4.6 Access Manholes shall be provided by the FSE directly above all three tees for inspection and maintenance;

3.4.7 Two-way cleanouts must be provided by the FSEs on the inlet and outlet lines;

3.4.8 Anti-flotation design with proper base course and compacted sub-grade should be considered to prevent settling where conditions warrant;

3.4.9 The FSE must design vault top and manhole covers for HS-20 rated loading where applicable; and

3.4.10 All Grease Interceptors shall be located where they are easily accessible for inspection, cleaning, and maintenance.

3.5 STANDARD GREASE INTERCEPTOR DETAILS

3.5.1 FSEs must comply with standard details GR #1 (Attachment A) and GR #2 (Attachment B) for standard Grease Interceptor installation.

3.5.2 Grease Interceptors may be installed in series if volume required is more than 1500 gallons. When installed in series, the first tank shall not have a baffle or center tee (see standard detail GR #2, Attachment B).

3.6 ACCESS MANHOLES

3.6.1 The minimum access opening dimensions shall be a minimum of 24" in diameter.

3.6.2 An access opening shall be provided by the FSE above the inlet, baffle wall, and outlet tees and shall be easily removable by one person.

3.6.3 A minimum 6" diameter traffic rated clean out with a concrete collar extending down through the vault top may be provided by the FSE above the baffle wall tee in lieu of an access manhole.

3.6.4 Manhole Frame and Cover requirements:

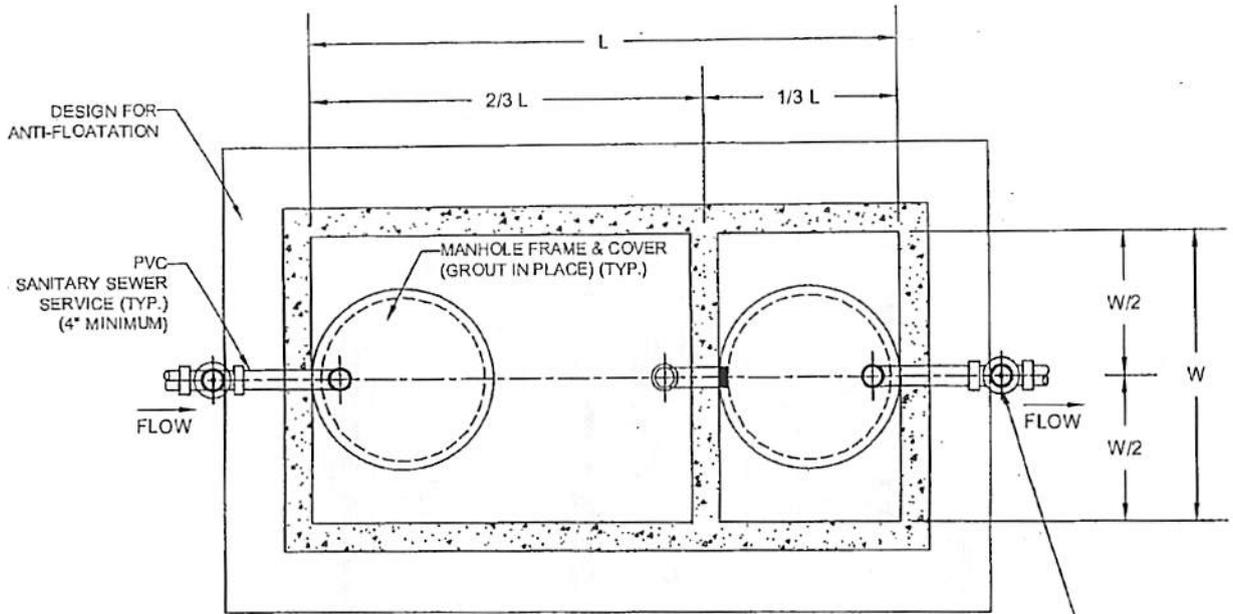
- 3.6.4.1 Provide grey iron castings, ASTM A48, Class 30 Iron;
- 3.6.4.2 Machine all bearing surfaces;
- 3.6.4.3 Acceptable manufacturer: US Foundry Model 680; and
- 3.6.4.4 Provide HS-20 rated frame and cover where applicable.

4. INSPECTION FOR ACCEPTANCE

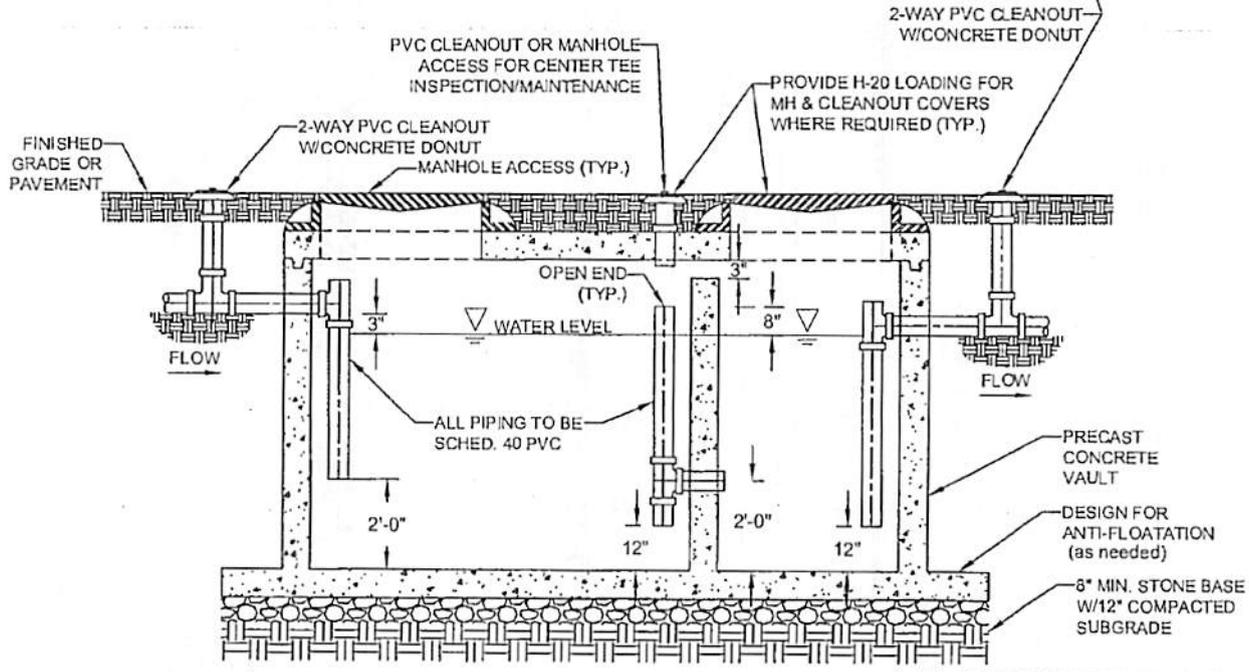
4.1 The FSE must notify the City 48 hours in advance, during the normal work week, when the Grease Interceptor is ready for final inspection by the City and the City must give final approval prior to the FSE covering any Grease Interceptor.

4.2 Where the City denies approval of the Grease Trap and/or Grease Interceptor is denied for a new FSE, the City may elect to submit a request to the appropriate building official requesting that certificates of occupancy be withheld until the Grease Trap and/or Grease Interceptor is constructed in accordance with this specification and is approved by the City.

Attachment A



PLAN



PROFILE

NOTES:

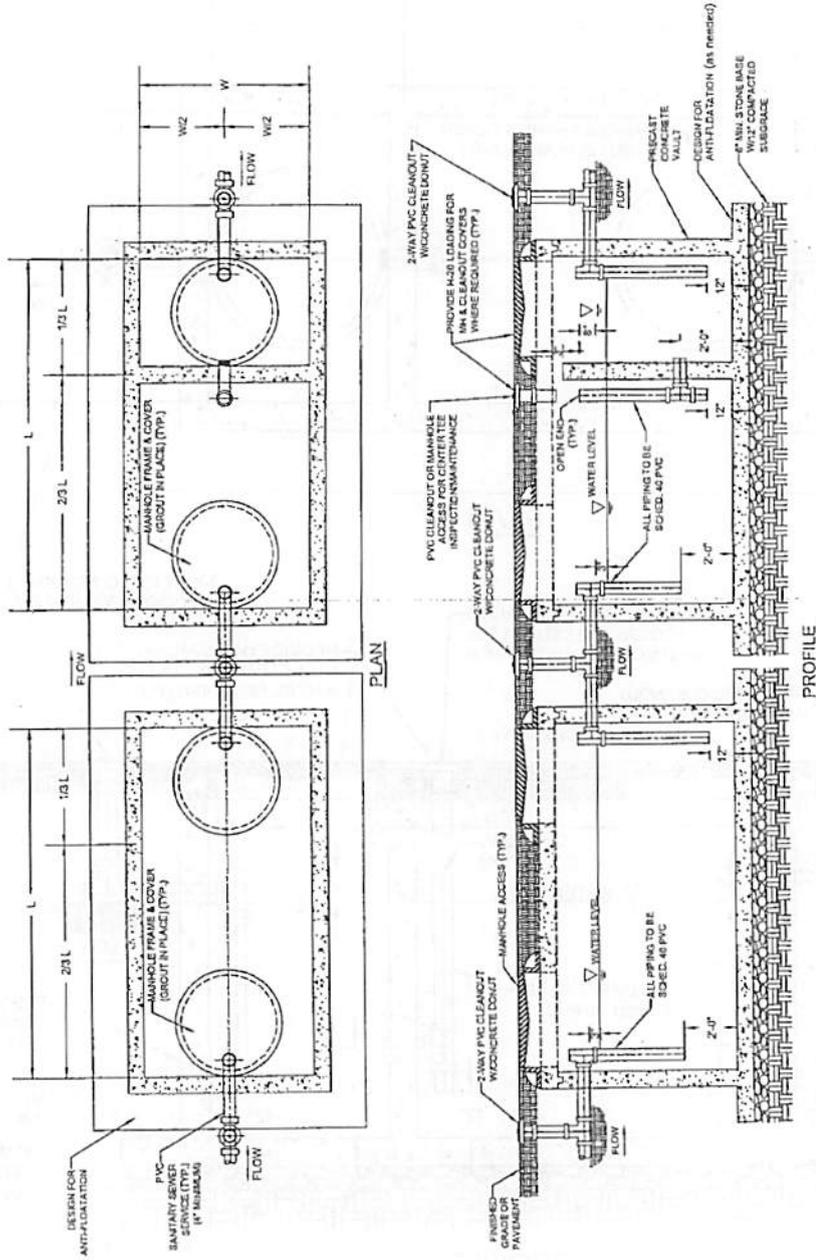
1. ALL PROPOSED GREASE INTERCEPTORS TO BE SUBMITTED TO CITY OF COLUMBIA FOR APPROVAL PRIOR TO INSTALLATION.

2. ALL GREASE INTERCEPTORS TO BE INSTALLED, OWNED AND MAINTAINED BY PROPERTY OWNER.
3. USE NON-SHRINK GROUT AT ALL PENETRATIONS.
4. PROVIDE BUTYL RUBBER SEAL BETWEEN ALL SECTIONS AND TOP.
5. LOCATE MANHOLE ACCESS ABOVE TEES FOR VISUAL INSPECTION AND MAINTENANCE.

GR #1

**CITY OF COLUMBIA
STANDARD GREASE INTERCEPTOR
(NOT TO SCALE)**

Attachment B



- NOTES:**
1. ALL PROPOSED GREASE INTERCEPTORS TO BE SUBMITTED TO THE CITY OF COLUMBIA FOR APPROVAL PRIOR TO INSTALLATION.
 2. ALL GREASE INTERCEPTORS TO BE INSTALLED, OWNED AND MAINTAINED BY PROPERTY OWNER.
 3. USE NON-SHRINK GROUT AT ALL PENETRATIONS.
 4. PROVIDE BUTYL RUBBER SEAL BETWEEN ALL SECTIONS AND TOP.
 5. LOCATE MANHOLE ACCESS ABOVE TEES FOR VISUAL INSPECTION AND MAINTENANCE.

GR #2
 CITY OF COLUMBIA
 STANDARD GREASE INTERCEPTOR IN SERIES
 (NOT TO SCALE)

Attachment C

CITY OF COLUMBIA

GREASE TRAP AND GREASE INTERCEPTOR SIZING GUIDE

- A. **NON-COOKING INTENSIVE FOOD SERVICE ESTABLISHMENTS** (examples include ice cream shops, candy shops, deli in grocery or convenience store without cooking facilities, bagel shops, etc.)

Formula: Min. Trap Capacity = $[(\# \text{ of compartments} \times \text{Length} \times \text{Width} \times \text{Depth}) / 1728] \times 7.48 \times 0.80$

Example: 3 compartment sink = $[(3 \text{ compartments} \times 17" (L) \times 17" (W) \times 11" \text{ deep}) / 1728] \times 7.48 \times 0.80$
= 33.02 gallon trap capacity (4.4 cu. ft.)

- B. **COOKING INTENSIVE FOOD SERVICE ESTABLISHMENTS** (examples include restaurants, drive-in restaurants, deli's with cooking capacity, carry out restaurants, catering, delivery, etc.)

Formula: Min. Interceptor Volume = No. of Seats x FR x (Hours of Operation/18)

FR = Flow Rate

Full Service Restaurant = 25 gallons

Non-Washable, Paper, or Plastic Utensils = 12.5 gallons

- C. **OTHER FOOD SERVICE ESTABLISHMENTS** (examples include hotels, nursing homes, schools, office, or factory cafeteria, etc.)

Formula: Total Volume = # of person meals x 5 gal. x DW
of person meals = number of meals served during either breakfast, lunch, or supper, whichever is greatest

DW = Dishwashing: With Dishwasher = 1.0 or Without Dishwasher = .75

Examples: 1. A cafeteria with a dishwasher serves 300 meals a day = 300 meals x 5 gal. x 1.0 = 1,500 gal.
2. 200 unit motel w/efficiency kitchens = 200 rooms x 4 people/room x 5 gal./meal x 0.75 = 3,000 gal.

- D. **FIXTURE UNIT CALCULATION METHOD** (When using the fixture unit calculation method, the Owner must submit calculations signed and sealed by a registered professional engineer in the state of South Carolina to the City for review.)

Formula: Total Volume = Q x T x SF

Q = Flow in GPM – Flow derived from total Drainage Fixture Units (DFU) or Fixture Units (FU) connected to the interceptor as determined using the International Plumbing Code (2000 or higher edition) or AWWA Manual of Water Supply Practices M22.

T = Retention Time – 30 Minutes

SF = Storage Factor = 1.25 based on fully loaded interceptor with 25% grease/solids.

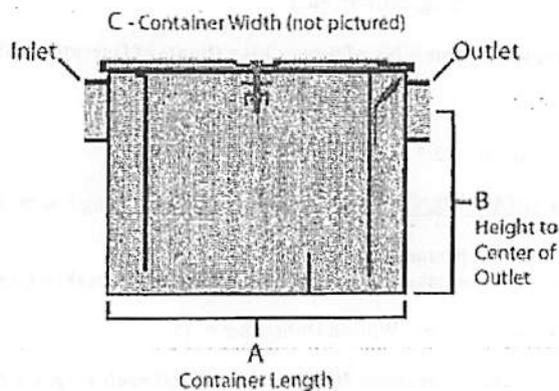
NOTES:

1. Non-Cooking Intensive Food Service Establishments as determined by the City may utilize grease traps (must have provisions for sampling at outlet of trap). All others must utilize grease interceptors unless approved by City staff. Refer to *Specifications for Grease Traps and Interceptors – Part 30* of the City of Columbia Standard Specifications for requirements.
2. Regardless of minimum size required, underground grease interceptors are required to have a minimum 1,000 gallon capacity. When greater than 1,500 gallon capacity is required, multiple units may be furnished and installed in series, see standard details in "Specifications for Grease Traps and Interceptors – Part 30 of the City of Columbia Standard Specifications. Larger sized interceptors may be approved on a case by case basis.
3. Refer to *Fats, Oils, and Grease Management Regulation – Part 29* for additional information.
4. The foregoing is a recommended minimum guideline only. It does not in any way relieve the owner of ordinance mandated requirements that discharged waste have a maximum grease content of 100 mg/l, see Sewer Use Ordinance Sec. 23-102.
5. Contact Scott Rogers at 545-3290 for more information.

Attachment D

CITY OF COLUMBIA GREASE TRAP SPECIFICATION SHEET EXAMPLE

NON-COOKING INTENSIVE FOOD ESTABLISHMENTS ONLY



(NOT TO SCALE)

Total Gallon Capacity	Dimension In Inches		
	Length (A)	Height (B)	Width (C)
9.2	19"	8"	14"
19.4	24"	11"	17"
49.8	30"	16"	24"
74.2	34"	18"	28"
98.7	38"	20"	30"

Formula for Calculating Total Grease Trap Capacity:

$$[\text{Length}(A) \times \text{Height}(B) \times \text{Width}(C) / 1728] \times 7.48 = \text{Total Gallon Capacity}$$

NOTES:

1. ALL PROPOSED GREASE TRAP PLANS TO BE SUBMITTED & APPROVED BY CITY OF COLUMBIA DEPARTMENT OF UTILITIES AND ENGINEERING PRIOR TO INSTALLATION.
2. GREASE TRAP INSTALLED, OWNED AND MAINTAINED BY PROPERTY OWNER.

CITY OF COLUMBIA
STANDARD OPERATING PROCEDURES FOR GREASE FACILITY INSPECTIONS

1.0 General

- 1.1 In accordance with the City of Columbia Code of Ordinances, Chapter 23, Wastewater Services, in conjunction with Utilities and Engineering's Regulations Part 29 and Part 30, discharge of water or wastes containing excessive grease into the sanitary sewer system is prohibited. Compliance with this Ordinance and these regulations is monitored through periodic grease trap/interceptor and sewer inspections at Food Service Establishments ("FSEs") (as defined in Regulations Part 29 and Part 30) that generate wastes containing grease. Frequency of inspection is established based on historical data.

The City tracks the effectiveness of its FOG program through various performance measures which, in the City's sole discretion, may be altered or changed from time to time. The City is currently tracking the number of FOG-related sanitary sewer overflows ("SSOs") in comparison with the City's total SSOs. The City is also regularly engaged in public education efforts in order to decrease FOG-related SSOs, including through enclosure of flyers in water bills and distribution of door knockers by inspectors in neighborhoods regarding the City of Columbia FOG Program.

Wastewater Maintenance Division ("WWM") personnel are kept up-to-date on which area each inspector covers. Inspectors will be notified if WWM field personnel are having substantial or noteworthy FOG issues in their area.

1.2 Training

1.2.1 New inspectors are trained upon hire. The City of Columbia Code of Ordinances, Chapter 23, Regulations Parts 29 and 30, and the Standard Operating Procedures for Grease Facility Inspections are provided to and reviewed with each new inspector, and receipt and review are documented. New inspectors are also introduced to the City's WWM personnel. On-the-job training is conducted for all new inspectors by an existing trained inspector for a minimum of one week before the new inspector is permitted to individually conduct inspections. During this initial training period, new inspectors are given practical training regarding all aspects of the Standard Operating Procedures for Grease Facility Inspections, including inspection protocol. New inspectors are also trained in safety and hygiene related to inspections, discussed in Section 2.0, below. The determination of when a new inspector is adequately trained to conduct inspections on his or her own will be made in the discretion of the existing trained inspector conducting the training.

1.2.2 Existing inspectors are regularly issued any updates to the Standard Operating Procedures upon final revision and are trained on current Standard Operating Procedures.

1.2.3 All inspectors are encouraged to attend workshops, conferences and tradeshow to further their knowledge in this field and stay up-to-date with emerging technology and techniques.

2.0 Safety and Hygiene

2.1 Prior to conducting sanitary sewer inspections in connection with FSE inspections, the inspector will receive training concerning the associated hazards. The inspector will review, with his/her supervisor, the hazard assessment for the task. The inspector will be required to understand the hazards and demonstrate knowledge of the necessary safety precautions, procedures and equipment.

2.2 Sanitary sewer inspections are frequently conducted at manholes in, or adjacent to, roadways. For inspections requiring temporary traffic control the inspector will follow procedures in the South Carolina Work Zone Safety Guidelines and the South Carolina Manual On Uniform Traffic Control Devices, Part V, "Traffic Control for Highway Construction and Maintenance Operations". Traffic control may necessitate assistance from additional personnel.

3.0 Inspection Procedures

3.1 Inspection procedures for New FSEs will be conducted as follows:

3.1.1 After a completed and satisfactory FOG Registration form has been submitted to the City, the FSE may proceed with installation and/or construction of the Grease Trap and/or Grease Interceptor. When installation and/or construction of the Grease Trap and/or Grease Interceptor is completed, the FSE Owner (as defined by Regulation Part 29) shall notify the City that the FSE is ready for inspection. The FSE Owner shall notify the City prior to covering any exterior Grease Interceptors. During the inspection, the information contained in the FOG Registration form will be verified and the FSE's Grease Traps and/or Grease Interceptors will be inspected. If a grease trap or grease interceptor approved by the City Engineer (and/or his or her designee) is properly installed and functioning, the FSE will be deemed to be in compliance and a follow up letter, Prerecorded Letter 4 (PR4) (Exhibit G), will be sent to the FSE Owner. If any Grease Trap or Grease Interceptor requires maintenance or repairs, if any incorrect information has been given, or in the event of noncompliance with any portion of this regulation, the inspector will issue a written notice requiring that the FSE correct any deficiencies, including a required time schedule for repairs to be effected prior to a second inspection. Second inspections will be performed after a minimum of ten (10) calendar days have elapsed to allow the FSE to

implement appropriate and necessary corrective action(s) to correct the deficiencies. If the FSE is not in compliance at the second inspection, the FSE Owner must complete any additional maintenance and/or repairs or take whatever other action may be required for compliance and resubmit the FOG Registration form.

3.2 Inspection of Existing FSEs will be conducted as follows:

3.2.1 Drawings are reviewed to identify FSE sewer connections and upstream and downstream manholes.

3.2.2 Each FSE shall be solely responsible for the cost of grease trap/grease interceptor installation, inspection, cleaning and maintenance. FSEs with grease traps may contract with a grease hauler cleaning service or they may develop a written protocol and perform their own grease trap cleaning and maintenance procedures. Facilities with interceptors shall utilize a grease hauler to properly dispose of interceptor contents. Cleaning and maintenance of grease traps and interceptors must be performed in accordance with Part 29 and the manufacturer's operation and maintenance recommendations and instructions. In the event of conflict between Part 29 and the manufacturer's operation and maintenance recommendations and instructions, Part 29 will control. The FSE owner must have a copy of this documentation and maintenance logs demonstrating compliance on site and must be able to produce them immediately upon the request of the inspector.

3.2.3 Cleaning frequency for grease traps and grease interceptors is to be conducted as follows.

- (a) Grease traps must be cleaned as often as necessary to achieve compliance with the City of Columbia Code of Ordinances, Chapter 23, and Part 29. This cleaning frequency may, in some cases, exceed that recommended by the manufacturer. The City requires the complete removal of all floating materials, gray water and bottom solids. The return of gray water back into the grease trap or the wastewater collection system is NOT allowed. Grease trap cleaning may include removing/scraping excessive solids from walls, floors, baffles and inlet and outlet piping. It shall be the responsibility of each FSE to inspect its grease trap during the cleaning procedure to ensure that the trap is properly cleaned out and that all fittings and fixtures inside the trap are in working condition and are functioning properly.**
- (b) Grease interceptors must be cleaned at a minimum frequency of twice per year. The City requires the complete removal of all floating materials, gray water and bottom solids. The return of gray water back into grease interceptor or the wastewater collection system is NOT allowed. Grease interceptor cleaning shall be performed as often as necessary and in a manner necessary to achieve compliance with the City of Columbia Code of**

Ordinances, Chapter 23, and Part 29. This cleaning frequency may, in some cases, exceed that recommended by the manufacturer. Such cleaning may include removing/scraping and/or hydro scrubbing excessive solids from walls, floors, baffles and all interior plumbing. It shall be the responsibility of each FSE to inspect its grease interceptor during the cleaning procedure to ensure that the interceptor is properly cleaned out and that all fittings and fixtures inside the interceptor are in working condition and are functioning properly. In addition to the required cleaning, each FSE shall determine an additional frequency at which its grease interceptor(s) must be cleaned for proper operation as necessary to satisfy each of the following criteria:

- 1) The floatable grease layer shall not exceed six inches in depth as measured with an approved dipping method.
- 2) The settleable solids layer shall not exceed six inches in depth as measured with an approved dipping method.
- 3) The total volume of captured grease and solid material shall not displace more than 25% of the capacity of the interceptor as calculated with an approved dipping method.
- 4) The interceptor shall retain/capture FOG such that the discharge of FOG is less than 100mg/l, or as otherwise specified in the City of Columbia Code of Ordinances, Chapter 23 and/or in Part 29. (When the FSE is not in compliance in this regard, the inspector may require, in his sole discretion, testing and submission of results to the inspector, at the FSE's own expense.)

3.2.4 Upon entering the FSE, the inspector should present his/her City identification and request to speak to the person in charge. Information concerning the FSE should be recorded by the inspector on a Grease Trap and Grease Interceptor Survey (Exhibit A).

3.2.5 The FSE's grease traps and/or grease interceptors, including clean-outs, manholes, and inlet and outlet tees, will be inspected by the inspector. If the FSE has a grease trap, FSE staff will be asked by the inspector to open and close the trap. In no case shall the inspector open or close a trap. During inspections, arrangements must be made by the FSE to have a qualified staff member open and close the trap. Findings will be noted by the inspector on the Grease Trap and Grease Interceptor Survey (Exhibit A). When appropriate, photographs should be taken by the inspector to document excessive grease discharge.

3.2.6 An FSE's grease removal maintenance records will be reviewed by the inspector to confirm that the FSE is taking appropriate and required steps to keep grease out of the sanitary sewer system. Grease Trap and Grease Interceptor Operation and Maintenance Program Form (Exhibit B) may be used by the FSE if they do not already have maintenance documentation (these records must be maintained and retained for at least two (2) years immediately preceding the date

of the most recent inspection) at the FSE. A City of Columbia FOG (Fats, Oils and Grease) Brochure (Exhibit C) is also provided to the FSE upon inspection. This brochure is educational in purpose and covers best management practices for grease removal.

3.2.7 If the inspector encounters disrepair or lack of maintenance when inspecting a grease trap and/or grease interceptor, at a minimum, the downstream manhole must be checked by the inspector for FOG accumulation. If excessive FOG is found in the downstream manhole, the inspector must notify wastewater maintenance who will clean and inspect the line.

4.0 Violations

4.1 If noncompliance is identified during an inspection, the inspector may initiate an enforcement action pursuant to City in the City of Columbia Code of Ordinances, Chapter 23 and Regulation Part 29 and/or issue the FSE a written notice of violation directing the FSE to correct any deficiency. The notice of violation will include a schedule for compliance and re-inspection as follows:

4.1.1 A notice of violation may be issued to the FSE by the City with the following compliance schedule in situations where an inspector determines:

- (a) that the FSE's Grease Trap and/or Grease Interceptor is irreparable or defective and must be replaced.
- (b) that a FSE has no Grease management in place;
- (c) that the FSE has undergone a change of use which necessitates the issuance of a new SCDHEC food service license and/or permit, remodeling, expansion of the food preparation area, or modifications to the kitchen waste plumbing system and has failed to comply with Section 3.2 of Regulation Part 29;
- (d) that the FSE does not have or does not properly maintain plumbing connections to a Grease Trap or Grease Interceptor in compliance with Regulation Part 29.

Prerecorded Letter 2 (PR2) (Exhibit E) will be mailed after an inspection identifying these deficiencies. FSEs receiving a notice of violation for any deficiency identified above will be required, within fifteen (15) days of the date of the notice of violation, to submit a corrective action plan to the City for consideration, outlining and detailing the scope of work, including a timeline for completion, that meets the requirements set forth in this Program, Specifications for Grease Traps and Grease Interceptors Regulation - Part 30, and Chapter 23. If the City approves the corrective action plan, the FSE must construct the improvements at its own expense. Construction must be complete within forty-five (45) days of the date of the City's written approval of the corrective action plan. A pre-construction inspection will be scheduled by the City and the FSE is responsible for notifying the

City at least twenty-four (24) hours in advance of the start of construction in order that this inspection can be scheduled.

4.1.2 A notice of violation may be issued to the FSE by the City with a fifteen (15) day compliance schedule in situations where an inspector determines:

- (a) that the FSE has failed to adequately clean, maintain, repair, or replace a Grease Trap or Grease Interceptor as determined by the City in accordance with this Program;
- (b) that the FSE is contributing FOG to the City's wastewater collection system in quantities in excess of the allowable limits as established by the City in Chapter 23;
- (c) that the FSE has been sold or undergoes a change of ownership or in operations and a new FOG Registration form is not submitted by the New FSE Owner in accordance with the requirements of this regulation;
- (d) that the FSE has been notified by the City that it must submit a completed FOG Registration form and the FSE has failed to do so within thirty (30) days of the date of notification;
- (e) that the FSE Owner and/or any user of a shared Grease Interceptor has failed to identify to the City all FSEs connected to the shared Grease Interceptor in the FOG Registration form in accordance with the requirements of this regulation;
- (f) that the FSE has failed to produce, maintain, or retain maintenance logs, files, or other records required to be kept under this regulation for the time period consisting of the two (2) years immediately preceding the date of the most recent inspection at the FSE and any time period thereafter; or
- (g) that the FSE has otherwise failed to comply with the Program in any other manner set forth in this regulation.

Prerecorded Letter 1 (PR1) (Exhibit D) will be mailed after an inspection identifying these deficiencies, and a follow-up inspection will be conducted within approximately 15 days of the date reflected on the PR2 Letter.

4.1.3 If on the follow-up inspection, the FSE can demonstrate through visual inspection and maintenance records compliance with the City of Columbia Code of Ordinances, Chapter 23, and Part 29, the FSE is deemed to be in compliance and a follow-up letter, Prerecorded Letter 3 (PR3) (Exhibit F), will be sent to the FSE Owner.

4.1.4 If any follow-up inspection reveals a continuation of discharge containing excessive grease or insufficient remedial action by the FSE, the investigator will contact the FSE Owner by phone. Depending on the nature of the situation, and in the City's sole discretion, the FSE may be granted an extension to achieve compliance in the City's sole discretion. In cases where FSEs make no attempt to correct the problem, or in other circumstances warranting such action, Prerecorded

Letter 5 (PR5) (Exhibit H) will be hand-delivered to the FSE Owner. The Director of Utilities and Engineering will be copied on this letter and, in the case of continued noncompliance after re-inspection, the inspector will notify the wastewater compliance manager who, in turn, will refer the continuing noncompliance to the Legal Department for an enforcement action pursuant to the City of Columbia Code of Ordinances, Chapter 23, and Part 29. The referral may include a recommendation to terminate the FSE's water or wastewater service pursuant to Section 23-111 of Chapter 23.

5.0 Records

- 5.1 It is extremely important that the inspector maintain thorough and accurate records, including, without limitation, notes on verbal communications, throughout the investigatory and remediation process. Photographs should be clearly labeled and filed with other documentation.

**INDEX OF EXHIBITS TO CITY OF COLUMBIA
STANDARD OPERATING PROCEDURES FOR
GREASE FACILITY INSPECTIONS**

- Exhibit A:** Grease Trap and Grease Interceptor Survey
- Exhibit B:** Grease Trap and Grease Interceptor Operation and Maintenance Program Form
- Exhibit C:** City of Columbia FOG (Fats, Oils and Grease) Brochure
- Exhibit D:** Prerecorded Letter 1 (PR1)
- Exhibit E:** Prerecorded Letter 2 (PR2)
- Exhibit F:** Prerecorded Letter 3 (PR3)
- Exhibit G:** Prerecorded Letter 4 (PR4)
- Exhibit H:** Prerecorded Letter 5 (PR5)

EXHIBIT A Grease Trap and Grease Interceptor Survey

INSPECTION DATE: _____ INSPECTOR NAME: _____

NAME OF FACILITY: _____

ADDRESS (STREET #, NAME, TYPE & ZIP): _____

FACILITY PHONE #: _____

FACILITY CONTACT PERSON (MANAGER): _____

GREASE TRAP DEVICE AVAILABLE: YES _____ NO _____

TRAP SIZE: _____ LOCATION: _____ HAULER USED: _____ # OF LIDS: _____ LAST PUMP DATE: _____

TRAP SIZE: _____ LOCATION: _____ HAULER USED: _____ # OF LIDS: _____ LAST PUMP DATE: _____

PUMP OUT FREQUENCY ON SCHEDULE? Y N HOW OFTEN ARE TRAP(S) CLEANED? _____

MAINTENANCE LOG MAINTAINED? Y N WILL IN FUTURE FURNISHED _____

PASS OR FAIL INSPECTION? _____ IF FAIL - TYPE OF ENFORCEMENT ACTION: _____ DATE MAILED: _____

IF NO TRAP

HOURS OF OPERATION: _____	SEAT COUNT: _____	FULL SERVICE OR NONWASHABLES
SINK MEASUREMENTS: _____	UNDER SINK MEASUREMENTS: _____	
COPY OF MENU NEEDED <input type="checkbox"/> MENU ATTACHED		

FACILITY REPRESENTATIVE SIGNATURE: _____

FACILITY OWNER E-MAIL: _____

ADDITIONAL COMMENTS: _____

UPDATED 07/01/2013

EXHIBIT C

3. Measure oil floating on top of the water. When there are two bottles or more of oil in any chamber, it should be removed. Older oil has a chance of becoming emulsified (to lump into smaller droplets).

Who do I call to clean it out?

The yellow pages will list companies that pump out and clean oil and water separators. These times have special vacuum trucks that pump out material with the consistency of anything from ketchup to solid dirt. The bulk liquid is shipped to a licensed treatment facility where the oil, solids and heavy metals are separated from the water. The treated water can be discharged to the sewer. You should never use a sump truck service to clean your oil and water separator or catch basin. Sump trucks may have different requirements and/or treatment method, costs could vary. Fees can include:

- Lab analysis of a sample of the separator's contents
- Washwater for excessive oil and sludge
- Discharge for excessive oil and sludge
- Truck time, figured per foot to port, with a 2-4 hour minimum
- Tank truck rise out at the treatment facility

What should not go through a separator?

Acid, lime, degreasers, and denagers will emulsify (break up) of the small droplets so the oil doesn't float to the surface. This will allow these pollutants to drain into the sewer system.

Flank, stacked or solvent not only can emulsify oil, but accumulated vapors can pass a threat to line workers at the pump stations or treatment plant.

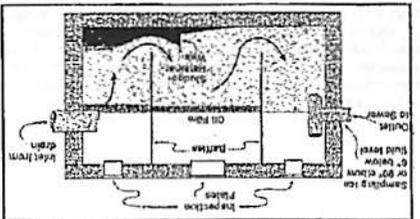
Concentrated amounts of oily products can overload the baffles or plates and pass through to the sewer.

Flushing the tank are not skinned from the surface of the separator will eventually become emulsified and appear to have a lighter color.

Heavy metal-bearing wastewater such as hot tank and cabinet washer solutions turn into a sludge or mudding sludge, any metal sludging, plating, or metal recovery water, and water-soluble machine coolant should not go through a separator too.

What can I do to maintain my oil and water separator?

You can save maintenance costs by diverting oil and sludge out of your separator. The separator site removed, the less chance they will have to become emulsified. Oil that is free-floating can be carefully vacuumed off with a mildly vacuum. This oil should be



- The following Grease Haulers and Recyclers are Approved to Dispose Directly at City of Columbia's Septage Receiving Station:
- * Ameyard Maintenance Service, LLC (location noted if not in Columbia, SC)
 - * G & K Tank Service (Sumter, SC)
 - * Appliance King (Fresno, CA)
 - * AHS (Greenville, SC)
 - * C.E. Taylor and Son, Inc.
 - * C. Walker Septic Tank Service (Ridgeway, SC)
 - * PASON LLC
 - * Commercial Waste Management, Inc. (Milledgeville, GA)
 - * Sharp's Plumbing Service, Inc.
 - * Dancy By products (St. George, SC)
 - * Dreher Septic Service
 - * ECHO SOLVE, LLC (Charlotte, NC)
- (Location noted if not in Columbia, SC)

Grease Rendering & Recycling:

Rendering companies or "grease recyclers" will accept oil, grease, and other animal by-products including deep fry fat and bones, heavily tarry grease, and other waste material into a beverage product such as animal foods. There are many benefits to the approach. They are listed below.

1. Compliance - Rendering prevents grease from reaching the City sewer system and thereby helps restaurants maintain compliance.
2. Cost Avoidance - The charge for pumping out a grease trap is considerably more than the service fee charged by a renderer.
3. Economic Incentives - Renderer's service fees are low and often provided at no charge in some cases, rendering companies are willing to pay for restaurant oil and grease.
4. Environmental Savings - Natural resources and energy are conserved through reduction and recycling. FOG recycling keeps these materials from clogging the City sewer lines, as well as from taking valuable landfill space.

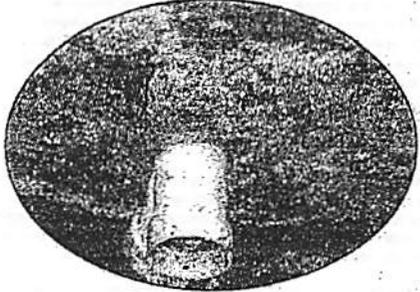


stored in a separate drum and properly disposed of. Cleaners may contain certain chemicals that, when mixed with the oil, could make them a hazardous waste.

Another way to remove oil is to use absorbent pads or socks. These float on top of the water and absorb oily oil. They can be placed in the float chamber to trap oil before it gets a chance to migrate. Pads should be checked often so they don't get saturated. Pads can be washed out and reused if handled properly and are available at most chemical and safety supply stores.

Sludge is saved on grease and oil that build up on the bottom of the separator. It is expensive to dispose of and difficult to clean out. A catch basin, installed before the separator will trap sludge before it reaches the separator. The sludge can then be shovelled out. This can be very helpful in businesses cleaning muddy equipment.

**CITY OF COLUMBIA
FOG PROGRAM
(FATS, OIL & GREASE)**

City of Columbia
Department of Utilities & Engineering
P.O. Box 147
Columbia, S.C. 29217
803-645-3400
www.columbiasc.net

Fats, Oil and Grease - sound or pushey? Fats, Oil and Grease (commonly referred to as FOG) enter the City of Columbia's sanitary sewer system every day. These items present a big problem in the sewer system. Improper cleaning practices allow food particles, oil and grease, and cleaning products to flow in the sewer system. These types of problems create environmental and public health concerns. When not disposed of properly, FOG form thick layers inside the sewer system and prevent normal flow. Clogged systems result in sewage spills, overflows and odor problems. In addition to this, FOG also attract insects and small animals, causing worse odor problems.



Restaurants produce a significant amount of FOG since grease is used in cooking and other preparation work.

The City of Columbia has a FOG Program to address and prevent FOG from entering the sewer system. Standards and initiatives on restaurants that may be discharged into the City's sanitary sewers are established in the City Code of Ordinances. This helps protect the equipment in the treatment process and is required by the United States Environmental Protection Agency. Appropriate portions of the Code, Chapter 21, Article IV, Section 23-111, can be viewed online at www.columbiasc.net or at www.municode.com. You may also call 646-3400 to request this information by mail.

City inspectors periodically check facilities to make sure they are properly handling grease. They will inspect grease traps and grease interceptors at facilities that are using the City's sewer system. Grease traps and/or grease interceptors must be cleaned out routinely in order to prevent property. Failing to do so may put a facility at risk of violating the City Code, which could lead to enforcement and fines. Facilities are responsible for keeping the grease traps and/or grease interceptors clean and for properly disposing of the fats, oil, grease, sludge, and solids that are removed. Some facilities gather their grease and sell it to companies that use it to make items such as pet food or cosmetics.

Grease traps and grease interceptors work by separating the grease and oil from wastewater. Greasy wastewater entering the trap passes through a walled flow control. This separator allows or regulates debris when the trap, but separates the FOG. The FOG then float to the top of the trap and accumulate until they are manually removed. Solids accumulate at the bottom of the trap and must also be manually removed. Wastewater without grease will continue to flow through the trap into a discharge pipe, and then to the City sewer system if the trap is clean and functioning properly. If the trap is full of grease, grease sludge, and solids that are removed, the wastewater will flow into a discharge pipe, and then to the City sewer system possibly leading to Clogs, violations and fines. Routine maintenance is key to keeping FOG out of the City's sewer system. It will also help reduce stoppages on private

property and in the City's sewage collection system. By doing your part, you can contribute to a cleaner and healthier Columbia.

Best Management Practices for Grease Removal:

Grease Traps:

Grease traps are typically below fixtures located under or near a sink. They should be cleaned on a regular basis. Cleaning the trap is a simple procedure that can take little time. Traps can be cleaned by exhaust staff or by a licensed grease hauler or recycler. The interval between cleaning depends on the individual establishment. A good rule of thumb is to clean the trap weekly. If the trap is more than 50% full of solids when cleaned weekly, management should witness or inspect the cleaning to ensure it is done properly.



When cleaning:

1. Make sure that all flow going to the trap has stopped.
2. Remove the cover of the trap and scoop out any FOG that have collected on top.
3. Bail out the water remaining in the trap to facilitate cleaning.
4. Remove baffles if possible.
5. Scrape the sides, the lid and the baffles to remove as much FOG as possible and deposit it in a grease waste container.
6. Replace the baffles and lid.
7. Record the volume of grease removed on a maintenance log.
8. Keep the maintenance log up to date and readily accessible. This serves as a record of the cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce costs.

Grease Interceptors:

A grease interceptor is much larger than a grease trap and is usually located in a walk out-side of the establishment. The minimum size is 750 gallons. It has should be cleaned on a regular basis, however, a licensed grease hauler or recycler should perform grease interceptor maintenance. Cleaning the interceptor vaults requires special training and equipment. It is very important that a restaurant representative be present during any cleaning, pumping, or skimming performed by a contractor to ensure that no shortcuts are taken. The restaurant services should include:

1. Complete pumping and cleaning of the interceptor and sample box (not just skimming

2. Descending and thorough cleaning of affected areas, as necessary.
3. Disposing or retreating of grease and oil at an approved location.
4. Refilling the vault with clean water (not with water already pumped out).




The cleaning frequency depends on the individual establishment. Inspections require cleaning at least every six months. However, frequency depends on the capacity of the device, the amount of grease in the wastewater and the degree to which the facility has contributed to blockages in the past. Thus, the frequency can range from every two weeks to every six months.

Oil and Water Separators:

Oil and water separators are large capacity, underground cement vaults installed between a drain and the connecting sewer pipe. These vaults are designed with baffles to trap sediments and retain floating oils while allowing the remaining wastewater to be discharged to the wastewater collection system by gravity. The large capacity of the vaults slows down the wastewater, allowing oil to float to the surface and solid material to settle out.

Any business that plans to discharge oily or sediment-laden wastewater to the sewer must install, use and maintain an oil and water separator. Businesses that typically need oil and water separators include:

- Quick lube stations
- Transportation tubing facilities
- Vehicle heavy equipment repair facilities
- Businesses using clean or pressure washers

Many think that if the separator is still draining, it is working, but the only "filter" an oil and water separator needs occasional cleaning. A separator's efficiency is most affected by solid solids or sludge and by oils. You should inspect the separator at least every six months.

When cleaning:

1. Open the inspection plates with a screwdriver and look in each chamber. Make sure the outlet chamber (usually the side closest to the street) has a sampling "T". It should have at least a six-inch extension below the water surface.
2. Take a long stick that will reach the bottom (about 8 feet). Any resistance to push in or pull out the bottom will indicate a sludge buildup. Service the oil and water separator in each chamber (typically the one closest to the drain).

EXHIBIT D

[DATE]

Re: Violation of the City of Columbia Code of Ordinances Concerning Treatment of Wastewater; [NAME OF RESTAURANT/FACILITY AND LOCATION]

[FSE Owner identified on Registration]
 [BUSINESS NAME]
 [ADDRESS LINE 1]
 [ADDRESS LINE 2]

Dear [FSE Owner]:

The City of Columbia has a FOG (Fats, Oil and Grease) program to address and prevent FOG from entering the sanitary sewer system. Standards and limitations on materials that may be discharged into the City's sanitary sewers are established in the City Code of Ordinances, in conjunction with Utilities and Engineering's Regulations Part 29 and Part 30. The FOG program helps protect the City's wastewater collection and treatment system and is required by the United States Environmental Protection Agency. The Utilities and Engineering's Regulations Part 29 and Part 30 can be viewed in its entirety online at <http://columbia.sc.gov/index.cfm/departments/utilities-engineering/engineering-regulations/>.

On [DATE], City staff inspected the grease trap and/or grease interceptor associated with your Food Service Establishment (FSE) located at [LOCATION]. The inspector observed the following deficiencies that are in violation of the City of Columbia Utilities and Engineering Regulation Part 29:

- Failure to Clean, Maintain, Repair, and/or Replace Grease Trap and/or Grease Interceptor
- Failure to Identify all FSEs Connected to Shared Interceptor
- Excessive FOG Contribution Failure to Submit FOG Registration
- Sale/Change of Ownership Change in Operations
- Failure to Produce and/or Maintain Required Records
- Other Noncompliance: _____

The implementation of a cleaning and maintenance schedule consisting of routine inspections and grease removal in accordance with Part 29 is essential to ensuring compliance with the applicable ordinance and regulations in the City's FOG program. Another inspection will be made fifteen (15) days after the date of this letter to determine whether the deficiencies denoted above have been corrected. The City's next inspection will include, in part, a review of maintenance records for your grease trap(s) and grease interceptor(s). If upon re-inspection your FSE is not in full compliance or fails to remain in compliance thereafter, enforcement action may be initiated pursuant to the City of Columbia Code of Ordinances, Chapter 23, and Part 29,

including, but not limited to, termination of your facility's water or wastewater service pursuant to Section 23-111 of Chapter 23.

If you have questions concerning the inspection, please call the inspector [NAME] at [NUMBER].

Yours very truly,

Stephen B. Sealey
Wastewater Compliance Specialist

CC: Ms. Missy Smith Gentry, P.E., Assistant City Manager
Mr. Joseph D. Jaco, P.E., Director of Utilities and Engineering
Mr. William H. Davis, P.E., Wastewater Engineer

- a. Submit a corrective action plan which shall meet the standards and limitations stated in the Ordinance and Parts 29 and 30. Your corrective action plan must be submitted to the Wastewater Compliance Section, 1200 Simon Tree Lane, Columbia, SC 29201 within 15 days of the date of this letter for review and approval.
- b. Upon your receipt of written notification of the City's approval of the corrective action plan, you must construct the improvements. Construction must be completed within 45 days of the date of the City's written approval of the

In order to bring your FSE into compliance with the applicable regulations, you must proceed with the following actions in accordance with the stated schedule of compliance:

- No Grease Trap/Grease Interceptor
- Irreparable Grease Trap/Interceptor
- Failure to comply with Section 3.2 of Part 29 following Change of Use, Remodeling, Expansion, and/or Modifications to Waste Plumbing System
- Failure to Have/Maintain Plumbing Connections

On [DATE], City staff inspected your Food Services Establishment (FSE) located at [LOCATION] and observed the following deficiencies that are in violation of Utilities and Engineering's Regulations Part 29 and Part 30.

The City of Columbia has a FOG (Fats, Oil and Grease) program to address and prevent FOG from entering the sanitary sewer system. Standards and limitations on materials that may be discharged into the City's sanitary sewers are established in the City Code of Ordinances, in conjunction with Utilities and Engineering's Regulations Part 29 and Part 30. The FOG program helps protect the City's wastewater collection and treatment system and is required by the United States Environmental Protection Agency. The Utilities and Engineering's Regulations Part 29 and Part 30 can be viewed in their entirety online at <http://columbia.sc.gov/index.cfm/departments/utilities-engineering/engineering-regulations/>.

Dear [FSE Owner]:

[FSE Owner identified on Registration]
 [BUSINESS NAME]
 [ADDRESS LINE 1]
 [ADDRESS LINE 2]

Re: Violation of the City of Columbia Code of Ordinances Concerning Treatment of Wastewater; [NAME OF RESTAURANT/FACILITY AND LOCATION]

[DATE]

EXHIBIT E

corrective action plan. You are required to notify the City when you plan to begin construction in order that a pre-construction inspection may be scheduled. You are responsible for providing the City with a minimum of 24 hours advance notice, during the normal work week, prior to the start of construction to allow appropriate time for scheduling.

- c. Full compliance with the Ordinance and Regulations, including correction of the deficiencies denoted above, is required within the compliance schedule stated herein.

If you are unable to comply with the schedule set forth herein, you must request, in writing, an extension of the schedule. This request should be addressed to me and should contain specific reasons and justifications for the request. Only in the most extenuating of circumstances will such requests be granted. If such a request is granted, you will receive written notification of same within [INSERT] days of the date of your submission, which notification will include a new compliance deadline.

The City's next inspection will include, in part, a review of your maintenance records for your grease trap(s) and/or grease interceptor(s). If upon re-inspection your FSE is not in full compliance or fails to remain in compliance thereafter, an enforcement action may be initiated pursuant to the City of Columbia Code of Ordinances, Chapter 23, and Part 29, including, but not limited to, termination of your facility's water or wastewater service pursuant to Section 23-111 of Chapter 23. If you have questions concerning the inspection, please call the inspector [NAME] at [NUMBER].

Yours very truly,

Stephen B. Sealey
Wastewater Compliance Specialist

CC: Ms. Missy Smith Gentry, P.E., Assistant City Manager
Mr. Joseph D. Jaco, P.E., Director of Utilities and Engineering
Mr. William H. Davis, P.E., Wastewater Engineer

EXHIBIT F

[DATE]

Re: Violation of the City of Columbia Code of Ordinances Concerning Treatment of Wastewater; [NAME OF RESTAURANT/FACILITY AND LOCATION]

[FSE Owner identified on Registration]
[BUSINESS NAME]
[ADDRESS LINE 1]
[ADDRESS LINE 2]

Dear [FSE Owner]:

A follow-up inspection of the City's sanitary sewer system at the subject location was conducted on [DATE]. Based on this inspection, the excess grease discharge violation described in the letter from the City dated [DATE] appears to have been corrected. The City will take no further enforcement action at this time.

Discharges of fats, oil, and grease into the sanitary sewer system can usually be prevented through regular maintenance of an adequate grease removal system providing maintenance is scheduled at a frequency appropriate to the system loading.

The City will continue to review maintenance records for your [GREASE TRAP OR GREASE INTERCEPTOR] at future inspections. You will need to document maintenance on a continual basis if you are not already doing so.

Your prompt attention in correcting this violation is appreciated. Should you have any questions, please call the inspector at (803) 255-8927.

Yours very truly,

Stephen B. Sealey
Wastewater Compliance Specialist

CC: Mr. Joseph D. Jaco, P.E., City Engineer
Mr. William H. Davis, P.E., Wastewater Engineer

EXHIBIT G

[DATE]

Re: City Approval of Fats, Oils,
and Grease Removal System;
[NAME OF
RESTAURANT/FACILITY
AND LOCATION]

[FSE Owner identified on the FOG Registration]
[BUSINESS NAME]
[ADDRESS LINE 1]
[ADDRESS LINE 2]

Dear [FSE Owner]:

The City of Columbia has a FOG (Fats, Oil and Grease) program to address and prevent FOG from entering the sanitary sewer system. Standards and limitations on materials that may be discharged into the City's sanitary sewers are established in the City Code of Ordinances. The FOG program helps protect the wastewater collection and treatment system and is required by the United States Environmental Protection Agency.

On [DATE], City staff inspected a [Grease Trap or Grease Interceptor] at your Food Service Establishment (FSE) at [LOCATION] to confirm that the [Grease Trap or Grease Interceptor] complies with the sizing and design requirements in Regulation Part 30, *Specifications for Grease Traps and Grease Interceptors*. The inspector has conditionally approved your [Grease Trap or Grease Interceptor] based on future satisfactory performance of the system. A proper maintenance schedule of cleaning, pumping, and routine inspections is mandatory. The nature and quantity of future discharges may also make system improvements necessary. The City will review maintenance records for the disposal of FOG at future inspections. This conditional approval is limited to the City's assessment of the compliance of your FSE's [Grease Trap or Grease Interceptor] with the sizing and design requirements in Regulation Part 30, *Specifications for Grease Traps and Grease Interceptors*, and does not address or concern other matters related to the sufficiency of the installation, plumbing connections, performance, operation or maintenance of your FSE's [Grease Trap or Grease Interceptor].

Periodic inspections will be made to determine if proper maintenance has been conducted on your approved FOG removal system. If you have questions concerning the inspection, please call the inspector at (803) 255-8927.

Yours very truly,

Stephen B. Sealey
Wastewater Compliance Specialist

CC: Mr. Joseph D. Jaco, P.E., City Engineer
Mr. William H. Davis, P.E., Wastewater Engineer

EXHIBIT H

[DATE]

Re: Re-Inspection Violation of
the City of Columbia Code of
Ordinances Concerning
Treatment of Wastewater;
[NAME OF
RESTAURANT/FACILITY
AND LOCATION]

BY HAND DELIVERY
WITH ACKNOWLEDGMENT OF RECEIPT

[FSE Owner identified on FOG Registration]
[BUSINESS NAME]
[ADDRESS LINE 1]
[ADDRESS LINE 2]

Dear [FSE Owner]:

The City of Columbia notified you by letter dated [DATE], that your Food Service Establishment (FSE) was in violation of the City of Columbia Code of Ordinances. On [DATE], City staff re-inspected your FSE located at [LOCATION]. The inspector determined that proper actions had not been conducted to correct violations and/or that your FSE was in violation of the City of Columbia Code of Ordinances.

If your FSE is not in full compliance with the Code of Ordinances within seven calendar days of your receipt of this letter, this matter will be referred to the City Attorney to initiate an enforcement action pursuant to City of Columbia Code of Ordinances, Chapter 23, including, but not limited to, termination of your FSE's water and/or wastewater service. In addition, the City reserves the right to pursue any other remedies provided by law for the subject violation(s).

Should you have any questions, please call me at (803) 733-8566.

Yours very truly,

Stephen B. Sealey
Wastewater Compliance Specialist

cc: Ms. Teresa B. Wilson, City Manager
Mr. Kenneth E. Gaines, City Attorney
Mr. Joseph D. Jaco, P.E., City Engineer
Mr. William H. Davis, P.E., Wastewater Engineer

Appendix H

Appendix H

List of Pump Stations with Capacity Ratings Greater than 1000 GPM

Station ID #	Name	Reliable Capacity (GPM)*	Number of Pumps**	TDH (ft)
110	West Columbia	16,666	4	85
295	North Columbia	14,580	6	102
335	Broad River	6,300	4	217
065	Mill Creek	9,000	4	110
195	Saluda River	10,420	4	129

* Reliable capacity with largest pump out of service

** Includes redundant pump

Revised Appendix I

REVISED APPENDIX I
SUPPLEMENTAL ENVIRONMENTAL PROJECT

Pursuant to the terms set forth in Section VIII of this Consent Decree, Columbia will perform a Supplemental Environmental Project (SEP), implementing stream cleanup, flooding, and/or water quality improvement projects in the following three areas (designated as Area 1, Area 2, and Area 3) as described below. Columbia shall spend a total of at least \$1,000,000 to implement this SEP. Columbia, in its sole discretion, may contract with third parties or utilize its own employees and equipment to perform any or all of this SEP. Columbia will be given credit against the total funding obligation for work performed utilizing its own employees or equipment, provided, however, that the work performed is not that which would have otherwise been performed by Columbia's employees. Any such credit for work performed utilizing Columbia's own employee or equipment must be supported by time and expense records.

In order to perform this SEP, Columbia must obtain the consent of private property owners and/or lessees to access certain areas designated for the work described herein. Columbia will make a reasonable effort to obtain the required consent for access, but is under no obligation to exercise its power of eminent domain in circumstances in which consent is not given voluntarily.

Columbia shall complete all work on Areas 1, 2 and 3 within five (5) years of the Effective Date of this Consent Decree; provided, however, that the deadline for any proposed work which requires an individual Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers ("Corps") shall be tolled for the period of time from the submittal of the application for such permit to the Corps until the issuance of the permit to Columbia by the Corps. Columbia shall complete the water quality monitoring component to evaluate the effectiveness of the SEP within six (6) years of the Effective Date of this Consent Decree.

Area 1 – Stream Cleanup, Flooding, and/or Water Quality Improvement of the Upper Congaree River Watershed Along the Lower and Middle Reach of Rocky Branch

Purpose

Columbia has identified Rocky Branch as a high-priority water body within the Upper Congaree River Watershed ("UCRW") that is in need of long-term efforts to improve its water quality, minimize flooding, and identify areas in need of restoration and stabilization. The lower and middle portions of Rocky Branch, starting at the railroad trestle across Blossom Street and ending at the Congaree River, are especially in need of attention. In a study conducted by PB America's Inc. on behalf of the City of Columbia, this area was identified as a significant contributor to upstream flooding (October 2007). This section of Rocky Branch is generally identified as Item 1 on the attached map (hereinafter referred to as "Rocky Branch") and flows through an environmental justice community. High volumes and velocities of stream flow have potentially contributed to stream bank degradation along this section of the watershed. Furthermore, reducing flooding in this region decreases the likelihood that floodwaters will enter the public sewer system through manholes, cleanouts, and faulty or improper connections and

joints, which will benefit the environment by reducing the likelihood and the volume of related SSOs.

Scope

Columbia will develop and implement, in conjunction with the Rocky Branch Watershed Alliance (“RBWA”), a multi-year, phased project designed to facilitate long-term efforts to improve the water quality of Rocky Branch. During the initial phase of this project (“Phase I of the Rocky Branch Project”), Columbia will engage a consultant, in consultation with RBWA, to develop an integrated Watershed Management Plan consistent with the planning protocols of the Center for Watershed Protection. The consultant will utilize prior assessments conducted by the City and RBWA and conduct new assessments as required to develop a comprehensive plan that prioritizes actions and capital improvements required to meet the long-term goals for Rocky Branch, including those beyond the scope of Phase II of the Rocky Branch Project.

The second phase (“Phase II of the Rocky Branch Project”) will implement projects identified in the Watershed Management Plan developed during Phase I. Projects will be implemented on a prioritized scale to improve water quality and reduce flood risk as determined by the City of Columbia in consultation with RBWA. This phase also includes implementing engineering techniques designed to improve water quality, minimize flooding, and restore and stabilize stream banks of Rocky Branch, such as stream and riparian buffer restoration, re-vegetation and low impact design standards. Additionally, Columbia shall maintain those selected engineering techniques until EPA determines that Columbia has satisfactorily completed this SEP pursuant to Paragraph 33 of the Consent Decree. Any remaining funds will be used for a one-time stream clean up project, consisting of removal of debris, such as trash, furniture, household appliances, tires, and construction debris, from the banks and contiguous stream beds of Area 1 accessible from Rocky Branch and within the municipal limits of the City. Columbia will secure necessary federal, state, and local permits for the project and will dispose of and/or recycle all removed debris consistent with applicable federal, state, and local requirements.

Within twenty-four (24) months of the Effective Date of this Consent Decree, Columbia will complete Phase I of the Rocky Branch Project.

Within three (3) years of the Effective Date of this Consent Decree, Columbia will submit to EPA the preliminary report on the condition of Rocky Branch and a plan for Phase II of the Rocky Branch Project, including Columbia’s selected techniques designed to improve water quality, minimize flooding, and restore and stabilize stream banks of Rocky Branch.

As indicated above, all work in Area 1 shall be completed within five (5) years of the Effective Date of this Consent Decree.

Area 2 – Stream Cleanup and Water Quality Improvement of Smith Branch

Purpose

In conjunction with Congaree Riverkeeper, Columbia has identified Smith Branch as a high-priority water body in need of a long-term effort to improve its water quality. The Broad River watershed contains the northern area of the City of Columbia. It includes the I-26, I-20, and I-77 corridors, along with the U.S. Hwy. 321, U.S. Hwy. 21, and U.S. Hwy. 176. Located within the City of Columbia corporate limits, Smith Branch is the most urbanized tributary of the Broad River. Approximately 81% of this watershed is urban, 15% is forest, and 2% is farmland. Its main stem headwater rises on property owned by the S.C. Department of Mental Health, and crosses Interstate 277 and North Main Street. Once the stream crosses Interstate 277, a tributary rising near the neighborhoods of Bethel-Bishop-Chappell Community, Booker Washington Heights Neighborhood, and the Colony Community flows southward to discharge into Smith Branch. Smith Branch then crosses Earlewood Park Neighborhood, Hyatt Park Neighborhood, and Colonial, Colonial West and Colonial Heights Neighborhoods before emptying into the Broad River. This section of Smith Branch from the Earlewood Park Neighborhood to the Broad River is generally described as Item 2 on the attached map (hereinafter referred to as “Smith Branch”) and flows through an environmental justice community.

Smith Branch is impaired both for recreational use and for aquatic life uses. In water samples tested by DHEC from 1998 through 2002, 89% of samples taken from Smith Branch exceeded the 400 cfu/100 ml water quality standard for fecal coliform. High fecal coliform concentrations in Smith Branch is likely caused by stormwater runoff, pet excrement, leaking sewer pipes, and failing septic tanks. In 2005, DHEC developed a Total Maximum Daily Load (“TMDL”) for fecal coliform in the Broad River, Crane Creek and Smith Branch. The TMDL for Smith Branch specifies a reduction in the load of fecal coliform bacteria into Smith Branch of 99% in order for the creek to meet the recreational use standard. As of 2010, Smith Branch still does not meet state water quality criteria to support recreational uses. Similarly, aquatic life in Smith Branch is impaired as demonstrated by the stream’s loss of benthic habitat. According to DHEC, the likely cause of impaired aquatic life on Smith Branch is pollution entering the stream through stormwater runoff. Poor benthic habitat may also be associated with the canalization of the stream with very little opportunity for riffles and pools to form. There is also much evidence of littering in the stream. Smith Branch is one of the first two streams in South Carolina to be the subject of a TMDL to address impaired aquatic life.

Scope

During the initial phase of this project (“Phase I of the Smith Branch Project”), Columbia will engage a design professional in consultation with Congaree Riverkeeper to develop a Smith Branch Comprehensive Watershed Management Plan consistent with the planning protocols of the Center for Watershed Protection.

During the second phase of this project (“Phase II of Smith Branch Project”), Columbia will conduct a one-time stream cleanup project in an effort to improve the overall quality and sustainability of Smith Branch. The stream cleanup project shall consist of removal of debris,

such as trash, furniture, household appliances, tires, and construction debris, from the banks and contiguous stream beds of Area 2 accessible from Smith Branch and within the municipal limits of the City. Columbia will secure necessary federal, state, and local permits for the project and will dispose of and/or recycle all removed debris consistent with applicable federal, state, and local requirements. This phase may also include additional projects identified in the Smith Branch Watershed Management Plan developed during Phase I. For those Phase II projects which include implementing engineering techniques, Columbia shall maintain those engineering techniques until EPA determines that Columbia has satisfactorily completed this SEP pursuant to Paragraph 33 of the Consent Decree.

Within twenty-four (24) months of the Effective Date of this Consent Decree, Columbia will complete Phase I of the Smith Branch Project.

Within three (3) years of the Effective Date of this Consent Decree, Columbia will submit to EPA the preliminary report on the condition of Smith Branch and a plan for Phase II of the Smith Branch Project, including Columbia's selected techniques designed to improve water quality, minimize flooding, and restore and stabilize stream banks on Smith Branch.

As indicated above, all work in Area 2 shall be completed within five (5) years of the Effective Date of this Consent Decree.

Area 3 – Stream Cleanup and Water Quality Improvements of Gills Creek

Purpose

Columbia has also identified Gills Creek as a high-priority water body in need of long-term efforts to improve its water quality. The Gills Creek Watershed contains over 70 miles of streams and encompasses multiple jurisdictions. Within the City of Columbia corporate limits, Gills Creek is primarily in the southeastern part of the city from the municipal border with Forest Acres down to where Gills Creek empties into the Congaree River. There is a high potential for continued growth in this urban watershed, which contains a portion of the City of Columbia. Although primarily residential, there are a substantial number of commercial and industrial areas. Almost the entire watershed, which runs through the City of Columbia, has water and sewer readily available. Growth is also projected along the newly connected I-77 beltway around the city (SCDHEC, Gills Creek Watershed Evaluation).

Besides the main stem of Gills Creek, there are many additional tributaries and associated wetlands that feed into the system; Penn Branch, Wildcat Creek and Kilbourne Creek are just a few. All waters feeding into Gills Creek are classified as FW (freshwater). DHEC issued TMDLs for two stations in Gills Creek: C-017 for Dissolved Oxygen, Fecal Coliform and C-001 for Fecal Coliform.

Scope

The Gills Creek Watershed Management Plan dated May 2009 identifies watershed management projects to improve the water quality of Gills Creek. In conjunction with the Gills Creek

Watershed Association, the City has identified the certain projects to be conducted on the section of Gills Creek which is generally described as Item 3 on the attached map (hereinafter referred to as “Gills Creek”) and flows through an environmental justice community. During the initial phase of this project (“Phase I of the Gills Creek Project”), the City will implement the following projects in the Gills Creek Watershed:

- 1) Install a pocket wetland or other similar best management practice (BMP) at the end of Pelham Drive near where it meets Gills Creek Parkway;
- 2) Install a pocket wetland or other similar BMP at the end of Hampton Leas Lane where the road dead ends into the Gills Creek floodplain;
- 3) Install a pocket wetland or other similar BMP at the end of Tall Pines Circle where the road dead ends in the Gills Creek floodplain;
- 4) Install an erosion control BMP and outlet protection at the two major discharges entering the Gills Creek floodplain under Gills Creek Parkway;
- 5) Install a pocket wetland or other similar BMP at the end of Edmond Drive where the stormwater network drains to the Gills Creek floodplain (tax map number R13709-03-11); and
- 6) Install a pocket wetland or other similar BMP at the end of Hampton Trace Lane where the stormwater network drains to the Gills Creek floodplain (tax map number R13709-03-05).

Columbia shall maintain these BMPs until EPA determines that Columbia has satisfactorily completed this SEP pursuant to Paragraph 33 of the Consent Decree. During the second phase of this project (“Phase II of Gills Creek Project”), Columbia will conduct a one-time stream cleanup project on select portions of Gills Creek as prioritized by the City in consultation with the Gills Creek Watershed Association. The stream cleanup project shall consist of removal of debris, such as trash, furniture, household appliances, tires, and construction debris, from the banks and contiguous stream beds of Area 3 accessible from Gills Creek. Columbia will secure necessary federal, state, and local permits for Phase I and Phase II of the project and will dispose of and/or recycle all debris removed during the project consistent with applicable federal, state, and local requirements.

Within twenty-four (24) months of the Effective Date of this Consent Decree, Columbia will complete Phase I of the Gills Creek Project.

Within three (3) years of the Effective Date of this Consent Decree, Columbia will submit to EPA the preliminary report on the condition of Gills Creek and a plan for Phase II of the Gills Creek Project, including Columbia’s selected techniques designed to improve water quality of the section of Gills Creek.

As indicated above, all work in Area 3 shall be completed within five (5) years of the Effective Date of this Consent Decree.

Water Quality Monitoring Component

In addition to the work described above, Columbia will conduct the water quality monitoring described below to assist in evaluation of the environmental benefits of the SEP in improving water quality in Smith Branch and Gills Creek.

I. Monitoring

The City of Columbia will implement a program for ambient monitoring of dissolved oxygen (DO), total suspended solids (TSS), temperature (temp) and *E. coli*¹ at the monitoring sites listed below. Columbia will conduct the monitoring in accordance with an approved South Carolina Department of Health and Environmental Control (DHEC) quality assurance project plan (QAPP). Columbia will have the TSS and *E. coli* data analyzed at a DHEC certified lab.² By using established monitoring sites, water quality data collected by Columbia will be available for comparison to historic water quality data taken by DHEC for assessment purposes. Within sixty (60) days of entry of the Consent Decree, Columbia will submit a QAPP to DHEC for review and approval. Columbia will begin monitoring within thirty (30) days of DHEC's approval of the QAPP. As indicated below, Columbia will monitor quarterly for the first 3 years under the Consent Decree and monthly (or every other month at Site C-17) from years 4 through 6 under the Consent Decree.

II. Water Quality Stations (see attached map):

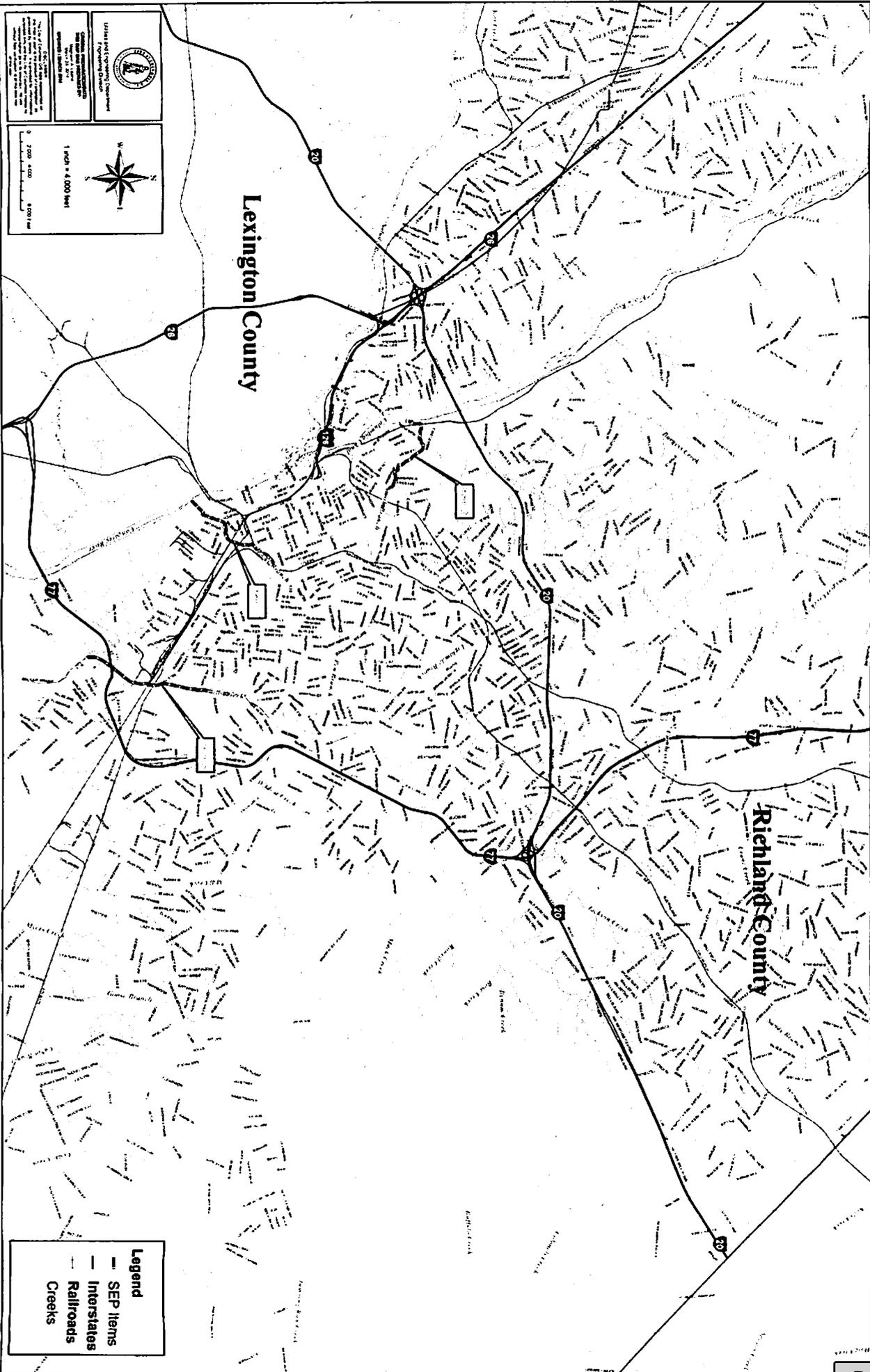
Site	Description	Impairment	TMDL	Monitoring Parameters	Frequency
C-001	Gills Creek at Garners Ferry Rd.	Fecal Coliform	Yes	DO <i>E. coli</i> Temp TSS	Quarterly during years 1-3, and monthly during year 4-6
B-280	Smith Branch at N. Main Street	Fecal Coliform	Yes	DO <i>E. coli</i> Temp TSS	Quarterly during years 1-3, and monthly years 4-6
C-017	Gills Creek at Bluff Road	Fecal Coliform DO	Yes	DO <i>E. coli</i> Temp TSS	Quarterly during years 1-3, and every other month (between DHEC samplings) years 4-6

Columbia shall provide EPA and DHEC the results of its water quality monitoring in the Quarterly Reports required under the Consent Decree.

¹ *E. coli* standard replaces the existing fecal coliform standard.

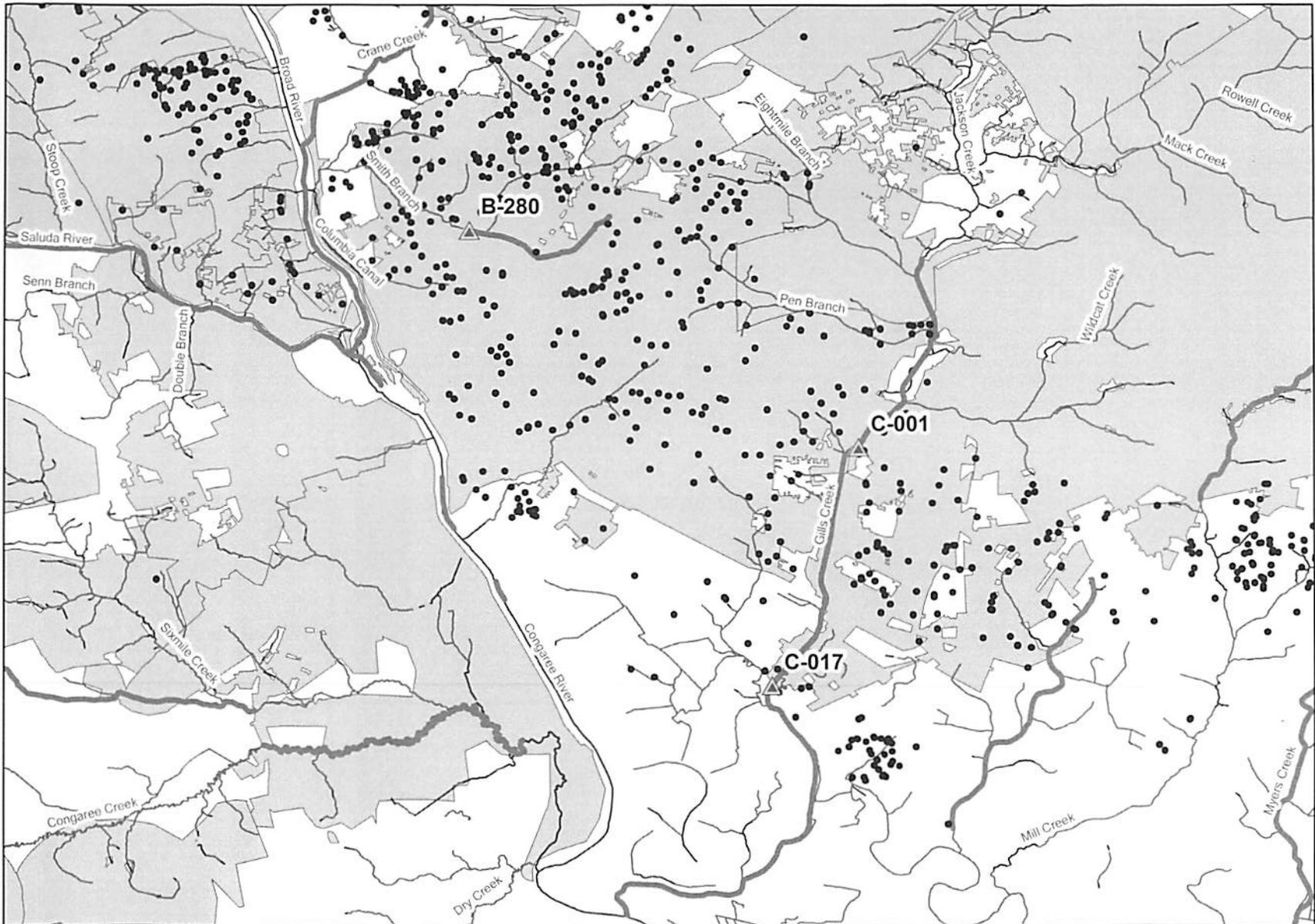
² The temp and DO parameters measured in the field with a probe are not subject to the certified laboratory requirement.

CITY OF COLUMBIA - SEP ITEMS



City of Columbia, South Carolina

Columbia Water Quality Monitoring



Legend

- ▲ Columbia SEP Monitoring Sites
- SSOs
- 303(d) Waters-2010
- Populated Places

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
Columbia Division

THE UNITED STATES OF AMERICA)	Civil Action No. 3:13-2429-TLW
)	
and)	
)	
STATE OF SOUTH CAROLINA by and)	
through the DEPARTMENT OF HEALTH)	
AND ENVIRONMENTAL CONTROL,)	
)	
Plaintiffs,)	
)	
v.)	
)	
THE CITY OF COLUMBIA,)	<u>CONSENT DECREE</u>
)	
)	
Defendant.)	

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WHEREAS, Plaintiff, the United States of America (“United States”), by the authority of the Attorney General of the United States and through its undersigned counsel, acting at the request and on behalf of the United States Environmental Protection Agency (“EPA”), has filed a Complaint contemporaneously with the lodging of this Consent Decree alleging that Defendant, the City of Columbia, South Carolina (“Columbia”), has violated and continues to violate Section 301 of the Clean Water Act (“CWA”), 33 U.S.C. § 1311, and the terms and conditions of its National Pollutant Discharge Elimination System (“NPDES”) permit issued under Section 402 of the CWA, 33 U.S.C. § 1342;

WHEREAS, Plaintiff, the South Carolina Department of Health and Environmental Control (“DHEC”), on behalf of the State of South Carolina (“State”), has joined in the Complaint and seeks injunctive relief and civil penalties for Columbia’s alleged violations of the South Carolina Pollution Control Act (“SCPCA”), S.C. Code Ann. §§ 48-1-10 *et seq.*, and the regulations promulgated pursuant thereto. Section 309(e) of the CWA, 33 U.S.C. § 1319(e), requires the state in which a municipality is located to be joined as a party whenever the municipality is a party to a civil action brought by the United States under Section 309 of the CWA;

WHEREAS, Columbia is a “municipality” pursuant to Section 502 of the CWA, 33 U.S.C. § 1362;

WHEREAS, DHEC has been authorized by EPA to administer the NPDES program pursuant to Section 402(b) of the CWA, 33 U.S.C. § 1342(b);

WHEREAS, Columbia’s Wastewater Collection and Transmission System (“WCTS”) transports wastewater to a publicly owned wastewater treatment plant (“WWTP”),

the Columbia Metro WWTP, which is operated by Columbia pursuant to NPDES Permit Number SC0020940. A map of the service area for the Sewer System is attached hereto as Appendix A;

WHEREAS, Columbia has reported to EPA and DHEC numerous Sanitary Sewer Overflows (“SSOs”) and other violations of the NPDES Permit in the past five years. The United States and the State contend that these reported events are violations of the CWA, SCPCA, and Columbia’s NPDES Permit;

WHEREAS, Columbia has voluntarily undertaken various capital improvement projects intended to improve its WCTS and WWTP as well as reduce the occurrence of SSOs, which, over the past five years, have resulted in significant expenditures of resources by Columbia;

WHEREAS, this Consent Decree requires Columbia to develop, submit, finalize, and implement existing and additional plans for the continued improvement of its WCTS and WWTP, with the goal of eliminating future SSOs and other violations of the NPDES Permit;

WHEREAS, the Parties to this Consent Decree have negotiated in good faith and have reached a settlement of the issues raised in the Complaint;

WHEREAS, Columbia does not admit any liability to the United States or the State arising out of the transactions or occurrences alleged in the Complaint;

WHEREAS, the Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties and that this Consent Decree is fair, reasonable, and in the public interest;

NOW THEREFORE, with the consent of the Parties, it is hereby ORDERED, ADJUDGED and DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and over the Parties. This Court has supplemental jurisdiction over the state law claims asserted by the State pursuant to 28 U.S.C. § 1367. Venue is proper in the District of South Carolina pursuant to Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and 28 U.S.C. §§ 1391(b) and 1395(a), because the violations alleged in the Complaint are alleged to have occurred in this judicial district, and pursuant to 28 U.S.C. § 1391. For purposes of this Decree, or any action to enforce this Decree, Columbia consents to the Court's jurisdiction over this Decree and any such action and over Columbia and consents to venue in this judicial district.

2. For purposes of this Consent Decree, Columbia agrees that the Complaint states claims upon which relief may be granted pursuant to Sections 301 and 402 of the CWA, 33 U.S.C. §§ 1311 and 1342, and 28 U.S.C. §§ 516 and 519 and SCPCA, S.C. Code Ann. §§ 48-1-10 *et seq.*

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Columbia and any successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of any part of the Sewer System, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Columbia of its obligation to ensure that the terms of the Consent Decree are implemented, unless (1) the

transferee agrees in writing to be bound by and assume responsibility for compliance with applicable provisions of this Consent Decree and to submit to the jurisdiction of the Court for its enforcement by becoming a Party under the Consent Decree and (2) the United States, in consultation with DHEC, approves the substitution of the transferee and consents to relieve Columbia of the applicable obligations. The United States' decisions shall not be subject to judicial review. At least thirty (30) Days prior to such proposed transfer, Columbia shall provide a copy of this Consent Decree to the proposed transferee and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA Region IV, the United States Attorney for the District of South Carolina, the United States Department of Justice and DHEC, in accordance with Section XVI of this Decree (Notices). Any attempt to transfer ownership or operation of the Sewer System without complying with this Paragraph constitutes a violation of this Decree. This Paragraph will not apply to the transfer of a portion of the WCTS to Richland County pursuant to the Lower Richland Sewer Service Agreement attached hereto as Appendix B.

5. Columbia shall provide a copy of this Consent Decree to all officers, employees, and agents with responsibility for overseeing implementation of work required under this Consent Decree, as well as to any consultant or contractor retained to perform Work required under this Consent Decree. Columbia shall condition any such contract upon performance of the Work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Columbia shall not raise as a defense the failure by any of its officers, directors, employees, agents or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. OBJECTIVES

7. The objective of the plans, measures, reports, construction, maintenance, operational requirements, and other obligations in this Consent Decree or resulting from the activities required by this Consent Decree is to cause Columbia to achieve and maintain full compliance with the CWA, the SCPCA, and the NPDES Permit, including the goal of eliminating all future SSOs.

IV. DEFINITIONS

8. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the meanings assigned to them in the CWA, 33 U.S.C. §§ 1251 *et seq.*, and regulations promulgated under the CWA, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “Building Backup” shall mean a release of wastewater into a building or onto private property that is caused by blockages, flow conditions, or other malfunctions in the WCTS. A wastewater backup or release that is caused by blockages, flow conditions, or other malfunctions of a Private Lateral or other piping/conveyance system that is not owned or operationally controlled by Columbia is not a Building Backup.

b. “Bypass” shall have the meaning set forth at 40 C.F.R. § 122.41(m).

c. “Calendar Quarter” shall mean the three-month period ending on March 31, June 30, September 30, or December 31.

d. “Calendar Year” shall mean the 12-month period starting on January 1 and

ending on December 31.

e. “Certification” or “Certify” shall mean compliance with the certification requirements in Section VI (Review of Deliverables) of this Consent Decree.

f. “Columbia” shall mean the City of Columbia, South Carolina, including all of its departments, agencies, instrumentalities such as the Public Works Department, and any successor thereto.

g. “Complaint” shall mean the complaint filed by the United States and the State in this action.

h. “Consent Decree” or “Decree” shall mean this consent decree document and all appendices attached hereto (listed in Section XXV). In the event of a conflict between this document and any appendix, this document shall control.

i. “CWA” shall mean the Clean Water Act, as amended, 33 U.S.C. §§ 1251, *et seq.*

j. “Date of Entry” shall mean the date on which this Consent Decree is entered by the United States District Court for the District of South Carolina.

k. “Date of Lodging” shall mean the date this Consent Decree is lodged with the Clerk of the Court for the United States District Court for the District of South Carolina.

l. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall

on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

m. “Defendant” shall mean the City of Columbia, South Carolina and any successor thereto.

n. “Deliverable” shall mean any written document required to be prepared and/or submitted by or on behalf of Columbia pursuant to this Consent Decree.

o. “DHEC” shall mean the South Carolina Department of Health and Environmental Control and any successor departments or agencies of the State.

p. “Discharge Monitoring Report” or “DMR” shall mean the monitoring report which Columbia is required to submit to DHEC on a monthly basis pursuant to its NPDES Permit.

q. “DOJ” shall mean the United States Department of Justice.

r. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

s. “Effective Date” shall have the definition provided in Section XVII.

t. “Excessive Inflow / Infiltration” or “Excessive I/I” shall have the meaning provided in 40 C.F.R. § 133.103(d) and 40 C.F.R. § 35.2005(b)(16).

u. “Force Main” shall mean any pipe that receives and conveys, or whose purpose is to receive and convey, wastewater under pressure from the discharge side of a pump.

v. “Gravity Sewer Line” or “Gravity Sewer” shall mean any pipe that receives, contains and conveys, or whose purpose is to receive, convey, and contain, wastewater not normally under pressure, but unassisted under the influence of gravity.

w. “Infiltration” shall mean water other than wastewater that enters the WCTS (including sewer service connections and foundation drains) from the ground through such means as, but not limited to, defective pipes, pipe joints, connections, or manholes. Infiltration does not include and is distinguishable from Inflow.

x. “Inflow” shall mean water other than wastewater that enters the WCTS (including sewer service connections) from sources such as, but not limited to, roof leaders, cellar drains, yard drains, sump pumps, foundation drains, area drains, drains from springs and swampy areas, manhole covers, cross connections between storm sewers and sanitary sewers, catch basins, cooling towers, storm water, surface runoff, street wash waters, or drainage. Inflow does not include and is distinguished from Infiltration.

y. “I/I” shall mean the total quantity of water from Inflow, Infiltration, and rainfall induced Infiltration.

z. “Major Gravity Sewer Line” shall mean any of the following:

(i). a Gravity Sewer Line that is fifteen (15) inches in diameter or larger;

(ii). a Gravity Sewer Line that conveys wastewater from one pumping station service area to another pumping station service area; and

(iii). a Gravity Sewer Line that has caused or contributed to, or that Columbia knows or should know will likely cause or contribute to, capacity-related unpermitted overflows.

aa. “Major Pump Station” shall mean a pump station receiving flow from a sewer line of 15 inches in diameter or greater.

bb. “MOM” or “Management, Operations, and Maintenance” shall mean a program of accepted industry practices to properly manage, operate and maintain sanitary wastewater collection, transmission and treatment systems, investigate capacity-constrained areas of these systems, and respond to SSO events.

cc. “NPDES” shall mean the National Pollutant Discharge Elimination System authorized under Section 402 of the CWA, 33 U.S.C. § 1342.

dd. “NPDES Permit” shall mean NPDES permit number SC0020940 issued to Columbia Metro WWTP pursuant to Section 402 of the Clean Water Act, 33 U.S.C. § 1342, and any future extended, modified, or reissued permits.

ee. “Paragraph” shall mean a portion of this Consent Decree identified by an Arabic numeral.

ff. “Parties” shall mean the United States of America on behalf of EPA, the State of South Carolina by and through DHEC, and Columbia.

gg. “Plaintiffs” shall mean the United States of America on behalf of EPA and the State of South Carolina by and through DHEC.

hh. “Private Lateral” shall mean that portion of a sanitary sewer conveyance pipe that extends from the wastewater right-of-way or utility easement to the single-family, multi-family, apartment, or other dwelling unit or commercial or industrial structure to which Columbia’s wastewater service is or has been provided.

ii. “Publicly Owned Treatment Works” or “POTW” shall mean a publicly owned treatment works or POTW as defined in 40 C.F.R. § 403.3(q), and includes the WCTS and the WWTP as defined in this Consent Decree.

jj. “Pump Station” shall mean facilities comprised of pumps which lift wastewater to a higher hydraulic elevation, including all related electrical, mechanical, and structural systems necessary to the operation of the facilities.

kk. “Sanitary Sewer Overflow” or “SSO” shall mean an overflow, spill, or release of wastewater from Columbia’s Sewer System including: (a) Unpermitted Discharges; (b) overflows, spills, or releases of wastewater that may not have reached waters of the United States or the State of South Carolina; and (c) all Building Backups.

ll. “Section” shall mean a portion of this Consent Decree identified by a Roman numeral.

mm. “Sewerbasin” shall mean all hydraulically linked portions of Columbia’s Wastewater Collection and Transmission System that are tributary to a trunk sewer which directly leads to the WWTP. Each Sewerbasin is independent of other Sewerbasins. The Sewerbasins in Columbia’s WCTS are shown on the map attached as Appendix C.

- nn. "Sewer System" shall mean the WCTS and the WWTP.
- oo. "State" shall mean the State of South Carolina.
- pp. "SORP" shall mean the Sewer Overflow Response Plan that Columbia has developed and which is attached as Appendix D to this Consent Decree.
- qq. "Subbasin" shall mean a subdivision of a Sewerbasin which consists of hydraulically linked sewers that are tributary to a common point in the sewer system. Sewer system evaluation techniques are undertaken on a Subbasin basis. A Subbasin typically consists of 10,000 to 50,000 linear feet of sewer. The Subbasins in Columbia's WCTS are shown on the map attached as Appendix C.
- rr. "Subparagraph" shall mean a portion of a paragraph identified by lowercase letters.
- ss. "SCPCA" shall mean the South Carolina Pollution Control Act, South Carolina Code Ann. §§ 48-1-10 *et seq.*
- tt. "United States" shall mean the United States of America, acting on behalf of EPA.
- uu. "Unpermitted Discharge" shall mean a discharge of pollutants which reaches waters of the United States or the State from (a) the Sewer System, (b) the WWTP through a point source not specified in an NPDES Permit, or (c) the WWTP which constitutes a prohibited Bypass.

vv. “Wastewater Collection and Transmission System” or “WCTS” shall mean the municipal wastewater collection, retention and transmission system, including all pipes, Force Mains, Gravity Sewer Lines, Pump Stations, pumps, manholes, and appurtenances thereto, which are owned or operated by Columbia and which flow to the Columbia Metro WWTP.

ww. “Wastewater Treatment Plant” or “WWTP” shall mean all facilities, devices, or systems which are owned, managed, operated, or maintained by Columbia for the storage, treatment, recycling, or reclamation of municipal wastewater, including the Columbia Metro WWTP located at 1200 Simon Tree Lane, Columbia, South Carolina, and all components of such wastewater treatment facility.

xx. “Work” shall mean all activities Columbia is required to perform under this Consent Decree.

V. COMPLIANCE REQUIREMENTS

9. **Obligation to Perform Work.** Upon the Date of Entry, Columbia shall implement the Work pursuant to this Consent Decree. Columbia is responsible for ensuring that any contractors hired to perform Work pursuant to this Consent Decree comply with all applicable laws and with this Consent Decree. All Work shall be performed using sound engineering practices, which may include, but are not limited to, appropriate provisions of South Carolina Regulation 61-67 (wastewater construction standards); South Carolina Regulation 61-9 (discharge standards); the *Handbook: Sewer System Infrastructure Analysis and Rehabilitation*, EPA/625/6-91/030, 1991; *Existing Sewer Evaluation and Rehabilitation*, WEF MOP FD-6,

1994, Third Edition 2009; and the most recent edition of “Recommended Standards for Wastewater Facilities” by the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (commonly known as the “Ten State Standards.”).

10. Early Action Capital Improvement Projects. Subject to receiving all necessary permits and approvals, Columbia shall implement and complete the following capital and short term SSO measures:

a. Capital Improvement Program for Columbia Metro WWTP. Columbia has underway a Capital Improvement Program for the Columbia Metro WWTP, as described further on Appendix E. The projects included in this Program are: (1) Metro Headworks Project (Capital Improvement Project (“CIP”) SS6722); (2) Metro WWTP Aeration Improvements (CIP No. SS7182); (3) Disinfection Improvements at the WWTP (CIP No. SS7058); (4) Secondary Clarifier Improvements at the WWTP (CIP No. SS6871); (5) Train 2 Pump Station Improvements (CIP No. SS7155); and (6) DAF Improvements (CIP No. SS7197). These capital improvements include construction of new Equipment as well as the upgrade and rehabilitation of existing Equipment. The schedule for the Capital Improvement Program for Columbia Metro WWTP is included in Appendix E , and such schedule shall be enforceable under this Consent Decree.

b. Capital Improvement Projects for WCTS. Columbia has underway a Capital Improvement Program for the Wastewater Collection and Transmission System, as described further on Appendix F. The projects included in this Program are: (1) Broad River Pump Station

Improvements (CIP No. SS7101); (2) North Columbia Pump Station Improvements; (3) West Columbia Pump Station Improvements (CIP No. SS711501); (4) Installation of 20,000 Linear Feet of 42-inch Forcemain from West Columbia Pump Station to WWTP (CIP No. SS711502); and (5) Saluda River Pump Station Improvements (CIP No. SS7116. The schedule for the Capital Improvement Program for Columbia's WCTS is included in Appendix F, and such schedule shall be enforceable under this Consent Decree.

11. Wastewater Treatment Plant Programs. Columbia shall develop and implement the specific Wastewater Treatment Plant Programs set forth below and ensure that each Program has a written, defined purpose; a written, defined goal; is documented in writing with specific detail as required herein; is implemented by trained personnel; has established performance measures; and has written procedures for periodic review.

a. Maintenance Management System. Within one (1) year after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Maintenance Management System ("MMS") for the WWTP. The objectives of the MMS are to ensure that preventive and corrective maintenance is conducted at the WWTP and that WWTP equipment integral to proper operation and maintenance, treatment units, and tanks is maintained with the goal of achieving compliance with the NPDES Permit. At minimum, the MMS shall include, and Columbia shall implement, the requirements set forth in Paragraphs 11.a.(i) through (xi) below.

(i). Identification of equipment integral to proper operation and maintenance, treatment units, and tanks used in the treatment of wastewater liquids and biosolids

(hereafter referred to as “Equipment”).

(ii). Standard procedures to conduct periodic preventive maintenance of the Equipment (hereafter referred to as “Standard Maintenance Procedures”).

(iii). Standard Maintenance Procedures, which include the frequencies of preventative maintenance, necessary to ensure that Equipment is properly maintained.

(iv). Adequate training and education for maintenance personnel to perform the Standard Maintenance Procedures.

(v). Procedures for recognition of indicators that corrective maintenance on Equipment is necessary.

(vi). Procedures for the generation of work orders associated with preventive and corrective maintenance of the Equipment.

(vii). Procedures for the generation of purchase orders associated with preventive and corrective maintenance of the Equipment.

(viii). An Inventory Management System that requires Columbia to maintain:

(A) lists of critical equipment and critical spare parts for the operation of the WWTP;

(B) an inventory of critical spare parts stored at the WWTP and a list of where the remaining critical spare parts not stored at the WWTP may be obtained to

enable the repair or replacement of Equipment in a minimum amount of time and to ensure proper operation of the WWTP; and

(C) written procedures for maintaining and updating the information in the Inventory Management System.

(ix). An accessible system for tracking preventive and corrective maintenance activities and histories at the WWTP including the generation of summary reports each month that identify:

(A) Equipment failures occurring in the previous month; and

(B) the end-of-month status of preventive and corrective maintenance work orders issued or outstanding in the previous month for Equipment.

(x). Procedures to ensure that failures of Equipment and/or loss of power supply during abnormal and emergency conditions are corrected in a timely fashion so as to limit the downtime of the facility or component.

(xi). The updated WWTP Operations Program shall include an implementation schedule specifying dates and actions.

b. WWTP Operations Program. Columbia currently has a WWTP Operations Program in place. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an updated WWTP Operations Program. The goal of the updated WWTP Operations Program is to ensure that all Equipment is operated to achieve compliance with the NPDES Permit. At

minimum, the updated WWTP Operations Program shall include an Operations Plan, a Process Control Plan, and Compliance Monitoring Plan.

(i). Operations Plan. The updated WWTP Operations Program shall include an Operations Plan. At minimum, the Operations Plan shall include:

- (A) the operations manuals for all Equipment;
- (B) descriptions of the operational controls at the WWTP;
- (C) the maximum flow that each process unit may treat before effluent quality is expected to exceed NPDES Permit limits;
- (D) a peak flow operations plan;
- (E) schematics of the solids and liquids treatment processes;
- (F) a procedure for review and update on an annual basis of an organizational chart consisting of the names, positions, and telephone numbers of the operations personnel at the WWTP;
- (G) detailed procedures for the year-round disposal of biosolids which include alternative disposal methods should the primary disposal method not be employable;
- (H) a detailed operations training program for WWTP operations personnel and supervisors; and
- (I) detailed procedures for adding operating information for new Equipment into the WWTP Operations Program prior to the date on which Columbia

commences operation of that Equipment.

(ii). Process Control Plan. The updated WWTP Operations Program shall include a Process Control Plan. At minimum, the Process Control Plan shall include:

(A) Parameters for each treatment unit that is monitored for the purpose of process control, including the appropriate frequency of monitoring and guidelines for interpreting the data in order to implement modification(s) and adjustment(s) to the systems and Equipment;

(B) Tasks associated with the operation of the WWTP, including overall process control strategy and unit-specific tasks, an analysis of the level of personnel assigned to the task and the frequency and duration associated with the tasks;

(C) Procedures for unit-specific tasks and overall process control (hereafter referred to as “Standard Operating Procedures”); and

(D) Standard Operating Procedures (including emergency response plans, as necessary) for abnormal operational conditions (e.g., power outages and weather-related events) to ensure that Equipment is operated to achieve compliance with the NPDES Permit, ensure safety of all personnel, and ensure proper communication among WWTP personnel of the current operational state of the WWTP (hereafter referred to as “Contingency Operating Procedures”).

(iii). Compliance Monitoring Plan. The updated WWTP Operations Program shall include a Compliance Monitoring Plan. At minimum, the Compliance Monitoring Plan shall include:

(A) procedures for proper calibration of compliance monitoring equipment which also identify the frequencies required by the manufacturer and Columbia;

(B) procedures to ensure that representative compliance sampling is conducted at the WWTP in accordance with the requirements of NPDES permits and 40 C.F.R. Part 136;

(C) descriptions of all compliance sampling locations;

(D) schematics showing the compliance sampling locations;

(E) procedures for collecting compliance samples from the designated locations;

(F) procedures for obtaining compliance sample containers, preservatives, and/or monitoring equipment from the laboratory;

(G) procedures for collecting compliance samples in containers as described in 40 C.F.R. Part 136; and

(H) procedures to ensure that all compliance samples requiring immediate (e.g., within fifteen (15) minutes) analyses are either monitored in the field or transported to the laboratory within proper holding times for analysis.

(iv). An implementation schedule specifying dates and actions.

c. WWTP Training Program. Columbia currently has a training program in place at the WWTP. Within twenty-four (24) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an

updated WWTP Training Program. Columbia shall update the Program by evaluating the personnel, tasks, equipment, and facilities associated with the operation and maintenance of the Columbia Metro WWTP. The updated Program shall include the following:

(i). WWTP Maintenance Training Program. A training program to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the maintenance of the Equipment. At minimum, the WWTP Maintenance Training Program shall be updated to include:

(A) Training to be provided to maintenance supervisors and personnel regarding the MMS in Paragraph 11.a. above;

(B) Schedules for the training of maintenance supervisors and personnel; and

(C) A system for tracking the training activities described in (A) and (B) above.

(ii). WWTP Operations Training Program. Columbia shall provide training to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the proper operation of the Equipment. At minimum, the WWTP Operations Training Program shall be updated to include:

(A) Training for operations supervisors and personnel regarding the use of the Operations Program in Paragraph 11.b. above;

(B) Training that ensures operations personnel are

knowledgeable about the Standard Operating Procedures and how to implement each task of the Standard Operating Procedures assigned to them or their subordinates efficiently and effectively on a day-to-day basis;

(C) Training that ensures all operations personnel are knowledgeable about the Contingency Operating Procedures and how to respond efficiently and effectively to atypical operational situations; and

(D) A system for tracking the training activities described in (A) through (C) above; and

(iii). An implementation schedule specifying dates and actions.

12. Management, Operations and Maintenance (“MOM”) Programs. Columbia shall develop and implement the specific MOM Programs set forth below and ensure that each MOM Program has a written, defined purpose; a written, defined goal; is documented in writing with specific detail as required herein; is implemented by trained personnel; has established performance measures; and has written procedures for periodic review.

a. Sewer Overflow Response Program. Columbia has developed and maintains a Sewer Overflow Response Plan (“SORP”), a copy of which is attached hereto as Appendix D. Columbia shall continue to implement its SORP, as may be revised by Columbia from time to time, during the term of this Consent Decree.

b. Contingency and Emergency Response Plan. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall develop in consultation with DHEC and submit to EPA and DHEC for review, comment, and approval a Contingency and

Emergency Response Plan (“CERP”). The CERP shall address both routine and catastrophic emergencies. Routine emergencies include such situations as overflowing manholes, line breaks, localized electrical failure and Pump Station outages. Catastrophic emergencies include floods, tornados, earthquakes or other natural events, serious chemical spills and widespread electrical failure. The CERP shall address areas of vulnerability and determine the effect of such a failure to operations, equipment and public safety and health based upon such factors as topography, weather, sewer system size, and other site-specific factors. The CERP shall include standard forms. The CERP shall have the following components:

- (i). WWTP. The WWTP component of the CERP shall establish standard operating procedures for use in emergency situations, including changes in process controls.
- (ii). WCTS. The WCTS component of the CERP shall include the SORP; the evaluation of, and acquisition plan for, additional Pump Station standby power and emergency equipment needs; and the written standard operating procedures for use in specific anticipated emergency activities, which include identification of the specific actions which staff should take and the instructions for operating equipment and systems. At a minimum, the standard operating procedures shall: identify criteria for initiating and ceasing the anticipated activities; identify the appropriate service/repair equipment and sources for that equipment; and describe the emergency planning for, and emergency use of, the following: stand-by power (e.g., generators or dual power feeds), portable pumps, maintenance equipment (e.g., vacuum truck, jet washing truck and/or combination truck), and each Pump Station.
- (iii). Public Notification of Emergencies. In addition to the reporting

requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying the public and other impacted entities, such as users with a downstream water intake, of an emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation;

(B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying the public;

(C) a list identifying, by name and phone number, all public contacts, including local media outlets, who must be contacted during an emergency situation;

(D) a list identifying Columbia staff who are authorized to make public statements during emergency situations; and

(E) pre-scripted news releases for various types of emergency situations.

(iv). Notification of Regulatory Authorities. In addition to the notification requirements set forth in the NPDES Permit, and the reporting requirements set forth in Section IX (Reporting Requirements), Columbia shall establish, in coordination with DHEC:

(A) criteria to be used as the basis for immediately notifying DHEC of any emergency situation caused by an SSO, diversion, Bypass, or effluent limit violation; (B) a list identifying, by name, phone number and pager number, all Columbia staff who are responsible for notifying DHEC; (C) a list identifying, by name and phone number, all officials who must be contacted; and (D) standard reporting forms.

(v). An implementation schedule specifying dates and actions.

c. WCTS Training Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a WCTS Training Program. Columbia shall develop the Program by evaluating the personnel, tasks, equipment, and facilities associated with the operation and maintenance of Columbia's WCTS. The Program shall include, and Columbia shall implement:

(i). General Training. Columbia shall provide general training to address tasks undertaken by Columbia's wastewater personnel. General training would include, for example, employee orientations, training in the basic principles of wastewater collection and transmission, and training in the rules and regulations affecting Columbia's Wastewater Maintenance Division. The general training component of the Program shall provide the content of the initial training, and the frequency and content of the refresher training, to be required for all personnel responsible for management, operations, or maintenance of Columbia's WCTS.

(ii). Position Specific Training. Columbia shall provide training for tasks undertaken by Columbia's wastewater personnel to address the methods, processes, procedures, and techniques required to perform the duties and tasks necessary for the proper operation and maintenance of the collection and transmission system. Collection system training would include, as appropriate, training in equipment operation, pipe installation/replacement, pipe cleaning, pipe inspection, and reading as-built drawings. Transmission system training would include, as appropriate, training in equipment operation, pump/ejector inspection, pump/ejector maintenance, and pump/ejector repair. Columbia's collection system training and transmission system training program shall include:

- (A) identification of the related tasks, equipment, and facilities;
 - (B) description of the technical knowledge necessary to properly conduct the individual tasks and properly operate the individual equipment and facilities;
 - (C) description of the underlying purposes and technical reasons for conducting the individual tasks or operating the individual equipment and facilities;
 - (D) standard procedures which personnel shall follow when conducting the individual tasks or operating the individual equipment and facilities;
 - (E) the content of the initial training, and the frequency and content of the refresher training, to be required for personnel conducting the individual tasks, or operating the individual equipment and facilities; and
 - (F) training designed to provide trainees with a thorough understanding of the individual procedures, underlying technical reasons, and underlying purposes associated with the individual tasks they may conduct, or the specific equipment and facilities they may operate, and to provide this in a consistent manner to all trainees.
- (iii). Tracking. The Training Program shall include a description of the common data management system to be used for tracking personnel participation in, and completion of, the initial general training, collection system training, and/or transmission system training, and the corresponding refresher training.
- (iv). Implementation Schedule. The Training Program shall include an

implementation schedule specifying dates and actions.

d. Information Management System Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval an Information Management System (IMS) Program. The IMS Program shall include, but may not be limited to the following: a description of what information is entered into the system, how it is entered and by what means it is recorded; types of work reports prepared and submitted, including examples; a description of the management reports generated from the input data (i.e. work reports), including examples; standard forms used by both field personnel and management for the program, where applicable; a detailed description of how the records are maintained; if computer software is utilized, a description of the software used with cited references for software training and procedures for utilizing the software; and a procedure for periodic quality assurance/quality control checks of the system. The Program shall include the following sub-programs:

(i). Management IMS. The IMS Program shall include a Management IMS to provide WCTS managers guidance and instruction to adequately evaluate operations, maintenance, customer service, and system rehabilitation activities so that overall system performance can be determined and WCTS planning can be conducted.

(ii). Operations IMS. The IMS Program shall include an Operations IMS to provide managers and field supervisors the guidance to adequately track scheduled operational activities and to enhance operational performance. The system shall utilize operating reports and standard operation forms used by field personnel and provide for field supervisor

review. While the Operations IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iii). Maintenance IMS. The IMS Program shall include a Maintenance IMS to provide managers and field supervisors the guidance to adequately track scheduled maintenance activities and to enhance maintenance performance. The system shall utilize maintenance reports and standard maintenance forms used by field personnel and for field supervisor review. While the Maintenance IMS need not be computer based, it shall be capable of feeding information into the Management IMS.

(iv). Complaint Tracking IMS. The IMS Program shall include a Complaint Tracking IMS to provide managers the guidance to adequately assess and manage complaint information. The system shall utilize standard complaint forms used by personnel and provide for supervisor review. While the Complaint Tracking IMS need not be computer based, it shall be capable of feeding information into the Management Programs IMS.

(v). An implementation schedule specifying dates and actions.

e. Capacity Assurance Program. Within one hundred and eighty (180) Days after EPA approval of the Hydraulic Model Report, Columbia shall submit to EPA and DHEC for review, comment, and approval a Capacity Assurance Program ("CAP"). The CAP shall identify each Sewerbasin with insufficient capacity under peak wet weather, average conditions, or both. It shall also analyze all portions of the WCTS that have experienced SSOs either due to, or exacerbated by, an excessive hydraulic contribution. The CAP shall assess peak flow capacity of all major Sewer System components for existing and proposed flows. At minimum, the CAP

shall include, and Columbia shall implement, the requirements set forth in Paragraphs 12.e.(i) through 12.e.(iii), below.

(i). Adequate Capacity Certifications. Except as otherwise provided in Paragraphs 12.e.(ii)(F) through 12.e.(ii)(I), below, after sixty (60) Days following EPA's approval of the CAP, Columbia shall authorize a new sewer service connection, or additional flow from an existing sewer service connection, only after it certifies that the analysis procedures contained in the approved CAP have been used and that Columbia has determined, based on those procedures, that there is Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity as set forth below. Notwithstanding the foregoing, the standards contained in the Capacity Assurance Program shall not be construed as standards for the ultimate design or rehabilitation of Columbia's WCTS.

(A) Treatment Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Treatment Capacity" shall exist when the WWTP would not be in "non-compliance" for quarterly reporting as defined in 40 C.F.R. § 123.45, Appendix A, if the WWTP were to receive the flow from the new connection or the increased flow from an existing sewer service connection(s), combined with the flow predicted to occur from all other authorized sewer service connections (including those which have not begun to discharge into the WCTS).

(B) Transmission Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Transmission Capacity" shall exist when each Pump Station through which the proposed additional flow would pass has the capacity to transmit,

with its largest pump out of service, the existing one (1) hour peak flow passing through such Pump Station, plus the additional one (1) hour peak flow predicted to occur from the new connection(s) or from the increased flow from an existing sewer service connection(s), plus the additional one (1) hour peak flow predicted to pass through such Pump Station from all other authorized sewer service connections which have not begun to discharge into the WCTS.

(C) Collection Capacity. For the purposes of Columbia's Capacity Assurance Program, "Adequate Collection Capacity" shall exist when each Gravity Sewer Line through which the proposed additional flow would pass has the capacity, without causing a Surcharge Condition, to carry the existing one (1) hour peak flow passing through such Gravity Sewer Line, plus the additional one (1) hour peak flow predicted to occur from the new connection(s) or from the increased flow from an existing sewer service connection(s), plus the additional one (1) hour peak flow predicted to pass through such Gravity Sewer Line from all other authorized sewer service connections which have not begun to discharge into the WCTS.

(D) "One (1) Hour Peak Flow." For purposes of Columbia's Capacity Assurance Program, the term "one (1) hour peak flow" shall mean the greatest flow in a sewer averaged over a sixty (60) minute period at a specific location expected to occur as a result of a representative 2 year-24 hour storm event.

(E) "Surcharge Condition." Except as otherwise set forth in Paragraph 12(e)(i)(F), below, the term "Surcharge Condition" shall mean:

(1) For two years from the date of EPA's approval of the CAP, the condition that exists when the supply of wastewater resulting from the one (1) hour peak flow is greater than

the capacity of the pipes to carry it and the surface of the wastewater rises to an elevation within two (2) feet of the rim of any manhole, and the gravity sewer pipe is under pressure or head, rather than at atmospheric pressure. Columbia agrees to not construct additional manholes and to not increase the elevation of existing manholes except to ensure that the elevation is no higher than five (5) feet above the Base Flood elevation as that term is defined at 44 C.F.R. § 59.1.

(2) After two years from the date of EPA's approval of the CAP, the condition that exists when the wastewater resulting from the one (1) hour peak flow is greater than the capacity of the pipes to carry it and the surface of the wastewater in manholes rises to an elevation greater than twenty-four (24) inches above the top of the pipe or within two (2) feet of the rim of the manhole, and the gravity sewer pipe is under pressure or head, rather than at atmospheric pressure, unless Columbia has, pursuant to Paragraph 12.e.(ii)(A), identified that pipe segment and manhole as designed to operate in that condition, in which case the identified level of surcharge for that pipe segment and manhole will be used to define a Surcharge Condition.

(F) Exception to Definition of Surcharge Condition. Notwithstanding the definition of "Surcharge Condition" in Paragraph 12(e)(i)(E), any rise in elevation above the top of the pipe shall be considered a Surcharge Condition if the manhole has experienced a capacity-related wet weather SSO during the previous twelve (12) month period (excluding those SSOs caused by severe natural conditions such as hurricanes, tornados, widespread flooding, earthquakes, or rainfall events greater than a representative 2 year-24 hour storm event), unless Columbia can certify that the cause of the SSO has been corrected through improvements to the WCTS.

(ii). Capacity Assurance Program Content

(A) The CAP shall identify the technical information, methodology and analytical techniques to be used by Columbia to determine Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity. Protocols for evaluating adequate capacity shall include identification of modeling software, standard design flow rate rules of thumb regarding pipe roughness, manhole head losses, as-built drawing accuracy (distance and slope), and water use (gallons per capita per day); projected flow impact calculation techniques; and flow metering. Columbia may identify sewer line segments which have been specifically designed and constructed to operate under surcharge conditions (e.g., with welded or bolted joints) and identify the level of acceptable surcharge for those segments.

(B) The CAP shall identify the technical information, methodology and analytical techniques, including the model or software, by which Columbia will calculate the net (cumulative) increase or decrease in volume of wastewater introduced to the WCTS as a result of Columbia's authorization of new service connections and increases in flows from existing connections and the completion of specific projects that add or restore capacity to the WCTS or WWTPs ("Capacity Enhancing Projects"), specific projects that reduce peak flow through removal of I/I ("I/I Projects"), and permanent removal of sewer connections ("Removal of Connections").

(C) The CAP shall identify the process by which Columbia will integrate its certification of Adequate Treatment Capacity, Adequate Transmission Capacity and

Adequate Collection Capacity into the authorization of new sewer service connections and increases in flow from existing connections.

(D) The CAP will describe the CAP Information Management System to be used to track the accumulation of available capacity, from completion of Capacity Enhancing Projects, I/I Projects and Removal of Connections, and the reduction in capacity from authorized increases in flow from new and existing sewer service connections.

(E) Capacity Certifications. Except as otherwise provided in Paragraphs 12(e)(ii)(F), (G), (H), and (I), below, after sixty (60) Days of EPA's approval of the CAP, Columbia may authorize new sewer service connections, or additional flow from existing sewer service connections, only after it certifies that the analysis procedures contained in the approved CAP have been used and that Columbia has determined, based on those procedures, that there is Adequate Treatment Capacity, Adequate Transmission Capacity and Adequate Collection Capacity. All certifications pursuant to this Paragraph 12.e.(ii)(E) shall be made by a registered professional engineer (P.E.) in the State of South Carolina and shall be approved by a responsible official of Columbia as defined by 40 C.F.R. § 122.22(b). Columbia shall maintain Capacity Assurance Program certifications, and all data on which the certifications are based, in its offices for inspection by EPA and DHEC. EPA and DHEC may request, and Columbia shall provide, any and all documentation necessary to support any certification made by Columbia pursuant to the approved CAP, and make available, to the extent possible, individuals providing such certifications to meet with EPA and DHEC.

(F) Minor Sewer Connections. The CAP may include

provisions for authorization of Minor Sewer Connections. For the purposes of the CAP, a “Minor Sewer Connection” is a connection with an average flow not to exceed four thousand (4,000) gallons per day. For minor sewer service connections, Columbia may elect to perform a quarterly capacity analysis for each Sewerbasin or Subbasin by certifying that the Sewerbasin or Subbasin has Adequate Treatment Capacity, Adequate Transmission Capacity, and Adequate Collection Capacity to carry existing flows and the additional flows generated by all such minor sewer service connections projected to be approved since the last capacity analysis. For any Sewerbasin or Subbasin which can be so certified, Columbia may approve these projected minor sewer service connections without performing individual capacity analysis for each connection.

(G) Capacity for Treatment, Transmission, and Collection in Lieu of Certification. Columbia may authorize a new sewer service connection, or additional flow from an existing sewer service connection, even if it cannot satisfy the requirements of Paragraph 12.e.(ii)(E), above, provided Columbia certifies that all of the following provisions, where applicable, are satisfied:

- (1) Columbia is in substantial compliance with this Consent Decree.
- (2) The sewer lines which will convey the proposed additional flow from new or existing sewer service connections have not experienced dry weather SSOs due to inadequate capacity within the previous twelve (12) months; or, in the alternative, the causes of any dry weather SSOs due to inadequate capacity have been eliminated.
- (3) Columbia has identified the sewer line segment(s), Pump Station(s) and/or wastewater treatment systems that do not meet the conditions for certification

of Adequate Treatment Capacity, Adequate Collection Capacity and/or Adequate Transmission Capacity.

(4) Columbia shall have completed, after June 10, 2010, and prior to the time the proposed additional flow from new or existing sewer connections is introduced into the WCTS, specific Capacity Enhancing Projects, I/I Projects and/or Removal of Connections which will add sewer capacity or reduce peak flows to the identified sewer line segment(s), lift station(s), and/or wastewater treatment system(s) in accordance with the requirements set forth below:

i. Where Columbia has undertaken specific Capacity Enhancing Projects that provide for additional off-line storage and/or specific Removal of Connections to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated added capacity resulting from such projects must be equal to or greater than the estimated amount of any proposed additional flow.

ii. Where Columbia has undertaken specific Capacity Enhancing Projects, other than those that provide for additional off-line storage, to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated reduction in peak flows or added capacity resulting from such projects must exceed the estimated amount of any proposed additional flow by a factor of 2:1.

iii. Where Columbia has undertaken specific I/I Projects to satisfy the requirements of this Paragraph 12.e.(ii)(G)(4), the estimated reduction in peak flows or added capacity resulting from such projects must exceed the estimated amount of any proposed additional flow by a factor of 3:1.

(5) Commencing one year after EPA approval of the CAP and annually thereafter, Columbia has performed a review of specific Capacity Enhancing Projects and I/I Projects undertaken to determine if actual added capacity and peak flow reductions are in line with what Columbia originally estimated for such projects; and Columbia has used the results of this review to adjust future estimates as necessary.

(6) Any new sewer service connection or increase in flow to an existing connection authorized prior to the completion of a necessary added capacity or peak flow reduction project as set forth above shall be conditioned upon completion of such project prior to the time that the new sewer service connection or flow increase is introduced into the WCTS.

(H) Essential Services. The CAP may contain provisions for Columbia to authorize a new sewer service connection, or additional flow from an existing sewer service connection, in cases where there is not Adequate Transmission Capacity, Adequate Collection Capacity and/or Adequate Treatment Capacity for health care facilities, public safety facilities and public schools and, subject to EPA review and approval, for government facilities; and in those cases where a pollution or sanitary nuisance condition exists, as determined by the Richland or Lexington County Health Department, as the result of a discharge of untreated wastewater from an on-site septic tank. All such new service connections, or additions to flow from an existing connection, shall be tracked in the CAP Information Management System.

(I) Existing Illicit Connections. The CAP may contain provisions for Columbia to authorize a new sewer service connection, or additional flow from an existing sewer service connection in cases where there is not Adequate Transmission Capacity and/or Adequate Collection Capacity and/or Adequate Treatment Capacity for any illicit connections or discharge of wastewater to the stormwater system. All such new service connections or additions to flow from an existing connection created after the Date of Entry that result from the elimination of such illicit connections or discharges shall be tracked in the CAP Information Management System.

(iii). Capacity Procedures Prior to CAP Approval. Within ninety (90) Days after the Date of Entry of this Consent Decree, Columbia shall establish a list of all authorized new sewer service connections or increases in flow from existing service connections, which flows have not yet been introduced into the WCTS. The following information shall be recorded for each such authorized connection: street address, estimated average daily flow, estimated peak flow, Sewerbasin or Subbasin, date authorized, and estimated Calendar Quarter when the additional flow from the connection will begin. Columbia shall update and maintain this list as necessary until full implementation of the CAP, as approved by EPA. In addition, upon execution of this Consent Decree and until EPA approves the CAP as required by Paragraph 12.e., Columbia agrees to continue to implement its current capacity program.

f. Sewer Mapping Program. Columbia currently has a sewer mapping program. Within sixty (60) days after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Sewer Mapping Program to update its Sewer System maps and update the capabilities and procedures for utilization of Columbia's existing Geographic Information System ("GIS") map of Columbia's WCTS. At minimum, the Sewer Mapping Program shall:

- (i). enable Columbia to produce maps of the WCTS using GIS technology;
- (ii). be designed in such a manner so as to allow electronic integration with Columbia's computer-based collection system model and computer-based operations and maintenance information management system;

(iii). enable Columbia to produce maps showing the location of all manholes, Gravity Sewer Lines, Pump Stations, Force Mains, valves, inverted siphons and the WWTP;

(iv). enable Columbia to produce maps capable of integrating electronically the locations of sewer service connections on lines that are televised;

(v). enable Columbia to produce maps that include attribute data for Columbia's WCTS including, but not limited to, size, material, estimated age or age range, slope, invert elevation, and rim elevation;

(vi). enable Columbia to produce maps that delineate the spatial boundaries of all Sewerbasins and Subbasins;

(vii). enable Columbia to produce maps that can integrate electronically available maps that show the location of surface streets and street addresses, permitted FOG customers, surface water bodies and political boundaries;

(viii). enable Columbia to produce maps in a manner that will allow use by all Sewer System operation and maintenance crew leaders in the field;

(ix). allow entry and mapping of work orders to identify and track problems geographically such as stoppages, service interruptions, and SSOs, and to assist in the planning and scheduling of maintenance;

(x). include written standard operating procedures for use of the program, the acquisition and entry of updated mapping data for new assets or changes to existing

assets, and updates to system software;

(xi). include locations of each permitted FOG establishment; and

(xii). include a schedule for the completion of the electronic mapping of each Sewerbasin in Columbia's WCTS.

g. Fats, Oil, and Grease ("FOG") Management Program. Columbia has developed and maintains a FOG Management Program, a copy of which is attached hereto as Appendix G. Columbia will continue to implement its FOG Management Program, as revised by Columbia from time to time, during the term of this Consent Decree.

h. Transmission System Operations and Maintenance Program.

Within one (1) year after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Transmission System Operations and Maintenance Program ("TSOMP"). The goal of the TSOMP is to facilitate proper operation and maintenance activities associated with the Pump Stations and Force Mains within the WCTS. At minimum, the TSOMP shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.h.(i). through (x). below.

(i). Means and modes of communication between Pump Stations, field crews, and supervising staff.

(ii). Technical specifications of each Pump Station within the WCTS.

(iii). Columbia currently has a Pump Station monitoring system which continuously monitors, reports, and transmits information for each Pump Station. The TSOMP

shall provide that Columbia will continue to operate and maintain Supervisory Control and Data Acquisition (“SCADA”) systems at all Pump Stations with a rated capacity of greater than 1,000 gallons per minute as identified on Appendix H, attached hereto and incorporated herein by reference. In addition, with the goal of eliminating future SSOs due to Pump Station failure(s), Columbia shall evaluate the need for installation of SCADA systems at all other Pump Stations, and install them where necessary in accordance with the approved TSOMP implementation schedule required under paragraph 12(h)(x) .

(iv). Written preventive operations and maintenance schedules and procedures for the following routine activities:

(A) Service and calibration of instrumentation such as flow meters, liquid level sensors, alarm systems, elapsed time meters, and remote monitoring equipment.

(B) Inspection and service for air release valves.

(C) Predictive (non-physical) and/or physical inspection and service for all Pump Stations including, but not limited to:

(1) reading, recording and maintaining records of information from the elapsed time meters and pump start counters;

(2) observing and documenting wet well conditions, including grease and/or debris accumulation;

(3) checking and re-setting, as necessary to improve system

performance, wet well pumping points (e.g. floats);

- (4) checking, recording and maintaining records of system pressure(s);
- (5) checking SCADA and/or alarm components;
- (6) checking stand-by power sources; and
- (7) identifying maintenance needs and any emergency planning needs.

(D) Engineering evaluation of Force Mains and Pump Stations for potential sulfide and corrosion control needs. The TSOMP shall require, and Columbia shall generate, a summary report of findings with the sulfide and corrosion control method(s) and the schedule for implementation of selected measures, where applicable.

(E) Inspection of Force Main easements, including inspection of creek crossings, stream bank encroachment toward Force Mains, and easement accessibility (including the need to control vegetative growth or encroachment of man-made structures or activities that could threaten the integrity of the affected Force Mains). Inspections shall include written reports, and where appropriate, representative photographs or videos of appurtenances being inspected (Force Mains, creek crossings, etc.). The TSOMP shall require inspectors to promptly report any observed SSOs, and any evidence of SSOs which may have occurred since the last inspection, to their area supervisors and document the findings. Columbia shall report any observed SSO in accordance with the SORP and the NPDES Permit.

(F) A schedule for the maintenance of easements.

(G) Resource commitments such as staffing, contractual support and equipment.

(v). Data attributes for the Sewer Mapping Program allowing program data to be compared in Columbia's GIS system against other pertinent data such as the occurrence of SSOs, including repeat SSO locations, and permit violations.

(vi). An inventory management system that requires Columbia to maintain:

(A) Lists of critical equipment and critical spare parts.

(B) An inventory of the critical spare parts and critical equipment stored at Columbia's facilities, and a list of where the remaining critical spare parts and critical equipment not stored at Columbia's facilities may be obtained to allow repairs in a reasonable amount of time; and

(C) Written procedures for updating the critical spare parts and equipment inventories in the inventory management system.

(vii). A common information system that Columbia will use to track implementation of the TSOMP, track maintenance activities (including Pump Station equipment histories), and track management, operation, and maintenance performance indicators.

(viii). The key performance indicators ("KPIs") Columbia will track to measure performance of the WCTS using the information system referenced in Paragraph 12.h.(vii) above. These KPIs shall include, but are not limited to, the number of SSOs related to

Force Mains per mile of Force Main and/or the number of SSOs related to Pump Stations per number of Pump Stations; and maintenance activities tracked by type (corrective, preventive, and emergency).

(ix). Reports which list equipment problems and the status of work orders generated during the prior month.

(x). An implementation schedule specifying dates and actions.

i. Gravity Sewer System Operation and Maintenance Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval, a Gravity Sewer System Operation and Maintenance Program (“GSOMP”) with the goal of eliminating future SSOs, particularly those caused by FOG, roots and/or debris obstructions. At a minimum, the GSOMP Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.i.(i) through (xii) below.

(i). Written procedures for inspection and maintenance of Columbia’s Gravity Sewer systems (i.e., Gravity Sewer Lines, manholes, inverted siphons, etc.).

(ii). Written preventive operations and maintenance schedules and procedures including, but not be limited to, the following routine activities:

(A) Inspection and maintenance of all Gravity Sewers, manholes and inverted siphons.

(B) Observing and documenting Gravity Sewer, manhole and

inverted siphon conditions, including grease, roots and/or debris accumulation.

(C) Identifying and documenting maintenance needs and any emergency planning needs.

(D) Scheduling preventive maintenance work/cleaning on a WCTS-wide basis. At a minimum, Columbia shall prioritize, inspect, and, if necessary, clean its Gravity Sewers, manholes and inverted siphons on a regular basis (i.e. such that, while priority portions of the WCTS may be inspected with more frequency, the entire Gravity Sewer system is inspected, and cleaned where necessary, at a frequency designed to prevent future SSOs).

(iii). Engineering evaluation of potential sulfide and corrosion control needs. The GSOMP shall require, and Columbia shall generate, a summary report of findings with the sulfide and corrosion control methods and the schedule for implementation of selected measures, where applicable.

(iv). Inspection of Gravity Sewer, manhole, and inverted siphon easements, including inspection of: creek crossings, stream bank encroachment toward Gravity Sewers, manholes and inverted siphons, and easement accessibility (including the need to control vegetative growth or encroachment of man-made structures or activities that could threaten the integrity of the affected Gravity Sewer, manholes or inverted siphon). Inspections shall include written reports, and where appropriate, representative photographs or videos of appurtenances being inspected (Gravity Sewers, manholes, inverted siphons, creek crossings, etc.). The GSOMP shall require inspectors to promptly report any observed SSOs to their area supervisors and to record any evidence of SSOs which may have occurred since the last inspection.

Columbia shall report any observed SSO in accordance with the SORP and the NPDES Permit.

(v). A schedule for the maintenance of easements.

(vi). A description of resource commitments such as staffing, contractual support and equipment.

(vii). Data attributes for the Sewer Mapping Program allowing program data to be compared in Columbia's GIS system against other pertinent data such as the occurrence of SSOs, including repeat SSO locations, and permit violations.

(viii). An inventory management system that requires Columbia to maintain:

(A) Lists of critical equipment and critical spare parts;

(B) An inventory of the critical spare parts and critical equipment stored at Columbia's facilities, and a list of where the remaining critical spare parts and critical equipment not stored at Columbia's facilities may be obtained to allow repairs in a reasonable amount of time; and

(C) Written procedures for updating the critical spare parts and equipment inventories in the inventory management system.

(ix). A common information system that Columbia will use to track implementation of the GSOMP, track maintenance activities, and track management, operation, and maintenance performance indicators.

(x). The key performance indicators (“KPIs”) Columbia will track to measure performance of the WCTS using the information system referenced in Paragraph 12.i.(ix). above. These KPIs shall include, but are not limited to:

(A) The linear footage of Gravity Sewer inspections, the linear footage of Gravity Sewers cleaned, the number of manholes inspected, the number of manholes cleaned/maintained, the number of inverted siphons inspected, the number of inverted siphons cleaned/maintained and the number of SSOs per mile of Gravity Sewer; and

(B) Maintenance activity tracked by type (corrective, preventive, and emergency).

(xi). Reports which list equipment problems and the status of work orders generated during the prior month.

(xii). An implementation schedule specifying dates and actions.

j. Financial Analysis Program. Within eighteen (18) months after the Date of Entry of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Financial Analysis Program which establishes and tracks the sufficiency of funds for operations and maintenance, capital projects financing, and debt service coverage associated with the WCTS. At minimum, the Financial Analysis Program shall include, and Columbia shall implement, the requirements set forth in Paragraph 12.j.(i) through (v).

(i). Cost Analysis. Protocols to regularly analyze and project future utility management, operations, and maintenance costs integral to proper management, operation,

and maintenance of the WCTS and WWTP. The cost analyses should include, at a minimum: capital infrastructure improvements; staffing levels; replacement of equipment and materials integral to the proper management, operation and maintenance of the WCTS and WWTP; outsourced activities; and services provided by organizational departments or agencies outside Columbia's Department of Utilities and Engineering.

(ii). Capital Improvement Financing Program. Protocols to analyze, project, plan, and finance capital improvement needs established through engineering studies; WCTS condition assessments; historical WCTS management, operations, and maintenance cost data; and sound sewer infrastructure asset management programs. Capital improvement financing should be planned using a five (5) year planning horizon with annual updates.

(iii). Budget and Customer Rate Setting Analysis. The Financial Analysis Program shall project the annual utility budget and customer rates periodically. The program should predict the budget and funding provided by customer rates that will meet the cost and financing needs for the management, operation, and maintenance of the WCTS as identified pursuant to the procedures set forth in Subparagraph j.(i) through (ii) above.

(iv). The ability to directly track and report operation and maintenance costs by the type of activity (corrective, preventative, and emergency) and capital improvement costs.

(v). An implementation schedule specifying dates and actions.

13. Satellite Sewer System Agreements. Within one (1) year after the Date of Entry

of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a proposed form of Satellite Sewer System Agreement for new or the renewal of existing agreements that cover the collection, conveyance and treatment of sewage by Columbia from satellite sewer systems as that term is defined in South Carolina Regulation 61-9.122.2.

The Parties acknowledge that DHEC continues to be responsible in all respects for enforcing the requirements of any state operating permits for satellite sewer systems. Columbia shall not be responsible for enforcement of any such permits or for management or oversight of any such satellite sewer systems.

a. At minimum, the form of Satellite Sewer System Agreement shall include the following:

(i). Requirements on the satellite sewer system to properly manage, operate and maintain its sewage collection and conveyance systems so as to minimize peak flows into Columbia's Sewer System by excluding, to the maximum practicable extent, the intrusion of surface and ground water and other extraneous flows.

(ii). Requirements on the satellite sewer system to ensure compliance with the legal authorities and procedures required in 40 CFR Section 403.8(f) with regard to equivalent control, monitoring and enforcement of non-domestic dischargers into Columbia's Sewer System from satellite sewer systems. Columbia should consider the "Multijurisdictional Pretreatment Programs Guidance Manual" published by EPA (833-B-94-005, June 1994) when developing these requirements.

(iii). Provisions addressing the term or life of these agreements;

mechanisms for appropriate modification of the agreements; and mechanisms for enforcement of the agreements such as provisions permitting termination of the agreement and physical disconnection from Columbia's Sewer System within a reasonable time not exceeding two (2) years upon the failure of the satellite sewer system to comply with its management, operations and maintenance obligations.

b. When any of Columbia's currently existing agreements expire or terminate, Columbia may, but shall not be required to, renew any such agreement or enter into a new agreement covering the collection, conveyance and treatment of sewage from such satellite sewer systems. In the event Columbia does renew such an agreement or enters into any such new agreement, each agreement shall be consistent with the form of Satellite Sewer System Agreement. If the owner/operator of a satellite sewer system refuses to sign a Satellite Sewer System Agreement that is consistent with the approved form of Satellite Sewer System Agreement, Columbia will notify EPA.

14. Continuing Sewer Assessment Program ("CSAP") for the WCTS

a. Within six (6) months after the Date of EPA and DHEC approval of the Sewer Mapping Program required under Paragraph 12.f. of this Consent Decree, Columbia shall submit to EPA and DHEC for review, comment, and approval a Continuing Sewer Assessment Program ("CSAP") that provides for an analysis of Columbia's WCTS infrastructure. The approved CSAP shall be implemented by Columbia in accordance with the schedules contained therein, and in accordance with the deadlines established in this Paragraph. The CSAP shall establish procedures for setting priorities and schedules for undertaking the continual assessment

of the WCTS using, as appropriate, the methods described in Paragraphs 14.b. (i) through (ix), below, and other appropriate methods identified by Columbia. Columbia shall develop these priorities and schedules taking into consideration factors including, but not limited to: age and type of materials; the nature and extent of customer complaints; flow monitoring, including flow isolation studies; locations and causes of SSOs; any remediation work already ongoing; field crew work orders; any preliminary sewer assessments, such as midnight flow monitoring; and any other relevant information. Where Columbia's implementation of the CSAP results in a determination that a Private Lateral is a source of I/I to the WCTS or is a source of a release, Columbia shall notify the property owner of its determination but shall not be responsible for repairs to the Private Lateral. For purposes of being able to develop the Infrastructure Rehabilitation Report set forth in Paragraph 16 below, the schedules set forth in the CSAP shall provide for the major components of the WCTS (to include all pipes 15 inches in diameter or larger and their appurtenances, such as manholes and Pump Stations) to be assessed at least once by no later than 24 months from the date of EPA/DHEC approval of the CSAP. The schedules set forth in the CSAP shall also provide for the remainder of the entire WCTS to be assessed at least once by no later than 60 months from the date of EPA/DHEC approval of the CSAP.

b. At a minimum, the CSAP shall include, and Columbia shall have the ability to implement, the assessment methods set forth in Paragraphs 14.b.(i) through (ix), below. When implementing the CSAP to assess specific portions of the WCTS, Columbia shall use methods that are appropriate for the portion of the WCTS being assessed.

(i) Physical Condition. Standard Procedures for evaluating the physical condition of the WCTS, including, but not limited to, consideration of age, construction

material and durability.

(ii) Dyed Water Flooding. Standard procedures for conducting dyed water testing to locate sources of I/I to the WCTS ("Dyed Water Flooding"). The Dyed Water Flooding component shall include standard forms for recording information derived from dyed water testing.

(iii) Corrosion Defect Identification. Standard procedures for inspecting and identifying sewer infrastructure that is either corroded or at risk of corrosion ("Corrosion Defect Identification"). This Corrosion Defect Identification component shall include a system for prioritizing repair of corrosion defects, corrosion identification forms, and procedures for a corrosion defect analysis.

(iv) Routine Manhole Inspection. Standard procedures and frequencies for routine inspection of manholes within the WCTS ("Routine Manhole Inspection"). This Routine Manhole Inspection component shall include manhole inspection forms and procedures for a manhole defect analysis, and may provide for less frequent inspection of newer manholes.

(v) Flow Monitoring. Standard procedures for routine flow monitoring during dry and wet weather to support engineering analyses related to WCTS capacity and peak flow studies ("Flow Monitoring"). Dry weather monitoring shall be carried out so as to allow the characterization of base flows and I/I rates. Wet weather monitoring shall be conducted periodically during events of sufficient duration and intensity that cause significant I/I into the WCTS. This Flow Monitoring component shall identify areas susceptible to I/I into the WCTS. This Flow Monitoring Program shall also establish, and Columbia shall implement,

a process for determining the number and locations of permanent and temporary flow meters; a program for sewer cleaning associated with flow monitoring; and a procedure for adequate rainfall measurement. The Flow Monitoring Program will contain an initial determination of the number and location of permanent and temporary flow meters, with a map showing such locations.

(vi) Video Inspection. Standard procedures for routine use of closed circuit television ("CCTV") and/or zoom camera video inspections to support sewer assessment activities, including procedures for video-assisted cleaning and a process for the retention and access of video data.

(vii) Gravity System Defect Analysis. Standard procedures for analysis of Gravity Sewer Line defects ("Gravity Sewer Line Defect Analysis"). This Gravity Sewer Line Defect Analysis component shall establish standard defect codes; defect identification procedures and guidelines; and a standardized process for cataloging Gravity Sewer Line defects.

(viii) Smoke Testing. Standard procedures for smoke testing of Gravity Sewer Lines to identify sources of I/I to the WCTS, including cross connections and other unauthorized connections ("Smoke Testing"). This Smoke Testing component shall include establishing and implementing smoke testing forms and procedures for smoke testing defect analysis.

(ix) Pump Station Performance and Adequacy. Standard procedures for the evaluation of Pump Station performance and Pump Station adequacy ("Pump Station Performance and Adequacy"), including:

(A) The use of pump run time meters; pump start counters; computation of Nominal Average Pump Operating Time ("NAPOT"); root cause failure analysis protocols; and appropriate remote sensing such as Supervisory Control and Data Acquisition ("SCADA").

(B) The evaluation of Pump Station capacity, as described in the "Pumping Systems" chapter of the most current version of WEF's Manual of Practice FD-4, "Design of Wastewater and Stormwater Pumping Stations."

(C) The evaluation of critical response time, defined as the time interval between activation of the high wet well level alarm and the first SSO, under peak flow conditions.

(D) The evaluation of Pump Station conditions, based upon both physical inspection and recent operating and mechanical failure history during at least the past five years; and

(E) The evaluation of Pump Station design and equipment, including redundancy of pumps and electrical power supply, and other equipment installed, based upon South Carolina Regulation 61-67 (wastewater construction standards). The evaluation of the ability of maintenance personnel to take corrective action within the critical response time calculated for each Pump Station.

c. Information and Management System. The CSAP shall include standard procedures for a CSAP Information Management System and performance goals for each

component of the CSAP set forth in Paragraphs 14.b. (i) through (ix), above.

15. Infrastructure Rehabilitation Program ("IR Program") for the WCTS. Within six (6) months after EPA approval of the CSAP, Columbia shall submit to EPA and DHEC for review, comment, and approval an Infrastructure Rehabilitation Program ("IR Program"). The IR Program shall describe policies and procedures for implementing rehabilitation measures to address I/I, structural issues in the WCTS and the other conditions causing SSOs, with the goal of eliminating future SSOs. The IR Program shall take into account all previous information Columbia has gathered, including any information gathered pursuant to the Work under this Consent Decree. For purposes of developing schedules under Paragraphs 15.a. through 15.e, the IR Program shall include procedures for Columbia to prioritize rehabilitation measures based upon relative likely human health and environmental impact risks, SSO frequencies, and SSO volumes. At minimum, the IR Program shall include the requirements set forth in Paragraphs 15.a. through 15.e. The IR Program may also provide for implementation of line and other small-scale repairs on a "find and fix" basis, where, if feasible, Columbia may implement rehabilitation measures at the time defects are identified.

a. Gravity Sewer Line Rehabilitation. For all Gravity Sewer Lines and related appurtenances, including city-owned laterals, that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Gravity Sewer Line rehabilitation priorities and schedules; maintaining an ongoing inventory of Gravity Sewer Line rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

b. Manhole Rehabilitation. For all manholes that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting manhole rehabilitation priorities and schedules; maintaining an ongoing inventory of manhole rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

c. Pump Station Rehabilitation. For all Pump Stations that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Pump Station rehabilitation priorities and schedules; maintaining an ongoing inventory of Pump Station rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

d. Force Main Rehabilitation. For all Force Mains and related appurtenances that are identified as in need of rehabilitation under the CSAP, the IR Program shall include procedures for: setting Force Main rehabilitation priorities and schedules; maintaining an ongoing inventory of Force Main rehabilitation projects already performed, scheduled to be performed, and needing to be scheduled and performed, including identification of the rehabilitation techniques used on completed projects; and analyzing the effectiveness of completed rehabilitation projects.

e. Each component of the IR Program set forth in Paragraphs 15.a. through 15.d. above shall include standard procedures for an IR Program information management

system, standard procedures for inspecting and documenting the quality of new construction and rehabilitated work for warranty and other purposes, and procedures for analysis of the effectiveness of completed rehabilitation.

16. IR Report for the WCTS. Within six (6) months after Columbia has assessed the major components of the WCTS once pursuant to the CSAP, Columbia shall submit to EPA and DHEC for review, comment, and approval an IR Report setting forth a summary of the results of the CSAP of the major components of the WCTS and a description of Columbia's proposed rehabilitation projects, including rehabilitation projects currently underway. The summary of the results of the CSAP shall contain a thorough analysis of historical and current flow monitoring, inspection, rainfall and other data, including data collected during the CSAP.

a. Results of the CSAP. At minimum, the CSAP results summary portion of the IR Report shall include the components set forth in Paragraphs 16.a.i through 16.a.viii. below.

(i). A determination of existing flows for each Subbasin within the WCTS including average and peak daily dry weather flow.

(ii). A determination of the average dry weather Infiltration rate (in gpd/inch diameter-mile).

(iii). A determination of peak wet weather flow and peaking factors (the ratio of peak flow to average dry weather flow).

(iv). Identification of the portions of the WCTS experiencing levels of I/I that cause or contribute to SSOs.

(v). A summary of identified sources of I/I to the WCTS organized by Subbasins, or portions of Subbasins, that indicates the specific types of defects found, and the quantity of each defect type with a given National Association of Sewer System Contractors (NAASCO) defect rating. The summary shall also estimate the total I/I contributions to such Subbasins or portions of Subbasins.

(vi). A summary of flow monitoring activities, that include, at a minimum, a map showing the delineation of the Subbasin, the location and type of each flow meter, problems encountered and deviations from the CSAP, and a description of quality control and quality assurance activities, including the use of scattergraphs, to ensure accurate flow measurement.

(vii). A description of the methods used to estimate I/I, an identification of the locations where the methods were used, and an explanation of the assumptions, rainfall events, and other variables used in estimating I/I.

(viii). A summary of the status of Columbia's development of the hydraulic Model Report required under Paragraph 17.d. of this Consent Decree, including a description of the completed activities and the remaining tasks and activities to be carried out in development of the hydraulic Model Report, and the anticipated dates of completion of such remaining tasks and activities.

b. Rehabilitation of Infrastructure. In accordance with the IR Program, the IR Report shall identify all specific rehabilitation measures and projects, including those currently underway and those additional rehabilitation projects identified through the assessment of the major components of the WCTS pursuant to the CSAP, as needed to address I/I and other conditions causing SSOs. The IR Report will also state the quantity of I/I that Columbia estimates will be removed through each identified rehabilitation project, and describe the methods used to quantify the I/I projected to be removed, including an explanation of the variables used in estimating the I/I projected to be removed. The IR Report shall include a schedule for completion of all identified rehabilitation projects. Based on the results of the initial assessment of major components of the WCTS pursuant to the CSAP, the IR Report shall group the additional rehabilitation projects into three scheduling categories (“Group 1,” “Group 2,” and “Group 3”) according to priority of the projects. The rehabilitation projects in the IR Report shall be prioritized according to their ability to resolve the most serious problems related to capacity overflows and problems related to WCTS segments with the highest defect ratings, as determined by the CSAP’s initial assessment of major components of the entire WCTS. The schedule shall provide for completion of rehabilitation measures identified in the IR Report by the dates listed in Subparagraph b.(i) – (iii) below. Upon approval of the IR Report by EPA and DHEC, Columbia shall complete all rehabilitation projects identified in the IR Report in accordance with the schedule contained therein.

(i). Group 1 rehabilitation projects shall be completed no later than 3 years following EPA and DHEC approval of the IR Report;

(ii). Group 2 rehabilitation projects shall be completed no later than 5 years after EPA and DHEC approval of the IR Report;

(iii). Group 3 rehabilitation projects shall be completed no later than 7 years after EPA and DHEC approval of the IR Report.

c. Supplemental IR Report. Within six (6) months after Columbia has assessed the remainder of the entire WCTS pursuant to the CSAP, as required by Paragraph 14.a, Columbia shall submit to EPA and DHEC for review, comment, and approval a supplemental IR Report which shall update all portions of the IR Report to reflect additional information developed by Columbia through completion of the assessment of the remainder of the entire WCTS. The Supplemental IR Report shall include an updated description of remedial projects that have been completed, including line repairs and small scale repairs completed on a find and fix basis, and shall identify any additional rehabilitation projects identified through ongoing implementation of the CSAP, as needed to address I/I and other conditions causing SSOs. The Supplemental IR Report shall include a schedule for completion of any additional rehabilitation projects no later than five years after EPA/DHEC approval of the Supplemental IR Report. Upon approval of the Supplemental IR Report by EPA and DHEC, Columbia shall complete all additional rehabilitation projects identified in the Supplemental IR Report in accordance with the schedule contained therein.

17. Sewer System Hydraulic Model. Columbia shall develop and maintain a

calibrated hydraulic model of its Sewer System (“the Model”) to establish existing hydraulic conditions and plan for future capacity needs of the Sewer System. The Model shall be developed on a Subbasin basis concurrent with the CSAP schedule for the initial assessment of major components of the WCTS in Paragraph 14 above. The model development schedule will be established based on system attribute data collected as part of the Sewer Mapping Program described in Paragraph 12.f. and flow and rainfall data collected as part of the flow monitoring program described in Paragraph 14.b.(v).

a. Capabilities. At a minimum, the Model shall be capable of:

(i). Accurately predicting the flow rate and hydraulic grade line of wastewater in Force Mains from Major Pump Stations and the Major Gravity Sewer Lines under any historical dry or wet weather condition;

(ii). Accurately predicting the location and severity of SSOs from the WCTS under any historical dry or wet weather condition;

(iii). Fully dynamic temporal analysis, including an accounting of downstream backwater impacts on upstream flows;

(iv). Accurately predicting the impacts of changes to Pump Station capacities on upstream and downstream flow rates and hydraulic grade lines, including hydraulic losses which may result from either full or partial Pump Station failures; and

(v). Generating hydrographs depicting baseline wastewater flow and I/I for the Subbasins for various storm recurrence intervals. The Model shall include methods for

accurately estimating the baseline wastewater flows and I/I components in each Subbasin using quality-controlled flow data obtained for the Sewer System.

b. **Implementation.** At a minimum, Columbia shall employ the Model to:

(i). Assist with the development and implementation of operation and maintenance procedures that optimize collection and transmission capacity;

(ii). Evaluate the impacts which Infiltration/Inflow rehabilitation projects, proposed system modifications, and upgrades and expansions have on collection and transmission capacity and the performance of Columbia's Sewer System;

(iii). Prioritize the continuing evaluation of the WCTS pursuant to the CSAP in Paragraph 14 above,

(iv). Prioritize rehabilitation projects; and

(v). Implement the Capacity Assurance Program described in Paragraph 12.e., above.

c. **Procedures and Protocols.** Columbia shall develop and employ written procedures, protocols, and schedules to routinely perform:

(i). Calibrations of the Model to account for age-related and other changes to Sewer System hydraulics, and to obtain and manage updated data from physical field observations and measurements for this purpose;

(ii). Verification of the Model's accuracy and performance; and

(iii). Sensitivity analyses to determine how the Model responds to changes in input parameters and variables.

d. Model Report. Fifteen (15) months after completion of the CSAP for major components of the WCTS described in Paragraph 14 above, Columbia shall submit a report (“Model Report”) to EPA and DHEC which:

(i). Identifies the functional attributes, characteristics, and limitations specific to the Model’s software as compared to other products evaluated by Columbia, and explains how the Model meets the capabilities required in Paragraph 17.a., above;

(ii). Identifies the date that the Model was deemed to be calibrated and functional;

(iii). Identifies all input and output parameters, constants, and assumed values used by the Model;

(iv). Explains the bases for the input parameters used in each Subbasin to characterize baseline wastewater flows and I/I, the quality assurance procedures used in acquiring the input data, and the engineering bases for the selections of constants (e.g., friction factors) and assumed values; and

(v). Provides a brief description of each procedure and protocol developed pursuant to Paragraph 17.c., above, provides the associated schedules, and identifies the individual(s) with their qualifications who are employed to implement the procedures and protocols.

e. Site Audit. Following receipt of the Model Report in Paragraph 17.d., above, EPA and DHEC may conduct compliance audits of the capabilities of the Model, the implementation of the Model, and the use of written procedures and protocols as required by this Paragraph.

VI. REVIEW OF DELIVERABLES

18. Public Review Requirement. Columbia shall post on its website instructions to the public for receiving email notice of future Deliverables. Prior to the submission of each Deliverable to EPA and DHEC, Columbia shall post a copy of the Deliverable on its website and provide notice of such action by email to all parties who have requested such notice. Columbia shall also send to the Reference Librarian at the Richland County Main Library, currently located at 1431 Assembly Street in Columbia, notice of the Deliverable to be submitted, a flyer containing a brief synopsis of the Deliverable, and instructions on how to find the document on Columbia's website. Columbia shall post on its website instructions for submitting comments, and shall allow the public a period of thirty (30) Days to comment on, the following Deliverables: (i) the CSAP required under Paragraph 14; (ii) the IR Program required under Paragraph 15; (iii) the IR Report and Supplemental IR Report required under Paragraph 16; (iv) the CERP required under Paragraph 12.b.; (v) the CAP required under Paragraph 12.e.; (vi) the TSOMP required under Paragraph 12.h.; and (vii) the GSOMP required under Paragraph 12.i. After the 30-day period, Columbia shall consider public comments for a period of up to fifteen (15) Days. Within seven (7) Days after submitting a Deliverable to EPA and DHEC, Columbia shall place a copy of the submitted version of the Deliverable on its website and at the library. Within seven (7) Days after EPA's approval, approval contingent upon conditions, or

modification by EPA, Columbia shall place a copy of such final version of the Deliverable on its website and at the library. Columbia shall maintain all versions of Deliverables on its website, along with all written comments received from the public, EPA, and DHEC, until termination of this Consent Decree.

19. Government Review of Deliverables.

a. Timing of Review of Deliverables. EPA and DHEC agree to use best efforts to expeditiously review and comment on Deliverables. If EPA issues written comments and decisions on the IR Report or Supplemental IR Report more than one-hundred and twenty (120) Days after receipt of such submission, or on any other Deliverable more than sixty (60) Days after receipt of such submission, any subsequent deadline or milestone dependent upon such review and comment shall be extended by the number of days beyond the one-hundred and twenty (120) day or sixty (60) day period that is applicable to the Deliverable, as specified in this Subparagraph a., for EPA's review of Columbia's submittals. Within thirty (30) days after the date that Columbia has reason to believe that a deadline or milestone is extended under this Subparagraph a., Columbia shall inform EPA and DHEC, in writing, of its belief and the amount of time Columbia believes the deadlines or milestones are extended. If EPA disagrees with Columbia's determination that a deadline is dependent upon such comments or decisions, EPA shall inform Columbia in writing. Columbia may dispute EPA's conclusion regarding whether a deadline is dependent upon such comments or decision pursuant to Section XII (Dispute Resolution).

b. EPA Action on Deliverables. After review of any Deliverable that is

required to be submitted pursuant to this Consent Decree, EPA, after consultation with DHEC, shall in writing: (i) approve the submission; (ii) approve the submission upon specified conditions; (iii) approve part of the submission and disapprove the remainder; or (iv) disapprove the submission. If EPA conditionally approves, approves only in part or disapproves entirely a submission, EPA shall provide a written explanation.

20. Approved Deliverables. If a Deliverable is approved by EPA pursuant to Paragraph 19.a., Columbia shall take all actions required by the Deliverable in accordance with the schedules and requirements of the Deliverable as approved. If the Deliverable is conditionally approved or approved only in part, pursuant to Paragraph 19.b.(ii) or 19.b.(iii), Columbia shall, upon written direction from EPA, after consultation with DHEC, take all actions required by the approved plan, report, or other item that EPA, after consultation with DHEC, determines are technically severable from any disapproved portions, subject to Columbia's right to dispute only the specified conditions or the disapproval of portions, under Section XII of this Decree (Dispute Resolution). Following EPA approval of any Deliverable or portion thereof, such Deliverable or portion thereof so approved shall be incorporated into and become enforceable under this Consent Decree.

21. Disapproved Deliverables. If the Deliverable is disapproved in whole or in part pursuant to Paragraph 19.b.(iii) or 19.b.(iv), Columbia shall, within sixty (60) Days or such other time as EPA and Columbia agree to in writing, correct all deficiencies and resubmit to EPA the Deliverable, or disapproved portion thereof, for approval, in accordance with Paragraphs 19 and 20, subject to Columbia's right to dispute the disapproval under Section XII of this Decree (Dispute Resolution). If the resubmission is approved in whole or in part, Columbia shall

proceed in accordance with Paragraph 20.

22. Stipulated Penalties Accruing. Any stipulated penalties applicable to the original Deliverable, as provided in Section X of this Decree, shall accrue during the sixty (60)-Day period or other specified period provided for the correction of deficiencies and resubmittal in Paragraph 21, above, but shall not be payable unless the resubmitted Deliverable is untimely or is disapproved in whole or in part, provided that, if the original submission was so deficient as to constitute a material breach of Columbia's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

23. Resubmitted/Revised Deliverables.

a. Resubmitted Deliverable. If a resubmitted Deliverable, or portion thereof, is disapproved in whole or in part, EPA, after consultation with DHEC, may again require Columbia to correct any deficiencies, in accordance with Paragraph 21, or may itself correct any deficiencies, subject to Columbia's right to invoke Dispute Resolution and the right of EPA to seek stipulated penalties as provided in preceding Paragraph 22. Upon EPA's correction of any deficiencies, such resubmitted plan, report, or other item, or portion thereof will be incorporated into and become enforceable under this Consent Decree and shall be implemented by Columbia according to the approved schedule subject to Columbia's right to invoke Dispute Resolution.

b. Revisions to Deliverables. The Parties recognize that, during implementation of this Consent Decree, information may be developed which warrants the

revision of previously submitted and/or approved Deliverables. Columbia may revise previously approved Deliverables only with EPA's prior written approval. For any proposed revised Deliverable, Columbia shall comply with the public notification requirements of Paragraph 18 of this Consent Decree originally applicable to such Deliverable.

24. Certification. Columbia shall, by a person who meets the requirements for reports and other information under 40 CFR § 122.22(b), sign and certify all Deliverables, notices, documents or reports submitted to the United States and State pursuant to this Consent Decree as follows:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

VII. CIVIL PENALTY

25. Within thirty (30) Days after the Effective Date of this Consent Decree, Columbia shall pay a total civil penalty in the amount of \$476,400, to be apportioned between the United States and the State as specified in paragraphs 26 and 27, below.

26. Columbia shall pay to the United States \$238,200 of the civil penalty by FedWire

Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Columbia, following lodging of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney’s Office for the District of South Carolina, 1441 Main Street, Suite 500, Columbia, S.C. 29201 (803) 929-3000. At the time of payment, Columbia shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States et al. v. City of Columbia*, and shall reference the civil action number and DOJ case number 90-5-1-1-09954, to the United States in accordance with Section XIV of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

27. Columbia shall pay to the State a civil penalty of \$238,200 by check payable to the “South Carolina Department of Health and Environmental Control” within thirty (30) Days after the Effective Date of this Consent Decree. The check shall reference the case name and civil action number herein and shall be sent to:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St.
Columbia, South Carolina 29201

VIII. SUPPLEMENTAL ENVIRONMENTAL PROJECT

28. Columbia shall implement a Supplemental Environmental Project (SEP), as

described in Appendix I of this Consent Decree in accordance with all provisions of Appendix I of this Consent Decree. The SEP Columbia shall implement, as described in Appendix I, consists of Flooding and Water Quality Improvements in three areas: (i) along the Lower Reach of Rocky Branch, (ii) Smith Branch, and (iii) Gills Creek, with expenditures totaling at least \$1,000,000. The SEP shall be completed within 60 months after entry of this Decree.

29. Columbia is responsible for the satisfactory completion of the SEP in accordance with the requirements of this Decree. Columbia may use contractors or consultants in planning and implementing the SEP.

30. With regard to the SEP, Columbia certifies the truth and accuracy of each of the following:

a. that all cost information provided to EPA in connection with EPA's approval of the SEP is complete and accurate and that Columbia in good faith estimates that the cost to implement the SEP, exclusive of overhead, additional employee time and salary, administrative expenses, legal fees, and contractor oversight, is \$1,000,000;

b. that, as of the date of executing this Decree, Columbia is not required to perform or develop the SEP by any federal, state, or local law or regulation and is not required to perform or develop the SEP by agreement, grant, or as injunctive relief awarded in any other action in any forum;

c. that Columbia is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP identified

in Appendix I. Columbia further certifies that, to the best of its knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of this settlement (unless the project was barred from funding as statutorily ineligible). For the purposes of this certification, the term “open federal financial assistance transaction” refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance whose performance period has not yet expired;

d. that the SEP is not a project that Columbia was planning or intending to construct, perform, or implement other than in settlement of the claims resolved in this Decree;

e. that Columbia has not received and will not receive credit for the SEP in any other enforcement action; and

f. that Columbia will not receive any reimbursement for any portion of the SEP from any other person.

31. SEP Completion Report

a. Within 30 days after the deadline for completion of the SEP, Columbia shall submit a SEP Completion Report to the United States, in accordance with Section XVI of this Consent Decree (Notices). The SEP Completion Report shall contain the

following information:

- (i). a detailed description of the SEP as implemented;
- (ii). a description of any problems encountered in completing the SEP and the solutions thereto;
- (iii). an itemized list of all eligible SEP costs expended;
- (iv). certification that the SEP has been fully implemented pursuant to the provisions of this Decree; and
- (v). a description of the environmental and public health benefits resulting from implementation of the SEP (with a quantification of the benefits and pollutant reductions, if appropriate).

32. EPA may, in its sole discretion, require information in addition to that described in the preceding Paragraph, in order to evaluate Columbia's completion reports.

33. After receiving the SEP Completion Report, EPA shall notify Columbia whether or not Columbia has satisfactorily completed the SEP.

34. If Columbia has not completed the SEP in accordance with this Consent Decree, stipulated penalties may be assessed under Section X of this Consent Decree.

35. Disputes concerning the satisfactory performance of the SEP and the amount of eligible SEP costs may be resolved under Section XII of this Decree (Dispute Resolution). No other disputes arising under this Section shall be subject to Dispute Resolution.

36. Each submission required under this Section shall be signed by an official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 24.

37. Any public statement, oral or written, in print, film, or other media, made by Columbia making reference to the SEP under this Decree shall include the following language: “This project was undertaken in connection with the settlement of an enforcement action, United States et al. v. City of Columbia, taken on behalf of the U.S. Environmental Protection Agency and South Carolina Department of Health and Environmental Control, under the Clean Water Act.”

38. For federal income tax purposes, Columbia agrees that it will neither capitalize into inventory or basis nor deduct any costs or expenditures incurred in performing the SEP.

IX. REPORTING REQUIREMENTS

39. Columbia shall submit the following notices and reports:

a. Quarterly Reports. After the Effective Date of this Consent Decree and until termination of this Decree pursuant to Section XX (Termination), Columbia shall submit to EPA and DHEC quarterly reports by email and by either U.S. Mail or an overnight delivery service. The first such quarterly report shall be submitted to EPA and DHEC no later than thirty (30) days after the second full calendar quarter after the Effective Date of this Consent Decree. Succeeding quarterly reports shall be submitted no later than thirty (30) days after the completion of each succeeding calendar quarter. The quarterly report shall include, at a minimum:

(i). A description of all projects and activities conducted during the

most recently completed calendar quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format. This description shall include completion percentages of early action capital improvement projects under Paragraph 10, continuing sewer assessments under the CSAP, and the subsequent remedial actions under the IR Report;

(ii). The date, time, location, source, duration, estimated volume, receiving water (if any), cause, and actions taken to repair or otherwise resolve the cause of all SSOs for the most recently completed quarter in a tabulated electronic format;

(iii). The anticipated projects and activities that will be performed in the next quarter to comply with the requirements of this Consent Decree, in Gantt chart or similar format;

(iv). Any additional information that demonstrates that Columbia is implementing the remedial measures required in this Consent Decree; and

(v). The results of water quality monitoring conducted during the previous Calendar Quarter as part of the SEP described in Appendix I to this Consent Decree.

b. Reporting of violations. If Columbia violates any requirement of this Consent Decree or has reason to believe that it is likely to violate any requirement of this Consent Decree in the future, Columbia shall notify the United States and DHEC of such violation and its likely duration within ten days of Columbia first becoming aware of the situation, with an explanation of the violation's likely cause and of the remedial steps taken, and/or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be

fully explained at the time the next quarterly report is due, Columbia shall include a statement to that effect in the report. Columbia shall investigate to determine the cause of the violation and then shall submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) days after the quarterly report;

c. Annual Reports. Each year, Columbia shall submit to EPA and DHEC an annual report for the previous calendar year, with the first annual report due on the first March 31st which occurs at least six months after entry of this Decree, and subsequent annual reports due each year thereafter by March 31. Each annual report shall include, at minimum:

(i). A summary of the CMOM Programs implemented pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established;

(ii). A summary of each remedial measure and capital project implemented pursuant to this Consent Decree; and

(iii). A trends analysis of the number, volume, duration, and cause of Columbia's SSOs for the previous twenty-four (24) month period.

40. Whenever any violation of this Consent Decree or any other event affecting Columbia's performance under this Decree or its NPDES Permit may pose an immediate threat to the public health or welfare or the environment, Columbia shall notify EPA and DHEC orally or by electronic or facsimile transmission as soon as possible, but no later than 24 hours after Columbia first knew of the violation or event. This procedure is in addition to the requirements

set forth in the preceding Paragraph.

41. All reports shall be submitted to the persons designated in Section XVI of this Consent Decree (Notices).

42. Each report by Columbia under this Section shall be submitted in accordance with the provisions of Paragraph 24 of this Consent Decree. The certification requirement in Paragraph 24 does not apply to emergency or similar notifications where compliance would be impractical.

43. The reporting requirements of this Consent Decree do not relieve Columbia of any reporting obligations required by the CWA or its implementing regulations, SCPCA or its implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

44. Any information provided pursuant to this Consent Decree may be used by the United States or the State in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

X. STIPULATED PENALTIES

45. Columbia shall be liable for stipulated penalties to the United States and the State for violations of this Consent Decree as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or

approved under this Decree.

46. Late Payment of Civil Penalty. If Columbia fails to pay the civil penalty required to be paid under Section VII of this Decree (Civil Penalty) when due, Columbia shall pay a stipulated penalty of \$1,000 per Day for each Day that the payment is late.

47. Violations. The following stipulated penalties shall accrue for each violation identified below:

a. Unpermitted Discharges. For each Unpermitted Discharge Event occurring on or after two (2) years from the Date of Entry, a stipulated penalty may be assessed as follows:

(i) For each Unpermitted Discharge Event of 5,000 gallons or less, a stipulated penalty may be assessed as follows:

Within two to five years from the Date of Entry, \$250.

More than five years from the Date of Entry, \$1,000.

(ii) For each Unpermitted Discharge Event of more than 5,000 gallons, a stipulated penalty may be assessed as follows:

Within two to five years from the Date of Entry, \$500

More than five years from the Date of Entry, \$2,000

For purposes of Subparagraph 47.a., an Unpermitted Discharge (as defined in Subparagraph 8.uu.) occurring over multiple days at the same location and due to the same

cause(s) is considered one “Unpermitted Discharge Event.” For example, a collapsed pipe that results in an Unpermitted Discharge on multiple days is a single Unpermitted Discharge Event.

b. Failure to Timely Submit Deliverable. For failing to submit any Deliverable, the following stipulated penalties shall accrue:

<u>Period Beyond Submittal Date</u>	<u>Penalty Per Violation Per Day</u>
1 – 30 days	\$500
more than 30 days	\$1,000

c. Failure to Timely Complete Rehabilitation Projects. For each day that Columbia fails to timely complete rehabilitation projects in accordance with the deadlines established in Paragraph 10, Appendices E and F, or Paragraph 16.b. of this Decree, a stipulated penalty shall accrue for each such missed deadline as follows:

<u>Period Beyond Submittal Date</u>	<u>Penalty Per Violation Per Day</u>
1-14 days	\$500
15 – 30 days	\$1,000
31 – 60 days	\$1,500
61 – 180 days	\$2,000
more than 180 days	\$2,500

d. Failure to Timely Implement SEP Milestones. For each Day that Columbia fails to timely implement a SEP milestone set forth in Section VIII or Appendix I, daily stipulated penalties may be assessed as follows:

<u>Period of Non-compliance</u>	<u>Penalty Per Violation Per Day</u>
1 – 60 days	\$500
more than 60 days	\$1,500

e. Failure to Complete the SEP. For the SEP identified in Section VIII and Appendix I, EPA, after receiving the SEP Completion Report, may notify Columbia that Columbia has failed to satisfactorily complete the SEP in accordance with the terms of this Consent Decree as described in Section VIII and Appendix I (including the required expenditures for the SEP). A stipulated penalty of \$375,000 for the SEP may be assessed, if Columbia does not cure the deficiencies identified in EPA's notice within ninety (90) Days after receiving such notice. Notwithstanding the foregoing, if EPA determines that Columbia has made good faith efforts to satisfactorily complete the SEP and has certified, with supporting documentation, that at least ninety (90) percent of the required amount of money has been spent on the SEP, Columbia shall not be liable for any stipulated penalty.

48. Stipulated penalties under this Section shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

49. Columbia shall pay stipulated penalties to the United States and the State within thirty (30) Days of a written demand by EPA. Columbia shall pay fifty percent (50%) of the total stipulated penalty amount due to the United States and fifty percent (50%) to the State.

50. The United States may, in the unreviewable exercise of its discretion, reduce or

waive stipulated penalties otherwise due it under this Consent Decree.

51. Stipulated penalties shall continue to accrue as provided in Paragraph 47, during any Dispute Resolution, but need not be paid until the following:

a. If the dispute is resolved by agreement or by a decision of EPA that is not appealed to the Court, Columbia shall pay accrued penalties determined to be owing, together with interest, to the United States and the State within thirty (30) Days of the effective date of the agreement or the receipt of EPA's decision or order.

b. If the dispute is appealed to the Court and the United States prevails in whole or in part, Columbia shall pay all accrued penalties determined by the Court to be owed, together with interest, within sixty (60) Days of receiving the Court's decision or order, except as provided in Subparagraph c., below.

c. If the District Court's decision is appealed, Columbia shall pay all accrued penalties determined to be owed, together with interest, within fifteen (15) Days of receiving the final appellate court decision.

52. Columbia shall pay stipulated penalties owing to the United States in the manner set forth and with the confirmation notices required by Paragraph 26, except that the transmittal letter shall state that the payment is for stipulated penalties and shall state for which violation(s) the penalties are being paid. Columbia shall pay stipulated penalties owing to the State in the manner set forth in Paragraph 27.

53. If Columbia fails to pay stipulated penalties according to the terms of this Consent

Decree, Columbia shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Columbia's failure to pay any stipulated penalties.

54. Subject to the provisions of Section XIV of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States and the State for Columbia's violation of this Consent Decree or applicable law.

XI. FORCE MAJEURE

55. "Force majeure," for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Columbia, of any entity controlled by Columbia, or of Columbia's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Columbia's best efforts to fulfill the obligation. The requirement that Columbia exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force majeure" does not include Columbia's financial inability to perform any obligation under this Consent Decree.

56. If any event occurs or has occurred may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Columbia shall provide notice in orally or by electronic or facsimile transmission to EPA and DHEC, within

seventy-two (72) hours of when Columbia first knew or should have known that the event might cause a delay. Within seven (7) days thereafter, Columbia shall provide a written notice to EPA and DHEC an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken in an effort to prevent or minimize the delay; a schedule for implementation of any measures to be taken in an effort to prevent or mitigate the delay or the effect of the delay; Columbia's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Columbia, such event may cause or contribute to an endangerment to public health, welfare or the environment. Columbia shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure event. Failure to comply with the above requirements shall preclude Columbia from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Columbia shall be deemed to know of any circumstance of which Columbia or Columbia's contractors knew or should have known.

57. If EPA, after a reasonable opportunity for review and comment by DHEC, agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by EPA, after a reasonable opportunity for review and comment by DHEC, for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Columbia in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

58. If EPA, after a reasonable opportunity for review and comment by DHEC, does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Columbia in writing of its decision.

59. If Columbia elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than fifteen (15) Days after receipt of EPA's notice. In any such proceeding, Columbia shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Columbia complied with the requirements of Paragraphs 55 and 56 above. If Columbia carries this burden, the delay at issue shall be deemed not to be a violation by Columbia of the affected obligation of this Consent Decree identified to EPA and the Court.

XII. DISPUTE RESOLUTION

60. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Columbia's failure to seek resolution of a dispute under this Section shall preclude Columbia from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of Columbia arising under this Decree.

61. **Informal Dispute Resolution.** Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Columbia sends the United States a written Notice of Dispute.

Such Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed twenty (20) Days from the date the dispute arises, unless that period is modified by written agreement between the United States and Columbia. The United States shall consult with the State during the period of informal negotiations. If the United States and Columbia cannot resolve a dispute by informal negotiations, then the position advanced by the United States shall be considered binding unless, within forty-five (45) Days after the conclusion of the informal negotiation period, Columbia invokes formal dispute resolution procedures as set forth below.

62. Formal Dispute Resolution. Columbia shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph, by serving on the United States and the State a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Columbia's position and any supporting documentation relied upon by Columbia. The United States shall serve its Statement of Position within ninety (90) Days of receipt of Columbia's Statement of Position. The United States Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the United States. The United States shall consult with the State during preparation of its Statement of Position. The United States Statement of Position shall be binding on Columbia, unless Columbia files a motion for judicial review of the dispute in accordance with the following Paragraph.

63. Judicial Dispute Resolution. Columbia may seek judicial review of the dispute by filing with the Court and serving on the United States and the State, in accordance with Section

XVI of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within ten (10) Days of receipt of the United States Statement of Position pursuant to the preceding Paragraph. The motion shall contain a written statement of Columbia's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree. The United States shall respond to Columbia's motion within the time period allowed by the Local Rules of this Court. The United States shall consult with the State during preparation of its response. Columbia may file a reply memorandum, to the extent permitted by the Local Rules.

64. Standard of Review.

a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraphs 62 and 63 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Columbia shall have the burden of demonstrating, based on the administrative record, that the position of the United States is arbitrary and capricious or otherwise not in accordance with law.

b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraphs 62 and 63, Columbia shall bear the burden of demonstrating that its position complies with this Consent Decree and furthers the objectives of

the Consent Decree.

65. The invocation of dispute resolution procedures under this Section shall not, by itself, extend, postpone, or affect in any way any obligation of Columbia under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 51. If Columbia does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

**XIII. RIGHT OF ENTRY AND INFORMATION COLLECTION AND
RETENTION**

66. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into any facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples and, upon request, splits of any samples taken by Columbia or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Columbia's compliance with this Consent Decree.

67. Upon request, Columbia shall provide EPA and DHEC or their authorized representatives splits of any samples taken by Columbia. Upon request, EPA and DHEC shall provide Columbia splits of any samples taken by EPA or DHEC.

68. Until five years after the termination of this Consent Decree, Columbia shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Columbia's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Columbia shall provide copies of any documents, records, or other information required to be maintained under this Paragraph.

69. At the conclusion of the information-retention period provided in the preceding Paragraph, Columbia shall notify the United States and the State at least ninety (90) Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States or the State, Columbia shall deliver any such documents, records, or other information to EPA or DHEC. Columbia may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Columbia asserts such a privilege, it shall provide the following:

- a. the title of the document, record, or information;
- b. the date of the document, record, or information;
- c. the name and title of each author of the document, record, or information;
- d. the name and title of each addressee and recipient;
- e. a description of the subject of the document, record, or information; and
- f. the privilege asserted by Columbia.

However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

70. Columbia may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Columbia seeks to protect as CBI, Columbia shall follow the procedures set forth in 40 C.F.R. Part 2.

71. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Columbia to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

72. This Consent Decree resolves the civil claims of the United States and the State

for the violations alleged in the Complaint filed in this action through the Date of Lodging of this Consent Decree.

73. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in Paragraph 72. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under the CWA, SCPCA, or their implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 72. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare or the environment arising at, or posed by, Columbia's Sewer System, whether related to the violations addressed in this Consent Decree or otherwise.

74. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to the Sewer System or Columbia's violations, Columbia shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, res judicata, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 72 of this Section.

75. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Columbia is responsible for achieving and

maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; and Columbia's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Columbia's compliance with any aspect of this Consent Decree will result in compliance with provisions of the CWA, SCPCA, or with any other provisions of federal, State, or local laws, regulations, or permits.

76. This Consent Decree does not limit or affect the rights of Columbia or of the United States or the State against any third parties, not party to this Consent Decree, nor does it limit the rights of third parties, not party to this Consent Decree, against Columbia, except as otherwise provided by law.

77. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XV. COSTS

78. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due but not paid by Columbia.

XVI. NOTICES

79. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and

addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09954

Amy Gillespie
Environmental Enforcement Section
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09954

and amy.gillespie@usdoj.gov

and

Chief, Water Programs Enforcement Branch
Water Protection Division
U.S Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303

To EPA

Chief, Water Programs Enforcement Branch
Water Protection Division
U.S Environmental Protection Agency, Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303

To the State:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St
Columbia, SC 29201

And

Roger Hall
hallrp@dhec.sc.gov

To DHEC:

Glenn Trofatter
SCDHEC-Bureau of Water
Water Pollution Control Division
2600 Bull St
Columbia, SC 29201

And

Roger Hall
hallrp@dhec.sc.gov

To Columbia:

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: City Manager

City of Columbia
P.O. Box 667
Columbia, South Carolina 29202
Attn: City Attorney

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: Chief Financial Officer

City of Columbia
P.O. Box 147
Columbia, South Carolina 29217
Attn: Director Utilities and Engineering

and:

W. Thomas Lavender, Jr.
Nexsen Pruet, LLC
1230 Main Street, Suite 700
Columbia, South Carolina 29201

80. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

81. Notices submitted pursuant to this Section shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree or by mutual agreement of the Parties in writing.

XVII. EFFECTIVE DATE

82. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket.

XVIII. RETENTION OF JURISDICTION

83. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XII and XIX, or effectuating or enforcing compliance with the terms of this Decree.

XIX. MODIFICATION

84. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval

by the Court.

85. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII of this Decree (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 64, the party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

86. This Consent Decree may be terminated when the United States determines that Columbia has satisfactorily completed performance of its compliance (Section V) and SEP (Section VIII) obligations required by this Decree, provided that Columbia has fulfilled all other obligations of this Decree, including payment of the civil penalty under Section VII of this Decree and any accrued stipulated penalties as required by Section X of this Decree not waived or reduced by the United States. Columbia may serve upon the United States a Request for Termination, certifying that Columbia has satisfied those requirements, together with all necessary supporting documentation.

87. Following receipt by the United States of Columbia's Request for Termination, the United States and Columbia shall confer informally concerning the Request and any disagreement that they may have as to whether Columbia has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the State, agrees that the Decree may be terminated, the United States and Columbia shall submit, for the Court's approval, a joint stipulation terminating the Decree.

88. If the United States, after consultation with the State, does not agree that the Decree may be terminated, Columbia may invoke Dispute Resolution under Section XII of this Decree. However, Columbia shall not invoke Dispute Resolution of any dispute regarding termination until one hundred-twenty (120) Days after service of its Request for Termination.

XXI. PUBLIC PARTICIPATION

89. This Consent Decree shall be lodged with the Court for a period of not less than thirty (30) Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold its consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Columbia and the State each consent to entry of this Consent Decree without further notice and agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified the Parties in writing that it no longer supports entry of the Decree.

XXII. SIGNATORIES/SERVICE

90. Each undersigned representative of Columbia, EPA, and the State, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

91. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Columbia agrees to accept service of process by mail with respect to all

matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. INTEGRATION

92. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than Deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXIV. FINAL JUDGMENT

93. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Columbia. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXV. APPENDICES

94. The following appendices are attached to and part of this Consent Decree:

“Appendix A” is a Map of the service area for the Sewer System

“Appendix B” is the Lower Richland Sewer Service Agreement

“Appendix C” is the Map of Sewerbasins and Subbasins

“Appendix D” is the Sewer Overflow Response Program, or SORP

“Appendix E” is the Capital Improvement Program for the WWTP

“Appendix F” is the Capital Improvement Program for the WCTS

“Appendix G” is the Fats, Oil and Grease (FOG) Management Program

“Appendix H” is the List of Pump Stations with Capacity Ratings Greater Than
1000 Gallons Per Minute

“Appendix I” is the Description of the Supplemental Environmental Project (SEP)

Dated and entered this __ day of _____, ____.

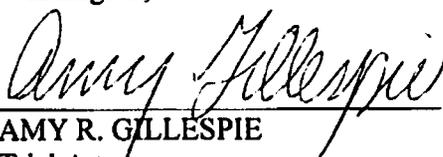
[]
UNITED STATES DISTRICT JUDGE
District of South Carolina

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA:

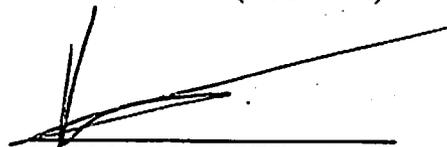


ROBERT G. DREHER
Acting Assistant Attorney General
Environment and Natural Resources Division
United States Department of Justice
950 Pennsylvania Avenue, NW
Washington, D.C. 20530



AMY R. GILLESPIE
Trial Attorney
Environmental Enforcement Section
Environment and Natural Resources Division
United States Department of Justice
P.O. Box 7611, Ben Franklin Station
Washington, D.C. 20044-7611
(202) 616-8754

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



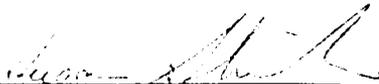
WILLIAM N. NETTLES
United States Attorney
District of South Carolina
First Union Building
1441 Main Street, Suite 500
Columbia, South Carolina 29201
Bill.Nettles@usdoj.gov
(803) 929-3000



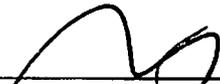
BETH DRAKE
First Assistant United States Attorney
District of South Carolina
First Union Building
1441 Main Street, Suite 500
Columbia, South Carolina 29201
Beth.Drake@usdoj.gov
(803) 929-3000

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



SUSAN SHINKMAN
Office Director
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency



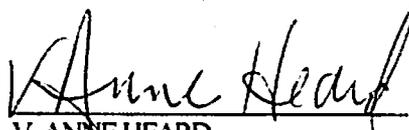
MARK POLLINS
Division Director
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency



CAROL DEMARCO
Water Enforcement Division
Office of Civil Enforcement
Office of Enforcement and Compliance Assurance
United States Environmental Protection Agency
Washington, DC 20460
Telephone 202-564-2412
Facsimile 202-564-0024

WE HEREBY CONSENT to the entry of this Consent Decree, subject to the public notice and comment provisions of 28 C.F.R. § 50.7:

FOR PLAINTIFF UNITED STATES OF AMERICA (Continued):



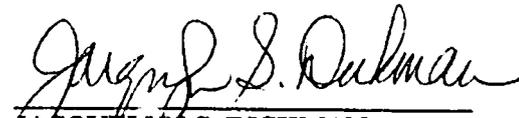
V. ANNE HEARD
Acting Regional Counsel and Director
Office of Environmental Accountability
United States Environmental Protection Agency
Region 4
61 Forsyth Street
Atlanta, GA 30303

Of Counsel:

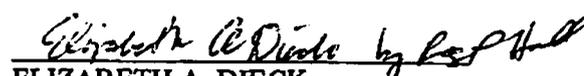
PAUL SCHWARTZ
Assistant Regional Counsel
United States Environmental Protection Agency
Region 4
61 Forsyth Street
Atlanta, GA 30303
Telephone: (404) 562-9576
Facsimile: (404) 562-9486

WE HEREBY CONSENT to the entry of this Consent Decree.

FOR THE SOUTH CAROLINA DEPARTMENT OF
HEALTH AND ENVIRONMENTAL CONTROL:



JACQUELYN S. DICKMAN
Deputy General Counsel
South Carolina Department of Health
and Environmental Control

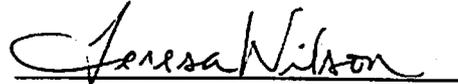


ELIZABETH A. DIECK
Director of Environmental Affairs
South Carolina Department of Health
and Environmental Control



ROGER P. HALL
Senior Counsel
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201
(803) 898-3432

FOR DEFENDANT THE CITY OF COLUMBIA:



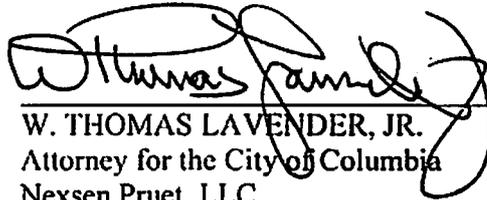
TERESA B. WILSON

In her capacity as City Manager

City of Columbia

P.O. Box 147

Columbia, SC 29217



W. THOMAS LAVENDER, JR.

Attorney for the City of Columbia

Nexsen Pruet, LLC

1230 Main Street, Suite 700

Columbia, SC 29201

Federal ID No 2689



We Are Columbia

Utilities & Engineering Department

Contracts

1136 Washington Street, Columbia, SC 29201 · Phone 803-545-3400 · Fax 803-545-3322

Acknowledgement of Receipt

Date: 10/19/2016

Brown and Caldwell
250 Berryhill Road, Suite 104
Columbia, SC 29210

RE: Agreement between Brown and Caldwell and the City of Columbia for services to the Force Main Condition Assessment and SCADA Improvements project (5529999-SS7333-658650)

Dear Sir/Madam:

I hereby acknowledge the receipt of the document below from the City of Columbia:

The Consent Decree entered by the U.S. District Court for the District of South Carolina on May 21, 2014, in the case captioned *The United States of America and State of South Carolina by and through the Department of Health and Environmental Control v. City of Columbia*, Civil Action No. 3:13-2429-TLW.



Signature of Recipient

PRINT Wayne E. Iseman

Acknowledgement of Receipt. Consent Decree



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-067 - Amending Ordinance No.: 2016-029 Granting an encroachment to the Knights of Columbus for installation and maintenance of brick pavers and sod within the right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street, Richland County TMS #09014-05-05 changing the Grantee's name to 1623 Marion St., Inc.**

FINANCIAL IMPACT:

ATTACHMENTS:

- 2016-067 amend 2016-029 encroach 1623 Marion Street (PDF)

HISTORY:

10/18/16

City Council

APPROVED ON FIRST READING

LEGAL DEPARTMENT DRAFT

ORDINANCE NO.: 2016-067

Amending Ordinance No.: 2016-029 Granting an encroachment to the Knights of Columbus for installation and maintenance of brick pavers and sod within the right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street, Richland County TMS #09014-05-05 changing the Grantee's name to 1623 Marion St., Inc.

WHEREAS, the Mayor and City Council by Ordinance No.: 2016-029 enacted on June 21, 2016, granted unto the Knights of Columbus (hereinafter "Grantee") the right to utilize a portion of the sidewalk right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street for installation and maintenance of a brick paver walkway approximately three (3') feet in width and sixteen (16') feet in width; a brick paver walkway approximately two (2') feet in width and sixteen (16') feet in length and sod, as shown in Ordinance 2016-029, a copy of which is attached hereto and incorporated herein; and,

WHEREAS, ownership of 1623 Marion Street, Richland County TMS #09014-05-05 has been transferred from the Knights of Columbus to 1623 Marion St., Inc., and the Grantor desires to amend Ordinance No.: 2016-029 to reflect the name of the current owner of record; NOW, THEREFORE,

BE IT ORDAINED by the Mayor and City Council of the City of Columbia, South Carolina, this ___ day of _____, 2016, that Ordinance No.: 2016-029 is hereby amended to reflect the current owner of record as 1623 Marion St., Inc.as Grantee; and,

BE IT FURTHER ORDAINED that 1623 Marion St., Inc., its successors and assigns are hereby granted the rights and privileges heretofore granted by the Mayor and City Council in Ordinance No.: 2016-029 enacted on June 21, 2106, to the Knights of Columbus to utilize a portion of the sidewalk right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street for installation and maintenance of a brick paver walkway approximately three (3') feet in width and sixteen (16') feet in width; a brick paver walkway approximately two (2') feet in width and sixteen (16') feet in length and sod, as shown in the attached ordinance.

Requested by:

Assistant City Manager Gentry

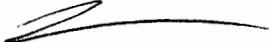
Mayor

Approved by:

City Manager

Approved as to form:

ATTEST:



City Attorney

City Clerk

Introduced:
Final Reading:

ORDINANCE NO.: 2016-029

Granting an encroachment to the Knights of Columbus for installation and maintenance of brick pavers and sod within the right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street, Richland County TMS #09014-05-05

WHEREAS, the Knights of Columbus (hereinafter "Grantee") desire to utilize a portion of the sidewalk right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street for installation and maintenance of a brick paver walkway approximately three (3') feet in width and sixteen (16') feet in length; a brick paver walkway approximately two (2') feet in width and sixteen (16') feet in length and sod, as shown on the attached drawing; and,

WHEREAS, it appears that the encroachment will not interfere with the use of the sidewalk or street for traffic, utility locations or other uses within the foreseeable future; NOW, THEREFORE,

BE IT ORDAINED by the Mayor and City Council of the City of Columbia, South Carolina, this 21st day of June, 2016, that Grantee, its successors and assigns is hereby granted the right to utilize a portion of the sidewalk right of way area of the 1600 block of Marion Street adjacent to its building at 1623 Marion Street for installation and maintenance of a brick paver walkway approximately three (3') feet in width and sixteen (16') feet in length; a brick paver walkway approximately two (2') feet in width and sixteen (16') feet in length and sod, as shown on the attached drawing.

ALL WORK SHALL COMPLY with the requirements of The City of Columbia and South Carolina Department of Transportation now in existence or hereafter enacted. The materials and type of finish to be used are to be approved by the City Engineer prior to installation. Any damage to the street or sidewalk caused by construction shall be repaired to the satisfaction of the City Manager. Improvements within the encroachment shall be maintained by the grantee at no cost to the City in a manner approved by the City Manager.

PROVIDED, HOWEVER, that in exercising the privileges granted under this ordinance, Grantee, his successors and assigns, will indemnify and save harmless the City from any and all claims or causes of action which may arise by reason of the construction or maintenance of the aforesaid encroachment.

PROVIDED FURTHER that the privilege granted hereby is subject to the Grantee complying with the following conditions, restrictions or limitations:

1. No item, including landscaping, shall be placed, planted or allowed to grow such that it creates a visual impediment to persons safely entering or exiting the driveway or to persons safely walking along the sidewalk. The City reserves the right to remove or cut any item located within the right of way which it deems to be a safety hazard.
2. Grantee is responsible for all maintenance and assuring that all accessibility and ADA requirements are met and maintained.
3. All trees shall be protected and no large tree roots shall be removed from any existing trees.
4. Irrigation must be designed to avoid spraying walkways, sidewalks and streets and/or creating hazardous conditions upon the walkways, sidewalks and streets.

PROVIDED FURTHER that the privilege granted hereby may be modified or terminated by Columbia City Council at any time without notice to the Grantee, his successors and assigns.

PROVIDED FURTHER that a certificate of insurance be issued as evidence of general liability insurance with at least the minimum amount of \$600,000.00 for personal injury and property damage and naming the City as an insured, be provided to and filed annually with the City Clerk by Grantee, his successors and assigns,

as required by Chapter 11, Licenses, Permits, Business Regulations, Article III, Contractors, Sec. 11-71, 1998 Code of Ordinances of the City of Columbia, South Carolina.

BE IT FURTHER ORDAINED that Grantee, in consideration of the above privilege, shall at his expense provide for protection and relocation of all utilities that might be within this area to the satisfaction of the City Manager.

ORIGINAL
STAMPED IN RED

Requested by:

Assistant City Manager Gentry _____



Mayor

Approved by:



City Manager

Approved as to form:



City Attorney

ATTEST:


City Clerk

Introduced: 6/7/2016
Final Reading: 6/21/2016

**CITY COUNCIL
ENCROACHMENT SUMMARY
2016-029**



**1623 MARION STREET
BRICK PAVERS**

Subject Property:	Right-of-ways adjacent to 1623 Marion Street, TMS#09014-05-05
Council District:	2
Proposal:	The applicant is requesting to amend encroachment ordinance 2013-036 for installation and maintenance of sod, irrigation and brick pavers
Applicant:	Knights of Columbus
Staff Recommendation:	Approval

Detail:	<p>The applicant is requesting to an encroachment for the installation and maintenance of brick paver walkway approximately three (3') feet in width and sixteen (16') feet in width; a brick paver walkway approximately two (2') feet in width and sixteen (16') feet in length and sod, as shown on the attached drawing.</p> <p>Conditions of the proposed encroachment are as follows:</p> <ol style="list-style-type: none"> 1. No item, including landscaping, shall be placed, planted or allowed to grow such that it creates a visual impediment to persons safely entering or exiting the driveway or to persons safely walking along the sidewalk. The City reserves the right to remove or cut any item located within the right of way which it deems to be a safety hazard. 2. Grantee is responsible for all maintenance and assuring that all accessibility and ADA requirements are met and maintained. 3. All trees shall be protected and no large tree roots shall be removed from any existing trees. 4. Irrigation must be designed to avoid spraying walkways, sidewalks and streets and/or creating hazardous conditions upon the walkways, sidewalks and streets.
----------------	---

CITY AGENCY COMMENTS FOR ENCROACHMENT	
Planning & Development Services	Recommend approval.
Streets	Recommend approval.
Utilities and Engineering	Recommend approval.
Traffic Engineering	Recommend approval.
Forestry	Recommend approval. Prior to installation, the applicant is to contact the Forestry Division to ensure that there is no damage to the existing tree roots. Any root damage impact the tree's health.
Land Development	Recommend approval.
Fire	Recommend approval.
Parking Services	Recommend approval.

**REQUEST FOR A PERMANENT COMMERCIAL ENCROACHMENT ORDINANCE
(INCLUDING OUTDOOR DINING/LANDSCAPING/STUDENT HOUSING)**

For a continuing encroachment on any type of property in which the City has an interest (i.e., rights of way, tree zone, sidewalk, streets), the person or entity is required to have an encroachment ordinance enacted by City Council permitting the encroachment. Encroachment ordinances are required for but not limited to: irrigation systems; landscaping; fencing; walls; pavers; walkways; outdoor dining items (chairs, tables, umbrellas, etc.); awnings; bollards and directional signs (i.e., churches) Business signs are NOT permitted via an encroachment. Encroachments must comply with all existing City codes, rules and regulations, the Americans with Disabilities Act, if applicable, and are subject to review and approval by City staff. Enactment of the encroachment ordinance by a majority vote of City Council, which is a discretionary legislative act, is also required. In order to obtain an encroachment ordinance from the City of Columbia, it will be necessary for the City of Columbia to be named as an additional insured on your insurance policy with limits being increased to \$600,000 as required by Sec. 11-71. It is recommended that you contact your insurance provider to determine if it will name the City of Columbia as an additional insured prior to submitting your request for an encroachment ordinance. If you have any questions concerning these requirements, please contact Chip Timmons with Risk Management, (803) 733-8306 or catimmons@columbiasc.net.

Please complete and submit this form along with photographs and drawings or site plan drawn to scale (including a 8-1/2 x11) to Johnathan Chambers by e-mail at jechambers@columbiasc.net; fax at 803-343-8779; or mail to Johnathan Chambers, Development Services, POB 147 Columbia, SC 29217, for preparation of an encroachment ordinance. Copies to City departments should be directed to the contact person for that department as shown below.

All work shall comply with the requirements of the City of Columbia and South Carolina Department of Transportation now in existence or hereafter enacted. The materials and type of finish to be used are to be approved by the City Engineer prior to installation. Any damage to the street or sidewalk caused by construction shall be repaired to the satisfaction of the City Manager. Improvements within the encroachment shall be maintained by the grantee at no cost to the City in a manner approved by the City Manager. Property owned, operated and maintained by SCDOT shall comply with SCDOT encroachment requirements.

Date: March 23/2016 Property Owner: Knights of Columbus
 Applicant's Name if different from Property Owner: Richard Scialdo hall volunteer
 Contact Information: Telephone Number: 803-312-5856 Fax Number: NA
 Mailing address: 1623 Marion Street Columbia, SC 29201 E-mail address: rjscialdo@bellsouth.nwr
 Business Name/Development Name for Encroachment: _____

Encroachment type: Wall Fence Columns Steps Irrigation System Landscaping Driveway Pavers Sidewalk/Walkway
 Planters Awning Underground Utilities Other: _____

Dimensions (height/width/length): Addition of walkways one 16'x3'x2" and one 16'x2'x2" per attached drawing
 (i.e. 6'x42' wooden privacy fence;
 two 12'x4'x3' concrete steps)

Construction material: concrete patio pavers 22"x22"x2" set in sand base and leveled.

OUTDOOR DINING: The Fire Marshal's posted capacity allowed within the business at the time of enactment of the outdoor dining encroachment ordinance shall include the total number of patron seating approved for the outdoor dining encroachment area, if not already included in the posted capacity allowance, so that patrons relocating from inside to the outside or from outside to the inside do not cause the posted capacity to be exceeded.

Hours/days of operation for outdoor dining: _____
 Posted Maximum Capacity Allowance (inside/outside combined): _____ No. of chairs outdoors: _____ No. of Tables Outdoors: _____
 Do you serve: Wine Beer Liquor SCDOR ABL No.: _____ If not, do you intend to apply for an ABL license? _____

I acknowledge that the adjoining property owners and businesses have been contacted and approve the addition of outdoor dining at this location to include the service of beer, wine and/or liquor if applicable during the business hours noted above, and that any changes made to the business hours, use of the encroachment area or items allowed within the encroachment area will require an amendment to the encroachment ordinance.

Name/Title: _____
 Date: _____

I acknowledge that any changes made to the business, hours, use of the encroachment area, or items allowed within the encroachment area, to include obtaining a license to sell beer, wine and/or liquor will require an amendment to the encroachment ordinance.

Name/Title: _____
 Date: _____

The proposed ordinance will be sent to the requesting party and City offices for review and approval. Johnathan Chambers will compile the recommendations and forward them to the City Clerk for scheduling before City Council. This process may take from 30-90 days.

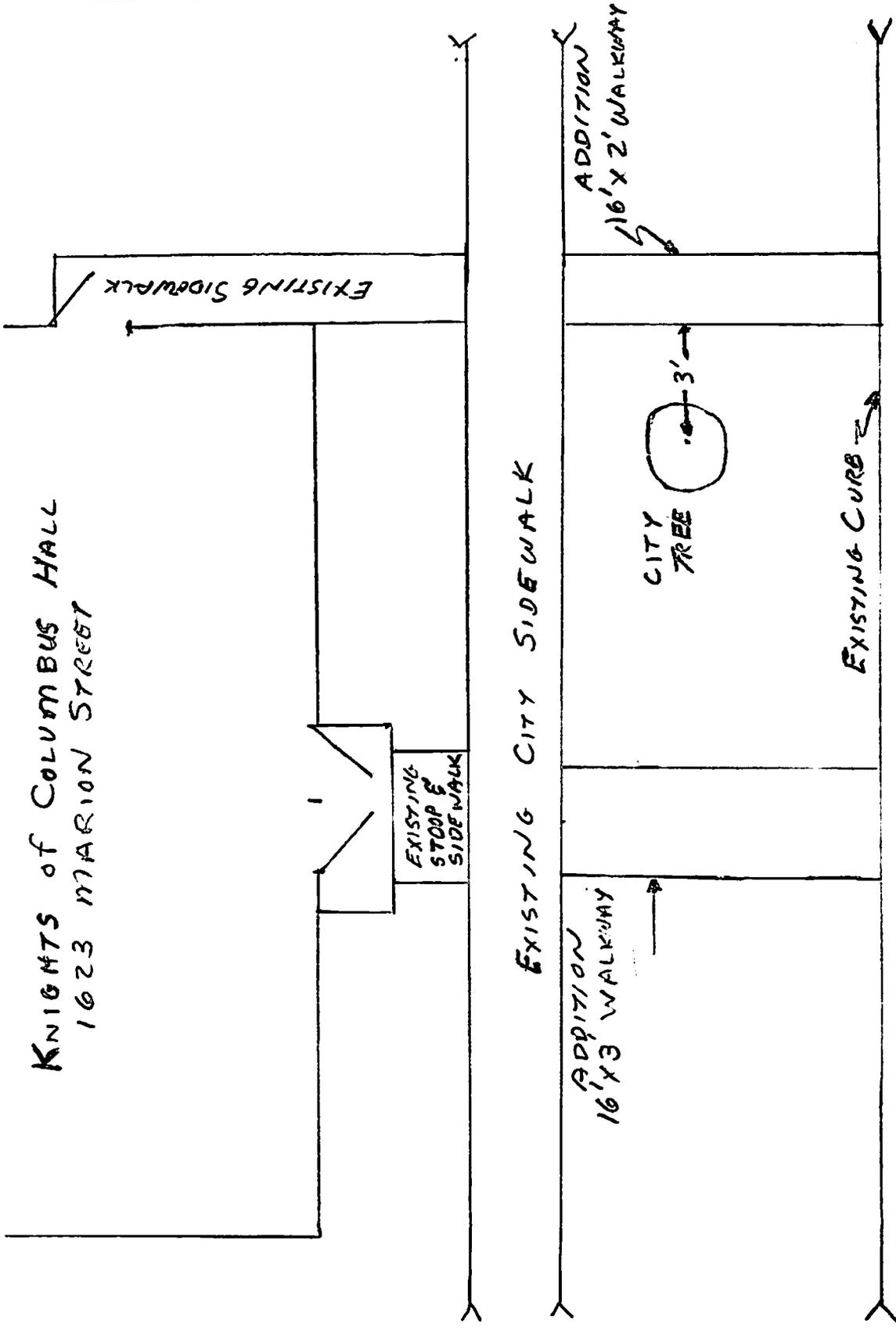
CONTACT	DEPARTMENT	PHONE	FAX	E-MAIL
Johnathan Chambers	Development Services (Land Development)	803-545-3333	803-343-8779	jechambers@columbiasc.net
John Fellows	Development Services (Planning)	803-545-3222	803-733-8647	jsfellows@columbiasc.net
Brian Cook	Development Services (Zoning)	803-545-3332	803-733-8647	kcook@columbiasc.net
Jerry Thompson	Development Services (Building Inspections)	803-545-3420	803-733-8699	jthompson@columbiasc.net
Fanessa Pindney	Development Services (Permits)	803-545-3420	803-733-8699	fcpinckney@columbiasc.net
Amy Moore	Development Services (Historic Preservation)	803-545-3222	803-733-8647	aemoore@columbiasc.net
Robert Harkins	Development Services (Plans Review)	803-545-3420	803-733-8647	rharkins@columbiasc.net
Denny Daniels	Utilities & Engineering (Construction Management)	803-545-3400	803-988-8199	jddaniels@columbiasc.net
Robert Anderson	Public Works (Administration)	803-545-3780	803-733-8648	raanderson@columbiasc.net
Robert Sweat	Public Works (Street Division)	803-545-3790	803-545-3785	rgsweatt@columbiasc.net
David Brewer	Public Works (Traffic Engineering)	803-545-3850	803-733-8648	ddbrewer@columbiasc.net
Sara Hollar	Public Works (Forestry & Beautification)	803-545-3860	803-733-8648	sehollar@columbiasc.net
John Hooks	Public Works (Solid Waste)	803-545-3800	803-733-8648	jphooks@columbiasc.net
Chip Timmons	Risk Management	803-733-8306	803-733-8245	catimmons@columbiasc.net
David Koon	Fire Department	803-545-3701	803-401-8839	cdkoon@columbiasc.net
John David Spade	Parking Services	803-545-3070	803-733-8523	jspade@columbiasc.net

LR: 7/2014





KNIGHTS of COLUMBUS HALL
1623 MARION STREET



← CITY STREET →

WALKWAYS TO BE CONSTRUCTED OF 22" X 22" X 2" CONCRETE PATIO PAVERS
SET INTO A SAND BASE AND LEVELLED.

RICHARD SCIALOJO
3/22/16





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-094 - Authorizing the City Manager to execute a Contract of Sale between the City of Columbia and Jarvais Javon Jackson for the property known as 5301 Holmes Avenue, Richland County TMS #11705-12-18**

FINANCIAL IMPACT:

ATTACHMENTS:

- Memo - 5301 Holmes Avenue (PDF)
- 2016-094 authorize transfer of 5301 Holmes Avenue (Jackson) (PDF)

HISTORY:

10/18/16

City Council

APPROVED ON SECOND READNG



CITY OF COLUMBIA

Community Development Department
1225 Lady Street • P.O. Box 147 • Columbia, South Carolina
29217 Office: 803.545.3046 • Fax: 803.255.8912 •

16.a

TO: Missy Caughman, Assistant City Manager

FROM: Gloria Saeed, Interim Director for Community Development

CC: Dollie Bristow, Community Development Administrator
Felicia Wilks, Loan Officer Supervisor
Community Development Department

RE: Approval to Sell - 5301 Holmes Avenue, Columbia, SC 29203

DATE: October 11, 2016

The Community Development Department is requesting approval to sell City owned real estate property located at 5301 Holmes Avenue, Columbia, South Carolina 29203. The City regained this property through foreclosure and has completed rehabilitation. This house is now ready to sell.

On September 12, 2016 Ms. Felicia Wilks requested Legal review for the items below and also requested that the City Clerk place a Resolution on Council's 10/18/2016 agenda.

- Jarvis Jackson Purchase Contract
- 5301 Holmes Ave. Appraisal



Jarvis Jackson
Purchase Contract dc



5301 HOLMES
AVENUE APPRAISAL.l

Mr. Jackson qualifies for purchase and is currently going through our City Lender Loan Program. The contract sales price is the appraised value of \$94,000. We are seeking approval from City Council to authorize City Manager, Ms. Teresa Wilson to sign the sales contract.

Please let us know if you need additional information.

ORDINANCE NO.: 2016-094

Authorizing the City Manager to execute a Contract of Sale between the City of Columbia and Jarvis Javon Jackson for the property known as 5301 Holmes Avenue, Richland County TMS #11705-12-18

BE IT ORDAINED by the Mayor and Council this ___ day of _____, 2016, that the City Manager is authorized to execute the attached Contract of Sale, or on a form approved by the City Attorney, and any other documents necessary and approved by the City Attorney, to consummate the transfer of 5301 Holmes Avenue, Richland County TMS #11705-12-18 from the City of Columbia to Jarvis Javon Jackson for Ninety-four Thousand and No/100 (\$94,000.00) Dollars.

Requested by:

Assistant City Manager Palen

_____ Mayor

Approved by:

City Manager

Approved as to form:

ATTEST:



Deputy City Attorney

City Clerk

Introduced:

Final Reading:

LEGAL DEPARTMENT DRAFT



We Are Columbia



CONTRACT OF SALE

Date: A Contract for the sale and purchase of the hereinafter described property is entered into this 7th day of September, 2016 by and between Jarvais Javon Jackson, Purchaser(s) and City Of Columbia, Seller.

Offer and Description: Purchaser(s) agree(s) to buy and Seller(s) agree(s) to sell that lot or parcel of land, with improvements thereon situated in Richland County, State of South Carolina and being described as follows: TMS# R11705-12-18,

5301Holmes Avenue, Columbia, South Carolina 29203.

Conveyance Shall Be Made: Conveyance shall be made subject to all covenants of record (provided they do not make the title unmarketable) and to all governmental statutes, ordinances, rules and regulations.

Price. The purchase price is \$94,000.00 and shall be paid by the Purchaser as follows: \$500.00 (same as required down-payment) upon execution of the Contract as an earnest money deposit to be held in trust by Starkes Law Firm, as escrow agent; Ninety-Three Thousand Five Hundred Dollars and 00/100 (\$93,500.00) Dollars in cash or certified funds at closing.

Closing Cost. The Purchaser shall pay all pre-paid items to include 1st year annual home owners insurance required property taxes and insurance escrow due at closing. The Seller shall pay all allowable closing cost not to exceed \$2,500.00. The Seller shall pay any cost incurred by Seller and the Seller shall pay Seller's pro-rata share of the 2016 real estate taxes.

Contract Contingencies: This closing is contingent upon the Purchaser receiving financing from the City of Columbia's Community Development Home Loan Program and bank financing.

Conveyance Date of Closing. The closing shall take place within sixty (60) days from the date of this contract. Seller(s) agree(s) to convey by marketable title and deliver a proper statutory warranty deed with dower duly renounced, if applicable, and free of encumbrances, except as herein stated, with all stamps affixed thereto. The deed shall be prepared in the name of **Jarvais Javon Jackson.**

Adjustments: Real estate taxes, homeowner association/regime fees, and rents when applicable, will be adjusted as of the date of closing. Tax proration pursuant to this Contract is to be based on the tax information available and deemed reliable by the Closing Attorney on the date of closing and to be prorated on that basis. Buyer will be responsible for applying for any applicable tax exemptions. Buyer is also responsible for any tax increases due to change of ownership. Unless otherwise agreed, Seller will pay all regular and special homeowner's association assessments and all governmental assessments levied through date of closing and Buyer will pay for those assessments levied after the date of closing.

Condition of Property. This property is being sold "***As Is***". Purchaser may have home inspection done within 10 days from complete execution of said contract. This may include CL-100, HVAC or other inspections or tests done to determine the condition of property. Seller will have no obligations to make any repairs or replacements to property identified as a result of inspections.

Home Warranty Coverage: Buyer and Seller agree that a home warranty will (X) will not () be provided at closing. If applicable, the warranty premium will be paid by Buyer () Seller (X) in the amount not to exceed **\$455.00**, provided by **2-10 Home Buyers Warranty** (home warranty company).

Condition of Title. At the closing, the premises shall be conveyed with good, marketable and insurable fee simple title subject to the following:

- (a) Taxes: Real Estate taxes for the current year and future years;
- (b) Easements and Right-of-Way: Easements and right-of-way of record or as would be shown by a current survey; provided, however, Seller warrants that said

easements and right-of-way do not materially affect the premises or unreasonably interfere with purchaser's intended use;

- (c) Restrictions of record.

Possession. Possession of said premises will be given to Purchaser on the day of the Closing.

Default. If the Purchaser shall default under this agreement, the Seller shall have the option of suing for damages including but not limited to reasonable attorney's fees or rescinding this contract. The earnest money shall be paid to the Seller. Upon default by the Seller, the Purchaser shall have the option of suing for damages or specific performance, or rescinding this contract. Upon default by the Seller, if the Purchaser elects to rescind this agreement, the purchaser will be refunded all sums paid hereunder.

Other Terms: N/A

Effect of Contract. The parties hereto further agree that this written contract expresses the entire agreement between the parties, and that there is no other agreement, oral or otherwise, modifying the terms hereunder.

Binding Contract. This contract shall be binding on both parties, their principals, heirs, personal representatives, successors and assigns as state law permits.

Disbursing Agent. It is agreed by both parties that all money paid under the contract shall pass through the hands of Xavier Starkes (Starkes Law Firm, LLC, 1817 Hampton St., Columbia, SC 29202), and he/she shall act as disbursing agent for both parties hereto.

Extension Agreement. Time is of the essence; however, if the transaction is not closed within the stipulated time limits of this contract, then both parties agree to extend said contract for a period not to exceed fifteen (15) days from the date designated for original closing.

Cashier's check. Purchase must have a cashier's check, or certified funds when completing this transaction.

Commissions. None.

SIGNATURES BELOW SIGNIFY ACCEPTANCE OF ALL TERMS AND CONDITIONS STATE HEREIN.

SIGNED, SEALED AND DELIVERED

IN THE PRESENCE OF:

WITNESS

By: _____
PURCHASER

WITNESS

PURCHASER

City Of Columbia

WITNESS

SELLER

APPROVED AS TO FORM
[Signature]
Legal Department City of Columbia, SC



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Resolution No.: R-2016-080 - Authorizing consumption of beer and wine beverages only at the Five Points Farm to Table Dinner at the Fountain on November 1, 2016**

FINANCIAL IMPACT:

ATTACHMENTS:

- R-2016-080 Five Points Fountain Farm to Table (Nov 1) (PDF)

RESOLUTION NO.: R-2016-080

*Authorizing consumption of beer and wine beverages only at the
Five Points Farm to Table Dinner at the Fountain on November 1, 2016*

WHEREAS, the Five Points Association is sponsoring a Farm to Table Dinner at the fountain plaza and on Saluda Avenue between the fountain plaza and Starbuck's building at the intersection of Greene Street on Tuesday, November 1, 2016; and,

WHEREAS, the Association has requested permission for the temporary closing and use of the fountain plaza and Saluda Avenue between the fountain plaza and Starbuck's building at the intersection of Greene Street from 2:00 p.m. until 11:00 p.m., for preparation of the area for an outdoor event to be held during the hours of 6:30 p.m. and 10:00 p.m., and for patrons to consume beer and wine beverages at the event during the hours of 6:30 p.m. and 9:30 p.m.; and,

WHEREAS, it has been determined that such an event would be in the public interest; NOW, THEREFORE,

BE IT RESOLVED by the Mayor and Council this ___ day of _____, 2016, that the sale beer and wine beverages only is authorized between the hours of 6:30 p.m. and 9:30 p.m. on Tuesday, November 1, 2016 on Saluda Avenue at the fountain plaza; and,

BE IT FURTHER RESOLVED that all vendors be restricted to stationary location; and,

BE IT FURTHER RESOLVED that possession and consumption of alcoholic liquors or alcoholic beverages other than beer and/or wine beverages within the event area is prohibited; and,

BE IT FURTHER RESOLVED that VIP tents or VIP areas for the possession and consumption of alcoholic liquors or alcoholic beverages, other than beer or wine beverages, within the event area are prohibited; and,

BE IT FURTHER RESOLVED that organizer is responsible or shall make arrangements for the cleanup of all trash and debris within the festival area and within the designated area of impact as shown on the attached drawing, and shall place same in the roll carts provided by the City. Any overflow of trash and debris shall be placed in garbage bags with the top securely closed and placed beside the City roll carts. The number of roll carts needed for the event shall be determined by organizer and the City Solid Waste Division prior to the event and placed throughout the event area to ensure that trash and debris are well contained. Roll carts and bagged trash and debris shall be returned to the collection point designated by the City in a timely manner. If the organizer has not opted to use City services to clean up the festival area and within the designated area of impact as shown on the attached drawing, any costs incurred by the City in removing loose trash and debris within the festival area and within the designated area of impact as shown on the attached drawing, which the organizer has failed to clean up, shall be billed to and paid by the organizer; and,

BE IT FURTHER RESOLVED that outdoor possession and consumption of beer and wine beverages, all outdoor musical performances and use of sound-amplifying devices shall end by 10:00 p.m. due to the proximity of the event to residential properties; and,

BE IT FURTHER RESOLVED that only pedestrian traffic will be allowed within the area. All other traffic, including, but not limited to, automobiles, trucks, motorcycles, mopeds, bicycles, skateboards, and horses, except police horses, is prohibited. All pets, including snakes, shall be prohibited. Coolers, glass bottles and breakable glasses and/or cups shall be prohibited; and,

BE IT FURTHER RESOLVED that during the designated time the fountain plaza and the closed portion of Saluda Avenue between the fountain plaza and Starbuck's building at the intersection of Greene Street, with the exception of the parking area and any other areas posted as to not allow alcoholic beverages, shall be declared to be a Public Park and provisions of Chapter 15, Parks and Recreation, Sec. 15-1, 15-2 and 15-3, 1998 Code of Ordinances of the City of Columbia, South Carolina are in effect. Pursuant to Chapter 14, Offenses and Miscellaneous Provisions, Article IV, Offenses Against the Public Peace and Order, Sec. 14-99, 1998 Code of Ordinances of the City of Columbia, South Carolina, the fountain plaza and Saluda Avenue between the fountain plaza and Starbuck's building at Greene Street, with the exception of the parking area and any other areas posted as to not allow alcoholic beverages, is deemed to be the site of a public festival at which alcoholic beverages may be consumed and the prohibition against possession or consumption

LEGAL DEPARTMENT DRAFT

of alcoholic beverages set forth in Sec. 14-99 shall not apply. Possession and consumption of beer and wine beverages shall be permitted only in provided by vendors within the areas designated.

PROVIDED, FURTHER, that the event organizer shall provide the names and cell phone numbers of a least two contact persons who can receive complaints during the event, including any set up and breakdown times. The cell phones shall remain on at all times during the event and during any set up and breakdown time.

PROVIDED, FURTHER, that failure of the event organizer to strictly comply with the time frames and other requirements and responsibilities set forth in this resolution may result in a denial of subsequent requests to allow the event.

PROVIDED, HOWEVER, that no solicitation or transactions be made in violation of Sec. 14-32, 1998 Code of Ordinances of the City of Columbia, South Carolina.

BE IT FURTHER RESOLVED that in the event of inclement weather on Tuesday, November 1, 2016, the City Manager is authorized to approve the rescheduling of the event for another date within one (1) week from the date of the originally scheduled event upon receiving twenty-four (24) hours written notice requesting the rescheduling of the event. The hours of operation for the event, service of beer and wine at the event and closing of streets for set up, clean up and crowd control of the event shall remain as outlined above.

BE IT FURTHER RESOLVED that should the organizer reschedule the event for another date beyond one (1) week from the date of the originally scheduled event, a request for a resolution of City Council approving the new date of the event shall be required.

Requested by:

Assistant City Manager Gentry

_____ Mayor

Approved by:

_____ City Manager

Approved as to form:

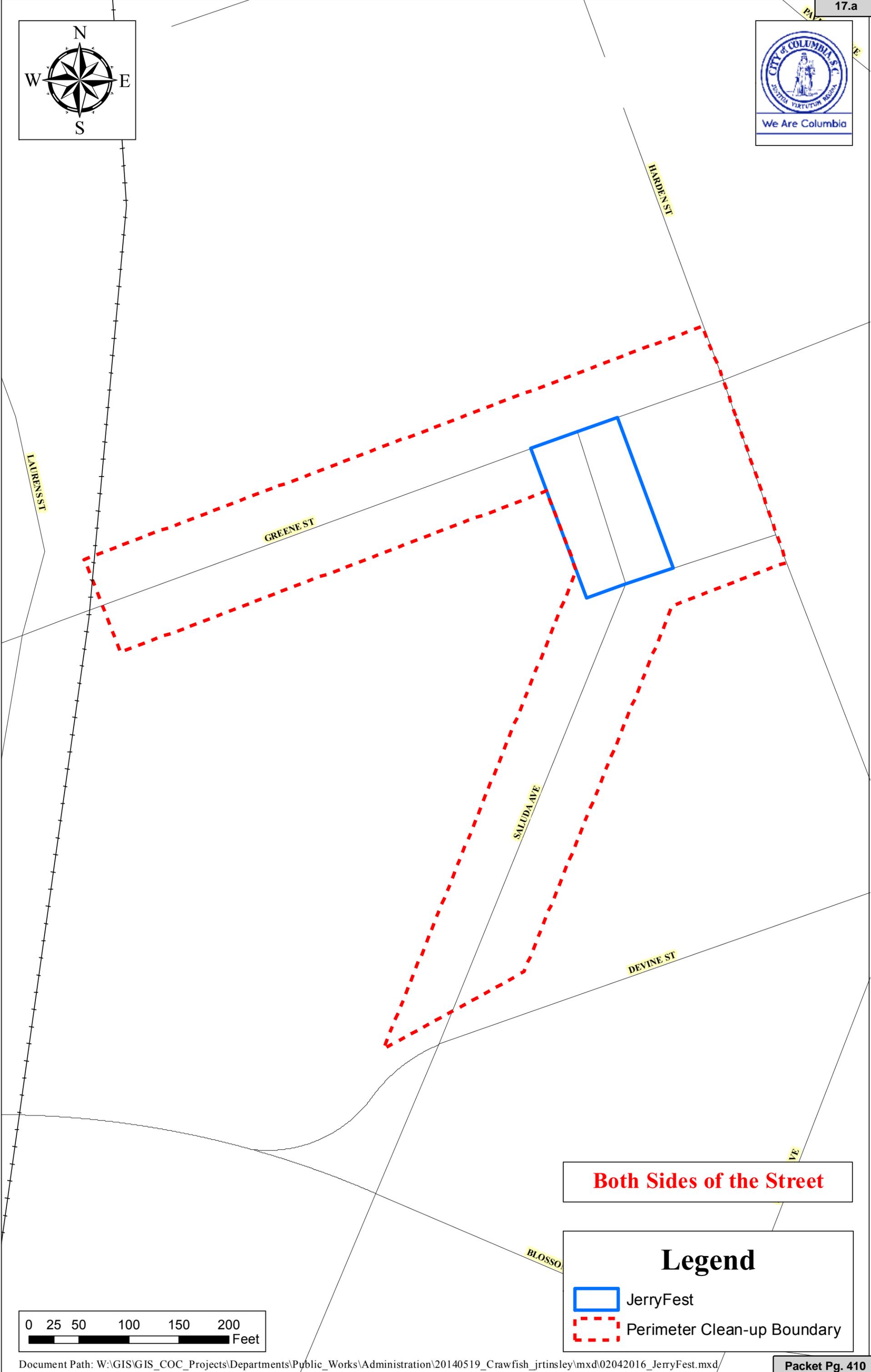
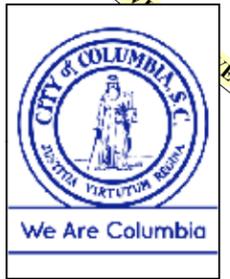
ATTEST:


Deputy City Attorney

_____ City Clerk

Introduced:

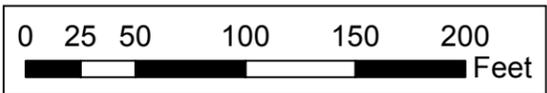
Final Reading:



Both Sides of the Street

Legend

-  JerryFest
-  Perimeter Clean-up Boundary





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Human Resources

FROM: *Pam Benjamin,*

SUBJECT: Recognition of the September 2016 Employee of the Month -
Mr. Robert Anderson, Public Works Director

FINANCIAL IMPACT: Ms. Samatha Yager, Recycling Coordinator for the Public
Works Department

ATTACHMENTS:

- 2016_10_21_14_06_27 (PDF)



EMPLOYEE OF THE MONTH NOMINATION FORM

RECEIVED

SEP 08 2016

NAME OF NOMINATED EMPLOYEE: Samantha Yager

EMPLOYEE'S DEPARTMENT/DIVISION: Solid Waste

HR/EMPLOYMENT

Employee's Title: Recycling Coordinator Date of Hire: 7/2/2012

Name of Nominator: John Hooks Date: 9/8/2016

Signatures of supervisor, division head, department head and if applicable, Assistant City Manager:

Name: John Hooks _____ Title: Supervisor _____

Name: John Hooks _____ Title: Division Head _____

Name: Robert Anderson _____ Title: Department Head _____

Name: Teresa Wilson _____ Title: City Manager _____

Nominator should provide three other employees' names who may be contacted concerning the work of the nominated employee.

Name: Travis Holliday _____ Division: Solid Waste _____

Name: George Chavis _____ Division: Solid Waste _____

Name: Alvin Cannady _____ Division: Solid Waste _____

CRITERIA FOR BEING NOMINATED EMPLOYEE OF THE MONTH

- ❖ The nominated employee must have been employed by the City of Columbia for at least one (1) full year.
- ❖ The nominated employee must have low absenteeism and tardiness.
- ❖ The nominated employee must have maintained and projected a positive attitude and a willingness to get along well with co-workers and the public.
- ❖ The nominated employee must have shown a willingness to perform any assigned duties in the highest standards possible and enhanced the department's ability to better serve the citizens of the City of Columbia.
- ❖ The nominated employee must have maintained a professional appearance and manner.
- ❖ The nominated employee must have demonstrated an allegiance to the City and be a team player who supports others' efforts to achieve the goals of the City of Columbia.
- ❖ The nominated employee should have earned the respect of co-workers.
- ❖ Special considerations may be given to employees who participate in extracurricular activities that benefit the City of Columbia.

THE DETAILED NARRATIVE MUST CITE SPECIFIC EXAMPLES THAT DEMONSTRATE THE CRITERIA FOR NOMINATION OF THIS AWARD. NOMINATIONS RECEIVED THAT DO NOT MEET THE CRITERIA WILL NOT BE CONSIDERED.



We Are Columbia

LETTER OF RECOMMENDATION

TO: ROBERT ANDERSON, PUBLIC WORKS DIRECTOR
FROM: JOHN HOOKS, SOLID WASTE SUPERINTENDENT
SUBJECT: EMPLOYEE OF THE MONTH
DATE: 9/1/2016

Mr. Anderson

The Solid Waste Division would like to nominate Samantha Yager for Employee of the Month. Samantha is our Recycling Coordinator and she has worked for the City since September of 2012.

When Ms. Yager started as Recycling Coordinator, her first assignment was to develop a public education component for our upcoming recycling roll cart roll out. The new larger roll carts would replace the smaller bins, which included a change in service. Residents would go from weekly collection to twice per month, not to be confused with every-other-week collection. We realized this change in service could cause issues with the public, as they would have to become accustomed to a new schedule. Once Ms. Yager began to develop our education program, we realized quickly that she was very talented and could accomplish a lot more. Ms. Yager developed a color-coded system that assigned each new route a color. The educational materials that were designed and implemented by Ms. Yager were distributed with the new carts during delivery. Color-coded materials not only helped draw attention to the change in service frequency to our residents, but also assisted office staff in quickly determining a resident's assigned route when contacting the Solid Waste office with questions.

In addition to developing an education program for our updated recycling program, Ms. Yager helped launch a new application for smart phones in the City. Recollect, a recycling service application, can be personalized to each resident's specific address. Recollect provides reminders for service times, can push updates for service (which is especially important for service day changes or emergencies) and gives residents information for what can or cannot be recycled. Ms. Yager's enthusiasm and perseverance in bringing the unique and innovative tool to our City has been a key component of our recycling program.

Ms. Yager is responsible for Solid Waste's grant applications, which help provide funding to support and expand our Recycling Program. With her dedication, the City has been awarded \$131,000 in grant funds. Ms. Yager is always looking for a new challenge. She works well with staff within Public Works and with other City departments, including Engineering and IT. She always goes above and beyond to make sure her projects are completed in an accurate and timely manner.

Ms. Yager is friendly, respectful, dedicated and dependable. She is well liked by those in our division and department and has a great attitude. Ms. Yager takes great pride in the work she does and happily contributes to the City every day. The Solid Waste Division, as well as the City of Columbia, is very proud and fortunate to have Samantha Yager working with us.

John Hooks
Solid Waste Superintendent
City of Columbia Public Works
jphooks@columbiasc.net



We Are Columbia

LETTER OF RECOMMENDATION

TO: ROBERT ANDERSON, PUBLIC WORKS DIRECTOR
FROM: DESTIN GOINS, STREET DIVISION ASSISTANT SUPERINTENDENT
SUBJECT: 2016 EMPLOYEE OF THE YEAR
DATE: 8/18/16

Mr. Anderson

It brings me great pleasure to nominate Samantha Yager for Employee of the year.

Ms. Yager has been a vital part of the Public Works Department as she has taken on many roles and stepped up in critical times of need to fill in for employees during a time of recovery. Ms. Yager has consistently chosen to use her time to help others in the Public Works Department. Ms. Yager also maintains a positive demeanor and outlook for the City of Columbia as a whole.

When I received a SCAPA Project Delivery Award for the design and construction administration of the Columbiana Drive Reconstruction, Ms. Yager saw to it that my efforts not go unnoticed. Her experience in Public Relations and handling of Media gave me the recognition for my work that I did not have the resources to do for myself. We all try to work towards giving the citizens of this city the best infrastructure conditions and services that we can possibly provide, and with that our rewards are in the form of recognition of our hard work. Ms. Yager saw to it that my accomplishments be recognized by the upper management of the City of Columbia and the citizens we serve.

Now I would like to take the opportunity to see that Ms. Yager be recognized. I would like for a light to be shining on the work that is done behind the scenes by Ms. Yager, so that she too be recognized.

Sincerely Yours,

Destin Goins
Assistant Streets Superintendent
City of Columbia Public Works
tdgoins@columbiasc.net



We Are Columbia

LETTER OF RECOMMENDATION

TO: ROBERT ANDERSON, PUBLIC WORKS DIRECTOR
FROM: DANA HIGGINS, CITY ENGINEER
SUBJECT: 2016 EMPLOYEE OF THE MONTH
DATE: 8/19/16

Mr. Anderson

I am writing on behalf of Samantha Yager and the recommendation for her to be Employee of the Month.

I met Samantha when she became a part of the city team in the Public Relations Department. She was very upbeat and easily available when I needed anything from the department. She moved into the job of Recycling Coordinator shortly after she joined the city. Since that time, I have been extremely impressed at her initiatives to promote recycling. She led the effort to replace the small recycle containers with roll carts. This won the City an award for Project of the Year from South Carolina American Public Works Association. At the annual convention, Samantha competed in a poster contest on how she generates interest in her area of expertise. She demonstrated a bulletin board she updates monthly with recycling ideas within her Public Works building. She won this award as well.

I feel strongly that Samantha should receive Employee of the Month.

Sincerely,

Dana R. Higgins, P.E.
City Engineer

ELLIOTT & ELLIOTT, P.A.
ATTORNEYS AT LAW
1508 LADY STREET
COLUMBIA, SOUTH CAROLINA 29201
sellott@elliottlaw.us

SCOTT ELLIOTT

TELEPHONE (803) 771-0555
FACSIMILE (803) 771-8010

August 24, 2016

Mary Pat Baldauf
Sustainability Facilitator
Public Works
2910 Colonial Drive
Columbia South Carolina 29203

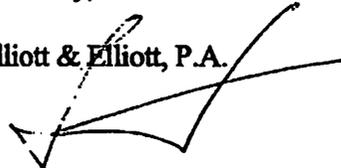
RE: Employee of the Month Selection Committee

Dear Ms. Baldauf,

The City of Columbia is very fortunate to have a public servant as Samantha Yager in its employ as its Recycling Coordinator. Under her leadership, the City has enhanced and grown our opportunities for recycling. Not only has Ms. Yager pressed to expand the facilities from the bin to the roll cart, but she has educated us on how we can be better recyclers. In addition, Ms. Yager's door is always open. I have had the occasion to contact her for services and she has cheerfully accommodated me. In my view, Ms. Yager serves as an outstanding example of public service. Writing as both a resident and business owner, I would recommend her as the City of Columbia employee of the month.

Sincerely,

Elliott & Elliott, P.A.



Scott Elliott

SE/lbk



August 25, 2016

Dear Sir/Madam:

It is my honor and pleasure to write on behalf of Samantha Yager and recommend her for the City of Columbia's Employee of the Year.

Our Office works closely every day with public works directors, solid waste directors, recycling coordinators and other solid waste management professionals throughout South Carolina. Samantha's knowledge, creativity, enthusiasm and dedication are second to none.

Samantha played an integral part in implementing Columbia's successful conversion from bins to roll carts for its curbside recycling program and spent countless hours promoting and making residents aware of the changes and how they work and benefit them as well as the City. The conversion has resulted in an improved participation rate by residents and an increased amount of material collected – improving from 340 tons a month to 500 tons a month.

In addition, Samantha has been a persistent advocate of the state's new RecycleMoreSC campaign and has seamlessly integrated the campaign into the city's new outreach efforts. Samantha also took the lead on a study in partnership with the City's recycling vendor to find ways to reduce contamination and improve collection quality.

Samantha works tirelessly to promote the City's program as well as help others. This Office has called on Samantha for assistance numerous times for presentations and advice for other local governments. She always generously gives her time, expertise and knowledge.

I will be delighted to answer any questions. Please feel free to contact me at (803) 898.1327 or cheslerl@dhec.sc.gov.

Thank you for your time and consideration.

Sincerely,

Richard Chesley
S.C. Department of Health and Environmental Control
Office of Solid Waste Reduction and Recycling



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Human Resources

FROM: *Pam Benjamin,*

SUBJECT: Recognition of the October 2016 Employee of the Month - Mr. William "Skip" Holbrook, Columbia Police Chief

FINANCIAL IMPACT: Officer Jason VanValkenburg, West Region Patrolman

ATTACHMENTS:

- october_2016_eom (PDF)



EMPLOYEE OF THE MONTH NOMINATION FORM

NAME OF NOMINATED EMPLOYEE: Jason VanValkenburgh
 EMPLOYEE'S DEPARTMENT/DIVISION: Police Dept - West Region
 Employee's Title: Patrolman Date of Hire: 1-21-14
 Name of Nominator: Sgt B. Webb Date: 8-18-16

Signatures of supervisor, division head, department head and if applicable, Assistant City Manager:

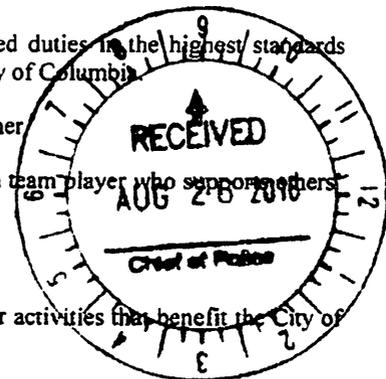
Name: Sgt Boyd Webb Title: Supervisor
 Name: [Signature] Title: Division Head
 Name: [Signature] Title: Department Head
 Name: _____ Title: City Manager

Nominator should provide three other employees' names who may be contacted concerning the work of the nominated employee.

Name: Inv. C.O. Clark Division: Police
 Name: Cpl. A. Viehweg Division: Police
 Name: Lt E. Reese Division: Police

CRITERIA FOR BEING NOMINATED EMPLOYEE OF THE MONTH

- ❖ The nominated employee must have been employed by the City of Columbia for at least one (1) full year.
- ❖ The nominated employee must have low absenteeism and tardiness.
- ❖ The nominated employee must have maintained and projected a positive attitude and a willingness to get along well with co-workers and the public.
- ❖ The nominated employee must have shown a willingness to perform any assigned duties to the highest standards possible and enhanced the department's ability to better serve the citizens of the City of Columbia.
- ❖ The nominated employee must have maintained a professional appearance and manner.
- ❖ The nominated employee must have demonstrated an allegiance to the City and be a team player who supports others' efforts to achieve the goals of the City of Columbia.
- ❖ The nominated employee should have earned the respect of co-workers.
- ❖ Special considerations may be given to employees who participate in extracurricular activities that benefit the City of Columbia.



THE DETAILED NARRATIVE MUST CITE SPECIFIC EXAMPLES THAT DEMONSTRATE THE CRITERIA FOR NOMINATION OF THIS AWARD. NOMINATIONS RECEIVED THAT DO NOT MEET THE CRITERIA WILL NOT BE CONSIDERED.



CITY OF COLUMBIA

Columbia Police Department
West Region
Interoffice Memorandum



To: Captain G. Gates *CG*

Date: 8-18-2016

From: Sergeant B. Webb

Subject: Employee of the Month Nomination - West Region

Initials: *BW*

I would like to recommend Patrolman J. VanValkenburgh for October Employee of the Month. Ptl VanValkenburgh is a valuable asset to the Columbia Police Department. I have supervised Ptl VanValkenburgh off and on for the past several years in West Region. VanValkenburgh shows up for work early everyday ready to go to work.

He has been tasked as West Regions only CRT officer. While working in this position over the past 5 – 6 months, he has been working very hard to solve numerous burglaries and auto breakings. He has solved and/or assisted in solving several cases that has closed many of these crimes. He has worked days and nights to get the job done. When he finds out that a squad needs help with calls or short on officers he usually volunteers to step up and help by taking some calls to help out.

VanValkenburgh has taken upon himself to ask the right questions to learn how to serve warrants, write search warrants and many others parts of the job to further his knowledge of this job. He now can handle the investigations and minor police activity on his own. When time permits he goes above and beyond the call and investigates major incidents himself without needing help. I regularly check his reports and very rarely have to correct any that he submits. He is usually the last officer to leave every day.

VanValkenburgh has a great attitude and is always upbeat. He loves cutting up and joking with other officers. He has also stepped up and volunteered for the lip singing contest in 2015 and he won first place singing Beyoncé's "Single Ladies". He is looking forward to the same contest for 2016. While patrolling through Apple Valley one day late last year he observed kids playing basketball in the street and on a goal that did not have a net on it. He then with his own money bought a new basketball net and went and put in on the goal for the kids. He never announced that he did it. I found out by running into him on his way out of the store. He rarely takes off or calls in sick because he loves coming to work and making a difference in people's lives. He has a great future with the Columbia Police Department and represents the department in a positive way.



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: City Clerk

FROM: *Erika Moore, City Clerk*

SUBJECT: City LIGHTs Employee Recognition - Ms. Teresa Wilson, City Manager

PRESENTER: Ms. Teresa Wilson, City Manager

FINANCIAL IMPACT:



We Are Columbia

MEETING DATE: November 1, 2016
DEPARTMENT: City Clerk
FROM: *Erika Moore, City Clerk*
SUBJECT: Justice 360 Event - Ms. Mandy Medlock, Executive Director
FINANCIAL IMPACT:

ATTACHMENTS:

- StevensonFlyer_Final (PDF)

JUSTICE 360

Justice 360 is a South Carolina non-profit organization working to reform policies and practices in capital proceedings.

presents

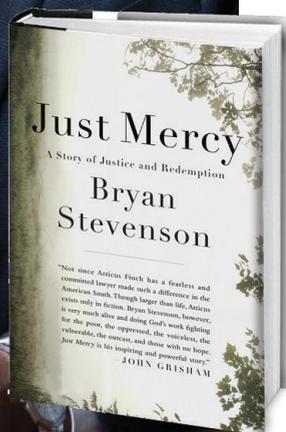
Grace, Justice, and Mercy

an evening with justice advocate
Bryan Stevenson



“Gripping ... What hangs in the balance is nothing less than the soul of a great nation.”

—DESMOND TUTU, Nobel Peace Prize Laureate



This is a **free event**, open to the public. No tickets are required.

Thursday, November 17 » 6:00 - 9:00 pm

The Township Auditorium
1703 Taylor Street » Columbia, SC 29203

Join Justice 360 for an enlightening conversation on race, reconciliation and the path forward to healing our community.

Bryan Stevenson is the founder and Executive Director of the Equal Justice Initiative in Montgomery, Alabama. Mr. Stevenson is a widely acclaimed public interest lawyer who has dedicated his career to helping the poor, the incarcerated, and the condemned.

The Evening's Event Includes:
Spoken Word Artist | Music by DJ Liv | Q & A Session
Free Bus Transportation Vouchers Available!

More information at www.justice360sc.org

Justice 360 | 900 Elmwood Avenue | Suite 200
Columbia, SC 29201 | 803-765-1044
info@justice360sc.org

presented in partnership with:



Office of Diversity and Inclusion
UNIVERSITY OF SOUTH CAROLINA



DJ Liv
aka
Sean Livingston





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-065 - Granting encroachment to Judy H. Tighe for installation and maintenance of a slag parking area and two stone knee walls within the right of way area of the 1700 block of Bannockburn Drive adjacent to her property located at 1729 Bannockburn Drive, Richland County TMS#13911-08-02**

FINANCIAL IMPACT:

ATTACHMENTS:

- 2016-065 encroach 1729 Bannockburn (PDF)

ORDINANCE NO.: 2016-065

Granting encroachment to Judy H. Tighe for installation and maintenance of a slag parking area and two stone knee walls within the right of way area of the 1700 block of Bannockburn Drive adjacent to her property located at 1729 Bannockburn Drive, Richland County TMS#13911-08-02

WHEREAS, Judy H. Tighe (hereinafter "Grantee") desires to use a portion of the right of way area of the 1700 block of Bannockburn Drive adjacent to her property located at 1729 Bannockburn Drive, Richland County TMS#13911-08-02 for installation and maintenance of slag parking area approximately fifty-five (55') feet in length and twelve (12') feet in width and two (2) stone knee walls approximately twenty-four (24") inches in height, twelve (12") inches in width and twenty-five (25') feet in length, as shown on the attached drawings; and,

WHEREAS, it appears that the encroachment will not interfere with the use of the medians or street for traffic, utility locations or other uses within the foreseeable future; NOW, THEREFORE,

BE IT ORDAINED by the Mayor and City Council of the City of Columbia, South Carolina, this ___ day of _____, 2016, that the Grantee is hereby granted the right to use a portion of the right of way area of the 1700 block of Bannockburn Drive adjacent to her property located at 1729 Bannockburn Drive, Richland County TMS#13911-08-02 for installation and maintenance of slag parking area approximately fifty-five (55') feet in length and twelve (12') feet in width and two (2) stone knee walls approximately twenty-four (24") inches in height, twelve (12") inches in width and twenty-five (25') feet in length, as shown on the attached drawings.

ALL WORK SHALL COMPLY with the requirements of The City of Columbia and South Carolina Department of Transportation now in existence or hereafter enacted. The materials and type of finish to be used are to be approved by the City Engineer prior to installation. Any damage to the street or sidewalk caused by construction shall be repaired to the satisfaction of the City Manager. Improvements within the encroachment shall be maintained by the grantee at no cost to the City in a manner approved by the City Manager.

PROVIDED FURTHER that the privilege granted hereby is subject to the Grantee complying with the following conditions, restrictions or limitations:

1. No item, including landscaping, shall be placed, planted or allowed to grow such that it creates a visual impediment to persons safely entering or exiting the driveway or to persons safely walking along the sidewalk. The City reserves the right to remove or cut any item located within the right of way which it deems to be a safety hazard.
2. All trees shall be protected.
3. Grantee is responsible for all costs and repair of the improvements within the right of way area should the City have to dig in the area or remove any part thereof for maintenance to City water and or sewer lines.
4. Obstructions of more than be four (4') feet in height are prohibited within the sight-visibility triangle.
5. Forestry and Beautification shall be provided access to trees within the right of way for maintenance purposes.
6. All trees shall be protected and no large tree roots shall be removed from any existing trees.
7. South Carolina Department of Transportation encroachment permit is required.

PROVIDED FURTHER that the privilege granted hereby may be modified or terminated by Columbia City Council at any time without notice to the Grantee, his successors and assigns.

PROVIDED FURTHER that a certificate of insurance be issued as evidence of general liability insurance with at least the minimum amount of \$600,000.00 for personal injury and property damage and naming the City as an insured, be provided to and filed annually with the City Clerk by Grantee, his successors and assigns, as required by Chapter 11, Licenses, Permits, Business Regulations, Article III, Contractors, Sec. 11-71, 1998 Code of Ordinances of the City of Columbia, South Carolina.

BE IT FURTHER ORDAINED that Grantee, in consideration of the above privilege, shall at his expense provide for protection and relocation of all utilities that might be within this area to the satisfaction of the City Manager.

Requested by:

Assistant City Manager Gentry

Mayor

Approved by:

City Manager

Approved as to form:

ATTEST:

Janne J. Lisowski

Senior Assistant City Attorney

City Clerk

Introduced:
Final Reading:

**CITY COUNCIL
ENCROACHMENT SUMMARY
2016-065**



**1700 BLOCK OF BANNOCKBURN DRIVE
ADJACENT TO 1729 BANNOCKBURN DRIVE
PARKING AREA AND STONE WALLS**

Subject Property:	Right-of-way adjacent to 1729 Bannockburn Drive, TMS#13911-08-02
Council District:	4
Proposal:	The applicant is requesting an encroachment for installation and maintenance of a slag parking area and two stone walls
Applicant:	Judy H. Tighe
Staff Recommendation:	Recommend approval with staff comments.

Detail:	<p>The applicant is requesting an encroachment for the installation and maintenance of a slag parking area approximately fifty-five (55') feet in length and twelve (12') feet in width and two (2) stone walls each measuring approximately twenty-four (24") inches in height, twelve (12") inches in width, twenty-five (25') feet in length, as shown on the attached drawing;</p> <p>Should council grant this request, staff would ask that the following conditions be imposed.</p> <ol style="list-style-type: none"> 1. No item, including landscaping, shall be placed, planted or allowed to grow such that it creates a visual impediment to persons safely entering or exiting the driveway or to persons safely walking along the sidewalk. The City reserves the right to remove or cut any item located within the right of way which it deems to be a safety hazard. 2. Grantee is responsible for all costs and repair of the improvements within the right of way area should the City have to dig in the area or remove any part thereof for maintenance to City water and or sewer lines. 3. South Carolina Department of Transportation encroachment permit is required.
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CITY AGENCY COMMENTS FOR ENCROACHMENT

Forestry	Recommend approval.
Streets	Recommend approval
Utilities and Engineering	Recommend approval.
Traffic Engineering	Recommend approval.
Planning	Recommend approval.
Land Development	Recommend approval.
Fire	Recommend approval.

REQUEST FOR A PERMANENT RESIDENTIAL OR CHURCH DIRECTIONAL SIGNS ENCROACHMENT ORDINANCE

22.a

Packet Pg. 429

For a continuing encroachment on any type of property in which the City has an interest (i.e., rights of way, tree zone, sidewalk, streets), the person or entity is required to have an encroachment ordinance enacted by City Council permitting the encroachment. Encroachment ordinances are required for but not limited to: irrigation systems; landscaping; fencing; walls; pavers; walkways; outdoor dining items (chairs, tables, umbrellas, etc.); awnings; bollards and directional signs (i.e., churches) *Business signs are NOT permitted via an encroachment.* An encroachment must comply with all existing City codes, rules and regulations, the Americans with Disabilities Act, if applicable, and is subject to review and approval by City staff. Enactment of the encroachment ordinance by a majority vote of City Council, which is a discretionary legislative act, is also required. In order to obtain an encroachment ordinance from the City of Columbia, it will be necessary for the City of Columbia to be named as an additional insured on your homeowners' policy with limits being increased to \$600,000 as required by Sec. 11-71. It is recommended that you contact your insurance provider to determine if it will name the City of Columbia as an additional insured prior to submitting your request for an encroachment ordinance. If you have any questions concerning these requirements, please contact Chip Timmons with Risk Management.

Please complete and submit this form along with any attachment(s) to Shari Ardis by e-mail at slardis@columbiasc.net ; fax at 803-737-4250; or mail to Shari Ardis, Legal Department, POB 147 Columbia, SC 29217, for preparation of an encroachment ordinance. Copies to City departments should be directed to the contact person for that department as shown below and not through the Legal Department. Chip Timmons with Risk Management (733-8306 or catimmons@columbiasc.net) should be contacted regarding the insurance requirements.

Date: 7-08-2016 Property Owner: JUDY H. TIGHE
 Applicant's Name if different from Property Owner: Same
 Contact Information: Telephone Number: 803-782-8686 Fax Number: _____
 Mailing address: 1729 BANNOCKBURN DR. E-mail address: JUDYTIGHE103@GMAIL.COM
 Encroachment Location (Address): 1729 BANNOCKBURN DR. 29206
 (If corner lot, include name and block number of side street, i.e., 1737 Main Street and 1100 block of Laurel Street)

Tax Map Number for Encroachment Location: R13911-08-02

Encroachment type: Wall Fence Columns Steps Irrigation System Landscaping Driveway Pavers
 Walkway/Side walk Underground Utilities other

If Other - specify: SLAG PARKING AREA
 Dimensions (height/width/length): [24" h x 12" w x 25' l] 2 walls
SLAG PARKING 12' x 55'

(i.e., 6'x42' wooden privacy fence; two 12"x4' concrete step; two 12"x12" x24" brick columns; 4'x15' brick paver walkway)
 Construction material: BLOCK STONE SLAG

Please provide photographs and drawing or site plan drawn to scale - no larger than 8-1/2 x 11.

Church Directional Signs (Must provide picture or drawing of proposed signs that reflect dimensions)

Location(s) signs are to be placed (i.e. Northeast corner of Main Street) _____



All work shall comply with the requirements of The City of Columbia and South Carolina Department of Transportation now in existence or hereafter enacted. The materials and type of finish to be used are to be approved by the City Engineer prior to installation. Any damage to the street or sidewalk caused by construction shall be repaired to the satisfaction of the City Manager. Improvements within the encroachment shall be maintained by the grantee at no cost to the City in a manner approved by the City Manager.

The proposed ordinance will be sent to the requesting party and City offices for review and approval. Johnathan Chambers will compile the recommendations and forward them to the City Clerk for scheduling before City Council. This process may take from 30-90 days.

CONTACT	DEPARTMENT	PHONE	FAX	E-MAIL
Johnathan Chambers	Development Services (Land Development)	803-545-3333	803-343-8779	jechambers@columbiasc.net
John Fellows	Development Services (Planning)	803-545-3222	803-733-8647	jsfellows@columbiasc.net
Brian Cook	Development Services (Zoning)	803-545-3332	803-733-8647	kbcook@columbiasc.net
Jerry Thompson	Development Services (Building Inspections)	803-545-3420	803-733-8699	jthompson@columbiasc.net
Fanessa Pinckney	Development Services (Permits)	803-545-3420	803-733-8699	fcpinckney@columbiasc.net
Amy Moore	Development Services (Historic Preservation)	803-545-3222	803-733-8647	aemoore@columbiasc.net
Robert Harkins	Development Services (Plans Review)	803-545-3420	803-733-8647	rtharkins@columbiasc.net
Denny Daniels	Utilities & Engineering (Construction Management)	803-545-3400	803-988-8199	jddaniels@columbiasc.net
Robert Anderson	Public Works (Administration)	803-545-3780	803-733-8648	raanderson@columbiasc.net
Robert Sweat	Public Works (Street Division)	803-545-3790	803-545-3785	rgsweatt@columbiasc.net
David Brewer	Public Works (Traffic Engineering)	803-545-3850	803-733-8648	ddbrewer@columbiasc.net
Sara Hollar	Public Works (Forestry & Beautification)	803-545-3860	803-733-8648	sehollar@columbiasc.net
John Hooks	Public Works (Solid Waste)	803-545-3800	803-733-8648	jphooks@columbiasc.net
Chip Timmons	Risk Management	803-733-8306	803-733-8245	catimmons@columbiasc.net
David Koon	Fire Department	803-545-3701	803-401-8839	cfdgkoon@columbiasc.net
John David Spade	Parking Services	803-545-3070	803-733-8523	spade@columbiasc.net

City of Columbia

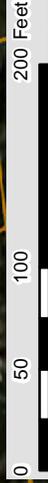
1729 Bannockburn Drive - Encroachment Application

Monday, July 18, 2016

22.a



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerotid, IGN, IGF, swisstopo, and the GIS User Community, Est. HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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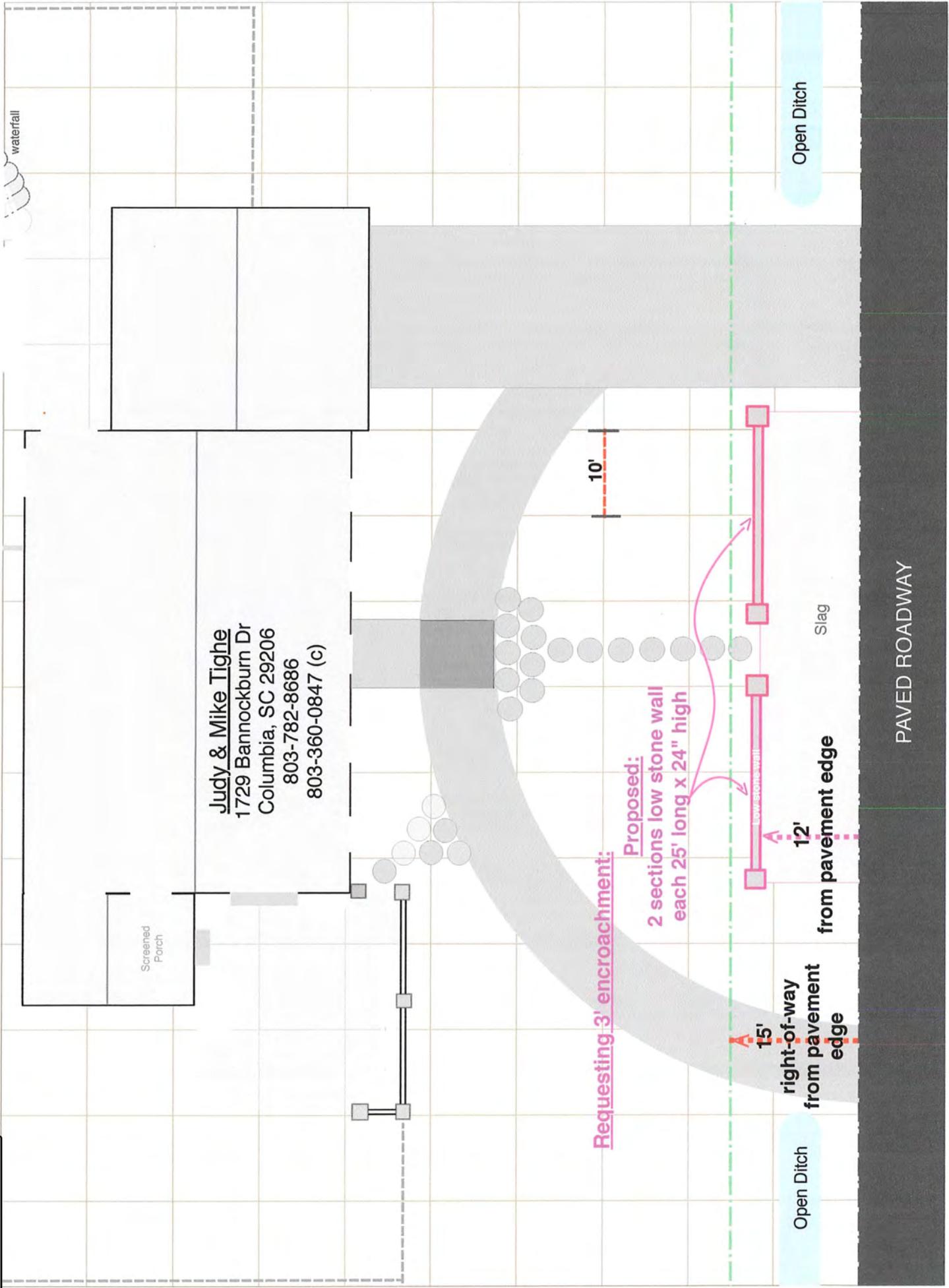


Bannockburn Dr



Bannockburn Dr

401 CP



Judy & Mike Tighe
 1729 Bannockburn Dr
 Columbia, SC 29206
 803-782-8686
 803-360-0847 (c)

Requesting 3' encroachment:

Proposed:
 2 sections low stone wall
 each 25' long x 24" high

15'
 right-of-way
 from pavement
 edge

Open Ditch

12'

from pavement edge

Slag

Open Ditch

PAVED ROADWAY



The wall we will construct is like this one; however, it will be set 12 feet back from the edge of the road to provide parking out of the roadway.

Judy Tighe
1729 Bannockburn Drive
Columbia, SC 29206
803-782-8686



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-095 - Authorizing the City Manager to execute a Partial Release of Right of Reverter by the City of Columbia to allow for the transfer of 0.870 acre (37,893 SF) of the SC State Fairgrounds Property Identified as Richland County TMS #11207-03-01 along Rosewood Drive and Bluff Road (SC Hwy. 48) to Richland County for Sidewalk Improvements**

FINANCIAL IMPACT:

ATTACHMENTS:

- 2016-095 pt rls ROR Fairgrounds-Bluff and Rosewood (PDF)

ORDINANCE NO.: 2016-095

Authorizing the City Manager to execute a Partial Release of Right of Reverter by the City of Columbia to allow for the transfer of 0.870 acre (37,893 SF) of the SC State Fairgrounds Property Identified as Richland County TMS# 11207-03-01 along Rosewood Drive and Bluff Road (SC Hwy. 48) to Richland County for Sidewalk Improvements

BE IT ORDAINED by the Mayor and City Council of the City of Columbia, South Carolina this ___ day of _____, 2016, that the City Manager is authorized to execute the attached Partial Release of Right of Reverter, or on a form to be approved by the City Attorney, on behalf of the City of Columbia for the release of 0.870 acre (37,893 SF) of the subject property from the right of reverter to allow for Richland County to acquire the said property and construct sidewalk improvements thereon.

Reference is made to the right-of-way drawing for Tract No. 12 prepared for the Richland County Transportation Penny Program, SC Route 48 (Bluff Road) Widening Phase 1, by Davis & Floyd, dated March 23, 2016, last revised March 31, 2016. A copy of said drawing being attached hereto and made a part hereof as Exhibit "A".

Requested by:

Assistant City Manager Gentry

Mayor

Approved by:

City Manager

Approved as to form:

Janne J Lisowski
Senior Assistant City Attorney

ATTEST:

City Clerk

Introduced:

Final Reading:



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-102 - Authorizing consumption of beer and wine beverages only at the 2017 Famously Hot New Year Event**

FINANCIAL IMPACT:

ATTACHMENTS:

- 2016-102 Famously Hot New Year Event (PDF)

ORDINANCE NO.: 2016-102

Authorizing consumption of beer and wine beverages only at the 2017 Famously Hot New Year Event

WHEREAS, the City ("Sponsor") is sponsoring the 2017 Famously Hot New Year Event in the 1200 block of Main Street between Lady Street and Gervais Street and the 1100 and 1200 blocks of Gervais Street between Assembly Street and Sumter Street from 6:30 p.m. Saturday, December 31, 2016 until 1:00 a.m. Sunday, January 1, 2017; and,

WHEREAS, Sponsor has requested permission for the temporary closing and use of the 900 block of South Main Street from Pendleton Street and College Street from 9:00 a.m. Saturday December 31, 2016 until 2:00 a.m. Sunday, January 1, 2017 and the 1100 and 1200 blocks of Pendleton Street from 11:30 p.m. Saturday December 31, 2016 until 12:30 a.m. Sunday, January 1, 2017 for set up and staging of equipment and a fireworks show; the 1200 block of Gervais Street between Main Street and Sumter Street from 8:00 a.m. Friday, December 30, 2016, until 9:00 a.m. Sunday, January 1, 2017; for set up, staging and clean-up of the event; and the 1100 and 1200 blocks of Gervais Street between Assembly Street and Sumter Street from 7:00 a.m. Saturday, December 31, 2016 until 9:00 a.m. Sunday, January 1, 2017; the half block area of the 1200 block of Main Street south of the entrance to the NBSC parking garage to allow for ingress and egress into the parking garage from 7:00 a.m. Saturday, December 31, 2016 until 9:00 a.m. Sunday, January 1, 2017; the remainder of the 1200 block of Main Street between Lady Street and Gervais Street from 4:00 p.m. Saturday, December 31, 2016 until 8:00 a.m., Sunday, January 1, 2017; for an event to be held from 6:30 p.m. Saturday, December 31, 2016 until 1:00 a.m., Sunday, January 1, 2017, and for patrons to consume beer and wine beverages only during the event hours of 6:30 p.m. Saturday, December 31, 2016 until 12:30 a.m. Sunday, January 1, 2017; and for crowd control and overflow; and,

WHEREAS, it has been determined that such an event would be in the public interest; NOW, THEREFORE,

BE IT ORDAINED by the Mayor and Council this ___ day of _____, 2016, that the sale of beer and wine beverages only is authorized between the hours of 6:30 p.m. Saturday, December 31, 2016 and 12:30 a.m. Sunday, January 1, 2017; and,

BE IT FURTHER ORDAINED that all vendors be restricted to stationary location; and,

BE IT FURTHER ORDAINED that possession and consumption of alcoholic liquors or alcoholic beverages other than beer and/or wine beverages within the event area is prohibited; and,

BE IT FURTHER ORDAINED that VIP tents or VIP areas for the possession and consumption of alcoholic liquors or alcoholic beverages, other than beer or wine beverages, within the event area are prohibited; and,

BE IT FURTHER ORDAINED that VIP areas for the possession and consumption of alcoholic liquors or alcoholic beverages, including beer or wine beverages, shall be allowed within an enclosed building adjacent to but outside of the event area. Beer and wine beverages shall not be carried from the event area into the VIP area. Alcoholic liquors or alcoholic beverages, including beer or wine beverages shall not be carried from the VIP area into the event area. Sponsor shall have a person posted at the entrance and exit of the VIP area to enforce the prohibition of transporting these beverages from one area to the other; and,

BE IT FURTHER ORDAINED that the Mayor and Council hereby repeal the restriction of outdoor possession and consumption of beer and wine beverages only, all outdoor musical performances and use of sound-amplifying devices ending by 10:00 p.m. only for this City of Columbia sponsored New Year Eve's event; and,

BE IT FURTHER ORDAINED that only pedestrian traffic will be allowed within the area. All other traffic, including, but not limited to, automobiles, trucks, motorcycles, mopeds, bicycles, skate boards, and horses, except police horses, is prohibited. All pets shall be prohibited. Coolers, glass bottles, breakable glasses and/or cups, large bags and backpacks shall be prohibited; and,

LEGAL DEPARTMENT DRAFT

LEGAL DEPARTMENT DRAFT

BE IT FURTHER ORDAINED that during the designated time the closed portion of the 1200 block of Main Street between Lady Street and Gervais Street and the 1100 and 1200 blocks of Gervais Street between Assembly Street and Sumter Street with the exception of the parking areas, adjacent off-street parking areas and other areas posted as to not allow alcoholic beverages, shall be declared to be a Public Park and provisions of Chapter 15, Parks and Recreation, Sec. 15-1, 15-2 and 15-3, Code of Ordinances of the City of Columbia, South Carolina are in effect. Pursuant to Chapter 14, Offenses and Miscellaneous Provisions, Article IV, Offenses Against the Public Peace and Order, Sec. 14-99, 1998 Code of Ordinances of the City of Columbia, South Carolina, the 1200 block of Main Street between Lady Street and Gervais Street and the 1100 and 1200 blocks of Gervais Street between Assembly Street and Sumter Street with the exception of the parking areas, adjacent off-street parking areas and any other areas posted as to not allow alcoholic beverages, is deemed to be the site of a public festival at which beer and wine beverages only may be consumed and the prohibition against possession or consumption of alcoholic beverages set forth in Sec. 14-99 shall not apply. Possession and consumption of beer and wine beverages only shall be permitted only in plastic cups, plastic or aluminum bottles or aluminum cans provided by vendors within the areas designated.

PROVIDED, FURTHER, that the event organizer shall provide the names and cell phone numbers of a least two contact persons who can receive complaints during the event, including any set up and breakdown times. The cell phones shall remain on at all times during the event and during any set up and breakdown time.

PROVIDED, FURTHER, that failure of the event organizer to strictly comply with the time frames and other requirements and responsibilities set forth in this resolution may result in a denial of subsequent requests to allow the event.

PROVIDED, HOWEVER, that no solicitation or transactions be made in violation of Sec. 14-32, 1998 Code of Ordinances of the City of Columbia, South Carolina.

Requested by:

Mayor Benjamin _____

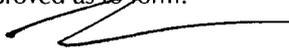
Mayor

Approved by:

City Manager

ATTEST:

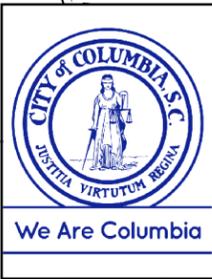
Approved as to form:



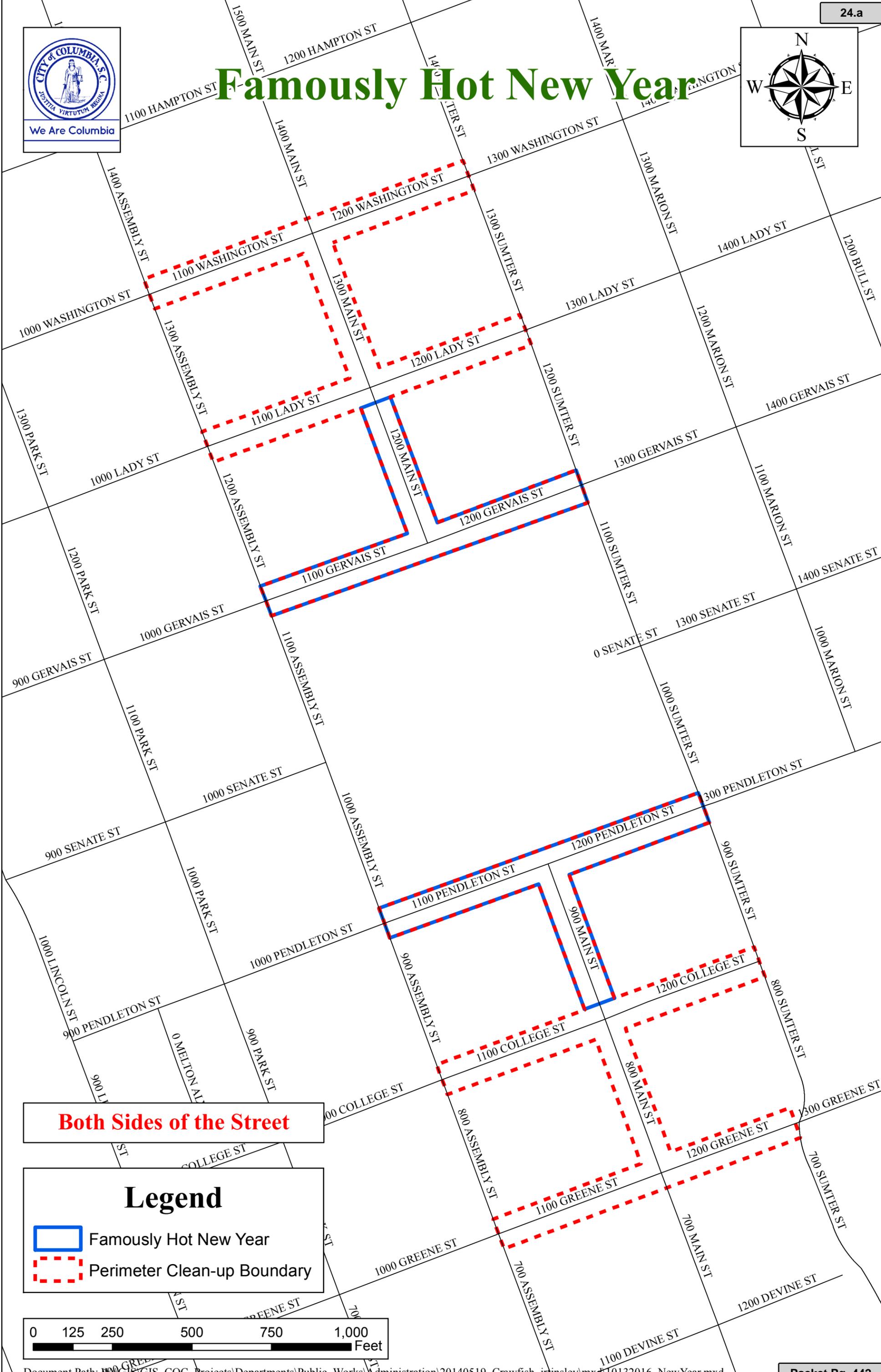
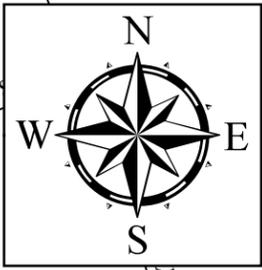
City Attorney

City Clerk

Introduced:
Final Reading:

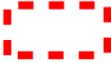


Famously Hot New Year



Both Sides of the Street

Legend

-  Famously Hot New Year
-  Perimeter Clean-up Boundary





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Office of Business Opportunities

FROM: *Tina Herbert,*

SUBJECT: Ordinance No.: 2016-111 - Adopting Amendments to the Commercial Revolving Loan Fund ("CRLF") Code

PRESENTER: Paul Featheringill

FINANCIAL IMPACT:

BUSINESS PROGRAM: Small Business Enterprise

CLEAN WATER 2020?: No

STRATEGIC GOALS: Business Growth & Investment

ATTACHMENTS:

- Revision memo 10.2016 (PDF)
- 2016-111 adopt amendments to CRLF Code (PDF)



We Are Columbia

Office of Business Opportunities

1225 Lady Street, Columbia, South Carolina 29203 • Phone: 803-545-3950 • Fax: 803-255-8912

To: Erika Moore

From: Paul Featheringill, Business Loan Officer

CC: Tina Herbert, Executive Director

Date: October 19, 2016

Re: Proposed Changes to the Commercial Revolving Loan Fund (CRLF) Code

The following revisions are proposed for consideration by City Council to the Commercial Revolving Loan Fund (CRLF) Code. These revisions are being proposed to provide greater consistency in the terms of the individual funds as well as to provide a better use of the limited funds available to lend through the CRLF.

Section 8.7.4: Limits

Remove the \$100,000 limit on non-EDA funded loans. All loans, regardless of funding source, will have a maximum amount of \$200,000.

Section 8.9.2: Application Procedures

Add the requirement of a signed bank turn-down letter demonstrating that credit is not otherwise available on terms and conditions that permit the completion of the project to be financed. This requirement will be for all loans applications greater than \$50,000, regardless of funding source.

Section 8.19.2: Commercial Development Block Grant (CDBG) Funds

The maximum loan amount is changed to \$200,000.

Section 8.19.4: Commercial Development Block Grant (CDBG) Funds

Add the requirement of a signed bank turn-down letter demonstrating that credit is not otherwise available on terms and conditions that permit the completion of the project to be financed. This requirement will be for all loans applications greater than \$50,000.

Section 8.20.2: Columbia Economic Renaissance Fund (CERF)

The maximum loan amount changed to \$200,000.

Section 8.20.4: Columbia Economic Renaissance Fund (CERF)

Add the requirement of a signed bank turn-down letter demonstrating that credit is not otherwise available on terms and conditions that permit the completion of the project to be financed. This requirement will be for all loans applications greater than \$50,000.

ORDINANCE NO.: 2016-111

Adopting Amendments to the Commercial Revolving Loan Fund ("CRLF") Code

BE IT ORDAINED by the Mayor and Council this ___ day of _____, 2016, that the attached amendment to the Commercial Revolving Loan Fund Code is hereby adopted.

Requested by:

Assistant City Manager Gentry

Mayor

Approved by:

City Manager

Approved as to form:


Senior Assistant City Attorney

ATTEST:

City Clerk

Introduced:

Final Reading:

LEGAL DEPARTMENT DRAFT

COMMERCIAL REVOLVING LOAN FUND

8.1 PURPOSE

The City of Columbia, through economic development projects financed by the Commercial Revolving Loan Fund, seeks to improve the number and caliber of job opportunities, as well as to retain existing jobs within the City of Columbia. The City of Columbia seeks to foster entrepreneurship, innovation and productivity through investments in infrastructure development, capacity building, and business development in order to attract private capital investment and higher-skill, higher-wage jobs. Additionally, the City of Columbia seeks the revitalization of commercial corridors throughout the City.

This code provision applies to all of the City of Columbia's commercial revolving loan funds, including those funds capitalized with federal, state and local dollars, unless a fund is otherwise provided for under another section of this code.

Interest payments and fees may be utilized to defray the ongoing administrative costs of operating the CRLF. Principal and any interest not used for administrative expenses will revolve into the CRLF for relending. The City will comply with any and all federal regulations and caps regarding administrative expenses.

8.2 DEFINITIONS

1. *Commercial Revolving Loan Fund Committee of the City of Columbia (CRLF Committee)*. Seven (7) member committee appointed by City Council to review and approve/disapprove loan applications
2. *CRLF*: Commercial Revolving Loan Fund
3. *CRLF Staff*. The staff of the City of Columbia
4. *Economic Development Administration (EDA)*. A department of the United States Department of Commerce providing revolving loan funds to the City of Columbia
5. *Equity*. Total grants and private dollars brought to a project by a borrower from any source other than the City of Columbia.
6. *Minority Business*. A minority-owned business is a business which reflects 51% minority ownership and in control of management decisions. Minority refers to any individual of a race other than Caucasian (white)

7. *Participating lender.* Banks and other institutional lenders who, in the regular course of business, make commercial loans
8. *Private commitment.* A commitment of funds needed for a project obtained from a bank, other lending institution, or legitimate private source
9. *Private to public dollar leveraging ratio.* The amount of private dollar investment, either through private commitment and/or a participating lender in a project in relation to the amount of public funds invested
10. *Small Business.* A small business is a start-up or expanding business which has 50 or fewer employees.
11. *Target Area.* From time to time the City may target a specific geographical area, census tract, corridor, or business type for funding. Such a designation will be considered a target area
12. *Total Project Cost.* Total direct costs incurred to carry out a project
13. *United States Department of Housing and Urban Development (HUD).* The Federal Agency that administers the Community Development Block Grant (CDBG) and any other federal funds awarded to the City Of Columbia
14. *Woman-owned business.* A business which reflects 51% female ownership and in control of management decisions is considered a women-owned business

8.3 TYPES OF LOANS

Commercial revolving loans may take the form of:

1. *Participation loans* made in conjunction with loans made by other public or private financial lending institutions, with subordination features, also known as gap financing;
2. *Commercial loans* with a minimum equity investment as determined by the funding source. (Equity investments can come from the owner, private and/or non-bank investors, grants, or other sources of equity.);
3. *Loans under \$10,000* which may not require bank participation or private equity investment.
4. All loan types may offer special financing techniques, including moratoriums on interest and/or principal repayments for a specified period of time.

8.4 USE OF LOAN FUNDS

1. Loans may be made to small businesses for the purpose of financing building construction, conversions, expansions, acquisition of land, buildings, machinery, equipment, supplies and materials or in particular cases of supplying working capital where it is deemed necessary by the staff and CRLF Committee.
2. Interest payments and fees may be utilized to defray the ongoing administrative costs of operating the CRLF. Principal and any interest not used for administrative expenses will revolve into the CRLF for relending. The City will comply with any and all federal regulations and caps regarding administrative expenses.

8.5 ELIGIBLE APPLICANTS

1. The applicant must fit the definition of small business as defined by the City of Columbia - fifty (50) employees or less.
2. The business must be located within the corporate limits of the City of Columbia.
3. Applicants must agree to provide all information and business records requested pertaining to the loan or business during the application process or the term of the loan must be made available to the city. (Personal financial statements shall remain confidential.)
4. All principals or owners must agree to provide personal guarantees.
5. Applicants who have been in default on previous loans with the City of Columbia are not eligible for additional funding.
6. Minimum credit score. The City requires the applicant to have a minimum credit score of 600 to be eligible to apply for a commercial loan.
7. In order for a current loan recipient to be eligible for an additional loan, the applicant must meet the following conditions:
 - a. Minimum 50% equity requirement
 - b. Previous loan must either be paid off or have been in repayment for at least 2 years and be current with no late payments or defaults
 - c. Business must be in an identified target area of the City of Columbia
 - d. Business is unable to get all of the financing needed for the project from a private financial institution or other private source

8.6 INELIGIBLE ACTIVITIES

Commercial revolving loan funds cannot be used for the activities listed below. City staff may reject applications for ineligible activities.

1. The direct or indirect refinancing of any pre-existing debt or subsidizing interest payments on an existing loan.
2. Funds for payment, distribution, or as a loan to owners, partners or shareholders of the applicant's business, except as ordinary compensation for services rendered.
3. Acquisition of an equity position in a private business,
4. Loan guarantees (a promise by one party to assume the debt obligation of a borrower if the borrower defaults on a loan).
5. The relocation of a business within the City of Columbia presently located outside of the Columbia commuting area.
6. Where the purpose of the loan is to finance the acquisition, construction, improvement or operation of real property which is to be held for speculative real estate ventures.
7. Where the purpose of the loan is to finance the creation, dissemination, or distribution of material deemed patently repugnant by commonly recognized community standards of decency or which has the effect of denying anyone their constitutionally guaranteed rights.
8. Where the effect of the granting of the loan would be to encourage a monopoly or be inconsistent with accepted practices of the American system of free competitive enterprise.
9. Where the applicant's business may not operate totally within the laws of the City of Columbia and the State of South Carolina.
10. Other activities prohibited by specific funding sources. See sections 8.18.1(c) for additional ineligible uses of EDA funds.
11. If City Staff determines that an application is ineligible for funding, a letter will be sent to the applicant within fourteen (14) business days of receipt. City Staff will notify the CRLF Committee of all applications that have been determined to be ineligible.

8. 7 FEES, INTEREST, TERMS AND LIMITS

1. Fees

Application Fee

A. A loan application fee of \$100, plus identifiable direct third-party charges (credit reports, etc.), shall be collected at time of application to defer processing expenses.

Origination Fee

A loan servicing fee of up to one percent (1%) shall be added to the cost of the CRLF loan. Fees shall be predicated on local market conditions and commensurate to risk to the CRLF.

2. Interest

A. Unless otherwise dictated by the funding source, (see sections EDA - 8.19.4; CDBG – 8.20.4; CERF – 8.21.4) the interest rate to be charged on City of Columbia CRLF loans shall be set at one percent (1%) below the current money center prime rate quoted in the Wall Street Journal. This rate will change from time to time with changes in the prime rate. These changes will be reflected in the City's rate of interest on the last day of the month in which the change in prime rate occurs.

B. In no event shall the interest rate charged be less than three percent (3%) annually nor shall it be greater than the maximum interest allowed under state law. Adjustable interest rates and balloon/call provisions may be utilized.

3. Terms

Terms for repayment of loans may vary, but standard terms for repayment shall be as follows:

- A. Equipment: 7 to 10 years;
- B. Land and building: up to 25 years
- C. Inventory: up to 3 years
- D. Working Capital: up to 2 years
- E. Leasehold Improvements: up to 25 years
- F. All loans will have five (5) year balloon/call features

4. Limits

The city's maximum loan shall not exceed \$200,000 ~~for EDA funded loans and \$100,000 for loans from all other funding sources.~~

The CRLF committee reserves the right to adjust the fees, interest, terms and limits when deemed necessary to carry out the goals of the commercial revolving loan fund program, however all federal requirements for lending programs must be met.

8.8 LOAN REVIEW COMMITTEE

The CRLF Committee shall consist of seven (7) members who shall assume responsibility for final approval of loan applications. The CRLF committee will be comprised of (1) one attorney with business or corporate expertise, (2) a licensed commercial contractor, (3-4) two small business persons (of which one may represent a small business development agency or a non-profit business), (5) a local bank representative, (6) an Assistant City Manager with the City of Columbia and (7) the Community Development Director with the City of Columbia. Individuals for these positions will be appointed by city council for two (2) year terms. City staff/administration members on the committee must not be the direct or indirect supervisor of the city staff presenting loans for approval.

The CRLF Committee is authorized to do the following:

1. Approve/deny all loan requests;
2. Approve/deny loan modifications recommended by staff;
3. Approve/deny subordination requests that would change the City's collateral position on an active loan;
4. Approve/deny referrals for legal action on defaulted loans;
5. Review policies and procedures which apply to CRLF funds; and
6. Review quarterly portfolio reports provided by staff.

In determining whether a loan request should be approved or denied, the CRLF committee is to consider the underwriting guidelines established under Section 8.10.

Only the CRLF committee can reverse its decisions to approve or deny loan requests, modifications, and referrals for legal action.

The CRLF committee is a public body and is subject to the Freedom of Information Act. Any scheduled meeting convening a quorum of the membership, whether corporal or by electronic means (including a telephone conference) is subject to FOIA.

8.9 APPLICATION PROCEDURES

1. An application form and all required supporting documentation must be submitted prior to a loan request being analyzed by City staff.
2. Loan Applications must include the following to be considered complete:
 - a. Business Financial statements for the past three (3) years and interim statements for the current year submitted by an applicant showing the applicable date of the information given, and signed and certified by the applicant or his accountant. The COC may require an audited statement.
 - b. Personal financial statements for all principals of the business.

- c. Federal Tax Returns for the past three (3) years and interim statements for the current year must be submitted for all existing businesses.
- d. If an Applicant does not have three (3) years of tax returns or financial statements, the COC shall require personal tax returns of the principals in the business
- e. Three most recent months of bank statements for the business or for start-up businesses with no bank history, three most recent months of statements for all principals of the business.
- f. A detailed projection of earnings for the next three (3) years must be submitted by the applicant.
- g. Incorporation documentation for incorporated businesses.
- h. Verification of current number of employees.
- i. All loan requests of more than \$50,000 require a signed bank turn-down letter indicating that credit is not available on terms and conditions that permit the completion of the project to be financed.

3. After a completed application has been submitted, the loan officer will review the file to ensure it meets all minimum underwriting criteria and present to the CRLF committee for approval within sixty (60) days.
4. Applicants are required to attend CRLF committee meetings when their application is being reviewed.
5. Applicants will be informed of their approval/denial status within seven (7) business days of the committee's decision.

8.10 UNDERWRITING CRITERIA (CONSIDERATION AND REVIEW OF APPLICATIONS)

Before submitting an Application Package to the CRLF Committee, City staff will review the package for the following underwriting criteria.

1. Adequate assurances are given that the loan can be repaid pursuant to proper terms and conditions based on review of financial statements and analysis of cash flow.
2. Adequate assurance that the loan is to accomplish an improvement which is warranted in light of current market conditions and an analysis of past performance and future projections.
3. The applicant must obtain a minimum private commitment of 10% (or higher as required by the applicable funding source-CDBG section 8.20.3; EDA section 8.19.3; CERF section 8.21.3) of the total project costs, where required. City of Columbia grants cannot be used to meet an applicant's minimum equity investment.

4. Each loan must create or retain one job per \$35,000 borrowed. Each applicant must certify that all jobs to be created will be filled as proposed in the loan application and/or all jobs being retained would be lost to the business within two (2) years without public support.
5. The applicant's credit, capacity and collateral is adequate.
 - a. Borrowers should have a debt coverage ratio of 1.0-1.15 and above.
 - b. Applicants must show evidence of adequate and acceptable collateral sufficient to provide a legitimate secondary repayment source through the life of the loan.
 - i. Collateral should have a maximum loan to value ratio of:
 - (a) 50-75% for inventory, equipment and receivables and
 - (b) 80% for real estate
 - (c) The ratio for the loan value to the collateral needed shall be determined by staff.
 - ii. The City may take a subordinate position to other lenders.
 - iii. Collateral is required on all loans above \$10,000. Loans under \$10,000 may be approved with proper personal guarantees (and UCCs if applicable) to satisfy collateral requirements.
 - iv. Any subordination agreements occurring after loan closing may be executed by City staff unless the result would change the City's position to a lesser position, in which case loan committee approval is required. The CRLF Committee will be notified of any subordination executed.
6. The business data provided by the application shows the business as solvent, efficient and or profitable.
7. The applicant demonstrates adequate funding to complete the proposed improvement project.
8. The proposed improvements meet any applicable federal guidelines. It is the responsibility of city staff to ensure that all improvements funded with federal funds meet the appropriate federal guidelines prior to awarding funds.
9. No conflicts of interest or perceived conflicts of interest exist preventing award.
10. Preference will be shown to applicants included in one or more of the following classifications:
 - a. minority-owned small businesses;
 - b. women-owned small-businesses;
 - c. commercial and/or business activities which have a significant economic benefit;
 - d. acquisition and renovation of older buildings in a target area;
 - e. businesses involving new technology; and
 - f. applicants with high job and private to public dollar leveraging ratios

After staff's analysis the underwriting criteria, all eligible completed Application Packages shall be submitted to the loan review committee for consideration.

8.11 LOAN CLOSING REQUIREMENTS AND MONITORING

1. Personal guarantees are required on all loans in addition to any other collateral requirements determined by the CRLF committee.
2. The City shall record UCC's for equipment, furniture and fixtures financed and/or used as collateral.
3. City staff should insure that all loans are protected through adequate insurance coverage.

A. Key man insurance (an insurance policy taken out by a business to compensate that business for financial losses that would arise from the death or extended incapacity of an important member of the business) may be required under the following circumstances:

1. The business is a sole proprietorship with no succession plan.
 2. The loan amount is greater than \$50,000.
 3. There is no real estate used as collateral for the loan.
4. It is the responsibility of the City staff to collect financial statements and tax documents throughout the life of the loan as well as to inspect all collateral. It is the responsibility of the borrower to provide all requested information as part of the terms of the loan.
 5. The city CRLF staff shall have the right to inspect, at reasonable hours, any facilities, equipment, premises, books, and records pertaining to the processing of a loan application or in the administration of a loan granted to the business under this program.
 6. The City staff is to monitor job creation and/or retention for three (3) years from the closing date of a loan.

8.12 REPORTING

A semi-annual report will be completed in July and January of every year and presented to City Council as public record of the performance and management of the fund.

8.13 DELINQUENCY AND DEFAULT

Delinquency is defined as:

- A. past due – up to 30 days late,
- B. seriously delinquent – from 30 to 90 days late; and
- C. Default – over 90 days late.

1. Past due loans will be monitored by the Loan Servicing Agent, if applicable, and/or City staff and borrowers will be contacted to collect payment.
2. If a borrower should become seriously delinquent, the following actions may be taken, with the approval of the CRLF Committee:
 - a. to postpone, defer or otherwise modify the loan terms for a specified work-out period;
 - b. cancel all or a portion of the debt in consideration of borrower's transfer of collateral to the lender in lieu of foreclosure.
3. Loans more than 90 days past due are in default. In cases where it is determined that funds cannot be collected, foreclosure action may be initiated with the approval of the CRLF committee. Should the CRLF committee decide to recommend legal action, case files should be transferred to the legal department who will take appropriate action in conjunction with the private lenders or the city manager who may specify other possible action.

8.14 LOAN SERVICING

1. Subsequent to approval and commitment, CRLF staff will coordinate loan closing with the private lender, borrower, and closing attorney. A document file will be established by CRLF staff when the loan is booked in by accounting. Receipt of post-closing documentation and periodic submission of financial statements will be monitored by CRLF staff. Borrower will be responsible for full compliance with terms, provisions and conditions contained within the loan documents.

CRLF loans will be of three (3) types with regards to servicing responsibilities:

- a. A joint loan made in concert with a private lender (lead lender) where the lead lender services the loan and periodically remits to the city its participant's share of monies collected.
- b. A separate city loan funded by CRLF and underwritten in concert with and related to the loan of the lead lender but independently evidenced and secured. In this instance, the city's loan will be serviced by the lead lender or a loan servicing agent selected by the city.
- c. All loans not serviced by the lead lender or a loan servicing agent selected by the City will be serviced by City staff.

8.15 INSPECTION OF PREMISES AND RECORDS

1. Subsequent to approval and commitment, city staff will coordinate loan closing with the private lender where applicable, borrower and closing attorney. Receipt of post-closing documentation and periodic submission of financial statements will be monitored by City staff. Borrower will be responsible for full compliance with terms, provisions and conditions contained with the loan documents.

2. The City staff, or its servicing agent, shall have the right to inspect at reasonable hours any facilities, equipment, premises, books, and records pertaining to the processing of a loan granted to the business under this program.

8.16 PRIVACY PROTECTION POLICY

City staff collects sensitive information from businesses and individuals and must comply with city and federal privacy regulations. All loan files must secure to maximize maintenance of privacy. In the event of a Freedom of Information Request, personal financial information and trade secrets may not be publicly disclosed.

8.17 PORTFOLIO GOALS AND PERFORMANCE

1. The CRLF as a whole should create or retain one job per \$15,000 borrowed.
2. Working capital loans shall be initially limited to thirty percent (30%) of the total Commercial Revolving Loan Fund Program's portfolio
3. A goal of 40% minority participation in the initial CRLF was established at the request of EDA. The City of Columbia will continue to commit to this goal with all loan funds governed by this code. The percentage may be determined by the amount of funds committed.
4. A goal of 35% women-owned businesses participation shall also apply.
5. Loans for start-up businesses shall be limited to thirty percent (30%) of the total Commercial Revolving Loan Fund Program's portfolio

8.18 ECONOMIC DEVELOPMENT ADMINISTRATION (EDA) FUNDS THROUGH THE DEPARTMENT OF COMMERCE

1. Specific EDA RLF Requirements

a. **Use of Capital.** The City must use RLF Capital for the purpose of making loans that are consistent with an approved Revolving Loan Fund Plan (RLF) or such other purposes approved by the EDA. To ensure that grant funds are used as intended, each loan agreement must clearly state the purpose of each loan. (See 13 C.F.R. § 307.17(a).)

b. **Bank Participation.** This fund requires bank participation. A letter of credit must be submitted with the loan application.

c. **Restriction on Use of RLF Capital.** In addition to City of Columbia ineligible uses, RLF Capital shall not be used to:

- i. Provide for borrowers' required equity contributions under other Federal Agencies' loan programs;
- ii. Enable borrowers to acquire an interest in a business, either through the purchase of stock or through the acquisition of assets, unless sufficient justification is provided in the loan documentation. Sufficient justification may include acquiring a business to save it from imminent closure or to acquire a business to facilitate a significant expansion or increase in investment with a significant increase in jobs. The potential economic benefits must be clearly consistent with the strategic objective of the RLF;
- iii. Provide RLF loans to a borrower for the purpose of investing in interest bearing accounts, certificates of deposit or any investments unrelated to the RLF;
- iv. Refinance existing debt, unless the City sufficiently documents in the loans documentation a "sound economic justification" for the refinancing (e.g. the refinancing will support additional capital investment intended to increase business activities).

2. **Loan Amount.** The maximum loan amount is \$200,000.

3. **Private Commitment Requirement for each loan.** RLF awards cannot exceed 50% of the total project cost (a minimum of 50% of the total project cost required to be from other non-RLF sources). The RLF loans funded by EDA encourage a 4 to 1 private to public match.

4. **Interest Rates.** The minimum interest rate the City may charge pursuant to EDA guidelines is four (4) percentage points below the lesser of the current Money Center Prime Interest Rate quoted in the Wall Street Journal or the maximum interest rate allowable under state law. In no event shall the interest rate be less than the lesser of four (4) percentage points or seventy-five percent (75%) of the prime interest rate quoted in the Wall Street Journal.

5. **Leveraging of RLF Portfolio.** RLF loans must be used to leverage private investment of at least two dollars for every dollar of such RLF loans. This leveraging requirement applies to the RLF portfolio as a whole rather than to individual loans and is effective for the duration of the RLF's operation. To be classified as leveraged, private investment must be made within twelve (12) months prior to approval of an RLF loan, as part of the same business development project, and may include:

- a. capital invested by the borrower or others;
- b. Financing from private entities; or
- c. the non-guaranteed portion and ninety (90) percent of the guaranteed portions of US Small Business Administration's 7 (a) loans and 504 Debenture loans.

6. A goal of 40% minority participation in the initial CRLF was established at the request of EDA. The City of Columbia will continue to commit to this goal with all loan funds governed by this code. The percentage may be determined by the amount of funds committed.

8.19 COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FUNDS

The City of Columbia may from time to time allocate additional Community Development Block Grant (CDBG) dollars for revolving loan fund use.

1. Specific CDBG requirements

A. Eligible activity: All projects must be an eligible activity per HUD regulations (Title 24 Section 570.201-202). Examples of eligible activities include, but are not limited to: acquisition, code enforcement, commercial rehabilitation, technical assistance, planning, micro-enterprise development, and special economic development.

B. National Objective: All projects must also meet one of HUD's national objectives: (a) benefit to low/moderate income persons, (b) eliminate/prevent slum or blight, or (c) urgent community need. If a project is located within a designated empowerment zone or eligible census tract there is a presumption of meeting the low/moderate income benefit standard.

C. Public Benefit: If a project is designated as special economic development, in addition to being an eligible activity meeting a national objective, it must also meet HUD's public benefit standards.

2. The maximum loan amount shall be \$~~1~~200,000. The CRLF committee may adjust this limit in keeping with the requirements of the funding source.

3. A minimum equity investment of 10% by the borrower is required.

4. All loan requests of more than \$50,000 require a signed bank turn-down letter indicating that credit is not available on terms and conditions that permit the completion of the project to be financed.

45. Interest Rate: See Section 8.7(2).

8.20 COLUMBIA ECONOMIC RENAISSANCE FUND (CERF).

1. Specific CERF requirements: This fund is capitalized with general fund dollars. Bank participation is not required, however it is encouraged.

A. Eligible applicants and uses: Developers, including City of Columbia development corporations and businesses owners are eligible to apply for funding based on the eligible activities listed below:

i. Developers and development corporations: property acquisition and pre-construction costs.

ii. Business owners: property acquisition, construction, business expansion, and other activities related to economic development.

2. The maximum loan shall be \$2400,000 for any one project. However the CRLF committee may adjust this limit based on available funding.

3. A minimum equity investment of 10% by the borrower is required.

4. All loan requests of more than \$50,000 require a signed bank turn-down letter indicating that credit is not available on terms and conditions that permit the completion of the project to be financed.

5. Interest Rate: See Section 8.7(2).

A. Loans may have an interest only component.

6. Development and rehabilitation projects must be complete within two (2) years of closing.

8.21 CONFLICT OF INTEREST

1. Any interested parties, including City officials, OBO employees, commercial revolving loan fund committee members and any other parties that advise, approve, recommend or otherwise participate in business decisions of the commercial revolving loan fund committee, may not receive any direct or indirect financial or personal benefits in connection with the approval and awarding of a loan. These financial interests may include employment, as an employee or through contractual services, stock ownership, a creditor or debtor relationship or prospective employment, with the organization selected or to be selected for an award.

2. An interested party may not use their position for a purpose that constitutes or presents the appearance of personal or organizational conflicts of interest or of personal gain. An appearance of impairment of objectivity could result from an organizational conflict where, because of other activities or relationships with other persons or entities, a person is unable or potentially unable to render impartial assistance or advice.

3. When a conflict of interest or perceived conflict of interest arises the following safeguards will be implemented to assure that the integrity of the loan award decision is not compromised.

a. Any staff or committee member aware of any conflict of interest, or perceived conflict of interest, has a duty to disclose the conflict to the CRLF chair and/OBO director. Such conflict of interest shall be disclosed in writing and presented to city staff for dissemination to the CRLF and the City Manager.

b. Failure to disclose a conflict of interest can result in removal from the CRLF Committee. Committee members that fail to disclose a conflict of interest resulting in a determination of conflict of interest from the federal funding source and a requirement that the funds be repaid may be liable for any funds awarded under the code that are deemed ineligible or must be returned to any agency as a result of the conflict

c. When a conflict of interest or perceived conflict of interest arises, the commercial revolving loan committee may not loan funds to an interested party.

d. If an interested party has, or has had a business relationship with a CRLF loan applicant within a year of the application, they will not be permitted to participate in the loan application review and must recuse themselves from the decision-making process when the loan is funded with City or CDBG dollars.

e. If the City of Columbia has a financial interest, either directly or indirectly in an applicant's project, any CRLF committee members who are city employees must recuse themselves from the decision-making process to avoid any appearance of organizational conflict of interest.

4. A business in which a city employee has an ownership interest is eligible to apply for commercial revolving loan funds, so long as none of the conflicts of interest above, or designated by federal guidelines, apply.

5. The City and the CRLF committee members must comply with all additional federal conflict of interest provisions that may apply.

APPROVED AS TO FORM



Legal Department City of Columbia, SC



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Legal

FROM: *Shari Ardis, Legal Administrator*

SUBJECT: **Ordinance No.: 2016-113 - Authorizing the City Manager to execute a Termination of Restriction to Beach Canalside, LLC**

FINANCIAL IMPACT:

ATTACHMENTS:

- 2016-113 Canalside Termination of Restriction (PDF)

ORDINANCE NO.: 2016-113

*Authorizing the City Manager to execute a Termination of Restriction
to Beach Canalside, LLC*

BE IT ORDAINED by the Mayor and Council this ___ day of _____, 2016, that the City Manager is authorized to execute the attached Termination of Restriction of the No Build Restriction to Beach Canalside, LLC, excluding the obligations of Beach Equity Investments, LLC under the Contract of Sale to preserve a designated portion of the CCI wall, or on a form approved by the City Attorney.

Requested by:

Assistant City Manager Gentry

Mayor

Approved by:

City Manager

Approved as to form:


Senior Assistant City Attorney

ATTEST:

City Clerk

Introduced:

Final Reading:

LEGAL DEPARTMENT DRAFT



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Planning and Development Services

FROM: *Krista Hampton, Director*

SUBJECT: West Gervais District Plan

PRESENTER: Krista Hampton

FINANCIAL IMPACT: Ordinance No.: 2016-081 - Adopting the West Gervais District Plan as an addendum to The Columbia Plan 2018

City Council District: 2

Proposal: Request that City Council adopt the West Gervais District Plan as an addendum to the City of Columbia's Comprehensive Plan.

Applicant: City of Columbia

Staff Recommendation: Approval

PC Recommendation: 07/11/2016; Deferred; 08/01/2016; Approval with Modification (6-1)

ATTACHMENTS:

- 09-20-2016_PH_CaseSummary_COMPPLAN_WestGervais (PDF)
- 2016-081 adopt West Gervais District Plan (PDF)
- Scott_Altizer_Request_for_Exemption (PDF)
- Scott_Altizer_Map_1000 Lady Street Lots (PDF)

HISTORY:

09/20/16

City Council

DEFER CONSIDERATION



CITY COUNCIL

September 20, 2016 at 6:00pm

City Council Chambers, 3rd Floor, 1737 Main Street, Columbia, SC 29201

COMPREHENSIVE PLAN AMENDMENT CASE SUMMARY WEST GERVAIS DISTRICT PLAN

City Council District:	2
Proposal:	Request that City Council adopt the West Gervais District Plan as an addendum to the City of Columbia's Comprehensive Plan.
Applicant:	City of Columbia
Staff Recommendation:	Approval
PC Recommendation:	07/11/2016; Deferred 08/01/2016; Approval with Modification (6-1)
Public Hearing, 1 st Reading:	09/20/2016; Pending
Public Hearing, 2 nd Reading:	10/04/2016; Pending

SUMMARY

Introduction to Plan:

Staff recommends approval of a resolution recommending the adoption of the West Gervais District Plan be adopted as part of the City of Columbia's Comprehensive Plan. Staff recommends to City Council the adoption of an ordinance adopting the West Gervais District Plan as part of the City of Columbia's Comprehensive Plan.

The Study Area:

The heart of the Vista was used for this study area, which was defined by the Congaree River to the West and Assembly Street to the East. The study area abuts the Innovista District to the South and follows the natural line of collective uses along Washington and Hampton to the North. The planning area is 184 acres, and the majority of the area is utilized for commercial and entertainment uses. The planning area also contains a number of landmarked structures and two –Design and Preservation Area Zoning Overlay Districts: the West Gervais Historic Commercial District and the West Gervais Historic Protection Area District.

Purpose:

The West Gervais District planning area is one of South Carolina's premier arts and entertainment districts, and a vital economic and cultural driver in Columbia today. The last planning for this area occurred in the late 1980's and was followed by implementation over the following 20 years. As many implementation items have been completed, market trends have changed and increased development is anticipated within this area an update to the 1980's planning efforts was requested. The development of an area Plan, especially as the City embarks upon a substantial code rewrite, has the ability to identify this vision and provide implementable strategies to make this vision a reality.

Summary of the Plan and Organization:

The Plan analyzes the existing conditions in the District, as well as the numerous comments received during the public input process. A vision statement frames the discussion of future land use, where specific recommendations are made for ground floor activity zones, mixed-use residential zones, mixed-use commercial and office zones, a height overlay district, and a setback zone along Huger Street. The Plan discusses connectivity, citing the adoption of Walk Bike Columbia, and incorporating those recommendations within the West Gervais District Plan. A discussion of the public realm follows, where recommendations are made for outdoor dining and plazas, wayfinding, site furnishings, shade, and public art. The possibility of the creation of a pedestrian zone and the development of a plaza at Lincoln Street and Lady Street is specifically mentioned within the public realm section. The Plan further notes that the West Gervais District is an excellent location for the development of green alleys, green roofs, and parklets. Based upon the issues and opportunities identified through the planning process and within the Plan text, a series of implementable policy and physical recommendations conclude the Plan document. These recommendations include concise strategies, assign responsible parties, and identify a timeframe for completion (short-, mid-, or long-term).

Vision Statement:

The West Gervais District Plan is guided by a Vision Statement developed in collaboration with community stakeholders and confirmed by hundreds of participants over the course of multiple public outreach meetings.

1. The West Gervais District is a mixed-use neighborhood with a coordinated development pattern that celebrates the past through conservation of historic resources and looks to a vibrant future.
2. The West Gervais District is a place that provides a mix of transportation choices with a strong commitment to the pedestrian environment; a City neighborhood that has a high level of internal and external connectivity and accessibility with the urban form.
3. The West Gervais District is a district that provides a high level of transportation amenities.
4. The West Gervais District is an urban neighborhood that allows for individuality yet encourages an aesthetic quality that keeps a pedestrian-scaled development pattern, promoting increased retail, entertainment, employment and residential units throughout.

Future Steps:

The document, if adopted by City Council, will serve as guidance for elected and appointed officials and City staff when making decisions about infrastructure improvements, amendments to local ordinances, and development reviews where applicable. The policy recommendations related to zoning will be taken into consideration as part of the code rewrite process.

STAFF RECOMMENDATION

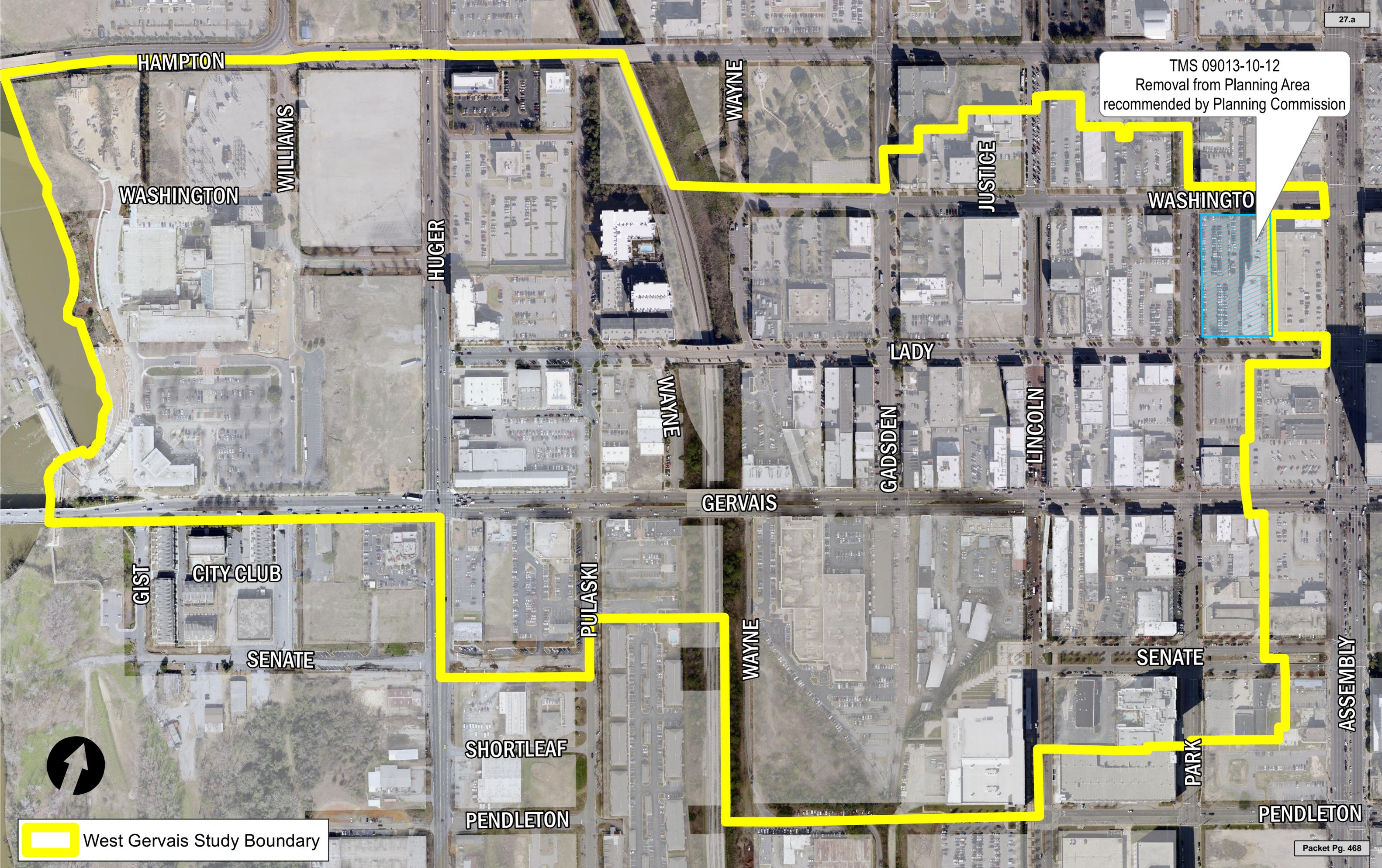
Staff recommends that City Council adopt of the West Gervais District Plan be adopted as part of the City of Columbia's Comprehensive Plan as written.

PLANNING COMMISSION RECOMMENDATION

The Planning Commission recommends that City Council adopt of the West Gervais District Plan be adopted as part of the City of Columbia's Comprehensive Plan with the removal of 1015 Lady Street, TMS 09013-10-12, which consists of approximately 2.3 acres, from the planning area and recommendations within the document.

TMS 09013-10-12
Removal from Planning Area
recommended by Planning Commission

 West Gervais Study Boundary



HAMPTON

WILLIAMS

WASHINGTON

HUGER

WAYNE

JUSTICE

WASHINGTON

WAYNE

LADY

GADSDEN

LINCOLN

GERVAIS

GIST

CITY CLUB

PULASKI

WAYNE

SENATE

SENATE

ASSEMBLY

SHORTLEAF

PARK

PENDLETON

PENDLETON



West Gervais
DISTRICT PLAN

DRAFT 6.21.16

WEST GERVAIS DISTRICT PLAN

Columbia, South Carolina

2016

ACKNOWLEDGEMENTS

DRAFT 6.21.16

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Prepared for the City of Columbia and the Vista Guild.
Thank you to the citizens who participated throughout the process.

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DRAFT 6/2/20

Introduction

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INTRODUCTION

The West Gervais District planning area, or “The Vista” as it is known locally, is one of South Carolina’s premier arts and entertainment districts. It is also a vital economic and cultural driver in Columbia today.

Once home to a vibrant cotton warehousing industry and railway terminal, by the early 1980's the area had fallen into disrepair and neglect before undergoing the commercial renaissance that continues to this day. This legacy is preserved today in the large concentration of turn of the Twentieth Century structures that make up the West Gervais Historic Commercial District. But, the District's history as a warehousing center also exists in the areas of industrially zoned property and transport-oriented roadways.

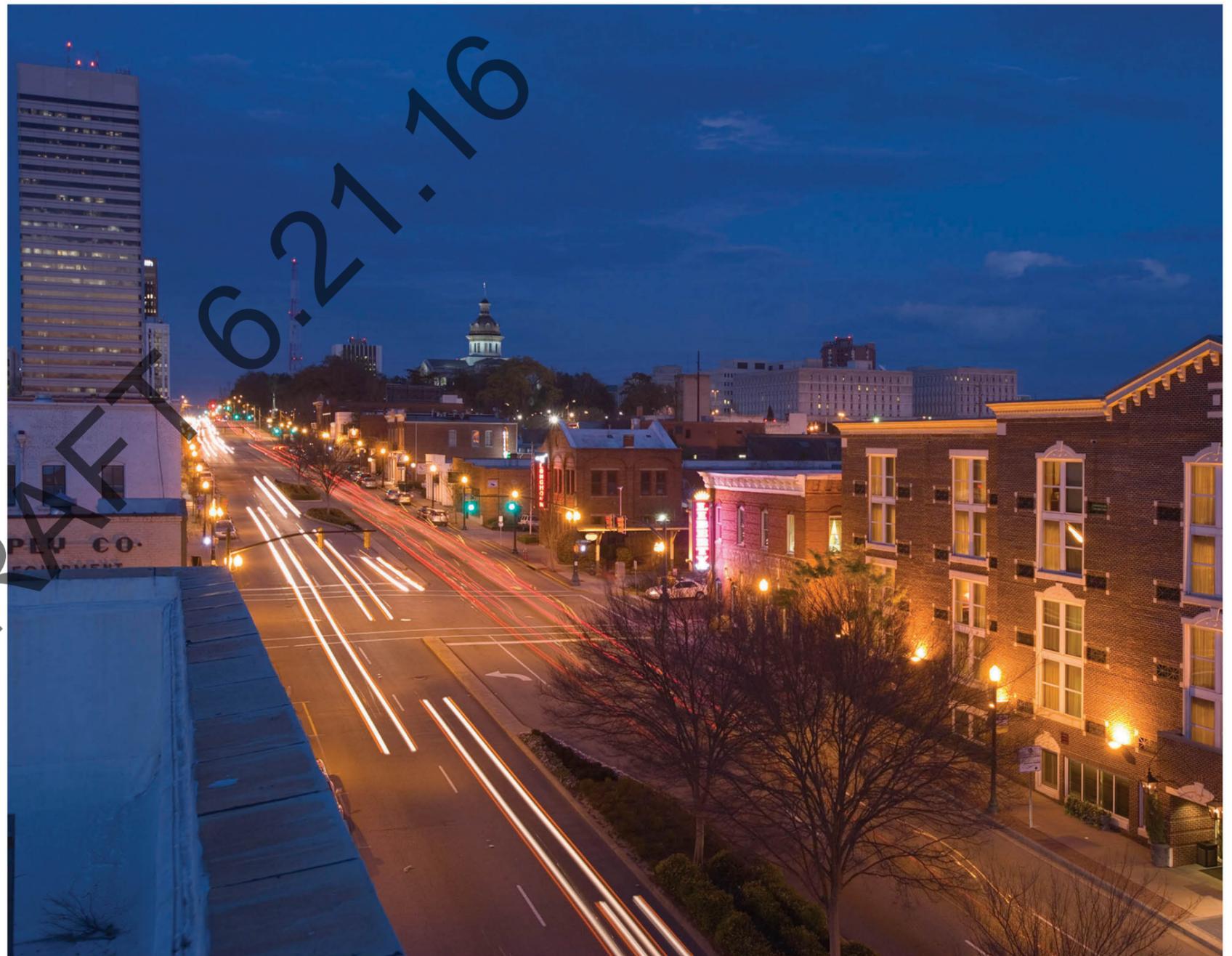
The industrial zoning has been modified through the adoption of overlays over the years to address the incompatibility of the old zoning with the character of the revitalized district. This process has resulted in an increasingly complicated set of land use regulations.

In addition, the success of The Vista's numerous commercial and cultural attractions has created an increased demand for pedestrian connections to provide residents, employees, and tourists quick and easy access in and around the district.

Building on the momentum and excitement for the future that currently exists in the area, the intent of this Plan is to provide land use guidance for both public and private development, thereby ensuring the District maintains its vital economic and unique cultural position in the city and region.

The Plan was created through a public process that brought together residents, business owners, property owners, and policy makers to reach consensus on a vision for the future.

The West Gervais District Plan is a democratic and optimistic document that represents a common vision for the area while being a decision making guide for City staff on a day-to-day basis. It is also a guide for investment in the area by individuals, families, businesses, religious organizations, and non-profit institutions.





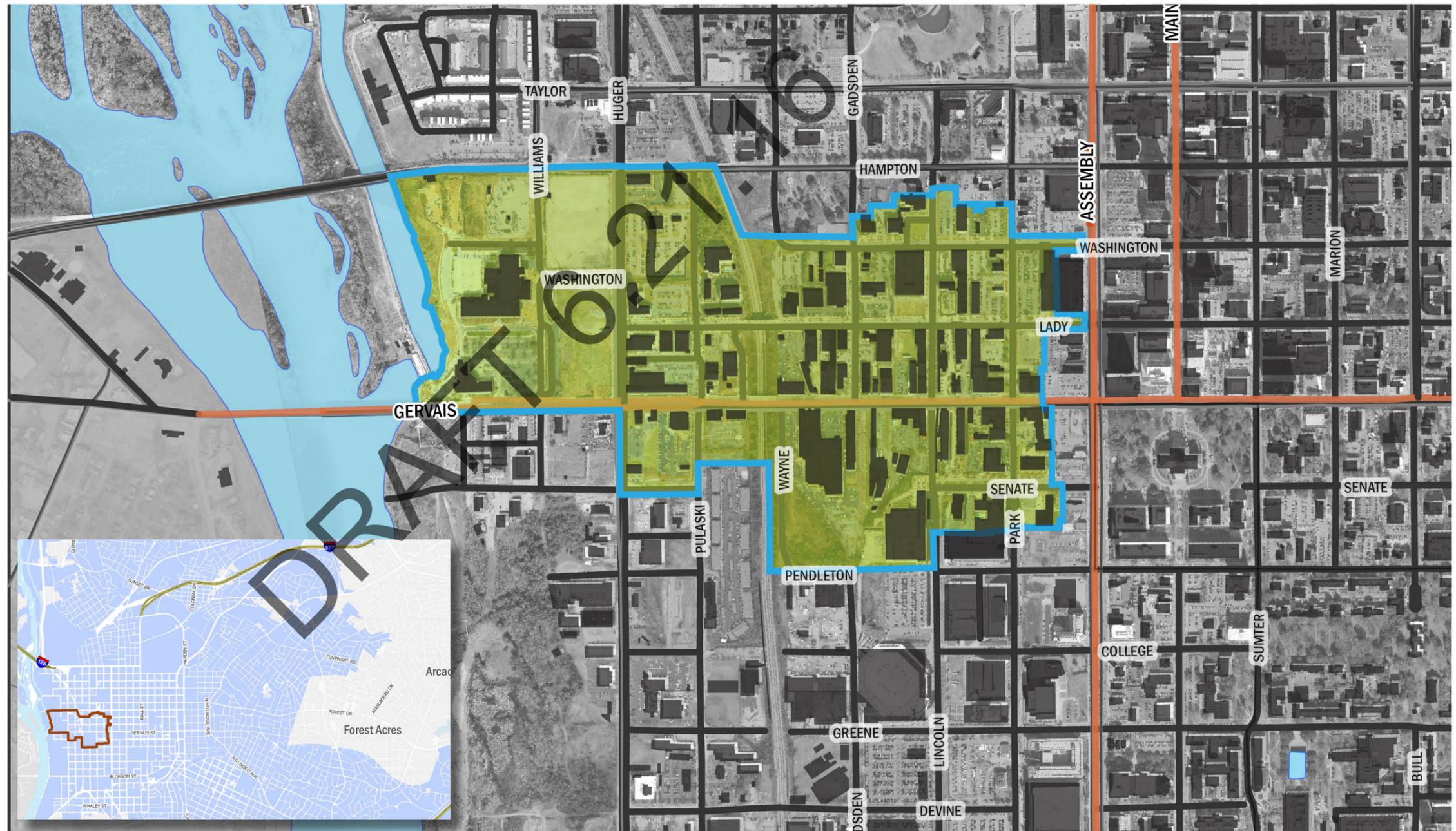
INTRODUCTION

WEST GERVAIS DISTRICT PLANNING AREA

The heart of the Vista was used for this study area, which was defined by the Congaree River to the West and Assembly Street to the East. The planning area is 184 acres, a third of which is land that is publicly-held and under State or City management.

Because of the area's largely commercial and entertainment land uses, there are few permanent residents. Only 382 permanent residents, located in 115 residential units, live in the study area according to the 2010 US Census and staff surveys. Opportunities for housing are rapidly becoming more available, both within and nearby, however these are driven by the housing demands of students and young professionals.

These, and other recent developments, have significantly diminished large vacant properties and adaptive reuse opportunities. However, the area land market remains highly sought after. The next phase of development, already under way, will be infill on existing surface parking lots. This is likely to create tension over the loss of parking as the area transitions to serving residents and employees who live and work within walking distance.



Legend West Gervais District Planning Area



INTRODUCTION

VISION

The West Gervais District Plan is guided by a Vision Statement developed in collaboration with community stakeholders and confirmed by hundreds of participants over the course of multiple public outreach meetings.



The West Gervais District is a mixed-use neighborhood with a coordinated development pattern that celebrates the past through conservation of historic resources and looks to a vibrant future.



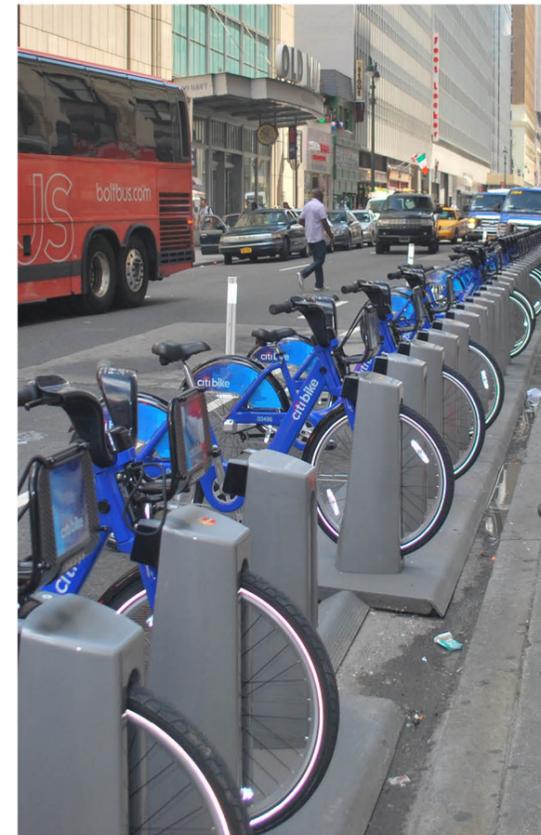
The West Gervais District is a place that provides a mix of transportation choices with a strong commitment to the pedestrian environment; a city neighborhood that has a high level of internal and external connectivity and accessibility with the urban form.



Photo Credit: www.pedbikeimages.org/laurasandy/2009



The West Gervais District is a district that provides a high level of transportation amenities.



The West Gervais District is an urban neighborhood that allows for individuality yet encourages an aesthetic quality that keeps a pedestrian-scaled development pattern, promoting increased retail, entertainment, employment and residential units throughout.

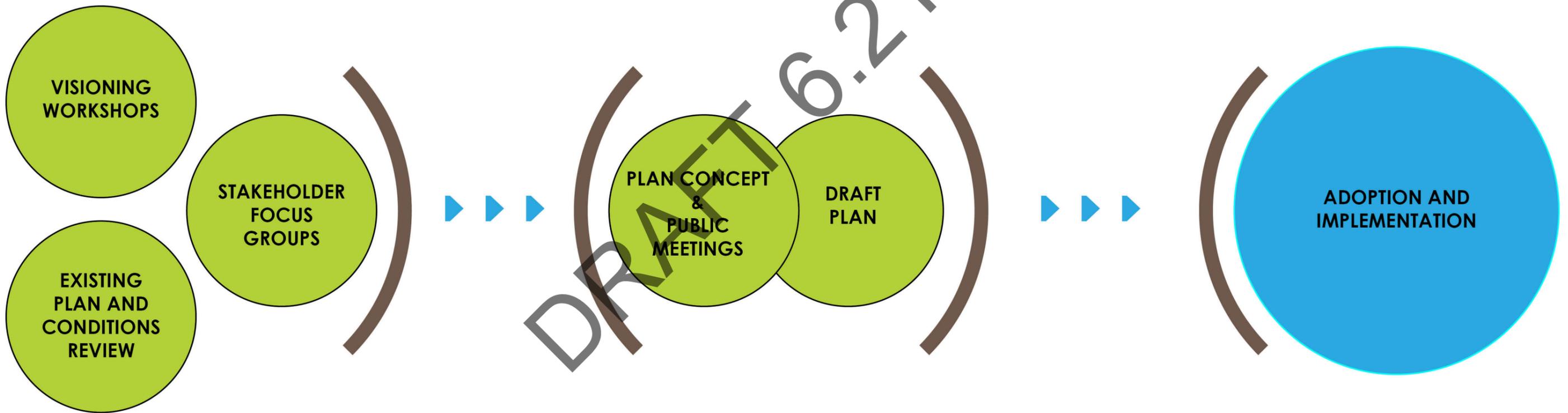




INTRODUCTION

PROCESS

The West Gervais District Plan is the official policy for the future growth and development of the Vista.



PROJECT HIGHLIGHTS

Visioning Workshop with the Vista Guild
 Review of existing conditions by City Planning staff
 Focus Groups with area stakeholders

Public meetings held on Gervais & Lincoln Streets
 Draft concept unveiled at the Columbia Metropolitan Convention Center
 Final Plan preparation by City Planning staff

Planning Commission
 City Council Public Hearing
 City Council 2nd Reading



INTRODUCTION

OUTREACH

The study included a public engagement effort unprecedented for the City of Columbia.

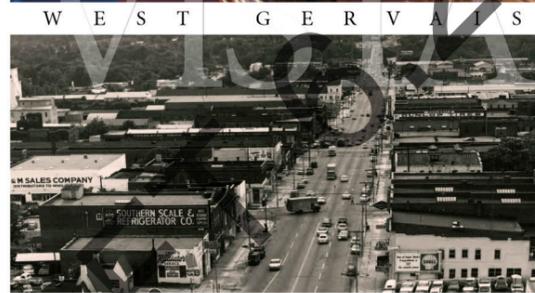
First, a week-long series of focus groups representing the area's wide variety of stakeholders was conducted by City staff. Stakeholder groups included art gallery owners, area hotel and convention center management, property owners, real estate brokers, residents, restaurant operators, retail representatives, and public infrastructure service providers.

The information received during the focus group sessions was crafted into a public survey designed to capture broader community opinions, representative of the West Gervais District's regional significance. This survey was distributed via email to neighborhood groups, posted on the City's website, and offered in hard copy format during public input sessions. Overall, nearly 250 people took the opportunity to register their opinions and ideas.

During this same period, planning staff conducted two public input sessions at key times and locations on Gervais Street. Presentation boards displayed under the historic train canopy in the heart of the District allowed people to vote on a range of urban design intervention choices and historic preservation strategies.

The event was an effort to engage people where they work, shop, or meet others for food or entertainment.

Rather than traditional public input sessions which require people to make special trips during work or late into the evening, this event provided the opportunity for people who may not otherwise participate in formal public meetings to voice their opinions as well as vote on such topics as housing types, potential public spaces, and other preferred development choices for the West Gervais District.





INTRODUCTION

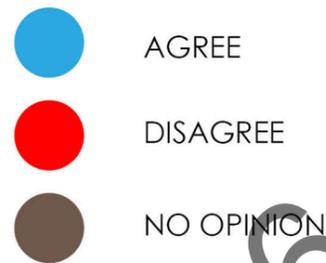
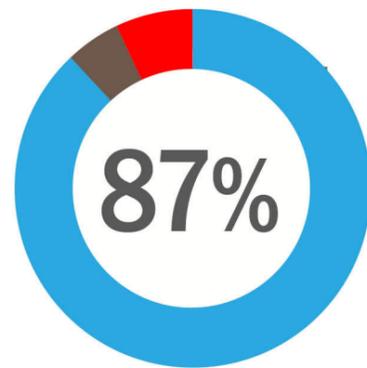
PUBLIC SURVEY

The survey portion of the planning process was compiled from key issues, concerns, and desired development types determined by both focus group participants and planning staff. Surveys were available online for two months and paper copies were also collected at public input sessions. The survey received nearly 250 responses - over 60% from visitors and workers in the West Gervais District. Results showed broad support for more land use variety (particularly retail), denser housing choices, and traffic-calming strategies.

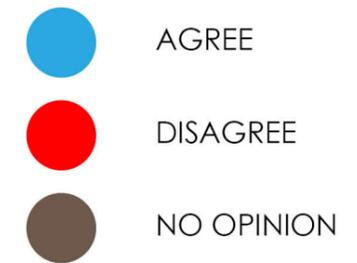
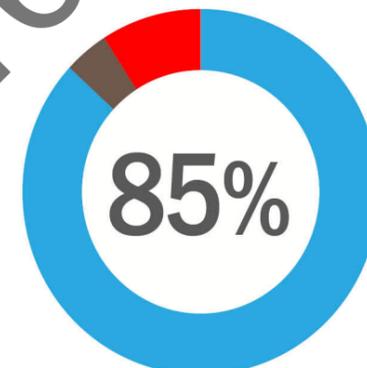
An overarching theme which emerged from this survey was a desire to see the area become more accessible. Better sidewalk connections, slower traffic speeds, and increased space for outdoor dining were supported by over 80% of respondents. There was also strong support for more housing options, provided they do not detract from the area's unique character.

Finally, respondents showed a surprising unawareness of available parking. In an area where surface lot parking spaces can be \$10 on weekend nights, half the participants did not know that the City operates two garages less than two blocks from Gervais Street, suggesting that the concern about parking availability is largely due to a lack of public awareness.

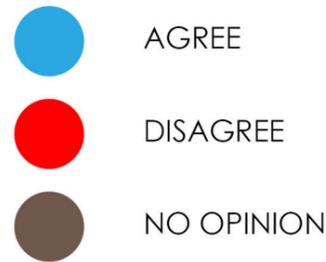
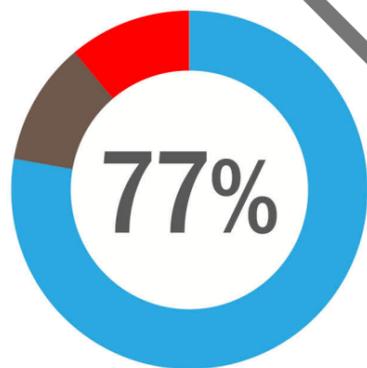
Q I would like more space on sidewalks for outdoor dining options.



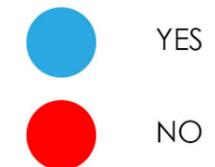
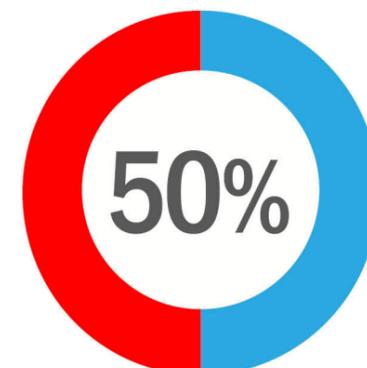
Q Preserving the unique character and architecture of the neighborhood should be a priority.



Q I would support the installation of traffic calming devices within the area.



Q Did you know the Vista has 1,525 parking spaces within two city parking garages?



Plan Context

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The West Gervais District is continually described as having a distinct character. This character has been defined by over 200 years of development and redevelopment with a great deal occurring within the past three decades.

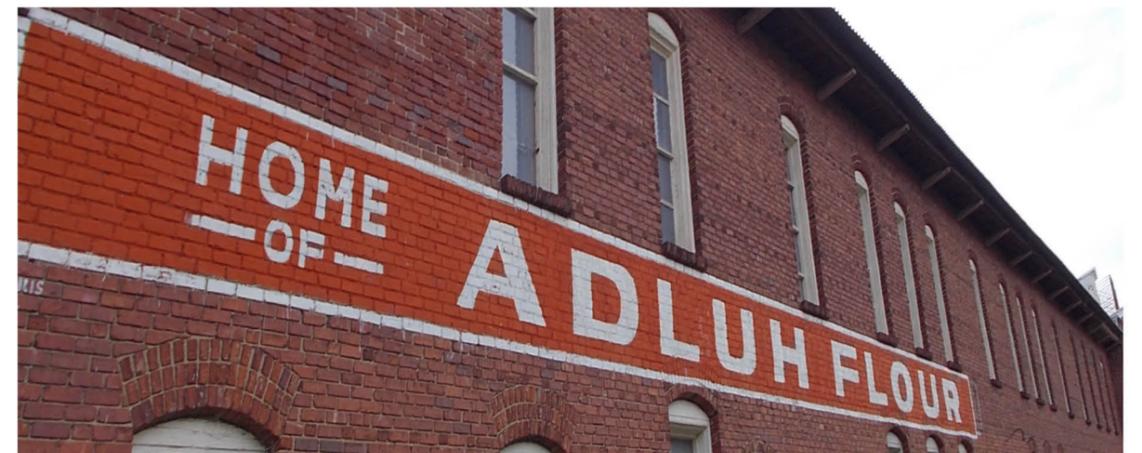
The West Gervais District Plan is intended to build on the success of the recent past while preserving the historic fabric that contributes so much to the area's unique character.

Additionally, several recurring themes emerged from the public outreach phase. The West Gervais District Plan is designed to address the desire expressed for increased walkability, outdoor dining, places to live, and retail shopping choices while maintaining the historic feel of the District. These considerations resulted in the development of plans and recommendations for future land use, connectivity, and the public realm, as well as an update to the existing West Gervais Historic Commercial District Guidelines.

Recent Planning Efforts

Since the West Gervais District Plan effort kicked off, two major City-wide master plans have been adopted by City Council. The first, the Plan Together Land Use Plan, is an update to the Future Land Use element of the City of Columbia's Comprehensive Plan. The second, Walk Bike Columbia, is a master plan for multi-modal transportation improvements in the City. These plans directly affect the West Gervais District and as a result have been integrated into the Future Land Use Plan, Connectivity Plan, and Public Realm Plan recommendations herein.

Throughout the planning process a variety of public participation meetings were undertaken. Once the planning study is reviewed by the Planning Commission they will make a recommendation to City Council by resolution. Once the Plan has been reviewed by City Council, Council will be presented with the opportunity to adopt the Plan as part of the Comprehensive Plan of the City.





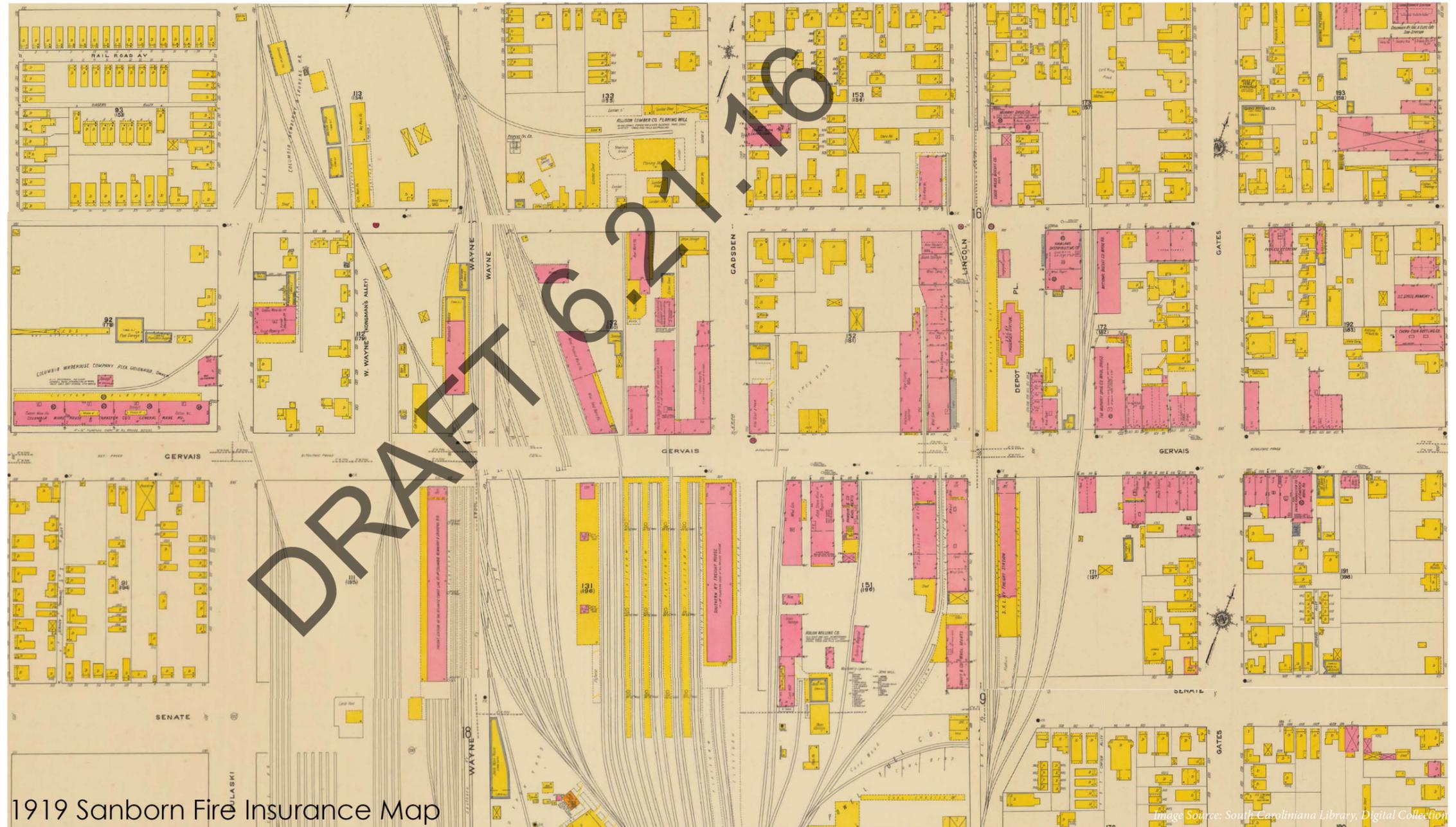
PLAN CONTEXT

HISTORIC WEST GERVAIS AREA

The current development pattern of the West Gervais Area can be traced back to beginning of the 20th Century. The railroad terminals and spur lines between Lincoln Street and Wayne Street interrupt the commerical core of historic brick structures that make up what is today the West Gervais District.

As seen in this 1919 Sanborn Fire Insurance Map, rail dominated the area and drove its development. Brick warehouses, several of which exist today, stored goods and provided employment. A major terminal at Lincoln Street connected Columbia regionally and a dense pattern of largely wood frame residential construction developed.

The effect of this legacy is visible today in the rich stock of intact brick commerical structures, but also in the uneven street pattern between Gervais and Pendleton Streets designed for industrial uses rather than the pedestrian-oriented uses that this plan calls for.



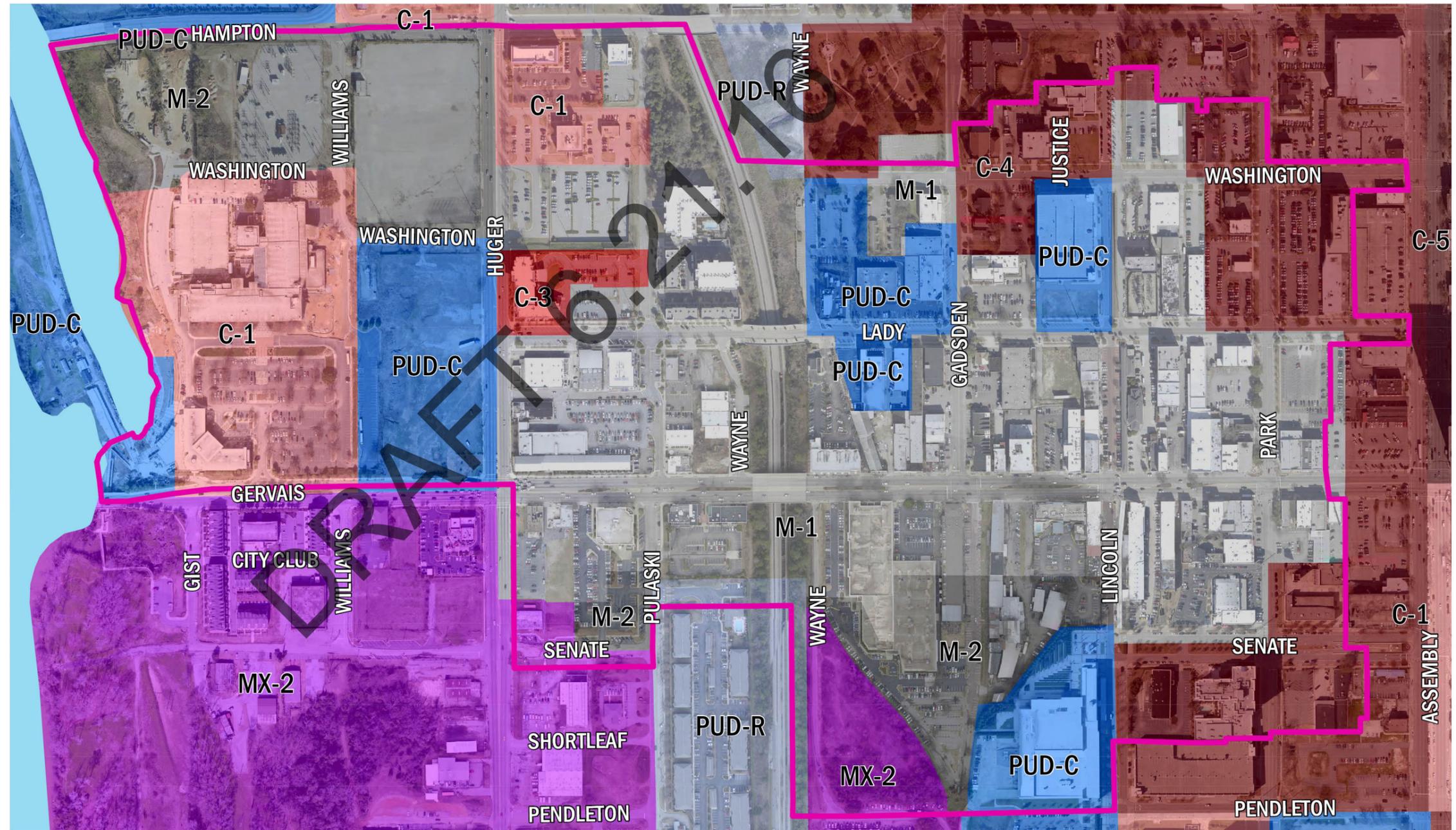
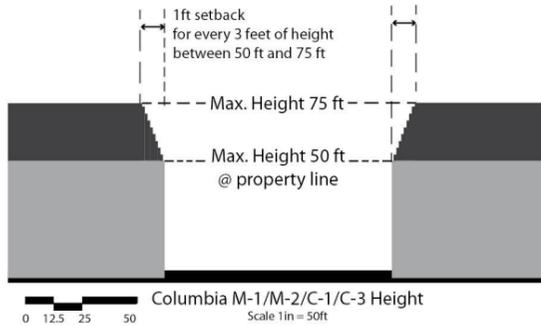
1919 Sanborn Fire Insurance Map

Image Source: South Caroliniana Library, Digital Collection

Legend Brick Building Frame Building

Existing Zoning Districts

As development pressures have increased over the past two decades the regulation of building height has become the source of much confusion and frustration. Several factors currently contribute to this situation. The first has to do with the base zoning in the area. Despite the relatively small amount of land area involved and the area's primary function as a commercial/entertainment district, the majority of the District is currently zoned for industrial (M-1 or M-2), with smaller portions zoned C-3 (General Commercial) and C-1 (Office and Institutional). These classifications allow for a maximum height of 50 feet at the lot line. This can increase to 75 feet if the building façade steps back one foot for every three feet of height (see diagram below). It should be noted that surrounding the study area are the MX-2 (Innovista) and C-4 (City Center) Zoning Districts, which do not have a height limit except when adjacent to the West Gervais Historic Commercial Overlay District.

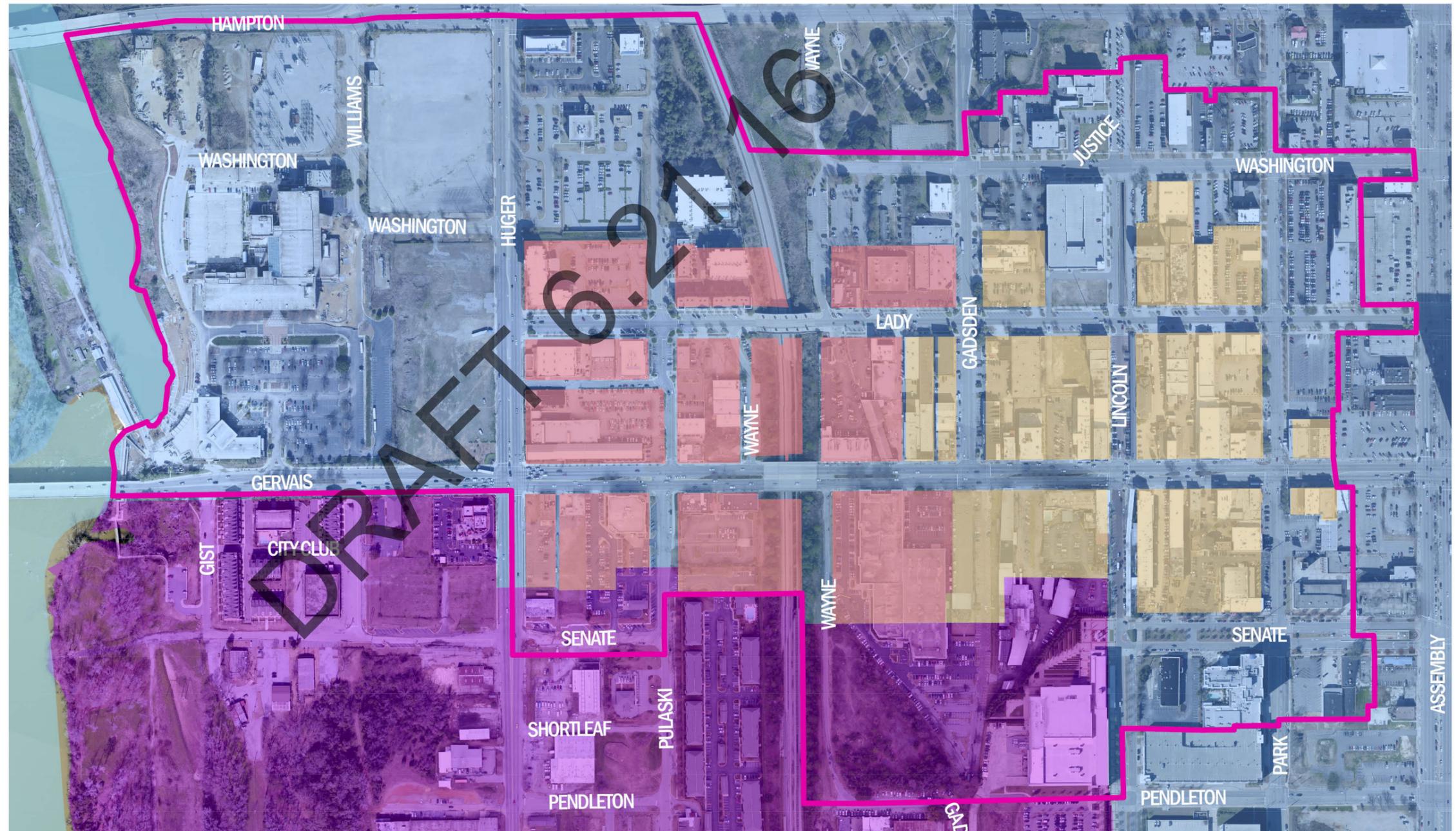


Legend	MX-2	PUD-C	C-3	M-1	West Gervais District
	C-4	PUD-R	C-1	M-2	



Existing Design & Preservation Overlays

Finally, the West Gervais District is subject to three separate design district overlays – the West Gervais Historic Commercial District, the City Center Design/Development District, and the Innovista Design District. The boundaries of these districts often follow parcel lines rather than the street network. This creates an irregular pattern that has led to neighboring developments being subject to different and some times conflicting regulations.

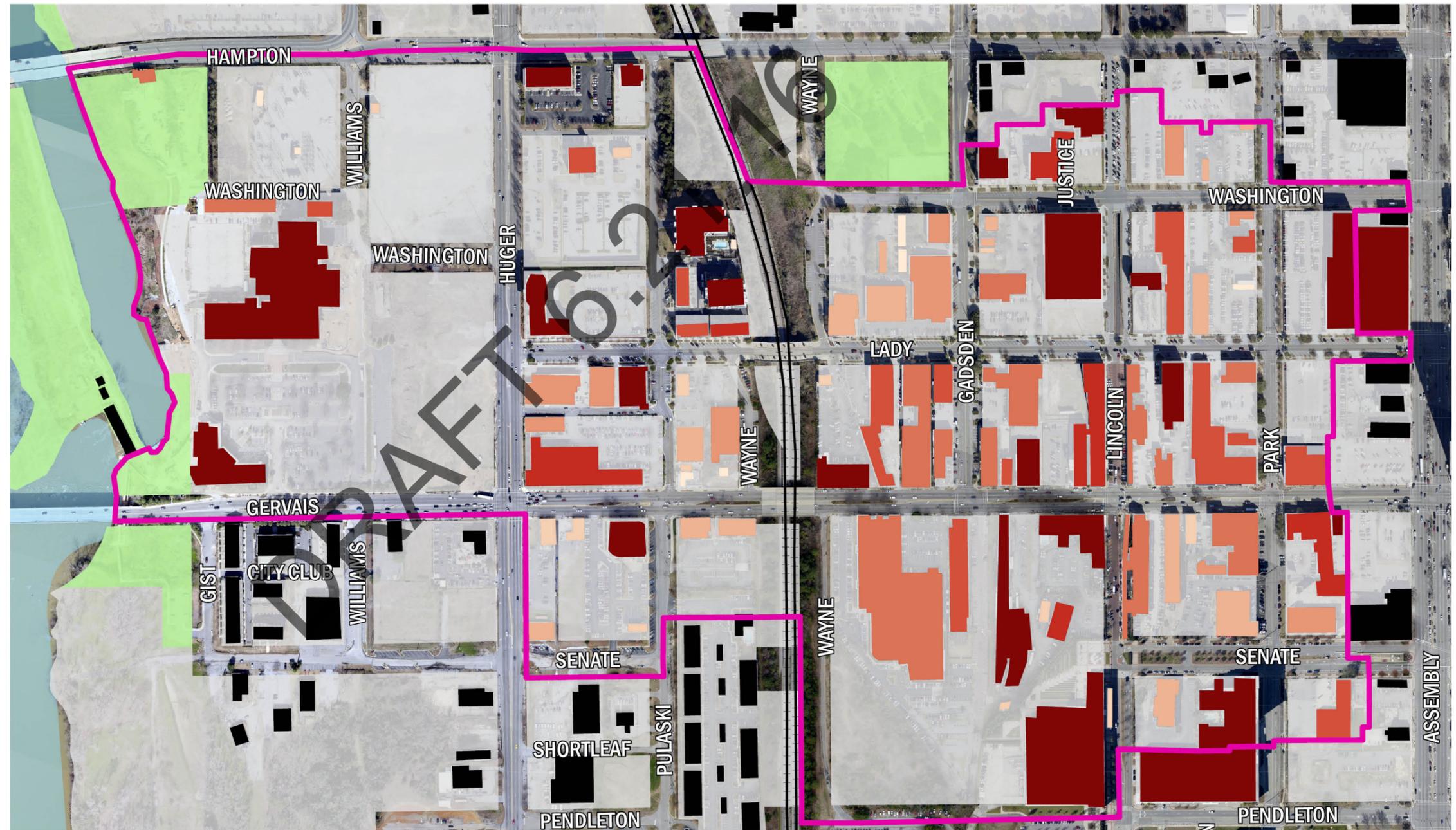




PLAN CONTEXT

Existing Building Heights

Not surprisingly, the uneven zoning, multiple design and preservation overlays, and large variation of existing lot sizes (as a legacy of industrial use) has resulted in a variety of building heights. Outside the largely intact historic core of two and three story structures between Park and Lincoln Streets, the area has seen four, five, and even six story buildings constructed in the last decade. As developable land becomes more scarce in the West Gervais District the pressure to increase building heights above six stories will only increase, making the need for coherent regulations and guidelines even more pressing.



Future Land Use

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PLAN COLUMBIA

The Plan Columbia Land Use Plan designates the entirety of the West Gervais Area as an **Urban Core Regional Activity Center (UCAC-3)**. This land use classification envisions future land uses that support intense, mixed use developments within the urban context.

The West Gervais District Plan is designed to support this designation while providing more specific guidance for new development within the District.

The Plan Columbia Land Use Plan lists the following use types for areas classified as UCAC-3:

Primary Types

- Small to Extra Large Business/ Employment (incl. High-rise, excl. Flex)
- Multi-family Medium and High-rise Mixed-use

Secondary Types

- Multi-family Medium to Highrise
- Small to Large Flex
- Civic/Institutional
- Parking Structures

Tertiary Types

- Single-family Attached
- Cemeteries & Mausoleums
- Parking Lots



UCAC-3 Urban Core Regional Activity Center

These developments are intense mixed-use business districts within the urban context. They may be adjacent to the central business district or found in outer areas of the city. They are primary destinations for work and play which attract people from more than a 20-mile radius or drive distance. The uses are built within the urban blocks and grid, and whole scale redevelopment of blocks or adaptive reuse of existing structures may occur in these areas. Their scale is large and may take up multiple city blocks. Their primary use is as a business district but high-intensity residential in mixed-use buildings is also appropriate.

BUILDING TYPES/LAND USES

Primary Types	Secondary Types	Tertiary Types
<ul style="list-style-type: none"> • Small to Extra Large Business/ Employment (incl. High-rise, excl. Flex) • Multi-family Medium and High-rise Mixed-use 	<ul style="list-style-type: none"> • Multi-family Medium to High-rise • Small to Large Flex • Civic/Institutional • Parking Structures 	<ul style="list-style-type: none"> • Single-family Attached • Cemeteries & Mausoleums • Parking Lots

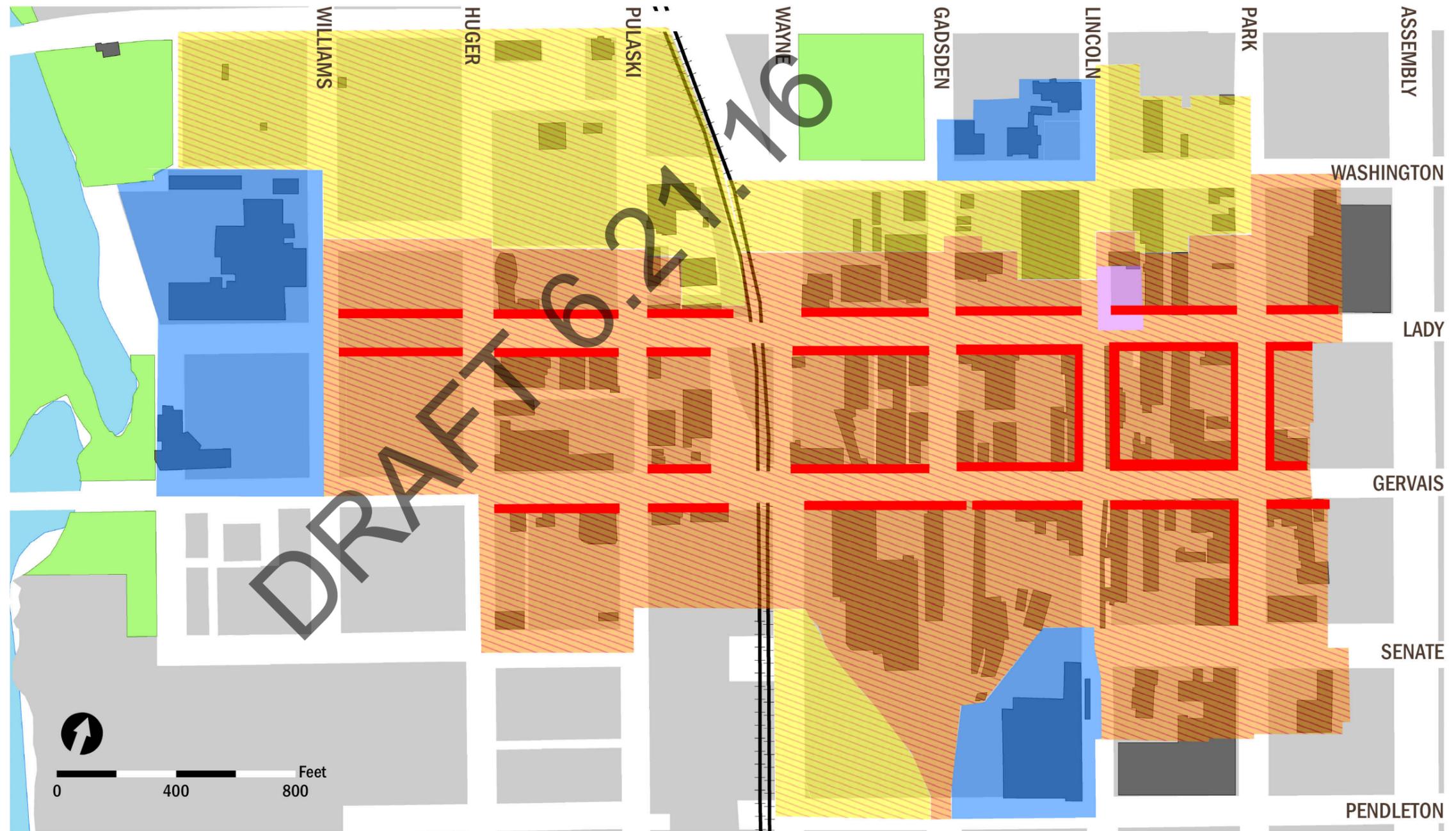


FUTURE LAND USE

West Gervais District Future Land Use

Columbia's downtown is currently experiencing high rates of residential and commercial growth, and the West Gervais District has been a focal point of much of this development. Two new hotels (one completed, one approved), multiple redevelopments, and dozens of new restaurants opening within the past year speak to this trend. Additionally, over 1,000 new housing units are under construction within blocks of the study area. With this in mind, the Future Land Use Plan allows for mixed-use flexibility of commercial and residential developments throughout the area.

The future land use vision for the area is for a mixed-use district, with commercially-focused uses concentrated between the Gervais and Lady Street corridors, and residentially-focused uses surrounding a commercial core. The strong preference for pedestrian accessibility of the area will be encouraged through Ground-Floor Activity Zones throughout the commercial core to promote active street life, enabling the area to receive the many associated economic, social, and environmental benefits of a vibrant urban core.



Legend

Mixed Use - Commercial	Institutional	Ground-Floor Activity Zone	Building Footprint
Mixed Use - Residential	Industrial	City Park	Tax Parcel



FUTURE LAND USE

ZONES

GROUND FLOOR ACTIVITY ZONES

To achieve and encourage the types of mixed use developments envisioned by the West Gervais District Plan, Ground Floor Activity Zones are designated along and between Gervais and Lady Streets. These zones feature commercial uses that generate high volumes of pedestrian traffic and activity. An important goal is to generate uses and interest in the District that make it active 24 hours a day, 7 days a week. Examples of recommended commercial uses are retail, restaurants, hotels, and certain office types and services.



MIXED-USE RESIDENTIAL ZONES

To support the high volume of commercial retail this Plan is calls for Mixed-Use Residential Zones are designated primarily off Washington and Hampton Streets. These zones should be primarily dense, residential developments (16 dwelling units per acre or greater) while allowing for some supporting commercial uses to encourage street-level activity. The Plan envisions minimum building heights of two floors.



MIXED-USE COMMERCIAL & OFFICE ZONES

Reserved primarily for the West Gervais Historic Commercial District, Mixed-Use Commercial & Office Zones are recommend to be comprised of of predominantly commercial uses that add to the District's existing entertainment focus by encouraging the development of employment corridors, thereby reinforcing West Gervais' function historically as a workplace as well as a commercial destination.





West Gervais District Proposed Height Districts

During the public meeting phase of the planning process, twelve ways building height could potentially be regulated were presented, with examples from Columbia, Charleston, and other areas. These examples include solely using the base zoning to govern height (as is currently the practice) or adding a series of overlays, enabling a more site-specific approach. Support has been expressed throughout the process for the development of simple and easily understood height regulations for the area. As Charleston has shown, the adoption of height overlay districts has proven to be a highly effective solution. The proposed height of a minimum of 30 feet and maximum of 80 feet with a 25 foot setback is similar to Charleston's 30/80 District.

The West Gervais District Plan proposes a Height Overlay Area within a defined boundary as proposed in the adjacent map. There would also be an eight foot setback zone along Huger to bring unity to the street from the Innovista Standards South of Gervais. Explanations of these proposed overlay districts and zones are detailed in the adjacent maps and diagrams.





FUTURE LAND USE

HEIGHT DISTRICTS

1 HEIGHT OVERLAY

Along Gervais, Lady, and other marked streets, there shall be a zoning overlay district which further governs height.

1.1 8' SETBACK AREA

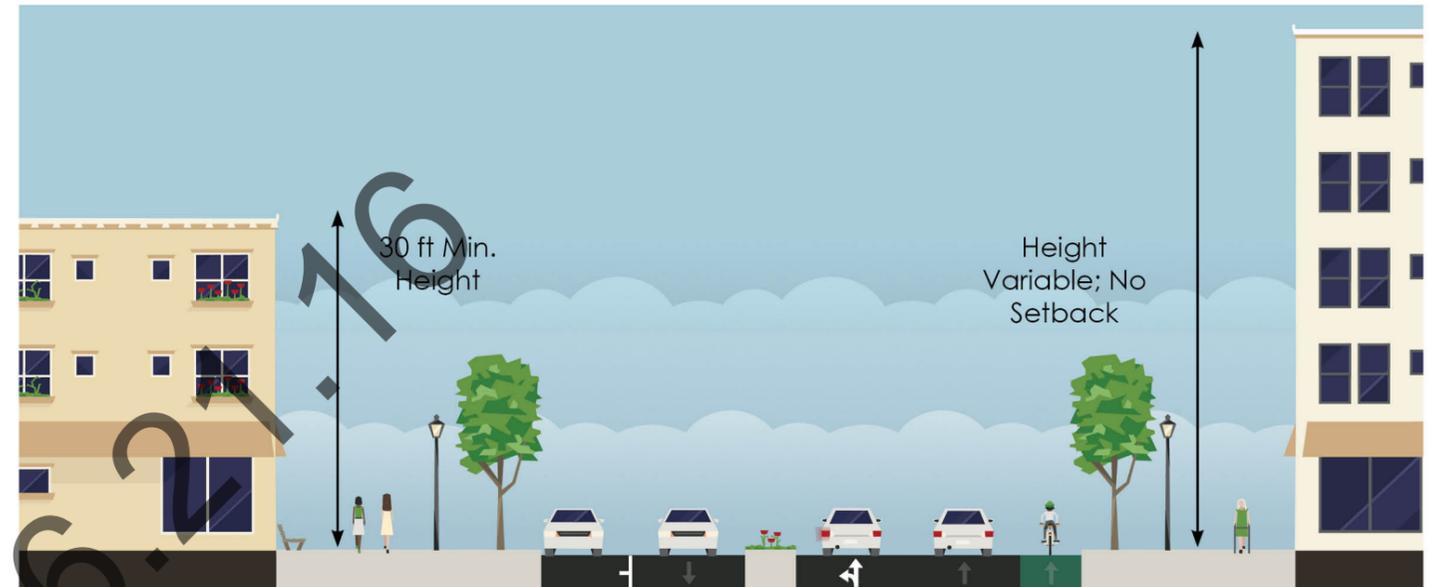
These areas are located along Huger Street continuing the eight foot setback design element found in Innovista to the South. The eight foot setback is designed to encourage a well-defined public realm and provide a buffer for pedestrians. This zone should be used for wider sidewalks, trees, and other amenities.

1.2 25 FT UPPER FLOOR STEP-BACK AREA

Along Gervais, Lady, and other marked streets, there shall be a 30' minimum height and a 55' maximum height at the property line. To exceed 55', the building must step-back at least 25', after which it can be up to 80' in height.

2 BASE ZONING AREAS

These areas would have the height of a building determined by the base zoning district requirements.



1 HEIGHT OVERLAY: MINIMUM HEIGHT

2 BASE ZONING AREAS

DRAFT



1.1 HEIGHT OVERLAY: 8' SETBACK AREA - HUGER

1.2 HEIGHT OVERLAY: 25' STEP-BACK

Connectivity

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WALK BIKE COLUMBIA

WALK BIKE COLUMBIA is a City-wide Plan for a network of complete streets, policies, and programs which will greatly increase the safety and comfort of pedestrians. These measures help to encourage walking or cycling between destinations rather than driving, particularly for short trips.

PEDESTRIAN IMPROVEMENTS

The pedestrian improvements recommended in the Walk Bike Columbia Plan include both sidewalk and intersection improvements. Only six intersections within the City limits were rated as the highest priority need; three of these are within or directly adjacent to the study area.

BICYCLE IMPROVEMENTS

The proposed bicycle network includes several types of on-street facilities, including on Gervais and Lady Streets. These East-West facilities will provide a needed connection for cyclists between the North-South connecting Vista Greenway and the Three Rivers Greenway.

BICYCLE PARKING

Fundamental to creating a bicycle friendly area is providing bike parking. Of the locations identified in City-wide user surveys, the top two were Gervais Street and The Vista. Bike parking can be provided by private businesses and by the City in garages and bicycle corrals.

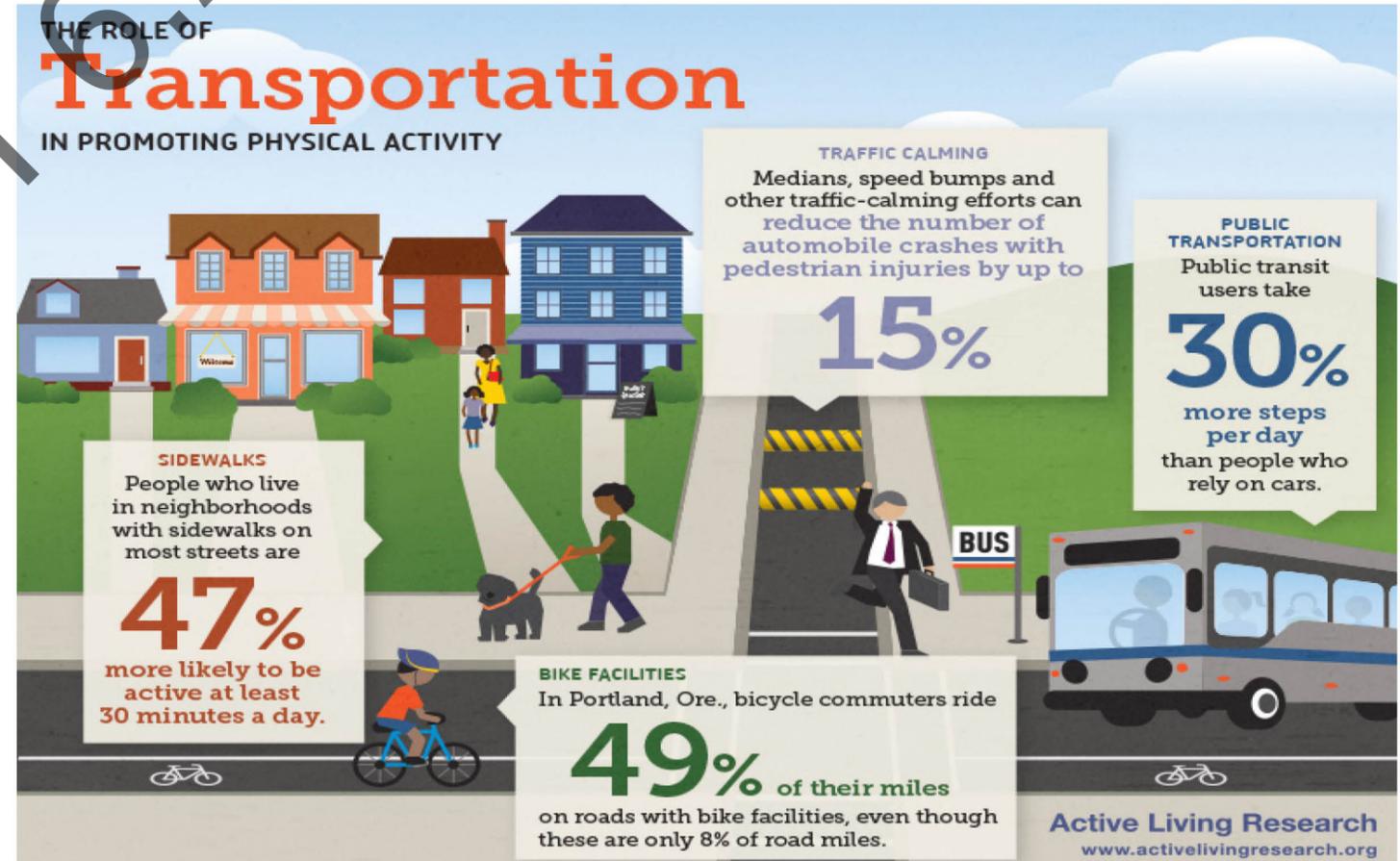
BIKE SHARE

The plan also recommends a 25-station system concentrated in the City Center, with four locations in the West Gervais District. This proposed system would provide another choice for short trips within the District, between The Vista and Main Street, and provide access to the Vista Greenway.



WALK BIKE COLUMBIA

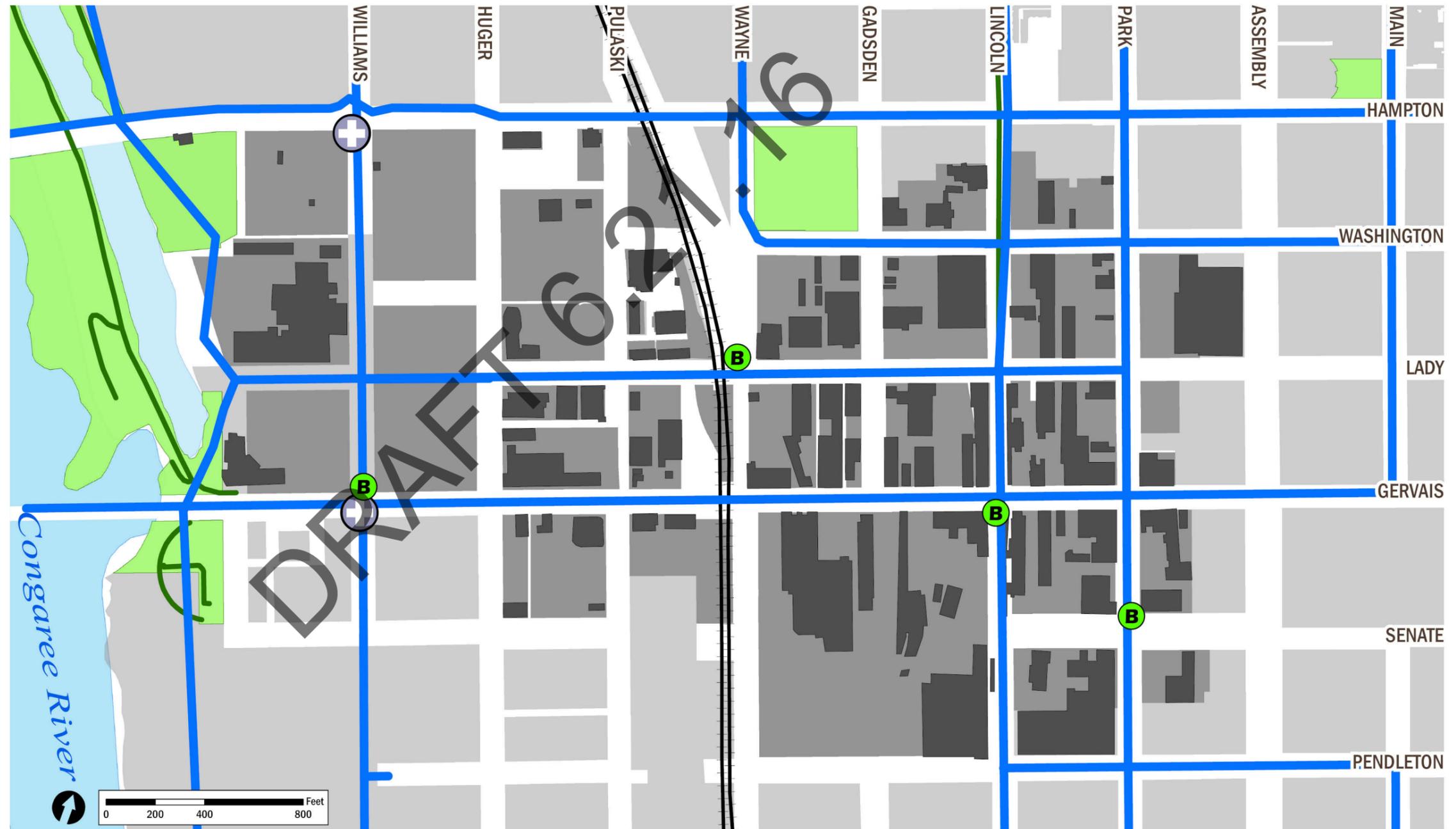
COLUMBIA, SOUTH CAROLINA | PEDESTRIAN & BICYCLE MASTER PLAN



Proposed Bikeway Improvements

The West Gervais District is a mixed-use area, and continues to build on its diversity of uses with several recent residential projects adding to the existing entertainment, retail, and regional draws such as the convention center and the museums. As the District builds the critical mass of residents necessary to support neighborhood retail, pedestrian connectivity becomes even more essential. By providing safe and easy routes for pedestrians and bicyclists particularly for the short trips within the District- vehicular congestion is reduced benefiting all users.

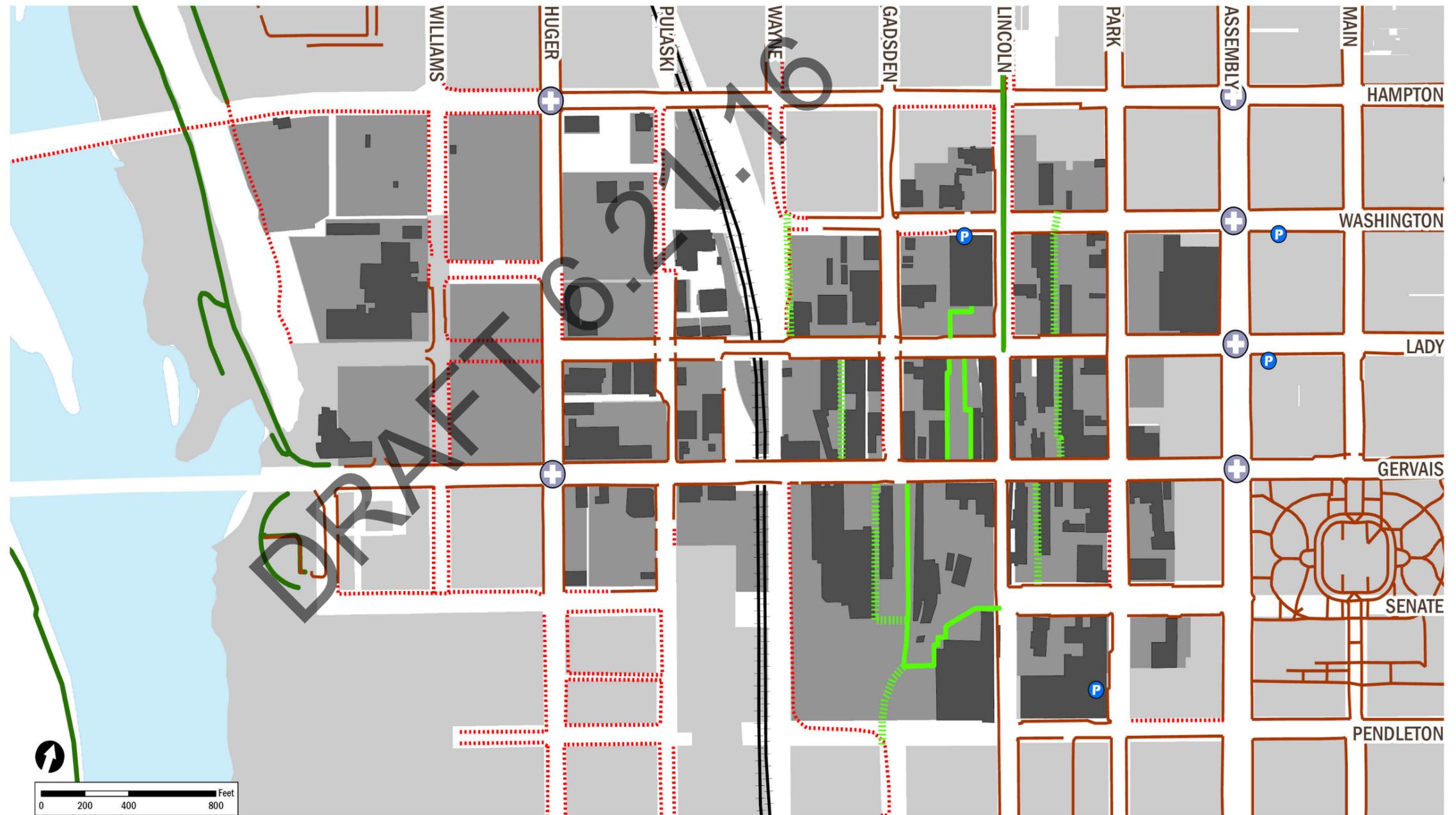
The challenges to connectivity in this District include high-volume, high-speed corridors such as Huger, Assembly, and Gervais which are difficult to cross for pedestrians and cyclists. Additionally, the large blocks which make up Columbia's street grid can be cumbersome to traverse to some destinations on the next street over.



Proposed Pedestrian Improvements

Beyond the obvious infrastructure needs such as sidewalks and crosswalks, other elements are imperative to ensuring our urban streets are safe, attractive and vibrant spaces for pedestrians. Providing safe and comfortable facilities for people with disabilities is an integral element of true connectivity. Shade trees provide comfort in the long hot summer months and provide a buffer between pedestrians and auto traffic. Site furnishings, street lighting, and public art contribute to the pedestrian realm and attract use.

Currently, a couple of mid-block alleys exist within the District which allow for greater connectivity. These are heavily used and several more are currently being planned in conjunction with private developments. These alleys provide an opportunity to create attractive public spaces for pedestrians to use and inhabit throughout the day and evening; the design of these spaces is critical to ensure user safety and comfort.



- | | | | | |
|---|---|---|---|---|
|  Existing/Planned Trail/Greenway |  Existing Sidewalk |  Existing Pedestrian Cut-Through |  Existing City Parking Garage |  Building Footprint |
| |  Proposed Sidewalk |  Proposed Pedestrian Cut-Through |  Proposed Intersection Improvement |  West Gervais District |

IMPROVEMENTS

PEDESTRIAN INFRASTRUCTURE

In order to improve the safety and the comfort of pedestrians in the District, a number of improvements are recommended, including signalized crossings with continental crosswalks, wide sidewalks buffered from traffic by a tree zone, and updated curb ramps with detectable warning surfaces. Traffic calming measures, such as bulb-outs, have been implemented in some areas.



BICYCLE FACILITIES

The long-term vision for bicycle connectivity in the District includes a cycle track on Gervais Street. This is an on-street bicycle lane that is separated from traffic by a buffer zone and a physical barrier such as bollards or a curb. In the shorter term, recommendations include a bicycle boulevard on Lady Street, a buffered bike lane on Park Street, and a bicycle boulevard on Lincoln Street from the Vista Greenway South. Bicycle parking is also an essential element in providing a truly bicycle friendly environment.



BIKE SHARE

The bike share recommendations in the Walk Bike Columbia Plan include a 25 station system with four of those stations in the West Gervais District. The entire system is focused in the core of the City, as they are most effective in providing a choice for short trips. The West Gervais District is a strategic location for bike share stations and use because of its popularity as an entertainment district and its proximity to the Three Rivers Greenway, the Vista Greenway, and Main Street.



Public Realm

DRAFT 6.21.16

ESSENTIALS

OUTDOOR DINING AND PLAZAS

Whether a public plaza or a restaurant patio, providing spaces for people to rest and inhabit at various times of the day creates an inviting and lively atmosphere for the District. Seeing others relaxing and enjoying themselves is contagious and encourages more of the same.

WAYFINDING

As a primary entertainment district with regional destinations, the West Gervais District is continuously inhabited by new visitors. Providing legible, attractive pedestrian kiosks consistent with the City's Wayfinding Master Plan provides an opportunity for branding throughout the District and beyond.

SITE FURNISHINGS

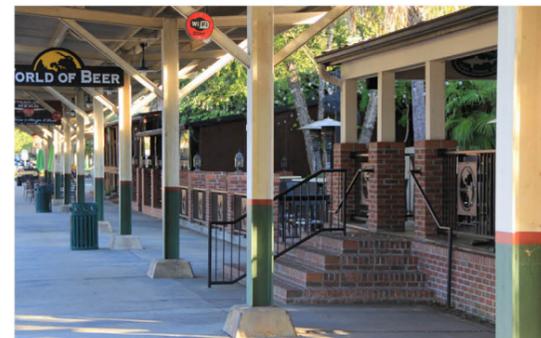
Street lights, benches, trash receptacles, bicycle racks, and other furnishings add style and continuity to the District. The design of site furnishings can help define the District along the streets and also in public plazas and alleys. The West Gervais District has traditional site furnishings to complement the historic architecture.

SHADE

Columbia's mild climate makes it a great city for outdoor activities. With six months of warm to extremely hot weather, shade is an critical part of the public realm that can make a difference between a space being comfortable and unbearable. The trees and shade structures enhance the District immensely.

PUBLIC ART

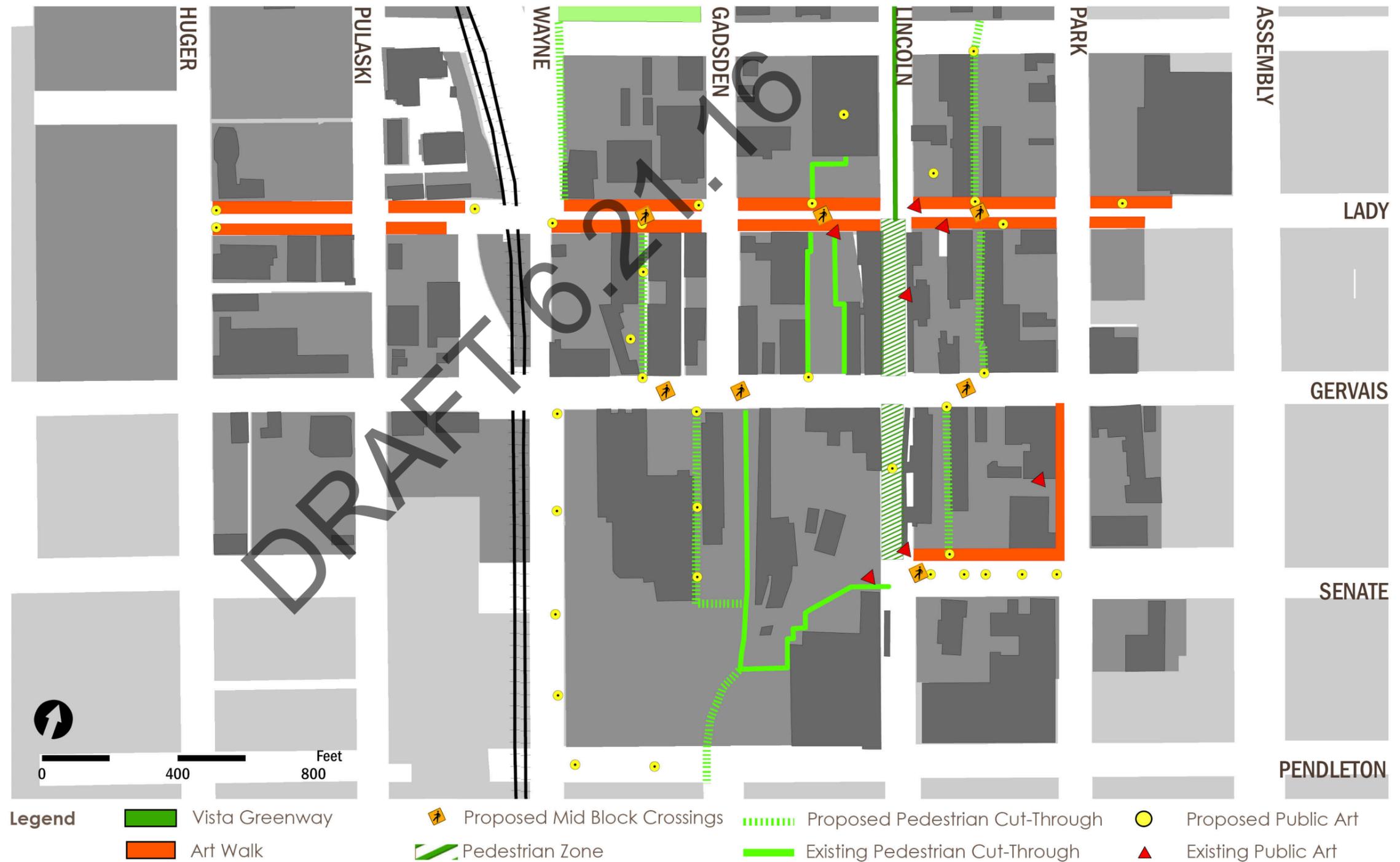
In addition to historic buildings, public art can define what is unique about a place and draw people to it. The West Gervais District has a history of local art studios and galleries and celebrates with art-related events throughout the year. There are several pieces of public art within the District and many opportunities for more.



West Gervais District Public Realm Plan

One of the primary character-defining elements that survey respondents want to see more of is interactive public space within the District. Some of the positive comments have to do with outdoor dining and public art. Having safe, comfortable spaces that are attractive and inviting throughout the District has immeasurable benefits. These spaces provide opportunities for interaction, public art, performances, or simply places to relax after a day of shopping or a bike ride. More people occupying the District's public spaces make it a safer place, and the vibrancy of street life is a direct benefit to the businesses in the District as well.

As within the larger City center, the streets of the West Gervais District are the primary public spaces. In many cases however, the sidewalks are too narrow to accommodate some of the desired activities that activate public space. There are a variety of ways to accommodate these activities; the installation of greenways, parklets, and public art can enhance and activate pedestrian spaces.



West Gervais District Pedestrian Zone

One of the primary items that was discussed by survey respondents and those attending public meetings was more space for outdoor activities such as dining, busking, and special events. Upon analysis of the area it was clear that widening sidewalks and reducing travel lanes may be difficult, especially on streets with only two lanes of traffic, thus other options were explored.

Many communities are embracing outdoor space and looking at and implementing pedestrian zones. A pedestrian zone is not permanently closed to other modes of transit, but will typically limit certain types of transit at various times of the year or week. Within the US there are a number of successful streets designed for pedestrians travel as the main transit mode. These include: State Street in Madison WI which allows transit but prohibits cars; Downtown Crossing in Boston which prohibits cars only during the day; and many streets within New York City. Other examples include streets which are limited to pedestrian travel only in summer months (Montreal) or only on Sundays (Toronto).

As the Vista becomes more utilized by pedestrians, sidewalks and other public spaces will become crowded and burst at the seams. Based upon data gathered in the Fall of 2015, Gervais, Lincoln and Park have some of the highest pedestrian counts within the downtown area of Columbia. These pedestrian counts are sustained from the morning rush, to lunch, to the commute home and into the evening entertainment hours. On weekends, Friday and Saturday night pedestrian counts increase greatly within this area.

One of the key elements of this Plan is connectivity within the District and to places beyond the District. The data on customers in restaurants, bars, and other entertainment places and pedestrian count data show that the study area is full of people; the question is how we can invite people to stick around and enjoy the community beyond dining. Without a key public square in the District, the concept of a temporary pedestrian area is an option to explore. Suggested pedestrian street segments could be along Lincoln from Senate to Gervais, Lincoln from Gervais to Lady.



West Gervias District Lincoln and Lady Plaza

One of the primary character-defining elements that survey respondents want to see more of is interactive public spaces. Currently the District does not have a major public space. Memorial Park is within the District, but the programming of this space has been developed in a ceremonial pattern which does not attract interactive uses.

Review of existing plans, context, and connectivity within the District highlights Lincoln Street as a primary North-South connector between the City center and the Vista. Lincoln Street in the future will be the link between the Vista Greenway and the Rocky Branch Greenway, becoming a key urban greenbelt around the central portion of the City. Foundation Square and the Vista Greenway Phase 2 opened in the summer of 2016 as the first step in the linkage of this greenway system.

The District clearly does not have a defined public space other than the traditional street right-of-way. The opportunity for a plaza at the trail head of the Vista Greenway would be a key element in meeting the

economic, social, and connectivity goals of this Plan. Thus a key recommendation of this Plan is the development of this area as a well-developed, flexible public space.

Over the years there have been many proposals for development of a plaza at the trail head of the Vista Greenway. Each of these plans calls for a flexible space, high quality materials, a water feature, opportunities for unique lighting features, and most importantly a space for public gathering and links to other parts of the City.



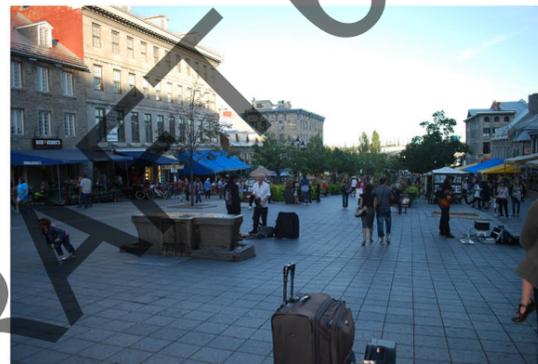
Flexible seating locations in the shade



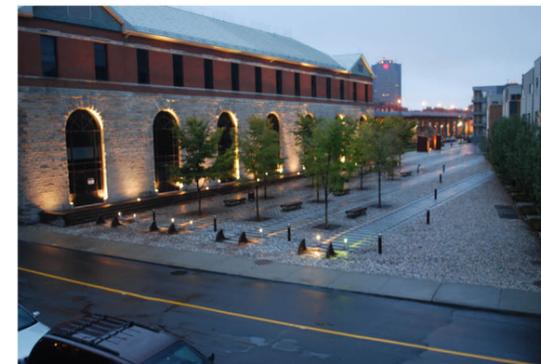
Seating options in the sun



Places for children



Flexible places for busking, strolling, and watching



Honoring the railroad / night lighting



Night lighting



Options for commerce



Seating in the sun and shade; interactive water feature



Vegetation

West Gervias District Open Street Opportunities

Across the nation there is a movement occurring referred to as Open Streets. This is an initiative to close streets to automobile traffic so that people may use them for walking, bicycling, dancing, playing and socializing. As of the Spring of 2016 there are over 100 documented initiatives in North America.

The concept of Open Streets dates back to 1965 when Seattle, Washington created its Bicycle Sundays event. This was followed by similar events in NYC in 1966, San Francisco in 1967, and Ottawa in 1970. In 1974 Bogotá Columbia held its first Ciclovía event (Ciclovía means "Bike Path").

Open Streets events nationwide generally promote public health, environmental, social, and economic goals. The Open Streets Project lists

the following initiatives:

- Encourage physical activity and allow participants to reimagine their communities as places to walk and bike for transportation
- Improve the air quality of cities by removing cars from the road
- Provide a novel type of public space that helps people meet and make social connections, thereby allowing individuals, community organizations, and political leaders to build relationships
- Bring thousands of people to frequent businesses and fuel local economies



Durham NC Summer Street Event 1 mile Closed loop
Image: PBIC Image Library 2010 Laura Sandt

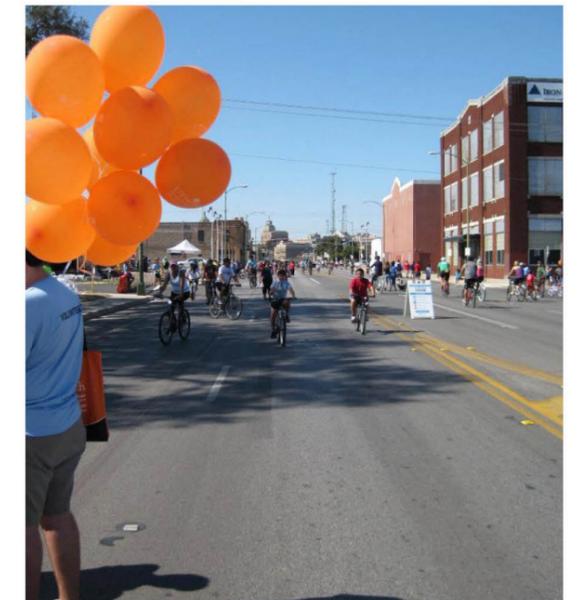
What are Open Streets?

Open Streets events temporarily close streets to automobiles so that people may utilize them for healthy and fun physical and social activities. Open Streets events should not be confused with block parties, or street fairs. Open Streets events are designed to actively encourage physical activity, increase community engagement, and build support for transportation choices.

www.openstreetsproject.org



LA Ciclovía
Image: PBIC Image Library 2010 Ryan Snyder



San Antonio Ciclovía Event 2011
Image: PBIC Image Library Julia Diana

Sunday, November 1, 2015 from 11 a.m. until 3 p.m., the Market Common was full of people for Myrtle Beach's first Open Streets event called Ciclovía. This was the first Ciclovía in South Carolina.





CASE STUDIES

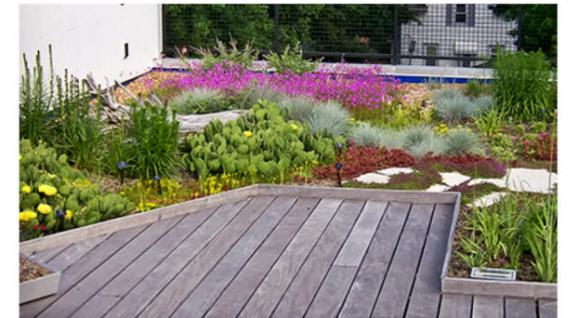
GREEN ALLEYS

Columbia's downtown was not designed with service alleys, however the District has a number of alleys which provide mid-block pedestrian access and, in some cases, back-of-house service access. Cities such as Chicago have implemented a Green Alley Program adopting best management practices to encourage improved surfaces for drainage and reflectivity, inclusion of plant material, dark sky lighting, and other tactics to improve alleys city-wide.



GREEN ROOFS

In a part of the City with prime real estate values, businesses and developers often cannot afford to provide outdoor spaces on developable land. However rooftops throughout the District provide interesting opportunities for additional open space. Roofs can also be designed to accommodate plants and even trees, providing increased energy efficiency, decreased stormwater runoff, and improved aesthetics. Cities throughout the Country offer various incentives for green roofs, such as tax breaks and Floor Area Ratio (FAR) bonuses.



PARKLETS

San Francisco pioneered the parklet movement to take advantage of on-street parking spaces as a way to provide additional public spaces for people. Many cities have created parklet ordinances, including Miami, Phoenix, and Raleigh. Typically a parklet is sponsored, designed, and permitted by an independent group, must meet certain design criteria, be covered by liability insurance, and must be removable and renewed annually. The West Gervais District is an excellent area for a pilot parklet program.



Recommendations

DRAFT 6.21.16



RECOMMENDATIONS

IMPLEMENTATION

General Recommendations

The Plan recommends multiple policy and physical recommendations to guide these implementation efforts. In developing these recommendations, the issues and opportunities presented earlier within the document were considered and incorporated as appropriate. Supporting each recommendation are implementation strategies, time frames, examples and resources and the entity responsible for implementation.

Time frames have been organized into four categories with each time frame having a specified time as follows:

- Immediate - approximately 12 months
- Short-term - approximately 1-2 years
- Mid-term - approximately 3-5 years
- Long-term - approximately 5-10 years or beyond

Plan recommendations have been divided into Policy Recommendations, Land Use Recommendations, Public/Private Investment Projects, Urban Design and Placemaking Recommendations, and Mobility Recommendations.

1.1 Adopt the Plan

Adopt the West Gervais District Plan, allowing it to serve as the framework to guide land use decisions, policy decisions, and Capital Improvement Plan (CIP) decisions for the area and set the stage for commencing improvements in the area. The Plan should be updated every ten years to maintain its relevancy and allow for flexibility given changing market conditions and city and community priorities.

Responsibility: City of Columbia Planning & Development Services, City of Columbia Planning Commission, City of Columbia Council.

Timeframe: Immediate

1.2 Modify Historic District Guidelines

Encourage adoption of revised West Gervais Historic Commercial District and West Gervais Historic Protection Area District guidelines to address preservation of existing resources and promote compatible development patterns.

Responsibility: City of Columbia Planning & Development Services, City of Columbia Design/Development Review Commission, City of Columbia Council.

Timeframe: Immediate

1.3 Modify Zoning

Encourage support of the Plan Together Zoning and Land Development Ordinance rewrite to allow for quality urban development.

Responsibility: City of Columbia Planning & Development Services.

Timeframe: Short-term

1.3.1 Zoning Height Standards

Encourage creation and adoption of height plan/standards with a step back similar to those adopted by Charleston SC for a portion of the regional activity center (UCAC-3) generally from Senate, the River, Washington and Park streets within the Study area as recommended by the Plan Columbia Land Use Plan and this document.

Responsibility: City of Columbia Planning & Development Services.

Timeframe: Short-term

1.3.2 Mixed-Use Zoning

Encourage the creation of one or two mixed-use districts that promote a mixture of commercial and retail uses on the ground floor and residential and office on upper floors. Emphasis of uses on upper floors should be office within the core of the District (Gervais) and residential on the perimeter of the District (Lady/Washington) through the code rewrite noted in 1.3 above.

Responsibility: City of Columbia Planning & Development Services.

Timeframe: Short-term



RECOMMENDATIONS

IMPLEMENTATION

Land Use Recommendations

Housing

Encourage a mixture of additional residential development throughout the area.

2.1.1 Density Bonuses

Develop programs and policies for density bonuses within prescribed building envelopes to incentivize higher density development and encourage enclosed parking. Such policies could allow for an increase of floor area ratio when parking is provided below grade, or within parking garages of at least two levels.

Responsibility: City of Columbia Planning & Development Services.

Timeframe: Short-term

2.1.2 Mixture of Housing Types

Develop programs and policies that promote a mixture of housing types to address workforce housing and family size units. Such policies and regulations could allow for increased floor area ratio when dwelling units meeting affordable housing definitions

Responsibility: City of Columbia Planning & Development Services, Community Development.

Timeframe: Short-term

2.1.2 Live Downtown Incentives

Develop incentives with area employers to encourage living near one's place of work. Successful programs often provide forgivable loans towards the purchase of the primary residence, providing allowance of funding to the cost of renting units for the first and second years, allowances for renewal of leases, and matching grant programs for exterior improvements to buildings. For an example of similar programs refer to <http://www.detroitlivedowntown.org/incentives/> or <http://www.downtownonthego.com/live/live-close-to-work>.

Responsibility: Community Development, Economic Development Departments.

Timeframe: Short-term

Retail

Develop programs and policies to encourage a larger variety of retail options within the lower levels of existing and new developments, while maintaining office, hotels, and residential uses on upper floors.

Responsibility: Economic Development Department, Vista Guild, Columbia Development Corporation.

Timeframe: Short-term

Office

Develop programs and policies to encourage a variety of creative professionals such as those within the industries of art, design, computer programming, engineering, business finance and similar to locate or remain within the District.

Responsibility: City of Columbia Economic Development Department, Vista Guild, Columbia Development Corporation.

Timeframe: Short-term



Housing Options

Public/Private Investment Recommendations

Incentivize new development including mixed use projects and public infrastructure as recommended using a variety of financing options as allowed within South Carolina.

Responsibility: Economic Development Department, Columbia Development Corporation

Timeframe: Long-term

3.1.1 Tax Increment Financing (TIF).

Under State Law, municipalities and counties can create tax increment financing districts. Once an improvement is identified, the base property value is determined. Public and private investments will increase the value of the property over the base. Taxes are then levied on the new increment, and used to pay debt service for the bonded improvements. Consideration of mini TIF projects could be undertaken. An example of such as project would be a one or two parcel TIF for a hotel where the increment would be used for development of public improvements within the right of way and development of a public plaza.

Responsibility: Columbia Development Corporation, Vista Guild, Planning and Development Services.

Timeframe: Mid-term

3.1.2 Brownfield Grants

Since 1998, brownfield assessment grants from U.S. Environmental Protection Agency are available to private entities planning to develop "real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant." Cleaning up and reinvesting in these properties takes pressures off of undeveloped, open land and both improves and protects the environment. The goal of the program is to leverage brownfields funding to attract private-sector investments which transform economically underutilized regions of the city into areas where high-skilled people live, work and play.

Responsibility: Columbia Development Corporation.

Timeframe: Long-term

3.1.3 Infrastructure Grants.

Infrastructure grants are project specific, and can be underwritten by either local or state agencies. The amount of the grant is directly related to the capital investment. The cost recovery schedule is based on property taxes. This implementation strategy is common for the installation of: curb



RECOMMENDATIONS

IMPLEMENTATION

and gutter, sidewalks, underground utilities, and signalization.

Funding for such Grants can come from multiple sources:

General Obligation Bonds are municipal bonds with fixed interest rates and terms. These bonds can be used for a variety of improvements, and typically offer a lower interest rate than would be available privately.

Revenue Bonds: Revenue Bonds use fees from services to repay debt. Common forms of revenue bonds are for water/sewer improvements, airports, and toll roads.

Low Interest Loans: Low interest loans are underwritten by a public entity to provide debt for specific projects. These loans typically offer lower interest rates than would be available in the private market.

Responsibility: Planning and Development Services, Parks, Administration, Engineering.

Timeframe: Mid-term

3.2 Boost investor confidence in the area to attract non-residential development.

Consider Business Improvement Districts (BIDs). These districts are defined geographies where parcels are assessed for a service to improve or maintain the area. Landscape maintenance and security are two examples of such services. To pay for the services, a special assessment tax can be

levied in relation to the benefit a property receives from a defined service and/or the size of the parcel. A demonstrated commitment from existing property owners to fund such extra services often boosts potential investors' confidence in investing in the area.

Responsibility: Columbia Development Corporation and Vista Guild.

Timeframe: Short-term

3.3 Continue Momentum

Define and participate in catalyst projects that will continue the momentum that has been built over the past 20 years with public and private investment.

Responsibility: Columbia Development Corporation, Vista Guild, Planning and Development Services, Engineering, Public Works, Economic Development, Community Development and Administration.

Timeframe: Long-term

3.4 Public Plaza / Gathering Places

There are many opportunities within the West Gervais District on both public and private property to create gathering spaces. A priority should be the creation of a pedestrian plaza at the head of the Vista Greenway at Lincoln and Lady. Other areas that should be improved concurrent with development include those behind the Convention Center, parallel to the railroad, along

the river, within the Kline and SCE&G properties, and the right-of-way on Park Street South of Gervais.

Responsibility: City of Columbia Economic Development Department, Vista Guild, Columbia Development Corporation, Planning and Development Services, Parks and Recreation, Engineering, and Public Works.

Timeframe: Mid-term



Spaces for gathering

4 Urban Design and Placemaking Recommendations

4.1 Accessibility and Programing of Convention Center Open Space

This area at the North side of the property and just West of the current vehicle drop off area has great opportunities that are underutilized. The space would be an ideal pedestrian connection to potential development to the West. It could also be a great venue for a Jazz in the Park series modeled off successful events at the National Gallery of Art Jazz in the Garden, Milwaukee East Town Association Jazz in the Park, New Orleans Jazz in the Park or many other similar venues.

Responsibility: Convention Center and Vista Guild.

Timeframe: Mid-term

4.2 Public Art Walk

Develop a multi-use trail along the East side of the railroad tracks from Greene Street to Blanding Street. This multiuse trail would be a continuation on of the Innovista Multiuse trail that is located on the east side of the railroad tracks South of Greene. This area should emphasize public art at key locations and have gathering spaces as well as active street/trail frontages. Connectivity of this trail to Lady Street and the Vista Greenway will provide important connectivity throughout the District. The High Line in New York City would be a precedent. <http://www>.

thehighline.org/

Responsibility: One Columbia , Vista Guild, Private Development, Columbia Development Corporation, Parks and Recreation Department, Planning and Development Services.

Timeframe: Mid-term/ Long-term

4.3 Night Time Illumination

Night time illumination has been found to contribute to the value of sites and enhance the night time economies of cities and business districts. Such lighting does not need to be bright or intensive but rather can be subtle and designed to have minimal glare. Funding for a plan, as well as funding for installation and long term maintenance will need to be explored and examined. Refer to BID recommendations for potential funding opportunities.

4.3.1 Public Art Illumination

Develop a night time illumination plan for the District with emphasis on lighting for public art/sculpture as well as lighting for holiday and festival events.

Responsibility: Vista Guild, Public Works, Planning and Development Services, Columbia Development Corporation, One Columbia.

Timeframe: Long-term



RECOMMENDATIONS

IMPLEMENTATION

4.3.2 Building Illumination

Develop a night time illumination plan for the Vista with emphasis on illumination of specific facades or architectural features of specific structures.

Responsibility: Private Development, Vista Guild, Public Works Department, Planning and Development Services Department, Columbia Development Corporation.

Timeframe: Long-term

4.4 Trash

Currently within the District most commercial business rely on curb side carts that are placed along public sidewalks. Pick up currently occurs during the evening hours. These carts are unattractive, have an odor, and juices that get tracked and create dirty sidewalks. A coordinated solution for garbage collection for commercial development within the West Gervais District should be examined and considered.

Responsibility: Vista Guild, Public Works Department, Municipal Solid Waste Division, Planning and Development Services, Traffic Engineering.

Timeframe: Immediate

4.5 Wayfinding

The City of Columbia developed a Wayfinding Master Plan in the early 2000s. Portions of this plan have been implemented while other elements have not. It is recommended that this plan be revisited and elements such as kiosks should be considered for funding throughout the District.

Responsibility: Vista Guild, Public Works Department, Columbia Development Corporation, Planning and Development Services Department.

Timeframe: Mid-term

4.6 Connectivity to Memorial Park, Finlay Park, Riverfront Park, and Convention Center Plaza

The West Gervais District has some great existing public spaces within a 10 min walk from the intersection of Gervais and Lincoln. These include the Convention Center upper and lower plazas, Vista Greenway trail head, Memorial Park, and Finlay Park. The Riverfront Park is a 15 + min walk from the District. These spaces are not seen as integral to the districts. Programing activities within these spaces and providing a higher concentration of office, retail and residential uses around these spaces will allow these valuable resources to be better integrated into the area. In addition, connectivity and infrastructure enhancements will provide

better access to these areas (see mobility section below).

Responsibility: Economic Development Department, Vista Guild, Private Development, Columbia Development Corporation, Planning and Development Services Department.

Timeframe: Mid-term

4.7 Found Space – Through Other Enhancements

Within urban environments the smallest urban spaces can contribute greatly to the area; found open space can come in a variety of forms. In 2012 the City and Vista Guild installed bump-outs that enhanced pedestrian crossings along Gervais, shortened the travel distance of pedestrians, and provided additional greenspace. Similar opportunities should be explored as infrastructure is built, rebuilt and developments are planned. Found spaces should be considered for each public and private development and should include the following, as well as opportunities that may not be listed:

- Bump Outs
- Streetscapes
- Outdoor Dining
- Mid-Block crossings
- Parklets
- Green Alleys
- Green Roofs

Responsibility: Economic Development Department, Vista Guild, Public Works Department, Stormwater Management Division, Engineering Services Department, Private Development, Columbia Development Corporation, Planning and Development Services Department

Timeframe: Mid-term

4.8 Outdoor Dining

Outdoor dining is increasingly becoming a common design element within open spaces of popular urban commercial and residential districts throughout the Nation and Columbia. The West Gervais District has some significant challenges with accommodating such amenities due to the width of sidewalks within the area. As sidewalks and streets are redesigned, consideration shall be given to the reallocation of public space for other uses such as outdoor dining.

Responsibility: City of Columbia Economic Development Department, Vista Guild, Public Works, Forestry, Planning and Development Services, and Traffic Engineering.

Timeframe: Mid-term

4.9 Green Alleys / Railroad Spur Pedestrian Enhancements

Within this Plan there are specific recommendations for using and enhancing abandoned

railroad spurs for pedestrian and connectivity opportunities. A program for green pedestrian alleys including standards and funding opportunities should be developed. Many case studies exist in cities throughout the country from Washington, DC to Chicago and LA. Funding for such projects might include private funding, BID or Vista Guild funds, Stormwater Management Grants and Funds, or a combination of those. Such projects can provide for better connectivity and economic vitality in a business district.

The development of these green alleys should be coordinated with the unified development code and required at the time of redevelopment of properties.

Responsibility: Vista Guild working with private developers/railroad ownership, Public



Night time building illumination



RECOMMENDATIONS

IMPLEMENTATION

Works Department, Engineering Department, Stormwater Management Division, Planning and Development Services Department, Columbia Development Corporation.

Timeframe: Mid-term

4.10 Mid-Block Crossings

Within this plan there are specific recommendations providing for better connectivity. Given Columbia's "famously hot" status, pedestrians often seek and use the shortest routes to and from a location. When this occurs pedestrians can often be found in areas that are not typical such as mid-block conditions etc. In many areas such as Lady Street and Washington Street, mid-block connections should be encouraged, particularly at locations that will connect existing and future pedestrian alleyways (as noted in 5.12 above). Mid-block crossings along Gervais and other streets will need formal analysis and involvement with SCDOT but should be explored as Gervais street has some of the highest pedestrian counts in the area.

Responsibility: Vista Guild in association with City and State agencies, Public Works Department, Engineering Department, Planning and Development Services Department, Columbia Development Corporation.

Timeframe: Mid-term

4.11 Green Roofs & Green Infrastructure

Stormwater is an ever-increasing area of concern for the area and community. As the density of this area increases, areas for water infiltration diminish. The majority of the area is already impervious, but opportunities and advancements in technology are rapidly developing. These opportunities include green roofs, bio-swaes and similar treatments which can be integrated into new building design or streetscape design, with an end result of a more green and healthier urban environment.

Responsibility: Vista Guild, Public Works Department, Engineering Department, Stormwater Management Division, Planning and Development Services Department, Columbia Development Corporation.

Timeframe: Mid-term



Yield to pedestrian sign - Greenville, SC

5 Mobility

In June of 2015 the City of Columbia Council adopted the Walk Bike Columbia Plan as a component of the City's Comprehensive Plan. This Plan created a long-term vision for walking, biking and transit within the City. This Plan has specific recommendations within the West Gervais District. These recommendations include intersection improvements, bike facilities, and sidewalk improvements designed to work with the Comet. Below is a summary of the types of improvements recommended within the West Gervais District. Maps showing specific recommendations can be found within the Walk Bike Columbia Plan, and are incorporated herein by reference.

Design and implementation of these improvements should adhere to the recommendations of the Walk Bike Columbia Plan.

Pedestrian Improvements.

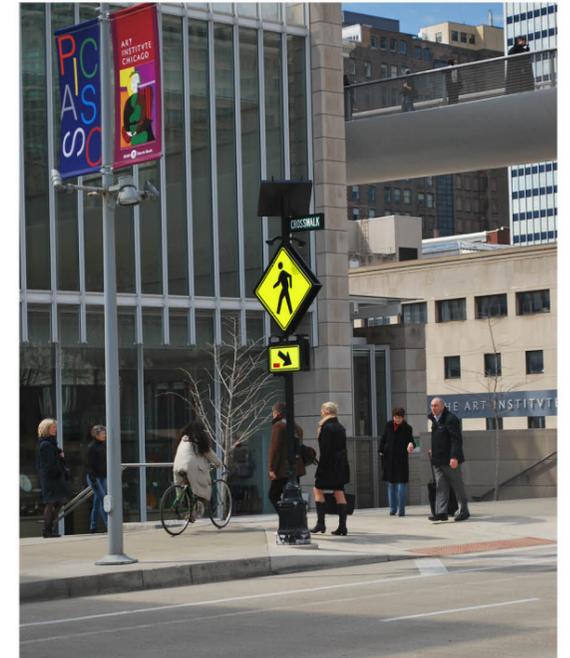
Pedestrian facility types fall into three categories: sidewalk improvements, intersection improvements, and mid-block connections. An overview of these improvement categories is provided below.

5.1 Sidewalks

Sidewalks are the most fundamental element of the walking network, as they provide an area for pedestrian travel separated from vehicle traffic. A variety of consider-



Green alley: impervious pavement, plantings, and night time illumination



Mid-Block Crossing beacon- solar operated



High-quality pedestrian crosswalk markings



Pedestrian area with art integration



RECOMMENDATIONS

IMPLEMENTATION

ations are important in sidewalk design. Providing adequate and accessible facilities can lead to increased numbers of people walking, improved safety, and the creation of social space.

Sidewalks must be more than areas to travel; they should provide places for people to interact. There should be places for standing, visiting, and sitting.

Sidewalks should be thought of as having specific areas for various activities, uses, and have an organized system of design throughout the area.

Sidewalks should contribute to the character of neighborhoods and business districts, strengthen their identity, and be places where adults and children can safely participate in public life.

The following streets are planned to have pedestrian improvements as specified within the Walk Bike Columbia Plan.

Intersection Improvements for Pedestrians

Signalized intersections are typically preferred crossing locations for pedestrians since traffic is typically stopped in one direction and motorists generally expect pedestrians to be crossing. However, vehicu-

lar turning speed, visibility, crossing distance and signal timing can be great barriers for pedestrians on roadways that are designed to primarily accommodate vehicular traffic.

Treatments such as high-visibility crosswalks, bulb-outs/ curb extensions, roadway geometry improvements, adding pedestrian signals, lengthened/leading pedestrian crossing intervals and pedestrian median refuges can improve new or existing intersections for pedestrian users.

Crossings/Mid-Block Connections

A marked/unsignalized crossing typically consists of a marked crossing area, signage and other markings to slow or stop traffic. This can occur at an unsignalized intersection or mid-block, where no intersection exists. The approach to designing crossings at unsignalized locations depends on an evaluation of vehicular traffic, line of sight, pathway traffic, use patterns, vehicle speed, road type, road width, and other safety issues such as proximity to major attractions. When space is available, using a median refuge island can improve user safety by providing pedestrians and bicyclists space to perform the safe crossing of one side of the street at a time.

Mid-block crossings can be an important element within the retailing environment



Parking Lane Enhancement Zone	Edge Zone	Furnishing Zone	Pedestrian Zone	Frontage Zone
<p>The parking lane can act as a flexible space to further buffer the sidewalk from moving traffic. Curb extensions and bike corrals may occupy this space where appropriate.</p> <p>In the edge zone there should be a 6 inch wide curb.</p>	<p>↑</p>	<p>The furnishing zone buffers pedestrians from the adjacent roadway, and is also the area where elements such as street trees, signal poles, signs, and other street furniture are properly located.</p>	<p>The through zone is the area intended for pedestrian travel. This zone should be entirely free of permanent and temporary objects.</p> <p>Wide through zones are needed in downtown areas or where pedestrian flows are high.</p>	<p>The frontage zone allows pedestrians a comfortable "shy" distance from the building fronts. It provides opportunities for window shopping, to place signs, planters, or chairs.</p> <p>Not applicable if adjacent to a landscaped space.</p>



RECOMMENDATIONS

IMPLEMENTATION

of the area particular when considering the climate of Columbia. Columbia has a rather long block length and by strategically providing mid-block crossings the distance pedestrians are required to walk through the area can be lessened, while also allowing for better connectivity points. Strategic placement near mid-block pedestrian alleys will be important to providing connectivity from one public space to another.

While the Walk Bike Columbia Plan does not recommend specific locations for mid-block crossings, it does recommend them as tool to improve connectivity within specific blocks or road segments. Throughout the public input session and observations of pedestrian movement this plan does recommend a number of mid-block crossings be considered in the future.

5.4 Greenways

Utility and waterway corridors often offer excellent shared use path development and bikeway gap closure opportunities. Utility corridors typically include powerline and sewer corridors, while waterway corridors include canals, drainage ditches, rivers, and beaches. These corridors offer excellent transportation and recreation opportunities for bicyclists of all ages and skills. For more information regarding greenways please refer to the Walk Bike Columbia Plan.

Bike Improvements.

Bike facility types fall into two categories: on road and off road improvements. An overview of these categories is provided below.

5.5 Bike Boulevards

Bicycle boulevards are low-volume, low-speed streets modified to enhance bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. These treatments allow through movements of bicyclists while discouraging similar through-trips by non-local motorized traffic. For more information regarding Bike Boulevards please refer to the Walk Bike Columbia Plan. The following streets are planned to be Bike Boulevards:

5.6 Buffered Bike Lanes

Buffered bike lanes are conventional bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane. Buffered bike lanes follow general guidance for buffered preferential vehicle lanes as per MUTCD guidelines (section 3D-01).

Buffered bike lanes are designed to increase the space between the bike lane and the travel lane and/or parked cars. This treatment is appropriate for bike lanes on road-

ways with high motor vehicle traffic volumes and speed, adjacent to parking lanes, or a high volume of truck or oversized vehicle traffic. For more information regarding buffered bike lanes please refer to the Walk Bike Columbia Plan.

The following streets are planned for Buffered Bike Lanes:

5.7 Cycle Tracks

Protection is provided through physical barriers and can include bollards, parking, a planter strip, an extruded curb, or on-street parking. Cycle tracks using these protective elements typically share the same elevation as adjacent travel lanes.

Raised cycle tracks may be at the level of the adjacent sidewalk or set at an intermediate level between the roadway and sidewalk to separate the cycle track from the pedestrian area. For more information regarding cycle tracks please refer to the Walk Bike Columbia Plan. The following streets are planned for Cycle Tracks:

5.8 Intersection Improvements for Bikes

There are a number of bicycle spot intersection improvements recommended with the Walk Bike Columbia Plan as seen in the bicycle recommendations maps of that document. These should be implemented in conjunction with linear bikeway improve-

ments they correspond to. Due to the wide variation in improvement types and subsequent costs, this Walk Bike Columbia Plan did not include cost estimates for these improvement types. For more information regarding intersection improvements please refer to the Walk Bike Columbia Plan.



Bike directional signage



Cycle track improvements



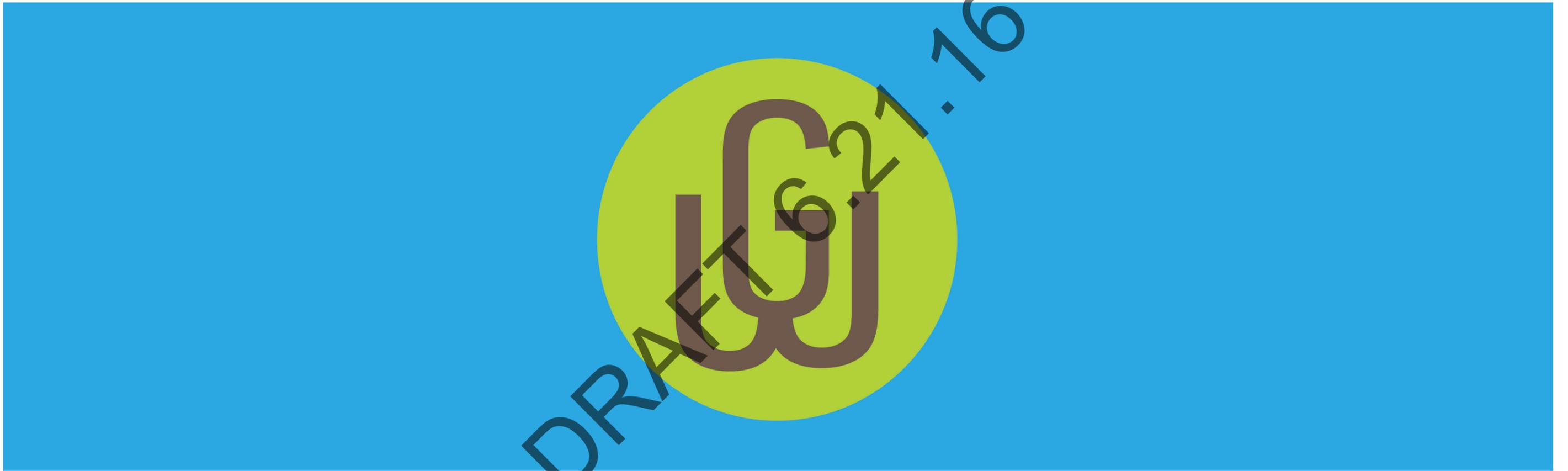
Intersection improvements



Mobility considered for all users



Greenways: places to gather



ORDINANCE NO.: 2016-081

Adopting the West Gervais District Plan as an addendum to The Columbia Plan 2018

WHEREAS, the City of Columbia and community at large recognize the value of planning for future development and growth; and,

WHEREAS, City Council approved Ordinance No.: 2008-085 on October 1, 2008 adopting the City of Columbia Comprehensive Plan 2018 in accordance with the South Carolina Comprehensive Planning Act of 1994 (Title 6, Chapter 29 of the SC Code); and,

WHEREAS, the City of Columbia Planning Department guided the visioning and creation of the West Gervais District Plan in response to and in partnership with the community; and,

WHEREAS, the City of Columbia Planning Department has engaged the public and solicited feedback throughout the planning process by utilizing various public outreach techniques and holding a number of public meetings; and,

WHEREAS, the City of Columbia Planning Commission has reviewed the West Gervais District Plan (dated June 21, 2016), has received input from members of the public, and has recommended that City Council adopt said plan with a modification to the planning area; NOW, THEREFORE,

BE IT ORDAINED by the Mayor and City Council of the City of Columbia this __ day of _____, 2016, that the West Gervais District Plan as dated June 21, 2016, a copy of which is attached hereto, is hereby adopted as an addendum to *The Columbia Plan 2018* and is effective as of final reading of this ordinance; and

BE IT FURTHER ORDAINED that copies of the West Gervais District Plan, as an addendum to *The Columbia Plan 2018*, be made available for public inspection and copying in the offices of the City Clerk and the Planning and Development Services Department; and

BE IT FURTHER ORDAINED that the Mayor and City Council of the City of Columbia direct the City Manager and City Departments to begin implementation of the West Gervais District Plan; and

BE IT FURTHER ORDAINED that the City of Columbia should periodically review the West Gervais District Plan.

Requested by:

Assistant City Manager Gentry

Mayor

Approved by:

City Manager

Approved as to form:



City Attorney

ATTEST:

City Clerk

Introduced:
Final Reading:

10/11/2016

To the attention of Mayor Steve Benjamin,

Dear Mayor Benjamin,

Please consider this request to exempt the properties, 1000, 1010, 1014 Lady St. and 1218 Park St. from the West Gervais District Plan. The same request was submitted by First Citizens Bank for 1015 Lady St. the bank owned property directly north of the subject property. The City of Columbia Planning Commission voted on August 1, 2016 to recommend to Council removal of 1015 Lady St. from the West Gervais District Plan. We appeal for the same.

And why not? The City of Columbia is expanding, experiencing unprecedented growth in all areas of development; sports and recreation, office and retail, housing, all the critical components of a bustling city. Isn't that what Columbia is, or what it wants to be, or is it? Will Columbia thrive, attracting more of what it needs; corporate office developments, a larger host convention center, downtown hotels, mixed use centers, condos, and parking garages? Or will it leave in place the current area of surface parking lots, void of character and unarguably well below their higher and best use potential?

That is the area between Park St. and Assembly St., acres of parking lots, asphalt squares on the edge of downtown. Will it remain, faceless, under performing, and non-contributing, is that the plan? The opportunity exists, several as a matter of fact, to turn parking lots into people centers, places where businesses will grow, young professionals will live and work, where visitors will stay and return to experience all that is, Columbia, South Carolina.

At what point is the best interest of a community served? It is not when developers are discouraged to create an expanded city skyline. When downtown meets the brick warehouses of last century an interesting synergy occurs as new meets the improved old. Antiquated mills and warehouses find new character in old bricks in the form of restaurants and shops. Decades old parking lots give way to the architecture of an emerging and vibrant downtown. Central Business District meets the Vista. The river front just got closer to Main Street.

We request exemption from the West Gervais District Plan of the four parcels that comprise the 1 acre NE corner at Park and Lady Street, that it be consistent with 1015 Lady Street and 1041 Gervais Street, and 1207 Assembly Street. Make it desirable. Make it inviting. Make it a place for the new face of Downtown Columbia.

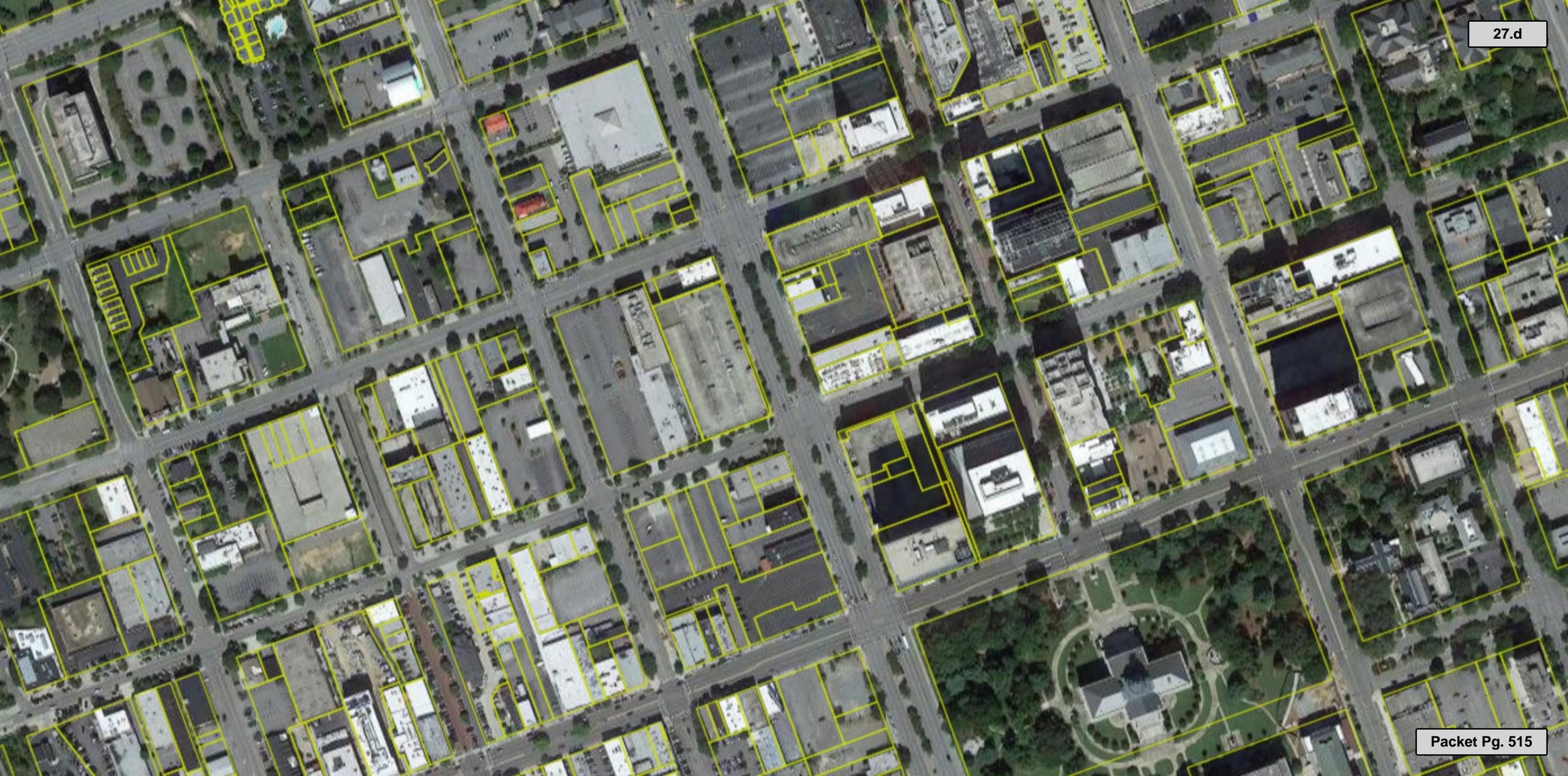
Sincerely,

William H. Bailey, Owner

Bill@BarterBrokers.com 843-442-6944

Scott A Altizer, Broker/Agent

saltizer@carolinaone.com 803-470-6061





We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Planning and Development Services

FROM: *Krista Hampton, Director*

SUBJECT: Pursuant to §17-654(B), Amend the Design Guidelines for the West Gervais Historic Commercial District (§17-681(D)(1)) and the West Gervais Historic Protection Area District (§17-681(C)(6))

PRESENTER: Krista Hampton

FINANCIAL IMPACT: Council District: 2

Proposal: Request the adoption of revised guidelines for the West Gervais Historic Commercial District (§17-681(d)(1)) and the West Gervais Historic Protection Area District (§17-681(c)(6)) pursuant to §17-654(b).

Applicant: Krista Hampton, Planning & Development Services Director, City of Columbia

Staff Recommendation: Approval

D/DRC Recommendation: 07/14/2016; Approval (7-0)

PC Recommendation: 07/11/2016; Deferred; 08/01/2016; Approval (6-1)

ATTACHMENTS:

- Guidelines Amendment-West Gervais Guidelines (PDF)

HISTORY:

09/20/16

City Council

DEFER CONSIDERATION



CITY COUNCIL

September 20, 2016 at 7:00pm

City Council Chambers, 3rd Floor, 1737 Main Street, Columbia, SC 29201

DESIGN GUIDELINES AMENDMENT CASE SUMMARY

PURSUANT TO §17-654(b), AMEND THE DESIGN GUIDELINES FOR THE WEST GERVAIS HISTORIC COMMERCIAL DISTRICT (§17-681(d)(1)) AND THE WEST GERVAIS HISTORIC PROTECTION AREA DISTRICT (§17-681(c)(6))

Council District:	2
Proposal:	Request the adoption of revised guidelines for the West Gervais Historic Commercial District (§17-681(d)(1)) and the West Gervais Historic Protection Area District (§17-681(c)(6)) pursuant to §17-654(b).
Applicant:	Krista Hampton, Planning & Development Services Director, City of Columbia
Staff Recommendation:	APPROVAL
D/DRC Recommendation:	07/14/2016; APPROVAL (7-0)
PC Recommendation:	07/11/2016; DEFERRED 08/01/2016; APPROVAL (6-1)
ZPH, 1 st Reading:	09/20/2016; Pending
2 nd Reading:	10/04/2016; Pending

DETAIL

The purpose of this amendment is to ensure that the process for reviewing development within the two districts is clarified. Several years ago the City was asked to update the guidelines for the West Gervais Historic Commercial District and the West Gervais Historic Protection Area. The result is a document that is updated with consistent language and photographs that reinforce the principles that have always been a part of the guidelines for these areas. Since these districts are also within the City Center Design/Development District, those principles have been placed into this one document as well, making this a singular source for design review for the Design/Development Review Commission and for the public. The development of the draft guidelines does not represent changes in the scope of review, and these guidelines have been presented to and reviewed by the community affected.

PLANS, POLICIES, AND LAND USE

The Planning Commission has also been asked to review the draft West Gervais District Plan, which recommends the modification of historic guidelines in Section 1.2 of the Plan. The plan notes that the modification of guidelines for both

the Historic Commercial District and the Historic Protection Area District is encouraged in order to address the preservation of existing resources and promote compatible development patterns.

STAFF RECOMMENDATION

Staff recommends City Council adopt the revised guidelines for the West Gervais Historic Commercial District and the West Gervais Historic Protection Area District pursuant to §17-654(b).



WEST GERVAIS STREET HISTORIC COMMERCIAL DISTRICT
design guidelines



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DRAFT
6/21/16



WEST GERVAIS STREET HISTORIC COMMERCIAL DISTRICT
design guidelines



I. INTRODUCTION

Since 1994, the West Gervais Street Historic Commercial District has witnessed a multitude of renovation and new construction projects in the unique commercial heart of the Vista. Assisted by design guidelines, City Staff and the Design/Development Review Commission, these projects have enabled an historic warehouse, retail and railroad district to maintain its charm and character well into the twenty-first century.

A. DISTRICT PRINCIPLES AND GOALS

The purpose of these guidelines is to enable property owners within the district to utilize a common framework to retain the historic character of the area and to construct new buildings that complement the existing built environment. The goals are to continue the successful adaptive reuse of the area while minimizing impact on historic resources and to allow new buildings to enhance the pedestrian experience, reinforce the characteristics of the area, and complement the existing scale and patterns in the district.

These design guidelines are criteria and standards that the Design/Development Review Commission (D/DRC) must consider to determine the appropriateness of proposed work within the historic district, in order to accomplish the following goals:

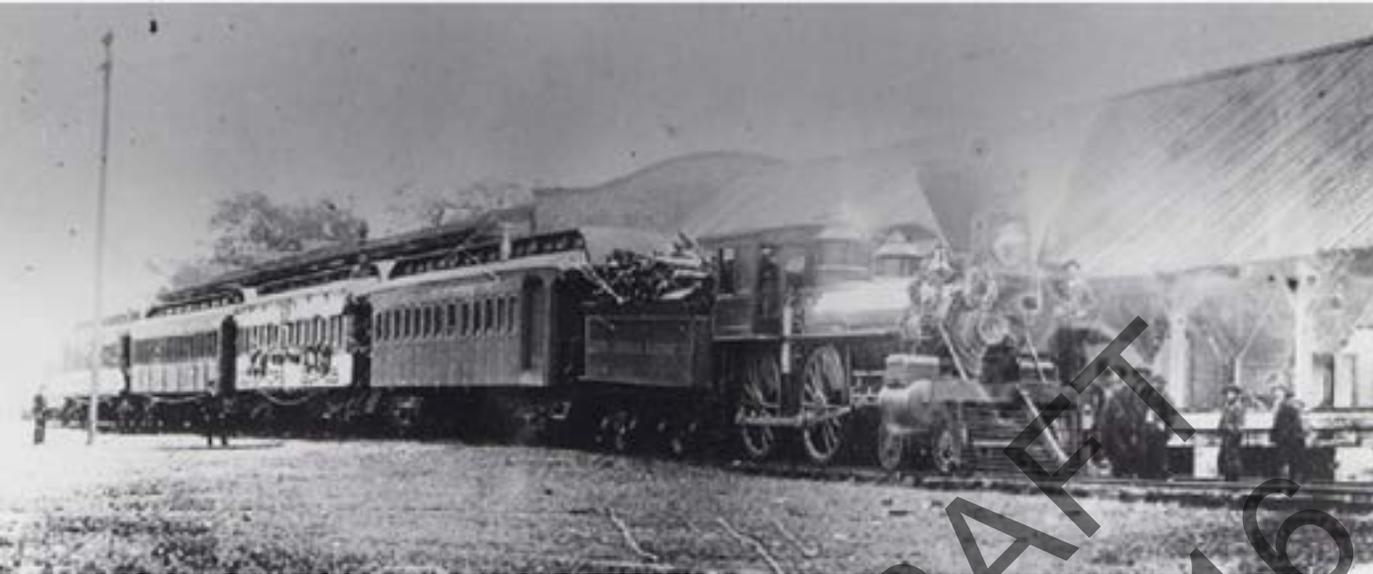
- ① Protect the beauty of the city and improve the quality of its environment through identification, recognition, conservation, maintenance and enhancement of areas, sites and structures that constitute or reflect distinctive features of the economic, social, cultural or architectural history of the city and its distinctive physical features;
- ② Foster appropriate use and wider public knowledge and appreciation of such features, areas, sites, and structures;
- ③ Resist and restrain environmental influences adverse to such purposes;
- ④ Encourage private efforts in support of such purposes; and
- ⑤ By furthering such purposes, promote the public welfare, strengthen the cultural and educational life of the city, and make the city a more attractive and desirable place to live and work.

B. UNDERLYING BASIS (SECRETARY OF THE INTERIOR'S STANDARDS)

This historic district's guidelines are based on the Secretary of the Interior's Standards for Rehabilitation. The Secretary of the Interior maintains the honorary National Register of Historic Places program and oversees the National Park Service, which generates the Standards for the Treatment of Historic Properties. These standards are used nationwide to protect the architectural integrity of historic properties by encouraging the preservation of original materials. For clarity, the Standards for Rehabilitation are listed below:

- ① A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.
- ② The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
- ③ Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
- ④ Changes to a property that have acquired historic significance in their own right will be retained and preserved.
- ⑤ Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.
- ⑥ Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
- ⑦ Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
- ⑧ Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.
- ⑨ New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
- ⑩ New additions and adjacent or related new construction will be undertaken in a such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

C. HISTORY, STATEMENT OF SIGNIFICANCE, AND DESIGN CHARACTERISTICS



1880s image of the wood-burning South Carolina Railway Company train in the Vista (Image courtesy Richland Library)

Centered on popular Gervais Street, the area that came to be known as the “Vista” has had a colorful past. Essentially divided near the middle, the western half is reminiscent of the warehouse and railroad district that created the city’s massive transportation industry, while the eastern half reinvented itself in the early 1900s into a retail oriented, dense marketplace that followed building trends using brick walls and cast iron storefronts.

Early development of the area was due to the railroad, which came to Columbia in the 1840s. By the Civil War the area was busy transporting soldiers and war goods, leading to the nation’s first wayside hospital when a group of ladies tended to

the wounded Confederates right near the tracks. East of the South Carolina Railroad Depot, the area was a mix of houses, small wood shops, the city gas works, the city machine works and the Congaree (also called Rose’s) Hotel at the corner of Gervais



Nineteenth-century buildings in the 700 block of Gervais Street - ca. 1905 photograph. (Courtesy Richland Library)

and Assembly Streets during the late 1800s. Some of the houses on Gates Street, later named Park Street, were well-known brothels that were even identified publicly in the city directories. A saw mill and a few other establishments filled up Lady Street and more business took over the main corridor of Gervais Street by the late 1890s. Fire was a constant threat, and after the turn of the century the eastern part of the Vista matured into a retail corridor with brick buildings and cast iron storefronts that rivaled the main business district along Main Street.

The dozens of railroad lines and spur tracks feeding the many industries in the Vista and traveling further south to the cotton warehouses and textile mills relied on the depots near Gervais Street, and these industries helped lead to a boom period. The Vista was offering wholesale groceries, pharmacies, flour mills and retail stores, as residential development filled in the city blocks along Washington, Lady, Senate and Pendleton Streets by the 1910s

By the 1920s and 1930s new brick warehouses and retail building filled in Lady Street, and the city braced for the Great Depression. African-Americans developed a business district along Washington Street, and purchased the old House of Peace Synagogue for use as a dance club, where the Big Apple dance was created. By the early 1940s the country

was at war, and soldiers once again traveled through the Vista railroads and depots, on their way to foreign battlefields. The war's end, however, brought about a different kind of boom period in expansion and development, with new suburban neighborhoods drawing residents and businesses away from the downtown.

During the 1970s the Vista remained a commercial district and had a variety of businesses, including tire stores, antique stores and other retail. Interest in the area grew as artists and small business owners found the Vista an inexpensive place to open shop by the 1980s. City officials turned a great deal of attention to the area during the same time, naming it the Congaree Vista and ultimately spending



A simple, multi-bayed cast iron storefront is shown on this ca. 1906 image of 810-816 Gervais Street, which was perhaps the earliest multi-story retail building in the Vista. (Courtesy Richland Library)



A ca. 1905 photograph of the 1200 block of Lincoln Street, showing the passenger canopy and train station on the right and the old city gas works silo toward the left. With some evidence of brick paving on Gervais Street in the foreground.

millions of dollars on several large-scale projects including the burying of power lines, the burying of the railroad tracks, and the recreation of Sydney Park, later named Finlay Park.

The Vista was recognized not just as a prime retail corridor but also as a historic gem in the city. It gained a listing in the National Register of Historic Places in the 1980s, followed up by historic district listing with the City of Columbia in the early 1990s. Subsequent private development was measured in

the millions of dollars, resulting in a vibrant, walkable hospitality district that has a unique character in the city, maintaining both its nineteenth century warehouses and railroad depot, as well as its early twentieth century retail buildings, harmonizing with new hotels, apartments, stores, offices and banks that round out this unique space.

STATEMENT OF SIGNIFICANCE The West Gervais Street Commercial District is significant as a unique historic commercial location within the city of Columbia that has a cohesive character defined by consistent use of brick as a major building material. Developed over a number of years as a mixed residential and transportation area with a myriad of train tracks and warehouses, the district transformed around the turn of the twentieth century, gaining retail buildings and losing residential ones. With the earliest railroad dating to the early 1840s, the earliest historic building dating to around 1846 and a heyday of commercial construction that continued into the 1930s, this area represents a commercial and warehouse district distinct from the city’s historic retail business district along Main Street. The period of significance is from 1846 to 1940.

THREE PREDOMINANT HISTORIC BUILDING TYPES IN THE DISTRICT



THE WAREHOUSE

As part of the railroad industry, warehouses were constructed to store and receive goods transported along the rail lines.

- Typically one-story
- Constructed of either wood or brick
- Located adjacent to railroads and sometimes attached to the back of an office building
- Often had simple exteriors, gable roofs, and large openings along the side walls



THE OFFICE

Created for office space, these buildings are sometimes attached to the front of warehouses.

- Often have a symmetrical arrangement of openings on the façade
- Single or double doors and windows, though there may have been multiple façade doors
- First-floor windows were sized generally the same as those on the second floor
- Often two stories
- Some have ornamentation in the form of brick corbeling, a cornice, or minor details at windows and doors



THE STORE

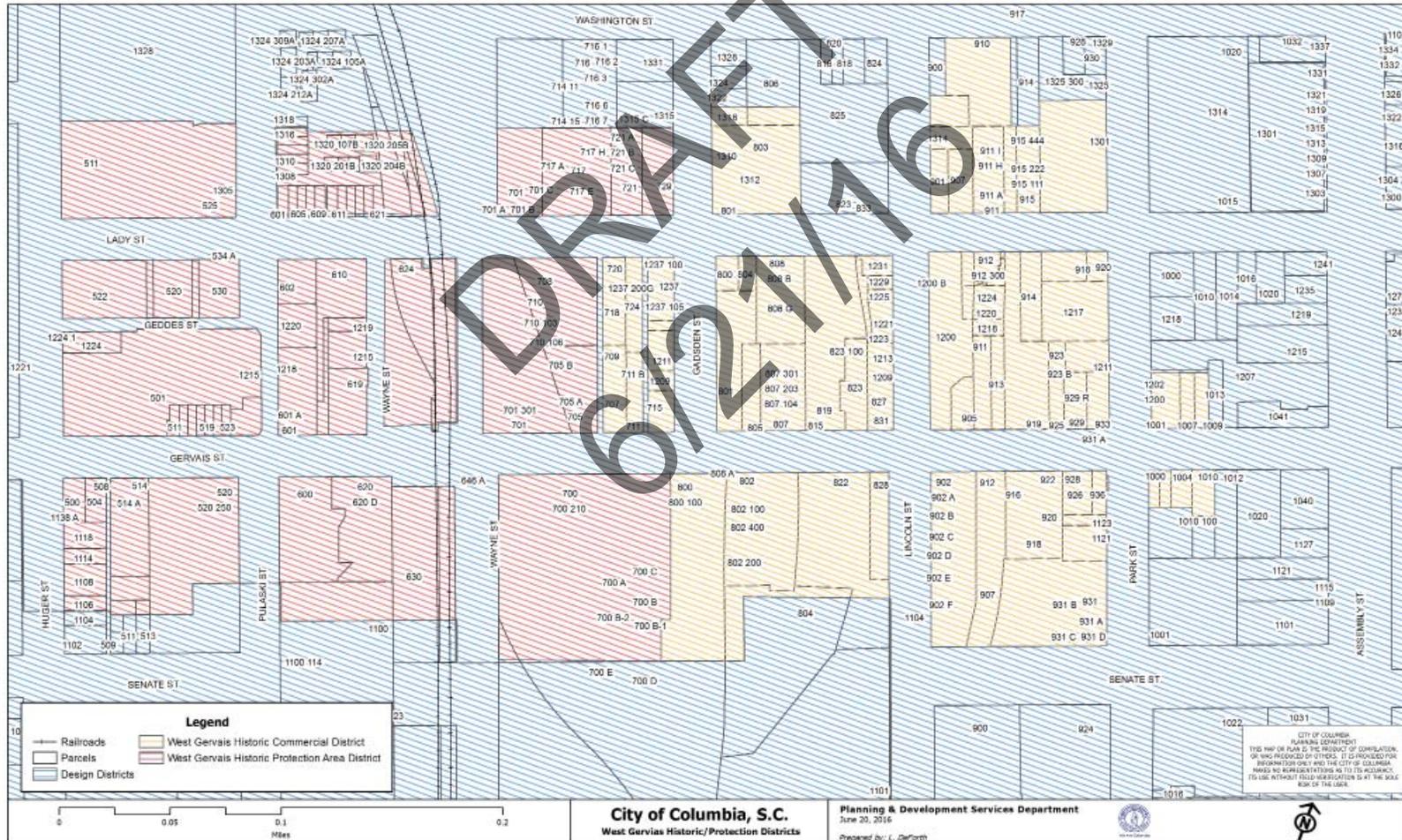
The retail buildings in the district were created to display retail goods. They usually have the highest degree of ornamentation of all three building types.

- Large expanses of glass on the first floor to display merchandise
- Recessed entries
- Brick corbeling
- Projecting cornices contrasts in materials or brick designs in upper floors
- Upper floors typically have vertical windows

D. DESIGNATION BACKGROUND

The West Gervais Street Historic Commercial District was first designated in 1994 as a result of several years of work to recognize and protect the large number of historic resources concentrated in the blocks surrounding West Gervais Street. This is an area that is unique in the city as it contains a mixture of warehouse, retail and office buildings that span from the 1840s to the 1930s, as well as the remnants of the mighty railroad system that first spurred development along this major east to west route into the city.

E. BOUNDARY MAP



II. Review Process & Administration

Projects affecting buildings and sites within the West Gervais Street Commercial District require review by the City Planning Department or the Design/Development Review Commission, which means that these projects receive an extra level of design review in addition to the normal city processes for issuing building and zoning permits. Contact the City Planning staff at the first opportunity to determine whether a project may be reviewed “at staff level” by a staff member or by the Design/Development Review Commission (D/DRC).

The City of Columbia Zoning Ordinance dictates what may be reviewed at staff level and what must be reviewed by the D/DRC. Projects vary in their scope and impact on a historic building and the historic district; typically larger projects must go to a D/DRC meeting, which occurs once a month. Staff review may be accomplished in as little as one day or may take longer, depending upon the project. If the review process results in an approval for a project, then staff will issue a Certificate of Design Approval (CDA) and the applicant may pursue the proper permits.

A. ACTIONS THAT REQUIRE DESIGN REVIEW

Changes to the exterior of a building that are visible from any public right-of-way require design review, and City Planning staff will help determine that visibility. Changes that must be reviewed include:

- New construction
- Additions and/or enclosures
- Maintenance*
- Any actions that alter the exterior appearance of a building
- Any actions that remove/change original materials or features of a building
- Site improvements such as paving, parking lots, screening of dumpsters, steps, fencing, retaining walls, decks, ramps, etc.
- Signage
- Demolition or relocation

**Maintenance as a review item is further explained in section D.*

ITEMS NOT REVIEWED

Changes to the interior of a building do not require design review UNLESS they affect the exterior, such as changes to windows, doors, etc. Building and Zoning permits are often required and it is the contractor and property owner who are responsible for obtaining all applicable permits.



B. ITEMS REVIEWED BY STAFF VS. D/DRC

In an effort to streamline the review process for projects in the district, several items have been designated to staff for review:

- 1 **Staff Review:** General maintenance, minor actions and alterations, site improvements, most signage, etc.
- 2 **D/DRC Review:** New construction, additions, enclosures, major actions and alterations, demolition, relocation, etc.

C. CERTIFICATES OF DESIGN APPROVAL

Projects located in the district that fall under the review purview of these guidelines must obtain a Certificate of Design Approval (CDA) issued by Planning Staff. The CDA is a written description of the project and includes any conditions of approval as determined by Staff or the D/DRC.

D. GENERAL MAINTENANCE & REPAIR

Contact the City's Development Center at before a project begins to determine if any permits or temporary encroachment approvals are required. However, whether a permit is required or not, Planning Staff must be contacted with a scope of work for any exterior general maintenance, repair, or cleaning project.

- If only a limited amount of rotted or severely deteriorated materials on the exterior of a building are being repaired or replaced, the same materials and appearance (ex. wood for wood, same size and details) should be used.
- Any cleaning project that involves the exterior of a building must use the gentlest means possible, which typically involves low pressure water and mild detergents. Maintenance projects require a CDA from Planning Staff to ensure that they comply with the guidelines.

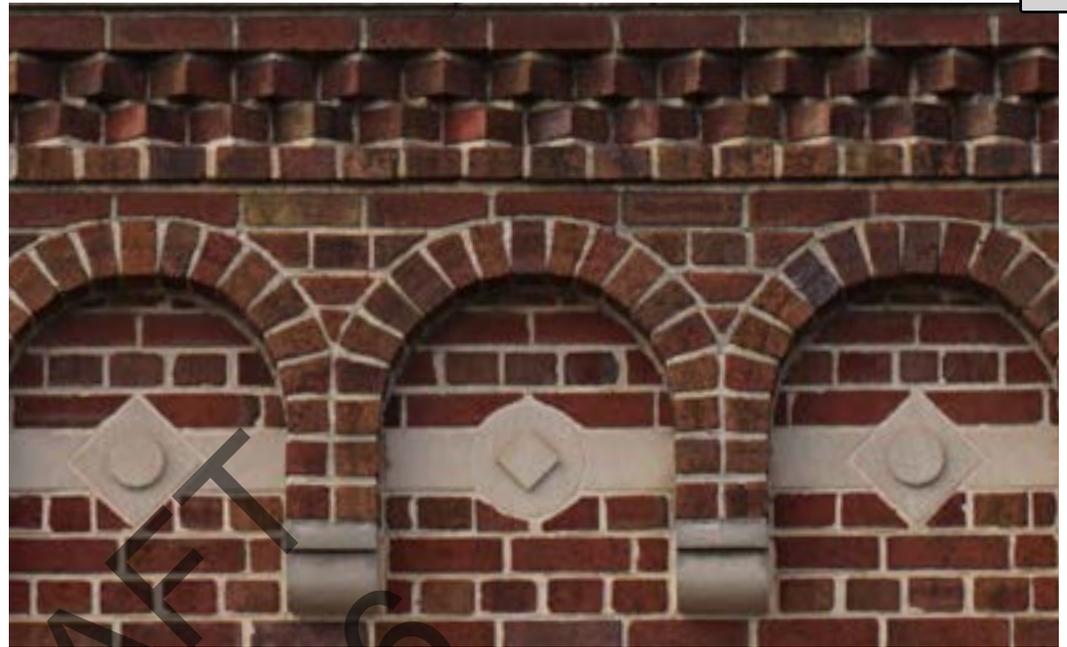
Additional rehabilitation techniques and resources can be found in the addendum.



III. Design/Development Review Commission



The Design/Development Review Commission (D/DRC) is a nine member quasi-judicial board appointed by City Council. Commissioners are those who by virtue of experience and/or education have insight into architecture and design review. They are responsible for evaluating projects within the City's design and historic districts, as well as those involving individual historic landmarks, based upon the established guidelines for each.



DESIGN/DEVELOPMENT REVIEW COMMISSION MEETINGS

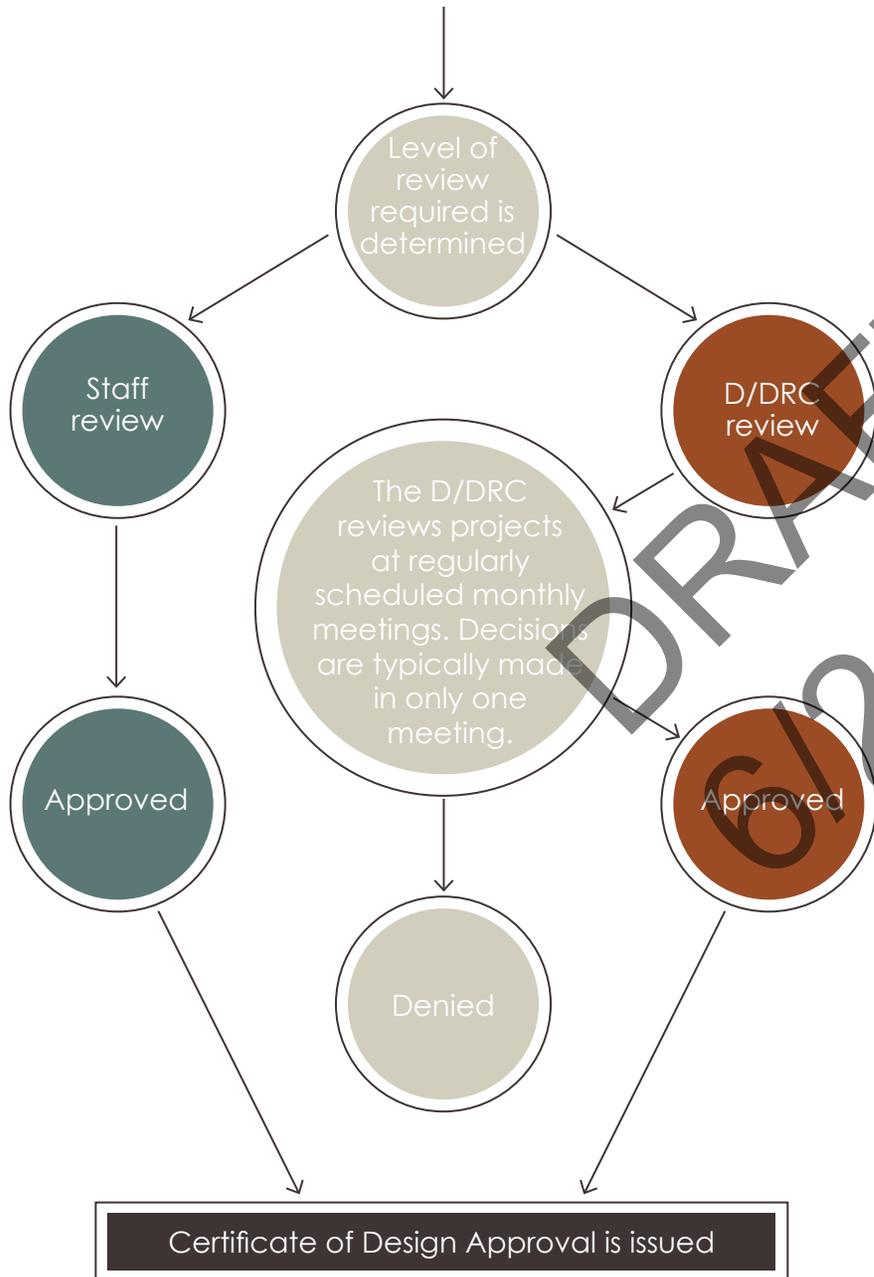
D/DRC meetings are held monthly. Projects on the agendas for these meetings are required to be publicly noticed, so a blue D/DRC public hearing notification sign will be placed on the property 15 days prior to the meeting. Staff will remove the sign after the meeting, usually within 1-2 business days.

At the D/DRC meeting, staff presents an evaluation of the project based on the guidelines for the district, which is followed by discussion by the commission members. You will be given an opportunity to speak to the D/DRC about your project and answer any questions the D/DRC may have. Usually, but not always, the project is decided on the same day. If the project is approved with no unresolved details or conditions, Staff will prepare a Certificate of Design Approval (CDA) within the next 1-2 business days.

The CDA signifies that your project was approved and lists any conditions required by the D/DRC. This CDA is forwarded to the Development Center and the Zoning Department which will not issue permits without this document. If your project was not approved, then you may revise your project and re-apply or, if you feel the decision was made in error, you may appeal the decision to the local circuit court.

DESIGN REVIEW PROCESS

Consult with staff prior to beginning work to ensure the most efficient process



IV. Other Reviews

Any project within the city limits is subject to the City Code of Ordinances, the adopted building codes, zoning code, fire and safety codes, etc. For larger projects, the City's Development Center will coordinate the review of your project through the various departments that have purview and shepherd the project through the entire process. Smaller projects may not require this sort of coordinated review and may simply require a building or zoning permit; however, no permit will be issued from the City for any project until a CDA has been received from the Planning Division, indicating review and approval have taken place. Calling early in your planning process will assist in keeping your project on schedule.



V. Guidelines for New Construction

The character of the West Gervais Street Commercial District has been retained and enlivened through the use of sensitive new construction through the last few decades. These guidelines are helpful in encouraging development that is respectful of the unique historic surroundings that make up the Vista.

A. BUILDINGS

There are relatively few noncontributing structures and very few vacant lots available for new construction. Each new or replacement structure can affect the character of the district positively or negatively and therefore must be undertaken with great sensitivity to the existing buildings on a block or street in terms of height, scale, proportion and rhythm of openings, setbacks, orientation, spacing and ground elevation relative to the street and surrounding development. New construction should be sympathetic to the architecture of an earlier period, and must take into account significant themes, such as height, materials, roof form, massing, set-back, and the rhythm of openings to insure that any new building blends with its context.

1 Height

Consult the current Zoning Ordinance for regulations regarding building height.

2 Size and scale

The size and scale of historic buildings in the district varies between one story buildings and three story buildings along street frontages.

The scale of the buildings is pedestrian friendly; it does not overwhelm the streets.

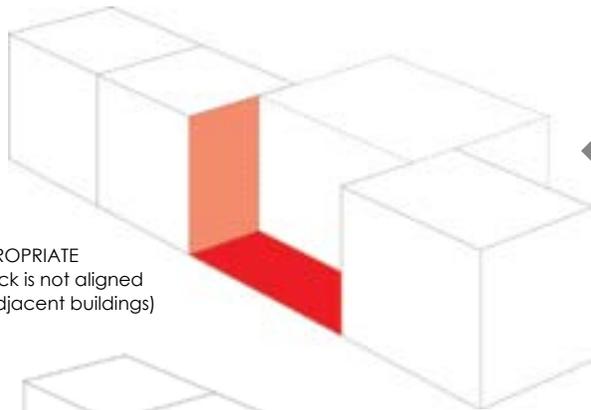
- a. *The size and scale of a new building shall be visually compatible with surrounding buildings.*
- b. *Buildings that are wider than the average width of the historic buildings or storefronts are to be broken up into vertical elements so as to segment the façade and respect the contextual, historic patterns of size and scale found on the block or street.*

- c. *Proportions of openings on each level (upper and lower stories) should be consistent with the building type (see pg. 8) and with historic examples of the type within the district. If no historic examples of the type exist then follow typical proportion patterns found on nearby historic buildings.*
- d. *Architectural features (ex. columns, pilasters) on the first floor of the façade should reference features and sizes of those found on historic buildings of the same type nearby.*
- f. *The scale of each floor of a multi-story building should reflect the patterns of nearby historic buildings of the same type.*
- g. *Whenever an infill building is proposed between two adjacent commercial structures, the characteristic rhythm, proportion and spacing of existing door and window openings should be maintained in the new construction.*

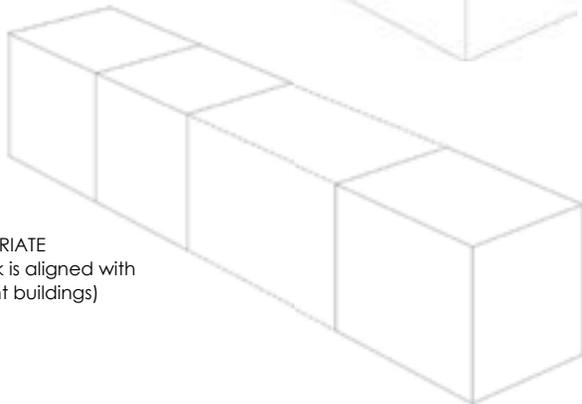
3 Setbacks

Historic buildings in the district are situated directly on the street front, or sidewalk. This emphasizes the dense, urban, pedestrian-friendly character of the area.

- Situate buildings along the front lot line so that there is no setback on the lot.*
- Buildings on corners should be situated with a zero lot line setback on all street facing elevations.*
- All exterior walls should be parallel to the street they address.*



INAPPROPRIATE
(setback is not aligned
with adjacent buildings)



APPROPRIATE
(setback is aligned with
adjacent buildings)

4 Massing

Massing in the district is very simple. Exterior walls, excluding storefronts, generally do not have bays that recess or project. Each exterior wall remains on a single plane.

- Massing should reflect the simple historic exteriors that have single-plane exterior walls and should refrain from recessed or projecting single bays.*
- Recessed or projecting vertical “blocks” should be used to break up a large-scale elevation that is much wider than historic elevations found on the same block or street to what is found on nearby historic buildings.*
- Architectural elements, contrasting materials, and detailing may be used to help break up massing on a façade that is wider than typical historic buildings in the district.*
- Design window and door openings to generate a ratio that is consistent with historic architectural patterns nearby, in order to break up massing in a way that conforms to the district.*



5 Storefronts

Historic commercial buildings, regardless of size and height, typically feature three main components: the storefront, the upper façade and the upper cornice. Storefronts play an important role in the function of buildings as they provide display space for retailers and shelter for pedestrians when equipped with awnings and recessed entries. Therefore, the storefront is a highly visible component that enables pedestrians to interact with the building on a human scale. A storefront can be any first story of a building located adjacent to a street front and conform to the building type, for example warehouse, office or retail types.

- a. *Storefronts on new construction should follow the established patterns of historic storefronts in the district, which are limited to the first floor only; however, they should never attempt to create a false historical appearance.*



Original storefront windows and doors at 1225 Lincoln Street

- b. *Utilize original patterns and details in unaltered, nearby historic buildings to provide context and guide new designs for rhythm of openings, size of openings, recessed entries, and other details.*
- c. *The storefront of a retail building should have a large percentage of glass; the glass should be as clear as possible (such as Ti-AC-36 or National Park Service approved product of equal performance) to engage the pedestrian while meeting applicable building and energy codes. Tint applications after installation are not permitted.*
- d. *Retail storefront glazing should maximize the visibility of storefront displays, and should avoid using small panes of glass, muntins or grids.*
- e. *The top of the bulkheads should be no lower than 18 inches and no higher than 36 inches from the ground.*
- f. *If the building is on a corner lot, orient the storefront and main entry to the major pedestrian traffic pattern. Corner entries should not occur.*
- g. *New storefronts should feature recessed entries with a maximum depth of 5 feet.*
- h. *The storefronts of buildings constructed for uses other than retail may utilize patterns and sizes of openings from historic examples in the district, for example warehouse or office buildings.*
- i. *NanaWall or other movable wall systems which can reference historic patterns or details may be used in a storefront provided that the storefront can retain a delineated presence along the street when those systems are in use.*

6 Sense of Entry and Directional Expression

Main entries on historic buildings in this district are located on the fronts of these building. On most of the buildings they are ornamented or recessed, sometimes within a storefront. No historic entries are located on the corners of buildings.

- a. *Place the main entrance and the associated architectural elements so that they are compatible to surrounding structures. Entries should reference historic openings nearby in size and pattern.*
- b. *Entries should reference historic openings nearby in size and pattern.*
- c. *Entries shall be distinctive, using recesses, arches, lintels, flanking pilasters, transoms or other features found on historic buildings in the district, or a modern interpretation of those features, to reference the attention paid to entries in the district.*
- d. *On a building with multiple storefronts or bays, a main entrance may be located in each storefront.*
- e. *Openings on side elevations may include small storefronts, pedestrian entrances or large openings. Large openings for warehouse buildings should reference historic patterns of*

openings on side elevations found in historic warehouse buildings, including size, scale, rhythm and other detailing.

- f. *Doors to retail shops should contain a high percentage of glass in order to view the retail contents, and should have a visible frame.*
- g. *Main entries shall not occur on the corners of buildings; they should occur on the main façade to mimic historic patterns.*



Central entryway with symmetrical fenestration

7 Rhythm of Openings

Most of the historic buildings feature a high degree of symmetry in their fenestration and entries, and maintain vertical alignment between floors on multi-storied buildings.

- a. *Construct new buildings so that the relationship of width to height of windows and doors, and the rhythm of solids to voids is visually compatible with historic buildings on*

the block or street. Maintain a similar ratio of height to width in the bays of the façade. Arrange the relationship of solid components (ex. walls, columns, etc.) to open spaces (ex. windows, doors, arches) so that it is compatible with existing historic buildings on the block or street.

- b. *Rhythm of openings should be compatible with the type of building proposed and its historic precedent in the surrounding historic buildings. For example, retail buildings of two or more stories should feature large glass windows in the storefront but have more solid wall than glass in the upper stories.*
- c. *If the type of building does not have a historic precedent, follow the prevailing patterns of the majority of the nearby historic buildings.*
- d. *Whenever an infill building is proposed, the common horizontal elements (e.g., cornice line and window height, width, and spacing) established by neighboring structures should be identified and the infill design should complement and accentuate what is already in place.*
- e. *Windows should maintain vertical alignment between floors on multi-storied buildings to be consistent with the historic entry and fenestration patterns in the district.*

8 Roofs

a. Types/forms

The prevalent roof form in the area is flat, which is not visible to the public right-of-way due to the heights of the buildings and their parapets. This roof form is most popular for the twentieth-century buildings. There are a few examples of hip roofs and one barrel roof, with gable roofs popular for a number of warehouses from both the 1800s and 1900s.

1. *Use roof shapes and pitches that are visually compatible with those of surrounding buildings.*
2. *The roof form should match the types (flat, hip, gable, barrel) that are found within the same block or street. Flat roofs should utilize parapet walls to disguise them and any mechanical equipment from street view.*
3. *If using a gable or hip roof, the pitch should be comparable to historic examples found nearby within the district.*
4. *Radical roof pitches (steeply pitched, irregular, etc.) or architectural features that create overly prominent or out-of-character buildings are not allowed.*
5. *Roofs with outdoor spaces, including such features as trellises, walls, etc., should locate those features away from the street elevations in order to minimize their visibility.*

b. Materials

Hip, gable and barrel roofs

The only roof materials that will likely be visible will be those on hip, gable or barrel roofs. Flat roofs are typically hidden behind parapet walls.

1. *Use roof materials that are visually compatible with those of surrounding buildings.*
2. *If the roof material will be visible to any public right of way it should be consistent with a material typical for the type of building, for example seamed metal roofs are appropriate for warehouse roofs.*
3. *Standing seam metal with a traditional profile is acceptable for gable and hip roofs. Asphalt shingle is appropriate for gable and hip roofs.*
4. *Other materials may be allowed if their used in the district on a similar roof type is substantiated by historic documentation.*
5. *Synthetic roof materials may be considered if they are able to correctly replicate historic appearance, finish, texture, size, shape and other detailing of historic materials.*

c. Eaves, cornices, brackets, and chimneys

Historic buildings in the district often have cornice, eave and roof features including chimneys, stepped parapets, brick, wood or metal cornices, and projecting eaves supported by brackets that add character.

1. *Articulate the top of the walls with decorative elements reflective of patterns on nearby historic buildings with original detailing.*
2. *Avoid exaggerated features that are out of proportion to the building or that detract from the overall character of the building and district.*
3. *Modern designs can be used to interpret these elements if they can successfully reference these elements/features while respecting the building's massing, scale, rhythm of openings, or materials.*



9 Rear Elevations

When rear elevations are visible from surrounding public rights-of-way the following guidelines shall apply:

- a. *The rear walls of buildings that are visible to the public right-of-way will be treated as they are used. If they are used as a utilitarian area then their details and fenestration should reflect that use. Typically utilitarian elevations do not have a high level of architectural detail.*
- b. *If the rear wall fronts another street, regardless of its use as a utilitarian area, it shall address the street as though it were a façade.*
- c. *The level of detail necessary for a rear elevation shall be related to its visibility, its impact on the district, and its use. If they are used as a main entry façade then they should reflect that use and reflect the patterns and details found in the facades of other nearby historic buildings.*

10 Materials, Textures and Details

The existing context helps inform the materials for new construction in the district. Exterior wall materials that currently exist on historic buildings in the district include brick and stucco, with a singular surviving historic house that has wood clapboard. Brick found on these buildings has the traditional red clay color with a light-colored mortar. Secondary exterior materials include cast stone, stucco, natural stone, terra cotta, wood, cast iron, and other metals for cornices or other detailing. These historic materials have proven durable, and their prevalence in the district is an important part of what makes the area distinct.



- a. *Use materials, textures, and architectural features that reference those of the historic buildings on the block or street. Materials should reference the finishes, details, textures, durability, shadow lines, sizes, shapes and orientation of the materials used historically.*
- b. *The major exterior wall material should be brick or genuine stucco.*
- c. *Secondary materials may include brick, genuine stucco, wood, cast stone, natural stone, terra cotta, metal, glass, and cast iron, with finishes that reference the surrounding historic district.*
- d. *Utilize no more than three materials on the exterior walls.*
- e. *Brick color should reflect the major trend of historic colors so that new construction can reinforce the ambience of the district.*
- f. *Windows may be wood, aluminum-clad wood or metal.*
- g. *Details of new construction materials shall use depths, proportions, types, finishes and details of architectural features, including windows and doors, found on historic buildings in the district.*
- h. *Foundation heights of new buildings should be consistent with those of historic buildings found adjacent or along the same street.*
- i. *Innovative, synthetic or sustainable products may be considered for exterior materials and secondary materials if they have proven to be durable and can create visual compatibility with the surrounding historic context and materials, including finishes, shadow lines, textures and details.*

B. ADDITIONS, PORCHES AND DECKS



Additions

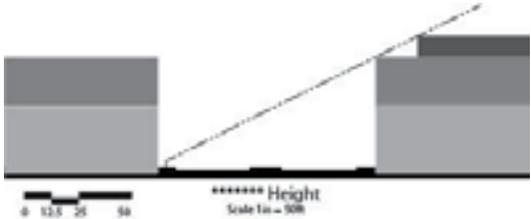
Additions are appropriate to the rear of structures in the district, particularly on historic buildings. In some cases, where setbacks may allow, additions may be permitted on the side of a building if the side is not a significant elevation for that particular building.

- 1. Site additions so that they do not detract from or obstruct important architectural features of the existing building or others around it, especially the principle façades. Place additions away from the primary façade and allow the original façade and front bays of the side elevations to remain intact, if these sides are highly visible.

- 2. Design additions to be compatible with the original structure in materials, style and detailing yet distinct enough to be an obviously new feature. For example, compatibility may be achieved through the use of the major building materials found on the existing structure, and distinction may be achieved through modern detailing.
- 3. Limit the size and scale of additions so that the integrity of the original structure is not compromised. The size and scale of the new addition shall be in proportion to the historic portion of the building and be clearly subordinate to it.
- 4. Character defining features of a historic building shall not be radically changed, obscured, damaged, or destroyed in the process of adding new construction. Additions shall not significantly alter original distinguishing qualities of buildings such as the basic form, materials, fenestration, and stylistic elements.
- 5. Additions should be able to be removed without harming the original building and its structural integrity.
- 6. In rare cases, additions may be appropriate for façades of non-historic buildings.
- 7. Additions are also subject to the guidelines for new construction.

Rooftop Additions

- 1. Rooftop additions are generally regarded as a case of last resort. The structure of the historic building should be studied to ensure the existing structure can withstand additional weight. If new components are proposed to strengthen existing structure, they must be done sensitively, without impacting the historic appearance of the building.
- 2. Rooftop additions cannot exceed height allowances as dictated by zoning and guidelines.
- 3. The basic form and character of a building should be maintained with a rooftop addition.
- 4. Rooftop additions should be set back to minimize visibility.
- 5. Where visible, rooftop additions should be in keeping with the character of the building.
- 6. Where additions would require the removal of a visible historic roof and its materials or a significant architectural feature, or where it would alter the shape of a visible roof, rooftop additions shall not be permitted.
- 7. Additions are also subject to the guidelines for new construction.



Decks and Porches

Outdoor seating space is often sought after by business owners in the district where there is accommodation for them. Front porches are not a typical feature of historic buildings in the district.

a. For New Buildings

1. Porches or decks are most appropriate on the side or rear of new construction.
2. If an outdoor dining area is desired on the front of a new building, it should be accommodated by the use of a movable wall system that allows the building to retain a street edge.
3. Prohibited materials include but are not limited to T-111 siding, unpainted or unstained treated wood, and vinyl. New materials must have a proven record of wear, and the ability to replicate historic textures, finishes and details.
4. Porches should adhere to the guidelines for new construction

b. For Existing Buildings

1. Decks or porches are not appropriate for the facades (front) of most historic buildings in the district. They may be located on the rear or sides of existing buildings where there is adequate clearance.
2. Side porches shall not be located flush with the street façade but rather will be set back to allow the original façade elevation and its corners to remain intact.



3. Porches and decks added to an existing historic building should be built so as to be removable in the future without impact on the associated historic structure.
4. Porches or decks should be built to be distinct yet complementary to the associated structure.
5. Prohibited materials include but are not limited to T-111 siding, unpainted or unstained treated wood, and vinyl. New materials must have a proven record of wear, and the ability to reference historic textures, finishes and details.
6. Where setbacks allow porches on the front of a building in the district, it shall be reviewed as a porch under these guidelines. If the porch is later enclosed it shall be reviewed under the guidelines for additions.

7. The design of porches shall not be oversized. Porches shall be integral to the design of the building and complement architectural details rather than obscuring such features.
8. If re-creating a porch detail that once existed on an existing building, use pictorial or historic evidence as the basis of design. The porch should be in proportion and scale as what would have been found historically, and should maintain the use of historically appropriate materials. It shall not be enclosed.
9. Porches should adhere to the guidelines for new construction.

B. FENCES, WALLS AND RAILINGS

Fences, walls and railings are not necessarily indicative of the historic character of the area; however, in certain circumstances, they may be required for purposes of enclosure or screening.

1. *Unless there is an extraordinary condition, front yard fencing and walls are not permitted.*
2. *Materials and design should reflect the materials and architecture of the associated building and the district in general. Depending on the associated structure the following materials may be appropriate:*
 - *Brick*
 - *Wrought iron or metal*
 - *Stucco*
 - *Wood fences may be allowed provided they reference the associated building in design.*
3. *Prohibited materials include but are not limited to:*
 - *Concrete block (unless stuccoed or veneered with an appropriate material)*
 - *Artificial siding (T-111 plywood, corrugated metal, vinyl)*
 - *Metal chain link fencing*
 - *Unfinished wood for fences or walls*
 - *“Living fences” may be appropriate in certain locations.*
4. *Specific ordinances apply to fence heights and setbacks for side and rear yards. See Columbia Code of Ordinances for more information.*



C. SERVICE AREAS

Necessary to most businesses, service areas can be handled in sensitive ways to minimize their impact on the historic character of the district.

1. *Service equipment such as the HVAC (heating-ventilation-air conditioning) units shall be placed in the least visible location of the site that is possible.*
2. *Roof mounted mechanical or utility equipment should be moved away from street frontages to minimize the need for added screening to shield them from view. If visible, the method of screening should be architecturally integrated with the structure using like materials, colors, shapes and sizes. Equipment should be screened by solid building elements (e.g., parapet wall) instead of after-the-fact add-on screening (e.g., wood or metal slats).*
3. *Mechanical or utility equipment that must be located along a public alley or street shall be screened with elements matching the character and primary building material of the associated structure.*
4. *Vinyl fencing and lattice are not appropriate for screening of utility equipment within the district.*
5. *Refuse containers and actively-used service and loading areas must be screened from view by the buildings they serve or by solid masonry walls which are designed as an integral part of the building, finished with compatible materials and with a minimum height of at least one foot higher than the anticipated height of the dumpster.*

D. SECONDARY STAIRS AND ADA COMPLIANCE

Modern building codes and current law dictate a number of features that were likely not originally found on historic buildings.

1. *Attach secondary stairs, ADA compliance ramps, etc. to buildings in ways that minimize the physical and visual impact to the historic material and architecture.*
2. *Locate secondary stairs, ADA compliance ramps, etc. on new buildings in locations that minimize visual impact on the main elevations.*
3. *Ramps should use the primary building's materials. Other materials, such as iron or concrete, may also be appropriate.*
4. *For secondary stairs, etc., utilize materials that complement the building.*
5. *Do not introduce materials or designs for these features that are incongruent with the building design and materials.*





VI. Guidelines for Rehabilitation & Maintenance

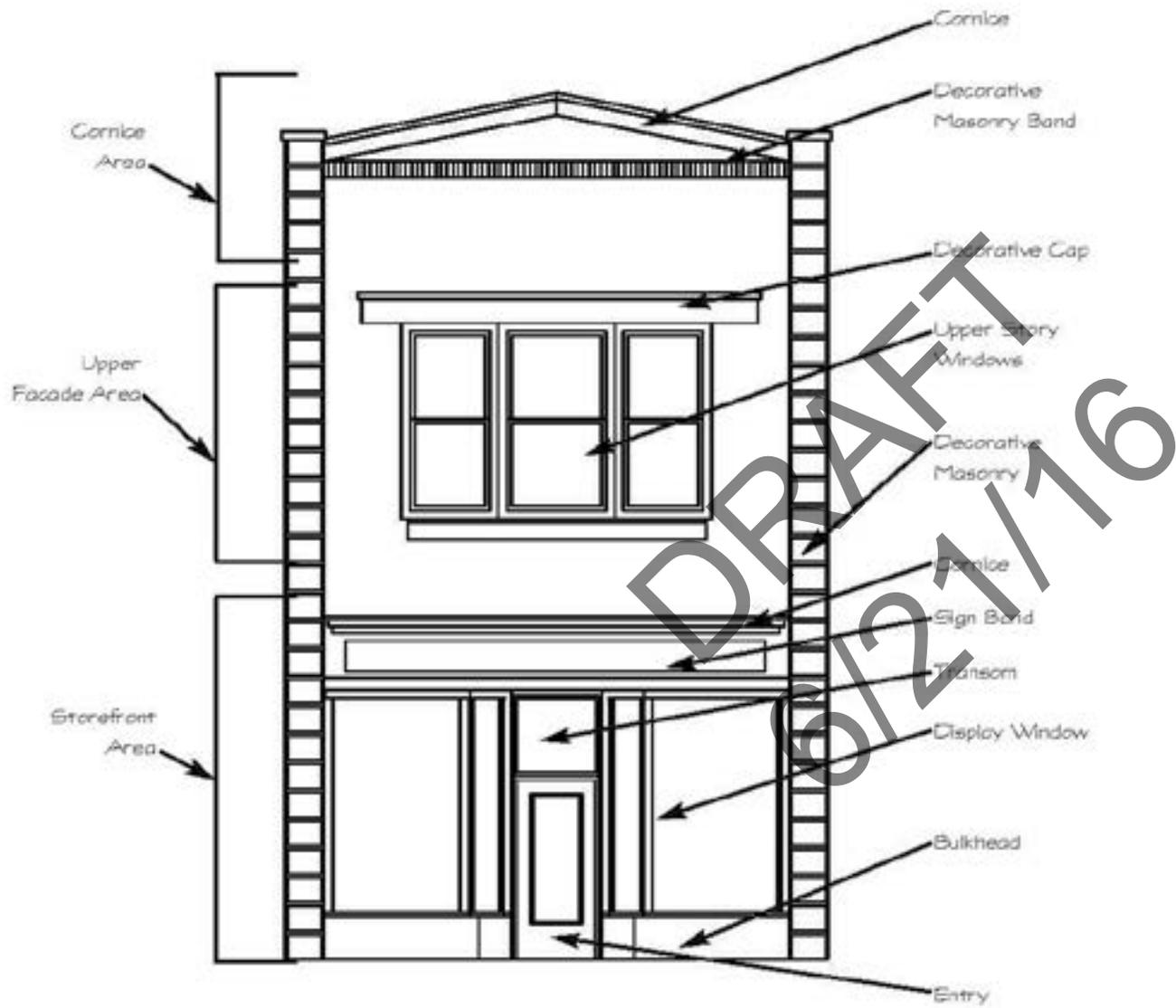
The character of the West Gervais Street Historic Commercial District is made up of surviving historic buildings that compose a relatively intact example of a retail, warehouse and industrial district as it appeared in the early 1900s. Relatively little has changed on the surviving buildings, making them the most intact early twentieth century collection of commercial structures in the capital city.

In order to retain the high degree of integrity that currently exists, it is important that their rehabilitation, adaptive reuse and maintenance strive towards retention of historic materials, details and characteristics.

A. STOREFRONTS

Many times in the remodeling of storefronts, original decorative architectural details are intact or simply covered up with subsequent construction. If the building is to be refurbished, these details should not be wasted, as they can often be restored as part of a reconstructed storefront. If only a few remain, they can be incorporated as features in a new design. In either case, the design of any improvements should grow out of the remaining traditional details and create a harmonious background which emphasizes them.

- a. *Existing historic materials including cornices, cast iron columns, windows, doors, transoms, specialty glasses (prismatic), bulkheads, and other decorative architectural details should be preserved to reinforce the traditional character of the district and add a richness of detail which is often irreplaceable at today's costs.*
- b. *Where the original storefront remains (little or no remodeling has occurred), it should be preserved and repaired with as little alteration as possible, and recessed sections shall not be enclosed.*
- c. *Where only part of the original storefront remains (limited remodeling has occurred), the storefront should be repaired, maintaining historic materials where possible, including the replacement of extensively deteriorated or missing parts with new parts based upon surviving examples of transoms, bulkheads, pilasters, signs, etc.*
- d. *Where the original storefront is completely missing (extensive remodeling has occurred), the first priority is to reconstruct the storefront based upon historical, pictorial and physical documentation. Where no documentation exists, the design of the new storefront should be compatible with the size, scale, proportion, material and color of the existing structure and follow local historic examples from the era.*
- e. *Clean historic storefronts using the gentlest methods possible. See addendum for more information.*
- f. *Any repairs must use like materials (i.e., replace wood with wood, metal with metal, brick with brick, stone with stone, etc.).*
- g. *New material shall duplicate the original in size, shape, profile, thickness and texture as closely as possible.*
- h. *Replacement material should consider original characteristics such as board width, length, exposure, and trim detailing. Plastic, vinyl, or PVC products are not permitted.*



Elements of a typical commercial facade.



B. ENCLOSURES

Enclosing spaces can create a significant change on buildings.

1. *If the enclosure of a porch or other space is intended to maintain a porch atmosphere then transparent materials should be used. Place new material behind the columns and balustrade.*
2. *If a porch or other space is enclosed for the purpose of creating a new solid wall then it shall be subject to the guidelines for additions and new construction.*
3. *Temporary enclosures with plastic are not allowed without prior approval of the City's Building Official or Fire Marshall, as per the City's Building or Fire Code.*

C. DOORS

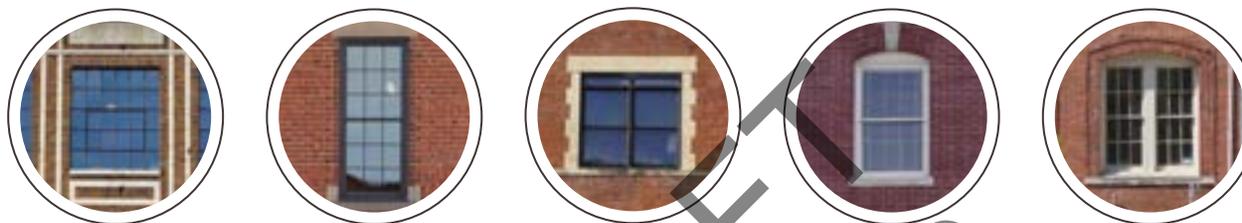
Many existing historic doors feature half lite, $\frac{3}{4}$ glass, or full glass in wood frames with very simplistic designs and no added ornamentation. On side elevations the doors vary, with some large warehouse doors dotting lengthy brick walls.



1. *Retain original doors, openings, surrounds, sidelights, trim, transoms and other details in their original location and with their original size, materials and details. Openings that have gained historic significance but that are not original shall also be retained.*
2. *Retain the original rhythm and pattern of door openings.*
3. *Do not introduce new openings on the primary façade.*
4. *Do not introduce new openings on highly visible elevations that would interrupt the original pattern of openings. If a new door is necessary (ex. for building codes) differentiate the opening so that it does not appear to be original to the building, but make it compatible with the materials and general design of the building.*
5. *New entrances on secondary elevations should be placed away from the main elevation(s), should be differentiated from original openings in their design, and should maintain the rhythm of openings. For example, an existing window opening might be lengthened to convert to a door.*
6. *Missing doors or doors deteriorated beyond repair should be replaced with doors that visually match the original, or that are of compatible design for the date of the building, and may be wood, metal or fiberglass.*
7. *Nonfunctional entrances that are architecturally significant should be preserved.*

D. WINDOWS

There are historic windows remaining in the district, though many are located in the upper floors of multi-story buildings. They are generally wood sashes with a double-hung appearance. Several buildings feature metal windows. Windows are a significant character-defining feature of any structure. Original wood windows were constructed so that individual components could be repaired instead of requiring wholesale replacement if one piece breaks or rots, and materials in historical wood windows tend to be of better quality than new wood windows.



1. Retain original window openings in their original location and with their original size. Openings and windows that have gained historic significance but that are not original shall also be retained.
2. Retain the original rhythm and pattern of window openings.
3. When a building has original windows, jambs and trim, those items must be repaired rather than replaced. When a majority of the wood or metal is viable, repair of deteriorated or damaged windows shall be preferred over replacement.
4. If replacement of a small number of units is deemed necessary by the D/DRC or City Staff after evaluating the sill, frame, sash, hardware, weather-stripping, stops, trim, operability, and glazing, replace with units that match the original window and its various parts including detailing, size, reflective quality, and materials.
5. If a window is determined to be non-original or non-historic, a replacement window may be aluminum-clad with simulated divided lite of an appropriate design and configuration for the building's era. If it is adjacent to historic windows it must match those windows in details and size.
6. If wholesale replacement is found to be necessary, either match the original unit or substitute a unit appropriate to the building's period of significance, maintaining the use of historical materials. Aluminum-clad, double-pane wood windows may also be appropriate provided they can match the details, sizes and shapes of the historic windows.
7. If no historic documentation exists as to the original windows and double-hung windows are appropriate for the window opening, then a 1/1 or 6/6 configuration may be used, provided that there are exterior muntins on the 6/6 window capable of replicating historic detailing. For openings where different configurations would have been more likely, a new window shall conform with the materials and design typical for the style and era of the building.
8. Improve the thermal performance of existing historic windows through adding or replacing weather stripping and adding appropriate storm windows which are compatible with the character of the building and which do not damage window frames.
9. No plastic, vinyl or PVC windows are allowed.

E. SHUTTERS

There are some historic images depicting shutters on a few buildings; they tended to be solid and not louvered.

1. *Shutters should not be added to the exterior of a building if there is no evidence of them existing on the building.*
2. *If shutters historically existed on the building, then new shutters may be added. They must be installed on hinges so as to appear functional and must appear to be able to cover the windows completely when closed. They must match the appearance of a historic shutter available at the time the building was constructed.*
3. *If shutters are installed they must be wood or a material that has similar properties of durability and appearance; vinyl is not a permitted material.*

F. ROOFS

Roofs are important features of historic buildings as well as the first line of defense against rainwater and other environmental elements.

1. *If the roof material is not visible from the public right-of-way, the applicant may install any appropriate roof material for the slope and design of the roof.*
2. *If the roof is visible then replacement material may be a commonly accepted modern item such as composition shingle or a historically appropriate material. Scallops or other unusual shingle shapes are not appropriate unless they have documentation proving they were originally on the building. The material currently on the roof may be repaired or replaced in kind.*
3. *Flat roofs that are experiencing water infiltration issues should be repaired with materials that are impermeable and should not receive any addition or change visible to the public right of way in order to amend water infiltration.*
4. *Existing historic chimneys or features that are visible to the public right of way and contribute to the character of a historic building shall be retained and repaired in place. Removing and rebuilding a chimney is not encouraged.*

G. CORNICES

Cornices are an important design element of several historic buildings in the district. Located at the top of the walls and near the roof, these elements are hallmarks of early twentieth century commercial design.

1. *If a cornice is missing and there is documentary evidence as to its original or historic appearance then a replicated cornice may be installed. The new cornice may be of metal or wood or another material that closely resembles the appearance and durability of the original material.*
2. *If a cornice is deteriorated it shall be retained and repaired using like materials.*
3. *If a cornice has deteriorated beyond repair, or it is not an original cornice, it may be replaced by a cornice that matches the materials and details of the original cornice, or a material that is of the same appearance, detailing and durability.*





H. EXTERIOR SIDING/TRIM

Almost all of the historic buildings in the district have masonry construction or masonry exterior walls. There are several examples of stucco, but unpainted brick is overwhelmingly used throughout, giving a continuity of appearance and color to this area that is unlike any other in the city. Masonry requires periodic maintenance such as repointing to keep the structure sound.

1. *Historic masonry shall be preserved and repaired using best practices for historic preservation so as not to cause further damage to historic materials.*
2. *Repairs to historic masonry shall maintain original colors and materials; mortars used for repairs shall not be of a type to damage brick. Prior to repointing, a mortar analysis is highly recommended.*
3. *Historic masonry shall not be painted.*
4. *Historic masonry shall not be cleaned aggressively with high powered pressure washers, sand blasters, or other media blasters. Harsh chemicals shall not be used on the building, and sealers shall not be applied to the exterior brick.*
5. *Exterior wood features shall not be wrapped or covered in vinyl, metal or other synthetic materials, such as those designed to be used as a ceramic coating.*
6. *Exterior wood features shall be retained and repaired, using wood of the same size and dimension.*
7. *Wood features that are missing or too deteriorated to be repaired must be replaced with wood or a substitute material that is visually compatible may be considered.*
8. *No vinyl, plastic or PVC materials are allowed.*

I. FOUNDATION

The foundations of the historic buildings are either solid brick walls or are hidden behind brick foundation walls, which gives a high degree of continuity between the brick walls and the foundation.

1. *Maintain a foundation and foundation walls in good condition and true to their historic appearance.*
2. *Repoint brick as necessary with appropriate mortar and mimic original mortar lines in shape and size if making repairs.*
3. *Avoid creating new openings in foundation walls unless absolutely necessary for access or mechanical systems.*
4. *Do not add stucco or other materials to historic foundation walls if there is no evidence they existed originally on the building.*

J. GUTTERS

Water infiltration around building foundations can be a major contributor to mortar loss in brick walls and wood rot in floor systems. Gutters are an important component of controlling rainwater and therefore preserving original masonry.

1. *Install gutters in locations that minimize their impact on important architectural features of the building.*
2. *Minimize the visibility of gutters and downspouts by using materials with color tones sympathetic to the material to which they are attached.*
3. *Gutters should be installed so that their water discharge is directed away from the building.*

K. SECURITY BARS AND DEVICES

Security bars may be necessary to avoid unwelcome intrusion, however these bars can be installed in sensitive ways to minimize their visibility.

1. *If placing exterior security bars over a window with muntins, attempt to align the vertical and horizontal bars with the muntins so that the security device is minimally visible. Paint the bars the same color as the muntins to further disguise them from view.*
2. *Other security devices shall be evaluated based on their ability to conform with design elements found on the structure and on their visibility.*



L. CANOPIES AND AWNINGS

Historically this district has featured several rigid, wood frame canopies extending from the sides of buildings to cover loading areas. Canvas awnings do not appear to have been used extensively along storefronts, but they are practical ways to protect windows from intense sunlight and add to the pedestrian experience. Awnings and canopies can be located no less than eight feet from grade.

1. *Awnings should be attached to the building in mortar joints or in storefront framing so as to avoid damaging brick.*
2. *Awnings should be a traditional shape that complements the architecture of the building. The awning shape should relate to the window or door opening and should not overlap adjoining features.*
3. *Awnings may be made of a durable, commercial grade fabric, canvas or similar material having a matte finish with a single color, or they may be metal with traditional details and profiles.*
4. *Awning frames and supports should be of painted or coated metal or other non-corroding material.*
5. *When there are several businesses in one building, awnings of a single color should be used with simple signs on the valance flap.*
6. *Canopies should be placed where they would have been found historically, typically along side elevations.*
7. *Canopy materials should be wood or metal. If it is replicating a historic feature it should match in details, materials and profiles.*
8. *Canopies should be simple in design and should not detract from or obscure importance historic or architectural features of the building.*

M. LIGHTING DESIGN

Well-designed lighting will highlight a building in ways that reinforce the historic nature of the district.

1. *Illumination should be soft and in keeping with the historic district. Generally, any lighting source that produces glare should be avoided, including but not limited to high pressure sodium/sodium vapor bulbs, tubular fluorescents, metal halide bulbs, etc.*
2. *Lighting should produce a 'wash' of light rather than outlining a building's façade or features.*
3. *Lighting should be clear in color.*
4. *Illumination should be directed and contained, should not create distortion, and should not 'spill over' onto other buildings or street frontage.*
5. *Lighting fixtures should be minimally sized, inconspicuous in color and design, and screened as much as possible from view. Wires and conduits should not be run on the primary building façade.*

N. RELOCATION

The majority of historic buildings in this district are built with brick walls. It is unlikely they would make good candidates for a relocation project.

1. *Relocation of a historic masonry building is highly discouraged.*
2. *Relocation of a wood frame, wood sided building is allowable.*

O. DEMOLITION

Demolition of historic buildings is greatly discouraged in the district. All demolition requests include the same basic review criteria as that found in the City Ordinance 17-674(e) and listed below:

A. Criteria for review of requests for demolition permits. The following criteria shall be used as a guideline by the DDRC or its staff for review of all requests for demolition permits. The commission may require the applicant to provide certain information dealing with the criteria. The type of information which may be required is detailed in the commission's rules and regulations; however, only that information which is reasonably available to owners may be required.

1. *The historic or architectural significance of a building, structure or object;*
2. *A determination of whether the subject property is capable of earning a reasonable economic return on its value without the demolition, with consideration being given to economic impact to the property owner of the subject property;*
3. *The importance of the building, structure or object to the ambience of a district;*
4. *Whether the building, structure or object is one of the last remaining examples of its kind in the neighborhood, the city or the region;*
5. *Whether there are definite plans for reuse of the property if the proposed demolition is carried out, and what the effect of those plans on the character of the surrounding area would be;*
6. *The existing structural condition, history of maintenance and use of the property, whether it endangers public safety, and whether the city is requiring its demolition*
7. *Whether the building or structure is able to be relocated, and whether a site for relocation is available; and*
8. *Whether the building or structure is under orders from the city to be demolished due to severe structural deficiencies, and this criterion shall have added significance in comparison to the criteria mentioned in subsections (1) through (7) of this subsection.*

B. In addition to the criteria above, if unapproved destruction of a historic building is the result of work being performed on the building, any proposed new construction shall recreate the size, scale and proportion of the demolished building.





VI. Guidelines for Signage

Signage is an integral component to any business and has the ability to reinforce or detract from the appearance of the business as well as the historic district. It is necessary to maintain the positive and unique character of the district while successfully identifying individual businesses. It is desired that all signage would communicate a clear message which reinforces the ease with which the area is navigated by pedestrians, drivers, and customers.

Signage must also meet the Columbia Code of Ordinances. Sign permits are required for all signs, including temporary signage, and design review is required for all permanent signage. Signs extending into the public right-of-way require encroachment permits and limited liability insurance. For further information, call Planning and Development Services.



A. PERMITTED AND PROHIBITED TYPES OF SIGNAGE

Permitted signage

Several types of signage are appropriate for the West Gervais Historic Commercial District. However, even permitted signage might be inappropriate for a building if signage is scaled too large or inappropriately placed.

The following sign types are historically appropriate for the West Gervais Historic Commercial District:

- Walls signs
- Projecting signs
- Free-standing signs (where space allows)
- Figurative signs
- Menu or directory signage

Prohibited signage

Not all sign types are appropriate for historic districts and the West Gervais Historic Commercial District specifically. Following is a list which includes but is not limited to the types of signs that do not contribute to the historic environment:

- Signs with digital or changeable copy
- Signs employing visible LED lights
- Signs with internally illuminated channel letters
- Billboards
- Plastic cabinet boxes or panels
- Pin mounted letters intended for installation in historic masonry
- Any new signage painted on historic masonry
- Digital signage
- Poles topped with signage

B. GENERAL GUIDELINES FOR SIGNAGE

Generally all signs should be compatible in material, size, color, etc., with the associated building and within the district. Likewise, the scale of new signage must be carefully considered and should be proportioned appropriately for the building. Signs throughout the district shall relate primarily to the sidewalk instead of motorists.

1 Scale

All signs shall be sized and installed in a manner that respects the design, scale and proportions of a building, including the arrangement of bays and openings, and should not obscure any ornamental or architectural features.

2 Location

Signs should be located where architectural features or details suggest a location, size, or shape for the sign.

All signs in the district should always terminate below the roof line and should never be placed atop awnings or canopies.

3 Installation/Attachment

When installing signage on historic buildings, every effort should be made to install into the mortar (repairable) rather than the building's masonry.

Individually pin-mounted signs are highly discouraged where they penetrate into historic masonry. Raceways are preferable where they can be made to blend with the material in which they are installed.

4 Materials

Materials should be compatible with the associated building and the design of its facade.



4 Materials

Materials should be compatible with their associated building and the design of its façade.

Permitted materials:

- Wood carved, sandblasted, or etched signs are appropriate when and properly sealed, painted, or stained;
- Metal formed, etched, cast, engraved signs are appropriate when properly primed and painted, or factory coated to protect against corrosion. Metal composite materials such as alumicore or dibond are acceptable;
- High-density pre-formed foam, and blasted, or etched signs are appropriate when simulating traditional wood signage. Similar material may be acceptable upon review;
- Open faced custom neon tubing, in the form of graphics or lettering, logos, or imagery, may be incorporated into several of the above permitted sign types;
- Clear annealed or tempered glass;
- Die-cut vinyl

Prohibited materials:

- Plastic dimensional letters
- Internally illuminated channel letters
- Internally illuminated cabinet box signs
- Paper/cloth, balloons or inflatable materials
- Plexiglass
- Any textured, frosted, or stained glass
- Any plastic boxes or panels
- Exposed diode bulbs



5 Color

The use of color in a sign should enhance it and contribute to its legibility.

- Limit the number of colors used in any one sign. Too many colors used simultaneously can confuse and negate the message of a sign. Small accents of several colors may make a sign unique and attractive, but the competition of large areas of many different colors decreases readability.
- Use sign colors that complement the colors used on the structure and the project as a whole.
- Bright day-glo (fluorescent) colors are distracting and are discouraged.

6 Sign Legibility

An effective sign should do more than attract attention, it should communicate a message.

- *A careful choice of words and attention to brevity is encouraged and increases the effectiveness of a sign. A sign with a brief, succinct message is easier to read and looks more attractive.*
- *Limit the number of fonts to increase legibility, using no more than two for small font and three for larger signs.*
- *Unless part of a registered trademark, avoid overly intricate typefaces or symbols which are difficult to read.*
- *Use symbols and logos in place of words wherever appropriate. These will usually register more quickly in the viewer's mind than a written message (see 4. Figurative Signs under "Types of Signs").*
- *Avoid using high gloss finishes which are difficult to read.*

7 Illumination

Like other aspects of signage, illumination will have a significant effect on the character of historic district. Appropriate lighting in the district will provide a more intimate feel to the area at night, reinforce the historic character, and still provide effective illumination for individual business signs. There are many excellent examples of such signage in the West Gervais Street Historic Commercial District.

Permitted lighting choices

- *First, consider no lighting at all. Evaluate if streetlights or interior lights may be sufficient to identify the business; signs should be lighted only to the minimum level required for nighttime readability.*
- *Indirect lighting is a highly encouraged form of lighting in the historic district and helps signage to become an integral part of the building's façade. Indirect lights should be focused and shielded to prevent glare; lighting levels should be at the minimum level required for nighttime readability;*
- *Back-lit, or halo lit, lighting is also highly encouraged. Letters should be completely opaque to create a back-lit or halo effect and to facilitate the soft background glow which provides illumination;*
- *Open-faced neon, with no plastic surround or cover, is appropriate in the historic district.*

Prohibited lighting choices

- *Face-lit signs*
- *Internally illuminated channel letters;*
- *Any cabinet sign with internal lighting;*
- *Bare-bulb lights which comprise a sign or are used as enhancements, as well as any signage with changing lights;*
- *Any sign which employs visible LED lights*
- *Signs with changeable copy (unless manually changeable copy for a theater, directories, church, etc.);*
- *Digital changeable copy;*
- *Neon encased in plastic*
- *Exposed diode bulbs*

C. SIGN TYPES

The following typify the signage historically found in the district. Signs should not overwhelm the architecture of a building and they should be scaled and placed on a building appropriately. These are provided to help ensure that signage supports a building's architecture and the integrity of the district.

1 Wall signs

Wall-mounted signs are an appropriate and traditional form of signage in the district, indeed many historic commercial buildings featured an area above the storefront expressly for signage. Wall signs should continue to be located where architectural features or details suggest a location, size, or shape for the sign.

- *Employ backer panels, which highlight text and minimize intrusions into historic materials.*
- *Raceways may also be utilized. Raceways should match the building color where the sign is located.*
- *Pin-mounted letters are not appropriate for use in historic masonry but may be installed in mortar; also they may be installed in non-historic or repairable building material or upon a backer panel.*
- *Wall mounted directory signs should be used on multi-tenant sites to reduce the visual clutter of many signs. Each nameplate should match each other in background color, size, and general style.*

2 Projecting signs

Projecting signs are generally two sided signs, suspended from an iron bracket or building element, are mounted perpendicular to the face of the building and require minimum anchoring, thus lessening damage to a facade. Projecting signs also provide high visibility to pedestrians and vehicular traffic since signs are mounted perpendicular to the right of way. They may be installed either vertically or horizontally. Any projecting sign requires at minimum an eight foot clearance from the bottom of a projecting sign to grade in a public right-of-way. Liability insurance is also required; please call the Zoning Department for more information.





Small Scale Projecting Signs:

- Projecting signs should be hung at a 90 degree angle from the face of the building.
- Signs should be mounted into the mortar of a masonry building as much as possible in order to avoid penetrating historic masonry.
- Projecting signs in general shall be located near the business entry. Location shall be with the storefront and more specifically mounted under the storefront cornice or second floor window sills. Determination of appropriateness shall be determined on a case by case base by Planning Staff based upon the unique design of each storefront façade.
- If more than one projecting sign is planned for a building, projecting signs on a building should be placed so that they harmonize but do not visually obscure one another.
- Projecting signs shall be limited to one per tenant space and regardless of tenant spaces shall be spaced no closer than 20 feet from one another.
- Signs throughout the district shall relate to the sidewalk instead of motorists. In this case, small projecting signs or signs under awnings are most appropriate.
- Any under awning or canopy directional signage shall be a simple blade sign of metal or wood (or similar material) and shall be no more than 2 s.f.

Large Scale Projecting Signs

Large scale projecting signs shall follow all applicable guidelines for small scale projecting signs.

Additionally:

- Large scale projecting signs will require significant engineering to attach to modern or historic structures. Detailed engineering drawings with specifics related to attachment to the structure shall be submitted with applications.
- Drawings shall provide specifics as to mounted, removal, drilling, and other connection techniques to the structure. Damage to historic materials shall be minimized.
- Only one large scale projecting sign shall be permitted for a structure and shall be located on the upper floors of the building.
- Large scale projecting signs shall harmonize but not visually obscure other blade and projecting signs within the city block.

3 Free-standing signs

Free-standing signs are not common in the historic district since structures are typically required to be built to the front lot line. However, where there is adequate room on an existing lot, a monument sign might be employed.

- *Monument signs should be no higher than 6' above grade and shall be incorporated into the street-side landscape buffer.*
- *When a street side landscaping buffer is not present, new landscaping shall be provided around the base of the sign. Landscaping at the base may not be required when a monument sign is constructed in the hardscape of an urban area, such as a plaza, in order to reinforce the urban character of the area.*
- *Monument signs shall appropriately transitioned into the landscape by incorporating a base and supporting structure that utilizes a building's design, architectural features, and materials. In rare instances, lot configuration, buffer dimensions, and the grade of the lot may require a different configuration than a standard monument sign. Aside from material considerations, primary consideration should be an appropriate scale for pedestrians and the visual impact upon the building and its surroundings.*

4 Figurative signs

Signs which advertise the occupant business through the use of graphic or crafted symbols, such as shoes, keys, glasses, books, etc. are encouraged and should follow the same rules for placement, size, coordination with the building, etc., as other sign types.



5 Window signs

Window signs have an ability to convey a message or store name to pedestrians. Window signs can be creative and come in many forms and styles. Window signs shall follow the following guidelines:

- *Should be limited to individual letters and logos placed on the interior surface of the window and which are intended to be viewed from the outside.*
- *Glass-mounted graphic logos may be applied by silk screening or pre-spaced vinyl die-cut forms.*
- *Window signs shall not cover more than 50% of the area of each panel of window glass; signage percentages will be measured using a geometric shape and anything that falls within this shape will count toward total square footage of signage.*

PLEASE NOTE: Check with the City's Zoning Department if you are planning to hang signage on the interior of the building within 12" of the storefront. Regulations may apply.

6 Multiple establishment signage

Where multiple businesses reside in one structure, an organized and coherent approach to signage will benefit both the businesses and the character of the Vista and other design districts. A master signage plan for these buildings is required. Multi-establishment signage plans are intended to create design compatibility among various tenants or buildings in a project. Compatibility does not necessarily meeting identical. Design compatibility should be accomplished by using two or more of the following elements:

- *Common theme or design*
- *Similar construction methods and/or materials*
- *Use of compatible colors, lettering, or style*
- *Compatible scale and size*

In buildings with more than two businesses, all signage should be coordinated in terms of size, placement, color, and overall design.



7 Awnings

When awnings are appropriate for a storefront and signage on the awning can be an appropriate way to convey a message or store name.

- *Signage shall be located upon the valance of the awning.*
- *Text copy is limited to the name of the business.*
- *Text located upon the valance shall be limited to 50% of the valance area.*
- *The color of the fonts shall contrast with the awning color (white/black), and be compatible with the building color scheme.*
- *Awnings may not be illuminated from within but lighting directed to the sidewalk or to the storefront may be considered.*

8 Sandwich boards

These are permissible per Zoning Department regulations and with adherence to the appropriate insurance and ADA requirements. Sandwich boards do not require design review but they must have permits. Please contact Planning and Development Services, Zoning Division at (803) 545-3333.

9 Menu Board Signage/Directory Signage

A menu or directory board is a sign designed to advertise a menu for a restaurant or provide a list of building tenants. These signs are attached to the exterior of buildings near main entrances. Typically these signs consist of a tight weather proof box with glass or no breakable glass-like product to display menus, names or similar information.

- *The menu/directory board shall be positioned to avoid obscuring or damaging architectural details.*
- *The menu/directory board size and shape shall relate to the wall area in which is it mounted.*
- *Menu/directory boards may or may not be illuminated. If illuminated the lighting shall be indirect or from an external source. Glowing plastic menu faces are not permitted.*



10 Pedestrian Walkways:

Commercial establishments are beginning to flourish in alleyways which run midblock and which often reference early railroad spurs. Today they serve as pedestrian connectors, and the identification of businesses or offices along them may be helpful for pedestrians as they navigate the district.

- *Identification of an alley and businesses therein might be handled either by a directory kiosk (which might include a formal directory with map, signage, store locations) or a pole sign with individual tenants listed with directional arrows. A pole height should terminate at 7'. Kiosks shall be scaled to pedestrians.*
- *Any kiosk or pole design should be coordinated with any City way-finding plans as well as the immediate surroundings. If a way-finding plan is not in place, then kiosks and other wayfinding structures should coordinate with one another throughout the historic district.*

11 Historic Signs

Historic signs can contribute greatly to the character of a historic district and where they exist, should be retained. Entirely aside from the architecture of the building upon which they reside, historic signs often easily signal another era and can become iconic in their own right. There are just a few historic signs still present and the City should retain these to help capture a snapshot of the area's younger days.

Recognizing the significance of historic signage, The Columbia City Ordinance does not require the removal of historic signage no longer associated with a resident business, nor is historic signage included in an overall sign count, which is typically required by the Zoning Division's review.

- *Historic signs should remain as they were originally designed.*
- *Historic painted wall signs and "ghost" signs should be retained where feasible and should not be painted over.*
- *New signage shall be placed and incorporated with the old so as not to overwhelm either the building or the extant historic signage.*





VI. Guidelines for Site Design

The spaces between and adjacent to buildings within the District are critical to the character and function of the urban environment. The principles of good urban design are consistent with the fabric of the historic district, as it was originally designed to accommodate and engage pedestrians in the 19th and early 20th century. These principles include locating and orienting the buildings toward the major street frontage, providing continuous, safe and comfortable pedestrian zones, and providing an interesting and stimulating environment to engage the pedestrian along the sidewalk.



A. URBAN DESIGN

Whether they are sidewalks, alleys, pathways through or alongside parking lots, or plazas, the exterior spaces within the District provide access for pedestrians to travel between destinations or simply to inhabit. The location and design of these spaces shall be considered with the following principles which reflect best practices for urban design:

- *Pedestrian connectivity is a priority throughout the District;*
- *Pedestrian safety and comfort including ADA accessibility, shade, and lighting are all critical elements that will be considered;*
- *Pedestrians shall have a dedicated space or a delineated path to travel from parking areas to buildings or destinations; where possible, separating the pedestrian from the vehicular way;*
- *These spaces shall be designed to the highest urban design standards to contribute to the urban character of the district;*
- *The following elements will be considered, where applicable, as part of the site design review process:*
 - Building siting and orientation
 - Parking location, treatment, and screening
 - Open spaces, to include plazas, streetscapes, and alleys
 - Lighting
 - Public art

B. BUILDING SITING & ORIENTATION



The manner in which a building functions and how it is accessed on a site are critical to how the building contributes to the overall quality of the built environment. Primary access shall be provided from the public sidewalk and consistent with the historic patterns of the District. New development in the West Gervais Street Historic District shall follow the guidelines in Section V. Guidelines for New Construction for setbacks. In very specific circumstances, an exception may be made by the DDRC, when certain conditions exist and where it does not have a negative effect on the existing development pattern. Some possible conditions are as follows:

- An outdoor dining area, provided it is designed with commercial quality materials and furnishings that coordinate with the building design and the public right-of-way where appropriate or,
- A residential application, where individual stoops provide access and privacy is a concern.

C. PARKING

One of the most difficult issues in urban development is providing an adequate amount of convenient parking without allowing parking structures and surface lots to dominate the urban setting. The amount of off street parking required for any new development is prescribed in the City's Zoning Ordinance; the guidance provided herein should ultimately be reflected in the parking provisions of that ordinance. Following are several principles that should apply to all parking facilities within the District, both structured and surface.



- Generally, the parking required for each block should be contained within that block. Where parcels within a block are developed by different owners, the parking requirements of each development should be accommodated within its own parcel unless a cooperative parking plan is submitted at the time of the earliest development.
- Development of surface parking on corner lots or adjacent to right-of-way shall be avoided.
- Direct vehicular access into Gervais Street and other east west streets is discouraged; access to surface parking behind Gervais Street should be from north south streets when possible.
- The use of an entire block for parking (either surface or structured) is generally discouraged.
- Parking structures shall be located within the block core, with actively programmed building space fronting on all streets.
- All parking shall be screened from the public right-of-way with a continuous evergreen hedge, 2-3' high.
- Surface lots shall incorporate shade trees at regular intervals to provide a continuous canopy at full maturity.
- Where location of parking within the block core is not feasible, parking structures should be located to the rear of the principal-use building, with the principal-use building oriented to front on the address

D. OPEN SPACES

street. The ground floor of the parking structure should be actively programmed.

- Structured parking configured as a base level podium supporting a high-rise tower should not be permitted.
- The architectural treatment of parking structures should be compatible in quality, form, materials, colors and textures with the structure(s) being served.
- Parking structure roof lines which are visible from the street should be level; ramping should occur within the structure or on the interior of the block where it is screened from the street.
- Light sources within parking structures shall be screened, whether architecturally or otherwise, from the street.
- New parking lots and existing surface parking lots which are serving new or renovated buildings shall be designed to minimize the negative impact of large paved surfaces on the quality of the visual environment.



The West Gervais Street District's streets, with their street trees and pedestrian amenities, are its primary open space. The narrow setbacks are specifically intended to prevent development of the broad landscaped open spaces typical of suburban campus-like settings. Any unbuilt zones along the setback line (i.e., plazas, entrance courts) should be small, intense areas that are placed and designed so that they will be occupied at various times of the day.

To invite public use and ensure user security, plazas or other public open spaces should be visible from streets and sidewalks, and should be surrounded by actively programmed building spaces such as shops,

restaurants, residential units, or offices.

Goals and methods for landscaping in an urban setting differ from common suburban practices; the following guidelines emphasize those differences, without attempting to cover all principles of sound site design and horticultural practices.

- Maintenance resources should be given first consideration when planning the urban landscape. In most situations, ease of maintenance is of paramount importance. Complex designs should never be attempted unless the required maintenance can be assured.
- Site preparation and grading should respect traditional urban forms of development. Berms and other suburban land sculpturing techniques are not appropriate in the West Gervais Street Historic District.
- Shade trees shall be incorporated wherever possible, on streetscapes, in parking areas, and in pedestrian plazas and alleys.
- Plant materials, particularly canopy trees, should be selected from varieties which are well adapted to the local climate and soils, resistant to pests, diseases, and drought; long-lived and strong, and free of excessive litter and other maintenance problems. Canopy trees should have an attractive

crown structure; ground cover materials should have a tight, weed-resistant growth habit.

- Tree plantings shall follow the latest best practices for urban tree health, including but not limited to a minimum of 200 sf planting area, utilizing structural soil or silva cells or similar where appropriate, and providing irrigation.
- Every effort should be made to preserve existing trees. Where existing trees can be incorporated in new development, appropriate measures should be taken to protect them during construction.



E. SITE FURNISHINGS

- Paved surfaces, benches, trash receptacles and other exterior furnishings should be of the highest quality construction and should be compatible in design with the architecture of adjacent development.
- Site furniture shall be of sturdy, commercial-grade construction designed for outdoor use.
- Site furniture and any other objects in private open spaces that are visible from the right-of-way shall be maintained in like-new condition, without rust, dents, peeling paint, or graffiti.

F. IMPROVEMENTS IN THE RIGHT-OF-WAY

- Where installation of streetscape improvements is required as part of the site plan, the City will provide design specifications on request; these specifications (including dimensions, materials, and planting methods) must be followed and will be subject to inspection.
- For any private use of public right-of-way such as for dining tables, planters, etc. the applicant must go through the encroachment process and follow the above guidelines for site furnishings.

G. SITE LIGHTING

Effective and efficient site lighting improves aesthetics, reduces energy use and maintenance, and preserves the night sky. This is particularly important in the West Gervais Street Historic District as it is very close the State Museum’s observatory. Pedestrian lights are generally set on 14 foot poles at 70 to 80 foot intervals. In addition to providing adequate ambient lighting for pedestrians and the street, they are a very important decorative element. The design of pedestrian lights should give a strong direction to the theme and character for the area. Where there is a City standard for street lighting, this shall be used by private developers when improving the right-of-way.

- Site lighting shall be adequate for the security of the site while maintaining a low lighting profile that reduces overspill and glare.
- The maximum height for pole-mounted parking lot or site lighting shall be 15’ at the top of the light source.
- Use high-efficiency lighting with low cut-off angles and down-lighting for landscaping
- Use reflective-type lighting fixtures to reduce or eliminate glare and provide safer, more human-scaled nightscapes.
- Allow zero direct beam exterior lighting at the property line.

H. PUBLIC ART

Public art should be incorporated into the District wherever possible to create a special identity and sense of place for important spaces including plazas, parks, and building entrance areas. The purpose of this section is not to create guidelines for the art itself, but rather to provide guidance for its placement. Site Selection- when selecting a site, public art:

- Should be located on axes and circulation paths to take advantage of views, visibility, and accessibility;
- Should anchor and activate its site;



- Should enhance the overall public environment and pedestrian streetscape experience;
- Should help to create a place of congregation and activity;
- Should be placed in a spot in which the scale of the piece does not overwhelm a small space or disappear into a very large space.

Placement Criteria

Furthermore, there are guidelines for artworks placed within project sites, to ensure that the works are displayed prominently and clearly identifiable as artwork.

Artworks displayed in exterior public spaces should be publicly accessible 24 hours per day or, if they are sited in a setting such as a park, be accessible during the normal hours of that site's operation.

Some other guidelines about public art site placement include:

- Artworks should not block windows or entranceways, nor obstruct normal pedestrian circulation in and out of a building (unless such alteration is specifically a part of the experience or design of the artwork).
- Art should not be placed in a given site if the landscaping and maintenance requirements of that site cannot be met.
- Art should be sited so as to be either immediately visible or in a location where it will be visible by the most people.
- Placement should always take into consideration the artist's intent for how the piece should be viewed, such as distance, angle, and height
- Consider color and texture of backgrounds that are appropriate for the piece; busy backdrops

can be distracting, whereas similarly colored backgrounds can result in lack of visibility.

- Art should be placed in a site where it will enhance its surroundings or at least not detract from it (creating a "blind" spot where illegal activity can take place).
- Artwork may or may not be illuminated. Artwork is encouraged to be illuminated, when illuminated it lighting used shall be soft wash of illumination, electrical fixtures and conduit shall be minimized from view.



A. GUIDELINES

The guidelines below generally reflect the original guidelines for the area. PLEASE NOTE that this area is also subject to the City Center Design/Development Guidelines. Items such as parking, signage and awnings, etc. that are delineated in the guidelines for the West Gervais Historic Commercial District, also apply to this Protection Area.

I. General Guidelines

1. *The Protection Area is also subject to the guidelines from the City Center Design/Development District. Where the following guidelines are stricter they are the prevailing rule.*
2. *Guidelines for the West Gervais Historic Commercial District for awnings, fences and walls, service areas, signage, lighting, and site design apply to the Protection Area.*

II. New Construction/Existing Building Guidelines

1. *Building Setback: The façade of the new building should be at the front lot line in order to mimic existing and historic patterns in the area.*
2. *Building Form and Scale: The building should have a simple rectangular or square form to complement existing buildings. The scale should be compatible with existing buildings. Additions should be secondary to an existing building and be characteristic of the building to which they are attached.*
3. *Roof Shape: Roofs should generally be flat and hidden behind parapet walls to complement existing patterns. Simple gable roofs with a low pitch may be appropriate as the same roof form is found on the Confederate Printing Plant at 501 Gervais Street.*
4. *Roof Material: If visible, the roof should have material that is consistent with the style of the building. The roof material should generally be secondary to the character of the building and should not detract from the building's integrity.*
5. *Materials and Finishes: No clapboards, unpainted wood or glass block are allowed. Brick should be used as the main wall material, and may be painted. No items on the "discouraged materials" list in the City Center Design/Development District guidelines may be used. Finishes should match traditional patterns. On existing buildings, maintain original architectural features.*
6. *Secondary Materials and Finishes: Secondary materials may be wood, stucco or metal, with traditional finishes.*
7. *Entrances and Storefronts: Entrances should be reflective of historic patterns and not be located on a corner. They should be located on the main façade and secondary entrances on secondary street fronts should be subordinate in design to the main entrance. No porches should be included in entrance or building designs. Recessed entrances with storefronts are encouraged, using proportions and rhythms consistent with traditional patterns.*
8. *Windows: Use window sizes, rhythms and proportions similar to historic designs.*
9. *Innovative Ideas: The commission may consider innovative ideas if they follow the general intent of the guidelines.*



VIII. Guidelines for West Gervais Protection Area

The West Gervais Protection Area is a buffer district located west of the West Gervais Historic Commercial District. It has a number of new buildings and altered older buildings, with a few historic structures generally located near the Huger Street corridor. It was established at the same time as the historic district with minimal guidelines aimed at new construction and review of existing buildings.



VIII. Resources



Need some help? From understanding how to repoint your brick to potential savings on your tax bill, there are resources available to make your project clear and doable.

A. INCENTIVES

There are tax advantages for qualifying renovation projects for eligible historic buildings located in the district.

Locally, the City offers the Bailey Bill, which can benefit an owner in the form of an abatement on the property tax for an eligible project.

A portion of the West Gervais historic district is also located within a National Register of Historic Places district. This may also allow an owner to pursue savings on their income tax through the assistance of the State Historic Preservation Office.

Call Planning staff for more information on these resources.

B. MASONRY CLEANING & REPOINTING

Using low to medium pressure water, non-ionic detergents and natural bristle brushes is the preferred method. High pressure water, harsh chemicals or sandblasting is not permitted. Regulate high pressure equipment to no more than 400psi, or mitigate high pressure by using higher degree nozzle tips to produce a wider fan pattern. In addition, increase the distance between the spray and the historic material to prevent damage. Do not use “chisel” nozzle tips that could abrade the surface and destroy mortar in historic brickwork.

A pure Portland Cement mortar is likely too strong to be used as mortar in most of these buildings; a Type N or Type O mortar is recommended for repairs and repointing.

C. 'HOW TO' FOR HISTORIC BUILDINGS

The National Park Service has published a number of briefs outlining best practices for maintaining and repairing historic buildings. The titles to those briefs are listed below and they are all accessible at this website: <http://www.nps.gov/tps/how-to-preserve/briefs.htm>

- Cleaning and Water-Repellent Treatments for Historic Masonry Buildings
- Repointing Mortar Joints in Historic Masonry Buildings
- Improving Energy Efficiency in Historic Buildings
- Roofing for Historic Buildings
- The Preservation of Historic Adobe Buildings
- Dangers of Abrasive Cleaning to Historic Buildings
- The Preservation of Historic Glazed Architectural Terra-Cotta
- Aluminum and Vinyl Siding on Historic Buildings: The
- The Repair of Historic Wooden Windows
- Exterior Paint Problems on Historic Woodwork
- Rehabilitating Historic Storefronts
- The Preservation of Historic Pigmented
- Structural Glass (Vitrolite and Carrara Glass)
- The Repair and Thermal Upgrading of Historic Steel Windows
- New Exterior Additions to Historic Buildings: Preservation Concerns
- Preservation of Historic Concrete
- The Use of Substitute Materials on Historic Building Exteriors
- Architectural Character—Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving their Character
- Rehabilitating Interiors in Historic Buildings—Identifying Character-Defining Elements
- The Repair and Replacement of Historic Wooden Shingle Roofs
- Repairing Historic Flat Plaster—Walls and Ceilings
- The Preservation and Repair of Historic Stucco
- Preserving Historic Ornamental Plaster
- Heating, Ventilating, and Cooling Historic Buildings: Problems and Recommended Approaches
- The Preservation of Historic Signs
- The Preservation and Repair of Historic Log Buildings
- The Maintenance and Repair of Architectural Cast Iron
- Painting Historic Interiors
- The Repair, Replacement, and Maintenance of Historic Slate Roofs
- The Preservation and Repair of Historic Clay Tile Roofs
- Mothballing Historic Buildings
- Making Historic Properties Accessible
- The Preservation and Repair of Historic Stained



C. 'HOW TO' FOR HISTORIC BUILDINGS

(CON'T)

and Leaded Glass

- Applied Decoration for Historic Interiors: Preserving Historic Composition Ornament
- Understanding Old Buildings: The Process of Architectural Investigation
- Appropriate Methods of Reducing Lead-Paint Hazards in Historic Housing
- Removing Graffiti from Historic Masonry
- Holding the Line: Controlling Unwanted Moisture in Historic Buildings
- Preserving Historic Ceramic Tile Floors
- The Seismic Retrofit of Historic Buildings: Keeping Preservation in the Forefront
- The Maintenance, Repair and Replacement of Historic Cast Stone
- The Preparation and Use of Historic Structure Reports
- The Use of Awnings on Historic Buildings: Repair, Replacement and New Design
- Preserving Historic Wooden Porches
- Maintaining the Exterior of Small and Medium Size Historic Buildings

D. SUSTAINABILITY & ENERGY EFFICIENCY

Historic buildings are already expressing some of the best principles of sustainability, including reusing existing structures and avoiding adding to the landfill, utilizing long-lasting, durable materials that can be repaired and maintained, and conserving energy through the benefit of thick masonry walls, which transfer heat and cold very slowly.

1. Improve efficiency with measures that do not require retrofitting exterior elements of the historic building. These can include setting thermostats lower during the winter and higher during the summer, and adding interior thermal shades or shutters.
2. Install new coatings on flat roofs that are designed to aid with energy efficiency.
3. Install exterior storm windows that are appropriate to the building and window design, or install interior storm windows.
4. Install insulation and update old or inefficient heating and air conditioning systems, which often account for a majority of annual energy costs.



E. DEFINITIONS

Adaptive Reuse The reuse of older structures, often involving extensive restoration or rehabilitation of the interior and/or exterior to accommodate the new use.

Addition 1. Construction that increases the living or working space of an existing structure, and is capable of being mechanically heated or cooled. (ex. porch enclosures, room additions, etc.) 2. An alteration that changes the exterior height of any portion of an existing building. 3. Any extension of the footprint of the structure, including porches and decks.

Alignment (Architectural) The visual alignment and subsequent placement of architectural elements such as windows, cornice elements, soffits, awnings, etc. from one structure to adjacent structures in order to promote streetscape continuity.

Appropriate Suitable for, or compatible with, a structure or district, based upon accepted standards and techniques for historic preservation and urban design as set forth in the Secretary of the Interior's Standards or these guidelines.

Arcade An arched roof or covered passage way.

Arch A curved structure supporting its weight over an open space such as a door or window.

Architectural feature/element Any of the component parts that comprise the exterior of a building, structure or object that convey the style of a building. (ex. Victorian, Bungalow, etc...).

Articulation Describes the degree or manner in which a building wall or roofline is made up of distinct parts or elements. A highly articulated wall will appear to be composed of a number of different planes, usually made distinct by their change in direction (projections and recesses) and/or changes in materials, colors or textures.

Awning A fixed cover, typically comprised of cloth over a metal frame, that is placed over windows or building openings as protection from the sun and rain.

Backer panel a flat panel upon which sign letters are mounted. A backer panel is usually painted to favorably highlight the signage. Backer panels can help to minimize intrusions into historic masonry.

Balcony A railed projecting platform found above ground level on a building.

Baluster The upright portion of the row of supports for a porch railing.

Balustrade A series of balusters surmounted by a rail.

Bay (Structural) A regularly repeated spatial element in a building defined by beams or ribs and their supports.

Built Environment The surrounding sidewalks, buildings, artwork, walls, streets, etc. that make up the man-made environment.

Bulkhead The space located between the pavement/sidewalk and the bottom of a traditional storefront window.

Canopy A projection over a niche, platform or doorway; often decorative or decorated.

Casement Window Window with hinges to the side so that the sash opens like a door.

Character-defining feature a detail or part of a structure that imparts style or design and distinguishes it from other structures (ex. porch railings, decorative windows).

Column A vertical support, usually cylindrical, consisting of a base, shaft and capital, either monolithic or built-up of drums the full diameter of the shaft.

Compatible to conform or be in harmony with the components of the style of a building or the character of a district.

Contributing (building/structure/site) A building, structure or site that reinforces the visual integrity or interpretability of a historic district. A contributing building is not necessarily "historic" (50 years old or older). A contributing building may lack individual distinction but add to the historic district's status as a significant and distinguishable entity.

Cornice The horizontal projection at the top of a wall; the top course or molding of a wall when it serves as a crowning member.

Curb Cuts The elimination of a street curb to enable vehicles to cross sidewalks and enter driveways or parking lots.

Demolition Active deconstruction in whole or in part of a building, object, or site.

Double Hung Window A window with an upper and low sash arranged so that each slides vertically past the other.

Driveway an area improved in accordance with approved materials, leading from a street or alley to a parking space.

Eaves The overhang at the lower edge of the roof which usually projects out over the walls.

Elevation 1. Height in terms of distance from grade; 2. an exterior wall of a building, usually used in referring to portions other than the façade.

Enclosure To close off a previously exterior open space, through the installation of walls or other devices.

Exterior Change An action that would alter the appearance or materials of a structure. Examples include: change in roof pitch or form, or replacing or covering exterior siding with substitute material, reducing, enlarging, closing or relocating window or door openings.

Facade The exterior face of a building which is the architectural front, sometimes distinguished from other faces by elaboration of architectural or ornamental details.

Fascia The outside horizontal board on a cornice.

Fenestration The arrangement and design of windows in a building.

General maintenance and repair Work meant to remedy damage due to deterioration of a structure or its appurtenances or general wear and tear, which will involve no change in materials, dimensions, design, configuration, color, texture or visual appearance.

Glazed Brick A brick which has been glazed on one side.

Halo Lighting (or reverse lit)—a subtle form of lighting for signage in which light is contained within an opaque letter and directed backwards, creating a wash of light behind signage letters.

Hip Roof A roof with four uniformly pitched sides.

Infill A newly constructed building within an existing development area.

Lintel A horizontal support member that supports a load over an opening, as a window or door opening, usually made of wood, stone or steel; may be exposed or obscured by wall coverings.

Major Substantive; substantial; as in considerable amount of.

Masonry Wall construction of such material as stone, brick and adobe.

Mass – The size or physical bulk of a building; mass

combines with shape to define form (such as cubes, rectangles, cylinders, etc.).

Monolithic A single large flat surface (facade) without relief. A massive, unyielding structure.

Muntin/Mullion The strips of the window that divides the glass into panes or lights. Mullions typically divide two distinct windows and is often vertically oriented.

New Construction The construction of any freestanding structure or feature. This may apply to a variety of structures such as storage buildings, carports & garages, secondary dwellings, etc.

Non-contributing (building/ structure/site) A building, structure or site which no longer reinforces the visual integrity of the district either because it is a vacant parcel, it is a structure that was built outside of the period of significance of the district or it is an historic structure that has lost its integrity through inappropriate alterations.

Outbuilding An auxiliary structure that is located away from a house or principal building (e.g. garage, studio, guest house, shed).

Parapet A low wall generally running around the outside of a flat roof.

Period of Significance a. For an individual structure: the

date of construction and/or the date(s) which coincide with its reason for significance, for example a c.1900 retail building that was also the site of a 1964 Civil Rights demonstration; b. for a district: the span of time during which the significant development occurred.

Pier A stout column or pillar.

Pilaster A column attached to a wall or pier.

Pitch The slope of a roof expressed in terms of ratio of height to span.

Porch A covered entrance or semi-enclosed space projecting from the facade of a building; may be open sided or screened.

Primary front yard That area between the street-facing facade of the principal building, the front lot line, and either both side lot lines (for interior lots and through lots) or a side lot line and the secondary front lot line (for corner lots).

Primary Building Facade The particular facade of a building which faces the street to which the address of the building pertains.

Principal elevation(s) Elevations that are integral to the overall design and understanding of the building

and its use.

Proportion Proportion deals with the ratio of dimension between elements. Proportion can describe height to height ratios, width to width ratios, width to height ratios, as well as ratios of massing. Landscaping can be used to establish a consistent rhythm along a streetscape which will disguise the lack of proportion in building size and placement.

Raceway Generally, a sort of rectangular box to which a sign's letters are attached; the box is then affixed to the building. The raceway may also contain any required electrical components. Raceways are designed to 'vanish' behind the signage letters. Like backer panels, they help to minimize intrusions into historic masonry.

Rehabilitation, Renovation The modification of or changes to an existing building in order to extend its useful life or utility through repairs or alterations, while preserving the features of the building that contribute to its architectural, cultural or historical character.

Relief Carving raised above a background plane, as in bas relief.

Reveal The vertical side section of a doorway or window frame.

Rhythm (Horizontal, Vertical) The regular or harmonious recurrence of lines, shapes, forms, elements or colors, usually within a proportional system.

Ridge The highest line of a roof when sloping planes intersect.

Sash The framework into which window panes are set.

Scale (Human) Scale is the measurement of the relationship of one object to another object. The scale of a building can be described in terms of its relationship to a human being. All components of a building also have a relationship to each other and to the building as a whole, which is the "scale" of the components. Intimate usually refers to small spaces or detail which is very much in keeping with the human scale, usually areas around eight to ten feet in size. At the other end of the spectrum, monumental scale is used to present a feeling of grandeur, security, timelessness or spiritual well-being.

Secondary Elevation Not prominently located or not highly visible to the public right of way.

Secondary Front Yard The non-primary side of a building on a corner lot. That area between the street-facing facade of the principal building, the secondary front lot line, the front lot line, and the rear lot line.

Setback The minimum horizontal distance between the lot or property line and the nearest front, side or rear line of the building (as the case may be), including porches or any covered projection thereof, excluding steps.

Shall What must happen.

Should What must happen unless evidence is presented to illustrate why an alternative is more suitable.

Siding The finish covering on the exterior of a frame building (with the exception of masonry). The term cladding is often used to describe any exterior wall covering, including masonry.

Sill The framing member that forms the lower side of an opening, such as a door sill. A window sill forms the lower, usually projecting, lip on the outside face of a window.

Storefront The traditional "main street" facade bounded by a structural pier on either side, the sidewalk on the bottom and the lower edge of the upper facade on top, typically dominated by retail display windows.

Street Wall The edges created by buildings and landscaping that enclose the street and create space.

Temporary Encroachment The temporary use of a public area, such as the placement of scaffolding on a public sidewalk in order to make repairs the front of building.

Transom The horizontal division or cross-bar in a window. A window opening above a door.

Trim The decorative finish around a door or window; the architrave or decorative casing used around a door or window frame.



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Traffic Engineering

FROM: *David Brewer,*

SUBJECT: Council is asked to approve ten (10) additional street lights in the Olympia Neighborhood and one (1) additional street light on Jennings Court for a total year-to-date expenditure in the amount of \$2,575.56, as requested by the Traffic Engineering Division.

PRESENTER: Robert Anderson

FINANCIAL IMPACT:

ORIGINAL BUDGET: \$2,200,000.00

Neighborhood	Existing Lights	Requested Lights	Current Annual Lease Cost	Project Request Total	Total Year To Date
Olympia	2	10	\$425.04	\$2,125.20	\$2,456.64
Jennings Court	3	1	\$356.76	\$118.92	\$2,575.56

ATTACHMENTS:

- Lighting Request Documentation 10-13-16 (PDF)



City of Columbia
Public Works Department
Traffic Engineering Division
Street Light Improvement Data

<i>Request Number</i>
17-03
<i>Status:</i>
Pending

Requested By Olympia
Date Requested 9/23/2016
Neighborhood Assembly St.
Map Attached

Inventory Performed By JH, RA
Date Inventory Performed 9/26/2016

Insufficient Number of Lights	<input checked="" type="checkbox"/>	
Tree Canopy Issues	<input type="checkbox"/>	<i>Date Canopy Addressed</i>
Bulbs Burned Out	<input type="checkbox"/>	<i>Date Bulbs Addressed</i>

Existing Number of Lights 150 HPS 0 400 HPS 2
Current Yearly Lease Cost \$425.04

Proposed Standard Lighting		
	150 HP	400 HPS
Additional Lights Requested	0	10
Monthly Lease Rate(per light)	\$9.91	\$17.71
Proposed Annual Lease Increase	\$2,125.20	
Additional Poles Needed	0	

Proposed Decorative Lighting	
Additional Poles Needed	0
Additional Lights Needed	0
Installation Cost	\$0.00
Monthly Lease Rate(per light)	\$0.00
Annual Lease Rate	\$0.00

TOTAL ADDITIONAL LIGHTS NEEDED **10**
PROJECT REQUEST TOTAL **\$2,125.20**

YTD Additions to Budget \$2,456.64 **YTD Lights Added** 12

City Council Action	
Funding Source Identified	Funding Source Acct Number
Agenda Item Date	Agenda Item Number

Disclaimer: Monthly lease rates subject to change based on Public Service Commission Approvals

Date Additional Lighting Requested **Date Lighting Addition Completed**

South Assembly Streetlighting



- Existing Streetlight
- Existing Wood Pole
- Existing 150w NEMA to be changed to 400w Cobra
- Proposed 400w Light on Existing Wood Pole



City of Columbia
Public Works Department
Traffic Engineering Division
 Street Light Improvement Data

<i>Request Number</i>
17-04
<i>Status:</i>
Pending

Requested By Justin Gravis
Date Requested 9/21/2016
Neighborhood 1228 Jennings Ct.
Map Attached

Inventory Performed By JH
Date Inventory Performed 9/28/2016

Insufficient Number of Lights	<input checked="" type="checkbox"/>		
Tree Canopy Issues	<input checked="" type="checkbox"/>	Date Canopy Addressed	9/28/2016
Bulbs Burned Out	<input type="checkbox"/>	Date Bulbs Addressed	

Existing Number of Lights **150 HPS** 3 **400 HPS** 0
Current Yearly Lease Cost \$356.76

Proposed Standard Lighting		
	150 HP	400 HPS
Additional Lights Requested	1	0
Monthly Lease Rate(per light)	\$9.91	\$17.71
Proposed Annual Lease Increase	\$118.92	
Additional Poles Needed	0	

Proposed Decorative Lighting	
Additional Poles Needed	0
Additional Lights Needed	0
Installation Cost	\$0.00
Monthly Lease Rate(per light)	\$0.00
Annual Lease Rate	\$0.00

TOTAL ADDITIONAL LIGHTS NEEDED **1**
PROJECT REQUEST TOTAL **\$118.92**

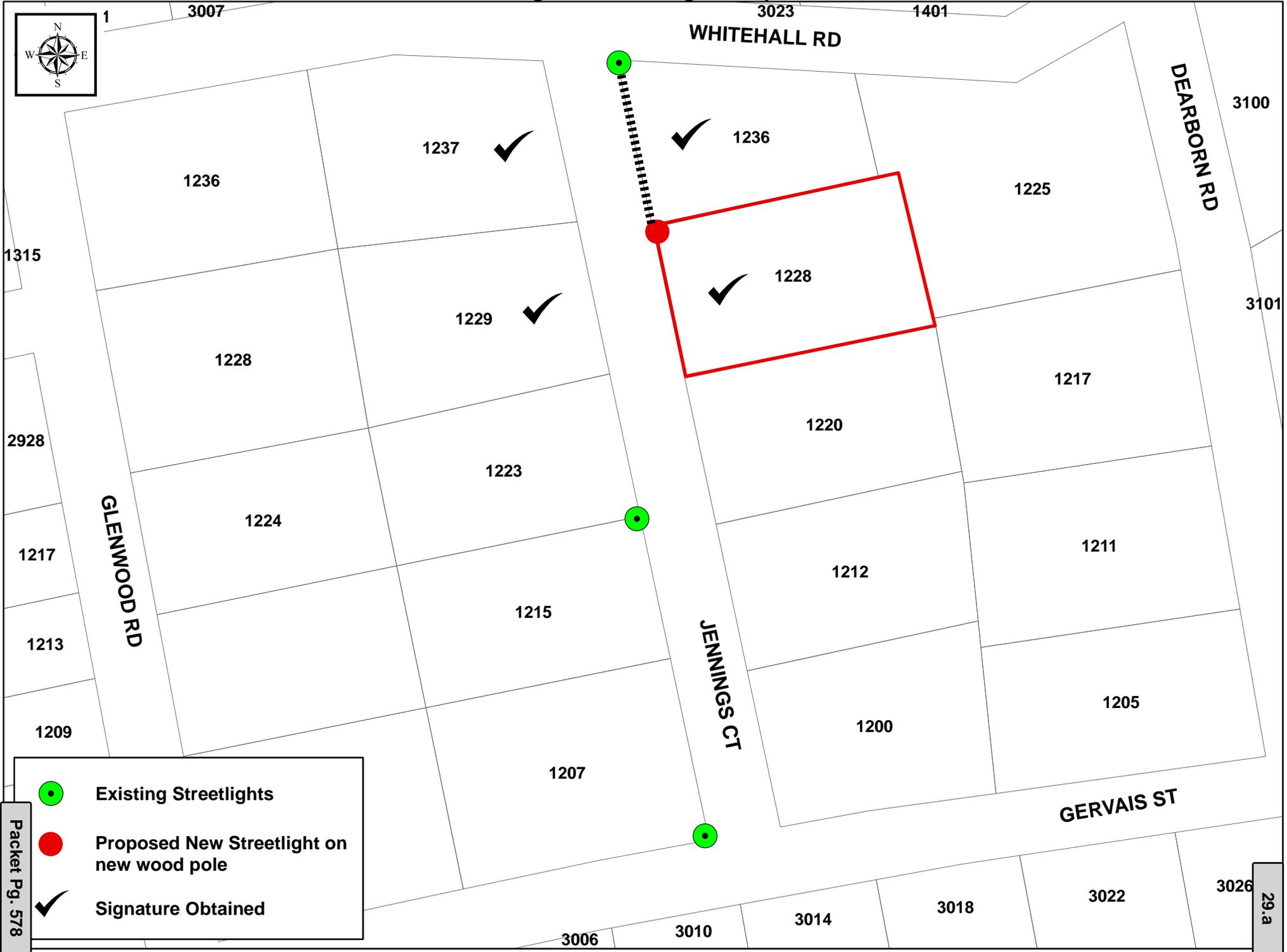
YTD Additions to Budget \$2,575.56 **YTD Lights Added** 13

City Council Action	
Funding Source Identified	Funding Source Acct Number
Agenda Item Date	Agenda Item Number

Disclaimer: Monthly lease rates subject to change based on Public Service Commission Approvals

Date Additional Lighting Requested **Date Lighting Addition Completed**

1228 Jennings Ct. Streetlight Request



-  Existing Streetlights
-  Proposed New Streetlight on new wood pole
-  Signature Obtained



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Administration

FROM: *Teresa Wilson, City Manager*

SUBJECT: Council is asked to approve the appointment of two (2) individuals to the Board of Zoning Appeals.

FINANCIAL IMPACT:

Council is asked to fill two (2) vacancies.

ATTACHMENTS:

- BoZA_Memo_1016 (PDF)



We Are Columbia

TO: Ms. Teresa Wilson, City Manager
FROM: Chanique J. Belton, City Manager Office
DATE: October 25, 2016
SUBJECT: Board of Zoning Appeals

Purpose: The purpose of the Board is to consider applications for variances to the development standards of the Zoning Ordinance, for special exceptions, and for administrative appeals where a person claims that the Zoning Administrator has erred in the enforcement of the Zoning Ordinance. In making a decision about an application, Board members apply criteria outlined within the Zoning Ordinance. The Board does not act as a recommending body to City Council; instead appeals of decisions of the Board are heard in Circuit Court.

Composition: The board is composed of seven (7) individuals serving a three (3) year term with eligibility for one (1) re-appointment.

Action: Council is asked to appoint two (2) new appointees.

District Representation:

District 1 – 1
 District 2 – 1
 District 3 – 2
 District 4 – 3
 Outside City Limits – 0

District Representation of Applicants:

There are three (4) applications for consideration.

District 1 – 0
 District 2 – 2
 District 3 – 2
 District 4 – 0
 Outside City Limits – 0

Applicants

Travis A. Basnett
1502 Main Street
Apt. 219
Columbia, SC 29201
District 2

Project Manager
Alliance Consulting Engineers, Inc.

April D. Jones
2614 Schoolhouse Road
Columbia, SC 29204
District 2

Business Owner
Jones Consulting

Josh Speed
2405 Blossom Street
Columbia, SC 29205
District 3

Brokerage Associate
Newmark Grubb Wilson Kibler

Gene L. Dinkins Jr.
2924 Wheat Street
Columbia, SC 29205
District 3

Professional Land Survey
Cox and Dinkins, Inc.

CURRENT MEMBERS

	<u>DATE APPOINTED</u>	<u>START</u>	<u>END</u>
Reggie Lamont McKnight- 5505 N. Main St. Columbia, SC 29203 District 1	12/14/2010 04/05/2016	12/14/2010 12/14/2015	12/14/2015 12/30/2016
The Renaissance Foundation			
Regina Williams 3517 White Street Columbia, SC 29203 District 2	02/16/2016	03/01/2016	03/30/2019
Tyler Scott Gregg 12 Sims Aly Columbia, SC 29205 District 3	02/2016	02/01/2016	02/28/2019
Attorney Bell Carrington Price 2909 Devine Street Columbia, SC 29205			
Pat Hubbard- VACANT 2719 Preston St. Columbia, SC 29205 District 3	11/05/2008 10/01/2013	11/05/2008 11/05/2013	11/05/2013 11/30/2016
University of South Carolina School of Law			

	<u>DATE APPOINTED</u>	<u>START</u>	<u>END</u>
Silas "Calhoun" McMeekin III 4805 Portobello Rd. Columbia, SC 29206 District 4	11/07/2007 03/05/2013	02/01/2008 02/01/2013	02/01/2013 02/02/2018
Coldwell Banker United Realtors			
Preston Young-VACANT 100 Deer Crossing Rd. Elgin, SC 29045 District 4	11/05/2008 10/01/2013	11/05/2008 11/05/2013	11/05/2013 11/30/2016
Charles Salley 1910 Old Neck Road Columbia, SC 29206 District 4	04/18/2012	05/01/2012	05/31/2017
Colliers International			



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Administration

FROM: *Teresa Wilson, City Manager*

SUBJECT: Council is asked to approve the appointment of one (1) individual to the Midlands Authority for Conventions, Sports and Tourism Board.

FINANCIAL IMPACT:

Council is asked to approve the appointment of one (1) individual.

ATTACHMENTS:

- MACST Memo 102016 (PDF)



We Are Columbia

TO: Ms. Teresa Wilson, City Manager

FROM: Chanique J. Belton, Office of the City Manager

DATE: October 25, 2016

SUBJECT: Midlands Authority for Conventions, Sports, and Tourism

Purpose: The purpose of the Authority shall be to: (a) engage in all aspects and/or activities related directly or indirectly to the design, development, management, operation, or any other functions pertaining to a regional conference/convention facility located in the City of Columbia, South Carolina; (b) participate in similar activities with respect to parking and other facilities that directly or indirectly support the operation of the Center.

Composition: This board is multijurisdictional with Richland and Lexington County each appointing two (2) individuals. The City appoints five (5) members who serve a three (3) year term with one (1) re-appointment. The by-laws specify that one appointment must be from the **hospitality industry** and one must be employed in the **lodging industry**.

Action: Council is asked to appoint an individual to represent the lodging industry.

Recommendation: The Board of Directors would like to nominate Mr. Andrew Lucas.

Applications Received

Rachel Barnett
 300 Hampton Creek Court
 Columbia, SC 29209
District 3

Andrew Lucas
 6503 SAndale Drive
 Columbia, SC 29206
Outside City Limits

Director of Marketing & Communications
 IT-oLogy
 1301 Gervais Street
 Columbia, SC 29201

General Manager
 Inn at USC

Frank Cason
 301Shallow Brook Drive
 Columbia, SC 29223
Outside City Limits

Area General Manager
 American Hospitality
 924 Senate Street
 Columbia, SC 29201

CURRENT MEMEBERS

DATE APPOINTED

START

END

Simon Hudson
 129 Beaver Dam Road
 Columbia, SC 29223
 (803) 708-2772

12/10/2013

01/01/2014

01/31/2017

Director SmartState Center in
 Tourism
 University of South Carolina
 701 Assembly Street
 Columbia, SC 29201
 (803) 777-7275
shudson@hrsm.sc.edu

Chris Asouzu
 7421 Coachmaker Road
 Columbia, SC 29209
 (803) 783-9000

12/10/2013

01/01/2014

01/31/2017

Director of Finance
 Global Spectrum
 801 Lincoln Street
 Columbia, SC 29208
 (803) 576-9069
casouz@global-spectrum.com

CURRENT MEMEBERS**DATE APPOINTED****START****END**

Kendall Clay-**Resigning**
 204 Scarlet Oak Way
 Lexington, SC 29072

08/04/2015

09/01/2015

06/30/2018

General Manager
 Marriott Hotel
 1200 Hampton Street
 Columbia, SC 29201
 (803) 771-7000
Kendall.clay@marriottcolumbia.com

John Hardee
 Lamar Advertising
 1221 Atlas Road
 Columbia, SC 29209
City of Columbia

12/10/2013
 05/05/2015

06/2010
 06/2012
 07/01/2015

06/2012
 06/30/2015
 06/30/2018

Janice Marshall
 101 Louthian Way
 Blythewood, SC 29016
 (803) 261-7786

12/10/2013

01/01/2014

01/31/2017

Executive Director
 James Clyburn Research and
 Scholarship Foundation
 (803) 255-0003
clyburnfoundation@yahoo.com

Bill Ellen - CEO
 1600 Lincoln Street
 Columbia, SC 29201
 (803) 545-3007
bellen@columbiaauthority.com



We Are Columbia

MEETING DATE: November 1, 2016

DEPARTMENT: Administration

FROM: *Teresa Wilson, City Manager*

SUBJECT: Council is asked to approve an appointment of one (1) individual to the Riverbanks Park Commission.

FINANCIAL IMPACT:

Council is asked to fill one (1) vacancy.

ATTACHMENTS:

- Riverbanks Park Memo 1016 (PDF)



We Are Columbia

TO: Mayor and Members of City Council
FROM: Chanique J. Belton, City Manager Office
DATE: October 17, 2016
SUBJECT: Riverbanks Park Commission Appointment

Purpose: The Riverbanks Park Commission is responsible for the overall operation and maintenance of Riverbanks Zoo.

Composition: This committee consists of seven commissioners. Columbia City Council, Richland County Council, and Lexington County Council each appoint two (2) members independently and the seventh member is appointed by one of these bodies on a rotating basis. Appointees serve a term of six (6) years.

Action: Council is asked to fill one (1) vacancy.

Recommendation: Mr. Satch Krantz and current chair, Ms. Mary Howard recommends the re-appointment for one final term. Letter of recommendation is attached.

- Current District Representation is:
 - District 1 – 1
 - District 2 – 0
 - District 3 – 1
 - District 4 – 1
 - Not in City Limits – 0
- District Representation of Applicants
 - District 1 – 0
 - District 2 – 0
 - District 3 – 1
 - District 4 – 2
 - Not in City Limits – 0

Applications Received

Tara Felder
 821 Abelia Road
 Columbia, SC 29205

District 4

Stay-At-Home Mother

Daniel Rickenmann
4203 Woodleigh Road
Columbia, SC 29206
District 4

Business Owner

James E Smith
312 St. James Street
Columbia, SC 29205
District 3

Investment Advisor
Merrill Lynch/Bank of America

Current Members

	<u>APPOINTED</u>	<u>STARTS</u>	<u>ENDS</u>
James Smith- VACANT 312 St. James St. Columbia, SC 29205 City of Columbia <i>*Requesting to be re-appointed*</i>		03/03/2004 9/15/2010	07/21/2010 09/15/2016
Alana Williams 3800 Trenholm Road Columbia, SC 29206 City of Columbia	10/07/2014	10/07/2014	10/31/2019

Other Jurisdictional Appointments

Lloyd Liles
Richland County

Phil Bartlett
Richland County

Mary Howard - Chair
Lexington County

Jan Stamps
Lexington County

Bud Tibshrary
At-Large