

**PUBLIC HEARING & REGULAR MEETING
OF CITY COUNCIL
SEPTEMBER 21, 2017 – 5:30 PM
MUNICIPAL COURTROOM
GEORGETOWN, SC**



Notice of this meeting has been made in accordance with the 1976 Code of Laws of South Carolina Freedom of Information Act.

1. CALL TO ORDER

2. ANNOUNCEMENT CONCERNING ELECTRONIC DEVICES

3. PUBLIC HEARING

The purpose of the Public Hearing is to receive citizen input concerning an ordinance to amend the Freedom of Information Act Fee Schedule.

4. INVOCATION & PLEDGE OF ALLEGIANCE

5. PUBLIC COMMENTS

6. INTRODUCTION OF NEW EMPLOYEES

7. PROCLAMATION

- A. Motion to approve Proclamation honoring the 100th Anniversary of the Georgetown County Chamber of Commerce.**

Attachments:

- 1 CHAMBER OF COMMERCE (PDF)

8. HOUSING AND COMMUNITY DEVELOPMENT

- A. Motion to approve first reading of an ordinance amending the 2011 Comprehensive Plan (Economic Development, Housing, & Transportation Elements and Plan Implementation) and the 2016 Land Use Element.**

Attachments:

- 1 Comp Plan Amendments Ord (PDF)
2 Resolution Final Signed (PDF)
3 Comp Plan Revisions (Attachments A_E) (PDF)
4 LUM-6 (PDF)

- B. Motion to approve first reading of an ordinance amending the City of Georgetown Zoning Ordinance to add Article XXI, Redevelopment District (REDD); and furthermore supplemental amendments to Article V Section 514, Article XIII Section 1301, and Article XV Section 1504.**

Attachments:

- 1 Article XXI REDD Text Amend Ord (PDF)

- 2 REDD Document (Exhibit A - Council Copy) (PDF)
- 3 LUM_6 (PDF)
- 4 RESOLUTION REDD from Council Signed (PDF)
- 5 April 25 2017 PC Minutes (PDF)

C. Motion to approve first reading of an ordinance rezoning twenty (20) parcels from Heavy Industrial (HI), Limited Industrial (LI), and Core Commercial (CC) to Base Redevelopment District (REDD-B); and furthermore amend the Official Zoning Map of the City of Georgetown.

Attachments:

- 1 REDD Rezoning Ord (PDF)
- 2 LUM_6 (PDF)
- 3 Current Zoning Map (PDF)
- 4 Proposed Zoning Map (PDF)

D. Motion to approve second reading of an ordinance amending the City of Georgetown Zoning Ordinance to add Article IV, Section 442 Outdoor Open Displays.

Attachments:

- 1 Outdoor Open Display Ord Final (PDF)
- 2 Highlighted Minutes from 2_28_17 (PDF)

9. FINANCE

A. Motion to approve second reading of an ordinance for the Issuance and Sale of a Revenue Bond to be Designated Series 2017 for Electric Fund Improvements, in an Amount not to exceed \$6,000,000.

Attachments:

- 1 2017 Series OrdinanceX revised (PDF)

10. FIRE

A. 2017 Fire Prevention Proclamation

Attachments:

- 1 FIRE PREVENTION WEEK (PDF)

B. Motion to approve payment to KS State Bank for the New P25 Compliant Motorola Radios in the amount of \$64,267.22.

Attachments:

- 1 Invoice (PDF)

11. PUBLIC WORKS

A. Motion to approve purchase and payment of a 2017 F150 Crew Cab pick up truck to Vick Bailey Ford in the amount of \$27,163.00.

Attachments:

- 1 vic bailey.quote (PDF)

12. ENGINEERING

- A. Motion to approve bid and payment to Caldwell Tanks Inc. for the construction of a new elevated 250,000 gallon pedosphere type water tank for a not to exceed amount of \$1,600,000. 00.**

Attachments:

- 1 CALDWELL BID (PDF)
- 2 2017 09 12 Northside Elevated Water Tank award recommendation letter (PDF)
- 3 2017-06-30 COG Northside Tank Bid Set Specs (PDF)
- 4 Addendum #1 (PDF)
- 5 Addendum #2 (PDF)
- 6 Addendum #3 (PDF)
- 7 Addendum #4 (PDF)
- 8 2017-06-29 North Side Tank Bid Set dwgs (PDF)

- B. Motion to engage Weston & Sampson as the engineer of record for the Kaminski Street and Heyward Street Water Main projects and make payment for a not to exceed amount of \$27,250.00.**

Attachments:

- 1 RFP_Kaminski St and Heyward St Water Main Replacement_8.7.17 (PDF)
- 2 RFP Supplemental Information 8.30.2017 (PDF)
- 3 COG Consulting Services Agreement 08.07.2017 (PDF)
- 4 SIGN IN SHEET AND SUBMITTAL LISTING (PDF)
- 5 Weston Sampson Proposal-Kaminski St. 9.6.2017 (PDF)
- 6 Weston Sampson Proposal-Heyward St. 9.6.2017 (PDF)
- 7 ANALYSIS of RFP (PDF)

13. ADMINISTRATION

- A. Motion to approve second reading of an Ordinance to Amend the Freedom of Information Act Fee Schedule contained in the City Clerk's Official Record of Utility Rates, Deposits and Miscellaneous Fees and Charges for the City of Georgetown, South Carolina.**

Attachments:

- 1 FOIA FEE SCHEDULE (PDF)

- B. Motion to Approve Purchase and Payment To Vic Bailey Ford For A 2017 Ford Interceptor SUV In The Amount Of \$29,128.00.**

Attachments:

- 1 Administration Vehicle (PDF)

- C. Motion to Approve Memorandum of Understanding Naming Main Street Georgetown Business Association (Main Street GBA) As The City's Designated Marketing Organization and Budget for DMO for Fiscal Year 2017-2018.**

Attachments:

- 1 DMO MOU for GBA (PDF)

2 DMO Proposed Budget 2017-2018 (PDF)

- D. Motion to Approve Agreement with Carey F. Smith For Professional Consulting Services Related To Economic Development Matters For Sixty Days At An Amount Not To Exceed \$12,000.00.**

Attachments:

1 Carey F. Smith Consulting Agreement (PDF)

14. CITY ADMINISTRATOR REPORT

15. MINUTES

- A. Motion to approve minutes of July 13, 2017 and July 27, 2017 Council Meetings.**

16. OLD BUSINESS

17. NEW BUSINESS

18. DEPARTMENT MONTHLY REPORTS

- A. August 2017 Georgetown Police Department Report**

Attachments:

1 August 2017 Monthly Report (PDF)

- B. August 2017 Municipal Court Report**

Attachments:

1 Municipal court report (PDF)

- C. August 2017 Fire Report**

Attachments:

1 AUGUST 2017 FIRE REPORT (PDF)

- D. August 2017 Public Works Department Report**

Attachments:

1 AUG.2017 (PDF)

- E. August 2017 Fleet Services Report**

Attachments:

1 Monthly Report (PDF)

- F. August 2017 Electric Utility Department Report**

Attachments:

1 august17report (PDF)

- G. August 2017 Engineering Report**

Attachments:

1 Engineering Monthly Report_August 2017 (PDF)

- H. August 2017 Housing & Community Development Report**

Attachments:

1 August 2017 Report (PDF)

I. Economic Development Monthly Report

Attachments:

1	Economic Development August Report.submit	(PDF)
2	Letter and Flyer for Business Owners	(PDF)
3	West End Newsletter	(PDF)

J. August 2017 Finance and IT Report

Attachments:

1	August 2017 Finance & IT Report	(PDF)
2	Grants-Monthly Rpts FY 17.18	(PDF)
3	GovDeals-Monthly Rpts FY 17.18	(PDF)
4	BudgetPerformanceReport-08312017	(PDF)

19. EXECUTIVE SESSION

Motion to adjourn Regular Meeting and enter Executive Session pursuant to South Carolina Code Section 30-4-70(a)(2) to discuss proposed contractual arrangements and the proposed purchase of the Stewart-Parker House, and to receive legal advice related to potential resolution of 2014-CP-22-0863; and Sec. 30-4-70(a)(5) to discuss matters relating to proposed location, expansion, or provision of services encouraging location or expansion of industries or other businesses in the area served by the public body.

Motion to adjourn Executive Session and return to Regular Session.

NO FORMAL ACTION WAS TAKEN IN EXECUTIVE SESSION.

COUNCIL MAY TAKE ACTION ON ITEMS DISCUSSED IN EXECUTIVE SESSION

20. ADJOURNMENT

- A. Motion to adjourn the Regular Meeting of City Council.**



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

PROCLAMATION

DOC ID: 2386

Council Meeting Date:	21 September 2017
Department:	Administration
Issue Under Consideration:	Motion to approve Proclamation honoring the 100th Anniversary of the Georgetown County Chamber of Commerce.

Reviews:

Paul Gardner Completed 09/14/2017 4:24 PM
 City Attorney Completed 09/15/2017 8:51 AM
 Ann U. Mercer Completed 09/15/2017 9:55 AM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 CHAMBER OF COMMERCE (PDF)

**MOTION TO APPROVE PROCLAMATION HONORING THE 100TH ANNIVERSARY OF THE
GEORGETOWN COUNTY CHAMBER OF COMMERCE.**



A Proclamation Honoring the 100th Anniversary Of the Georgetown County Chamber of Commerce

WHEREAS, the year 2017 marks the 100th Anniversary of the Georgetown County Chamber of Commerce whose mission is enhancing the welfare of business and promoting and stimulating economic vitality in the Georgetown County area for the benefit of its members and the community; and

WHEREAS, the Georgetown County Chamber of Commerce is the third oldest Chamber in the State of South Carolina; and

WHEREAS, the Georgetown County Chamber of Commerce is a visionary leader for advancing a cooperative, productive and prosperous community; and

WHEREAS, for 100 years, the Georgetown County Chamber of Commerce has promoted on a daily basis the commercial and civic interests of the community; and

WHEREAS, for 100 years, the Georgetown County Chamber of Commerce has served as a membership-based economic development organization providing a wealth of resources and support for new and existing businesses, visitors and tourists, current and relocating residents to the area, and the general public; and

WHEREAS, for 100 years, the Georgetown County Chamber of Commerce has offered its members an avenue for networking with other businesses, marketing their services and products, and for remaining informed on issues and trends impacting businesses; and

WHEREAS, for 100 years, the Georgetown County Chamber of Commerce has worked to develop and market the county as a site for new and expanding businesses providing economic opportunities for businesses and citizens alike; and

WHEREAS, the Georgetown County Chamber of Commerce has broadened its mission by providing ongoing business and education partnerships to enhance the workforce and develop future leaders in our communities.

NOW, THEREFORE BE IT RESOLVED, the Mayor and Council of the City of Georgetown, hereby recognize and honor the Georgetown County Chamber of Commerce for their 100 years of service, leadership and commitment to the Georgetown County area.

SIGNED, SEALED AND DATED this 21st day of September 2017.

ATTEST:

Jack M. Scoville, Jr.
Mayor

Ann U. Mercer
City Clerk



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2304 B

Council Meeting Date:	21 September 2017
Department:	Housing and Community Development
Issue Under Consideration:	Motion to approve an ordinance amending the 2011 Comprehensive Plan (Economic Development, Housing, & Transportation Elements and Plan Implementation) and the 2016 Land Use Element.
Amount Requested:	N/A
Is Item in Current Budget?	N/A
If no, please explain:	N/A
Financial Impact:	N/A
Points to Consider:	• These amendments to the Comprehensive Plan will compliment the proposed rezoning to the steel mill area from Heavy Industrial (HI), Limited Industrial (LI), and Core Commercial (CC) to Base Redevelopment District (REDD-B). • This Resolution was reviewed and approved by Planning Commission on March 28, 2017 with a 6-0 vote in favor.
Options:	Approve or deny the Comprehensive Plan amendment ordinance.
Staff Recommendations:	Staff recommends approving this amendment ordinance.

Reviews:

Rick Martin	Completed	05/10/2017 11:45 AM
City Attorney	Completed	05/10/2017 12:15 PM
Paul Gardner	Completed	05/10/2017 4:46 PM
Debra Bivens	Completed	08/08/2017 5:44 PM
Ann U. Mercer	Completed	08/11/2017 1:49 PM
Georgetown City Council	Pending	09/21/2017 5:30 PM

Attachments:

1. 1 Comp Plan Amendments Ord (PDF)
2. 2 Resolution Final Signed (PDF)
3. 3 Comp Plan Revisions (Attachments A_E) (PDF)
4. 4 LUM-6 (PDF)

**MOTION TO APPROVE AN ORDINANCE AMENDING THE 2011 COMPREHENSIVE PLAN
(ECONOMIC DEVELOPMENT, HOUSING, & TRANSPORTATION ELEMENTS AND PLAN
IMPLEMENTATION) AND THE 2016 LAND USE ELEMENT.**

AN ORDINANCE AMENDING THE 2011 COMPREHENSIVE PLAN (ECONOMIC DEVELOPMENT, HOUSING, & TRANSPORTATION ELEMENTS and PLAN IMPLEMENTATION) AND THE 2016 LAND USE ELEMENT OF THE CITY OF GEORGETOWN

- WHEREAS,** the General Assembly of South Carolina enacted in 1994 an amendment to the Code of Laws of South Carolina by adding Chapter 29 to Title 6, "South Carolina Local Government Comprehensive Planning Enabling Act of 1994", as subsequently amended [the State Code]; and
- WHEREAS,** the planning process includes the development of a comprehensive plan and the State Code requires that the plan contain, at a minimum, a population element, and economic development element, a natural and cultural resources element, a community facilities element, a housing element, a land use element, a transportation element, and a priority investment element; and
- WHEREAS,** the City of Georgetown has adopted, pursuant to the State Code, a comprehensive plan entitled the "City of Georgetown, South Carolina Comprehensive Plan, 2011" and this plan was updated with the adoption of the "City of Georgetown Land Use Element, 2016"; and
- WHEREAS,** the State Code requires that the local planning commission develop and maintain a planning process which will result in the systematic preparation and continued reevaluation and updating of those elements considered critical, necessary, and desirable to guide development and redevelopment in its area of jurisdiction; and
- WHEREAS,** the Georgetown City Council has requested, by resolution adopted on March 16, 2017, that the Planning Commission consider and make recommendations as to certain Comprehensive Plan amendments related to adoption of the REDD within the Primary and Secondary Redevelopment Areas as illustrated on the Future Land Use Map (Map Exhibit LUM-6);
- WHEREAS,** the City of Georgetown Planning Commission has conducted a review and concluded that amendments to the City of Georgetown Comprehensive Plan are warranted;

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Georgetown, South Carolina that the following amendments, as listed below and attached hereto, to the City of Georgetown Comprehensive Plan, 2011 and the City of Georgetown Land Use Element, 2016:

1. **Economic Development Element** - Section entitled "Industrial Development" pages 41 and 42 (Attachment A);
2. **Economic Development Element** - Section entitled "Goals and Objectives", Goal 4, pages 44 and 45 (Attachment A);
3. **Housing Element** - Section entitled "Goals and Objectives", Goal 4, page 110 and Goal 6, pages 111 and 112 (Attachment B);
4. **Land Use Element** - Section entitled "Goals and Objectives", Goal 4, pages 136 to 138; Goal 5, page 138; and Goal 8, pages 140 to 142 (Attachment C);
5. **Land Use Element** - Section entitled "Plan Implementation", Short Term

Projects and Initiatives, pages 145 and 146; and Medium Term Projects and Initiatives, page 146 (Attachment C);

6. **Transportation Element** - Section entitled "Goals and Objectives", Goal 4, pages 160 to 162 (Attachment D); and

7. **Plan Implementation** - Section entitled "Overarching Theme: Promote Compatible and Sustainable Residential, Commercial, and Industrial Development", Short Term Projects and Initiatives, Density, pages 195 and 196 (Attachment E).

ATTEST:

Ann U. Mercer, City Clerk

Jack M. Scoville, Jr., Mayor

First Reading: _____

Approved as to Form:

Second Reading: _____

Elise F. Crosby, City Attorney

Resolution No. ____

**RESOLUTION
RECOMMENDING ADOPTION OF
AMENDMENTS TO THE
CITY OF GEORGETOWN COMPREHENSIVE PLAN**

WHEREAS, the General Assembly of South Carolina enacted in 1994 an amendment to the Code of Laws of South Carolina by adding Chapter 29 to Title 6, "South Carolina Local Government Comprehensive Planning Enabling Act of 1994", as subsequently amended ['the State Code']; and

WHEREAS, the planning process includes the development of a comprehensive plan and the State Code requires that the plan contain, at a minimum, a population element, an economic development element, a natural and cultural resources element, a community facilities element, a housing element, a land use element, a transportation element, and a priority investment element; and

WHEREAS, the City of Georgetown has adopted, pursuant to the State Code, a comprehensive plan entitled the "City of Georgetown, South Carolina Comprehensive Plan, 2011" and this plan was updated with the adoption of the "City of Georgetown Land Use Element, 2016"; and

WHEREAS, the State Code requires that the local planning commission develop and maintain a planning process which will result in the systematic preparation and continued reevaluation and updating of those elements considered critical, necessary, and desirable to guide development and redevelopment in its area of jurisdiction; and

WHEREAS, the Georgetown City Council has requested, by resolution adopted on March 16, 2017, that the Planning Commission consider and make recommendations as to certain Comprehensive Plan amendments related to adoption of the REDD within the Primary and Secondary Redevelopment Areas as illustrated on the Future Land Use Map (Map Exhibit LUM-6);

WHEREAS, the City of Georgetown Planning Commission has conducted a review and concluded that amendments to the City of Georgetown Comprehensive Plan are warranted;

NOW THEREFORE, THE CITY OF GEORGETOWN PLANNING COMMISSION, BY RESOLUTION, HEREBY RECOMMENDS FOR ADOPTION BY THE CITY COUNCIL THE FOLLOWING AMENDMENTS, AS LISTED BELOW AND ATTACHED HERETO, TO THE CITY OF GEORGETOWN, SOUTH CAROLINA COMPREHENSIVE PLAN, 2011 AND THE CITY OF GEORGETOWN LAND USE ELEMENT, 2016:

1. **ECONOMIC DEVELOPMENT ELEMENT** – Section entitled "Industrial Development" pages 41 and 42 (Attachment A);
2. **ECONOMIC DEVELOPMENT ELEMENT** – Section entitled "Goals and Objectives", Goal 4, pages 44 and 45 (Attachment A);
3. **HOUSING ELEMENT** – Section entitled "Goals and Objectives", Goal 4, page 110 and Goal 6, page 111 and 112 (Attachment B);
4. **LAND USE ELEMENT** – Section entitled "Goals and Objectives", Goal 4, pages 136 to 138; Goal 5, page 138; and Goal 8, pages 140 to 142 (Attachment C);

Resolution No. ____

**RESOLUTION
RECOMMENDING ADOPTION OF
AMENDMENTS TO THE
CITY OF GEORGETOWN COMPREHENSIVE PLAN**

5. **LAND USE ELEMENT** – Section entitled “Plan Implementation”, Short Term Projects and Initiatives, pages 145 and 146; and Medium Term Projects and Initiatives, page 146 (Attachment C);
6. **TRANSPORTATION ELEMENT** - Section entitled “Goals and Objectives”, Goal 4, pages 160 to 162 (Attachment D); and
7. **PLAN IMPLEMENTATION** – Section entitled “Overarching Theme: Promote Compatible and Sustainable Residential, Commercial, and Industrial Development”, Short Term Projects and Initiatives, Density, pages 195 and 196 (Attachment E).

By a vote of 6 to 0, this resolution was adopted by the City of Georgetown Planning Commission at its regular meeting held on March 28, 2017.

Winfred Pieterse

Winfred Pieterse, Chairman
City of Georgetown Planning Commission

3-30-17

Date

Debra Grant

Debra Grant, Secretary
City of Georgetown Planning Commission

3-30-17

Date

Attachment: Resolution Final Signed (2304 : Amend the 2011 Comprehensive Plan and 2016 Land Use Element)

Attachment A**ECONOMIC
DEVELOPMENT
ELEMENT***City of Georgetown Comprehensive Plan, 2011*

Educational Services (\$31,953) are higher than the average annual salaries of full-time, year round workers within the city. Investments in both of these areas can have a tremendous positive impact on the economic well-being of Georgetown residents.

The Population Element provides an overview of the educational attainment statistics of the adult population in Georgetown. Census data indicates that Georgetown lags behind many other communities throughout the state in terms of educational attainment. Research has proven that there is a strong correlation between educational attainment and lifelong earning potential. One of the major goals of this plan is to pursue a partnership with one of the state higher education institutions such as University of South Carolina, College of Charleston, Coastal Carolina University, or Clemson to invest in the development of a satellite or branch campus in the City of Georgetown. This type of facility would be highly beneficial to the city in several ways including lifelong learning opportunities for the adult workforce and the local retiree population, increased retention of younger residents, and improved workforce training programs for existing and prospective businesses. In addition, a higher education facility can serve as a social and cultural activity hub for the entire community.

A primary goal outlined in this comprehensive plan is to attract retirees to the Georgetown community. One of the major service needs of this population group is specialized health care service. Making further investments in the Georgetown Hospital System will be vital in attracting new retirees who have particular health care service needs while helping to meet the health care needs of current residents.

Industrial Development

Considering the relatively small geographic boundaries of the City of Georgetown, there is not much undeveloped land available to locate new industries within the city limits. To address this reality, it is important for the city to partner with Georgetown County in their industrial recruitment and development efforts. Employees of new industries that may locate in Georgetown County will certainly consider living in the city and will likely spend a significant amount of their incomes on retail goods and services, leisure activities, and dining in Georgetown.

If annexation is pursued as is recommended in the Land Use Element, the city could encourage industrial development in suitable land areas within the newly annexed territory. The first step will be to properly zone the annexed area and ensure that the adequate infrastructure needs such as water and sewer service and transportation access are provided. Any potential negative externalities such as noise, traffic, light, and air pollution should be mitigated to reduce impacts on nearby residential and commercial areas.

ECONOMIC DEVELOPMENT ELEMENT

Attachment A

City of Georgetown Comprehensive Plan, 2011

Adjacent to the city limits, there are existing industrial sites including the Port of Georgetown. Georgetown's port is one of only two coastal ports operated and maintained by the South Carolina Ports Authority. As of 2017, the future viability of the Port of Georgetown is uncertain. Declining use, the prohibitive cost of dredging, and the state's focus on the Port of Charleston and the inland ports at Greer and Dillon are significant obstacles to the port's continued operation.

After intermittent periods of inactivity, the steel mill at the western end of Georgetown's harbor ceased operations in 2015. This, coupled with a lack of new investment in the surrounding area, resulted in a review of the city's land use policies. Subsequently, the city amended its land use policies to encourage the transition from heavy industrial to mixed uses on this and adjacent sites (see the Land Use Element). In 2016, the Urban Land Institute (ULI) conducted a study on the area's future viability. Among the ULI recommendations, the study concluded that transitioning the site from industrial to mixed-use would constitute an appropriate adaptive reuse of the land.

It is anticipated that the redevelopment of these industrial sites will be a multi-year undertaking. The redevelopment of these sites will need to consider the identification and mitigation of environmental constraints and the extension and upgrade of infrastructure including planned streets. In addition, the city will need to amend its zoning ordinance to provide for the eventual discontinuance of heavy industrial uses, while providing development options that encourage the compatible use of these sites.

Part III. Economic Development Policies

GOALS & OBJECTIVES

GOAL 1: Support existing businesses and industries, as they are the foundation for future economic growth and development. *Objectives include:*

- Ensure that business retention is a major focus in the city's economic development strategy by:
 1. Expanding local SCORE program to ensure that local business owners have access to training, information resources, and business counseling;
 2. Surveying existing businesses to better understand local impediments to business growth; and
 3. Establishing a business retention technical committee which can help address business community concerns as they are identified.

**ECONOMIC
DEVELOPMENT
ELEMENT**

Attachment A

City of Georgetown Comprehensive Plan, 2011

2. State, federal, and local tax obligations;
3. Recommended business insurance needs;
4. Local workforce training resources; and
5. Local and state tax incentives and grant opportunities.

GOAL 4: Ensure that the downtown and historic district are a major component of long-term economic development efforts. Objectives include:

- Develop a strategy that clearly separates the historic district and the waterfront from adjacent industrial districts to minimize nuisances. Efforts could include:
 1. Improved landscaping and screening on adjacent industrial sites;
 2. Limit the expansion of nuisances through zoning standards; and
 3. Encourage the discontinuance of incompatible heavy industrial uses in the primary and secondary redevelopment areas (see Map Exhibit LUM-6). Provide, through amendments to the city's zoning ordinance, for the transitioning of these sites to compatible uses by the creation of a redevelopment district(s) (see also the Land Use Element).
- Monitor vacant storefronts on Front Street and work with businesses and property owners to minimize economic impacts.
- Develop an incentive program that reduces certain business fees for commercial enterprises that locate in a vacant building within the downtown business district.
- List available vacant properties on the city's website.
- Pursue "Main Street" designation through the National Trust for Historic Preservation.
- Pursue "Preserve America Community" designation through the Advisory Council on Historic Preservation.
- Continue to properly maintain and enhance the Haborwalk area, making it accessible and appealing to all users.
- Work with the Georgetown County Chamber of Commerce and other entities to market and promote Georgetown's downtown and local businesses. Develop specific marketing strategies such as:
 1. "Buy Local" Campaigns; and
 2. Promoting or featuring local businesses as part of the marketing for local festivals and events.
- Assess strategies that encourage US 17 motorists to visit the historic district of Georgetown. Strategies may include, but not be limited to the following:

Attachment A

ECONOMIC
DEVELOPMENT
ELEMENT*City of Georgetown Comprehensive Plan, 2011*

1. Continue to improve wayfinding signage so that visitors can easily navigate local roads and find parking, attractions, and local businesses. Make the wayfinding system efficient for both motorists and pedestrians. Utilize maps so that visitors can locate points of interest outside of the core downtown area such as East Bay Park; and
2. Enhance the aesthetics of the main transportation gateways so that visitors have a positive first impression of the City of Georgetown. Within primary and secondary redevelopment areas designated on the future land use map (Map Exhibit LUM-6), adopt zoning standards that prohibit new heavy industrial uses and encourage the discontinuance of incompatible uses. Require the mitigation of visual and other nuisances through the use of setbacks, screening, landscaping, and other mitigating techniques (see also the Land Use Element).

GOAL 5: Maintain a regional and global perspective when analyzing trends in the local economy. Objectives include:

- Utilize research assistance from higher education institutions such as Coastal Carolina University, Clemson University Cooperative Extension, and Horry-Georgetown Technical College.
- Continue to partner with regional economic development agencies such as the Myrtle Beach Regional Economic Development Corporation, Northeastern Strategic Alliance, and Georgetown County Economic Development Commission to maximize existing resources and pursue mutual economic interests.

GOAL 6: Pursue new opportunities to expand the city's tourism economy. Objectives include:

- Create a tourism management plan to address the following considerations:
 1. Full exploration of local tourism opportunities including festivals and events, ecotourism activities, cultural tourism activities, downtown dining and entertainment, etc;
 2. Identify current constraints to tourism growth (hotel capacity, public transportation availability, event parking limitations, etc.);
 3. Develop strategies to attract repeat visitors;
 4. Develop strategies to tap into regional and national tourism and travel markets;

HOUSING ELEMENT

Attachment B

City of Georgetown Comprehensive Plan, 2011

- Adopt and locally enforce the requirements of the *International Residential Code* for all new construction.
- Adopt and locally enforce the requirements of the *Property Maintenance Code*.
- Ensure the protection of dwellings from flooding to include:
 1. Enforce the requirements of the Flood Damage Prevention Ordinance;
 2. Require the installation of stormwater and drainage infrastructure for all new developments; and
 3. Continue efforts to retrofit older neighborhoods with adequate drainage infrastructure.
- Proactively encourage infill development.
- Explore the creation of priority investment zones in older neighborhoods with high numbers of vacant lots or deteriorating structures.
- Protect, through the use of zoning, residential areas from nuisances as defined in the Land Use Element.

GOAL 4: Build and maintain housing density within the city's core, older neighborhoods while ensuring housing compatibility. Objectives include:

- Raise density standards for portions of the core areas of the city from ten units per acre up to twenty units per acre. Densities higher than twenty units per acre may be permitted within planned developments, the downtown, and primary and secondary redevelopment areas. Increased densities may be provided through density bonuses (see Goal 6).
- Differentiate high density areas within the city's core (presently zoned R4 and R5) with those at the periphery of the city (presently zoned R4). Density should only be raised where the density criteria in the Land Use Element can be met.
- Develop design criteria for multi-family housing that ensure:
 1. The compatibility of the multi-family structure's form (scale and architectural style) with those of surrounding properties;
 2. Parking is located to the rear of multi-family structures, to the extent that is practicable. Large, multi-family parking facilities should be discouraged or, when appropriate, prohibited; and
 3. The avoidance of large apartment complexes. Consideration should be given, in lieu of stringent density standards, to limiting the number of units per structure (see also the Land Use Element).

HOUSING ELEMENT

Proposed Amendments (Amended Passages are Highlighted)

Page 110



Attachment B

HOUSING
ELEMENT*City of Georgetown Comprehensive Plan, 2011***GOAL 5: Recognize the importance of Georgetown's historic residential uses and structures. Objectives include:**

- Create and maintain an inventory of contributing structures and components.
- Encourage preservation and discourage demolition when appropriate.
- Maintain and refine the city's preservation guidelines as administered by the architectural review board.
- Require the rehabilitation of structures in accordance with Section 106 of the U.S. Department of Interior's standards.
- Refine zoning standards in the areas of lot size, density, and setback to ensure the continuation of historic structures and to allow new construction that is compatible (see also the Land Use Element).
- Promote the tourism value of Georgetown's historic homes and sites.

GOAL 6: Encourage innovation in housing design and development. Objectives include:

- Allow Planned Developments in cases where:
 1. A mixture of uses and housing types are proposed. Establish clear guidelines for defining mixed use and specify a minimum percentage of land or floor area to be devoted to nonresidential uses;
 2. The land area involved is greater than ten acres;
 3. The proposal cannot readily be accomplished through existing zoning;
 4. The proposal can easily be integrated into existing infrastructure and the established development pattern of the city; and
 5. The proposal would be for the long-term benefit of the community (see also the Land Use Element).
- Allow zero-lot-line developments in cases where:
 1. The proposal's density is in keeping with the density permitted in the zoning district;
 2. The proposal ensures the long-term access to and maintenance of structures;
 3. Open space is provided; and
 4. The proposal involves multiple lots. Zero-lot-line developments involving clusters of less than five lots should be discouraged; or
 5. The zero-lot-line component is to be collocated with or is a complementary component of an institutional use; or
 6. The proposal is part of an infill strategy or initiative for a designated area.

HOUSING ELEMENT

Attachment B

City of Georgetown Comprehensive Plan, 2011

- Provide density bonuses in the zoning ordinance for developments that provide:
 1. Affordable housing;
 2. Public parks or buildings;
 3. Streets and other rights-of-way illustrated on the official map; or
 4. Other amenities in addition to those required by the zoning ordinance or development regulations.
- Consider and provide other zoning techniques when in furtherance of this plan. This may include the use of development agreements, floating zones, cluster development, and other zoning techniques allowed by law.

GOAL 7: Promote sustainable development in Georgetown's neighborhoods.
Objectives include:

- Participate in the newly created Sustainable Communities Initiative administered by the US Department of Housing and Urban Development.
- Establish incentives such as stormwater fee discounts for residents to install green infrastructure lot and building components such as rain gardens and green roofs.
- Create walkable, active, and safe neighborhoods by incorporating sidewalks, common areas, and open space into neighborhood designs.
- Encourage residential development that meets US Green Building Council's LEED Neighborhood Development Certification Program criteria.

GOAL 8: Develop and implement strategies that address the need for affordable housing in Georgetown. *Objectives include:*

- Create market-based incentives for developers to incorporate affordable housing units into their residential development plans.
- Continue to work with the Waccamaw Regional Council of Governments Community Development Department to:
 1. Secure funds through the US Housing and Urban Development HOME Program which assists communities in expanding rental and homeowner affordable housing units; and
 2. Establish a community housing trust fund to ensure that matching funds are available for HOME Program projects and other grant opportunities administered through the Waccamaw Regional Council of Governments.

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- Require, where available, the use of sanitary sewer and public water for all new developments within the city limits.
- Prohibit illicit discharges into the city's storm sewer system or water bodies.
- Encourage the voluntary protection of naturally sensitive areas through the use of conservation easements. Consideration should be given to providing local incentives, such as density and height bonuses, for voluntary conservation initiatives. Bonuses could be granted, when compatible with adjacent uses, for the dedication of open or green space(s) adjacent to the city's rivers, marshes, and viewsheds.
- Retain and refine the use of the city's Conservation Preservation District to include the expansion of this district to unprotected marshland in the city or upon annexation.



A Grand View: Homes overlook the marsh of East Bay.

GOAL 4: Provide ample areas for residential development and implement density standards that consider property access and the availability of services. Objectives include:

- For all zoning requests, the loss of long standing residential districts or uses should be considered. Speculative commercial rezonings that result in the reduction of the city's viable housing stock should be discouraged.
- Plan for an increase in the city's population of one percent annually.
- Increase the permitted density within the core residential areas of the city and the downtown in keeping with the objectives of this element. Consideration should be given to:
 1. Developing design or form standards for multi-family housing; and
 2. Limiting the number of units per structure or the size of structures (in keeping with building mass/ or form of other structure in an area.)
- Define density as follows:
 1. Very low density – One or fewer units per acre.
 2. Low Density – Two to five dwelling units per acre.

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3. Medium Density – Six to nine dwelling units per acre.
 4. High Density – Ten to twenty dwelling units per acre.
 5. Very High Density – More than twenty dwelling units per acre.
- Restrict areas to very low density in cases where:
 1. Public water and sewer are unavailable to service the development;
 2. Public services such as fire, police, or sanitation cannot service a higher density without additional public costs;
 3. The development has limited access to a public street or the capacity of the existing street cannot support a higher density;
 4. A higher density would result in the loss or degradation of an environmentally sensitive area; or
 5. The property is located at the periphery of the city and a very low density is appropriate to maintain the density of the city's core.
 - Restrict areas to low density in cases where:
 1. Public facilities and infrastructure such as water, sewer, fire, police, or sanitation cannot service a higher density without additional public costs;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is designed to transition between areas of medium and very low development density; or
 3. The property is located at the periphery of the city and a low density is appropriate to maintain the density of the city's core.
 - Permit medium density in cases where:
 1. Public facilities and infrastructure such as water, sewer, police, fire, and sanitation can service the proposed density;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is part of a planned development;
 3. Streets adjacent to the site can support the proposed density without a reduction in the street's level of service; and
 4. The site is serviced by sidewalks.
 - Permit high density in cases where:
 1. Public facilities and infrastructure such as water, sewer, police, fire, and sanitation can service the proposed density;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is part of a planned development.
 3. Streets adjacent to the site can support the proposed density without a reduction in the street's level of service;

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- 4. The development is adjacent to or incorporates mixed uses;
- 5. The development will not result in loss or reduction of the city core's density; and
- 6. The site is serviced by sidewalks.
- Very high densities may be permitted in planned developments, the city's downtown, and primary and secondary redevelopment areas subject to the policies and standards of this plan.

GOAL 5: Adopt standards that protect residential uses from incompatible development. Objectives include:

- Mitigate the potential for nuisance creation through the use of zoning, development regulations, and other regulatory standards. Nuisances to residential occupancy include:
 1. Automobile lights, outdoor lighting, and illuminated signs;
 2. Loud noises and vibrations;
 3. Noxious odors, dust, smoke, fumes, and other air pollutants;
 4. Excessive traffic;
 5. Litter, junk, and overgrown lots;
 6. Dilapidated structures;
 7. Excessive outdoor storage or assembly; and/or
 8. Loss of privacy.
- Allow a mixture of residential, commercial, and professional uses in cases where the nonresidential uses do not create nuisances and the uses are compatible with residential structures in size, scale, height, mass, architecture, and placement. The zoning ordinance should provide that compatible nonresidential uses be permitted as special exceptions, conditional uses, and/or be subject to form based standards.
- Allow public and semi-public uses in residential areas where the uses do not create nuisances to residential occupancy. The zoning ordinance should provide that public and semi-public uses can be permitted in residential areas as conditional uses and/or be subject to form based standards.
- Prohibit incompatible and/or nuisance generating commercial, professional, public, and semi-public uses from locating in residential areas.
- Prohibit incompatible industrial uses from locating or expanding into residential areas.
- Mitigate the impacts of incompatibility through the utilization of fences, walls, physical barriers, vegetation, building and access orientation, separation, and/or building form.

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of adjacent properties; and

3. The zoning change is designed to benefit a single owner or provide a competitive advantage to a particular parcel to the detriment of the community or the surrounding neighborhood.

GOAL 7: Provide areas for future industrial development that minimize the impact to adjacent uses. Objectives include:

- New industrial districts within the city should be located in areas that are separated from residential districts, the historic district, and other incompatible uses to the extent that is practicable;
- Differentiate through zoning, heavy industrial uses from less intense, limited or light industrial activities. Heavy industrial uses include those activities which are likely to generate significant levels of truck traffic, noise, pollution, vibration, dust, fumes, odors, radiation, radioactivity, poisons, pesticides, herbicides, or other hazardous materials, fire or explosion hazards, or other undesirable conditions.
- The arrangement of new industrial districts and uses should consider:
 1. The transportation needs of planned industry including access to rail, the port, and major roadways. Industrial zoning districts should be arranged to reduce impacts on the existing transportation system;
 2. The potential nuisances created by the proposed siting and whether these nuisances can be abated;
 3. Compatibility of surrounding land uses;
 4. The potential for impacts on natural resources or sensitive areas; and
 5. Utility and public service costs.
- Engage in an active and continuous dialogue with the county to identify future industrial sites outside of the city limits.
- Encourage the county to adopt standards that minimize nuisances from industries in close proximity to the city.
- Plan for the long-term conversion of existing industrial districts and uses once these sites are abandoned or become obsolete.

GOAL 8: Provide for the harmonious redevelopment of existing industrial districts and uses located in the city's core and in other areas where the potential for nuisances and impacts on adjacent properties are high. Objectives include:

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- Prioritize areas and sites within the city for conversion and redevelopment. In general, heavy industrial uses are deemed incompatible when in close proximity to the city's downtown, waterfront, historic district, residential neighborhoods, and gateway corridors and intersections.
- Provide viable redevelopment options for property owners. The city's zoning ordinance should be amended to provide for a mixed-use/redevelopment district(s). This district(s) should:
 1. Allow for a mixture of uses;
 2. Prohibit new heavy industrial uses. The district(s) may permit, as a conditional use or special exception, certain limited or light industrial uses, provided these uses incorporate complementary architectural features, have a minimal potential for creating nuisances, and are compatible in intensity with surrounding nonindustrial uses;
 3. Promote setback, height, and other bulk and dimensional restrictions which are compatible with adjacent districts or provide for reasonable transition. Flexible design and dimensional standards should also be considered subject to district specific design standards and/or architectural/design review;
 4. Consider providing density, height, parking, or other development bonuses and design modifications contingent upon the provision of open space and public amenities;
 5. Protect adjacent streets. Consideration should be given to restricting new curb cuts, spacing points of ingress/egress, and limiting the size and location of surface parking areas to complement development along the city's historic corridors and maintain the level of service on adjacent arterial streets; and
 6. Protect adjacent waterfronts. Consideration should be given to protecting or creating viewsheds and encouraging proximal open space.
- Pursue the rezoning of prioritized redevelopment areas (see the future land use map).
- Provide for the continuation (as a nonconformity) of active industrial uses following rezoning. The continuation of nonconformities should be conditioned to promote the abatement of nuisances and the eventual discontinuance of incompatible uses. Consideration should be given to:
 1. Requiring that industrial sites be brought into conformance following the discontinuance of production or abandonment;
 2. Prohibiting expansion and/or reconstruction;
 3. Requiring buffering, screening, and other mitigation; and

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4. Requiring the date certain discontinuance and termination of nonconformities.
 - Recognize that redevelopment may occur through means other than a traditional zoning district, e.g. as a planned development district, use of development agreements, floating zones, cluster developments, and other zoning techniques allowed by law. These zoning/development options should be considered when harmonious with this plan.
 - Recognize that brownfield sites and their redevelopment may present environmental challenges. The city should actively work with property owners, the county, and/or other partners to identify grants for assessment and cleanup.
 - Consider the creation of priority investment zones, tax increment financing districts, or similar tools to incentivize the redevelopment of former industrial sites.
 - Recognize the importance of street interconnectivity and the city's historical grid pattern. The redevelopment of sites adjacent to the city's historic district, downtown, and West End should preserve and, where feasible, extend this street pattern.
 - Recognize that the primary and secondary redevelopment areas as identified on the future land use map (Map Exhibit LUM-6) were the subject of additional study. The redevelopment of these sites should consider and, to the extent practicable, incorporate recommendations contained within the Urban Land Institute's (ULI) Advisory Services Panel Report, *Transforming Georgetown Economically, Physically, and Socially* (September 18-23, 2016).
 - Examine zoning standards for adjacent properties subsequent to or in conjunction with the conversion/redevelopment of former industrial sites. This evaluation should consider possible complementary or ancillary uses, the incorporation of design standards, and a provision of similar redevelopment incentives.
 - Consider the creation of a redevelopment corporation or similar public/private partnership to assist in planning, environmental assessment, community outreach, public improvement and facilities implementation, the marketing of sites, and similar activities.

GOAL 9: Ensure that the future location of public buildings and uses complement existing land uses and promote the goals of this element.
Objectives include:

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The City of Georgetown Comprehensive Plan, 2011 provides a unified plan implementation section. With the 2016 review of the plan, the land use element is the first of nine elements to be updated. Because of the interrelated nature of this plan's elements, it is anticipated that the implementation section for the entire plan will be updated at the conclusion of the planning commission's review process.

The land use element's implementation activities provided in the 2011 plan's final section are deemed to remain relevant. Reference to this portion of the plan should continue; however, this element's update contains significant policy clarifications and guidance with respect to the continuation and eventual cessation of heavy industrial uses in proximity to the city's downtown, waterfront, historic district, residential neighborhoods, and gateway corridors and intersections (see Goal 8 and the Future Land Use Map). Because of this, the activities listed below are considered an addendum to the 2011 plan's implementation initiatives:

Short Term Projects and Initiatives

- ✓ **Creation of a Mixed Use/Redevelopment District.** The city's zoning ordinance should be amended to create a mixed use/redevelopment district(s). The purpose of this district(s) is to provide for the optimum use and conversion of industrial sites and other large tracts. Because of the size of these tracts, unknown development constraints, and the need to provide appropriate transition between adjacent zoning districts, it is recommended that the district(s) provide for a variety of allowable uses. This district(s) should provide flexibility in dimensional requirements; however, the city may wish to consider the implementation of design guidelines to ensure transition, especially for redevelopment occurring immediately adjacent to the city's historic district, waterfront, and gateway corridors and intersections. **Responsible Entities:** Building and Planning Department, Planning Commission, and City Council.
- ✓ **Rezoning.** The future land use maps (Map Exhibits LUM-6 and LUM-7) illustrate primary and secondary redevelopment areas and corridors. The primary and secondary redevelopment areas illustrated on Map LUM-6 should be examined in the short term for rezoning(s). This may occur immediately following the creation of a mixed use/redevelopment district(s). **Responsible Entities:** Building and Planning Department, Planning Commission, and City Council.

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- **Redevelopment Corporation.** The city should investigate and consider the creation of a redevelopment corporation or similar public/private partnership to assist in planning, environmental assessment, community outreach, public improvement and facilities implementation, the marketing of sites, and similar activities within designated redevelopment districts. **Responsible Entities:** *City Administrator and City Council in conjunction with other identified partners.*
- ✓ **Official Map.** The city should pursue the creation of an official map. Priority should be given to identifying needed public sites and rights-of-way within the primary and secondary redevelopment areas and redevelopment corridors (see Map Exhibit LUM-6). **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*

Medium Term Projects and Initiatives

- ✓ **Annexation and Rezoning.** The Port of Georgetown and adjacent unincorporated properties are illustrated as a secondary redevelopment area on the Future Land Use for Studies Areas map (Map Exhibit LUM-7). The state's port facility has historically been an economic asset that contributed to the economic growth of the city and region; however, in recent years, declining tonnage and the need for dredging have reduced the port's impact. The anticipation in the short term is that the Port of Georgetown will remain an active industrial site. If port operations by the state discontinue in the future, the transition of this area to a mixed use/redevelopment district compatible with the city's historic waterfront should be encouraged. If annexed, properties within this secondary redevelopment area should be rezoned by the city to accommodate this transition. **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*
- ✓ **Redevelopment Corridors.** The city should examine zoning standards for properties adjacent to designated redevelopment districts. The redevelopment of large mixed use tracts adjacent to the waterfront and east of US 17 has the potential to increase the economic viability of the entire US 17 corridor. Upon redevelopment, zoning district requirements for adjacent properties should ensure the permissibility of complementary uses and compatible design standards. **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*

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2. Require the placement of bike lanes in the construction of new collector or arterial roadways.
3. Investigate the designation of bike lanes on existing streets.
4. Encourage new commercial developments to include bike racks and other amenities. Provide incentives, including a reduction in required parking, for developments providing bicyclist friendly amenities.
5. Seek national designation for the city's efforts to promote bicycle use.
6. Continue support for the East Coast Greenway and pursue improvements for Georgetown's section of the route including the construction of the Meeting Street Wooden Bridge.

GOAL 4: Improve the appearance, safety, and function of Georgetown's major corridors and intersections. *Objectives include:*

- Identify "gateway intersections" within Georgetown and upgrade with defined improvements, such as:
 1. Decorative and wayfinding signage;
 2. Internally illuminated street name signs;
 3. Improved pedestrian crossings that incorporate pavement textures, "street print", and/or decorative elements;
 4. A uniform landscaping motif; and
 5. Mast arm signalization.
- Prioritize gateway intersection improvements. When feasible, priority should be given to the following intersections (in rank order):
 1. Front and Fraser Streets;
 2. Five Points intersection;
 3. Church and St. James Streets;
 4. Black River Road and Church Streets;
 5. Highmarket and Fraser Streets; and
 6. Broad and Church Streets.
- Refine the "Design Overlay District for Main Corridors" standards within the zoning ordinance. Refinement should include:
 1. The creation of objective architectural standards to aid in administration and enforcement;
 2. Clarification of appeals and variance provisions related to traditional dimensional zoning standards and architectural standards; and
 3. The development of standards which address building orientation, signage, and landscaping for properties adjacent to "prioritized gateway intersections" as identified in this element.

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- Investigate the feasibility of roundabout installation at key secondary intersections. Intersections for possible consideration are: (1) Highmarket and Saint James, (2) Highmarket and Broad, (3) Highmarket and Cleland, and (4) South Island and Aviation Streets.
- Continue efforts to provide or upgrade wayfinding signage, internally illuminated street name signs, and entrance signage. Signage along the city's primary entrances should include "trailblazer signs" and large-scale banners to create a sense of arrival.
- Continuously monitor the need for additional signalization at intersections. Intersections for priority monitoring are:
 1. Church and St. James Streets;
 2. Church and Broad Streets;
 3. Church and Cleland/Fraser Alley;
 4. Highmarket and Washington (public safety use);
 5. Fraser and Montford/Oakley Streets; and
 6. South Island Road and Aviation Boulevard (see roundabout above).
- Pursue the creation of a truck bypass to improve safety and reduce damage to Fraser Street.
- Pursue improvements to Black River Road. This project should involve the installation of sidewalks and possible realignment to create an intersection with Cleland and Church Streets. Widening and the installation of turn lanes should also be considered.
- Pursue the widening and extension of Anthuan Maybank Drive.
- Prioritize improvements within and adjacent to primary and secondary redevelopment areas and redevelopment corridors (see Map Exhibit LUM-6). Standards should be adopted which, at a minimum, address:
 1. A development's traffic impact and the need to implement traffic impact mitigation measures;
 2. The protection of Front Street from freight traffic and other high traffic generating uses;
 3. The need to limit excessive curb cuts and to provide adequate spacing between site entrances;
 4. The creation and preservation of viewsheds through the use of setbacks, size, orientation, separation, and streetscape requirements; and
 5. The elimination of visual and other nuisances through landscaping, screening, and other mitigation techniques.
- Pursue the creation of an official map to identify needed public streets, rights-of-way, and other improvements within the city. This map may include the

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entire city or prioritize areas including but not limited to redevelopment areas and corridors.

GOAL 5: Ensure that new street construction is of the highest quality and provides safeguards to ensure proper maintenance and property access. Objectives include:

- Require that all newly created lots have frontage on and access to a public street. The use of private streets for primary property access should, except in cases of demonstrated hardship, be prohibited by the city's development regulations.
- Develop standards for new street creation. Standards should be based on the functional classification of the proposed street and should address:
 1. Grade;
 2. Compaction;
 3. Surfacing composition of required concrete or bituminous asphalt;
 4. Right-of-way width;
 5. Intersection alignment;
 6. Curve radii;
 7. Utility placement and the need for easements outside of the dedicated right-of-way;
 8. Drainage and the need for easements outside of the dedicated right-of-way;
 9. Sidewalks, bike lanes, and accessibility;
 10. Right-of-way trees and other plantings; and
 11. Curb and gutter installation; or
 12. Ditching, to include guidelines for shoulder width and slope.
- Formalize the process for bonding, street inspection, and dedication.
- Provide predictability in the acceptance of new streets into public ownership and maintenance. Acceptance policies/standards should be promulgated that:
 1. Require the dedication and subsequent public acceptance of new streets in cases where:
 - (a) subdivided lots derive their only frontage from the new street, or
 - (b) the new street connects two or more segments of an existing public street and the connection is deemed in the public interest;
 2. Encourage the dedication and subsequent public acceptance of new streets in cases where:

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PLAN
IMPLEMENTATION*City of Georgetown Comprehensive Plan, 2011***Overarching Theme: Promote Compatible and Sustainable Residential, Commercial, and Industrial Development**

Land use planning requires thorough consideration of existing transportation and utility infrastructure, economic development opportunities, appropriate locations for housing developments, community facility needs, and environmentally sensitive areas within the community. Land use planning has significant implications on many of the elements discussed throughout this comprehensive plan.



Short Term Projects and Initiatives: The following projects and initiatives are designed to be implemented within one to three years of the adoption of this plan.

✓ **Zoning Ordinance Review and Update.** Following the adoption of the comprehensive plan, a review of the city's zoning ordinance should be conducted:

- **Historic Area Review.** The primary emphasis of this review component is to quantify the effect of the current zoning on the city's historic areas. Prior to the commission's review, a street level assessment should be conducted to include: (1) Quantifying the number of nonconformities created by existing setbacks or lot size requirements; (2) Documenting architectural features or building arrangements contributing to nonconformity; (3) Quantifying the number of nonconformities created by existing use standards.

The examination and subsequent update by the planning commission should concentrate on promoting the continuation of historical uses, desirable architectural features, and building arrangements (where nuisances, if any, can be mitigated).

- **Zoning Ordinance Administration.** The primary emphasis of this review and update is to ensure the timely, efficient, and consistent decision making. Areas of potential update include: (1) The incorporation of text/map amendment review standards into the zoning ordinance (See §§1300-1303, *City of Georgetown Zoning Ordinance*); (2) Streamlining the zoning ordinance by eliminating the city's Intermediate Commercial District and the combination of the city's Medical Residential District with an enhanced Neighborhood Commercial District or the

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creation of a mixed use district; and (3) Specifying timelines for staff action on all administrative permits.

- **Traditional Neighborhoods.** The planning commission should examine the creation of a traditional neighborhood district or amend existing R-4 District provisions. The purpose of the traditional neighborhood district would be to promote the orientation of structures/porches close to the street (through reduced setbacks, build-to-lines, or a combination of both), encourage mixed use and density, and to implement design and streetscape standards (see Historic Area Review above).
- **Density.** In general, density within the city's core areas may be increased from ten units per acre to twenty units per acre. Very high densities may also be permitted for select areas within the city's core through the use of development bonuses. The increase in density should be coupled with the development of design standards and limitations on the number of units per structure. In areas designated for increased density, the planning commission should actively solicit the input of stakeholders.

Areas currently zoned for high density development at the periphery of the city that do not conform to the density criteria outlined in the goals and objectives of this plan should be considered for down zoning. Newly annexed areas should be zoned for low or very low density until such times as adequate municipal services are available.

Include provisions within the zoning ordinance for density bonuses for projects that incorporate community amenities or affordable housing units into development proposals. Density bonuses should be considered in the creation of priority investment zones for areas, especially those zones where infill development is encouraged. These bonuses may also be provided in primary and secondary redevelopment areas (see Map Exhibit LUM-6), thus, where conditions warrant, creating an option for high or very high density.

Responsible Entities: Building and Planning Department, Planning Commission, and City Council. **Relevant Comprehensive Plan Elements:** Land Use, Housing, Economic Development, Transportation, and Community Facilities (see note I-1).

- ✓ **Vacant Housing.** An inventory of vacant lots suitable for residential construction should be conducted annually to determine housing potential and to gauge the success of infill initiatives. **Responsible Entities:** Building and Planning Department, and Planning

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ECONOMIC DEVELOPMENT ELEMENT

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Educational Services (\$31,953) are higher than the average annual salaries of full-time, year round workers within the city. Investments in both of these areas can have a tremendous positive impact on the economic well-being of Georgetown residents.

The Population Element provides an overview of the educational attainment statistics of the adult population in Georgetown. Census data indicates that Georgetown lags behind many other communities throughout the state in terms of educational attainment. Research has proven that there is a strong correlation between educational attainment and lifelong earning potential. One of the major goals of this plan is to pursue a partnership with one of the state higher education institutions such as University of South Carolina, College of Charleston, Coastal Carolina University, or Clemson to invest in the development of a satellite or branch campus in the City of Georgetown. This type of facility would be highly beneficial to the city in several ways including lifelong learning opportunities for the adult workforce and the local retiree population, increased retention of younger residents, and improved workforce training programs for existing and prospective businesses. In addition, a higher education facility can serve as a social and cultural activity hub for the entire community.

A primary goal outlined in this comprehensive plan is to attract retirees to the Georgetown community. One of the major service needs of this population group is specialized health care service. Making further investments in the Georgetown Hospital System will be vital in attracting new retirees who have particular health care service needs while helping to meet the health care needs of current residents.

Industrial Development

Considering the relatively small geographic boundaries of the City of Georgetown, there is not much undeveloped land available to locate new industries within the city limits. To address this reality, it is important for the city to partner with Georgetown County in their industrial recruitment and development efforts. Employees of new industries that may locate in Georgetown County will certainly consider living in the city and will likely spend a significant amount of their incomes on retail goods and services, leisure activities, and dining in Georgetown.

If annexation is pursued as is recommended in the Land Use Element, the city could encourage industrial development in suitable land areas within the newly annexed territory. The first step will be to properly zone the annexed area and ensure that the adequate infrastructure needs such as water and sewer service and transportation access are provided. Any potential negative externalities such as noise, traffic, light, and air pollution should be mitigated to reduce impacts on nearby residential and commercial areas.



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Adjacent to the city limits, there are existing industrial sites including the Port of Georgetown. Georgetown's port is one of only two coastal ports operated and maintained by the South Carolina Ports Authority. As of 2017, the future viability of the Port of Georgetown is uncertain. Declining use, the prohibitive cost of dredging, and the state's focus on the Port of Charleston and the inland ports at Greer and Dillon are significant obstacles to the port's continued operation.

After intermittent periods of inactivity, the steel mill at the western end of Georgetown's harbor ceased operations in 2015. Since that time, the city has amended its land use policies to encourage the transition from heavy industrial to mixed uses on this and adjacent sites (see the Land Use Element). In 2016, the Urban Land Institute (ULI) conducted a study on the site's future viability. Among the ULI recommendations, the study concluded that transitioning the site from industrial to mixed-use would constitute an appropriate adaptive reuse of the land.

It is anticipated that the redevelopment of these industrial sites will be a multi-year undertaking. The redevelopment of these sites will need to consider the identification and mitigation of environmental constraints and the extension and upgrade of infrastructure including planned streets. In addition, the city will need to amend its zoning ordinance to provide for the discontinuance of heavy industrial uses, while providing development options that encourage the compatible use of these sites.

Part III. Economic Development Policies

GOALS & OBJECTIVES

GOAL 1: Support existing businesses and industries, as they are the foundation for future economic growth and development. *Objectives include:*

- Ensure that business retention is a major focus in the city's economic development strategy by:
 1. Expanding local SCORE program to ensure that local business owners have access to training, information resources, and business counseling;
 2. Surveying existing businesses to better understand local impediments to business growth; and
 3. Establishing a business retention technical committee which can help address business community concerns as they are identified.

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2. State, federal, and local tax obligations;
3. Recommended business insurance needs;
4. Local workforce training resources; and
5. Local and state tax incentives and grant opportunities.

GOAL 4: Ensure that the downtown and historic district are a major component of long-term economic development efforts. Objectives include:

- Develop a strategy that clearly separates the historic district and the waterfront from adjacent industrial districts to minimize nuisances. Efforts could include:
 1. Improved landscaping and screening along the steel mill site;
 2. Limit the expansion of nuisances through zoning standards; and
 3. Encourage the discontinuance of incompatible heavy industrial uses in the primary and secondary redevelopment areas (see Map Exhibit LUM-6). Provide, through amendments to the city's zoning ordinance, for the transitioning of these sites to compatible uses through the creation of a redevelopment district(s) (see also the Land Use Element).
- Monitor vacant storefronts on Front Street and work with businesses and property owners to minimize economic impacts.
- Develop an incentive program that reduces certain business fees for commercial enterprises that locate in a vacant building within the downtown business district.
- List available vacant properties on the city's website.
- Pursue "Main Street" designation through the National Trust for Historic Preservation.
- Pursue "Preserve America Community" designation through the Advisory Council on Historic Preservation.
- Continue to properly maintain and enhance the Haborwalk area, making it accessible and appealing to all users.
- Work with the Georgetown County Chamber of Commerce and other entities to market and promote Georgetown's downtown and local businesses. Develop specific marketing strategies such as:
 1. "Buy Local" Campaigns; and
 2. Promoting or featuring local businesses as part of the marketing for local festivals and events.
- Assess strategies that encourage US 17 motorists to visit the historic district of Georgetown. Strategies may include, but not be limited to the following:

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1. Continue to improve wayfinding signage so that visitors can easily navigate local roads and find parking, attractions, and local businesses. Make the wayfinding system efficient for both motorists and pedestrians. Utilize maps so that visitors can locate points of interest outside of the core downtown area such as East Bay Park; and
2. Enhance the aesthetics of the main transportation gateways so that visitors have a positive first impression of the City of Georgetown. Within primary and secondary redevelopment areas designated on the future land use map (Map Exhibit LUM-6), adopt zoning standards that prohibit new heavy industrial uses and encourage the discontinuance of incompatible uses. Require the mitigation of visual and other nuisances through the use of setbacks, screening, landscaping, and other mitigating techniques (see also the Land Use Element).

GOAL 5: Maintain a regional and global perspective when analyzing trends in the local economy. Objectives include:

- Utilize research assistance from higher education institutions such as Coastal Carolina University, Clemson University Cooperative Extension, and Horry-Georgetown Technical College.
- Continue to partner with regional economic development agencies such as the Myrtle Beach Regional Economic Development Corporation, Northeastern Strategic Alliance, and Georgetown County Economic Development Commission to maximize existing resources and pursue mutual economic interests.

GOAL 6: Pursue new opportunities to expand the city's tourism economy. Objectives include:

- Create a tourism management plan to address the following considerations:
 1. Full exploration of local tourism opportunities including festivals and events, ecotourism activities, cultural tourism activities, downtown dining and entertainment, etc;
 2. Identify current constraints to tourism growth (hotel capacity, public transportation availability, event parking limitations, etc.);
 3. Develop strategies to attract repeat visitors;
 4. Develop strategies to tap into regional and national tourism and travel markets;

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- Adopt and locally enforce the requirements of the *International Residential Code* for all new construction.
- Adopt and locally enforce the requirements of the *Property Maintenance Code*.
- Ensure the protection of dwellings from flooding to include:
 1. Enforce the requirements of the Flood Damage Prevention Ordinance;
 2. Require the installation of stormwater and drainage infrastructure for all new developments; and
 3. Continue efforts to retrofit older neighborhoods with adequate drainage infrastructure.
- Proactively encourage infill development.
- Explore the creation of priority investment zones in older neighborhoods with high numbers of vacant lots or deteriorating structures.
- Protect, through the use of zoning, residential areas from nuisances as defined in the Land Use Element.

GOAL 4: Build and maintain housing density within the city's core, older neighborhoods while ensuring housing compatibility. Objectives include:

- Raise density standards for portions of the core areas of the city from ten units per acre up to twenty units per acre. **Densities higher than twenty units per acre may be permitted within planned developments, the downtown, and primary and secondary redevelopment areas. Increased densities may be provided through density bonuses (see Goal 6).**
- Differentiate high density areas within the city's core (presently zoned R4 and R5) with those at the periphery of the city (presently zoned R4). Density should only be raised where the density criteria in the Land Use Element can be met.
- Develop design criteria for multi-family housing that ensure:
 1. The compatibility of the multi-family structure's form (scale and architectural style) with those of surrounding properties;
 2. Parking is located to the rear of multi-family structures, to the extent that is practicable. Large, multi-family parking facilities should be discouraged or, when appropriate, prohibited; and
 3. The avoidance of large apartment complexes. Consideration should be given, in lieu of stringent density standards, to limiting the number of units per structure (see also the Land Use Element).

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*City of Georgetown Comprehensive Plan, 2011***GOAL 5: Recognize the importance of Georgetown's historic residential uses and structures. Objectives include:**

- Create and maintain an inventory of contributing structures and components.
- Encourage preservation and discourage demolition when appropriate.
- Maintain and refine the city's preservation guidelines as administered by the architectural review board.
- Require the rehabilitation of structures in accordance with Section 106 of the U.S. Department of Interior's standards.
- Refine zoning standards in the areas of lot size, density, and setback to ensure the continuation of historic structures and to allow new construction that is compatible (see also the Land Use Element).
- Promote the tourism value of Georgetown's historic homes and sites.

GOAL 6: Encourage innovation in housing design and development. Objectives include:

- Allow Planned Developments in cases where:
 1. A mixture of uses and housing types are proposed. Establish clear guidelines for defining mixed use and specify a minimum percentage of land or floor area to be devoted to nonresidential uses;
 2. The land area involved is greater than ten acres;
 3. The proposal cannot readily be accomplished through existing zoning;
 4. The proposal can easily be integrated into existing infrastructure and the established development pattern of the city; and
 5. The proposal would be for the long-term benefit of the community (see also the Land Use Element).
- Allow zero-lot-line developments in cases where:
 1. The proposal's density is in keeping with the density permitted in the zoning district;
 2. The proposal ensures the long-term access to and maintenance of structures;
 3. Open space is provided; and
 4. The proposal involves multiple lots. Zero-lot-line developments involving clusters of less than five lots should be discouraged; or
 5. The zero-lot-line component is to be collocated with or is a complementary component of an institutional use; or
 6. The proposal is part of an infill strategy or initiative for a designated area.

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- Provide density bonuses in the zoning ordinance for developments that provide:
 1. Affordable housing;
 2. Public parks or buildings;
 3. Streets and other rights-of-way illustrated on the official map; or
 3. Other amenities in addition to those required by the zoning ordinance or development regulations.
- Consider and provide other zoning techniques when in furtherance of this plan. This may include the use of development agreements, floating zones, cluster development, and other zoning techniques allowed by law.

GOAL 7: Promote sustainable development in Georgetown's neighborhoods.
Objectives include:

- Participate in the newly created Sustainable Communities Initiative administered by the US Department of Housing and Urban Development.
- Establish incentives such as stormwater fee discounts for residents to install green infrastructure lot and building components such as rain gardens and green roofs.
- Create walkable, active, and safe neighborhoods by incorporating sidewalks, common areas, and open space into neighborhood designs.
- Encourage residential development that meets US Green Building Council's LEED Neighborhood Development Certification Program criteria.

GOAL 8: Develop and implement strategies that address the need for affordable housing in Georgetown. *Objectives include:*

- Create market-based incentives for developers to incorporate affordable housing units into their residential development plans.
- Continue to work with the Waccamaw Regional Council of Governments Community Development Department to:
 1. Secure funds through the US Housing and Urban Development HOME Program which assists communities in expanding rental and homeowner affordable housing units; and
 2. Establish a community housing trust fund to ensure that matching funds are available for HOME Program projects and other grant opportunities administered through the Waccamaw Regional Council of Governments.

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Attachment C

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- Require, where available, the use of sanitary sewer and public water for all new developments within the city limits.
- Prohibit illicit discharges into the city's storm sewer system or water bodies.
- Encourage the voluntary protection of naturally sensitive areas through the use of conservation easements. Consideration should be given to providing local incentives, such as density and height bonuses, for voluntary conservation initiatives. Bonuses could be granted, when compatible with adjacent uses, for the dedication of open or green space(s) adjacent to the city's rivers, marshes, and viewsheds.
- Retain and refine the use of the city's Conservation Preservation District to include the expansion of this district to unprotected marshland in the city or upon annexation.



A Grand View: Homes overlook the marsh of East Bay.

GOAL 4: Provide ample areas for residential development and implement density standards that consider property access and the availability of services. Objectives include:

- For all zoning requests, the loss of long standing residential districts or uses should be considered. Speculative commercial rezonings that result in the reduction of the city's viable housing stock should be discouraged.
- Plan for an increase in the city's population of one percent annually.
- Increase the permitted density within the core residential areas of the city and the downtown in keeping with the objectives of this element. Consideration should be given to:
 1. Developing design or form standards for multi-family housing; and
 2. Limiting the number of units per structure or the size of structures (in keeping with building mass/ or form of other structure in an area.)
- Define density as follows:
 1. Very low density – One or fewer units per acre.
 2. Low Density – Two to five dwelling units per acre.

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3. Medium Density – Six to nine dwelling units per acre.
 4. High Density – Ten to twenty dwelling units per acre.
 5. Very High Density – More than twenty dwelling units per acre.
- Restrict areas to very low density in cases where:
 1. Public water and sewer are unavailable to service the development;
 2. Public services such as fire, police, or sanitation cannot service a higher density without additional public costs;
 3. The development has limited access to a public street or the capacity of the existing street cannot support a higher density;
 4. A higher density would result in the loss or degradation of an environmentally sensitive area; or
 5. The property is located at the periphery of the city and a very low density is appropriate to maintain the density of the city's core.
 - Restrict areas to low density in cases where:
 1. Public facilities and infrastructure such as water, sewer, fire, police, or sanitation cannot service a higher density without additional public costs;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is designed to transition between areas of medium and very low development density; or
 3. The property is located at the periphery of the city and a low density is appropriate to maintain the density of the city's core.
 - Permit medium density in cases where:
 1. Public facilities and infrastructure such as water, sewer, police, fire, and sanitation can service the proposed density;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is part of a planned development;
 3. Streets adjacent to the site can support the proposed density without a reduction in the street's level of service; and
 4. The site is serviced by sidewalks.
 - Permit high density in cases where:
 1. Public facilities and infrastructure such as water, sewer, police, fire, and sanitation can service the proposed density;
 2. The density is consistent with adjacent properties and planned uses, follows historic development patterns, or is part of a planned development.
 3. Streets adjacent to the site can support the proposed density without a reduction in the street's level of service;

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4. The development is adjacent to or incorporates mixed uses;
 5. The development will not result in loss or reduction of the city core's density; and
 6. The site is serviced by sidewalks.
- Very high densities may be permitted in planned developments, the city's downtown, and primary and secondary redevelopment areas subject to the policies and standards of this plan.

GOAL 5: Adopt standards that protect residential uses from incompatible development. Objectives include:

- Mitigate the potential for nuisance creation through the use of zoning, development regulations, and other regulatory standards. Nuisances to residential occupancy include:
 1. Automobile lights, outdoor lighting, and illuminated signs;
 2. Loud noises and vibrations;
 3. Noxious odors, dust, smoke, fumes, and other air pollutants;
 4. Excessive traffic;
 5. Litter, junk, and overgrown lots;
 6. Dilapidated structures;
 7. Excessive outdoor storage or assembly; and/or
 8. Loss of privacy.
- Allow a mixture of residential, commercial, and professional uses in cases where the nonresidential uses do not create nuisances and the uses are compatible with residential structures in size, scale, height, mass, architecture, and placement. The zoning ordinance should provide that compatible nonresidential uses be permitted as special exceptions, conditional uses, and/or be subject to form based standards.
- Allow public and semi-public uses in residential areas where the uses do not create nuisances to residential occupancy. The zoning ordinance should provide that public and semi-public uses can be permitted in residential areas as conditional uses and/or be subject to form based standards.
- Prohibit incompatible and/or nuisance generating commercial, professional, public, and semi-public uses from locating in residential areas.
- Prohibit industrial uses from locating or expanding into residential areas.
- Mitigate the impacts of incompatibility through the utilization of fences, walls, physical barriers, vegetation, building and access orientation, separation, and/or building form.

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of adjacent properties; and

3. The zoning change is designed to benefit a single owner or provide a competitive advantage to a particular parcel to the detriment of the community or the surrounding neighborhood.

GOAL 7: Provide areas for future industrial development that minimize the impact to adjacent uses. *Objectives include:*

- New industrial districts within the city should be located in areas that are separated from residential districts, the historic district, and other incompatible uses to the extent that is practicable;
- Differentiate through zoning, heavy industrial uses from less intense, limited or light industrial activities. Heavy industrial uses include those activities which are likely to generate significant levels of truck traffic, noise, pollution, vibration, dust, fumes, odors, radiation, radioactivity, poisons, pesticides, herbicides, or other hazardous materials, fire or explosion hazards, or other undesirable conditions.
- The arrangement of new industrial districts and uses should consider:
 1. The transportation needs of planned industry including access to rail, the port, and major roadways. Industrial zoning districts should be arranged to reduce impacts on the existing transportation system;
 2. The potential nuisances created by the proposed siting and whether these nuisances can be abated;
 3. Compatibility of surrounding land uses;
 4. The potential for impacts on natural resources or sensitive areas; and
 5. Utility and public service costs.
- Engage in an active and continuous dialogue with the county to identify future industrial sites outside of the city limits.
- Encourage the county to adopt standards that minimize nuisances from industries in close proximity to the city.
- Plan for the long-term conversion of existing industrial districts and uses once these sites are abandoned or become obsolete.

GOAL 8: Provide for the harmonious redevelopment of existing industrial districts and uses located in the city's core and in other areas where the potential for nuisances and impacts on adjacent properties are high. *Objectives include:*

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- ✓ Prioritize areas and sites within the city for conversion and redevelopment. In general, heavy industrial uses are deemed incompatible when in close proximity to the city's downtown, waterfront, historic district, residential neighborhoods, and gateway corridors and intersections.
- ✓ Provide viable redevelopment options for property owners. The city's zoning ordinance should be amended to provide for a mixed-use/redevelopment district(s). This district(s) should:
 1. Allow for a mixture of uses;
 2. Prohibit heavy industrial uses. The district(s) may permit, as a conditional use or special exception, certain limited or light industrial uses, provided these uses incorporate complementary architectural features, have a minimal potential for creating nuisances, and are compatible in intensity with surrounding nonindustrial uses;
 3. Promote setback, height, and other bulk and dimensional restrictions which are compatible with adjacent districts or provide for reasonable transition. Flexible design and dimensional standards should also be considered subject to district specific design standards and/or architectural/design review;
 4. Consider providing density, height, parking, or other development bonuses and design modifications contingent upon the provision of open space and public amenities;
 5. Protect adjacent streets. Consideration should be given to restricting new curb cuts, spacing points of ingress/egress, and limiting the size and location of surface parking areas to complement development along the city's historic corridors and maintain the level of service on adjacent arterial streets; and
 6. Protect adjacent waterfronts. Consideration should be given to protecting or creating viewsheds and encouraging proximal open space.
- ✓ Pursue the rezoning of prioritized redevelopment areas (see the future land use map).
- ✓ Provide for the continuation (as a nonconformity) of active industrial uses following rezoning. The continuation of nonconformities should be conditioned to promote the abatement of nuisances and the eventual discontinuance of incompatible uses. Consideration should be given to:
 1. Requiring that industrial sites be brought into conformance following the discontinuance of production or abandonment;
 2. Prohibiting expansion and/or reconstruction;
 3. Requiring buffering, screening, and other mitigation; and

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4. Requiring the date certain discontinuance and termination of nonconformities.
- ✓ Recognize that redevelopment may occur through means other than a traditional zoning district, e.g. as a planned development district, use of development agreements, floating zones, cluster developments, and other zoning techniques allowed by law. These zoning/development options should be considered when harmonious with this plan.
 - ✓ Recognize that brownfield sites and their redevelopment may present environmental challenges. The city should actively work with property owners, the county, and/or other partners to identify grants for assessment and cleanup.
 - ✓ Consider the creation of priority investment zones, tax increment financing districts, or similar tools to incentivize the redevelopment of former industrial sites.
 - ✓ Recognize the importance of street interconnectivity and the city's historical grid pattern. The redevelopment of sites adjacent to the city's historic district, downtown, and West End should preserve and, where feasible, extend this street pattern.
 - ✓ Recognize that the primary and secondary redevelopment areas as identified on the future land use map (Map Exhibit LUM-6) were the subject of additional study. The redevelopment of these sites should consider and, to the extent practicable, incorporate recommendations contained within the Urban Land Institute's (ULI) Advisory Services Panel Report, *Transforming Georgetown Economically, Physically, and Socially* (September 18-23, 2016).
 - ✓ Examine zoning standards for adjacent properties subsequent to or in conjunction with the conversion/redevelopment of former industrial sites. This evaluation should consider possible complementary or ancillary uses, the incorporation of design standards, and a provision of similar redevelopment incentives.
 - ✓ Consider the creation of a redevelopment corporation or similar public/private partnership to assist in planning, environmental assessment, community outreach, public improvement and facilities implementation, the marketing of sites, and similar activities.

GOAL 9: Ensure that the future location of public buildings and uses complement existing land uses and promote the goals of this element.
Objectives include:

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*City of Georgetown Comprehensive Plan, 2016***PLAN IMPLEMENTATION**

The City of Georgetown Comprehensive Plan, 2011 provides a unified plan implementation section. With the 2016 review of the plan, the land use element is the first of nine elements to be updated. Because of the interrelated nature of this plan's elements, it is anticipated that the implementation section for the entire plan will be updated at the conclusion of the planning commission's review process.

The land use element's implementation activities provided in the 2011 plan's final section are deemed to remain relevant. Reference to this portion of the plan should continue; however, this element's update contains significant policy clarifications and guidance with respect to the continuation and eventual cessation of heavy industrial uses in proximity to the city's downtown, waterfront, historic district, residential neighborhoods, and gateway corridors and intersections (see Goal 8 and the Future Land Use Map). Because of this, the activities listed below are considered an addendum to the 2011 plan's implementation initiatives:

Short Term Projects and Initiatives

- ✓ **Creation of a Mixed Use/Redevelopment District.** The city's zoning ordinance should be amended to create a mixed use/redevelopment district(s). The purpose of this district(s) is to provide for the optimum use and conversion of industrial sites and other large tracts. Because of the size of these tracts, unknown development constraints, and the need to provide appropriate transition between adjacent zoning districts, it is recommended that the district(s) provide for a variety of allowable uses. This district(s) should provide flexibility in dimensional requirements; however, the city may wish to consider the implementation of design guidelines to ensure transition, especially for redevelopment occurring immediately adjacent to the city's historic district, waterfront, and gateway corridors and intersections. **Responsible Entities:** Building and Planning Department, Planning Commission, and City Council.
- ✓ **Rezoning.** The future land use maps (Map Exhibits LUM-6 and LUM-7) illustrate primary and secondary redevelopment areas and corridors. The primary and secondary redevelopment areas illustrated on Map LUM-6 should be examined in the short term for rezoning(s). This may occur immediately following the creation of a mixed use/redevelopment district(s). **Responsible Entities:** Building and Planning Department, Planning Commission, and City Council.

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- ✓ **Redevelopment Corporation.** The city should investigate and consider the creation of a redevelopment corporation or similar public/private partnership to assist in planning, environmental assessment, community outreach, public improvement and facilities implementation, the marketing of sites, and similar activities within designated redevelopment districts. **Responsible Entities:** *City Administrator and City Council in conjunction with other identified partners.*
- ✓ **Official Map.** The city should pursue the creation of an official map. Priority should be given to identifying needed public sites and rights-of-way within the primary and secondary redevelopment areas and redevelopment corridors (see Map Exhibit LUM-6). **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*

Medium Term Projects and Initiatives

- ✓ **Annexation and Rezoning.** The Port of Georgetown and adjacent unincorporated properties are illustrated as a secondary redevelopment area on the future land use map (LUM-7). The state's port facility has historically been an economic asset that contributed to the economic growth of the city and region; however, in recent years, declining tonnage and the need for dredging have reduced the port's impact. The anticipation in the short term is that the Port of Georgetown will remain an active industrial site. If port operations by the state discontinue in the future, the transition of this area to a mixed use/redevelopment district compatible with the city's historic waterfront should be encouraged. If annexed, properties within this secondary redevelopment area should be rezoned by the city to accommodate this transition. **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*
- ✓ **Redevelopment Corridors.** The city should examine zoning standards for properties adjacent to designated redevelopment districts. The redevelopment of large mixed use tracts adjacent to the waterfront and east of US 17 has the potential to increase the economic viability of the entire US 17 corridor. Upon redevelopment, zoning district requirements for adjacent properties should ensure the permissibility of complementary uses and compatible design standards. **Responsible Entities:** *Building and Planning Department, Planning Commission, and City Council.*

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2. Require the placement of bike lanes in the construction of new collector or arterial roadways.
3. Investigate the designation of bike lanes on existing streets.
4. Encourage new commercial developments to include bike racks and other amenities. Provide incentives, including a reduction in required parking, for developments providing bicyclist friendly amenities.
5. Seek national designation for the city's efforts to promote bicycle use.
6. Continue support for the East Coast Greenway and pursue improvements for Georgetown's section of the route including the construction of the Meeting Street Wooden Bridge.

GOAL 4: Improve the appearance, safety, and function of Georgetown's major corridors and intersections. *Objectives include:*

- Identify "gateway intersections" within Georgetown and upgrade with defined improvements, such as:
 1. Decorative and wayfinding signage;
 2. Internally illuminated street name signs;
 3. Improved pedestrian crossings that incorporate pavement textures, "street print", and/or decorative elements;
 4. A uniform landscaping motif; and
 5. Mast arm signalization.
- Prioritize gateway intersection improvements. When feasible, priority should be given to the following intersections (in rank order):
 1. Front and Fraser Streets;
 2. Five Points intersection;
 3. Church and St. James Streets;
 4. Black River Road and Church Streets;
 5. Highmarket and Fraser Streets; and
 6. Broad and Church Streets.
- Refine the "Design Overlay District for Main Corridors" standards within the zoning ordinance. Refinement should include:
 1. The creation of objective architectural standards to aid in administration and enforcement;
 2. Clarification of appeals and variance provisions related to traditional dimensional zoning standards and architectural standards; and
 3. The development of standards which address building orientation, signage, and landscaping for properties adjacent to "prioritized gateway intersections" as identified in this element.

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- Investigate the feasibility of roundabout installation at key secondary intersections. Intersections for possible consideration are: (1) Highmarket and Saint James, (2) Highmarket and Broad, (3) Highmarket and Cleland, and (4) South Island and Aviation Streets.
- Continue efforts to provide or upgrade wayfinding signage, internally illuminated street name signs, and entrance signage. Signage along the city's primary entrances should include "trailblazer signs" and large-scale banners to create a sense of arrival.
- Continuously monitor the need for additional signalization at intersections. Intersections for priority monitoring are:
 1. Church and St. James Streets;
 2. Church and Broad Streets;
 3. Church and Cleland/Fraser Alley;
 4. Highmarket and Washington (public safety use);
 5. Fraser and Montford/Oakley Streets; and
 6. South Island Road and Aviation Boulevard (see roundabout above).
- Pursue the creation of a truck bypass to improve safety and reduce damage to Fraser Street.
- Pursue improvements to Black River Road. This project should involve the installation of sidewalks and possible realignment to create an intersection with Cleland and Church Streets. Widening and the installation of turn lanes should also be considered.
- Pursue the widening and extension of Anthuan Maybank Drive.
- Prioritize improvements within and adjacent to primary and secondary redevelopment areas and redevelopment corridors (see Map Exhibit LUM-6). Standards should be adopted which, at a minimum, address:
 1. A development's traffic impact and the need to implement traffic impact mitigation measures;
 2. The protection of Front Street from freight traffic and other high traffic generating uses;
 3. The need to limit excessive curb cuts and to provide adequate spacing between site entrances;
 4. The creation and preservation of viewsheds through the use of setbacks, size, orientation, separation, and streetscape requirements; and
 5. The elimination of visual and other nuisances through landscaping, screening, and other mitigation techniques.
- Pursue the creation of an official map to identify needed public streets, rights-of-way, and other improvements within the city. This map may include the

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entire city or prioritize areas including but not limited to redevelopment areas and corridors.

GOAL 5: Ensure that new street construction is of the highest quality and provides safeguards to ensure proper maintenance and property access. Objectives include:

- Require that all newly created lots have frontage on and access to a public street. The use of private streets for primary property access should, except in cases of demonstrated hardship, be prohibited by the city's development regulations.
- Develop standards for new street creation. Standards should be based on the functional classification of the proposed street and should address:
 1. Grade;
 2. Compaction;
 3. Surfacing composition of required concrete or bituminous asphalt;
 4. Right-of-way width;
 5. Intersection alignment;
 6. Curve radii;
 7. Utility placement and the need for easements outside of the dedicated right-of-way;
 8. Drainage and the need for easements outside of the dedicated right-of-way;
 9. Sidewalks, bike lanes, and accessibility;
 10. Right-of-way trees and other plantings; and
 11. Curb and gutter installation; or
 12. Ditching, to include guidelines for shoulder width and slope.
- Formalize the process for bonding, street inspection, and dedication.
- Provide predictability in the acceptance of new streets into public ownership and maintenance. Acceptance policies/standards should be promulgated that:
 1. Require the dedication and subsequent public acceptance of new streets in cases where:
 - (a) subdivided lots derive their only frontage from the new street, or
 - (b) the new street connects two or more segments of an existing public street and the connection is deemed in the public interest;
 2. Encourage the dedication and subsequent public acceptance of new streets in cases where:

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Attachment E

PLAN
IMPLEMENTATION*City of Georgetown Comprehensive Plan, 2011***Overarching Theme: *Promote Compatible and Sustainable Residential, Commercial, and Industrial Development***

Land use planning requires thorough consideration of existing transportation and utility infrastructure, economic development opportunities, appropriate locations for housing developments, community facility needs, and environmentally sensitive areas within the community. Land use planning has significant implications on many of the elements discussed throughout this comprehensive plan.



Short Term Projects and Initiatives: The following projects and initiatives are designed to be implemented within one to three years of the adoption of this plan.

✓ **Zoning Ordinance Review and Update.** Following the adoption of the comprehensive plan, a review of the city's zoning ordinance should be conducted:

- **Historic Area Review.** The primary emphasis of this review component is to quantify the effect of the current zoning on the city's historic areas. Prior to the commission's review, a street level assessment should be conducted to include: (1) Quantifying the number of nonconformities created by existing setbacks or lot size requirements; (2) Documenting architectural features or building arrangements contributing to nonconformity; (3) Quantifying the number of nonconformities created by existing use standards.

The examination and subsequent update by the planning commission should concentrate on promoting the continuation of historical uses, desirable architectural features, and building arrangements (where nuisances, if any, can be mitigated).

- **Zoning Ordinance Administration.** The primary emphasis of this review and update is to ensure the timely, efficient, and consistent decision making. Areas of potential update include: (1) The incorporation of text/map amendment review standards into the zoning ordinance (See §§1300-1303, *City of Georgetown Zoning Ordinance*); (2) Streamlining the zoning ordinance by eliminating the city's Intermediate Commercial District and the combination of the city's Medical Residential District with an enhanced Neighborhood Commercial District or the

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creation of a mixed use district; and (3) Specifying timelines for staff action on all administrative permits.

- **Traditional Neighborhoods.** The planning commission should examine the creation of a traditional neighborhood district or amend existing R-4 District provisions. The purpose of the traditional neighborhood district would be to promote the orientation of structures/porches close to the street (through reduced setbacks, build-to-lines, or a combination of both), encourage mixed use and density, and to implement design and streetscape standards (see Historic Area Review above).
- **Density.** Density within the city's core areas should be increased from ten units per acre to twenty units per acre. The increase in density should be coupled with the development of design standards and limitations on the number of units per structure. In areas designated for increased density, the planning commission should actively solicit the input of stakeholders.

Areas currently zoned for high density development at the periphery of the city that do not conform to the density criteria outlined in the goals and objectives of this plan should be considered for down zoning. Newly annexed areas should be zoned for low or very low density until such times as adequate municipal services are available.

Include provisions within the zoning ordinance for density bonuses for projects that incorporate community amenities or affordable housing units into development proposals. Density bonuses should be considered in the creation of priority investment zones for areas, especially those zones where infill development is encouraged. These bonuses may also be provided in primary and secondary redevelopment areas (see Map Exhibit LUM-6), thus, where conditions warrant, creating an option for high or very high density.

Responsible Entities: Building and Planning Department, Planning Commission, and City Council. **Relevant Comprehensive Plan Elements:** Land Use, Housing, Economic Development, Transportation, and Community Facilities (see note I-1).

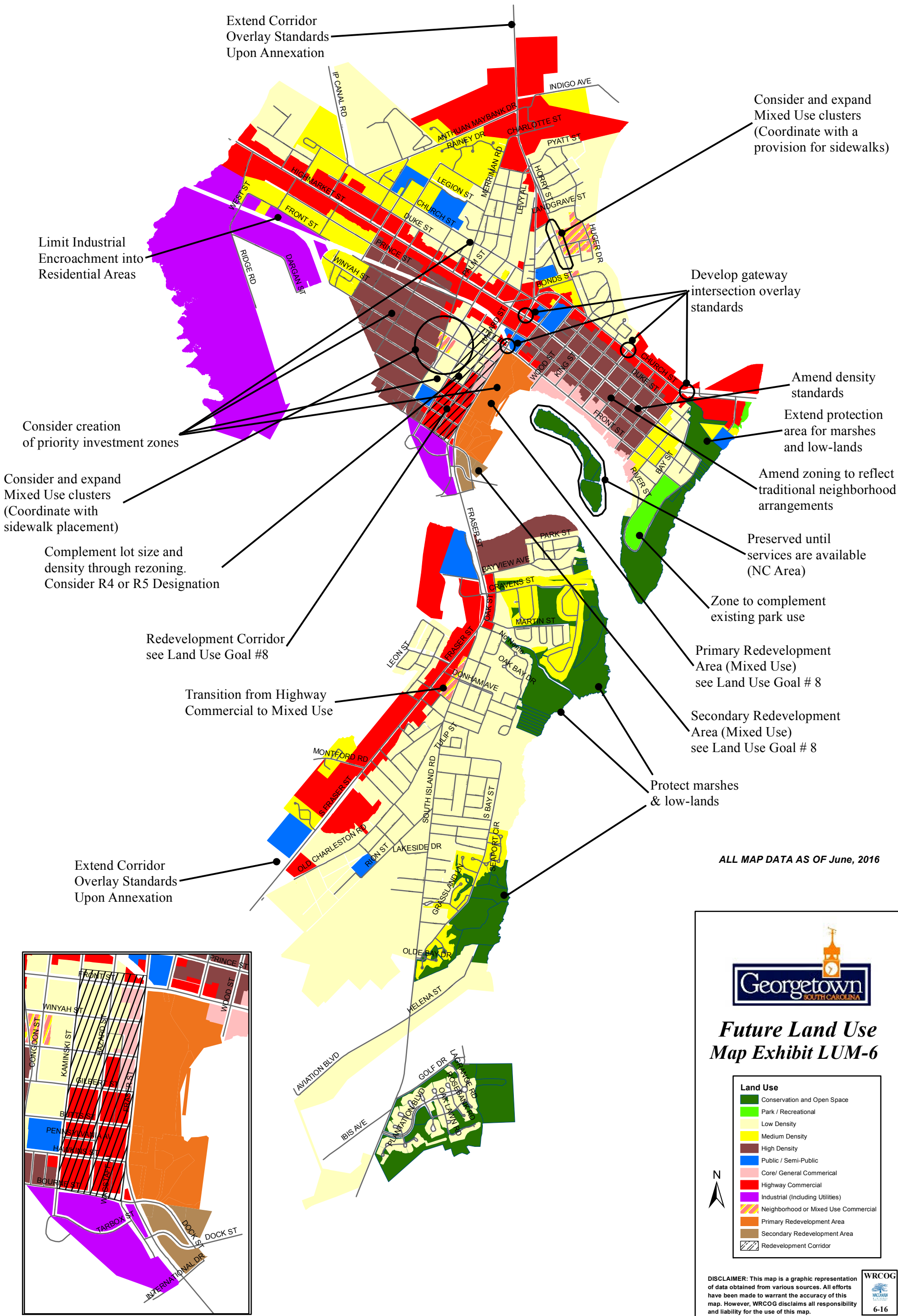
- ✓ **Vacant Housing.** An inventory of vacant lots suitable for residential construction should be conducted annually to determine housing potential and to gauge the success of infill initiatives. **Responsible Entities:** Building and Planning Department, and Planning Commission. **Relevant Comprehensive Plan Elements:** Housing, Land Use, Population, and Economic Development.

IMPLEMENTATION

Proposed Amendments (Amended Passages are Highlighted)

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120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2283 B

Council Meeting Date:	21 September 2017
Department:	Housing and Community Development
Issue Under Consideration:	Motion to approve an ordinance amending the City of Georgetown Zoning Ordinance to add Article XXI, Redevelopment District (REDD); and furthermore supplemental amendments to Article V Section 514, Article XIII Section 1301, and Article XV Section 1504.
Amount Requested:	N/A
Is Item in Current Budget?	N/A
If no, please explain:	N/A
Financial Impact:	N/A
Points to Consider:	• City Council resolved to adopt zoning changes related to redevelopment on March 16, 2017 with a 4-3 vote in favor. • This is the proposed text amendment to add Article XXI, Redevelopment District (REDD) to the Zoning Ordinance. • This proposed text amendment is the first step in rezoning the "steel mill" area property. • Planning Commission held a public hearing on April 25, 2017 at 6pm at the Georgetown High School auditorium and they voted to deny the text amendment 4-3.
Options:	Approve or deny the first reading of this text amendment to the Zoning Ordinance.
Staff Recommendation:	Staff recommends approving the text amendment to add the Redevelopment District (REDD) to the Zoning Ordinance.

Reviews:

Rick Martin Completed 05/09/2017 1:44 PM
 City Attorney Completed 06/30/2017 3:42 PM
 Paul Gardner Completed 09/14/2017 10:32 AM

Updated: 8/14/2017 1:54 PM by Ann U. Mercer B

Page 1

I skipped Paul since he is out.

Debra Bivens Completed 08/08/2017 5:32 PM

Ann U. Mercer Completed 08/11/2017 1:47 PM

Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 Article XXI REDD Text Amend Ord (PDF)
2. 2 REDD Document (Exhibit A - Council Copy) (PDF)
3. 3 LUM_6 (PDF)
4. 4 RESOLUTION REDD from Council Signed (PDF)
5. 5 April 25 2017 PC Minutes (PDF)

**MOTION TO APPROVE AN ORDINANCE AMENDING THE CITY OF GEORGETOWN
ZONING ORDINANCE TO ADD ARTICLE XXI, REDEVELOPMENT DISTRICT (REDD); AND
FURTHERMORE SUPPLEMENTAL AMENDMENTS TO ARTICLE V SECTION 514, ARTICLE
XIII SECTION 1301, AND ARTICLE XV SECTION 1504.**

AN ORDINANCE AMENDING THE CITY OF GEORGETOWN ZONING ORDINANCE TO ADD ARTICLE XXI, REDEVELOPMENT DISTRICT (REDD); AND FURTHERMORE SUPPLEMENTAL AMENDMENTS TO ARTICLE V SECTION 514, ARTICLE XIII SECTION 1301, AND ARTICLE XV SECTION 1504

- WHEREAS,** pursuant to Title 6, Chapter 29 of the Code of Laws of South Carolina, the City of Georgetown enacted the Zoning Ordinance of the City of Georgetown, South Carolina; and
- WHEREAS,** Article XVIII, Section 1800 of the Zoning Ordinance of the City of Georgetown provides that the Zoning Ordinance may be amended from time to time by the Mayor and City Council; and
- WHEREAS,** on March 16, 2017, the City Council of the City of Georgetown resolved to consider zoning code changes related to redevelopment of lands within the city located within the city's primary and secondary redevelopment areas, after public hearing and recommendation from the Planning Commission; and
- WHEREAS,** the City Council of the City of Georgetown incorporates herein its findings from the March 16, 2017 Resolution above-referenced; and
- WHEREAS,** the Planning Commission of the City of Georgetown, South Carolina held a public hearing on April 25, 2017 in the auditorium of the Georgetown High School for the proposed text amendments to the Zoning Ordinance; and
- WHEREAS,** following the public hearing on April 25, 2017, the Planning Commission voted 4-3 to recommend denial of the text amendments to the Zoning Ordinance; and
- WHEREAS,** the City Council of the City of Georgetown recognizes the importance to city residents and business owners of economic vitality, public health, safety, and welfare, and thoughtful economic development; and
- WHEREAS,** the Mayor and City Council of the City of Georgetown desire to amend the Zoning Ordinance in the best interests of the future of the City of Georgetown.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Georgetown, South Carolina that Article XXI, Redevelopment District (REDD), as presented and incorporated herein, be added into the Zoning Ordinance of the City of Georgetown; and furthermore Articles V Section 514, XIII Section 1301, & XV Section 1504 be amended as proposed and incorporated herein to supplement the zoning district amendment. (see attachments)

ATTEST:

Ann U. Mercer, City Clerk

Jack M. Scoville, Jr., Mayor

Attachment: Article XXI REDD Text Amend Ord [Revision 1] (2283 : Text amendment for the Redevelopment District (REDD))

First Reading: _____

Approved as to Form:

Second Reading: _____

Elise F. Crosby, City Attorney

Attachment: Article XXI REDD Text Amend Ord [Revision 1] (2283 : Text amendment for the Redevelopment District (REDD))

EXHIBIT A

REDD

TEXT AMENDMENT

CITY COUNCIL COPY
3-16-2017

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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City Council Copy 3-16-2017

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Article XXI Georgetown Redevelopment Districts (REDD)

Division 1 Introductory Provisions

Section 2100 Intent of the REDD

The Georgetown City Council has determined that heavy industrial uses are incompatible when in close proximity to the city's downtown, waterfront, historic district, residential neighborhoods, and gateway corridors and intersections. It has been further determined by the council that the discontinuance of incompatible industrial uses is in the long-term interest of the city. These areas should be redeveloped in a manner which improves property value, promotes economic development, and enhances the viability of surrounding residential neighborhoods and businesses, while providing the owners of affected sites flexibility in the transition and repurposing of their lands.

The intent of this Ordinance, and the districts created herein, is to provide a regulatory framework that promotes the thoughtful redevelopment of industrial sites, industrial districts, and adjacent properties in accordance with the City of Georgetown's Comprehensive Plan, including the future land use map, and the City of Georgetown's Official Map. Specifically, the provisions of this Ordinance are designed in furtherance of the comprehensive plan to encourage compatible redevelopment by:

1. Allowing a mixture of uses;
2. Prohibiting heavy industrial uses while providing for the conditioned continuation of existing nonconformities;
3. Promoting setback, height, and other bulk and dimensional restrictions that are compatible with adjacent districts or provide for reasonable transition;
4. Providing density, height, parking, and other development bonuses and design modifications for developments that provide additional open spaces or public amenities;
5. Protecting adjacent streets; and
6. Protecting adjacent waterfronts and preserving and/or creating viewsheds.

It is recognized that some aspects of the redevelopment and repurposing of former industrial sites may occur in the short term and that other aspects may take years to accomplish. This article and the district created by it provide for short and long-term redevelopment with multiple options designed to afford flexibility to affected property owners. The purposes and intent of each district is further described in Division 2.

Section 2101 Summary of Article Provisions

This article creates four redevelopment districts, including a base redevelopment district and three floating zones. Each district allows, but does not require, a mixture of uses with permitted intensities and densities varying by zone. Heavy industrial and similarly incompatible uses are prohibited in the four districts and this article provides nonconformity standards to address the continuation and eventual cessation of these pre-existing uses.

Properties may be rezoned by the City Council to the REDD base district to accommodate the repurposing and transitioning of lands from incompatible industrial or other uses to activities and uses that are economically viable and harmonious with the city's longstanding commercial and

Article XXI

Georgetown Redevelopment Districts (REDD)

residential districts. The base district allows for lower intensity nonindustrial development and retains many of the non-district specific requirements of the city's zoning ordinance.

Property owners may choose to proceed with development under the standards of the base district; however, this article provides the authority for the City Council to apply three floating zone options available within the base redevelopment district, each of which are described herein. Property owners may petition for the rezoning of their properties to one of these floating zones. The flexibility afforded by the floating zones varies. Two of the floating zones require the approval by the City Council of a development plan and development zoning text, collectively referred to as floating zone district standards. However, the proposed standards must be in agreement with the comprehensive plan and the requirements of this article and must be approved by the City Council. If approved by City Council, floating zone district standards govern future development of the property within the floating zone.

Table 2101 provides an overview of the different requirements and options provided under the four REDD districts.

Table 2101 Summary of REDD Districts				
STANDARDS	Base District	Floating Zones		
	REDD-B	REDD-F1	REDD-F2	REDD-F3
Development Plan (DP) Required	NO (Site Plan Required)	NO (Site Plan Required)	YES	YES
Development Zoning Text (ZT) Required	NO Standards Set by Article	NO Standards Set by Article	YES	YES
Density Bonus Available	NO	NO	YES	YES
Flexible Height Standards	NO	NO	YES	YES
Flexible Lot Size Standards	NO	NO	NO	YES
Flexible Parking Standards	NO	NO	YES	YES
Flexible Sign Standards	NO	NO	YES	YES
Flexible Use Standards	NO	NO	NO	YES
Subject to Design Overlay District Standards	YES	YES	OPTIONAL	OPTIONAL
Heavy Industry Permitted	NO	NO	NO	NO
Light Industry Permitted	NO	YES By Special Exception Only	YES If Authorized by the District's Standards	YES If Authorized by the District's Standards

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

Article XXI

Georgetown Redevelopment Districts (REDD)

Section 2102 Definitions Applicable to Article

In addition to the definitions set forth in Article III and elsewhere in this Ordinance, the following words, terms, and phrases when used in this article shall have the meanings ascribed to them by this section. All other words, terms, and phrases not defined by this Ordinance shall be given their common, ordinary meaning unless the context clearly requires otherwise.

2102.1 *Abandon (Abandonment):* The relinquishment of property, a change of use, or the discontinuance in the use of the property by the owner, regardless of intent, for a period of more than three hundred sixty five (365) consecutive days or more than three hundred sixty five (365) days in any two consecutive years.

2102.2 *Affordable Housing:* In the case of dwelling units for sale, housing in which mortgage, amortization, taxes, insurance, and condominium or association fees, if any, constitute no more than twenty-eight percent of the annual household income for a household earning no more than eighty percent of the area median income, by household size, for the metropolitan statistical area as published from time to time by the U.S. Department of Housing and Urban Development (HUD) and, in the case of dwelling units for rent, housing for which the rent and utilities constitute no more than thirty percent of the annual household income for a household earning no more than eighty percent of the area median income, by household size for the metropolitan statistical area as published from time to time by HUD.

2102.3 *Building Coverage:* The horizontal area measured within the outside of the exterior walls of the ground floor of all principal and accessory buildings. For properties in the REDD-B and REDD-F1, building coverage is expressed as a percentage of lot area. For properties in the REDD-F2 and REDD-F3, building coverage is expressed as a percentage of the net development area.

2102.4 *Cluster Development (Clustering):* The grouping of allowable uses within a subdivision or development site, permitting a reduction in the otherwise applicable lot size, while preserving substantial open space on the remainder of the parcel. Building and impervious coverage and density in the REDD-F2 and REDD-F3 are based on net development area (not individual lot area) allowing for clustering in these districts.

2102.5 *Density:* The number of dwelling units permitted per acre. For properties in the REDD-B and REDD-F1, the number of dwelling units permitted is based on lot area. For properties in the REDD-F2 and REDD-F3, the number of dwelling units permitted is based on the net development area.

2103.6 *Development Bonus:* The provision of additional development capacity in the form of an increase in allowable density, building coverage, impervious coverage or a decrease in required open area. A development bonus may be granted as an incentive for the voluntary provision of increased amenities or improvements of public benefit as identified in this article.

Article XXI

Georgetown Redevelopment Districts (REDD)

2102.7 Development Zoning Text: Written standards adopted by legislative action of the City Council that, in addition to the standards imposed by this article and the approved development plan, establish zoning requirements within the floating zone.

2102.8 Floating Zone: The zones described in the text of this article and adopted by legislative action of the City Council, but which are unmapped unless a property owner petitions the City Council to have the floating zone applied to a particular parcel meeting the minimum zoning district area requirements of this Ordinance through action by the City Council, as authorized by S.C. Code 6-29-720(C)(2).

2102.9 Floating Zoning District Standards, or “district standards.” The REDD development plan and development zoning text that collectively, when adopted by the City Council, in accordance with this article, form the zoning requirements governing development in the REDD-F2 and REDD-F3 floating zones.

2102.10 Heavy Industry (heavy industrial): A use engaged in the basic processing and manufacturing of materials or products predominately from extracted or raw materials, or a use engaged in storage or manufacturing processes using flammable or explosive materials, or storage or manufacturing processes that potentially involve hazardous or commonly recognized offensive conditions such as smoke, noise, soot, dirt, vibrations, odor, noxious discharges, and adverse traffic generation. Heavy industrial uses include but are not limited to the manufacture of chemicals (including herbicides, insecticides, fungicides, disinfectants, solvents, and related industrial and household chemical compounds and any use involving the bulk storage of chemicals), fertilizers, paper, petroleum products (including plastics and rubber), and steel and other metals; concentrated feedlots; electric generation; oil and gas extraction and storage; incinerators; mining; animal slaughter, packaging, and rendering plants; lumber mills; and recycling and salvage yards.

2102.11 Impervious Coverage: The area covered by an impervious surface expressed as a percentage. For properties in the REDD-B and REDD-F1 districts, impervious coverage is expressed as a percentage of lot area. For properties in the REDD-F2 and REDD-F3 districts, impervious coverage is expressed as a percentage of the net development area.

2102.12 Impervious Surface: Any hard-surfaced, man-made area that does not readily absorb or retain water, including but not limited to building roofs, parking and driveway areas, graveled areas, sidewalks, swimming pools, and other paved areas.

2102.13 Light Industry (light industrial): A use engaged in the manufacture, predominately from previously prepared materials, of finished products or parts, including processing, fabrication, assembly, treatment, packaging, incidental storage, sales, and distribution of such products, but excluding basic industrial processing. Light industry is capable of operation in such a manner as to control the external effects of the manufacturing process, such as smoke, noise, soot, dirt, vibration, odor, noxious discharges, and adverse traffic conditions.

Article XXI

Georgetown Redevelopment Districts (REDD)

2102.14 Net Development Area: The cumulative area of all lots and land including open space within an individual district sharing common district standards but excluding streets, rights of way, dedicated easements, wetlands, and ponds.

2102.15 Nonconforming Lot: A lot, designated on a duly recorded subdivision plat, or duly recorded deed, or by other lawful means, that complied with the zoning and development standards applicable to it on the effective date of this Ordinance, but which no longer complies with the minimum area, lot width, frontage, or other standards now applicable to it.

2102.16 Nonconforming Feature: A characteristic of a lot, structure, or use, such as illumination, parking, impervious area, landscaping, or a similar appurtenance, that lawfully existed on the effective date of this article, but which no longer complies with the standards applicable to it.

2102.17 Nonconforming Structure: A building or structure that lawfully existed on the effective date of this article, but which no longer complies with the size, coverage, setback, building height, or other dimensional standards applicable to it.

2102.18 Nonconforming Use: A use that lawfully existed on the effective date of this article, but which is no longer allowed by the use regulations of the zoning district in which it is located. The term nonconforming use shall include all onsite buildings and structures associated with said use.

2102.19 Official Map: A map or maps showing the location of existing or proposed public streets, highways, and public utility rights-of-way, public building sites and public open spaces adopted by City Council in accordance with Section 6-7-1210 et seq. of the state code. A public building site is one on which a building is to be constructed for public use with public funds.

2102.20 Open Area: Land not occupied by buildings, parking lots, or structures. Open area includes yards, open space, active and passive parks, stormwater basins and swales, and other vegetated lands that are open from the ground to the sky. For properties in the REDD-B and REDD-F1, open space is expressed as a percentage of lot area. For properties in the REDD-F2 and REDD-F3, open space is expressed as a percentage of the net development area.

2102.21 Open Space: Noncommercial land not occupied by buildings, parking lots, or structures that has been set-aside, reserved, or dedicated for public use or for the general use and enjoyment of residents, employees, or patrons of a development. Open spaces are planned and clearly delineated areas. Open space may contain improvements (and incidental impervious surfaces) such as swimming pools, pedestrian walkways, boardwalks, play equipment for children or adults, ball fields, court games, picnic tables, etc. when included as part of approved district standards. Active and passive parks are considered open space. Open space does not include required yards or isolated (noncontiguous) areas of less than 1,000 square feet. For properties in the REDD-B and REDD-F1, open space is expressed as a percentage of lot area. For properties in the REDD-F2 and REDD-F3, open space is expressed as a percentage of the net development area.

Article XXI

Georgetown Redevelopment Districts (REDD)

2102.22 *Park (Active)*: A park that features recreation including swimming pools, gyms, playing fields and courts, or similar recreation.

2102.23 *Park (Passive)*: A park that features interpretive programs, open space, picnic areas, trails or similar amenities that take advantage of natural and scenic resources but not including recreational facilities, such as swimming pools, gyms, and playing fields.

2102.24 *REDD Development Plan*: A component of proposed floating zone district standards, drawn to scale and prepared by a licensed design professional, that depicts the location of proposed uses and structures and the existing and proposed conditions of the lot, including topography, vegetation, drainage, floodplains, marshes and waterways, open spaces, walkways, means of ingress and egress, utility services and other public improvements such as streets and sidewalks, landscaping, signs, lighting and screening devices, and any other information required by this article or that may be reasonably required in order that an informed decision can be made by the approving authority.

2102.25 *Retail Store, small*: A commercial use, conducted exclusively within an enclosed building, that engages in the sale of goods to ultimate consumers, usually in small quantities. Small retail stores are conducted in a building with a gross floor area of 5,000 square feet or less.

2102.26 *Retail Store, medium*: A commercial use, conducted exclusively within an enclosed building, that engages in the sale of goods to ultimate consumers, usually in small quantities. Medium retail stores are conducted in a building with a gross floor area of more than 5,000 but less than 10,000 square feet.

2102.27 *Retail Store, large*: A commercial use, conducted exclusively within an enclosed building, that engages in the sale of goods to ultimate consumers, usually in small quantities. Large retail stores are conducted in a building with a gross floor area of more than 10,000 square feet.

2102.28 *Site Plan*: A plan, drawn to scale and prepared by a design professional, that illustrates the location of existing and proposed structures, uses, parking, signs, points of ingress and egress, lots lines, and other features deemed necessary by the Zoning Administrator to determine compliance with this Ordinance.

2102.29 *Substantial Improvement*. Any repair, reconstruction, rehabilitation, addition or other improvement to a nonconforming use, structure, or site feature the cumulative cost of which in any five year period equals or exceeds fifty (50) percent of the structure or feature's appraised value for tax purposes before the start of construction of the improvement. This term also includes repairs and improvements to uses, structures, and site features that have been damaged or destroyed by any cause. Determinations of the costs of shall be made by the building official.

2102.30 *Traffic Impact Mitigation Measure*. Any measures or improvements taken by, or required of, the developer in order to lessen, abate, or reduce the impact of the development on the public streets and highway system.

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2102.31 *Traffic Impact Study.* An engineered analysis of the effects of traffic generated by a development at build-out on the capacity, operations, and safety on the public streets and highway system and including an assessment of traffic impact mitigation measures necessary to reduce impact. This analysis and related calculations shall reference the most current edition of the Institute of Transportation Engineer's Trip Generation Manual.

2102.32 *Water Oriented Uses.* A use that is located over or is otherwise reliant on its proximity to the water. These uses include, but are not limited to, docks, piers, and wharfs.

Sections 2103 through 2119 [RESERVED]

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Division 2 Redevelopment Districts

Section 2120 Creation of Redevelopment Districts

2120.1 REDD Districts. In addition to the districts and overlays provided by articles VI and XIII, the following districts are hereby created:

Base Redevelopment District (REDD-B)
Redevelopment District Floating Zone 1 (REDD-F1)
Redevelopment District Floating Zone 2 (REDD-F2)
Redevelopment District Floating Zone 3 (REDD-F3)

2120.2 District Citation. The individual districts may be cited by full title, e.g. Base Redevelopment District or by abbreviated reference, e.g. REDD-B or REDD-B district. Collectively these districts and affected properties may be referred to as “the REDD”, “REDD districts” or “REDD properties.” The requirements for properties in the REDD-F2 and REDD-F3 are based on the floating zone district standards approved by legislative action of the City Council. As these floating zones are applied, a unique name or identifier will be used as a prefix to the zone’s title, for example: “Georgetown Market Village” REDD-F3.

2120.3 District Assignment. Except as provided in this article, properties may be zoned REDD-B and REDD-F1 following the map amendment procedures as provided in Article XVIII of this Ordinance. The application of REDD-F2 and REDD-F3 floating zones to a particular parcel also constitutes a text and map amendment and requires compliance with Division 8 of this article, requisite to City Council consideration and action.

Section 2121 REDD-B District

2121.1 District Intent. The intent of the Base Redevelopment District is to provide for lower intensity nonindustrial development while protecting adjacent streets, waterways, and uses from encroachment. This district provides for varying uses but limits intensity through setback, lot size, coverage, density, and other standards. These standards are designed to promote compatible reuse while preserving the higher intensity redevelopment potential of properties. It is anticipated that in the future, properties or portions of the REDD-B district may be rezoned to the higher intensity floating zones as property and development conditions warrant.

2121.2 Eligibility for Designation. Notwithstanding the provisions of Section 513, any property, irrespective of lot size, within the city may be zoned as a Base Redevelopment District subject to conformity with the comprehensive plan and the requirements of this Ordinance. A request to rezone a property to an REDD-B may be initiated by the City Administrator, the Planning Commission, the City Council, or by the owner of the property.

2121.3 REDD-B Dimensional and Density Standards. The following standards shall apply to properties within the REDD-B district.

1. Minimum lot size. Each lot shall have a minimum area of ten (10) acres.

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2. Minimum lot width. Each lot shall have a minimum lot width of three hundred (300) feet.
3. Building coverage. The total lot coverage permitted for all buildings shall not exceed ten (10) percent of the lot area.
4. Impervious coverage. The total lot coverage permitted for all impervious surfaces shall not exceed twenty (20) percent of the lot area.
5. Height limit. Building and structure height shall not exceed thirty five (35) feet. No building shall exceed two (2) stories.
6. Setbacks. The minimum setback from property lines shall be as follows:
 1. Front yard: Ninety (90) feet;
 2. Rear yard: Fifty (50) feet;
 3. Side yard: Forty (40) feet; and
 4. Side yard abutting a public street: Sixty (60) feet.
7. Special setback from natural water body. The minimum setback from a natural water body shall be one-hundred (100) feet. For tidal rivers, bays, or inlets this distance is measured from the mean high water mark. This requirement does not apply to water-oriented uses that are approved as a special exception by the Board of Zoning Appeals.
8. Open Area Required. No less than sixty (60) percent of the lot area shall be open area.
9. Open Space. Except as may be required for a conditional or special exception use, open space is not required in this district.
10. Density. Where multi-family units are permitted as a special exception, density shall not exceed two (2) units per acre (or fractional equivalent thereof) of lot area. REDD floating zones may permit densities in excess of two (2) units per acre as expressly provided by this article.

2121.4 Uses. Uses permitted by right, by conditional use, and by special exception are provided in Division IV of this article.

Section 2122 REDD-FI District

2122.1 District Intent. The intent of the Redevelopment District Floating Zone 1 is to provide for development on smaller, pre-existing lots within the REDD. These lots by virtue of their size, location, or lot width may not readily accommodate the setback and coverage requirements of the base district. Also, due to their lot size, these smaller lots would not be eligible for consideration under the other floating zone options provided by this article. This floating zone permits uses similar to the base district and provides reduced setbacks and coverage requirements. This district also allows for light industrial uses as a special exception. It is further intended that this district only be assigned in cases where the orientation of lots allow for self-contained or stand-alone development that do not impact the development of adjacent properties or conflict with the city's official map.

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2122.2 Eligibility for Designation. Notwithstanding the provisions of Section 513, any property within the REDD-B district that constituted an existing lot of record of less than three (3) acres in area at the time of this article's adoption may be zoned as a Redevelopment District Floating Zone 1 subject to conformity with the comprehensive plan and the requirements of this Ordinance. A request to rezone a property to an REDD-F1 district may only be initiated by the owner(s) of the property(s).

2122.3 REDD-F1 Dimensional and Density Standards. The following standards shall apply to properties within the REDD-F1 district.

1. Minimum lot size. Each lot shall have a minimum area of one (1) acre.
2. Minimum lot width. Each lot shall have a minimum lot width of one hundred (100) feet.
3. Building coverage. The total lot coverage permitted for all buildings shall not exceed twenty five (25) percent of the lot area.
4. Impervious coverage. The total lot coverage permitted for all impervious surfaces shall not exceed thirty five (35) percent of the lot area.
5. Height limit. Building and structure height shall not exceed thirty five (35) feet. No building shall exceed two (2) stories.
6. Setbacks. The minimum setback from property lines shall be as follows:
 1. Front yard: Forty (40) feet;
 2. Rear yard: Twenty (20) feet;
 3. Side yard: Twenty (20) feet; and
 4. Side yard abutting a public street: Thirty (30) feet.
7. Special setback from natural water body. The minimum setback from a natural water body shall be one-hundred (100) feet. For tidal rivers, bays, or inlets this distance is measured from the mean high water mark. This requirement does not apply to water-oriented uses that are approved as a special exception by the Board of Zoning Appeals.
8. Open Area Required. No less than forty five (45) percent of the lot area shall be open area.
9. Open Space. Except as may be required for a conditional or special exception use, open space is not required in this district.
10. Density. Where multi-family units are permitted as a special exception, density shall not exceed three (3) units per acre (or fractional equivalent thereof) of lot area.

2122.4 Uses. Uses permitted by right, by conditional use, and by special exception are provided in Division IV of this article.

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Section 2123 REDD-F2 District

2123.1 District Intent. The intent of the Redevelopment District Floating Zone 2 is to provide for higher intensity development consistent with approved floating zoning district standards. Further, this district is intended to accommodate imminent development on tracts of three acres or greater. Uses within this district are prescribed by the article; however this district is intended to allow for design flexibility in setback, height, density, and parking standards and to allow for cluster development. In addition, architectural standards may be customized. This district is designed to encourage development that is compatible with adjacent nonindustrial districts, integration with surrounding development, and provide for the coordination of improvements outlined in the city's comprehensive plan and official map.

2123.2 Eligibility for Designation. Any property or combination of properties within the REDD-B or REDD-F1 districts that is three acres or greater of contiguous area may be zoned as a Redevelopment District Floating Zone 2 subject to conformity with the comprehensive plan and the requirements of this Ordinance. A request to rezone a property to an REDD-F2 district may only be initiated by the owner(s) of the property(s).

2123.3 REDD-F2 Dimensional and Density Standards. The following standards shall apply to properties within the REDD-F2 district.

1. Minimum lot size. Each lot shall have a minimum area of four thousand (4,000) square feet.
2. Minimum lot width. Each lot shall have a minimum lot width of twenty five (25) feet.
3. Building coverage. The total lot coverage is established by applicable district standards. The coverage for all building within the floating zone shall not exceed thirty five (35) percent of the net development area.
4. Impervious coverage. The total lot coverage is established by applicable district standards. Impervious coverage shall not exceed forty five (45) percent of the net development area.
5. Height limit. The maximum building and structure height is established by the district standards.
6. Setbacks. The minimum setbacks are established by applicable district standards.
7. Open Area Required. No less than forty (40) percent of the net development area shall be open area.
8. Open Space Required. No less than twenty five (25) percent of the net development area shall be open space.
9. Density. Density shall not exceed five (5) units per acre (or fractional equivalent thereof) of net development area.
10. Clustering. The REDD-F2's district standards may provide for cluster development.

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2123.4 Uses. Uses that may be permitted by right, by conditional use, and by special exception are provided in Division IV of this article. The REDD-F2's floating zone may further restrict allowable uses by requiring a higher level of approval procedure but not a lower level approval procedure than is shown in Division IV, Table 2142. Where uses are further restricted, the floating zone text shall specify those uses which are allowed by right, conditional use, or special exception and provide conditions, if any, requisite to the establishment of each use. A use which does not appear within Division IV, Table 2142 is an unlisted use and is not permitted within an REDD-F2 floating zone.

Section 2124 REDD-F3 District

2124.1 District Intent. The intent of the Redevelopment District Floating Zone 3 is to provide for higher intensity development consistent with approved floating zoning district standards. Unlike the REDD-F2, this district is intended for larger developments and affords the greatest amount of flexibility in design and permissibility of uses of any of the REDD districts. This district is designed to encourage large scale development that can occur in phases and that incorporates the design principles and improvements of the city's comprehensive plan and official map.

2124.2 Eligibility for Designation. Any property or combination of properties within the REDD-B, REDD-F1, or REDD-F2 districts that is ten (10) acres or greater of contiguous area may be zoned as a Redevelopment District Floating Zone 3 subject to conformity with the comprehensive plan and the requirements of this Ordinance. A request to rezone a property to an REDD-F3 district may only be initiated by the owner(s) of the property(s).

2124.3 REDD-F3 Dimensional and Density Standards. The following standards shall apply to properties within an REDD-F-3 floating zone.

1. Minimum lot size. The minimum lot size is established by the applicable district standards.
2. Minimum lot width. Each lot shall have a minimum lot width of twenty (20) feet.
3. Building coverage. The total lot coverage is established by the REDD-F3's district standards. The coverage for all building within the floating zone shall not exceed forty (40) percent of the net development area.
4. Impervious coverage. The maximum impervious coverage for each lot is established by the REDD-F3's district standards. Impervious coverage shall not exceed fifty (50) percent of the net development area.
5. Height limit. The maximum building and structure height is established by the approved district standards.
6. Setbacks. The minimum setbacks are established by the approved district standards.
7. Open Area Required. No less than thirty five (35) percent of the net development area shall be open area.

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9. Open Space Required. No less than twenty five (25) percent of the net development area shall be open space.
10. Density. Density shall not exceed seven (7) units per acre (or fractional equivalent thereof) of net development area.
11. Clustering. The REDD-F3's district standards may provide for cluster development.

2124.4 Uses. Permitted uses and their location within the district are established by the district standards. In addition to permitted uses, the development's zoning text may provide for alternate uses that may be permitted by right, as a conditional use, or as a special exception.

Section 2125 Summary of Dimensional and Density Standards

The dimensional and density standards of the REDD districts are summarized in Table 2125 below:

Table 2125					
Summary of REDD District Dimensional & Density Standards					
STANDARDS		Base District	Floating Zones		
		REDD-B	REDD-F1	REDD-F2	REDD-F3
Minimum Area for District Designation		None	None	3 acres	10 acres
Maximum Area For District Designation		None	Less than 3 acres	None	None
Minimum Lot Size		10 acres	1 acre	4,000 square feet	Set by DS
Minimum Lot Width		300 feet	100 feet	25 feet	20 feet
Maximum Building Coverage*		10%	25%	35%	40%
Maximum Impervious Coverage*		20%	35%	45%	50%
Height Limit		35 feet	35	Set by DS	Set by DS
Setbacks	Front	90 feet	40	Set by DS	Set by DS
	Rear	50 feet	20	Set by DS	Set by DS
	Side	40 feet	20	Set by DS	Set by DS
	Street Side Yard	60 feet	30	Set by DS	Set by DS
	Waterfront	100 feet	100	Set by DS	Set by DS
Minimum Open Area		60%	45%	40%	35%
Minimum Open Space		None	None	25%	25%
Density (Units per acre)*		2	3	5	7
Notes: The dimensional and density standards illustrated in Table 2125 are the minimum standards for the above districts. Where the text of this Ordinance provides more restrictive standards than those summarized above, the more restrictive standards shall apply. *Density and coverage bonuses are available in the REDD-F2 and REDD-F3 districts and shall not exceed any density limitations set forth in the comprehensive plan. DS = District Standards					

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Sections 2126 through 2129 [RESERVED]

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Division 3 General Provisions Governing REDD Districts

Section 2130 Heavy Industrial Uses Prohibited in the REDD Districts

Notwithstanding any provision to the contrary, new heavy industrial uses are prohibited in the REDD districts. Heavy industrial uses that lawfully existed on the effective date of this article are nonconforming uses in the REDD.

Section 2131 Alternate Development Options Retained

This article provides various zoning district options and requirements for properties within the REDD. Nothing herein precludes an owner of an REDD property from requesting that it be rezoned to an alternate zoning district as provided in Article VI or petitioning for approval as a planned development district as provided in Article VII.

Section 2132 Affect of the Design Overlay District Standards

Properties located within the REDD-B and REDD-F1 are subject to the standards and requirements of Article XIII: Design Overlay District for Main Corridors. Properties located within the REDD-F2 and REDD-F3 are subject to the design and appearance standards as specified in the approved floating zone district standards for their respective floating zone.

Section 2133 REDD Districts Subject to Other Requirements of Zoning Ordinance

Except where specifically supplanted by this article or approved district standards applicable to a floating zone, all lands within the REDD are subject to this ordinance's requirements of general applicability affecting uses, lots, structures, parking, and other features.

Sections 2134 through 2139 [RESERVED]

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Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Division 4 Use Standards

Section 2140 Classification of Use in the REDD

2140.1 Referral to Zoning Administrator. All questions concerning the classification of uses within the REDD shall be referred to the Zoning Administrator for an interpretation of this Ordinance. The referral of the use classification question shall be accompanied by a written statement of facts listing the nature of the use and whether it involves dwelling activity, sales, processing, storage and the amount thereof, anticipated employment, types of products, transportation requirements, and any additional information determined necessary by the Zoning Administrator to classify the proposed use.

2140.2 Decision of the Zoning Administrator. The Zoning Administrator shall consider the nature and described performance of the proposed use and may assign a use classification descriptive of the use from Table 2142 “Schedule of Uses” or assign a use classification as is otherwise specifically provided by this Ordinance.

2140.3 Appeals. Appeals from the determinations of the Zoning Administrator are made to the Board of Zoning Appeals pursuant to Article XV of this Ordinance.

2140.4 Referral of Unlisted Uses. If the Zoning Administrator or the Board of Zoning Appeals, operating under parts (2) and (3) above, determines that a described use does not appear within this Ordinance, the Zoning Administrator or the Board of Zoning Appeals shall transmit a copy of the determination to the Planning Commission. The City Administrator, Planning Commission or City Council may initiate a text amendment to classify the proposed use.

2140.5 Unlisted Uses are Prohibited. Any use which does not appear within this Article shall be determined to be a Use Not Allowed within the REDD-B, REDD-F1, and REDD-F2 districts.

Section 2141 Use Types

Within the REDD-B, REDD-F1, and REDD-F2 districts, a use is either a Use Permitted by Right, a Conditional Use, a Special Exception Use, or a Use Not Allowed.

P

USES PERMITTED BY RIGHT

A “P” in the zoning district column of Table 2142 indicates that a use is permitted in the respective zoning district, subject to compliance with all other applicable regulations of this Ordinance (see Section 2144 for exception).

C

CONDITIONAL USES

A “C” in the zoning district column of Table 2142 indicates that a use is allowed in the respective zoning district only if it complies with use-specific conditions and all other applicable regulations of this Ordinance. A cross-reference to the applicable use-specific

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conditions can be found in the “Special Conditions” column of Table 2142 (see Section 2144 for exception).

SE

SPECIAL EXCEPTION USES

An “SE” in the zoning district column of Table 2142 indicates that a use is allowed only if reviewed and approved by the Board of Zoning Appeals in accordance with the special exception procedures of this Ordinance. In addition, special exception uses may be subject to compliance with the use-specific conditions and all other applicable regulations of this Ordinance. A cross-reference to the applicable use-specific conditions, if any, can be found in the “Special Conditions” column of Table 2142.



USES NOT ALLOWED

A blank cell in the zoning district column of Table 2142 indicates that a use is not allowed in the respective zoning district, unless said use is otherwise expressly allowed by other provisions within this Ordinance.

Section 2142 Use Table

Uses are allowed within the REDD-B, REDD-F1, and REDD-F2 districts in accordance with Table 2142 “REDD Schedule of Uses”. The REDD-F2’s floating zone may further restrict allowable uses by requiring a higher level of approval procedure but not a lower level approval procedure than is shown in Table 2142. Where uses are further restricted, the floating zone text approved by City Council shall specify those uses which are allowed by right, conditional use, or special exception and provide conditions, if any, requisite to the establishment of each use. A use which does not appear within Table 2142 is an unlisted use and is not permitted within an REDD-F2 floating zone (see also Section 2123.4).

Table 2142 REDD Schedule of Uses				
KEY: P=Permitted by Right C=Conditional Use SE=Special Exception Blank Cell=Use Not Allowed				
USE CLASSIFICATION	DISTRICT			SPECIAL CONDITIONS
	REDD-B	REDD-F1	REDD-F2	
Adult Day Care			P	
Armory	P	P	P	
Assembly Hall, Coliseums, Gymnasiums, and similar uses			P	
Automated Teller Machine (Free-Standing)	C	P	P	Section 418
Bakery	P	P	P	
Bank	P	P	P	
Barber Shop	P	P	P	

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Beauty Shop	P	P	P	
Bed and Breakfast			P	
Billiard Parlor			P	
Boat Sales, Service, and Supplies			P	
Bowling Alley			P	
Bus Station			P	
Church and other religious institutions			P	
Club			P	
Courthouse			P	
Day Care Center			P	
Dock, Pier and Wharf	SE	SE	P	Section 423
Family Day Care Home			P	
Financial Institutions			P	
Fire Station	P	P	P	
Fraternal Organizations			P	
Greenhouse/Horticulture Nursery	P	P	P	
Group Dwelling			P	
Horse Drawn Carriage		SE	P	Section 407
Hospital			P	
Hotel			P	
Industrial, Light		SE	P	Section 2143.1
Library	P	P	P	
Lodge			P	
Marina (Wet or Dry)			P	
Marine Related Storage			P	
Mini-Day Care Center			P	
Mini-shopping Center	SE	SE	P	
Multi-Family	SE	SE	P	Section 2143.2
Museum	P	P	P	
News Stand	P	P	P	
Office (Business, professional, government)	P	P	P	
Park, Active	SE	SE	P	
Park, Passive	P	P	P	
Parking Lot (principal use)	SE	SE	P	
Police Station	P	P	P	
Post Office			P	
Printing Establishment			P	
Produce Stand and Market	SE	SE	P	
Public Assembly Hall			P	
Publicly Owned and	P	P	P	

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Operated Buildings, Facilities, and Land				
Restaurant (excluding drive-in)	SE	SE	P	
Retail Store, Small	P	P	P	
Retail Store, Medium	P	P	P	
Retail Store, Large	SE	SE	P	Section 2143.3
Schools			P	
Seafood Establishment (wholesale/retail)			P	
Single Family Dwelling			P	
Skating Rink			P	
Substation	SE	SE	P	Section 412
Taxi Stand			P	
Theater (indoor)	SE	SE	P	
Trucking Terminal/Transfer Company			P	
Two-Family Dwelling or Duplex			P	
Uses Located Over Water			P	
Watchmen/Caretaker Dwelling	P	P	P	
Water Tower	C	C	P	Section 411
Wholesale and warehouse in enclosed building		SE	P	Section 2143.1

Section 2143 Use Conditions

In addition to the district and supplemental requirements imposed on lands and uses by this Ordinance and the required findings for special exceptions in Section 1504, the following conditions shall apply in the REDD districts where a use is allowed as a conditional use or special exception as shown in Table 2142.

2143.1 Light Industry (including wholesale and warehouse uses). Light industry may be permitted in the REDD-F1 provided that:

1. Total building floor area shall not exceed 15,000 square feet;
2. The principal building and any permitted accessory structures shall observe a minimum rear yard setback of one hundred (100) feet and a side yard setback of fifty (50) feet;
3. The principal building and any permitted accessory structure shall not be placed any closer than four hundred (400) feet from Front Street nor placed any closer than two hundred (200) feet from any arterial street. This distance shall be measured in a straight line, without regard to intervening structures or objects, from the nearest

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portion of the building to the nearest boundary of the Front Street or arterial street's right-of-way;

4. All activities associated with the use shall be contained within an enclosed building. No outdoor processes or storage of materials is permitted;
5. An exterior landscaping buffer, a minimum of thirty (30) feet in width, shall be provide along the rear and side yards; and
6. Vehicular access onto Front Street is prohibited.

2143.2 Multi-Family. Multi-family uses in the REDD-B and REDD-F1 require one thousand (1,000) square feet of open space per unit. An exterior landscaping buffer, a minimum of twenty (20) feet in width, shall be required around the entire development.

2143.3 Retail Store, large. Large retail stores may be permitted in the REDD-B and REDD-F1 provided that:

1. Total building floor area shall not exceed 40,000 square feet;
2. The principal building and any permitted accessory structure shall not be placed any closer than four hundred (400) feet from Front Street. No parking lot(s) and drive(s) associated with the retail store shall be placed closer than two hundred (200) feet from Front Street. This distance shall be measured in a straight line, without regard to intervening structures or objects, from the nearest portion of the building, parking lot, or drive to the nearest boundary of the Front Street right-of-way;
3. Vehicular access onto Front Street is prohibited; and
4. A traffic impact study is required.

Section 2144 Special Exception Required for High Intensity Uses

Notwithstanding the provisions of Section 2142, in the REDD-B and REDD-F1 uses that require new curb cuts or access points onto Front Street or uses that have the potential to generate three hundred (300) or more peak hour trips as determined by the Institute of Transportation Engineer's Trip Generation Manual (latest edition) are special exception uses and require approval by the Board of Zoning Appeals. The board shall require the submission of a traffic impact study and condition the special exception's approval on the implementation of traffic impact mitigation measures.

Sections 2145 through 2149 [RESERVED]

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Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Division 5 Supplemental Standards

Section 2150 Fences and Walls

In the REDD-B and REDD-F1, fences and walls shall not exceed eight (8) feet in height and shall not be placed within any required yard. In cases where a fence or wall is used to conceal or enclose a nonconforming industrial use or a utility use, is required by Sections 510 or 2151 of this Ordinance, or is required by a health or safety code (e.g. construction fencing), the Zoning Administrator may permit the placement of a fence or wall in a required yard provided such placement does not infringe on sight distance at an intersection or driveway. In the REDD-F2 and REDD-F3, the approved floating zone shall establish requirements for the placement of fences and walls.

Section 2151 Screening of Nonconforming Heavy Industrial Uses Required

In addition to the requirements imposed by Section 510, heavy industrial uses in the REDD-B and an REDD-F1 floating zone shall be screened from view from any public street or right-of-way with no less than a six foot high, sight obscuring fence, wall, or hedge of not less than an eighty percent opacity. Notwithstanding the provisions of Division 7, heavy industrial uses shall conform with the requirements of this section no later than three hundred sixty-five (365) days from the effective date of this Ordinance. Where not in conflict with this section, screening installed after this article's effective date shall conform to the requirements of Article XIII of this Ordinance

Section 2152 Outdoor Storage and Display

Except where expressly provided in REDD-F2 or REDD-F3 district standards approved by City Council, no merchandise, equipment (excluding licensed vehicles and trailers), machinery, bulk materials for processing or shipment, or recyclable, salvage, or junk materials shall be stored or displayed outside of an enclosed building in the REDD, except as follows:

1. Materials and associated recyclables may be stored outside of an enclosed building when appurtenant to a permitted construction or demolition project;
2. Outdoor storage, of less than twenty (24) total hours in any seven (7) day period and excluding outdoor sales or display, is permitted when incidental to the shipping, receiving, or stocking of a licensed business; or
3. Outdoor storage that lawfully existed on the effective date of this article is a nonconforming feature and is subject to the provisions of Section 2174. The area devoted to outdoor storage may not hereafter be enlarged.

Section 2153 Signs

2153.1 Review, Permitting, and Enforcement. Except where expressly provided otherwise in a REDD-F2 and REDD-F3 floating zone district, signs in the REDD districts are subject to the review, permitting, and enforcement standards contained in Article X and Article XIII of this Ordinance.

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2153.2 Permitted Signs in REDD-B and REDD-F1. In addition to signs deemed exempt from the terms of this Ordinance, the following signs are permitted in REDD-B and REDD-F1 districts:

1. Monument freestanding sign: One (1) monument freestanding sign shall be permitted per lot. The maximum gross surface area per sign face shall not exceed sixty (60) square feet and the aggregate gross surface area of the sign shall not exceed one hundred twenty (120) square feet. The freestanding sign shall not exceed eight (8) feet in height and shall not be placed closer than fifteen (15) feet from any property line.
2. Wall signs. Each principal building shall be permitted one (1) wall sign. The maximum gross surface area of the wall sign shall not exceed sixty (60) square feet. In cases where a principal building is located on a corner lot, an additional wall sign is permitted provided that the gross surface area of the sign not exceed thirty (30) square feet.

2153.3 Permitted Signs in the REDD-F2 and REDD-F3. In the REDD-2 and REDD-F3 districts, signs shall be permitted in accordance with the approved floating zone district standards.

Section 2154 Parking and Access Standards

In the REDD-B and REDD-F1 districts, off-street parking shall be provided, constructed, and maintained in accordance with Articles XI and XIII of this Ordinance. In the REDD-2 and REDD-F3 districts, off-street parking shall be provided in accordance with the approved floating zone.

Section 2155 Application of District Standards; Clustering

In the REDD-B and REDD-F1, density, open area, open space, building coverage, impervious coverage, and other standards are applied uniformly to each lot. In the REDD-F2 and REDD-F3, density, open area, open space, building coverage, and impervious coverage are based on the net development area. Cluster development is permitted, if authorized in approved floating zone district standards. Individual lots within these districts may have varying densities and coverages, provided that cumulatively the lots within the district conform to the standards of this Ordinance and the comprehensive plan.

Section 2156 Frontage Requirements in the REDD

Notwithstanding the provisions of Section 501, all lots in the REDD districts shall have frontage on and access to a publically dedicated and accepted or publicly maintained street. The minimum frontage requirement shall be a distance equal to or greater than the minimum lot width requirement for the district in which the lot is located.

Section 2157 Exception for Small Lots in REDD-B and REDD-F1

In the REDD-B and REDD-F1, coverage and setback requirements shall not be applied to limit building coverage to less than 2,500 square feet or limit impervious coverage to less than 5,000 square feet on any lot. The Zoning Administrator is authorized to proportionally reduced setback requirements in accordance with this requirement (see also Section 2173).

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Section 2158 Development Bonuses Available in REDD-F2 and REDD-F3

2158.1 Development Bonuses Available for Certain Improvements. The owner of the property may propose a development bonus as part of an application for an REDD-F2 or REDD-F3 floating zone. Bonuses may be granted for:

1. The dedication of active and passive parks for public use;
2. The construction and dedication of pedestrian trails;
3. The construction and dedication of streets as illustrated on the official map or provided in the comprehensive plan; or
4. Affordable housing.

When in conformity with the density provisions of the comprehensive plan, development bonuses may be granted in accordance with Table 2158:

Table 2158 Schedule of Development Bonuses		
Improvement	Development Bonus	Maximum Development Bonus
Parks and Pedestrian Trails: The voluntary construction and dedication of onsite active or passive park area to the city or other entity for perpetual public use. The location of park areas should correspond with the locations and intended purposes as provided in the comprehensive plan.	For every ½ acre of park area, the district may be afforded one additional dwelling units per acre of net development area and an additional 1% in building and impervious surface coverage.	No more than four additional dwelling units per acre and no more than a 4% increase in allowable building and impervious surface coverage for the district.
Waterfront Parks and Pedestrian Trails: The voluntary construction and dedication of onsite, waterfront active or passive park area to the city or other entity for perpetual public use. The location of park areas should correspond with the locations and intended purposes as provided in the comprehensive plan.	For every ½ acre of waterfront park area, the district may be afforded two additional dwelling units per acre of net development area and an additional 1% of building and impervious surface coverage.	No more than eight additional units per acre and no more than a 4% increase in allowable building and impervious surface coverage for the district.
Street Dedication: The construction and dedication of onsite streets (and associated rights-of-way) as illustrated on the official map or as outlined in the comprehensive plan.	For every ½ acre of dedicated street right-of-way, the district may be afforded three additional dwelling units per acre of net development area and	No more than nine additional units per acre and no more than a 6% increase in allowable building and impervious surface coverage for the district.

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	an additional 2% of building and impervious surface coverage.	
Affordable Housing: The provision of affordable housing subject to sufficient instruments being provided to guarantee unit affordability for a period of no less than fifteen (15) years.	For every affordable unit provided, one additional market rate unit may be allowed (for the entire district).	May not increase density by more than 20% of district standards.

2158.2 *Application and Recommendation of Planning Commission.* The application and accompanying proposed district standards shall clearly describe the improvements and the requested development bonus. The Planning Commission in its report on the proposed floating zone to City Council shall make a recommendation on the requested development bonuses including the justifications for granting the request and its consistency with the comprehensive plan.

2158.3 *Approval of Development Bonus.* The City Council may, with the approval of an REDD floating zone, grant the requested development bonus. Where the requested bonus would involve the transfer of real property to the City of Georgetown, the acceptance of property and the corresponding granting of development bonuses is discretionary to the City Council. Improvements which are to be dedicated to the City shall follow the procedures as outlined in the City of Georgetown Development Regulations.

Section 2159 [RESERVED]

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Division 6 REDD Architectural and Design Standards

Sections 2160 through 2169 [RESERVED]

Attachment: REDD Document (Exhibit A - Council Copy) (2283 : Text amendment for the Redevelopment District (REDD))

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Division 7 REDD Nonconformity Standards

Section 2170 General Provisions Governing Nonconformities in REDD Districts

2170.1 Applicability. Notwithstanding the provisions of Section 400, nonconforming uses, structures, lots, and site features within the REDD districts are subject to the requirements of this article.

2170.2 Continuance. Any use, structure, lot, or other property feature that lawfully existed on this article's effective date may continue in accordance with and subject to the limitations imposed by this division.

2170.3 Determination of nonconformity status. The burden of establishing that a use, structure, lot, or site feature is a legal nonconformity, which lawfully existed on the effective date of this article shall, in all cases, be solely upon the property owner.

2170.4 Substantial improvements prohibited. A nonconformity shall not hereafter be substantially improved except where such improvement eliminates the nonconformity.

2170.5 Incidental Repairs and maintenance. Incidental repairs and normal maintenance of nonconformities shall be permitted unless such repairs are otherwise prohibited by this article. Nothing in this article shall be construed to prevent structures from being structurally strengthened or restored to a safe condition, in accordance with an official order of the building official or his/her designee.

2170.6 Change of tenancy or ownership. The status of a nonconformity is not affected by changes of tenancy, ownership, or management and the provisions of this division shall apply to current and subsequent owners and assigns of properties in the REDD.

Section 2171 Nonconforming Uses

2171.1 Expansion. A nonconforming use shall not be enlarged or expanded unless one of the following conditions exists:

1. Such expansion eliminates or reduces the nonconformity and such expansion or extension conforms to the provisions of this Ordinance; or
2. The expansion is into a part of an existing building or structure that was lawfully and manifestly designed or arranged for such use, provided that no such expansion shall be allowed if it displaces a conforming use or constitutes a substantial improvement as defined herein.

2171.2 Change of use. A nonconforming use may not be changed to any use other than a use allowed in the zoning district in which it is located.

2171.3 Abandonment and loss of nonconforming status. Once a nonconforming use, which lawfully existed on the effective date of this Ordinance, is abandoned, the use's legal nonconforming status shall be lost and the re-establishment of a nonconforming use shall be

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prohibited. Any subsequent use of the property shall comply with the regulations of the REDD district in which it is located.

The abandonment of a nonconforming use and any related building(s) or structure(s) shall be deemed to have occurred upon any one or more of the following for more than three hundred sixty five (365) consecutive days or more than three hundred sixty five (365) days in any two consecutive years:

1. The cessation of production or processes for which the nonconforming use was intended; or
2. The vacating of the premises; or
3. Failure to secure or maintain licenses, permits, or regulatory approvals necessary for operation; or
4. Disconnecting utility service, such as water, gas, or electric service, serving the nonconforming use or property; or
5. Removal of buildings, equipment, or fixtures which are necessary for the operation of the nonconforming use; or
6. Any structure containing a nonconforming use that has fallen into disrepair and has been deemed unfit for occupancy by the building official, fire marshal, or other competent authority.

2171.4 Damage or destruction and loss of legal nonconforming status. A nonconforming use that is damaged or destroyed by any cause shall not be restored or re-established if the cumulative cost of the repair work (materials and labor) in any five year period is more than fifty (50) percent of its pre-damage appraised value for tax purposes. Determinations of the costs of repair work shall be made by the building official, based on receipts and other evidence indicating actual repair costs. Where damage is fifty (50) percent or less and such repairs are permitted, they shall in no way increase the extent of the nonconformity (pre-damage) and shall otherwise be in full compliance with the regulations of this Ordinance. Authorized repairs shall be completed within twelve (12) months of such damage and shall conform to the requirements of the building code.

2171.5 Accessory uses. No use that is accessory to a principal nonconforming use shall continue after the principal use has ceased, unless it complies with the regulations of this Ordinance.

2171.6 Discontinuance of Nonconforming Heavy Industrial Uses.

1. Except as provided below, heavy industrial uses shall be discontinued within five (5) years from the effective date of this Ordinance. Thereafter, all uses on the property shall comply with the requirements of this Ordinance.
2. Within three (3) years of the discontinuance of a nonconforming heavy industrial use as required by subsection (1) above or (3) below, all nonconforming structures and features shall be brought into conformity with the provisions of this Ordinance. Structures and equipment that are manifestly and exclusively arranged for conducting the discontinued nonconforming use shall be removed from the property.
3. At any time within four (4) years of the effective date of this division, an owner may apply to the Zoning Administrator for an extension to the timeframes for compliance

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set forth in subsection (1) or (2) above. The burden shall be on the applicant to demonstrate that these timeframes are not reasonable and do not afford sufficient time to protect a vested right or to recover costs, based some or all of the following factors:

- (a) capital investments made in the property before the property became nonconforming;
- (b) actual present or depreciated value of the land and improvements;
- (c) original purchase price;
- (d) the time period, if any, to amortize costs of the land and improvements, under the Internal Revenue Code;
- (e) the remaining useful life of capital improvements and equipment on the property;
- (f) annual income;
- (g) return on investment;
- (h) close-out or demolition costs;
- (i) depreciation or appreciation in value of the property and capital investments;
- (j) salvage value of any nonconforming structures or equipment;
- (k) environmental clean-up costs, if any;
- (l) the remaining term of any leases on the property;
- (m) the availability of alternative business locations and the costs of relocation;
- (n) the suitability of existing capital investments and the property for uses that conform with the REDD;
- (o) the benefits to the public of amortizing the nonconforming use, based on the intent of this Article and the City's comprehensive plan, compared to the detriment to the property owner; and
- (p) any other factors supporting the applicant's assertion that the amortization and conformity timeframes set forth in subsections (1) and (2) above are not sufficient to protect a vested right under applicable law.

In making a determination under this subsection, the Zoning Administrator may rely on neutral experts in property appraisal, finance, and industry, based on reasonable economic practice and current market conditions. Appeals from the Zoning Administrator's determination shall be to the Board of Zoning Appeals as provided in this Ordinance.

4. No less than one hundred eighty (180) days after the effective date of this division, the Zoning Administrator shall provide written notice to the current owner of a nonconforming use property setting forth the date of the required discontinuance and conformity under subsections (1) and (2) above and advising the owner of the opportunity to appeal the Administrator's determination or to apply for an extension as provided in subsection (3). The Zoning Administrator also shall record a copy of said notice with the Georgetown County Registrar of Deeds.
5. The affected property owner may, within ninety (90) days of the receipt of written notice provided by subsection (4), above, appeal the Zoning Administrator's determination that subsections (1) and (2) apply to the property, to the Board of Zoning Appeals as provided in Article XV of this Ordinance.

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Section 2172 Nonconforming Structures

2172.1 Use. A nonconforming structure may be occupied by any use allowed in the underlying zoning district. When a nonconforming structure contains one or more nonconforming uses, the nonconforming use of the structure is subject to the requirements of Section 2171.

2172.2 Expansion. A nonconforming structure shall not be enlarged or altered in a way which increases its nonconformity or constitutes a substantial improvement, but any structure or portion thereof may be altered to decrease its nonconformity.

2172.3 Moving or relocation. A nonconforming structure may be moved in whole or part to another location on the same lot if the movement or relocation does not increase the extent of nonconformity. A nonconforming structure may be moved to another lot provided that the dimensional and use requirements of the lot's underlying zoning district can be met.

2172.4 Damage or destruction and loss of nonconforming status. A nonconforming structure that is damaged or destroyed by any cause shall not be repaired, rebuilt, or altered if the cumulative cost of the repair work (materials and labor) in any five year period is more than fifty (50) percent of its pre-damage appraised value for tax purposes. Determinations of the costs of repair work shall be made by the building official, based on receipts and other evidence indicating actual repair costs. Where damage is fifty (50) percent or less and such repairs are permitted, they shall in no way increase the extent of the nonconformity (pre-damage) and shall otherwise be in full compliance with the regulations of this Ordinance. Authorized repairs shall be substantially complete within twelve (12) months of such damage and shall conform to the requirements of the building code.

Section 2173 Nonconforming Lots

2173.1 Vacant lots. Nonconforming vacant lots may be occupied by a use allowed by the underlying zoning district, provided that the use shall comply with all applicable setbacks. If the applicable zoning district permits a variety of uses or a variety of intensities and one or more uses or intensities would comply with setback and other district standards, while others would not, then only the uses or intensities that would comply with the applicable district standards shall be permitted.

2173.2 Lots with building(s) or structure(s). If a nonconforming lot contains a building or structure on the date on which this article becomes applicable to it, then the owner may continue the use of that building or structure and may reasonably expand the structure in a way that does not increase the degree of nonconformity. For buildings or structures occupied by a permitted use, an increase in the building size shall not be deemed to increase the degree of nonconformity unless it increases the encroachment on a required yard or, in the case of residential occupancy, increases the number of dwelling units on the nonconforming lot.

Section 2174 Nonconforming Features

Nonconforming features. Except as may be provided elsewhere in this Ordinance, nonconforming features to include a deficiency in the number of required parking spaces, paving, deficiency in

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landscaping, required illumination, excessive impervious coverage or similar site appurtenance may continue pursuant to the provisions of this section. Any change of principal use, new construction, feature replacement, or the issuance of a zoning permit affecting the nonconforming feature will thereupon require full compliance with the requirements of this Ordinance.

Sections 2175 through 2179 [RESERVED]

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Division 8 REDD Zoning and Floating Zone Approval Process

Section 2180 REDD-B and REDD-F1

Except as provided by Sections 2121.2 and 2122.2, the rezoning of property to the REDD-B and REDD-F1 districts shall follow the amendment provisions of Article XVIII of this chapter.

Section 2181 REDD-F2 and REDD-F3

Designation of a parcel with the REDD-F2 or REDD-F3 floating zone shall follow the procedures as outlined in this article.

2181.1 Sketch Plan Prepared. A sketch plan shall be prepared illustrating the boundaries of the proposed areas to be rezoned, the proposed land uses, a proposed lot layout and street configuration, estimated gross densities the generalized location of proposed buildings and improvements, and estimated useable open space.

2181.2 Sketch Plan Review. The Zoning Administrator shall submit the sketch plan to the Planning Commission with a recommendation as to whether the proposed design concept is consistent with the comprehensive plan and the requirements of this article. Within sixty (60) days of the receipt of the sketch plan by the Zoning Administrator, the Planning Commission shall either request preparation of detailed district standards consistent with the proposed sketch plan or recommend revisions to the sketch plan.

2181.3 Content of Proposed Floating Zone. A proposal to have an REDD-F2 or REDD-F3 floating zone applied to a particular parcel shall be on forms approved by the Planning Commission. As part of the proposal, the applicant shall prepare and submit a detailed REDD development plan and zoning text for the entire proposed district to the Zoning Administrator for consideration by the City Council as provided herein. Floating zone district standards shall contain all relevant information deemed necessary by the Planning Commission and the Zoning Administrator. Relevant information and exhibits shall include but are not limited to the following:

1. REDD Development plan. A development plan shall be submitted that illustrates:
 - (a) The surveyed boundary of the district including approximate interior property lines when future division is permitted;
 - (b) Proposed land uses for each lot or tract within the district;
 - (c) The location of existing and proposed utilities, streets, easements, and other rights-of-way. Where offsite improvements are required, the plan shall illustrate the location and extent of improvements;
 - (d) The location(s) and proposed use(s) of existing and planned buildings;
 - (e) The location of parking lots, drives, and walkways;

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- (f) The location and acreage of passive and active parks and open spaces;
 - (g) A delineation of development phases, if applicable, with an estimated timeline for development (REDD-3 only);
 - (h) Topographical data including existing and proposed contour elevations, areas of special flood hazard, drainage easements, and storm water detention easements.
 - (i) Supplemental exhibits and written narratives that include:
 - 1. A traffic impact study including a description of traffic impact mitigation measures to be taken,
 - 2. A lighting plan denoting the types and locations of exterior fixtures and intensity of illumination,
 - 3. A signage plan,
 - 4. An analysis of public facility impacts,
 - 5. A detail of improvements to be constructed and dedicated to public use. This written narrative shall include a cost estimate and specify the intended ownership, use, and maintenance of improvements,
 - 6. An analysis of any special site conditions that require remediation or mitigation such as floodplains, wetlands, and brownfields,
 - 7. A listing of all onsite nonconformities and a schedule for their removal,
 - 8. If applicable, any requested development bonuses, and
 - 9. A statement of conformity with the city's comprehensive plan, this article, and the official map, and
 - 10. Any additional information the applicant believes to be pertinent.
2. District text. Proposed text that establishes the requirements of the REDD district shall be submitted. At a minimum, the proposed text shall include:
- (a) The name (prefix) of the REDD district, not duplicating the name of any other REDD district, planned development, or subdivision;
 - (b) A statement of the intent and objectives of the proposed district;
 - (c) A legal description of the district boundaries, including the location and acreage of varying densities, uses, or other areas subject to special requirements;
 - (d) Proposed land uses and dimensional requirements including:
 - 1. A listing of uses to be allowed within the proposed district the total acreage for each use and their location. This listing may include primary and alternate uses,
 - 2. Proposed maximum and average residential densities for each residential use, not in excess of those allowed by this Ordinance or the City comprehensive plan, if applicable,
 - 3. The maximum proposed floor area ratios, if any, and the maximum building and impervious coverage for each use,

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4. The maximum height for each use or for the district as a whole,
5. The minimum setbacks for each use or for the district as a whole,
6. The minimum separation distance, if any, between buildings or uses, and
7. Any other proposed use or dimensional requirements to be enforceable to the district.

(e) Requirements imposed on development within the district including, but not limited to: landscaping and streetscapes, signage, parking, pedestrian amenities, lighting, architectural, and/or orientation standards;

(f) A provision which establishes for the possible reversion of property if construction does not occur within a specified-time period; and

(g) A provision which enumerates, other than district requirements, the specific requirements of this chapter which are not applicable to or that are amended upon approval of applicable district standards.

Complete forms and required exhibits, together with an application fee to cover administrative costs, shall be filed with the Zoning Administrator. Any communication purporting to be an application for an amendment shall be regarded mere notice to seek relief until it is made in the form required.

2181.4 Planning Commission Review; Hearing; Recommendation. The Zoning Administrator shall promptly transmit all complete applications to have a floating zone applied to a particular parcel to the Planning Commission. The Planning Commission shall conduct a public hearing on the proposed REDD district floating zone following the notification and hearing procedures for text and map amendments as specified in Section 1802.3 of this Ordinance. At the hearing, any party may appear in person, or by agent, or by attorney. The Planning Commission shall have thirty days following the public hearing within which to submit its recommendation and report to the City Council. The report submitted to the City Council shall contain a summary of all significant issues or concerns presented at the public hearing. Criteria to be considered by the Planning Commission in making a recommendation include, but are not limited to, the following:

1. Whether or not the proposed district complies with the standards and intent of this article;
2. Whether or not the proposed district is consistent with the comprehensive plan, official map, and adopted land use standards (including the zoning ordinance and land development regulations);
3. Whether or not the city or other agencies will be able to provide necessary public services, facilities, and programs to serve the district at the time the property is developed; and
4. When applicable, whether the development bonus(es) requested are in agreement with this article and any applicable policies or density provisions set forth in the comprehensive plan.

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If the Planning Commission fails to submit a recommendation within the thirty day period, it shall be deemed to have recommended approval of the requested district.

2181.5 Action by the City Council. The Planning Commission shall promptly transmit its recommendation to the City Council for legislative action. For each district request, the City Council shall consider the recommendation of the Planning Commission; however, the City Council is not bound by the recommendation in making its final decision. The creation of the REDD district must be adopted as an ordinance in accordance with South Carolina law and the requirements of the Zoning Ordinance.

Section 2182 Reversion

Notwithstanding the provisions of Section 1803, the Planning Commission shall within two years of a rezoning, and periodically thereafter, review the assignment of an REDD-B or REDD-F1 districts to determine its continued appropriateness under the terms of the comprehensive plan. If warranted, the Planning Commission may initiate proceedings to reclassify the property.

In the REDD-F2 and REDD-F3, the timeline for development (including phased development in the REDD-F3) and process for evaluation and reversion are to be specified in the approved floating zone; however, nothing therein shall limit the authority of the City Council to amend the official zoning map or text as provided Title 6, Chapter 29 of the South Carolina Code of Laws or abridge the vesting of rights as provided in the City of Georgetown Development Regulations.

Section 2183 REDD Districts Subject to Land Development Regulations

When an REDD district provides for the dedication of land for rights-of-way, parks, or other public spaces; requires the division of property into two or more lots; requires easements; or necessitates the installation of other public improvements, zoning permits for property within the district shall not be issued until such time as a final plat has been approved by the Planning Commission in accordance with the Georgetown Land Development Regulations. The Planning Commission shall require the posting of a surety instrument to guarantee the installation and/or dedication of required improvements including traffic impact mitigation measures and any legal instruments necessary to accomplish public dedication.

All plats approved under the terms of this section shall be recorded in the Office of the Register of Deeds of Georgetown County.

Section 2184 Permitting

Following the adoption by the City Council of an REDD district and an applicant's compliance with this Ordinance, permits may be issued by the Zoning Administrator to allow construction. All permitting shall conform to the application and site plan review procedures as specified in Article XV of this chapter.

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Section 2185 REDD-F2 and REDD-F3 Floating Zone Amendments

2185.1 Minor Amendments. Minor changes in an REDD floating zone's district standards may be approved by the Zoning Administrator provided that such changes:

1. Do not increase the density of the district;
2. Do not change the exterior boundaries of the district or alter the permitted height of structures,
3. Do not increase the intensity of land use;
4. Do not increase the number of lots (where subdivision has been approved);
5. Do not materially change the location or amount of land devoted to a specific land use;
6. Do not alter or conflict with the district's zoning text; and,
7. May include, but not be limited to the minor shifting of buildings, proposed streets, public or private ways, utility easements, parks or other public open spaces, or other features of the plan. Minor shifting of buildings does not include encroaching into any required setback.

All minor changes approved by the Zoning Administrator and all amended plans or plats shall be recorded in the Office of the Clerk of Court of Georgetown County.

2185.2 Major Amendments. Major changes in an approved REDD floating zone's district standards shall be considered an amendment to the original ordinance and shall require a public hearing, review and recommendation by the Planning Commission, and approval by City Council as required by South Carolina law and the City Zoning Ordinance. Major changes may include, but are not limited to, the following:

- (1) Increases in density, within any limitations described in this Ordinance or the City comprehensive plan,
- (2) Changes in the exterior boundary lines of the REDD floating zone district or alterations in the district's lot size, density, or dimensional requirements;
- (4) Changes in the location or amount of land devoted to specific land uses;
- (5) The creation of any new lot; or
- (6) Any change that requires the zoning text of the floating zone district to be altered.

A major change(s) to an REDD floating zone district shall be approved or denied pursuant the procedures established in Section 2181.

Sections 2186 through 2199 [RESERVED]

Amendments to Sections 514, 1301, and 1504

PROPOSED AMENDMENTS ARE HIGHLIGHTED

Section 514 One Principal Use on a Lot

Only one principal use may be permitted on a parcel with the exception of the Planned Developments as defined in Section 713 and the REDD-F2 and REDD-F3 as provided in Article XXI. Parcels that have existing buildings prior to the adoption of this ordinance may continue uses of the building. If the existing use ceases to operate, a new use will not be permitted. If the uses ceases for a period of 90 days, the use will no longer be considered existing and will not be eligible for a permit to reopen. A property owner may subdivide the property if all the requirements established in Article VIII of the Zoning Ordinance can be met.

Section 1301 Delineation of District Boundaries

The boundaries of the Design Overlay District shall include all parcels partially or completely within the outlined Design Overlay District boundaries as illustrated on the Official Zoning Map and the map attached as approved by the Mayor and City Council and includes the following zoning districts within the district. (All properties annexed into the City of Georgetown after the adoption of said guidelines, partially or completely contiguous with Church Street, Highmarket Street, Fraser Street, access roads parallel to these said streets where visible from the main road, and or any street designated to be within the adopted Overlay district shall be required to comply with the adopted guidelines as set forth):

General Commercial (GC)
Intermediate Commercial (IC)
Planned Development District(s) (PD)
Conservation Preservation (CP)
High Density Residential (R-4)
Heavy Industrial (HI)
Low Density Residential (R-1)
Public Service District (PS)
Base Redevelopment District (REDD-B)
Redevelopment District Floating Zone 1 (REDD-F1)

Specific zoning-related standards are established within the zoning ordinance and must be met prior to beginning development or redevelopment activities of the overlay zone. In addition to the requirements set forth in the Design Overlay Corridor District, all commercial, industrial, or Office development in the Design Overlay District shall meet all applicable zoning requirements set forth in the underlying zoning district.

Noncontributing commercial buildings located in the Designs Overlay District that are also located in the Historic District shall be exempt from ARB review.

PROPOSED TEXT AMENDMENTS

Amendments to Sections 514, 1301, and 1504

PROPOSED AMENDMENTS ARE HIGHLIGHTED

Section 1504 Powers

The Board of Zoning Appeals shall have the following powers:

1504.1 To hear and decide appeals where it is alleged there is error in an order, requirement, decision, or determination made by an administrative official in the enforcement of the Zoning Ordinance; **and**

1504.2 To hear and decide appeals for variances from the requirements of the Zoning Ordinance when strict application of the provisions of the Ordinance would result in unnecessary hardship. A variance may be granted in an individual case of unnecessary hardship if the Board make and explains in writing the following findings:

1504.201 There are extraordinary and exceptional conditions pertaining to the particular piece of property,

1504.202 These conditions do not generally apply to other property in the vicinity,

1504.203 Because of these conditions, the application of the Ordinance to the particular piece of property would effectively prohibit or unreasonably restrict the utilization of the property,

1504.204 The authorization of the variance will not be of substantial detriment to adjacent property or to the public good, and the character of the district will not be harmed by the granting of the variance, and

1504.205 The Board may not grant a variance the effect of which would be to extend physically a nonconforming use of land, or to change the zoning district boundaries shown on the Official Zoning Map. The fact that property may be utilized more profitably, should a variance be granted may not be considered grounds for a variance;

1504.3 To authorize the permitting of special exceptions subject to the terms and conditions for such uses as set forth by this Ordinance. The Board of Zoning Appeals may approve, approve with conditions, or deny a request for a special exception permit. Special exception permits may be approved only if the board finds that the proposed use:

1504.301 Is in fact a use specifically listed as a special exception for the zoning district in which the use is intended,

1504.302 Is consistent with the recommendations contained in the City of Georgetown Comprehensive Plan and the character of the underlying zoning district as indicated in the zoning district's intent,

1504.303 Is compatible with existing uses in the vicinity and will not adversely affect the general welfare or character of the immediate community,

PROPOSED TEXT AMENDMENTS

Amendments to Sections 514, 1301, and 1504**PROPOSED AMENDMENTS ARE HIGHLIGHTED**

1504.304 Adequate provision is made for such items as setbacks, buffering, and screening (including fences and/or landscaping) to protect adjacent properties from the possible adverse influence of the proposed use such as noise, vibration, dust, glare, odor, traffic conditions, and similar factors,

1504.305 When applicable, will be developed in a way that will preserve and incorporate important natural features,

1504.306 Complies with all applicable rules, regulations, laws, and the standards of this chapter, and

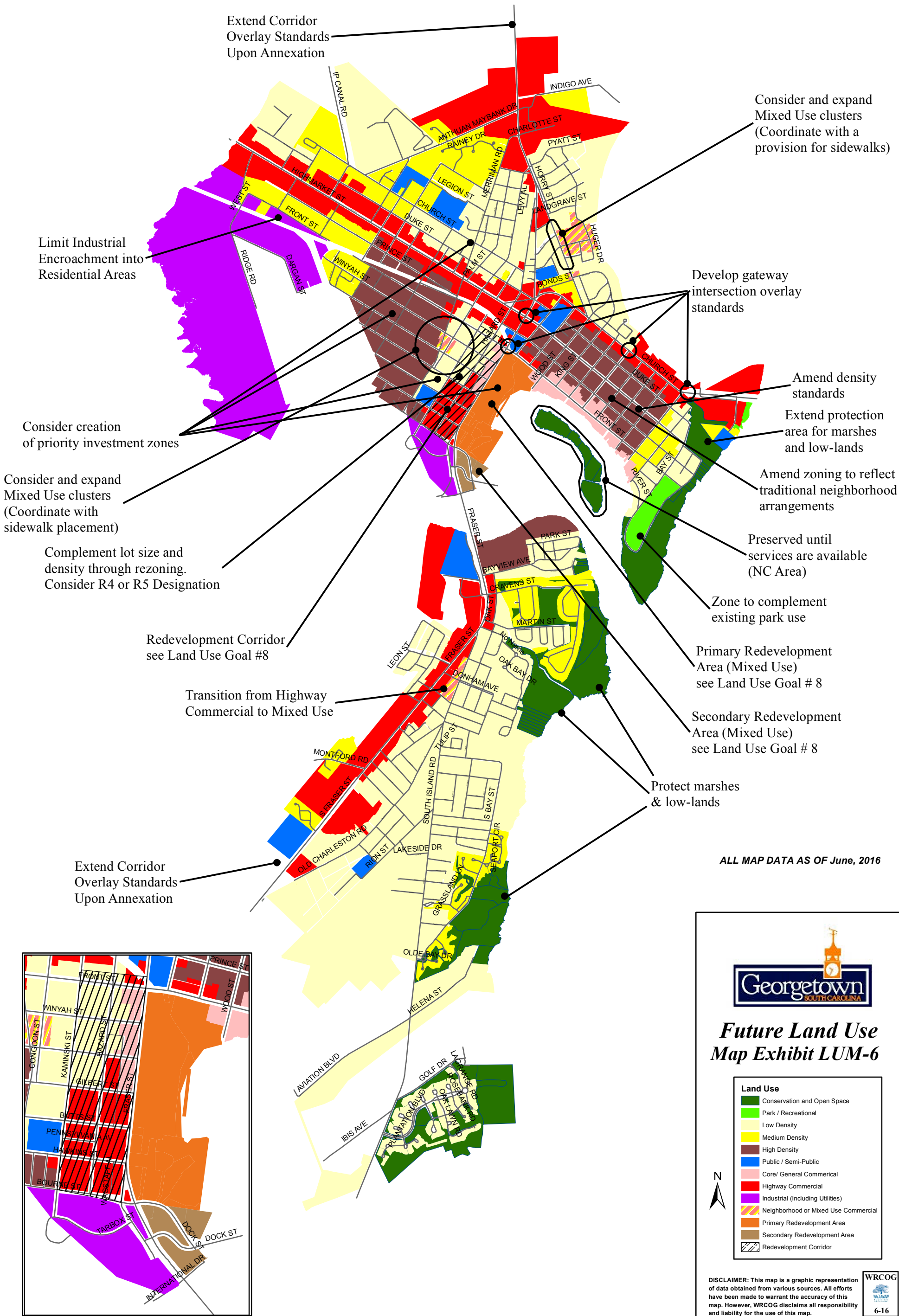
1504.307 Will not hinder or endanger vehicular traffic or pedestrian movements on adjacent streets.

In granting a special exception permit, the board may attach to it such conditions regarding the location, character, or other features of the proposed structure or use as the board may consider advisable to protect established property values in the surrounding area or to promote the public health, safety, or general welfare; and

1504.4 To remand a matter to the Zoning Administrator, upon motion by a party or the board's own motion, if the board determines that the record is insufficient for review. A party's motion for remand may be denied if the board determines that the record is sufficient for review. The board must set a rehearing on the remanded matter without further public notice for a time certain within sixty days unless otherwise agreed by the parties. The board must maintain a list of persons who expressed an interest in being informed when the remanded matter is set for rehearing, and notice of the rehearing must be mailed to these persons prior to the rehearing.

1504.5 In exercising the above powers, the Board of Zoning Appeals may, in conformity with the provisions of this Ordinance, reverse or affirm, wholly or in part, or may modify the order, requirements, decision, or determination of the Zoning Administrator and to that end shall have all the powers of the officer from whom the appeal is taken and may issue or direct the issuance of a permit. The board, in the execution of the duties for which appointed, may subpoena witnesses and in case of contempt may certify such fact to the circuit court having jurisdiction. All final decisions and orders of the Board must be permanently filed in the office of the Board as a public record. All findings of fact and conclusions of law must be delivered to the parties of interest by certified mail.

PROPOSED TEXT AMENDMENTS



Attachment: LUM_6 (2283 : Text amendment for the Redevelopment District (REDD))

STATE OF SOUTH CAROLINA)

RESOLUTION

CITY OF GEORGETOWN)

WHEREAS, the City of Georgetown has undertaken efforts to reimagine and revitalize lands on and around its inner harbor waterfront adjacent to the City's West End neighborhood and the City's National Register Historic District and historic downtown, which has the ability to transform the larger community; and

WHEREAS, the City of Georgetown wishes to leverage the community's assets, expanding on its resources, providing economic opportunity to its residents, and attracting outside investment; and

WHEREAS, on April 7, 2016, the City of Georgetown Planning Commission's Comprehensive Plan Sub-Committee held a meeting to discuss the Land Use Element of the 2016 Comprehensive Plan update as a precursor to rezoning and the intent to explore redevelopment along Highway 17 and near the city's inner harbor waterfront; and

WHEREAS, a working group comprised of representatives from the City of Georgetown, Georgetown County, South Carolina Department of Commerce, South Carolina State Ports Authority, Santee Cooper, and local businesses evaluated various community planning options and determined the best approach for Georgetown's inner harbor waterfront was an Urban Land Institute Advisory Services Panel Program; and

WHEREAS, in 2016, the City engaged the Urban Land Institute ("ULI") to undertake a study of the areas near the harbor, evaluating Market Opportunities, Planning and Development Options, and an Action Plan and Priority Recommendations, and soon thereafter full ULI briefing books were provided to the Mayor and City Council members; and

WHEREAS, on August 23, 2016, after a public meeting, the Planning Commission recommended revisions to the Land Use Element of the Comprehensive Plan related to the redevelopment of areas of the inner harbor; and

WHEREAS, the ULI Panel engaged by the working group visited the community from September 18-23, 2016, and subsequently produced a report outlining its recommendations for redevelopment of the inner harbor waterfront and responding to specific questions and issues raised by the working group; and

WHEREAS, during the ULI Panel engagement, a Public Town Hall meeting was held on September 19, 2016 at Howard Auditorium and the ULI Panel Report was presented at a public meeting at Winyah Auditorium on September 23, 2016; and

WHEREAS, on October 27, 2016, following a public hearing, the City Council adopted revisions to the Land Use Element of the City's Comprehensive Plan related to the redevelopment of areas of the inner harbor; and

WHEREAS, the Comprehensive Plan Land Use Element adopted in October 2016 recommended creation of a mixed use/redevelopment district to provide for the optimum use and conversion of industrial sites and other large tracts; and

WHEREAS, the City of Georgetown has designated on the Future Land Use Map of its Comprehensive Plan's Land Use Element, certain Primary and Secondary Redevelopment Areas comprising the inner harbor waterfront; and

WHEREAS, the Primary and Secondary Redevelopment Areas are located within the City's Design Overlay District for Main Corridors (MCOD), and also about Front Street, Georgetown's historic riverfront core commercial district; and

WHEREAS, following adoption of the amendments to the Land Use Element, the City staff, in partnership with the Waccamaw River Council of Governments, worked to develop zoning text amendments for the Georgetown Redevelopment Districts (REDD) for the areas within the Primary and Secondary Redevelopment Areas of the Comprehensive Plan's Future Land Use Map; and

WHEREAS, City staff recommends adoption of the REDD within all or some of the lands within the Primary and Secondary Redevelopment Areas of the Comprehensive Plan's Future Land Use Map; and

WHEREAS, on January 19, 2017, the City Council authorized an Intergovernmental Agreement to work together with Georgetown County in planning for the redevelopment of the areas around the inner harbor; and

WHEREAS, the recommended zoning ordinance text of the REDD and proposed areas for rezoning are on file with the City and are open to public inspection; and

WHEREAS, the City's Comprehensive Plan Land Use Element identifies a goal to provide for the harmonious redevelopment of existing industrial districts and uses located in the city's core and in other areas where the potential for nuisances and impacts on adjacent properties are high; and

WHEREAS, the City of Georgetown held town hall meetings on March 2, March 6, and March 7, 2017 to receive public input on redevelopment of the lands generally within the Primary and Secondary Redevelopment Areas; and

WHEREAS, the City of Georgetown recognizes the importance to the community of implementing the recommendations of its Comprehensive Plan and the ULI Panel Report;

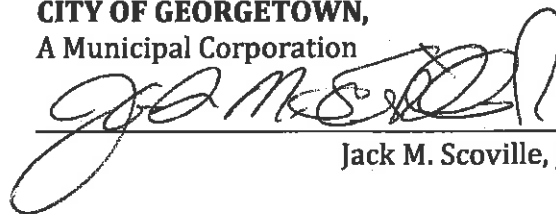
NOW THEREFORE BE IT RESOLVED THAT,

1. The draft Zoning Code text amendment establishing the Georgetown Redevelopment Districts (REDD) is attached to this Resolution as Exhibit A, and the City Council is hereby resolved to adopt such or similar text, with or without modifications, subject to a public hearing, public input, and the recommendations of the Planning Commission, as provided below;

2. The attached Exhibit B, Comprehensive Plan Future Land Use Map, indicates the lands ("Primary and Secondary Redevelopment Areas") the City Council will consider for rezoning to REDD-Base, as provided in the REDD ordinance attached as Exhibit A;
3. The City Council hereby requests the Planning Commission, at its regular March 28, 2017 meeting, consider and make recommendations as to certain Comprehensive Plan amendments related to adoption of the REDD within the Primary and Secondary Redevelopment Areas;
4. The City Council hereby requests the Planning Commission hold a public hearing on the proposed draft REDD text and associated map amendments, at its regular meeting of April 25, 2017 and to make a report and recommendation to the City Council as provided by state law and City code;
5. The City Council hereby directs and authorizes City staff to advertise the public hearings related to the proposed Zoning Code text and map amendments and to any proposed Comprehensive Plan amendments recommended by the Planning Commission at its March 28, 2017 meeting, following such meeting and report from the Planning Commission;
6. The City Council hereby resolves that consideration at first reading of the proposed Zoning Code text and map amendment ordinances shall follow the required report and recommendation from the Planning Commission, and may be held as soon as May 18, 2017;
7. The City Council of the City of Georgetown is hereby resolved to consider the particular scheme of zoning recommended by City staff, related to the revitalization of its inner harbor waterfront, as shown in the REDD in Exhibit A, within the Primary and Secondary Redevelopment Areas, as shown in Exhibit B, based on public input and the report and recommendation of the Planning Commission; and
8. The REDD zoning shall be subject to the pending ordinance doctrine within the Primary and Secondary Redevelopment Areas of the City's Comprehensive Plan Future Land Use Map, shown in Exhibit B.

AND IT IS SO RESOLVED, this 16th day of March 2017.

CITY OF GEORGETOWN,
A Municipal Corporation



Jack M. Scoville, Jr., Mayor

ATTEST:


Ann U. Mercer, City Clerk

APPROVED AS TO FORM:



Elise Crosby, City Attorney

**Planning Commission
Minutes
April 25, 2017**

MEMBERS PRESENT: Winfred Pieterse, Gerald Williams, Bernard Jones, Paul Smith, Brittany Johnson, Chris Moore, & Joan Schmid

MEMBERS ABSENT: None

OTHERS PRESENT: Matt Millwood, Elise Crosby, Rick Martin, & Debra Grant

I. Call to Order

Pledge & Prayer

II. Public Hearing:

- **Mr. Gordon Spelich/Representing Liberty Group** addressed the Commissioners and told them that they have signed a letter of intent with the owners of the Georgetown Steel Mill. Mr. Spelich said he is present to see what the outcome of this meeting will be, because they would like to make Georgetown their first US venture. The hope is to clean the property and be a good neighbor by being a green/steel company. Several thousand dollars will be allocated to the cleanup and to make the site aesthetically pleasing. This venture will create jobs for the area.
- **Mr. Keith Nagel/Representing Arcelor Mittal** told the Commissioners that the rezoning of the site will restrict them from making this operation viable. Mr. Nagel says he believes the Liberty Group's sale is a sustainable opportunity to reopen and offer high paying jobs to the citizens of Georgetown. The rezoning that the City is seeking is incompatible to the use of the mill, instead the plan is for retail, residential, and offices that will be extended over the next 25 years. The new zoning is not realistic, and the 5 years given for the use of producing steel is not reasonable and is a death sentence to the steel mill. If this ordinance passes and hinder this sale and/or future sales of the mill, they will have no choice but to seek legal actions for damages. They are asking that the Planning Commission make a recommendation against the rezoning and that City Council will delay its rezoning efforts while there is an opportunity to reopen the steel mill.
- **Mr. James Sanderson Jr. /President of the Steel Union (Not a citizen of the City of Georgetown)** Mr. Sanderson is in opposition of the rezoning of the steel mill property. Mr. Sanderson said the mill was in operation since 1969 and stop operation in 2015. There was an agreement made on April 21, 2017 for the purchase and reopening the steel mill, and it appears that the efforts of the City to rezone the property was fast tracked to prevent this.
- **Ms. Tessa Warren/Partner in the law firm representing the United Steel Workers (Not a citizen of the City of Georgetown)** the steel mill workers believe this business will again be a viable business and they are in opposition to the rezoning of the property.
- **Mr. Bill Duncan/ local attorney (Not a citizen of the City of Georgetown)** is in opposition of the rezoning of the property and in support of the reopening of the mill, because if it is rezoned it will put our neighbors out of a good job.
- **Ms. Zane Wilson (citizen of the City of Georgetown)** is in favor of the reopening of the mill, if there is someone willing to reopen it.

- **Mr. Eric Solheim (not a citizen of the City of Georgetown)** is in support of the reopening of the steel mill. Mr. Solheim said he feels the Mayor does not care about the City's well-being and said the plans of the ULI is fiction for this area.
- **Alice Kester (citizen of the City of Georgetown)** said she feels the rezoning of the property is in the best interest of the city.
- **John Kester (citizen of the City of Georgetown)** is in favor of the rezoning of the steel mill, because of the air quality and all the damages caused to the homes and trees in the city.
- **Charles Smith (citizen of the City of Georgetown)** is in opposition of the rezoning and the text amendment. This text amendment prevents any type of manufacturing companies from coming into the city.
- **Tupelo Humes (citizen of the City of Georgetown)** is a steel mill worker and in favor of the reopening of the mill because of the opportunities that will be given to the citizens to make a living. Mr. Humes said if someone has come forward to reopen the mill the rezoning should be put aside. Mr. Humes said he feels the rezoning is a personal agenda for some of the members of City Council.
- **Pete Olmstead (citizen of the City of Georgetown)** is in favor of the rezoning of the steel mill property.
- **Ryan Gibson (citizen of the City of Georgetown)** does not feel that the rezoning would prohibit the operation of the mill, and is in favor of the rezoning.
- **Ms. Lucas (citizen of the City of Georgetown)** is not in favor of the rezoning and would like to see the mill reopened.

III. Regular Meeting

Motion to close Public Hearing and enter into regular meeting; Motion made by Mr. Moore and seconded by Mr. Jones.

IV. Public Input: None

V. Minutes: The minutes for March 28, 2017; Mr. Chris Moore made a motion to approve the minutes as written, seconded by Mr. Bernard Jones; the motion carried unanimously.

VI. Commission Considerations:

- 1. Review and recommend a text amendment to the City of Georgetown Zoning Ordinance to add the proposed zoning district, Article XXI, Redevelopment District (REDD), and supplemental amendments to Article V Section 514, Article XIII Section 1301, and Article XV Section 1504.**

- 2. Recommend for adoption a rezoning of the following parcels:**

05-0025-059-03-00	05-0028-023-00-00	05-0028-024-01-01
05-0026A-001-00-00	05-0028-023-01-00	05-0028-024-02-00
05-0026A-002-00-00	05-0028-023-01-00	05-0028-024-03-00
05-0026A-004-00-00	05-0028-023-01-00	05-0028-025-00-00
05-0026A-005-00-00	05-0028-023-02-00	05-0028-022-00-00
05-0028-022-00-00	05-0028-024-00-00	05-0028-024-00-00
05-0028-022-01-00	05-0028-024-01-00	

From Limited Industrial (LI), Heavy Industrial (HI), & Core Commercial (CC) to Base Redevelopment District (REDD-B) (see attached LUM-6 for detailed location); and furthermore amend the Official Zoning Map of the City of Georgetown.

Staff Input: Matt Millwood told the Commissioners that he did not have a power point, however he had included all pertinent information in their packets. All notices were sent out to the surrounding property owners. The packets also included the current zoning map and the proposed zoning map. Mr. Millwood also explained why the Planning Commission is hearing this case tonight; stating that the Planning Commission's bylaws found in the City's Code of Ordinances requires a Public Hearing for all amendments to the zoning ordinance and maps to come before the Planning Commission. City Council voted on a resolution on March 16, 2017 which was a directive from the Council and Mayor to this Commission to review and make a recommendation on the text amendment and rezoning.

Mr. Pieterse/Board Chair asked if the County owned any of the property listed on the map. **Matt Millwood/City Staff** said no the County is not listed as owning any property on the map.

Motion: Mr. Gerald Williams made a motion to disapprove the proposal for rezoning the property to the new Redevelopment District (REDD) zone and that the City makes all the necessary speed to work with the Liberty Group to help them reopen the steel mill to allow jobs and benefit the City of Georgetown.

Seconded: Ms. Brittany Johnson seconded the motion, the motion carried 4 to 3 by a roll call vote.

VII. Information for Board

Updates from staff on the West End Redevelopment Sub-Committee meeting that was held on Monday, April 24, 2017 at 6 pm.

Matt Millwood/City Staff said the meeting was held at the Mitney building and the discussion was on trash pickup, mobile homes, housing & zoning elements, and the Economic Development Director, Ms. Gloria Tinubu gave the future and current goals of the committee.

Ms. Brittany Johnson also mention the discussion of properties that are too small for development.

VIII. Executive Session

- a. Motion to adjourn the regular April meeting of the Planning Commission and enter Executive Session pursuant to SC Code Sections 30-4-70 (a) (2) and (5) to discuss and receive legal advice on matters related to zoning, covered by attorney-client privilege, concerning agenda items VI, 1-2. **Motion was made by Mr. Chris Moore, seconded by Mr. Bernard Jones.**
- b. Motion at adjourn Executive Session and reconvene the regular meeting of the Planning Commission.

No formal action was taken in Executive Session.

After reconvening from Executive Session, **Mr. Gerald Williams made a motion to disapprove the proposed text amendment to the City of Georgetown Zoning Ordinance, seconded by Mr. Bernard Jones; the motion carried 4 to 3 by roll call vote.** This extra motion was recommended by the City Attorney to make sure both items for consideration on the agenda were voted on.

IX. Adjournment: With there being no further business the meeting was adjourned.

Submitted By,

Debra Grant

Board Secretary



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2290 B

Council Meeting Date:	21 September 2017
Department:	Housing and Community Development
Issue Under Consideration:	Motion to approve an ordinance rezoning twenty (20) parcels from Heavy Industrial (HI), Limited Industrial (LI), and Core Commercial (CC) to Base Redevelopment District (REDD-B); and furthermore amend the Official Zoning Map of the City of Georgetown.
Amount Requested:	N/A
Is Item in Current Budget?	N/A
If no, please explain:	N/A
Financial Impact:	N/A
Points to Consider:	• This proposed ordinance is to rezone the property in the "steel mill" area from Heavy Industrial (HI), Limited Industrial (LI), and Core Commercial (CC) to Base Redevelopment District (REDD-B). • This rezoning coincided with the proposed text amendment to add Article XXI, Redevelopment District (REDD), to the Zoning Ordinance of the City of Georgetown. • This proposed rezoning will make the area Mixed-Use for future development (see attached LUM-6).
Options:	Approve or deny first reading of this rezoning ordinance.
Staff Recommendation:	Staff recommends approving this rezoning.

Reviews:

Rick Martin	Completed	05/09/2017 1:44 PM
Paul Gardner	Completed	05/09/2017 2:40 PM
Debra Bivens	Completed	08/08/2017 5:34 PM
Ann U. Mercer	Completed	08/11/2017 1:48 PM
Georgetown City Council	Pending	09/21/2017 5:30 PM

Attachments:

1. 1 REDD Rezoning Ord (PDF)
2. 2 LUM_6 (PDF)
3. 3 Current Zoning Map (PDF)
4. 4 Proposed Zoning Map (PDF)

**MOTION TO APPROVE AN ORDINANCE REZONING TWENTY (20) PARCELS FROM
HEAVY INDUSTRIAL (HI), LIMITED INDUSTRIAL (LI), AND CORE COMMERCIAL (CC) TO
BASE REDEVELOPMENT DISTRICT (REDD-B); AND FURTHERMORE AMEND THE
OFFICIAL ZONING MAP OF THE CITY OF GEORGETOWN.**

AN ORDINANCE REZONING THE FOLLOWING TWENTY (20) PARCELS FROM LIMITED INDUSTRIAL (LI), HEAVY INDUSTRIAL (HI), & CORE COMMERCIAL (CC) TO BASE REDEVELOPMENT DISTRICT (REDD-B) (see attached LUM-6); AND FURTHERMORE AMEND THE OFFICIAL ZONING MAP OF THE CITY OF GEORGETOWN

05-0025-059-03-00	05-0028-023-00-00	05-0028-024-01-01
05-0026A-001-00-00	05-0028-023-01-00	05-0028-024-02-00
05-0026A-002-00-00	05-0028-023-01-00	05-0028-024-03-00
05-0026A-004-00-00	05-0028-023-01-00	05-0028-025-00-00
05-0026A-005-00-00	05-0028-023-02-00	05-0028-022-00-00
05-0028-022-00-00	05-0028-024-00-00	05-0028-024-00-00
05-0028-022-01-00	05-0028-024-01-00	

WHEREAS, pursuant to Title 6, Chapter 29 of the Code of Laws of South Carolina, the City of Georgetown enacted the Zoning Ordinance of the City of Georgetown, South Carolina; and

WHEREAS, Article XVIII, Section 1800 of the Zoning Ordinance of the City of Georgetown provides that the Zoning Ordinance may be amended from time to time by the Mayor and City Council; and

WHEREAS, on March 16, 2017, the City Council of the City of Georgetown resolved to consider rezoning the above-reference parcels; and

WHEREAS, the City Council of the City of Georgetown incorporates herein its findings from the March 16, 2017 Resolution above-referenced; and

WHEREAS, the Planning Commission of the City of Georgetown, South Carolina held a public hearing April 25, 2017, to receive public input regarding the rezoning request; and

WHEREAS, following the public hearing the Planning Commission voted 4-3 to recommend denial of the rezoning request; and

WHEREAS, the City Council of the City of Georgetown recognizes the importance to the city of the locations proposed for rezoning, sited at Georgetown's southern gateway, between the US Highway 17 and the Sampit River; and

WHEREAS, the Mayor and City Council of the City of Georgetown have determined it is in the best interests of the future economic vitality and public health, safety, and welfare of the city that the requested zoning boundaries as shown on the Official Zoning Map be revised and amended as follows:

Rezoning of the aforementioned twenty (20) parcels from Limited Industrial (LI), Heavy Industrial (HI), & Core Commercial (CC) to Base Redevelopment District (REDD-B).

For a specific description of said properties, please see attached map (LUM-6).

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Georgetown, in Council duly assembled, that the Official Zoning Map of the City

of Georgetown be amended by revising and amending the zoning boundaries of the Official Zoning Map, together with all explanatory matter herein as follows:

Rezoning of the aforementioned twenty (20) parcels from Limited Industrial (LI), Heavy Industrial (HI), & Core Commercial (CC) to Base Redevelopment District (REDD-B), see map (LUM-6).

BE IT FURTHER ORDAINED, that such changes shall be made on the Official Zoning Map. All ordinances or parts of ordinances inconsistent with this Ordinance are hereby repealed to the extent of such inconsistency.

ATTEST:

Ann U. Mercer, City Clerk

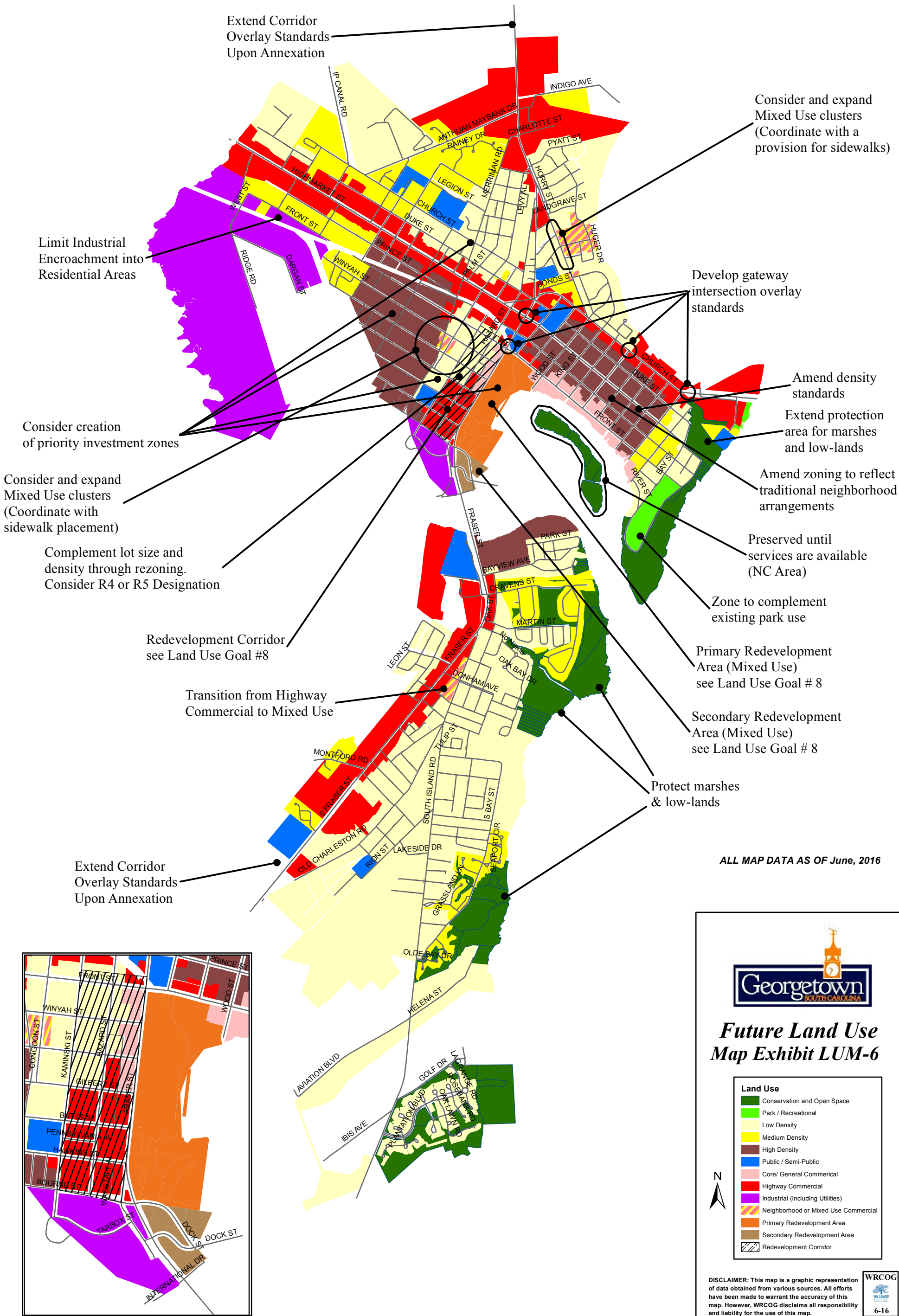
Jack M. Scoville, Jr., Mayor

First Reading: _____

Approved as to Form:

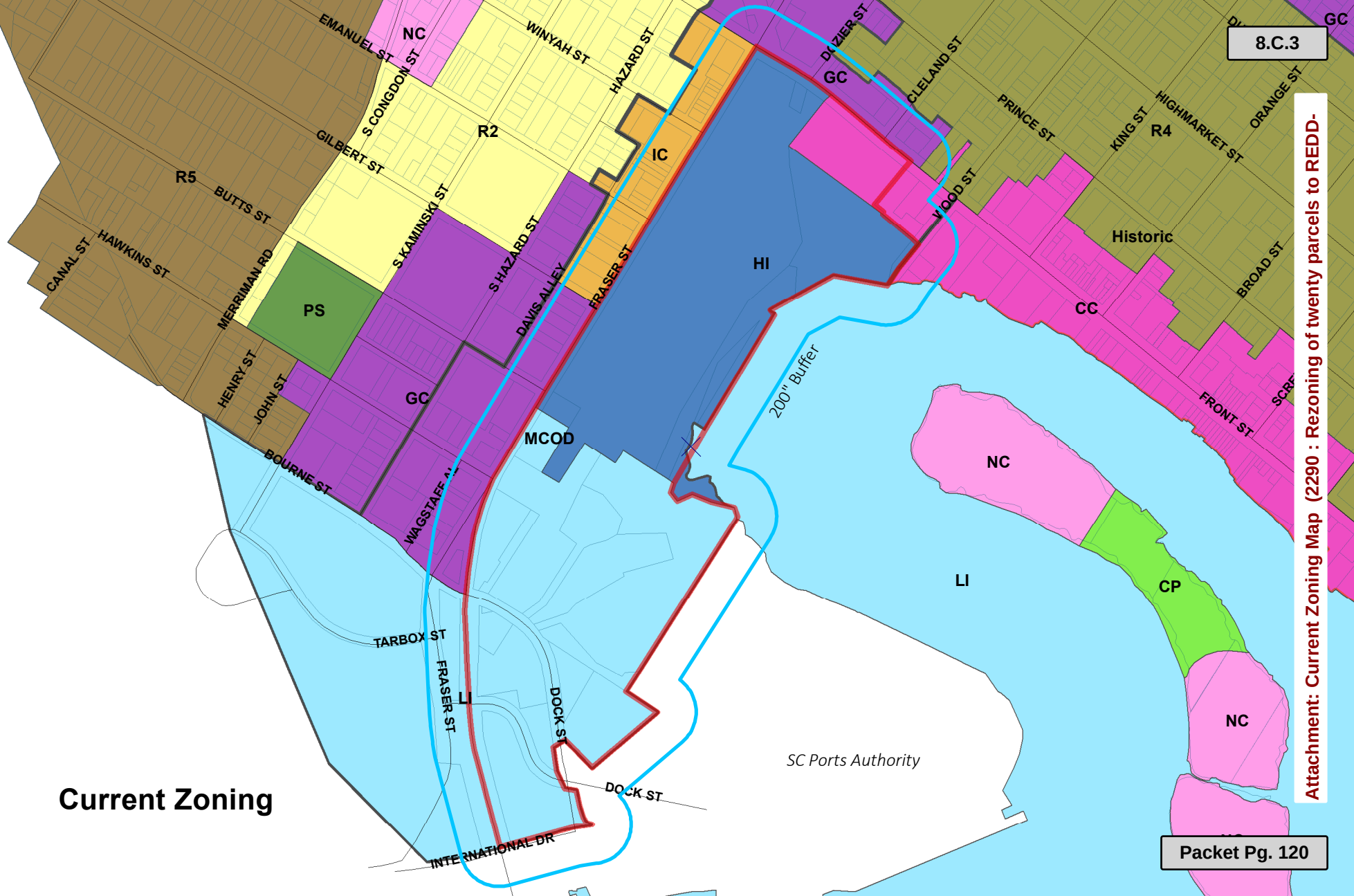
Second Reading: _____

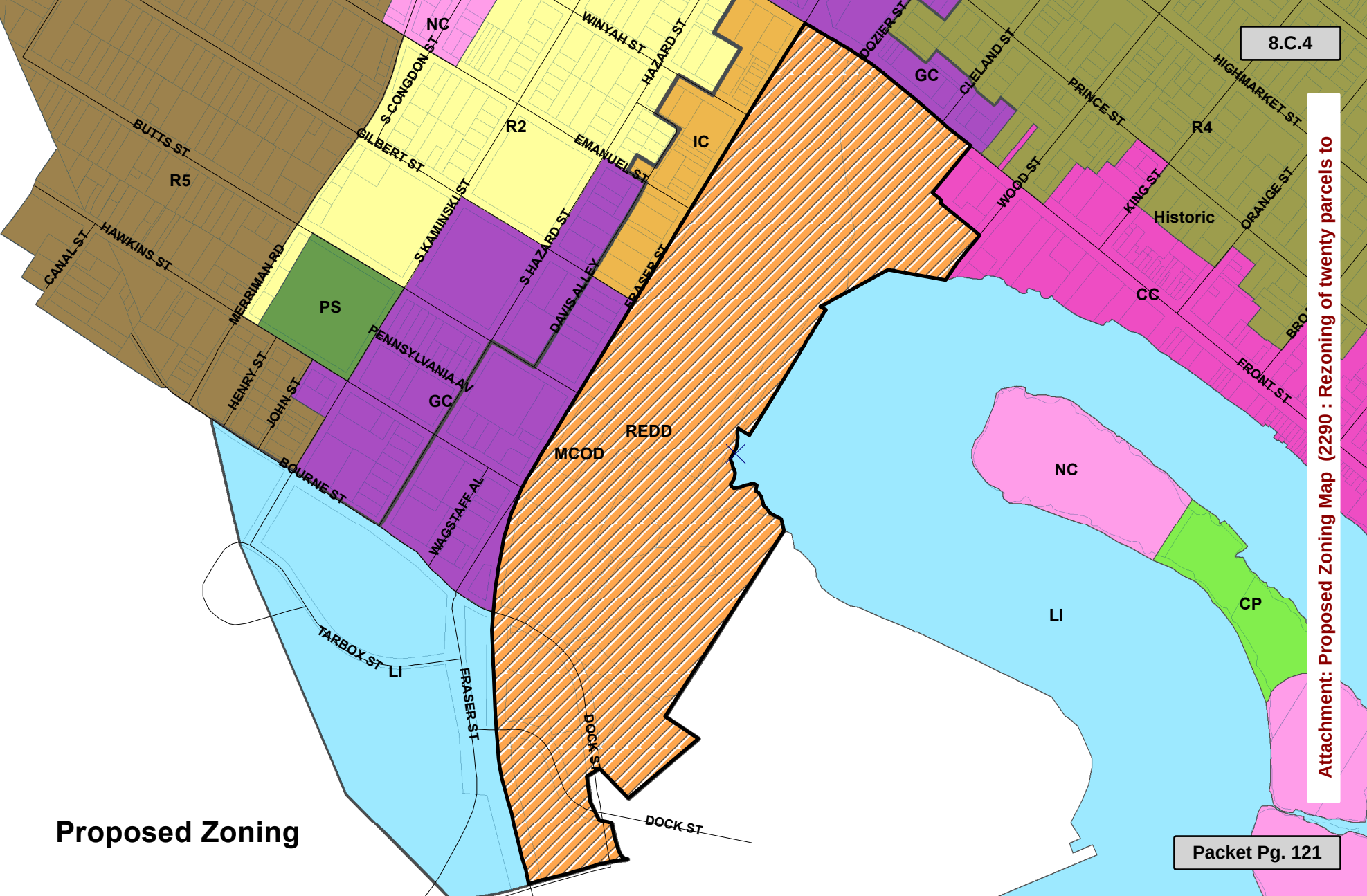
Elise F. Crosby, City Attorney



Attachment: LUM_6 (2290 : Rezoning of twenty parcels to REDD-B and amend zoning map)

Current Zoning





8.C.4

Attachment: Proposed Zoning Map (2290 : Rezoning of twenty parcels to

Proposed Zoning

Packet Pg. 121



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2248

Council Meeting Date:	21 September 2017
Department:	Housing and Community Development
Issue Under Consideration:	Motion to approve an ordinance amending the City of Georgetown Zoning Ordinance to add Article IV, Section 442 Outdoor Open Displays
Amount Requested:	N/A
Is Item in Current Budget?	N/A
If no, please explain:	N/A
Financial Impact:	N/A
Points to Consider:	• This ordinance will be enforced city-wide to reduce the amount of merchandise that businesses may display or store outside their business. • The intent is to clean up the visible store-fronts along the main commercial corridors throughout the City of Georgetown. • Planning Commission met on February 28, 2017 and unanimously recommended this ordinance with a 6-0 vote.
Options:	Approve or deny first reading of the Outdoor Open Display ordinance.
Staff Recommendation:	Staff recommends approving this ordinance.

Reviews:

Rick Martin Completed 08/07/2017 12:29 PM
 City Attorney Completed 08/07/2017 6:04 PM
 Paul Gardner Skipped 08/07/2017 12:27 PM
 Paul is out this month.
 Debra Bivens Completed 08/08/2017 5:18 PM
 Ann U. Mercer Completed 08/09/2017 8:50 AM
 Georgetown City Council Completed 08/17/2017 5:30 PM

Attachments:

Updated: 8/7/2017 12:29 PM by Rick Martin

Page 1

1. 1 Outdoor Open Display Ord Final (PDF)
2. 2 Highlighted Minutes from 2_28_17 (PDF)

**MOTION TO APPROVE AN ORDINANCE AMENDING THE CITY OF GEORGETOWN
ZONING ORDINANCE TO ADD ARTICLE IV, SECTION 442 OUTDOOR OPEN DISPLAYS**

**AN ORDINANCE AMENDING THE CITY OF GEORGETOWN ZONING ORDINANCE
ARTICLE IV, SECTION 442, OUTDOOR OPEN DISPLAY**

WHEREAS, pursuant to Title 6, Chapter 29 of the Code of Laws of South Carolina, the City of Georgetown enacted the Zoning Ordinance of the City of Georgetown, South Carolina; and

WHEREAS, Article XVIII, Section 1800 of the Zoning Ordinance of the City of Georgetown provides that the Zoning Ordinance may be amended from time to time by the Mayor and City Council; and

WHEREAS, the Planning Commission of the City of Georgetown, South Carolina held a public hearing regarding the proposed amendment to Article IV, Section 442 Outdoor Open Display; and

WHEREAS, following the public hearing on February 28, 2017 and the unanimous 6-0 vote by Planning Commission in favor of amending the Zoning Ordinance to change the text for Section 442, Outdoor Open Display, the Mayor and City Council of the City of Georgetown feel it is in the best interest of the City of Georgetown to amend the Zoning Ordinance.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and City Council of the City of Georgetown, South Carolina that Article IV, Section 442 of the City of Georgetown Zoning Ordinance be amended as follows:

442. Outdoor Open Display

442.1 In all districts, no merchandise for sale, rent, or display shall be located outside of an enclosed building except in conformance with this section.

442.2 Permanent and Routine Displays.

- a) General Commercial (GC) & Planned Development (PD). The following open displays are permitted in the GC & commercial PD districts, without restriction on the duration or frequency of display: Newspaper containers, vending machines, ATM, automobiles, motorcycles, golf carts, and similar motorized vehicles, bicycles, motor homes, travel trailers, boats, propane bottle exchange cages, nursery, horticulture and agricultural products, and electrically refrigerated bagged ice machines. All other displays not mentioned shall be at the discretion of the Zoning Administrator.
- b) Intermediate Commercial (IC) and Limited Industrial (LI). The following open displays are permitted in the IC & LI districts, without restriction on the duration or frequency of display: Newspaper containers, vending machines, ATM, automobiles, motorcycles, golf carts, and similar motorized vehicles, boats, bicycles, propane bottle exchange cages, horticulture and agricultural products and electrically refrigerated block and bagged ice machines.
- c) Neighborhood Commercial (NC). The following open displays are permitted in the NC district, without restriction on the duration or frequency of display: Newspaper containers, vending machines, ATM, and electrically refrigerated bagged ice machines.
- d) Core Commercial (CC), , & Public Services (PS). The following open displays are permitted in the CC & PS districts, without restriction on the duration or frequency of display: Newspaper and mail containers and vending machines. Displays in the CC district shall obtain an encroachment permit from the Zoning Administrator as pertains to city code Chapter 20-7.

- e) The merchandise or rentals permitted in parts (a-d) above may be displayed only by the owner of the principal business within the property's boundary and up against the primary structure. No permanent or routine display shall extend over any sidewalk, exception in CC district with an encroachment permit, or be placed in a manner as to block or impede vehicular or pedestrian ingress or egress to a site, or obstruct any parking space required by Article XI.
- f) For large retail stores of 30,000 sq. ft. or more, outdoor displays may be located forward of the principle structure and shall meet the following:
 - Setback requirements of the zoning district (Art. VIII);
 - Fence or landscape buffer that meets the regulations of Article XIII (Overlay District); and
 - A site plan shall be approved by the Zoning Administrator
- g) The use of a tent in conjunction with a permanent or temporary display is subject to the limitations imposed by Sec. 442.4.

442.3 Temporary Displays.

- a) Temporary outdoor displays are permitted for the following purposes:
 1. Religious meetings on church property or in nonresidential districts (GC, CC, NC, IC, LI, PS, & PD);
 2. Fund-raising events for local nonprofit organizations, only in nonresidential districts (GC, CC, NC, IC, LI, PS, & PD); and
 3. Special sales promotion events for local businesses licensed in the city and shall be approved by the Zoning Administrator.
- b) Temporary outdoor displays, as provided in Sec. 442.3 (a), shall require the issuance of a Special Event Permit, Business License or Peddlers License depending on the type and size of temporary outdoor display. Each permit/license shall warrant an outdoor display for no more than three (3) consecutive days. No more than five (5) permits or licenses authorizing such displays shall be issued per lot within a calendar year.
- c) Notwithstanding the limitations imposed by Sec. 442.3 (b), on lots containing three or more businesses, where each business has a separate principal entrance, each business may utilize the provisions of this ordinance. Each permit/license shall authorize no more than three (3) consecutive days of temporary outdoor display. No more than five (5) permits or licenses authorizing such displays shall be issued per lot within a calendar year (15 days maximum).
- d) Temporary outdoor displays as authorized by this section shall be under a tent and/or within ten (10) feet of the store front. The outdoor displays described above may be displayed only by the owner of the principal business within the property's boundary. No outdoor display shall impede vehicular or pedestrian ingress/egress into a site or building, nor shall any temporary outdoor display obstruct special use parking space(s) (handicap, loading zones, etc.) as required by Article XI.

442.4 Tents. Tents used in conjunction with temporary displays are authorized by this section subject to the following limitations:

- a) Except in the CC district, a tent shall not be placed closer than twenty (20) feet from any right-of-way or ten (10) feet from any side or rear property line. Tents larger than two hundred (200) square feet shall observe the setback requirements applicable to the zoning district in which the tent is located.
- b) The placement of a tent requires the issuance of a Special Event Permit or Peddlers License depending on the type and size of display. Each permit/license shall warrant a tent for no more than three (3) consecutive days. No more than five (5) permits or licenses authorizing such displays shall be issued per lot within a calendar year (15 days maximum). In the case of a temporary outdoor display, the business license authorizing the placement of a tent is to be issued concurrently with the special event permit or peddlers license.
- c) Notwithstanding the limitations imposed by Sec. 442.4 (b), on lots containing three or more businesses, where each business has a separate principal entrance, each

business my utilize the provisions of this ordinance. Each permit/license shall authorize no more than three (3) consecutive days of temporary outdoor display. No more than five (5) permits or licenses authorizing such displays shall be issued per lot within a calendar year (15 days maximum).

Article II, Sec. 13-16 License required.

Every person engaged or intending to engage in any calling, business, occupation or profession listed in the rate classification index portion of the article in whole or in part, within the limits of the city, is required to pay an annual license fee and obtain a business license as provided in this article. (Ord. of 3-9-98)

ATTEST:

Ann U. Mercer, City Clerk

Jack M. Scoville, Jr., Mayor

First Reading: _____

Approved as to Form:

Second Reading: _____

Elise F. Crosby, City Attorney

**Planning Commission
Minutes
February 28, 2017**

MEMBERS PRESENT: Winfred Pieterse, Gerald Williams, Bernard Jones, Paul Smith, Chris Moore, & Joan Schmid

MEMBERS ABSENT: Brittany Johnson

OTHERS PRESENT: Matt Millwood & Cindy Thompson

- I. **Call to Order**
- II. **Minutes:** The minutes for January 24, 2017; **Mr. Chris Moore made a motion to approve the minutes as submitted, seconded by Mr. Paul Smith; the motion carried unanimously.**
- III. **Public Hearing: None**
- IV. **Consideration:**
 - 1. **Review and recommend a text amendment request from the City of Georgetown to Article VII, Section 702.2 (Minimum Area of PD) of the City of Georgetown Zoning Ordinance.** Matt Millwood/City Staff told the Board that this agenda item was tabled from last month and is back for a recommendation to the Mayor and Council. The 2011 Comprehensive Plan changed the requirement from a minimum of 5 acres to a minimum of 10 acres; currently if someone wanted to establish a PD (Planned Development) they would have to have 10 continuous acres. Many interested parties feel that requirement is too much. Staff has rewritten it to make it a minimum of 5 contiguous acres of developable land. Developable land shall exclude any wetlands, required open space, drainage ponds, and easements. **Mr. Pieterse** said the reason the Commissioners moved the required acreage to 10 is because too many developers were coming in and trying to put Planned Developments all over. Then these PD's were never completed. **Matt** said this new ordinance will make the property owners have at least 5 contiguous acres of developable land, and would give more opportunity for developers to come in the area, **Matt** said. **Ms. Joan Schmid** said she has done more research on the request and found that there is no magic number for the amount of acres. It just depends on how much time the City wants to put into developments and all the elements that a PD requires.

Public Input: None

Motion: **Mr. Paul Smith made a recommendation to approve the minimum of 5 contiguous acres of developable land that shall exclude any wetlands, required open space, drainage ponds, and easements, seconded by Ms. Joan Schmid; the motion carried 5 to 1 by a roll call vote. (Mr. Pieterse cast the descending vote)**

- 2. **Review and recommend an ordinance on Short Term Vacation Rentals.** **Matt Millwood/City Staff** told the Board that lately there has been an influx of online advertisement for VRBO, AirBnB, and others that rent out people's homes for short term (6 months or less). We feel this is a commercial business and the owners should be required to have a business license. We have looked at many other municipalities for ideas to put together an ordinance. The City has many complaints from neighbors that experience the late night noise from short-term renters that have weddings and parties. The finance

department has been notified and they too feel that there does need to be an ordinance in place for this. The city is not trying to stop home rentals, however there needs to be something in the ordinance to regulate these short-term rentals. **Mr. Gerald Williams** asked if there was a large percentage of houses being used for rentals. **Matt** said there are just about 4 or 5 houses being advertised on the internet at this time, but we would like to get ahead of the short-term rental "boom" so that it will not become a problem in the future. **Mr. Williams** asked if the City is receiving complaints. **Matt** said yes complaints have come in especially during the wedding season. The City wants to allow this but also wants to regulate it. **Ms. Joan Schmid** asked what zone this would be allowed in. **Matt** said it would be allowed in all residential zones. **Ms. Schmid** also asked why this couldn't fall under the Bed and Breakfast ordinance or some other ordinance that is already in place like home occupation. **Matt** said the definition of the home occupation is more of an office type business. **Ms. Schmid** agreed but said the Bed and Breakfast are required to be approximately 3-9 bedrooms, has to pay accommodation and hospitality taxes, and the owner must live on the property. **Matt** said the difference with the Short-Term Rentals is that there is no one living on the property to manage it. **Ms. Schmid** said instead of allowing the Short Term Rental we should use the Bed and Breakfast after changing a few requirements to beef it up. **Ms. Schmid** said the City may want to look at the State Law for some language for the Bed and Breakfast. **Matt** said he appreciated the input but from all his research the Short Term Rentals and the Bed and Breakfast are very different and it would be hard combining it with the Bed and Breakfast because of their difference by definition. **Mr. Pieterse** asked what the City's stance was on this. **Matt** said the City wants to allow it and require them to get a business license and have a vacation rental agent that can be notified. The new ordinance would also allow the City to issue violations if needed. The Short-Term Vacation Rental Occupants shall not exceed thirty (30) consecutive days, and all applications must go through the Zoning and the Finance departments. **Ms. Schmid** said **439.4 (c)** should state that the owner must abide by the 2015 International Property Maintenance Code, which was put in the newly proposed ordinance. The person renting the property must be told by the owner the codes that must be followed. This should be discussed when the business license is issued. She also recommend that proof of insurance be required. In **539.7 (b)**, **Ms. Schmid** also recommended that it state "Short-term vacation rental units ~~must~~ shall be properly maintained and regularly inspected by the owner to ensure continued compliance with applicable zoning, building, health and safety code provisions." She also recommended that the number of occupants and parking spaces be listed on the business license for verification of the authorities when and if they are called. The other Board members and Staff agreed that this particular recommendation from **Ms. Schmid** would be hard to enforce. **Ms. Schmid** said **539.8** should be corrected to say "...the city shall revoke any pending certificates and shall reject and suspend all applications for the subject premises for a period of twelve (12) consecutive months.

Public Input: None

Motion: Mr. Chris Moore made a recommendation to move forward with the request including the corrections discussed, seconded by Ms. Schmid; the motion carried 6 to 0 by a roll call vote.

3. **Review and recommend an ordinance on Outside Open Displays.** **Matt Millwood/City Staff** told the Board that this ordinance was done similar to Surfside Beach's ordinance to help

with outdoor clutter and open displays, with businesses along the main corridor. We do have businesses such as Wal-Mart and Tractor Supply that have outdoor merchandise, however they are in an enclosed area. This new ordinance is to keep other businesses from putting a lot of merchandise outside in an open environment, especially along the main corridor. **Mr. Pieterse** asked if there was something already in place for Front Street. **Matt** said because the City owns the right of way on Front Street we do issue encroachment permits, sandwich board sign permits, and others just for that district (Core Commercial). The main issues are in the General Commercial and Planned Development which pretty much allow anything right now, and this new ordinance will help clean this up. **Mr. Chris Moore** asked about businesses, such as trailer sales and produce stands, that have outside displays on property other than their main business. **Matt** said that there are parcels that are zoned for retail sale and the City can issue a license for that use. **Ms. Joan Schmid** questioned **440.3 (d)** "No outdoor display shall impede vehicular or pedestrian ingress/egress into a site or building, nor shall any temporary outdoor display obstruct a parking space (s) as required by Article XI." **Matt** said if an owner does not have enough property to comply with the outdoor display ordinance, then they will not be able to display their items outside. **Ms. Schmid** also asked about **440.4 Tents**; she asked if a permit is required. **Matt** said yes a "special event" or "peddler's" license is required. **Ms. Schmid** said she is worried about the danger of tents with strong winds, and that maybe they shouldn't be allowed during hurricane season. **Mr. Gerald Williams** asked if anything is in place to keep items from being too close to the road. **Matt** said yes, no outdoor display can be less than 20 ft. from the road with this new ordinance.

Public Input: None

Motion: Mr. Gerald Williams made a motion to proceed with the request for an ordinance on Outside Open Displays, seconded by Mr. Bernard Jones; the motion carried 6 to 0 by a roll call vote.

V. Board Discussion:

1. **Discuss an upcoming zoning district called the Redevelopment District (REDD), proposed for the Steel Mill redevelopment area site.** **Matt/City Staff** told the Board that this has been postponed until he can get the legal aspects and some directives from the City Council, it will be ready for discussion at a later date.
2. **Updates from Board Chair on the West End Redevelopment Sub-Committee meeting that was held on Saturday, February 11, 2017.** **Matt** said he felt the meeting was very calm and went well. There was about 10 residents that attended. The City's new Director of Economic Developer was introduced, Ms. Gloria Bromell Tinubu, who is very experienced in the field of Economic Development and in heirs property. **Mr. Pieterse**, spoke of Ms. Tinubu and all her experience. **Mr. Pieterse** also mentioned the things that were discussed for future development for the West End and said the most important question is how to start. **Mr. Pieterse** said he was disappointed in the turnout for the meeting. **Mr. Chris Moore** said that the City needs to reach out to other Cities and felt the most important issue is the heir's property. **Councilman Sheldon Butts** said that Council has begun a check list to make sure everything is taken care of. The streetscape and lighting was on that list and by following the check list it will prevent anything from being missed. **Mr. Bernard Jones** asked when the next meeting will be held. **Councilman Butts** said the date of the next meeting has not been determined, however he can assure him that it will not take place on a Saturday.

3. **Updates from staff to the 2016-2017 Comprehensive Plan.** Matt told the Board that the next sub-committee meeting for the Comp. Plan will be Monday, March 13 at noon to discuss the Cultural Resources and Housing Element.

Chris Moore said he received a call that talked about the grant that is coming to update the Historic Guidelines. He said this may help with the redevelopment of the West End, because they will cover homes outside the Historic District.

VI. **Board Elections:**

Chairman:

Nomination 1: Mr. Chris Moore nominated Mr. Winfred Pieterse, seconded by Mr. Bernard Jones. With there being no other nominations, **Mr. Pieterse will remain the Board Chair for 2017-2018.**

Vice-Chair:

Nomination 1: Mr. Pieterse nominated Bernard Jones, (there was not a second); Mr. Jones said he is still attending school at this time.

Nomination 2: Mr. Bernard Jones nominated Chris Moore, seconded by Joan Schmid. Mr. Moore said it will be his pleasure to serve, however he does have his house up for sale and he may no longer be a resident of the City of Georgetown. **Mr. Pieterse** asked if the Board member had to be a resident of the City to serve on the Board. **Matt** said he did not know, but would look into it. **Mr. Chris Moore will serve as Vice-Chair until further notice.**

- VII. **Adjournment:** With there being no further business the meeting was adjourned.

Submitted By,

*Cindy Thompson
Acting Secretary*



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2360

Council Meeting Date:	21 September 2017
Department:	Finance
Issue Under Consideration:	Motion to Approve First Reading of an Ordinance for the Issuance and Sale of a Revenue Bond to be Designated Series 2017 for Electric Fund Improvements, in an Amount not to Exceed \$6,000,000.
Amount Requested:	\$6,000,000 – Not to Exceed Amount
Is Item in Current Budget?	Debt service payment is budgeted.
If no, please explain:	
Financial Impact:	The debt service payment will be funded with a portion of the revenues from the Peak Shaving Project savings.
Points to Consider:	Bond Proceeds will be used to Fund the Peak Shaving Project and the Front Street Electric Underground Upgrade.
Options:	Approve or Disapprove.
Staff Recommendations:	Approve.

Reviews:

Debra Bivens Completed 08/08/2017 7:13 PM

Elise Crosby Completed 08/09/2017 10:25 AM

Ann U. Mercer Completed 08/09/2017 10:39 AM

Paul Gardner Skipped 08/08/2017 7:14 PM

Staff Change

Georgetown City Council Completed 08/17/2017 5:30 PM

Attachments:

1. 1 2017 Series OrdinanceX revised (PDF)

MOTION TO APPROVE FIRST READING OF AN ORDINANCE FOR THE ISSUANCE AND SALE OF A REVENUE BOND TO BE DESIGNATED SERIES 2017 FOR ELECTRIC FUND IMPROVEMENTS, IN AN AMOUNT NOT TO EXCEED \$6,000,000.

**AN ORDINANCE
PROVIDING FOR THE ISSUANCE AND SALE OF COMBINED PUBLIC UTILITY
SYSTEM IMPROVEMENT REVENUE BONDS TO BE DESIGNATED SERIES 2017, IN
THE PRINCIPAL AMOUNT OF NOT EXCEEDING SIX MILLION DOLLARS
(\$6,000,000) OF THE CITY OF GEORGETOWN, SOUTH CAROLINA; AND OTHER
MATTERS RELATING THERETO.**

2017 SERIES ORDINANCE

DATED: SEPTEMBER 21, 2017

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BE IT ORDAINED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF GEORGETOWN, IN A MEETING DULY ASSEMBLED:

ARTICLE I - FINDINGS OF FACT

Section 1.01. Findings.

Incident to the enactment of this 2017 Series Ordinance (this “**Series Ordinance**”), and the issuance of the bonds provided for herein, the City Council of the City of Georgetown (the “**City Council**”), the governing body of the City of Georgetown, South Carolina (the “**City**”), finds that the facts set forth in this Article exist and the following statements are in all respects true and correct:

(a) The City has made general provision for the issuance from time to time of Combined Public Utility System Revenue Bonds (the “**Bonds**”) of the City through the enactment of an ordinance, entitled “AN ORDINANCE PROVIDING FOR THE RESTRUCTURING OF THE WATER AND SEWER SYSTEM TO CREATE THE COMBINED PUBLIC UTILITY SYSTEM OF THE CITY OF GEORGETOWN, SOUTH CAROLINA; AUTHORIZING THE ISSUANCE AND SALE OF COMBINED PUBLIC UTILITY SYSTEM REVENUE BONDS OF THE CITY OF GEORGETOWN, SOUTH CAROLINA; AND OTHER MATTERS RELATING THERETO” enacted by the City Council on July 28, 2011, as amended on August 20, 2015 (as amended, the “**Master Bond Ordinance**”). All capitalized terms used herein and not otherwise defined shall have the meaning ascribed thereto in the Master Bond Ordinance.

(b) It is provided in and by the Master Bond Ordinance that, upon enactment of a “Series Ordinance,” there may be issued one or more series of Bonds for the purpose of, among other things: (1) obtaining funds for expansions, additions and improvements to the combined public utility system of the City (the “**System**”), including the recoupment of funds already so expended; (2) providing funds for the payment of any bond anticipation notes; (3) refunding Bonds or other obligations; (4) providing funds for the payment of interest due on any Bonds; (5) funding a Debt Service Reserve Fund, if any, in an amount equal to the Reserve Requirement; and (6) paying the costs of issuance of Bonds, including any credit enhancement therefor.

(c) Pursuant to the provisions of the Master Bond Ordinance, the City Council previously issued the following Series of Bonds, each of which were issued on parity and are currently Outstanding (the “**Outstanding Bonds**”):

(i) \$437,398 Combined Public Utility System Improvement Revenue Bond, Series 2013A (South Carolina Water Pollution Control Revolving Loan Fund, Loan Number X1-156-13-412-13), dated September 20, 2013;

(ii) \$1,192,601 Combined Public Utility System Improvement Revenue Bond, Series 2013B (South Carolina Drinking Water Revolving Loan Fund, Loan Number X3-056-13-2210001-02), dated September 20, 2013;

(iii) \$5,845,000 Combined Public Utility System Improvement and Refunding Revenue Bonds, Series 2015A, dated November 23, 2015; and

(iv) \$5,772,000 Combined Public Utility System Refunding Revenue Bond, Series 2015B, dated November 23, 2015.

(d) Based upon advice received from the City staff and professional consultants, the City Council has concluded that certain improvements to the System are necessary and convenient to accommodate growth in the City and to promote the general welfare of its citizens, including certain electric system improvements, including all items necessary to design, implement, construct and equip the City's planned peak shaving power generation facility and other related improvements (collectively, the "**Project**").

(e) On the basis of the authority provided in the Master Bond Ordinance, the City has determined to issue a commercial loan to be evidenced by its Series 2017 Bond (as defined herein), in one or more Series, in order to: (1) provide funds to defray the costs of the Project, (2) fund the 2017 Debt Service Reserve Fund, if required, and (3) to pay the costs of issuance of the Series 2017 Bond.

(f) By reason of the foregoing, the City has determined to enact this Series Ordinance as a "Series Ordinance" in accordance with the terms and provisions of the Master Bond Ordinance in order to effect the issuance of the Series 2017 Bond.

[End of Article I]

ARTICLE II - DEFINITIONS AND AUTHORITY

Section 2.01. Definitions.

(a) Except as provided in subsection (b) below, all terms defined in Section 2.02 of the Master Bond Ordinance shall have the same meanings in this Series Ordinance as such terms are prescribed to have in the Master Bond Ordinance.

(b) As used in this Series Ordinance, unless the context shall otherwise require, the following terms shall have the following respective meanings:

“2017 Construction Fund” shall mean the fund established in accordance with Section 4.01(B)(17) of the Master Bond Ordinance for the purposes set forth in Section 6.01 hereof.

“2017 Debt Service Fund” shall mean the fund established to provide for the payment of the principal of and interest on the Series 2017 Bond, all in accordance with the provisions of Section 7.03 of the Master Bond Ordinance.

“2017 Debt Service Reserve Fund” shall mean the fund, if any, established for the Series 2017 Bond.

“2017 Reserve Requirement” shall mean the debt service reserve requirement, if any, established for the Series 2017 Bond pursuant to Section 4.05(b) hereof.

“City Administrator” shall mean the City Administrator of the City.

“Code” shall mean the Internal Revenue Code of 1986, as amended.

“Holder” shall mean the respective registered owner of the Series 2017 Bond.

“Purchaser” means a banking institution that may purchase the Series 2017 Bond.

“Series Ordinance” shall mean this 2017 Series Ordinance.

“Trustee” shall mean Regions Bank, its successors and assigns.

Section 2.02. Authority for this Series Ordinance.

This Series Ordinance is enacted pursuant to the provisions of the Master Bond Ordinance.

[End of Article II]

ARTICLE III - PERIOD OF USEFULNESS

Section 3.01. Period of Usefulness.

The period of usefulness of the System is determined to be not less than forty (40) years from the date of enactment of this Series Ordinance.

[End of Article III]

ARTICLE IV - AUTHORIZATION AND TERMS OF THE SERIES 2017 BOND

Section 4.01. Principal Amount; Designation of Series.

(a) Pursuant to the provisions of the Master Bond Ordinance, the City intends to issue a commercial loan in the principal amount of not exceeding Six Million Dollars (\$6,000,000). The loan shall be evidenced by a Series of Bonds entitled “City of Georgetown, South Carolina Combined Public Utility System Improvement Revenue Bond, Series 2017” (the “**Series 2017 Bond**”). The Series 2017 Bond shall bear a series designation as determined by the City Administrator, but in all cases shall include the calendar year of the issuance thereof.

(b) The Series 2017 Bond may be issued as a single Series, or as separate Series of Bonds, from time to time, as determined by the City Administrator; should the City Administrator determine to issue multiple Series of Bonds, the City Administrator shall be further authorized to redesignate such Bond or Bonds with different alphanumeric designations so as to properly distinguish any Bonds to be issued. In the event the Series 2017 Bond is issued in multiple Series, the authorizations applicable to the Series 2017 Bond shall apply equally to any such additional Bonds and the City Administrator shall be empowered to create and authorize any additional funds or use of proceeds as may be necessary to conform to the issuance of such additional Series of Bonds.

(c) One or more Series of the Series 2017 Bonds may be issued on a taxable basis.

(d) The actual principal amount of the Series 2017 Bond shall be determined by the City Administrator.

Section 4.02. Purposes.

The Series 2017 Bond is authorized for the purposes of providing funds (a) to defray the costs of the Project, (b) to fund the 2017 Debt Service Reserve Fund, if required, and (c) to pay the costs of issuance thereof.

Section 4.03. Date of Issue; Interest Rate; Maturity; Redemption.

(a) The Series 2017 Bond shall be issued on the date of its original delivery or such other date prior to the delivery of the Series 2017 Bond as the City Administrator determines (the “**Date of Issue**”). The Series 2017 Bond shall bear interest at a rate to be determined by the City Administrator (calculated on a 360-day year of twelve 30 day months) and shall mature in the respective principal amounts as shall be determined by the City Administrator at the time of original delivery of the Series 2017 Bond; provided that the Series 2017 Bond shall reach final maturity no later than the date which is twenty (20) years from the Date of Issue.

(b) Principal of and interest on the Series 2017 Bond shall be payable in any coin or currency of the United States which at the time of payment is legal tender for the payment of public and private debts. The Series 2017 Bond shall be payable with respect to principal and interest on such date or dates as shall be determined by the City Administrator (the “**Bond Payment Date(s)**”).

(c) The redemption provisions applicable to the Series 2017 Bond shall be established by the City Administrator prior to the Date of Issue.

Section 4.04. Authentication Required.

(a) The Series 2017 Bond shall be authenticated by the Trustee on such date as the same shall be delivered. The Series 2017 Bond shall bear interest from the Date of Issue if no interest has yet been paid, otherwise from the last date to which interest has been paid and which date is on or prior to the date of authentication of the Series 2017 Bond.

(b) The principal of and interest on the Series 2017 Bond shall be paid by check or draft mailed from the office of the Trustee to the person in whose name the Series 2017 Bond is registered at the close of business on the Record Date, and presentment of the Series 2017 Bond for payment shall not be required, except for the final payment of principal and interest thereon; however, the requirement for final presentment may be waived by a mutual written agreement of the City and the Holder.

(c) Any Holder of the Series 2017 Bond may request, prior to the applicable Record Date, that interest payments be made by wire transfers to such Holder at an account specified by such Holder.

Section 4.05. Establishment of 2017 Debt Service Fund and 2017 Debt Service Reserve Fund.

(a) The 2017 Debt Service Fund is hereby directed to be established by the Trustee on the Date of Issue for the benefit of the Holder of the Series 2017 Bond. If the Series 2017 Bond is issued in multiple Series, more than one Debt Service Fund may be established with a distinct and separate designation for each fund associated with the applicable Series.

(b) In the event the Purchaser requires the establishment of the 2017 Debt Service Reserve Fund, the Trustee is hereby directed to establish the 2017 Debt Service Reserve Fund. In such event, the 2017 Debt Service Reserve Fund shall be maintained by the Trustee in accordance with the Master Bond Ordinance in an amount equal to the 2017 Reserve Requirement, which amount shall be established by the City Administrator. If the Series 2017 Bond is issued in multiple Series, the City Administrator may direct the Trustee to establish a Debt Service Reserve Fund for each Series of Bonds and may determine the Reserve Requirement necessary for each such Debt Service Reserve Fund. The Reserve Requirement for all of the Outstanding Bonds, to the extent established, have been met and are satisfied.

Section 4.06. Appointment of Trustee, Registrar and Paying Agent.

(a) Pursuant to the provisions of the Master Bond Ordinance, Regions Bank is hereby reappointed to act as Trustee under the Master Bond Ordinance and appointed to act as Trustee under the provisions of this Series Ordinance.

(b) As long as the Series 2017 Bond remains Outstanding, the City shall maintain a register therefor. Regions Bank, as Trustee, shall also act as Registrar and Paying Agent with respect to the Series 2017 Bond under the Master Bond Ordinance and this Series Ordinance.

(c) On or prior to the delivery of the Series 2017 Bond, the Trustee shall signify its acceptance of the duties of the Trustee, Registrar and Paying Agent under the Master Bond Ordinance and this Series Ordinance.

Section 4.07. Form of Series 2017 Bond; Numbering.

The Series 2017 Bond shall be issued as a physical certificate in registered form. If multiple Series of Bonds are issued, the Bonds shall be numbered from 1 upwards in such fashion as to maintain a proper record thereof. The Series 2017 Bond, together with the Certificate of Authorization and Assignment to appear thereon, is to be in substantially the following form with necessary and appropriate variations, omissions and insertions as permitted or required by the Master Bond Ordinance or this Series Ordinance, to wit:

(FORM OF BOND)

WITH THE CONSENT OF THE PURCHASER, AND NOTWITHSTANDING ANY CONTRARY PROVISION CONTAINED IN THE ORDINANCE, THE SERIES 2017 BOND MAY BE SOLD OR TRANSFERRED ONLY TO PURCHASERS WHO EXECUTE A PURCHASER'S LETTER DELIVERED TO THE CITY, IN FORM SATISFACTORY TO THE CITY, CONTAINING CERTAIN REPRESENTATIONS, WARRANTIES AND COVENANTS AS TO THE SUITABILITY OF SUCH PURCHASERS TO PURCHASE AND HOLD THE SERIES 2017 BOND. SUCH RESTRICTION SHALL BE SET FORTH ON THE FACE OF THE SERIES 2017 BOND AND SHALL BE COMPLIED WITH BY EACH TRANSFEREE OF THE SERIES 2017 BOND.

UNITED STATES OF AMERICA
CITY OF GEORGETOWN, SOUTH CAROLINA
COMBINED PUBLIC UTILITY SYSTEM
IMPROVEMENT REVENUE BOND, SERIES 2017

No. R-1

\$ _____

Registered Holder: _____

CITY OF GEORGETOWN, SOUTH CAROLINA (the "**City**"), acknowledges itself indebted and for value received hereby promises to pay, solely from the sources and as hereinafter provided, to _____ (the "**Bank**"), or its registered assigns, the principal amount of _____ DOLLARS (\$ _____), in the manner provided below, with interest thereon from the date hereof at the rate of _____ percent (_____%) per annum. This Series 2017 Bond (this "**Bond**") shall be payable with respect to principal and interest on each _____ (the "**Bond Payment Date(s)**") for a _____ (____) year term. Principal of and interest on this Bond shall be payable in any coin or currency of the United States, which at the time of payment is legal tender for the payment of public and private debts.

The principal of and interest on this Bond shall be paid by check or draft from the office of Regions Bank (the "**Trustee**"), to the person in whose name this Bond is registered on the Record Date at the address shown on the registration books, provided that the final payment of principal of and interest on this Bond shall be made upon the presentment of this Bond at the office of the Trustee; however, the presentation requirement may be waived by mutual agreement between the City and the Holder. Notwithstanding the foregoing, at any time that this Bond is held by the Bank, such payment may be made by the Trustee to the principal office of _____, at _____, _____.

This Bond is issued in the form of fully registered bonds, issued pursuant to and in accordance with the Constitution and statutes of the State of South Carolina (the "**State**"), including particularly Chapters 17 and 21 of Title 6, Code of Laws of South Carolina 1976, as amended (the "**Enabling Act**"); by an ordinance entitled, "AN ORDINANCE PROVIDING FOR THE RESTRUCTURING OF THE WATER AND SEWER SYSTEM TO CREATE THE COMBINED PUBLIC UTILITY SYSTEM OF THE CITY OF GEORGETOWN, SOUTH

CAROLINA; AUTHORIZING THE ISSUANCE AND SALE OF COMBINED PUBLIC UTILITY SYSTEM REVENUE BONDS OF THE CITY OF GEORGETOWN, SOUTH CAROLINA; AND OTHER MATTERS RELATING THERETO,” enacted by the City Council of the City of Georgetown (the “**City Council**”), the governing body of the City, on July 28, 2011, as amended on August 20, 2015 (as amended, the “**Master Bond Ordinance**”); and a series ordinance entitled, “AN ORDINANCE PROVIDING FOR THE ISSUANCE AND SALE OF COMBINED PUBLIC UTILITY SYSTEM IMPROVEMENT REVENUE BONDS, TO BE DESIGNATED SERIES 2017, IN THE PRINCIPAL AMOUNT OF NOT EXCEEDING SIX MILLION DOLLARS (\$6,000,000), OF THE CITY OF GEORGETOWN, SOUTH CAROLINA; AND OTHER MATTERS RELATING THERETO” (the “**2017 Series Ordinance**”) duly enacted by the City Council on September 21, 2017 (the Master Bond Ordinance and the 2017 Series Ordinance are hereinafter together referred to as the “**Ordinances**”). The proceeds of this Bond will be used for the purposes of providing funds (i) to defray the costs of the Project (as defined in the Series Ordinance), and (ii) to pay the costs of issuance hereof.

Certain capitalized terms used herein and not otherwise defined shall have the meanings ascribed thereto in the Ordinances. Certified copies of the Ordinances are on file in the office of the Trustee and in the office of the Clerk of Court of Common Pleas and General Sessions for Georgetown County, South Carolina.

This Bond shall be payable solely from and shall be secured by a pledge of and lien upon the Gross Revenues of the System. Additionally, this Bond is further secured by a statutory lien on the System as provided in Section 6-21-330 of the Code of Laws of South Carolina 1976, as amended. Such pledge of and lien upon the Gross Revenues of the System securing this Bond shall be on a parity in all respects with such pledges and liens securing the Outstanding Bonds, which were issued pursuant to the Master Bond Ordinance and any additional Bonds issued under the terms of the Master Bond Ordinance, and shall have priority over all other pledges and liens.

THE FULL FAITH, CREDIT AND TAXING POWERS OF THE STATE OF SOUTH CAROLINA OR THE CITY ARE NOT PLEDGED TO THE PAYMENT OF THE PRINCIPAL OF OR INTEREST ON THIS BOND, AND THIS BOND SHALL NEVER CONSTITUTE AN INDEBTEDNESS OF THE ISSUER WITHIN THE MEANING OF ANY STATE CONSTITUTIONAL PROVISION OR STATUTORY LIMITATION (OTHER THAN THOSE PROVISIONS PROVIDING FOR INDEBTEDNESS PAYABLE FROM A REVENUE-PRODUCING PROJECT OR A SPECIAL SOURCE, WHICH SOURCE DOES NOT INVOLVE REVENUES FROM ANY TAX OR LICENSE PURSUANT TO THE PROVISIONS OF S.C. CONST. ART. X, SEC. 14 (10)), BUT SHALL BE PAYABLE SOLELY FROM THE GROSS REVENUES OF THE SYSTEM.

The Gross Revenues of the System are currently pledged and hypothecated to the payment of the Outstanding Bonds, as described in the 2017 Series Ordinance (the “**Parity Bonds**”). The Master Bond Ordinance authorizes the issuance of additional bonds on a parity with the Series 2017 Bonds and the Parity Bonds which, when issued in accordance with the provisions of the Master Bond Ordinance, will rank equally and be on a parity herewith and therewith (“**Additional Bonds**” and together with the Series 2017 Bonds and the Parity Bonds, collectively the “**Bonds**”).

The City has covenanted to continuously operate and maintain the System and fix and maintain such rates for the services and facilities furnished by the System as shall at all times be sufficient (a) to maintain the Debt Service Funds and thus provide for the punctual payment of the principal of and interest on all Bonds, (b) to maintain the Debt Service Reserve Funds, if any, in the manner therein prescribed, (c) to provide for the payment of Operation and Maintenance Expenses, (d) to build and maintain a reserve for depreciation of the System, for contingencies and for improvements, betterments and extensions to the System other than those necessary to maintain the same in good repair and working order, (e) to pay all amounts owing under a reimbursement agreement with any provider of a surety bond, insurance policy or letter of credit as contemplated under Section 7.04(D) of the Master Bond Ordinance, (f) to provide for the punctual payment of the principal of and interest on all Junior Lien Bonds that may from time to time hereafter be outstanding, and (g) to discharge all obligations imposed by the Enabling Act, the Master Bond Ordinance and any applicable Series Ordinance.

This Bond and the interest hereon are exempt from all State, county, municipal, school district, and all other taxes or assessments imposed within the State, direct or indirect, general or special, whether imposed for the purpose of general revenue or otherwise, except estate or other transfer and certain franchise taxes.

This Bond is transferable, as provided in the Master Bond Ordinance, only upon the registration books of the City kept for that purpose and maintained by the Registrar, by the purchaser hereof in person or by his duly authorized attorney, upon (a) compliance with the restrictions recited on the face hereof, (b) surrender of this Bond and an assignment with a written instrument of transfer satisfactory to the Registrar, duly executed by the purchaser hereof or his duly authorized attorney, and (c) payment of the charges, if any, prescribed in the Ordinances. Thereupon a new Bond or Bonds of the same aggregate principal amount, maturity and interest rate shall be issued to the transferee in exchange therefor as provided in the Master Bond Ordinance. The City, the Trustee and the Registrar may deem and treat the person in whose name this Bond is registered as the absolute owner hereof for the purpose of receiving payment of or on account of the principal or redemption price hereof and interest due hereon and for all other purposes.

For every exchange or transfer of this Bond, the City or the Trustee or Registrar, as the case may be, may make a charge sufficient to reimburse it for any tax, fee or other governmental charge required to be paid with respect to such exchanges or transfers.

[Insert Redemption Provisions]

It is hereby certified and recited that all conditions, acts and things required by the Constitution and statutes of the State to exist, be performed or happen precedent to or in the issuance of this Bond, exist, have been performed and have happened, that the amount of this Bond, together with all other indebtedness of the City, does not exceed any limit prescribed by such Constitution or statutes.

This Bond shall not be valid or obligatory for any purpose until the Certificate of Authentication hereon shall have been duly executed by the Registrar.

IN WITNESS WHEREOF, THE CITY OF GEORGETOWN, SOUTH CAROLINA, has caused this Bond to be signed by the manual signature of its Mayor, its corporate seal to be affixed hereon, and the same to be attested by the manual signature of its City Clerk, all as of this ____ day of _____, 2017.

CITY OF GEORGETOWN, SOUTH CAROLINA

(SEAL)

Mayor

Attest:

City Clerk

CERTIFICATE OF AUTHENTICATION

This is the Bond described in the within mentioned Ordinances of the City.

REGIONS BANK, as Registrar

By: _____
Authorized Officer

Date of Authentication: _____, 2017

[FORM OF ASSIGNMENT]

FOR VALUE RECEIVED, the undersigned sells, assigns and transfers unto

(Name and Address of Transferee)

_____ the within bond and
does hereby irrevocably constitute and appoint _____
attorney to transfer the within bond on the books kept for registration thereof, with full power of
substitution in the premises.

Dated: _____

Signature

(Authorized Officer)

Notice: The signature to the assignment must
correspond with the name of the registered
owner as it appears upon the fact of the within
bond in every particular, without alteration or
enlargement or any change whatsoever.

* * * * *

[End of Article IV]

ARTICLE V - EXECUTION OF BOND; NO RECOURSE**Section 5.01. Execution and Authentication.**

The Series 2017 Bond shall be executed and authenticated in accordance with the provisions of the Master Bond Ordinance.

Section 5.02. No Recourse.

All covenants, stipulations, promises, agreements and obligations of the City contained in the Master Bond Ordinance or in this Series Ordinance shall be deemed to be the covenants, stipulations, promises, agreements and obligations of the City and not those of any officer or employee of the City in his or her individual capacity, and no recourse shall be had for the payment of the principal or redemption price of or interest on the Series 2017 Bond, or for any claim based thereon or on the Master Bond Ordinance or on this Series Ordinance, either jointly or severally, against any officer or employee of the City or any person executing the Series 2017 Bond.

[End of Article V]

ARTICLE VI - APPLICATION OF BOND PROCEEDS

Section 6.01. Use and Disposition of Series 2017 Bond Proceeds.

On or upon the delivery of the Series 2017 Bond and receipt of the proceeds thereof, such proceeds shall be disposed of as follows:

(a) if required, the sum necessary to satisfy the 2017 Reserve Requirement by funding the 2017 Debt Service Reserve Fund; and

(b) all remaining proceeds and other available funds shall be deposited with the City in the 2017 Construction Fund (the “**2017 Construction Fund**”) and used to defray the costs of the Project and pay the costs of issuance on the Series 2017 Bond.

Section 6.02. Establishment of 2017 Construction Fund and Investment of Moneys Deposited Therein.

There is hereby established, in accordance with Section 4.01 of the Master Bond Ordinance, the 2017 Construction Fund. There shall be paid into the 2017 Construction Fund the sums prescribed under Section 6.01(b) hereof. The 2017 Construction Fund shall be held, maintained and controlled by the City, unless otherwise determined by the City Administrator at the closing of the Series 2017 Bond.

Subject to Section 15.16 of the Master Bond Ordinance, moneys in the 2017 Construction Fund shall be invested and reinvested by the City in Authorized Investments. All earnings shall be added to and become a part of the 2017 Construction Fund. Withdrawals from the 2017 Construction Fund shall be made upon written order of the City, acting by and through either the Chief Financial Officer or the City Administrator. Any amounts remaining in the 2017 Construction Fund following completion of the construction of the Project shall be transferred to the Trustee for deposit into 2017 Debt Service Fund used to pay principal or interest on the Series 2017 Bond.

Section 6.03. Establishment of 2017 COI Fund.

There is hereby established, in accordance with Section 4.01 of the Master Bond Ordinance, the 2017 COI Fund. There shall be paid into the 2017 COI Fund the sums prescribed by Section 6.01(b) hereof. The 2017 COI Fund shall be held and controlled by the City, unless otherwise determined by the City Administrator at the closing of the Series 2017 Bond. The 2017 COI Fund may be established as a sub-account of the 2017 Construction Fund.

Subject to Section 15.16 of the Master Bond Ordinance, moneys in the 2017 COI Fund shall be invested and reinvested at the written direction of the City in Authorized Investments. Upon the earlier of (i) payment of all costs of issuance for the Series 2017 Bond, or (ii) 90 days after the Date of Issue, the sums remaining in the 2017 COI Fund shall be transferred by the City to the Trustee for deposit to the 2017 Debt Service Fund and used to pay principal and interest on the Series 2017 Bond.

[End of Article VI]

ARTICLE VII - SALE OF SERIES 2017 BOND**Section 7.01. Sale of Series 2017 Bond.**

(a) The City Administrator is hereby authorized to solicit bids from such banking institutions upon such terms as he shall determine for the purchase of the Series 2017 Bond. The City Administrator is authorized to award the sale of the Series 2017 Bond to the banking or financial institution that provides terms that he, in his sole discretion, determines are most advantageous to the City.

(b) Alternatively, the City Administrator is authorized to negotiate the sale of the Series 2017 Bond directly with such banking institutions as he shall determine. Upon such a negotiation, he is authorized to award the sale of the Series 2017 Bond to the banking or financial institution that he determines.

Section 7.02. Certain Financial Information to be Provided to Purchaser.

For so long as a Purchaser is in possession of the Series 2017 Bond, the City shall furnish the Purchaser, at such reasonable times as the Purchaser shall request, all other financial information related to or affecting the System as the Holder may reasonably request. Upon reasonable notice, the City shall permit the Purchaser, or its agents and representatives, to inspect during regular business hours the City's books and records relating to or affecting the System and to make extractions therefrom.

[End of Article VII]

ARTICLE VIII - COMPLIANCE WITH REQUIREMENTS OF THE CODE; BANK QUALIFICATION

Section 8.01. Compliance with the Code Generally.

The City further represents and covenants that it will not take any action which will, or fail to take any action (including, without limitation, filing the required information report with the Internal Revenue Service) which failure will, cause interest on the Series 2017 Bond to become includable in the gross income of the Purchaser thereof for federal income tax purposes pursuant to the provisions of the Code and regulations promulgated thereunder in effect on the date of original issuance of the Series 2017 Bond. Without limiting the generality of the foregoing, the City represents and covenants that:

(a) All property financed by the proceeds of the Series 2017 Bond will be owned by the City in accordance with the rules governing the ownership of property for federal income tax purposes.

(b) The City shall not permit any facility financed by the proceeds of the Series 2017 Bond to be used in any manner that would result in (i) ten percent (10%) or more of such proceeds being considered as having been used directly or indirectly in any trade or business carried on by any person other than a governmental unit as provided in Section 141(b) of the Code, or (ii) an amount greater than the lesser of \$5,000,000 or five percent (5%) of such proceeds being considered as having been used directly or indirectly to make or finance loans to any person other than a governmental unit as provided in Section 141(c) of the Code.

(c) The City is not a party to, and will not enter into or permit any other party to enter into, any contract with any person involving the management of any facility financed or refinanced with the proceeds of the Series 2017 Bond or by notes paid by the Series 2017 Bond that does not conform to the guidelines set forth in Revenue Procedure 2017-13, or a successor revenue procedure, Code provision or regulation.

(d) The City will not sell or lease any property financed by the proceeds of the Series 2017 Bond to any person unless it obtains the opinion of Bond Counsel that such lease or sale will not affect the tax exemption of the Series 2017 Bond.

(e) The Series 2017 Bond will not be federally guaranteed within the meaning of Section 149(b) of the Code. The City shall not enter into any leases or sales or service contracts with any federal government agency unless it obtains the opinion of nationally recognized bond counsel that such action will not affect the tax exemption of the Series 2017 Bond.

Section 8.02. Arbitrage Bonds.

The City hereby covenants and agrees with the Holder of the Series 2017 Bond that no use of the proceeds of the Series 2017 Bond shall be made which, if such use had been reasonably expected on the date of issue of the Series 2017 Bond, would have caused the Series 2017 Bond to be an “arbitrage bond,” as defined in the Code, and to that end the City hereby shall:

(a) comply with the applicable provisions of Section 103 and Sections 141 through 150 of the Code and any Regulations so long as the Series 2017 Bond is Outstanding;

(b) establish such funds, make such calculations and pay such amounts, in the manner and at the times required in order to comply with the requirements of the Code relating to required rebates of certain amounts to the United States Government;

(c) make such reports of such information at the time and places required by the Code; and

(d) take such other action as may be required to assure that the tax-exempt status of the Series 2017 Bond will not be impaired.

Section 8.03. Designation of Series 2017 Bond as Bank Qualified.

The City reasonably expects that the principal amount of the Series 2017 Bond, together with the original principal amounts of all other tax-exempt obligations of the City and any entity subordinate thereto (other than obligations which are private activity bonds not qualified under Section 145 of the Code) issued in calendar year 2017, will, in the aggregate, not exceed \$10,000,000. The City hereby designates the Series 2017 Bond as a “qualified tax-exempt obligation” within the meaning of Section 265(b)(3)(B) of the Code.

[End of Article VIII]

ARTICLE IX - CONTINUING DISCLOSURE

Section 9.01. Continuing Disclosure Covenant.

The City covenants to comply with the requirements of Section 11-1-85 of the Code of Laws of South Carolina 1976, as amended (“**Section 11-1-85**”) by filing with a central repository for availability in the secondary bond market when requested:

- (a) an annual independent audit, within thirty days of the City’s receipt of the audit; and
- (b) event-specific information within thirty days of an event adversely affecting more than five percent of the Gross Revenues or the City’s tax base.

The City specifically reserves the right to amend the above covenant in order to reflect any applicable change in law, including, without limitation, Section 11-1-85, without consent of the Trustee or the Holder of the Series 2017 Bond.

Section 9.02. Remedy.

The only remedy for failure by the City to comply with the covenants set forth in Section 9.01 hereof, or any certificates or agreements delivered in connection therewith, shall be an action for specific performance or such covenants; and failure to comply with such covenants, certificates or agreements shall not constitute a default or an “Event of Default” under the Master Bond Ordinance or this Series Ordinance. The Trustee shall have no responsibility to monitor the City’s compliance with such covenants, certificates or agreements. However, the Holder may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the City to comply with its obligations under this Article and the related certifications or agreements of the City.

[End of Article IX]

ARTICLE X - MISCELLANEOUS

Section 10.01. Severability.

If any one or more of the covenants or agreements provided in this Series Ordinance on the part of the City or any fiduciary to be performed should be contrary to law, then such covenant or covenants or agreement or agreements shall be deemed severable from the remaining covenants and agreements, and shall in no way affect the validity of the other provisions of this Series Ordinance.

Section 10.02. Table of Contents and Section Headings Not Controlling.

The Table of Contents and the Headings of the several Articles and Sections of this Series Ordinance have been prepared for convenience of reference only and shall not control, affect the meaning of, or be taken as an interpretation of any provision of this Series Ordinance.

Section 10.03. City Administrator; Prior Action.

All provisions herein delegating any authority to the City Administrator are ratified and approved by the City Council. All prior actions of the City Administrator in furtherance of the purposes of this Series Ordinance (including, but not limited to, the solicitation of bids under the provisions of Section 7.01 hereof) are hereby approved, ratified and confirmed.

Section 10.04. Other Documents.

The City Council authorizes the City Administrator and/or the Mayor to execute and sign all other documents necessary to effect the issuance of the Series 2017 Bond.

[End of Article X]

DONE, RATIFIED AND ENACTED this 21st day of September, 2017.

CITY OF GEORGETOWN, SOUTH CAROLINA

(SEAL)

By: _____
Mayor

Attest:

City Clerk

First Reading: August 17, 2017
Second Reading: September 21, 2017



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

PROCLAMATION

DOC ID: 2368

Council Meeting Date:	21 September 2017
Department:	Fire Department
Issue Under Consideration:	2017 Fire Prevention Proclamation

Reviews:

Charles W. Cribb Completed 08/16/2017 8:43 AM
 City Attorney Completed 08/16/2017 9:40 AM
 Paul Gardner Completed 09/12/2017 11:35 AM
 Ann U. Mercer Completed 09/13/2017 8:37 AM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 FIRE PREVENTION WEEK (PDF)

2017 FIRE PREVENTION PROCLAMATION

CITY OF GEORGETOWN, SOUTH CAROLINA
PROCLAMATION

WHEREAS, the City of Georgetown is committed to ensuring the safety and security of all those living in and visiting the City; and

WHEREAS, U.S. fire departments responded to 365,500 home fires in 2015, according to the National Fire Protection Association (NFPA); and

WHEREAS, U.S. home fires resulted in 2,560 civilian deaths in 2015, representing the majority (78 percent) of all U.S. fire deaths; and

WHEREAS, newer homes are built with lightweight materials that burn faster than older home constructions; and

WHEREAS, many of today’s products and furnishings produce toxic gases and smoke when burned, making it impossible to see and breathe within moments; and

WHEREAS, these conditions contribute to a much smaller window of time for people to escape a home fire safely, having as little as one to two minutes to escape from the time the smoke alarm sounds; and

WHEREAS, a home fire escape plan provides the skill set and know-how to quickly and safely escape a home fire situation; and

WHEREAS, a home fire escape plan includes two exits from every room in the home; a path to the outside from each exit; smoke alarms in all required locations; and a meeting place outside where everyone in the home will meet upon exiting; and

WHEREAS, home fire escape plans should be developed by all members of the household; and

WHEREAS, practicing a home fire escape plan twice a year ensures that everyone in the household knows what to do in a real fire situation;

WHEREAS, City of Georgetown first responders are dedicated to reducing the occurrence of home fires and home fire injuries through prevention and protection education; and

WHEREAS, City of Georgetown residents are responsive to public education measures and are able to take personal steps to increase their safety from fire, especially in their homes; and

WHEREAS, the 2017 Fire Prevention Week theme, “Every Second Counts: Plan 2 Ways Out!” effectively serves to educate the public of the vital importance of developing a home fire escape plan with all members of the household and practicing it twice a year;

NOW THEREFORE, by virtue of the authority vested in me as Mayor of the City of Georgetown, South Carolina, and on behalf of our City Council, I hereby proclaim October 8-14, 2017 as

FIRE PREVENTION WEEK

in the City of Georgetown and urge all residents to find and develop a home fire escape plan with all members of the household and practice it twice a year; and to participate in the many public safety activities and efforts of the City of Georgetown's Fire Department services during Fire Prevention Week 2017.

SIGNED, SEALED AND DATED this 21st day of September 2017.

ATTEST:

Jack M. Scoville, Jr.
Mayor

Ann U. Mercer
City Clerk

Attachment: FIRE PREVENTION WEEK (2368 : 2017 Fire Prevention Proclamation)



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ACTION ITEM

DOC ID: 2369

Council Meeting Date:	21 September 2017
Department:	Fire Department
Issue Under Consideration:	Motion to Approve payment to KS Statebank for the New P25 Compliant Motorola Radios in the amount of \$64,267.22
Amount Requested:	\$64,267.22
Is Item in Current Budget?	YES
If no, please explain:	
Financial Impact:	\$64,267.22
Points to Consider:	This is a Lease Agreement for Financing Purchase of P25 Compliant Radios that was approved 01/26/2017. We paid deposit in the amount of \$35,000.00 in June 2017. Balance of \$64,267.22 was Budgeted in 17/18 CIP Budget.
Options:	1. Approve Payment 2. Disapprove Payment
Staff Recommendation:	Approve Payment

Reviews:

Charles W. Cribb Completed 08/16/2017 8:42 AM
 Paul Gardner Completed 09/12/2017 11:37 AM
 Ann U. Mercer Completed 09/13/2017 8:40 AM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 Invoice (PDF)



INVOICE

DATE SENT: 06-13-2017

BILL TO:

CITY OF GEORGETOWN, SOUTH CAROLINA
 ATTN: ACCOUNTS PAYABLE
 120 NORTH FRASER STREET
 GEORGETOWN, SC 29440

REMIT TO:

KS STATEBANK
 GOVERNMENT FINANCE DEPARTMENT
 PO BOX 69
 MANHATTAN, KS 66505-0069
 FOR INQUIRIES: (877) 587-4054

ACCOUNT NUMBER	PAYMENT DATE	PAYMENT DUE DATE	TOTAL AMOUNT DUE
3350983 & 3352008	12/15/2017	12/15/2017	\$64,267.22

DESCRIPTION	AMOUNT
GOVERNMENT OBLIGATION CONTRACT DATED AS OF DECEMBER 15, 2016	PAYMENT AMOUNT: \$64,267.22
COMMUNICATIONS EQUIPMENT	
	\$64,267.22
	TOTAL DUE

Attachment: Invoice (2369 : Radio Upgrade)



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ACTION ITEM

DOC ID: 2372

Council Meeting Date:	21 September 2017
Department:	Public Works
Issue Under Consideration:	Motion to approve purchase and payment of a 2017 F150 Crew Cab pick up truck to Vick Bailey Ford in the amount of \$27,163.00.
Amount Requested:	\$27,163.00
Is Item in Current Budget?	Yes,
If no, please explain:	
Financial Impact:	Cost savings on fuel and repairs.
Points to Consider:	• This new vehicle will replace vehicle #1200. • Current vehicle is over 15 years old. • Current vehicle is old and deteriorating.
Options:	Council to approve or disapprove the purchase of this truck.
Staff Recommendation:	Staff recommends the purchase of this vehicle.

Reviews:

Tim Chatman Completed 09/06/2017 2:00 PM
 Debra Bivens Completed 09/12/2017 11:21 AM
 Paul Gardner Completed 09/12/2017 11:41 AM
 Ann U. Mercer Completed 09/14/2017 8:51 AM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 vic bailey.quote (PDF)

Vic Bailey Ford				11.A.1
David Vetter 864.585.3600 or 800.922.1365				
2017 FORD F150 4x4 CREW CAB, FLEX FUEL, PICK UP w/ XL TRIM				
Contract #: 4400011586				
Standard Equipment Included:				
5.0L V-8 Engine	Power Steering			
Automatic Transmission	Power Brakes			
A/C	Cruise Control			
AM/ FM Radio	Vinyl Bench Seat			
5 1/2' Pick-Up Body	Heavy Duty Rubber Floor			
Power Windows and Door Locks				
SC STATE CONTRACT PRICE:			\$30,510.00	(plus tax)
ADDITIONAL AVAILABLE OPTIONS:				
Super Cab 4+2 (Long Bed -8')			-\$4,395.00	(Deduct)
Delete Front Mounted Winch			-\$1,595.00	(Deduct)
			\$24,520.00	
Black Platform Running Boards -18B			\$255.00	
Bedliner (Drop-In)			\$229.00	
Bed Mat			\$169.00	
4-Corner Flashing Strobe System (LED Lights)			\$595.00	
Adrian Sinlge Lid Cross Box			\$595.00	
	Total		\$26,363.00	
	State tax		\$500.00	
	delevery		\$300.00	
			\$27,163.00	

Attachment: vic bailey.quote (2372 : Public Works Dept - New Pick up Truck Request)



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ACTION ITEM

DOC ID: 2383

Council Meeting Date:	21 September 2017
Department:	Engineering
Issue Under Consideration:	Motion to approve bid and make payment to Caldwell Tanks Inc. for the construction of a new elevated 250,000 gallon pedisphere type water tank for a not to exceed amount of \$1,600,000. 00.
Amount Requested:	\$1,600,000.00
Is Item in Current Budget?	Yes
If no, please explain:	
Financial Impact:	The amount requested includes an additional amount of \$25,300 to be used as contingency.
Points to Consider:	The base bid is \$1,529,000 for the erection of the new water tank with an alternate bid price of \$45,700 for modifications and upgrades at the Yogi Bear Tank site. Total bid price: \$1,574,700.
Options:	Only one bid was submitted on time. There was a second bid that was sent to an incorrect address and arrived a day later but could not be considered due to the strict procurement regulations.
Staff Recommendation:	Both City staff and Engineer of Record recommend the award of this contract to Caldwell Tanks, Inc. since the bid price is well within the allotted budget. Caldwell Tanks, Inc. was the contractor for the last City's water tank in Maryville and they performed well.

Reviews:

Orlando Arteaga Completed 09/13/2017 4:02 PM
 Finance Completed 09/13/2017 4:27 PM
 City Attorney Completed 09/14/2017 10:26 AM
 Paul Gardner Completed 09/14/2017 10:42 AM
 Ann U. Mercer Completed 09/14/2017 12:07 PM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 CALDWELL BID (PDF)
2. 2 2017 09 12 Northside Elevated Water Tank award recommendation letter (PDF)
3. 3 2017-06-30 COG Northside Tank Bid Set Specs (PDF)
4. 4 Addendum #1 (PDF)
5. 5 Addendum #2 (PDF)
6. 6 Addendum #3 (PDF)
7. 7 Addendum #4 (PDF)

Updated: 9/14/2017 12:06 PM by Ann U. Mercer (Page 1)

8. 8 2017-06-29 North Side Tank Bid Set dwgs (PDF)

SECTION 00311
BID FORM

ENGINEERING

SEP 06 2017

RECEIVED

NORTH SIDE WATER STORAGE TANK, PROJECT #1508
For the City of Georgetown, SC

Date: September 6, 2017

PROPOSAL OF Caldwell Tanks, Inc.

(hereinafter called "Bidder"), a Kentucky (State)

corporation/partnership/individual (Strike out inapplicable terms) ~~doing business as~~

TO: City of Georgetown, SC

TO: Whom it may concern:

The Bidder, in compliance with your invitation for bids for the **NORTH SIDE WATER STORAGE TANK, PROJECT #1508** having examined the drawings and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, for the Lump Sum of:

One Million Five Hundred Twenty-Nine Thousand Dollars \$ (1,529,000.00)

The lump sum price indicated above shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The lump sum price indicated above shall also include the amounts indicted as Allowances, if any, and as described in the Division 1 Section "Allowances". Should actual cost vary from the Allowance listed, The Contract Sum shall be adjusted by Change Order.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within **Four hundred and sixty (460)** consecutive calendar days after specified date on Notice to Proceed.

BID FORM
00311-1

COPY

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

Bidder further agrees to pay as liquidated damages the sum of \$750.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions 00700.1.

The specifications and addenda are complementary of each other. What is called for by one shall be as binding as if called for by all. If a conflict between any of the above is discovered by the contractor, the problem shall be referred to the Owner as soon as possible for resolution by the Owner. Should a conflict occur which is not resolved before bid time and/or is necessary to comply with mandatory requirements (i.e., codes, ordinances, etc.), it shall be the contractor's responsibility to price and bid the more expensive method.

Bidder acknowledges receipt of the following addendum:

No.: 1 Dated: 7/20/17

No.: 2 Dated: 8/24/17

No.: 3 Dated: 8/30/17

No.: 4 Dated: 9/1/17

No.: Dated:

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of sixty (60) Calendar days after the scheduled closed time for receiving bids.

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

BID FORM
00311-2

COPY

SCHEDULE OF TASKS

Additions and deletions from the Work shall be paid in accordance with the Prices indicated below.

Item No.	Task Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization, Demobilization, Bonding and Licenses	1	LS	\$76,500	\$76,500
2	250,000 gallon elevated tank (includes electrical, foundation, interior valving and appurtenances)	1	LS	\$993,724	\$993,724
3	12" waterline installed by HDD	1350	LF	\$130	\$175,500
4	12" MJ waterline installed by open cut	265	LF	\$75	\$19,875
5	12" RJ waterline installed by open cut	1102	LF	\$75	\$82,650
6	Bore & jack casing under roadway	1	LS	\$18,000	\$18,000
7	12" RJ waterline installed casing	1	LS	\$6,000	\$6,000
8	24" x 12" tapping sleeve & valve	1	LS	\$10,350	\$10,350
9	12" gate valves	2	EA	\$3,500	\$7,000
10	Ductile Iron Fittings	1	Ton	\$14,000	0
11	Sidewalk	150	LF	\$35	\$5,250
12	Cut & Replace Asphalt Paving /Driveways	20	SY	\$150	\$3,000
13	Gravel paving	1200	SY	\$13	\$15,600
14	Clearing	1	Acre(s)	\$8,500	\$8,500
15	Fencing	600	LF	\$35	\$21,000
16	Silt Fencing	1600	LF	\$5	\$8,000
17	Sediment Tube	80	LF	\$20	\$1,600
18	15' Wide Double Gate	1	EA	\$1,500	\$1,500
19	Flowable fill	13	CY	\$350	\$4,550
20	Manual air release valves	3	EA	\$1,800	\$5,400
21	Restrained joints installed on existing waterlines	TBD	EA	\$500	0
22	Work not specifically identified above, but required by Contract Documents	1	LS	\$1	\$1
23	Cash allowance A: SCADA	Allowance			\$65,000.00
Total Bid Price (for page 1 of the bid form)					\$1,529,000.00

ALTERNATE ADDER NUMBER 1:

Item No.	Task Description	Quantity	Unit	Total Price
1	ALTERNATE ADDER NUMBER 1: All work associated with modifications at the Yogi Bear elevated water tank site	1	LS	\$45,700.00
DO NOT INCLUDE THIS PRICING IN THE TOTAL BID PRICE				

BID FORM
00311-3

COPY

The above Task Prices shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover the finished work called for.

Prime Contractor Responsibilities - The contractor will be required to assume sole responsibility for the complete effort as required by this RFB. The City will consider the contractor to be the sole point of contact with regard to all project matters.

SUBCONTRACTOR LIST

Subcontracting - If any part of the work covered by this RFB is to be subcontracted, the contractor shall identify the subcontracting organization at the time of the offer. All subcontractors must be approved by the City.

Sub-contractors (with contact information) to be utilized in project:

SUBCONTRACTOR	COMPANY NAME/ADDRESS	CONTACT NAME/ PHONE
Piles	Hayward Baker/ 208 Little Santee RD Colfax, NC 27235	Gilberto Limon (336) 601-2129
Civil Work	A.C. Schultes / 3887 S. NC HWY 41 Wallace, NC 28466	William Jefferys (910) 285-7465
Foundation	Ozark Mtn. Construction / 1002 Artis Ln. Conway AR 72034	Scott Pelley (501) 450-7538
Coatings	Sentinel Blast & Paint / 5787 Ruslin hills Dover, OH 44622	John D Page (330) 364-4007
Electrical	Power Distribution & Control PO Box 449 Silver City, NC 27344	Will Dodds (919) 302-7239
Fencing	Seegars Fence Company 4611 Hardscrabble Rd. Columbia SC 29229	Dustin Smith (803) 608-2160

BID FORM
00311-4

COPY

EQUIPMENT/MATERIALS

The type/manufacturer of the equipment and materials that were used as a basis for the Bid pricing herein, must be identified below:

Equipment/Material	Manufacturer/Type
Altitude Valves	Singer
Check Valves	American Flow
Gate Valves	American Flow
HDD Pipe (HDPE or fPV)	Flying W.

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

COPY

The undersigned declares that his firm is (delete those not applicable): A corporation organized and existing under the laws of the State of Kentucky

A partnership consisting of:

The undersigned declares that the person or persons signing this proposal is fully authorized to sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.

It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

Respectfully Submitted:

Caldwell Tanks, Inc.

Contractor

(SEAL – if bid is by a Corporation)

By: Eric Jeff Ross

Eric W. Monske

(Type/Print Name)

Regional Sales Manager

(Title)

4000 Tower Road

(Street Address)

Louisville, KY 40219

(City, State, Zip Code)

S.C. General Contractor's License No. G10255

FID No. and/or SSN 61-0148890

(END OF SECTION)

BID FORM
00311-6

COPY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that **CALDWELL TANKS, INC.**, Louisville, Kentucky, a Kentucky Corporation, has constituted and appointed, and does constitute and appoint the persons named below as its true and lawful Attorneys-in-Fact, to execute proposals for the sale of materials or the construction of work, to make contracts for same, and execute Surety Bonds to be used in connection therewith:

KEVIN J. GALLAGHER
CARTER J. SPOELSTRA
PATRICK A. SMITH
ERIC W. MONSKE

K. RYAN HARVEY
C.R. SPANGLER, III
DAVID G. CULL
WILLIAM A. STETZLER

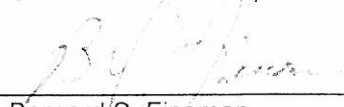
This appointment is made in accordance with Article V, Section 1 of the By-Laws of the Corporation as amended January 16, 1986, and still in full force and effect.

IN WITNESS WHEREOF, **CALDWELL TANKS, INC.** has caused these presents to be signed by its President, and its corporate seal to be thereunto affixed and duly attested by its Secretary this 17th day of November, 2016.

ATTEST:

CALDWELL TANKS, INC.

(SEAL) _____

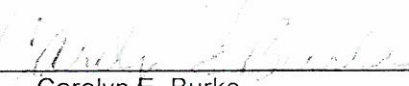
BY: 

Bernard S. Fineman
President

STATE OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

On this 17th day of November, 2016, before me personally appeared Bernard S. Fineman, President of CALDWELL TANKS, INC., who being duly sworn, said he resides in the state of Kentucky; that he is President of CALDWELL TANKS, INC., the Corporation described in and which executed the foregoing instrument; that he knows the Corporate seal; that it was so affixed by order of the Board of Directors of said Corporation; and that he signed his name thereto as President of said Corporation by like authority.

(SEAL) _____

BY: 

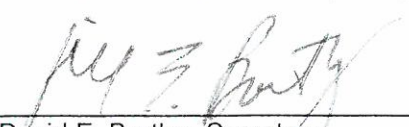
Carolyn E. Burke
Notary Public, State at Large
MY COMMISSION EXPIRES 9/25/2019

STATE OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

I, David E. Bartley, Secretary of CALDWELL TANKS, INC. do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by CALDWELL TANKS, INC., which is still in full force and effect.

IN WITNESS WHEREOF, I have signed this certificate at Louisville, Kentucky, this 6th day of September, 2017

(SEAL) _____

BY: 

David E. Bartley, Secretary
Caldwell Tanks, Inc.

COPY

00350 BID BOND

KNOW ALL MEN BY THESE PRESENT:

That we, the undersigned Caldwell Tanks, Inc., as Principal, and Great American Insurance Company, as Surety, are hereby held and firmly bound unto the City of Georgetown, South Carolina, as Owner, in the penal sum of Five Percent of Total Amount Bid Dollars (n/a) Cents (\$ 5% of Bid Amount), for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors and assigns.

Signed this 6th day of September, 2017.

The condition of the above obligation is such that:

WHEREAS, the Principal has submitted to City of Georgetown, SC a certain Bid, attached hereby and by reference made a part hereof, to enter into a contract in writing for the North Side Water Storage Tank, Project #1508.

NOW, THEREFORE,

- (A) If said Bid shall be rejected, or
- (B) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said Bid) and shall furnish a Bond for faithful performance of said contract, and for the payment of all persons performing labor furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid, then this obligation shall be void; otherwise the same shall remain in force and effect - it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by an extension of the time within which the Owner may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

BID BOND
00350-1

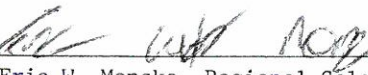
COPY

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

Caldwell Tanks, Inc.

Principal

(Corporate Seal)

By:  (L.S)
Eric W. Monske, Regional Sales Manager

Great American Insurance Company

Surety

(Corporate Seal)

By:  (L.S)
Vonda Rentz, Attorney-In-Fact

Important: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Note: Bond must be countersigned by a South Carolina resident agent.

(END OF SECTION)

BID BOND
00350-2

COPY

GREAT AMERICAN INSURANCE COMPANY®

Administrative Office: 301 E 4TH STREET • CINCINNATI, OHIO 45202 • 513-369-5000 • FAX 513-723-2740

The number of persons authorized by
this power of attorney is not more than FIVE

No. 0 20852

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the GREAT AMERICAN INSURANCE COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Ohio, does hereby nominate, constitute and appoint the person or persons named below, each individually if more than one is named, its true and lawful attorney-in-fact, for it and in its name, place and stead to execute on behalf of the said Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; provided that the liability of the said Company on any such bond, undertaking or contract of suretyship executed under this authority shall not exceed the limit stated below.

Name	Address	Limit of Power
MIKE SHERRARD	ALL OF	ALL
BARBARA O'DONNELL	LOUISVILLE, KENTUCKY	\$100,000,000
DUANE RAY		
JOHN F. NEACE		
CRYSTY NURSE		

This Power of Attorney revokes all previous powers issued on behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the GREAT AMERICAN INSURANCE COMPANY has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 26TH day of JANUARY, 2017

Attest

GREAT AMERICAN INSURANCE COMPANY



Assistant Secretary

Divisional Senior Vice President

STATE OF OHIO, COUNTY OF HAMILTON - ss:

DAVID C. KITCHIN (877-377-2405)

On this 26TH day of JANUARY, 2017, before me personally appeared DAVID C. KITCHIN, to me known, being duly sworn, deposes and says that he resides in Cincinnati, Ohio, that he is a Divisional Senior Vice President of the Bond Division of Great American Insurance Company, the Company described in and which executed the above instrument; that he knows the seal of the said Company; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by authority of his office under the By-Laws of said Company, and that he signed his name thereto by like authority.



Susan A. Kohorst
Notary Public, State of Ohio
My Commission Expires 05-18-2020

This Power of Attorney is granted by authority of the following resolutions adopted by the Board of Directors of Great American Insurance Company by unanimous written consent dated June 9, 2008.

RESOLVED: That the Divisional President, the several Divisional Senior Vice Presidents, Divisional Vice Presidents and Divisional Assistant Vice Presidents, or any one of them, be and hereby is authorized, from time to time, to appoint one or more Attorneys-in-Fact to execute on behalf of the Company, as surety, any and all bonds, undertakings and contracts of suretyship, or other written obligations in the nature thereof; to prescribe their respective duties and the respective limits of their authority; and to revoke any such appointment at any time.

RESOLVED FURTHER: That the Company seal and the signature of any of the aforesaid officers and any Secretary or Assistant Secretary of the Company may be affixed by facsimile to any power of attorney or certificate of either given for the execution of any bond, undertaking, contract of suretyship, or other written obligation in the nature thereof, such signature and seal when so used being hereby adopted by the Company as the original signature of such officer and the original seal of the Company, to be valid and binding upon the Company with the same force and effect as though manually affixed.

CERTIFICATION

I, STEPHEN C. BERAHA, Assistant Secretary of Great American Insurance Company, do hereby certify that the foregoing Power of Attorney and the Resolutions of the Board of Directors of June 9, 2008 have not been revoked and are now in full force and effect.

Signed and sealed this

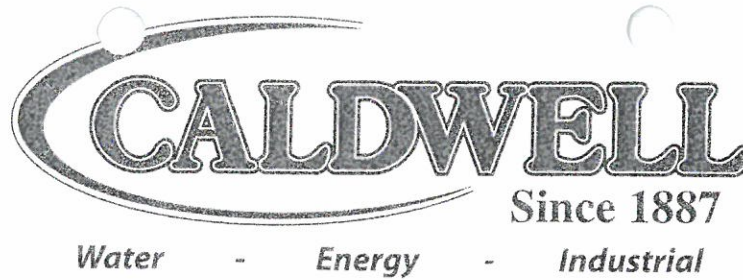
day of

6th day of September, 2017.



Assistant Secretary

COPY



CERTIFICATE

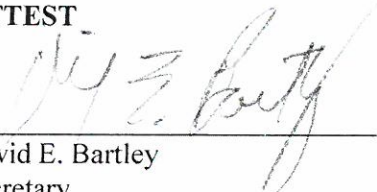
This is to certify that Caldwell Tanks, Inc. has met all requirements and is licensed in to do business in the State of South Carolina. Our License number is G10255.

OUR STATUTORY AND PROCESS AGENT IS:

Corporation Service Company
1703 Laurel Street
Columbia, South Carolina 29201

Dated this 6th day of September, 2017

ATTEST



David E. Bartley
Secretary

CALDWELL TANKS, INC.



Eric W. Monske
Regional Sales Manager

(Seal)

SCQUAL.DOC

COPY



PEDESPHERE ELEVATED WATER TANKS

<u>CAPACITY</u>	<u>LOCATION/OWNER</u>	<u>ENGINEER</u>	<u>DATE COMPLETED</u>
250M Elevated 121' HWL	Western Virginia Water Authority Roanoke, VA Trent Cox (540) 353-5700	Western Virginia Water Authority Roanoke, VA Trent Cox (540) 353-5700	5/17 \$875,000.00
250M Elevated 182' HWL	City of Conneaut Conneaut, OH Timothy Eggleston (440) 593-7401	CT Consultants Mentor, OH Shawn Aiken (440) 951-9000	1/16 \$1,382,000.00
250M Elevated 90' HWL	NJ American Water Co. Hillsborough, NJ Robert Biehler (908) 482-0287	Dewberry Engineers, Inc. Parsippany, NJ Robert Foley (973) 739-9400	10/15 \$848,000.00
250M Elevated 134' HWL	White County Commissioners Monticello, IN John C. Heimlich, Commissioner (574) 583-4879	American Structurepoint, Inc. Indianapolis, IN Jennifer M. Bailey (317) 547-5580	6/15 \$598,000.00
250M Elevated 141.5' HWL	Lebanon VA Medical Center Lebanon, PA	Lamereaux Consulting, LLC Jermyn, PA Dennis Kutch, PE (570) 876-5350	11/14 \$731,431.00
250M Elevated 145'6" HWL	Oglala Sioux Tribe Pine Ridge, SD Williar Clifford	Morrison-Maierle, Inc. Helena, MT Craig Nowak (406) 442-3050	4/13 \$751,000.00
250M Elevated 163' HWL	Meherrin River Jail Brunswick Co., VA	Timmons Group Richmond, VA David J. Saunders, P.E. (804) 200-6388	10/12 \$665,050.00
250M Elevated 155' HWL	Newton County Regional Water & Sewer District Morocco, IN Jim Pistello (219) 285-0053	American Structurepoint, Inc. Indianapolis, IN Jessica Baston (317) 547-5580	1/11 \$875,000.00
250M Elevated 158' HWL	City of Ava Ava, MO Janice Lorrain (417) 683-5516	Scott Consulting Engineers, PC Springfield, MO John K. Forrester (417) 866-8644	10/10 \$678,800.00
250M Elevated 126'9" HWL	Borough of Pitman Pitman, NJ Tom Brown (856) 589-3522	Federici & Akin, PA Sewell, NJ George Hann, Jr., PE (856) 589-1400	12/10 \$1,583,000.00

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

COPY

CONFIDENTIAL

NOTE:

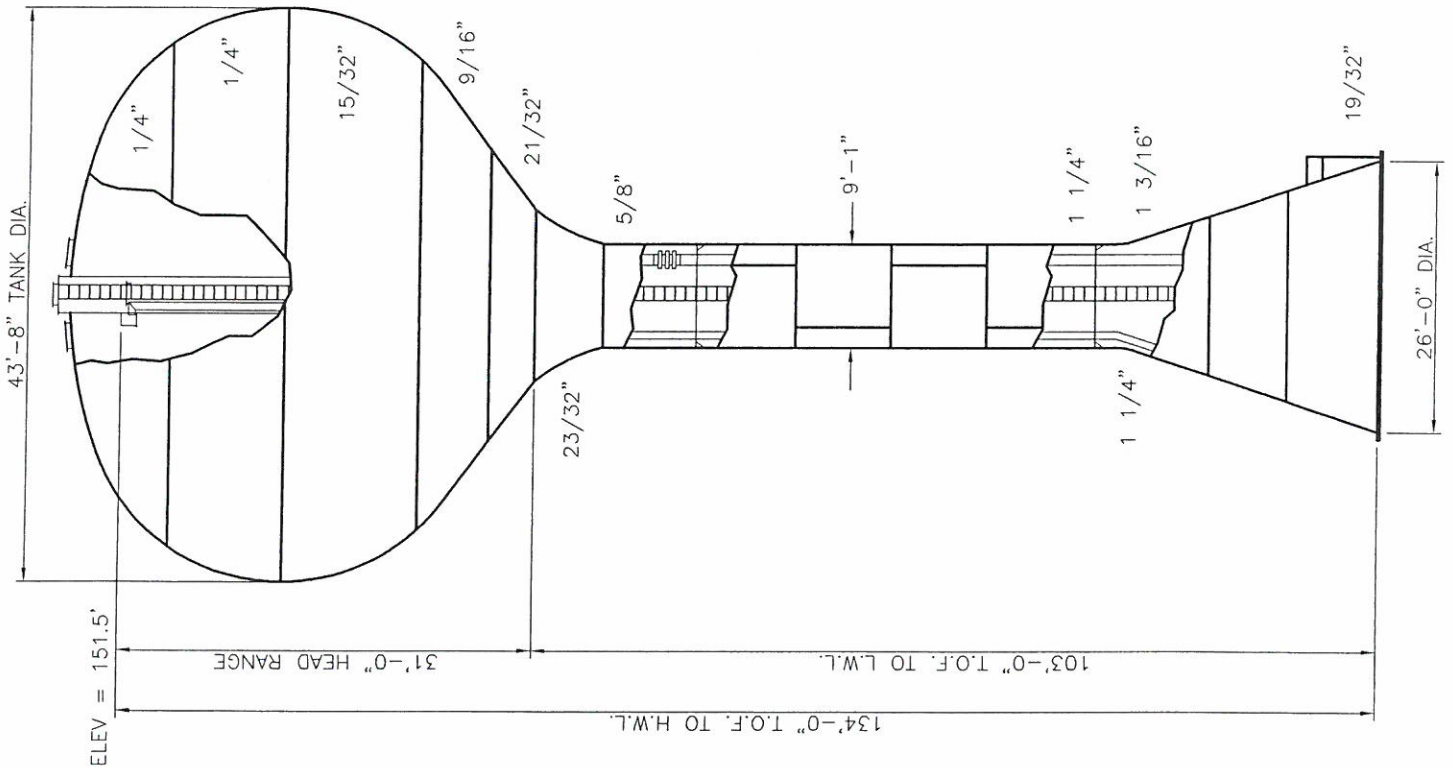
DESIGN PER AWWA D100-11 AND ENGINEER'S SPECIFICATIONS.

ALL ACCESSORIES TO BE INCLUDED AS PER SPECIFICATIONS.

ORIENTATION OF ACCESSORIES SHOWN FOR CLARITY.

SUBJECT TO CHANGE WITH FINAL DESIGN.

A BASIC WIND SPEED: 129 MPH, EXP C (ASCE 7-05)
SEISMIC LOAD: $S_S = 96.10\%$ $S_1 = 36.00\%$
20 PSF SNOW LOADING



CALDWELL
Since 1887
Water - Energy - Industrial

GEORGETOWN, SC
250,000 GALLON PEDESHERE

BY: DTR
DATE:
TITLE: TANK SKETCH
DRAWING NO.

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)

NOTES:

FOUNDATION DESIGN BASED ON 2 ROW OF
HP 12x53 ASTM A572 GRADE 50 (FY = 50 KSI)
PILE DEPTH: 43' BELOW EXISTING GRADE (TIP ELEVATION = -27')
PILE CAPACITY: 90 TONS COMPRESSION ; 15 TONS TENSION **A**

A 44 PILES REQUIRED

SITE PREPARATION SHALL BE IN ACCORDANCE WITH THE PROJECT
SOILS REPORT.

CONCRETE: 28 DAY COMPRESSIVE STRENGTH (4000 PSI).

CAP: 91 CU. YDS. REQUIRED

REINFORCEMENT: ASTM SPEC. A615 GR. 60.

CAP: 5,000 LBS. REQUIRED

REINFORCING STEEL QUANTITIES DO NOT ACCOUNT FOR
LAPS, BENDS, HOOKS, ETC.

FOUNDATION IS SUBJECT TO CHANGE WITH FINAL DESIGN.

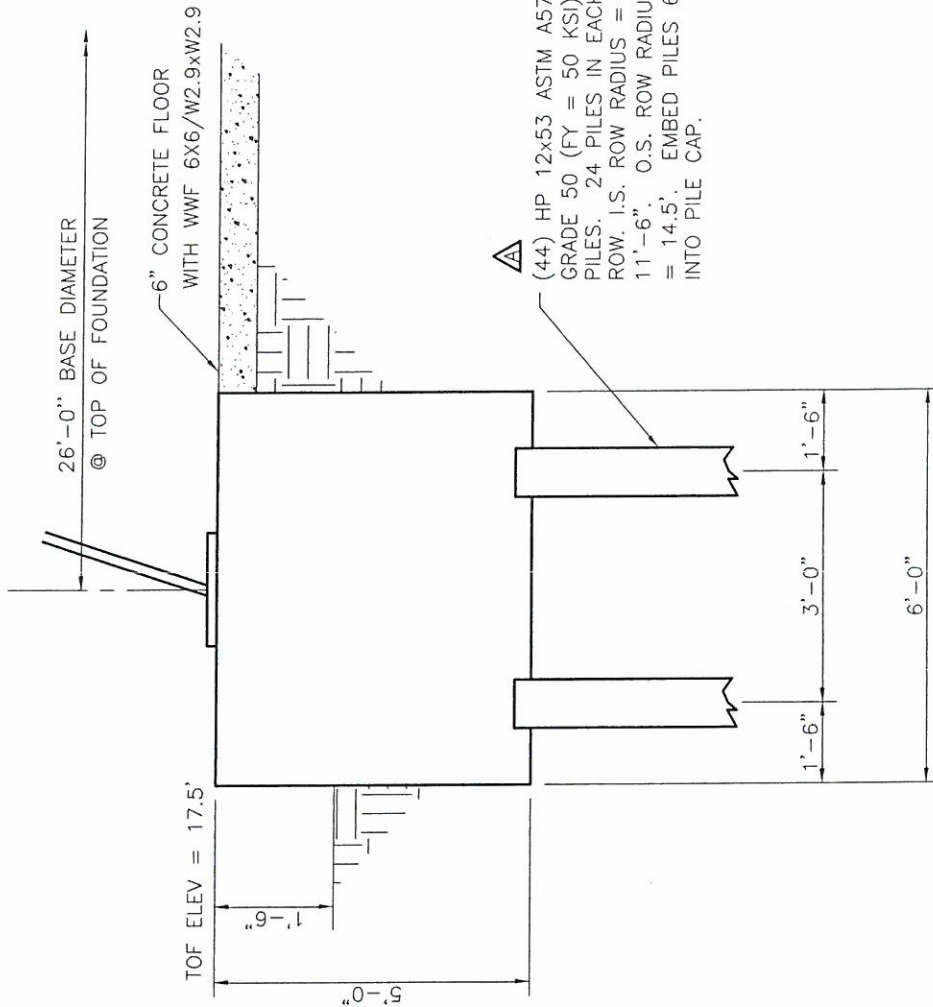
PIPING PIT NOT SHOWN.

PROJECT GEOTECHNICAL ENGINEER SHALL
MONITOR PILE INSTALLATION.

FOUNDATION SUBCONTRACTOR OR PILE CONTRACTOR TO INSTALL
UPLIFT CONNECTORS PROVIDED BY CTI ON EACH PILE. PILE UPLIFT
CONNECTOR REQUIRED CAPACITY EQUAL TO 30 KIPS.

A MINIMUM OF TWO PILES SHALL BE DYNAMICALLY MONITORED
DURING INSTALLATION AND RESTRIKE BY GEOTECHNICAL ENGINEER
OR SOMEONE THEY DESIGNATE, UTILIZING ASTM D4945 STANDARD
TEST METHOD FOR HIGH-STRAIN DYNAMIC TESTING OF PILES. SEE
GEOTECHNICAL REPORT FOR ADDITIONAL PILE TESTING AND
INSTALLATION REQUIREMENTS.

COPY



CALDWELL
Since 1987
Water · Energy · Industrial

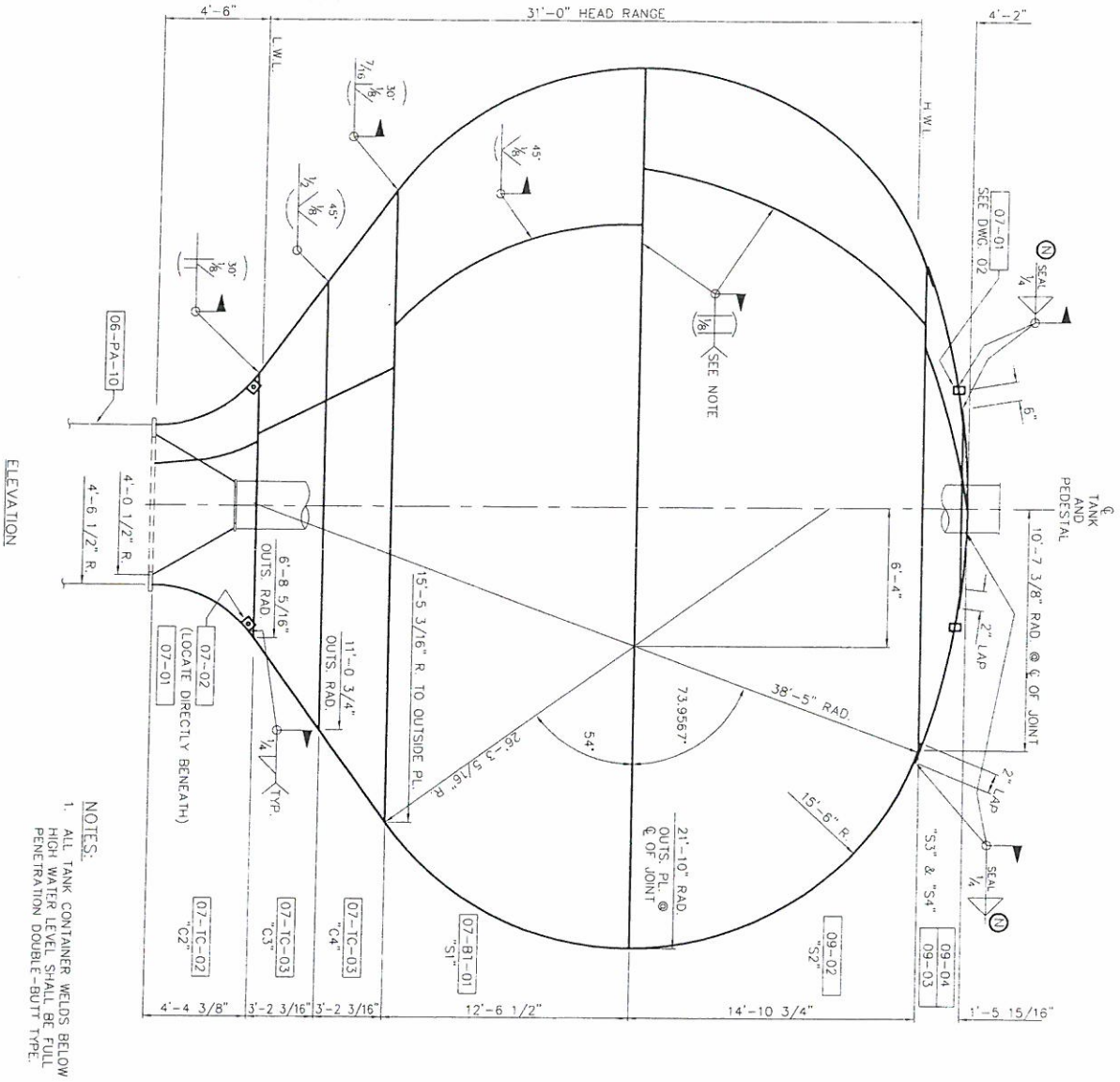
GEORGETOWN, SC
250,000 GALLON PEDESHERE

BY: DTR
DATE: 09/11/11
TITLE: FOUNDATION SKETCH

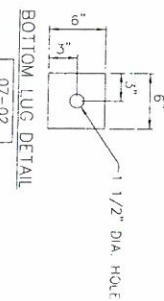
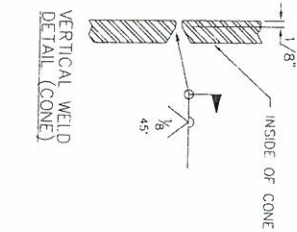
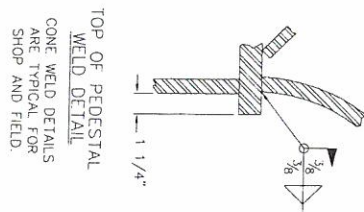
12.A.1

09

Attachment: CALDWELL BID (2383 : Approval of construction bid for North Water Tank)



NOTES:
1. ALL TANK CONTAINER WELDS BELOW HIGH WATER LEVEL SHALL BE FULL PENETRATION DOUBLE-BUTT TYPE.



SHIPPING ITEM	QTY.	P.C. MK.	QTY.	MATERIAL REQ'D	DESCRIPTION
07-TC-02	2	08-02	5	PL C/F (1) 3/4" x 96" x 318"	SMOOTH TRANSITION ASSEMBLY
07-TC-03	8	08-03	1	PL C/F (4) 5/8" x 72" x 191"	CONC. ASSEMBLY
07-B1-01	12	08-04	1	PL C/F (4) 9/16" x 75" x 273"	"S3" CONE
09-02	24	09-01	2	PL C/F (24) 15/32" x 72" x 180"	"S4" CONE
09-03	12			PL C/F (24) 1/4" x 72" x 246"	"S1" BOT. TAIL
09-04	2			PL C/F (3) 1/4" x 77" x 221"	"S2" ROOF KNUCKLE
07-01	2			PL C/F (1) 1/4" x 62" x 227"	"S3" ROOF TAIL
07-02	2			BY 7 DIA SCH 40 PRE x 4 LG. W/DK CAPS	"S4" ROOF CAP
				PL 1/2" x 6" x 6"	ROOF SLEEVE
					BOTTOM LUG

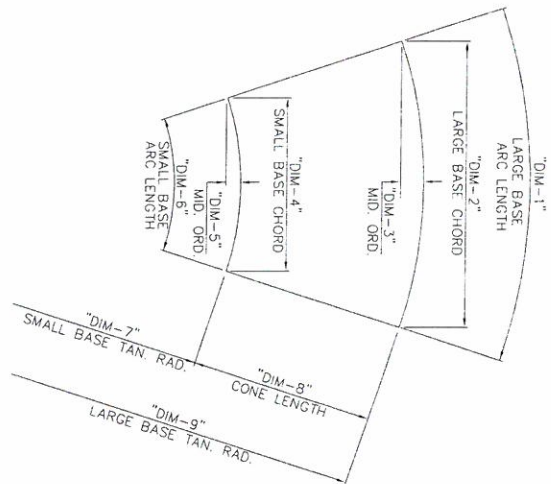
SYMBOL	"C2" DIMENSIONS 08-02	"C3" DIMENSIONS 08-03	"C4" DIMENSIONS 08-04
"1"	3/4"	5/8"	9/16"
"DM-1"	N/A	8'-8"	12'-1 3/16"
"DM-2"	4'-1 9/16"	8'-6 1/4"	11'-10 3/4"
"DM-3"	2 13/32"	8 3/16"	11 7/16"
"DM-4"	2'-9 11/16"	5'-1 27/32"	8'-6 11/32"
"DM-5"	7/16"	4 15/16"	8 3/16"
"DM-6"	N/A	5'-2 7/8"	8'-8 3/32"
"DM-7"	27'-8 7/16"	8'-3 5/32"	13'-8"
"DM-8"	5'-1 7/32"	5'-4 11/16"	5'-4 11/16"
"DM-9"	10'-8 13/16"	13'-7 7/8"	19'-0 23/32"
"DM-10"	4'-1 5/8"	8'-5 1/2"	11'-9 5/8"
"DM-11"	7'-10 7/16"	15'-7 21/32"	21'-9 13/16"
"DM-12"	N/A	N/A	N/A
"DM-13"	N/A	N/A	N/A
"DM-14"	4'-2 31/32"	8'-8 1/8"	12'-1 5/16"
"DM-15"	2'-10 1/4"	5'-3 1/32"	8'-8 7/32"
"DM-16"	2'-9 11/16"	5'-1 7/16"	8'-5 9/16"
"DM-17"	5'-4 1/16"	9'-5 5/8"	15'-7 25/32"
"DM-18"	N/A	N/A	N/A
"DM-19"	N/A	N/A	N/A
"DM-20"	6'-8 5/16"	11'-0 3/4"	15'-5 3/16"
"DM-21"	N/A	18'-9 7/32"	26'-2 1/2"
"DM-22"	4'-6 1/2"	6'-8 13/32"	11'-0 27/32"
"DM-23"	N/A	11'-4 5/32"	18'-9 7/16"
"DM-24"	4'-4 19/32"	3'-2 1/32"	3'-2 1/32"

SHOP INFORMATION

NO. SEG.	10	8	8
SEG. WT.	530	960	1290
VERT. EDGE	DETAIL "A"	DETAIL "A"	DETAIL "A"
SM. END	NO BEVEL	DETAIL "C"	DETAIL "A"
L.G. END	NO BEVEL	DETAIL "A"	NO BEVEL

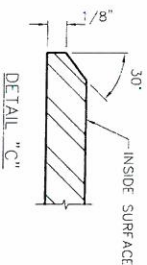
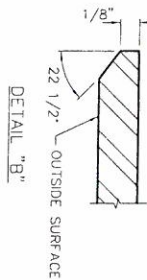
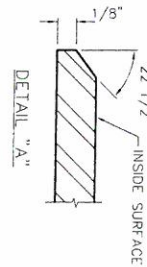
SHIPPING INFORMATION

NO. ASSY	5	8	8
REF. DWG.	07	07	07



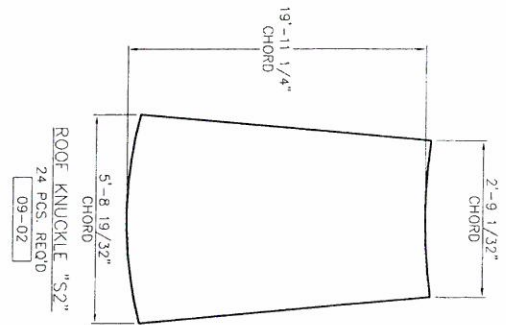
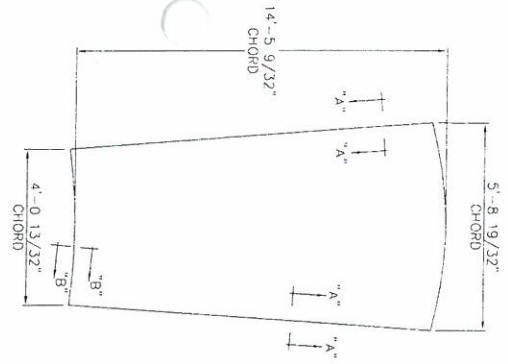
08-01
08-02
08-03
08-04

CONE DIMENSIONS BEFORE FORMING
ALL DIMENSIONS ON CENTERLINE OF PLATE



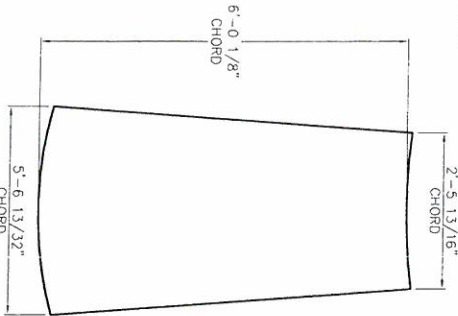
CONE DIMENSIONS AFTER FORMING
ALL DIMENSIONS ON OUTSIDE OF PLATE

COPY

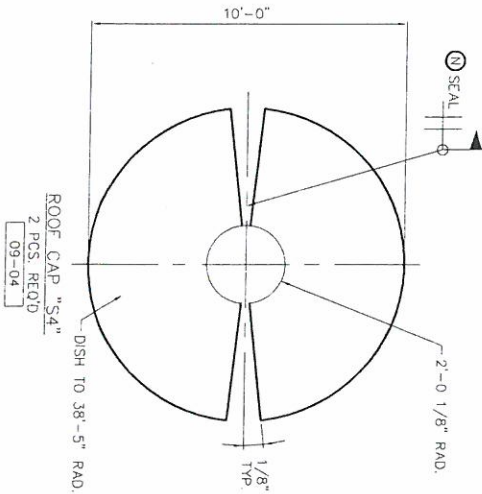


DIMENSIONS AFTER FORMING ON OUTSIDE OF PLATE	
SMALL END	
CHORD ACROSS TWO PIECES	= 7'-11 7/8"
CHORD ACROSS FOUR PIECES	= 15'-5 3/16"
LARGE END	
CHORD ACROSS TWO PIECES	= 11'-3 5/8"
CHORD ACROSS FOUR PIECES	= 21'-10"

BOTTOM TAIL "S1"
24 PCS. REOD
09-01

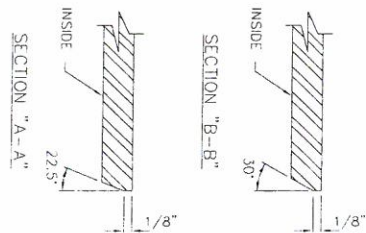


ROOF TAIL "S3"
12 PCS. REOD
09-03



ROOF CAP "S4"
2 PCS. REOD
09-04

- NOTE:
1. ALL DIMENSIONS ARE CALCULATED ON CENTERLINE OF PLATE BEFORE FORMING.
 2. ALL TANK SEAMS & ACCESSORIES ABOVE WELDED INSIDE & OUTSIDE.



COPY

September 12, 2017

Mr. Orlando Arteaga, P.E.
City Engineer
City of Georgetown
PO Box 939
2377 Maybank Drive
Georgetown, South Carolina 29442

**RE: North Side Water Storage Tank
City of Georgetown Project # 1508
WKD Project Number 20160218.00.CH
Bid Tabulation and Recommendation**

Dear Orlando:

Enclosed is the Certified Bid Tabulation for the bid received on September 6, 2017 for the Northside Elevated Water Tank project.

Based upon our review of the bid, we recommend that the City of Georgetown award the construction contract in the amount of \$1,574,700.00 to Caldwell Tanks, Inc., to perform the work required for this project. This contract amount includes all the base bid work, as well as the work required by alternate adder #1.

We appreciate the opportunity to provide services to the City of Georgetown, and we are available to answer any questions you may have.

Sincerely,

W. K. Dickson & Co., Inc.



A. Paul Smith, III, P.E.

Enclosure

cc: Will Cook, City of Georgetown

162 Seven Farms Drive, Suite 210
Charleston, SC 29492
Tel. 843.416.5560
Fax 843.416.5563
www.wkdickson.com

Aviation • Water Resources • Urban Development • Geomatics

Attachment: 2017 09 12 Northside Elevated Water Tank award recommendation letter (2383 : Approval of construction bid for North Water

BID TABULATION
North Side Water Storage Tank
Project # 1508
City of Georgetown
Bid Date: 09/06/2017

ITEM	DESCRIPTION	QTY.	UNIT	BIDDER #1 Caldwell Tanks, Inc. 4000 Tower Road Louisville, KY 40219		BIDDER #2 No Bid		BIDDER #3 No Bid	
				UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
Item -1	Mobilization, Demolition, Bonding and Licenses	1	LS	\$76,500.00	\$76,500.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -2	250,000 gallon elevated tank (uncludes electrical, foundation, interior valving and appurtenances)	1	LS	\$993,724.00	\$993,724.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -3	12" Waterline Installed by HDD	1,350	LF	\$130.00	\$175,500.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -4	12" MJ Waterline Installed by Open Cut	265	LF	\$75.00	\$19,875.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -5	12" RJ waterline installed by open cut	1,102	LS	\$75.00	\$82,650.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -6	Bore and Jack Casing Under Roadway	1	LS	\$18,000.00	\$18,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -7	12" RJ Waterline Installed Casing	1	LS	\$6,000.00	\$6,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -8	24" x 12" Tapping Sleeve & Valve	1	LS	\$10,350.00	\$10,350.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -9	12" Gate Valves	2	EA	\$3,500.00	\$7,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -10	Ductile Iron Fittings	1	TON	\$14,000.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -11	Sidewalk	150	LF	\$35.00	\$5,250.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -12	Cut & Replace Asphalt Paving/Driveways	20	SY	\$150.00	\$3,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -13	Gavel Paving	1,200	SY	\$13.00	\$15,600.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -14	Clearing	1	AC	\$8,500.00	\$8,500.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -15	Fencing	600	LF	\$35.00	\$21,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -16	Silt Fencing	1,600	LF	\$5.00	\$8,000.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -17	Sediment Tube	80	LF	\$20.00	\$1,600.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -18	15' Wide Double Gate	1	EA	\$1,500.00	\$1,500.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -19	Flowable Fill	13	CY	\$350.00	\$4,550.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -20	Manual Air Release Valves	3	EA	\$1,800.00	\$5,400.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -21	Restrained Joints Installed on Existing Waterlines	TBD	EA	\$500.00	\$0.00				
Item -22	Work not specifically identified above, but required by	1	LS	\$1.00	\$1.00	\$0.00	\$0.00	\$0.00	\$0.00
Item -23	Cash Allowance A: SCADA	1	Allowance		\$65,000.00		\$65,000.00		\$65,000.00
BASE BID TOTAL OF ITEMS 1 THROUGH 23 INCLUSIVE, THE AMOUNT OF:					\$1,529,000.00		\$65,000.00		\$65,000.00
ALTERNATE ADDER No. 1: All work associated with modifications at the Yogi Bear elevated water tank site.					\$45,700.00		\$0.00		\$0.00

I hereby certify to the best of my knowledge, the above is a true tabulation of BIDS received September 06, 2017.



A. Paul Smith III, P.E.
 S.C. Professional Engineering License No. 18751

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

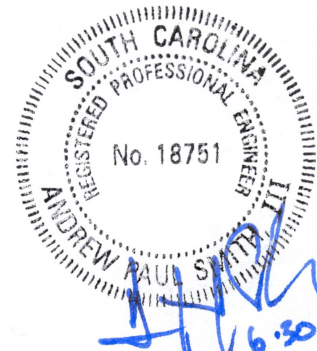
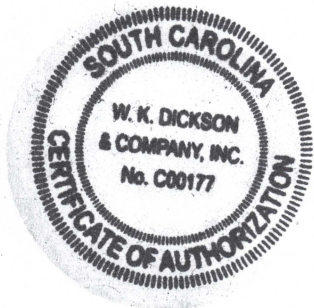
CITY OF GEORGETOWN
SOUTH CAROLINA
PROJECT MANUAL
FOR
NORTH SIDE WATER STORAGE TANK

PROJECT #1508

June 27, 2017

REV	DATE	DESCRIPTION	BY	CHK	APR

CITY OF GEORGETOWN
1134 N Fraser Street
GEORGETOWN SC 29440
(843) 545-4000



COVER PAGE
00001

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APPENDIX A

Geotech Report

APPENDIX B

SCADA Proposal – MR Systems

APPENDIX C

Tank Logos

(END OF SECTION)

SECTION 00010 ENUMERATION OF THE DOCUMENTS

The drawings, specifications and addenda, which form a part of this contract as set forth in Paragraph 1 of the General Conditions, Contract and Contract Documents are enumerated in Section 00005 - Table of Contents.

The order of precedence when conflicts in the documents occur is as follows:

1. Permits from other Agencies as may be required by law
2. Change Orders and/or supplemental agreements according to the latest date
3. Contract Agreement
4. Addenda
5. Bid Forms or Contractor's Proposal Response
6. Invitation to Bid or Request for Proposals
7. Instruction to Bidders or Request for Qualifications
8. Approved Shop Drawings and Working Drawings
9. Supplementary Special Provisions
10. Technical Specifications
11. Plan Set
12. Standard Drawings and Details
13. City's Standard Specifications, Amendments and Supplements
14. Agency Standard Specifications, i.e. SC DOT and SCDHEC Standard Specifications
15. Referenced Specifications

The figured dimensions shown on the Drawings and in the Specifications, may not, in every case agree with the scale dimension. Figured dimensions take precedence over scaled dimensions and finer scaled drawings take precedence over coarser scaled drawings, i.e. one inch equals twenty feet, drawings take precedence over one inch equals fifty feet drawings.

(END OF SECTION)

ENUMERATION OF THE DOCUMENTS
00010-1

**SECTION 00015
REFERENCES**

The following reference shall be used hereinafter:

<u>Owner:</u> City of Georgetown, SC PO Box 939 Georgetown, SC 29442	The City of Georgetown hereinafter will be referred to as the “Owner” and/or the “City”.
<u>City Administrator:</u> Mr. Paul Gardner PO Box 939 Georgetown, SC 29442	Mr. Paul Gardner hereinafter will be referred to as the “City Administrator”.
<u>Risk Manager:</u> Ms. Suzanne Abed-El-Latif PO Box 939 Georgetown, SC 29442	Ms. Suzanne Abed-El-Latif hereinafter will be referred to as the “Risk Manager”.
<u>Purchasing Agent</u> Ms. Daniella Howard PO Box 939 Georgetown, SC 29442	Ms. Daniella Howard hereinafter will be referred to as the “Purchasing Agent”.
<u>Project Manager:</u> Mr. Orlando Arteaga PO Box 939 Georgetown, SC 29442	Mr. Orlando Arteaga, P.E. hereinafter will be referred to as the “Project Manager”
<u>Designer of Record</u> WK Dickson, Inc. 162 Seven Farms Drive Suite 210 Charleston, SC 29492	Mr. A. Paul Smith III, P.E., hereinafter will be referred to as the “Engineer”

(END OF SECTION)

REFERENCES
00015-1

**SECTION 00020
ADVERTISEMENT FOR
BIDS**



**CITY OF GEORGETOWN, SC
REQUEST FOR BID**

PROJECT NAME: North Side Water Storage Tank
 PROJECT #: 1508
 BID #: 2017-14-31
 DATE OF ISSUE: Tuesday, June 27, 2017
 DUE DATE: No later than 2:00 pm (EST), Tuesday, July 25, 2017

The City of Georgetown requests separate sealed bids from qualified contractors for the **North Side Water Storage Tank**, in the City of Georgetown, SC. The scope of work for this project is described in the complete Bid Documents which are available for purchase by going to Plan Room at www.wkdickson.com and registering as a vendor. **Please note that only registered plan holders may bid as a General Contractor.** Plans and Specifications may be examined at: W.K. Dickson & Co., Inc., 162 Seven Farms Drive, Suite 210, Charleston, SC 29492.

Bids will be publicly opened and read aloud at the Water Utilities and Engineering Dept. Building, 2377 Anthuan Maybank Drive, Georgetown, SC 29440. Last day for questions is Tuesday, July 18, 2017, by 2:00 pm.

Each bid must be accompanied by a certified check of the Bidder, or by Bid Bond made payable to the City, for an amount equal to not less than five percent (5%) of the total bid as a guarantee that, if the bid is accepted, the required Agreement will be executed and that a one hundred and ten percent (110%) Performance Bond and a one hundred percent (100%) Payment Bond will be furnished.

Any prospective bidder, offeror, contractor or subcontractor who believes they are aggrieved in connection with the solicitation of this contract may protest to the Owner in accordance with Section 11-35-4210 of the South Carolina Code of Laws, within 15 days of the date of issuance of the Notice of Intent to Award.

All bidders shall be legally qualified under the provisions of the South Carolina Contractor's Licensing Law, Chapter 11, Sections 40-11-05 through 40-11-440 of the South Carolina Code of Laws as amended. Any bid submitted by a bidder who does not meet these requirements shall be rejected.

The City reserves the right to waive any informality in bidding and to reject any or all bids if it is in City's best interest to do so. Unless all bids are rejected, award will be to the low responsive, responsible Bidder.

The City of Georgetown is an equal opportunity/ affirmative action employer.

No Bidder may withdraw the bid within sixty (60) days after the actual date of the opening and thereof.

Bid documents will be modified only by written addenda. All project information will be posted on the Plan Room at www.wkdickson.com. It is the responsibility of the Bidder to obtain the information directly from the WK Dickson Plan Room site. It is strongly recommended that the bidder checks the site daily for updates. Bids received after the due date and specified time will not be considered for any reason and will remain unopened. City will not accept bids by fax or electronic mail.

ADVERTISEMENT FOR BIDS
00020-1

Bids are to be mailed or hand delivered only to the address listed below:

Physical Address:

City of Georgetown

Attn: Purchasing - Bid Proposal

North Side Water Storage Tank Proj #1508

2377 Anthuan Maybank Drive

Georgetown, SC 29440

Mailing Address:

City of Georgetown

Attn: Purchasing - Bid Proposal

North Side Water Storage Tank Proj #1508

PO Drawer 939

Georgetown, SC 29442

(END OF SECTION)

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 00100 INFORMATION FOR BIDDERS

1. PROJECT DETAIL

Generally and without force or effect on the Contract requirements, the Work consists of construction a new 250,000 gallon elevated water storage tank, approximately 2,100 linear feet of new 12" water line, and the modification of an existing altitude valve vault.

2. RECEIPT AND OPENING OF BIDS

1. The City of Georgetown (hereinafter called the "Owner") invites bids on the form (s) attached hereto, all blanks of which must be appropriately filled in. Sealed bids, one (1) original and two (2) copies, must be received by the City's Purchasing Department no later than **2:00 pm, Thursday, July 25, 2017**. Bids will be publicly opened at the Water Department located at 2377 Anthuan Maybank Drive, and read aloud at that time. No bid proposal will be accepted after the due date and time specified above. Faxed or emailed bid proposals will not be accepted for any reason. The City reserves the right to waive any technicalities or informalities and to accept or reject any and/or all submissions as deemed by its sole judgement to be in its best interest. The City also reserves the right to terminate the selection process without notice, to waive any irregularities in any submittal, and to request additional information from any of the firms submitting a bid proposal.
2. All bids should be clearly marked on the outside, **"North Side Water Storage Tank" #1508**.
3. It is the sole responsibility of the proposer to have their proposals delivered to the City of Georgetown before the closing hour and dated. The City assumes no responsibility for delivery of proposals that are mailed. Late, faxed, or emailed proposals will not be accepted nor considered for any reason and will remain unopened. The official clock shall be that of the City's Purchasing Agent, or designee. The City reserves the right to reject any or all bids and to waive any informalities and technicalities in the bid process.

The envelopes containing the bids and bid bonds must be sealed and addressed to either our physical address, or our post office box:

Physical Address:

City of Georgetown
Attn: Purchasing - Bid Proposal
North Side Elevated Water Tank, Proj.
#1508
2377 Anthuan Maybank Drive
Georgetown, SC 29440

Mailing Address:

City of Georgetown
Attn: Purchasing - Bid Proposal
North Side Elevated Water Tank, Proj.
#1508
PO Drawer 939
Georgetown, SC 29442

The Owner may consider informal any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities or reject any and all bids. Any bid may be withdrawn prior to the above scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may

INFORMATION FOR BIDDERS

00100-1

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

withdraw a bid within sixty days after the actual date of the opening thereof.

3. PREPARATION OF BID

Each bid must be submitted on the prescribed form. All blank spaces for bid prices must be filled in with ink or typewritten.

Bids which are incomplete, unbalanced, conditional or obscure, or which contain additions not called for, erasures, alterations, or irregularities of any kind, or which do not comply with the Information for Bidders, may be rejected at the option of the Owner.

The correct total amount bid for the completed work is defined as the correct sum total of the amounts bid for the individual items in the proposal.

Each bid must be submitted in a sealed envelope bearing on the outside the name of the Bidder, Bidder's address, Contractor's license number, Bidder's license number, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed as specified above.

4. SUBCONTRACTS

The bidder is specifically advised that any person, firm, or other party to whom it is proposed to award a subcontract under this contract must be acceptable to the Owner. A list of subcontractors must be included with the bid submittal on the form provided.

5. TELEGRAPHIC MODIFICATION

Any bidder may modify its bid by telegraphic or facsimile communication at any time prior to the scheduled time for receipt of bids, provided such telegraphic or facsimile communication is received by the Owner prior to closing time, and provided further the Owner is satisfied that a written confirmation of the telegraphic or facsimile modification over the signature of the bidder was mailed prior to the closing time.

The telegraphic or facsimile communication should not reveal the bid price, but should provide the addition or subtraction or other modification so that the final prices or terms will not be known by the Owner until the sealed bid is opened. If written confirmation is not received within two (2) days from the closing time, no consideration will be given to the telegraphic or facsimile modification.

6. QUALIFICATION OF BIDDER

The Owner may make such investigations as is deemed necessary to determine the ability of the bidder to perform the work, and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request.

The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of, such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the contract and to complete the work contemplated therein.

Conditional bids will not be acceptable.

7. BID SECURITY

Each bid must be accompanied by cash, certified check of the bidder, or a bid bond prepared on the form of bid bond attached hereto, duly executed by the bidder as principal and having as surety thereon a surety company approved by the Owner, in the amount of five percent (5%) of the bid. Cash or checks will be returned to all except the three (3) lowest bidders within three (3) days after the opening of bids, and the remaining cash or checks will be returned promptly after the Owner and the accepted bidder have executed the contract, or, if no award has been made within sixty (60) days after the date of the opening of the bids, upon demand of the bidder at any time thereafter so long as bidder has not been notified of the acceptance of its bid.

8. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT

The successful bidder, upon failure or refusal to execute and deliver the contract and bonds required within ten (10) days after they have received notice of the acceptance of their bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with the bid.

9. TIME OF COMPLETION AND LIQUIDATED DAMAGES

Bidder must agree to commence work on or before a date to be specified in a written "Notice to Proceed" of the Owner and to fully complete the project within the number of consecutive calendar days thereafter as indicated on the Bid Form. Bidder must agree also to pay as liquidated damages the sum indicated on the Bid Form for each consecutive calendar day thereafter as hereinafter provided in General Conditions.

10. CONDITIONS OF WORK

Each bidder must inform himself fully of the conditions relating to the construction of the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of the obligation to furnish all material and labor necessary to carry out the provisions of the contract.

Insofar as possible, the Contractor in carrying out the work must employ such methods and means as will not cause any interruption of, or interference with, the work of any other contractor.

11. ADDENDA AND INTERPRETATIONS

No interpretation of the meaning of the plans, specifications, or other pre-bid documents will be made to any bidder orally. Each request for such interpretation should be in writing and addressed to the Project Manager. To be given consideration, the request must be received at least ten (10) days prior to the date fixed for the opening of bids.

Any and all such interpretations and any supplemental instructions will be in the form of written addenda which, if issued, will be on the City of Georgetown website <http://www.cogsc.com> no later than three (3) days prior to the date fixed for the opening of bids. It shall be the bidder's responsibility to check for addenda before issuing its bid. Failure of any bidder to receive any addendum shall not relieve the bidder from any obligation under its bid as submitted. All addenda so issued shall become part of the contract documents.

12. SECURITY FOR FAITHFUL PERFORMANCE

Simultaneously with bidder's delivery of the executed contract, the Contractor shall furnish a surety bond or bonds as secured for faithful performance of this contract and for the payment of all persons performing labor on the project under this contract, as specified in General Conditions included herein. The surety on such bond or bonds shall be a duly authorized surety company, bond shall be countersigned by an agent residing in South Carolina, and the said surety shall be satisfactory to the Owner. The Performance Bond shall be in the amount of one-hundred and ten percent (110%) of the bid and the Payment Bond shall be in the amount of one-hundred percent (100%) of the bid.

13. POWER OF ATTORNEY

Attorneys-in-fact who sign bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

14. NOTICE OF SPECIAL CONDITIONS

Attention is particularly called to those parts of the contract documents and specifications which deal with the following:

A. Insurance requirements

15. LAWS AND REGULATIONS

The Bidder's attention is directed to the fact that all applicable State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included in the contract the same as though herein written out in full.

16. METHOD OF AWARD - LOWEST QUALIFIED BIDDER

If at the time this contract is to be awarded, the lowest base bid or alternate bid submitted by a responsible bidder does not exceed the amount of funds then estimated by the Owner as available to finance the contract, the contract will be awarded on the base bid or alternate bid. If such bid exceeds such amount, the Owner may reject all bids or may award the contract on the base bid combined with such deductible alternates applied in numerical order in which they are listed in the Form of Bid, as produces a net amount which is within the available funds.

The Owner will decide which the lowest qualified bidder is, and in determining such bidder, the following elements will be considered for each bidder:

- A. Maintains a permanent place of business.
- B. Has successfully completed other work with the City
- C. Has adequate equipment and personnel to perform the work properly and expeditiously.
- D. Has suitable financial status to meet obligations incident to the work.
- E. Has appropriate technical experience.

17. RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK

The work comprises approximately the tasks shown in the bid form which will be used as a basis for comparison of Bids and not for final estimate. The Owner does not, by expression or by implication, agree that the actual amount of work shall correspond with the tasks listed. The Owner reserves the right to increase or decrease the amount of work under the Contract of the work contemplated, by the task prices quoted in the Bid.

18. OBLIGATION OF BIDDER

At the time of the opening of bids, each bidder will be presumed to have inspected the site and to have read and be thoroughly familiar with the plans and contract documents, including all addenda. If a site visit is required, contact the Project Manager to schedule a date and time. The failure or omission of any bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation in respect to its bid.

(END OF SECTION)

**SECTION 00110
CONTRACTOR'S AND SUBCONTRACTOR'S
INSURANCE REQUIREMENTS**

1. As required under Paragraph 29 of the General Conditions, the Contractor shall not commence work under this Contract until he has obtained all the insurance required under this paragraph and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence work on his Subcontract until all similar insurance required of the Subcontractor has been so obtained and approved.
2. Unless otherwise specified in this Contract, the Contractor shall, at its sole expense, maintain in effect at all times, during the performance of work, insurance coverage with limits not less than those set forth below with insurers and under forms of policies satisfactory to Owner.
3. The Contractor shall deliver Certificates of Insurance to the Project Manager no later than ten (10) days after award of the Contract but in any event, prior to execution of the Contract by the Owner and prior to commencing work on the site as evidence that policies providing such coverage and limits of insurance are in full force and effect.
 - A. Certificates shall provide not less than thirty (30) days advance notice which will be given in writing to the Owner prior to cancellation, termination, or material alteration of said policies of insurance.
 - B. Certificates shall identify on their faces the **NORTH SIDE WATER STORAGE TANK PROJECT #1508**.
4. Additional Insured: The Commercial General Liability and Excess Liability (Umbrella) insurance policies shall be endorsed to include the Owner as additional insured.
5. The Owner is not maintaining any insurance on behalf of the Contractor covering against loss or damage to the work or to any other property of the Contractor unless otherwise specifically stated herein and as may be described by appendix hereto. In the event the Contractor maintains insurance against physical loss or damage to the Contractor's construction equipment and tools, such insurance shall include an insurer's waiver of rights of subrogation in favor of Owner.
6. The Contractor shall indemnify the Owner and the Architect as stated in Part 47 of Section 00700.
7. Insurance Requirements:
 - A. Commercial General Liability Insurance: The Contractor shall take out and maintain during the life of the Contract such commercial general

liability insurance as shall protect him from claims for damage for bodily injury, including accidental death, as well as from claims for property damage, which may arise from operations under this contract whether such operations are by himself or by any Subcontractor or by anyone directly or indirectly employed by either of them. The amount of such insurance shall not be less than the following:

General Aggregate	\$2,000,000.00
Products - Complete/Operations Aggregate	\$2,000,000.00
Personal and Advertising Injury	\$1,000,000.00
Each Occurrence	\$1,000,000.00
Fire Damage (any one fire)	\$ 50,000.00
Medical Expenses (any one person)	\$ 50,000.00

1. The General Aggregate listed above shall be for this project only.
2. Special Hazards: The Contractor's and his Subcontractors General Liability Insurance shall provide adequate protection against use of explosives, collapse, and underground hazards. Each detonation of blasting shall be considered a single occurrence.

B. Comprehensive Automobile Liability Insurance:

1. Includes coverage for all owned, hired, and non-owned automobiles
2. The combined single limit of liability shall not be less than the following:

Any One Accident or Loss	\$1,000,000.00

C. Excess Liability (Umbrella) Insurance:

1. Contractor shall carry and maintain Combined Excess Liability (Umbrella) insurance for a limit not less than the following:

Each Occurrence	\$2,000,000.00

Aggregate	\$2,000,000.00

D. Worker's Compensation: The insurance required by this section shall be written for not less than the following or greater if required by law:

1. Statutory benefits as provided by South Carolina Law
2. Employers' Liability:

Each Accident	\$500,000.00
Disease - Policy Limit	\$500,000.00
Disease - Each Employee	\$500,000.00

E. Builders Risk Insurance: The Contractor shall purchase and maintain an "all risk" or special perils form builder's risk policy issued in the name of the Contractor, Owner and Subcontractors for the full contract value of the insurable portions of the work. This policy shall contain a provision that in the event of payment of any loss or damage, the insurer will have no rights of recovery against any of the parties named as insureds or additional insureds.

F. Flood Insurance: The Contractor is required to carry flood insurance for projects located in designated flood hazard area in which Federal Flood Insurance is available.

G. Owner's Protective Liability Insurance: The Contractor shall purchase and maintain an Owner's Protective Liability policy issued in the name of the Owners with a combined single limit of liability of not less than the following:

Each Occurrence	\$2,000,000.00
Aggregate	\$2,000,000.00

(END OF SECTION)

**SECTION 00311
BID FORM**

NORTH SIDE WATER STORAGE TANK, PROJECT #1508
For the City of Georgetown, SC

Date: _____

PROPOSAL OF _____

(hereinafter called "Bidder"), a _____(State)

corporation/partnership/individual (Strike out inapplicable terms) doing business as

TO: City of Georgetown, SC

TO: Whom it may concern:

The Bidder, in compliance with your invitation for bids for the **NORTH SIDE WATER STORAGE TANK, PROJECT #1508** having examined the drawings and specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, for the Lump Sum of:

_____ Dollars \$ (_____)

The lump sum price indicated above shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The lump sum price indicated above shall also include the amounts indicted as Allowances, if any, and as described in the Division 1 Section "Allowances". Should actual cost vary from the Allowance listed, The Contract Sum shall be adjusted by Change Order.

Bidder hereby agrees to commence work under this contract on or before a date to be specified in written "Notice to Proceed" of the Owner and to fully complete the project within **Four hundred and sixty (460)** consecutive calendar days after specified date on Notice to Proceed.

Bidder further agrees to pay as liquidated damages the sum of \$750.00 for each consecutive calendar day thereafter as hereinafter provided in Paragraph 19 of the General Conditions 00700.1.

The specifications and addenda are complementary of each other. What is called for by one shall be as binding as if called for by all. If a conflict between any of the above is discovered by the contractor, the problem shall be referred to the Owner as soon as possible for resolution by the Owner. Should a conflict occur which is not resolved before bid time and/or is necessary to comply with mandatory requirements (i.e., codes, ordinances, etc.), it shall be the contractor's responsibility to price and bid the more expensive method.

Bidder acknowledges receipt of the following addendum:

No.:__Dated: _____

No.:__Dated: _____

No.:__Dated: _____

No.:__Dated: _____

No.:__Dated: _____

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informality in the bidding.

The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of sixty (60) Calendar days after the scheduled closed time for receiving bids.

SCHEDULE OF TASKS

Additions and deletions from the Work shall be paid in accordance with the Prices indicated below.

Item No.	Task Description	Quantity	Unit	Unit Price	Total Price
1	Mobilization, Demobilization, Bonding and Licenses	1	LS		
2	250,000 gallon elevated tank (includes electrical, foundation, interior valving and appurtenances)	1	LS		
3	12" waterline installed by HDD	1350	LF		
4	12" MJ waterline installed by open cut	265	LF		
5	12" RJ waterline installed by open cut	1102	LF		
6	Bore & jack casing under roadway	1	LS		
7	12" RJ waterline installed casing	1	LS		
8	24" x 12" tapping sleeve & valve	1	LS		
9	12" gate valves	2	EA		
10	Ductile Iron Fittings	1	Ton		0
11	Sidewalk	150	LF		
12	Cut & Replace Asphalt Paving /Driveways	20	SY		
13	Gravel paving	1200	SY		
14	Clearing	1	Acre(s)		
15	Fencing	600	LF		
16	Silt Fencing	1600	LF		
17	Sediment Tube	80	LF		
18	15' Wide Double Gate	1	EA		
19	Flowable fill	13	CY		
20	Manual air release valves	3	EA		
21	Restrained joints installed on existing waterlines	TBD	EA		0
22	Work not specifically identified above, but required by Contract Documents	1	LS		
23	Cash allowance A: SCADA	Allowance			\$65,000.00
Total Bid Price (for page 1 of the bid form)					

ALTERNATE ADDER NUMBER 1:

Item No.	Task Description	Quantity	Unit	Total Price
1	ALTERNATE ADDER NUMBER 1: All work associated with modifications at the Yogi Bear elevated water tank site	1	LS	
DO NOT INCLUDE THIS PRICING IN THE TOTAL BID PRICE				

BID FORM
00311-3

The above Task Prices shall include all labor, materials, overhead, profit, insurance, taxes, fees, etc., to cover the finished work called for.

Prime Contractor Responsibilities - The contractor will be required to assume sole responsibility for the complete effort as required by this RFB. The City will consider the contractor to be the sole point of contact with regard to all project matters.

SUBCONTRACTOR LIST

Subcontracting - If any part of the work covered by this RFB is to be subcontracted, the contractor shall identify the subcontracting organization at the time of the offer. All subcontractors must be approved by the City.

Sub-contractors (with contact information) to be utilized in project:

SUBCONTRACTOR	COMPANY NAME/ADDRESS	CONTACT NAME/ PHONE

EQUIPMENT/MATERIALS

The type/manufacture of the equipment and materials that were used as a basis for the Bid pricing herein, must be identified below:

Equipment/Material	Manufacturer/Type
Altitude Valves	
Check Valves	
Gate Valves	
HDD Pipe (HDPE or fPV)	

The undersigned declares that his firm is (delete those not applicable): A corporation organized and existing under the laws of the State of _____

A partnership consisting of:

The undersigned declares that the person or persons signing this proposal is fully authorized to sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.

It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

Respectfully Submitted:

Contractor

(SEAL – if bid is by a Corporation)

By: _____

(Type/Print Name)

(Title)

(Street Address)

(City, State, Zip Code)

S.C. General Contractor's License No. _____

FID No. _____ and/or SSN _____

(END OF SECTION)

00350 BID BOND**KNOW ALL MEN BY THESE PRESENT:**

That we, the undersigned _____, as Principal,
and _____, as Surety, are hereby held and
firmly bound unto the **City of Georgetown, South Carolina**, as Owner, in the penal sum of
_____ Dollars _____ Cents (\$ _____), for the payment
of which, well and truly to be made, we hereby jointly and severally bind ourselves,
successors and assigns.

Signed this _____ day of _____, 2017.

The condition of the above obligation is such that:

WHEREAS, the Principal has submitted to _____ a certain Bid, attached
hereby and by reference made a part hereof, to enter into a contract in writing for the
_____.

NOW, THEREFORE,

- (A) If said Bid shall be rejected, or
- (B) If said Bid shall be accepted and the Principal shall execute and deliver a contract in the
Form of Contract attached hereto (properly completed in accordance with said Bid) and
shall furnish a Bond for faithful performance of said contract, and for the payment of all
persons performing labor furnishing materials in connection therewith, and shall in all
other respects perform the agreement created by the acceptance of said Bid, then this
obligation shall be void; otherwise the same shall remain in force and effect - it being
expressly understood and agreed that the liability of the Surety for any and all claims
hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety
and its Bond shall be in no way impaired or affected by an extension of the time within which
the Owner may accept such Bid, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and
such of them as are corporations have caused their corporate seals to be hereto affixed and these
presents to be signed by their proper officers, the day and year first set forth above.

BID BOND

00350-1

Principal

(Corporate Seal)

By: _____(L.S)

Surety

(Corporate Seal)

By: _____(L.S)

Important: Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

Note: Bond must be countersigned by a South Carolina resident agent.

(END OF SECTION)

BID BOND

00350-2

**SECTION 00500
CONTRACT**

STATE OF SOUTH CAROLINA

COUNTY OF GEORGETOWN

THIS AGREEMENT, entered into this ____ day of _____, 2017 and effective immediately by and between _____, doing business as a (individual/partnership/corporation), with its principal office in the City of _____ County _____ (State) _____, (hereinafter called the "Contractor") and the City of Georgetown, a duly organized and validly existing political body of the State of South Carolina (hereinafter called "City"),

WITNESSETH THAT WHEREAS, The City desires to engage the services of a professional contractor for the purpose of **NORTH SIDE WATER STORAGE TANK, #1508** hereinafter referred to as "Project"; and,

WHEREAS, The City has solicited bids for the same by that certain Request for Bids for Construction Services, hereinafter referred to as "RFB", a copy of which is attached hereto for all purposes as **EXHIBIT "1"**; and,

WHEREAS, The Contractor has represented to City that it has the qualifications, experience, expertise, training, and personnel to timely perform the Project for City; and,

WHEREAS, The Contractor has expressed its desire to do so by their bid, dated _____, 20_____, hereinafter referred to as "Bid", a copy of which is attached hereto for all purposes as **EXHIBIT "2"**; and,

WHEREAS, the parties desire to enter in an agreement for the Contractor to perform the Project for City per all the terms and conditions more particularly set out herein below;

NOW, THEREFORE, for and in consideration of the foregoing, and of other good and valuable consideration, the adequacy of which is hereby acknowledged, the parties hereto agree as follows:

(1) **SCOPE OF SERVICES:**

- a. Contractor hereby agrees to perform the tasks and services as outlined in the Project Manual, incorporated into this Agreement as **ATTACHMENT "A"** and hereinafter referred to as "Work";

- b. Contractor further agrees to commence and complete any and all extra work in connection therewith, under the terms as stated in the General and Special Conditions of the Contract; and at his/hers (it's or their) own proper cost and expense to furnish all the materials, supplies, machinery, equipment, tools, superintendents, labor, insurance, and other accessories and services necessary to complete the said project in accordance with the conditions and prices stated in the Proposal and the General Conditions, Supplemental General Conditions, and Special Provisions of the Contract, the plans, including all maps, plats, blueprints, and other drawings and printed or written explanatory matters thereof, the specifications and contract documents therefore as prepared by the Design Professional, and as enumerated in Paragraph 1 of the General Conditions, all of which are made a part hereof and collectively evidence and constitute the Contract.
- c. City may, from time to time require changes in the Work of the Contractor to be performed hereunder. Such changes, which are mutually agreed upon by and between City and the Contractor, shall be incorporated by written amendment to this Agreement.

(2) **COMPENSATION:**

- a. City agrees to pay Contractor a sum not to exceed _____ dollars (\$ _____.____) in accordance with the Schedule of Values, incorporated into this Agreement as **ATTACHMENT "B"** and hereinafter referred to as "Compensation";
- b. In the event funds are not appropriated or become non-appropriated for an included fiscal year by City, it is agreed by the parties that this Agreement will become null and void and the City's obligations cannot extend beyond the date of non-appropriation.

(3) **PERIOD OF SERVICES:**

- a. the Work to be performed hereunder by the Contractor shall begin upon the date outlined to the City's Notice to Proceed letter to the Contractor, incorporated into this Agreement as **ATTACHMENT "C"** and hereinafter referred to as "NTP"
- b. The Work shall be completed in accordance with the Schedule, incorporated into this Agreement as **ATTACHMENT "D"** and hereinafter referred to as "Schedule".
- c. Modifications to the Schedule may be required. Such modifications, which are mutually agreed upon by and between City and the Contractor shall be incorporated by written amendment to this Agreement.

(4) **FORCE MAJEURE:**

- a. Force majeure includes acts of God, acts of other branches of government in either their sovereign or contractual capacities, or any similar cause beyond the reasonable control of the parties.

- b. Any delays in or failure of performance by either party that are caused by a Force Majeure shall not constitute breach of this Agreement.
- c. In the event that any event of force majeure, as herein defined occurs, both parties shall be entitled to a reasonable extension of time for performance of its WORK.

(5) **NOTICES:**

- a. Any notices, bills, invoices, or reports required by this Agreement shall be sufficient if sent by the parties in the United States mail, postage paid, to the addresses of the Project Manager (See Section 00015)

(6) **RECORDS AND INSPECTIONS:**

- a. Contractor shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of one year after the completion of the project.
- b. City shall have free access at all proper times to such records, and the right to examine and audit the same and to make transcripts there from, and to inspect all program data, documents, proceedings, and activities.

(7) **COMPLETENESS OF AGREEMENT:**

- a. This Agreement and any additional or supplementary document or documents incorporated herein by specific reference contain all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind any of the parties hereto
- b. This Agreement is entered into with full understanding and awareness of such requirement.
- c. City shall be allowed to rely upon the representations of Contractor as set out in the Proposal.
- d. With the exception of the foregoing, this Agreement constitutes the entire agreement between the parties hereto and may not be modified or amended except in writing signed by both parties hereto.

(8) **CONFLICTS:**

- a. In the case of any conflict between the terms and conditions of this Agreement and the terms of any other agreement between the parties hereto, the terms of this Agreement shall control
- b. If there is a conflict between the City's Proposal and this Agreement, then this Agreement shall control.
- c. If there is a conflict between the City's Request for Bids and the Contractor's Proposal, the City's Request for Bids shall control.

- d. Both parties agree that all conflicts arising under this Agreement that cannot be settled between the parties shall be resolved in the Georgetown County Court of Common Pleas (Non-Jury)

(9) **SEVERABILITY:**

- a. If any part or provision of this Agreement is held invalid or unenforceable under applicable law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining parts and provisions of this Agreement.

(10) **NONWAIVER:**

- a. The waiver by City or Contractor of a breach of this Agreement shall not operate as a waiver of any subsequent breach, and no delay in acting with regard to any breach of this Agreement shall be construed to be a waiver of the breach.
- b. In no event shall the making of any payment by City to the Contractor constitute or be construed as a waiver by City of any breach of covenant, or any default which may exist on the part of the Contractor.
- c. The making of any such payment by City while any such breach or default shall exist in no way impairs or prejudices any right or remedy available to City in respect to such breach or default.

(11) **GOVERNING LAW:**

- a. This Agreement and the rights, obligations and remedies of the parties hereto, shall in all respects be governed by and construed in accordance with the laws of the State of South Carolina.

(12) **RESPONSIBILITY:**

- a. Each party shall be responsible for its own acts as provided under the law of South Carolina and will be responsible for all damages, costs, fees and expenses which arise out of the performance of this Agreement which are due to that party's own negligence, tortious acts and other unlawful conduct and the negligence, tortious action and other unlawful conduct of its respective agents, officers and employees.

(13) **FREEDOM OF INFORMATION ACT (FOIA)**

- a. The parties acknowledge that all documents are subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.
- b. If the Contractor contends a document is exempt from disclosure under the FOIA, it shall mark any such documents plainly, and seek protection from disclosure by filing an appropriate action in Circuit Court and shall bear the cost of the action and any monetary or attorney's fees awarded to the person or entity making the FOIA request.

- c. If the Contractor objects to release and litigation is commenced against the City under the FOIA, the City agrees to promptly notify the Contractor, who shall move in intervene as a party. The Contractor agrees to hold the City harmless from and indemnify for all costs (including plaintiff's attorney's fees if awarded by the Court) incurred by the City in defending the lawsuit and the funds necessary to satisfy any judgment and all costs on appeal, if any.
- (14) **THIRD PARTY OBLIGATIONS:**
- a. Neither party shall be obligated or liable hereunder to any party other than the second party to this Agreement.
- (15) **RESTRICTIONS ON LOBBYING:**
- a. Contractor shall comply with all requirements of Section 1352, Title 31 of the U.S. Code, which prohibits all recipients of federal funds from using appropriated monies for lobbying activities.
- (16) **SUCCESSORS AND ASSIGNS:**
- a. The rights and obligations herein shall inure to and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, City and the Contractor have executed this agreement as of the date first written above.

CITY OF GEORGETOWN, SOUTH CAROLINA
(OWNER)

(SIGNATURE)

By: _____

(SEAL)

Title: _____

(CONTRACTOR)

(SIGNATURE)

By: _____

(CORPORATE SEAL)

Title: _____

Attest: _____

It's Secretary _____

Witness _____

(END OF SECTION)

CONTRACT
00500-5

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

**SECTION 00501.1
PERFORMANCE BOND**

KNOW ALL MEN BY THESE PRESENTS THAT

(NAME OF CONTRACTOR)

(ADDRESS OF CONTRACTOR)

a Corporation Partnership, hereinafter called Principal, and

(NAME OF SURETY)

(ADDRESS OF SURETY)

hereinafter called Surety, are held and firmly bound unto

THE CITY OF GEORGETOWN, SOUTH CAROLINA
(NAME OF OWNER)

PO BOX 939, GEORGETOWN, SC 29442
(ADDRESS OF OWNER)

hereinafter called Owner, in the penal sum of _____ Dollars
_____ Cents (\$ _____), in lawful money of the United States, for the payment
of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and
successors, jointly and severally, firmly by these present.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a
certain Contract with the Owner dated the _____ day of _____ 20____, a copy
of which is hereto attached and made part hereof for **NORTH SIDE WATER STORAGE TANK**

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties, all the
undertakings, covenants, terms, conditions, and agreements of said Contract during the original term
thereof, and any extensions thereof which may be granted by the Owner, with or without notice to
the Surety, and if he shall satisfy all claims and demands incurred under such contract and fully
indemnify and save harmless the Owner from all costs and damages which it may suffer by reason
of failure to do so, and shall reimburse and repay the Owner all outlay and expense which the Owner
may incur in making good any default, then this obligation shall be void; otherwise to remain in full
force and effect.

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that

PERFORMANCE BOND
00501.1

no change, extensions of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this the _____ day of _____ 20____.

Signed, sealed and delivered in the presence of:

(PRINCIPAL - CONTRACTOR)

(SIGNATURE)

As to Principal

By: _____

Title: _____

(SURETY)

(SIGNATURE)

As to Surety

By: _____

ATTORNEY-IN-FACT
(Power of Attorney to be attached)

By: _____

(RESIDENT AGENT)

(RESIDENT AGENT COMPANY NAME)

(RESIDENT AGENT COMPANY ADDRESS)

(RESIDENT AGENT ADDRESS)

NOTES:

1. Date of Bond must not be prior to date of Contract.
2. If Contractor is a Partnership, all partners should execute Bond.
3. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

(END OF SECTION)

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

**SECTION 00501.2
PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS THAT

(NAME OF CONTRACTOR)

(ADDRESS OF CONTRACTOR)

a Corporation Partnership, hereinafter called Principal, and

(NAME OF SURETY)

(ADDRESS OF SURETY)

hereinafter called Surety, are held and firmly bound unto

THE CITY OF GEORGETOWN, SOUTH CAROLINA
(NAME OF OWNER)

PO BOX 939, GEORGETOWN, SC 29442
(ADDRESS OF OWNER)

hereinafter called Owner, in the penal sum of _____ Dollars
_____ Cents (\$ _____), in lawful money of the United States, for the
payment of which sum well and truly to be made, we bind ourselves, our heirs, executors,
administrators, and successors, jointly and severally, firmly by these present.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a
certain Contract with the Owner dated the _____ day of _____ 20____, a
copy of which is hereto attached and made part hereof for **NORTH SIDE WATER STORAGE
TANK.**

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
subcontractors, and corporations furnishing materials for or performing labor in the prosecution of
the work provided for in such contract, and any authorized extension of modification thereof,
including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on
machinery, equipment and tools, consumed or used in connection with the construction of such
work, and all insurance premiums on said work, and for all labor, performed in such work whether
by subcontractor or otherwise, then this obligation shall be void; otherwise to remain in full force
and effect.

PAYMENT BOND
00501.2

PROVIDED FURTHER, that the said Surety, for value received hereby stipulates and agrees that no change, extensions of time, alteration, or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the specifications.

PROVIDED FURTHER, that no final settlement between the Owner and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in three (3) counterparts, each one of which shall be deemed an original, this _____ day of _____ 20____.

Signed, sealed and delivered in the presence of:

(PRINCIPAL - CONTRACTOR)

(SIGNATURE)

As to Principal

By: _____

Title: _____

(SURETY)

(SIGNATURE)

As to Surety

By: _____

ATTORNEY-IN-FACT
(Power of Attorney to be attached)

By: _____

(RESIDENT AGENT)

PAYMENT BOND
00501.2

(RESIDENT AGENT COMPANY NAME)

(RESIDENT AGENT COMPANY ADDRESS)

(RESIDENT AGENT ADDRESS)

NOTES:

1. Date of Bond must not be prior to date of Contract.
2. If Contractor is a Partnership, all partners should execute Bond.
3. Surety companies executing Bonds must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the project is located.

(END OF SECTION)

PAYMENT BOND
00501.2

SECTION 00502
NOTICE OF INTENT TO AWARD

OWNER: City of Georgetown, SC

PROJECT: **NORTH SIDE WATER STORAGE TANK – PROJECT 1508**

TO ALL BIDDERS

This is to notify all Bidders that it is the intent of the Owner to award a contract as follows:

NAME OF BIDDER: _____

DATE BIDS WERE RECEIVED: _____

AMOUNT OF BASE BID: \$ _____

ALTERNATE(S) ACCEPTED: \$ _____

TOTAL AMOUNT WITH ALTERNATE(S): \$ _____

The Owner has determined that the above named Bidder is responsible and has submitted the winning bid. The Owner may enter into a contract with this Bidder subject to the contract review by _____.

(Print or Type Name)

(Award Authority Title)

(Signature)

(Date Posted)

(END OF SECTION)

NOTICE OF INTENT TO AWARD
00502-1

**SECTION 00503
NOTICE OF AWARD**

TO:

PROJECT: NORTH SIDE WATER STORAGE TANK, PROJECT # 1508.

The Owner has considered the bid dated _____ 20 __, submitted by you for the above described work in response to its Advertisement for Bids and its Information for Bidders.

You are hereby notified that your bid has been accepted for items in the amount of \$ _____.

You are required by the Information for Bidders to execute the Agreement and furnish the required Contractor's performance bond, payment bond, and certificates of insurance within ten (10) calendar days from the date of this notice to you. If you fail to execute said agreement and to furnish said bonds within ten (10) days from the date of this notice, said Owner will be entitled to consider all your rights arising out of the Owner's acceptance of your bid as abandoned and as a forfeiture of your bid bond. The Owner will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this Notice of Award to the Owner.

Dated this _____ day of _____, 20__.

CITY OF GEORGETOWN, SOUTH CAROLINA

By: _____

Title: _____

Acceptance of Notice

Receipt of the above Notice of Award is hereby acknowledged this _____ day of _____, 20__.

(Signature)

By: _____

Title: _____

(END OF SECTION)

NOTICE OF AWARD
00503-1

SECTION 00600 EMPLOYMENT ELIGIBILITY VERIFICATION REQUIREMENT

- A. Contractor is required to comply with all applicable State and Federal employment eligibility verification requirements including but not limited to the following:
1. By signing its bid or proposal, Contractor certifies that it will comply with the applicable requirements of Title 41, Chapter 8 of the South Carolina Code of Laws and agrees to provide to the City of Georgetown upon request any documentation required to establish either: (a) that Title 41, Chapter 8 is inapplicable both to Contractor and its subcontractors or sub-subcontractors are in compliance with Title 41, Chapter 8. Pursuant to Section 41-8-70, "In addition to other penalties provided by law, a person who knowingly makes or files any false, fictitious, or fraudulent document, statement, or report pursuant to this chapter is guilty of a felony, and upon conviction, must be fined within the discretion of the court or imprisoned for not more than five years, or both. "Contractor agrees to include in any contracts with its subcontractors language requiring its subcontractors to (a) comply with the applicable requirement of Title 41, Chapter 8, and (b) include in their contracts with the sub-subcontractors language requiring the sub-subcontractors to comply with the applicable requirements of Title 41, Chapter 8.
- B. Contractor is required to complete and submit the attached affidavit along with the executed contract documents.
- C. E-Verify.
1. In addition to completing and maintaining the federal employment eligibility verification form (Form I-9), Contractor must, within three (3) business days after employing a new employee, verify the employee's work authorization through the E-Verify federal work authorization program administered by the U.S. Department of Homeland Security. Employers may no longer confirm a new employee's employment authorization with a driver's license or state identification card.
 2. Contractor shall enroll in E-Verify at www.dhs.gov/e-verify.

CONTRACTOR AFFIDAVIT

SOUTH CAROLINA ILLEGAL IMMIGRATION REFORM ACT (Amended)

In accordance with the requirements of the South Carolina Illegal Immigration Reform Act, Contractor hereby certifies that it is currently in compliance with the requirements of Title 40, Chapter 8 of the S.C. Code Annotated and will remain in compliance with such requirements throughout the term of its contract with the Owner.

The Contractor hereby acknowledges that in order to comply with requirements of S.C. Code Annotated Section 41-8-20:

- (A) All private employers in South Carolina shall be imputed a South Carolina employment license, which permits a private employer to employ a person in this State. A private employer may not employ a person unless the private employer's South Carolina employment license and any other applicable licenses as defined in Section 41-8-10 are in effect and are not suspended or revoked. A private employer's employment license shall remain in effect provided the private employer complies with the provisions of this chapter.
- (B) All private employers who are required by federal law to complete and maintain federal employment eligibility verification forms or documents must register and participate in the E-Verify federal work authorization program, or its successor, to verify the work authorization of every new employee within three business days after employing a new employee. A private employer who does not comply with the requirements of this subsection violates the private employer's licenses.
- (C) The South Carolina Department of Employment and Workforce shall provide private employers with technical advice and electronic access to the E-Verify federal work authorization program's website for the sole purpose of registering and participating in the program.
- (D) Private employers shall employ provisionally a new employee until the new employee's work authorization has been verified pursuant to this section. A private employer shall submit a new employee's name and information for verification even if the new employee's employment is terminated less than three business days after becoming employed. If a new employee's work authorization is not verified by the federal work authorization program, a private employer must not employ, continue to employ, or reemploy the new employee.
- (E) To assist private employers in understanding the requirements of this chapter, the director shall send written notice of the requirements of this section to all South Carolina employers, and shall publish the information contained in the notice on its

EMPLOYMENT VERIFICATION

00600-2

website. Nothing in this section shall create a legal requirement that any private employer receive actual notice of the requirements of this chapter through written notice from the director, nor create any legal defense for failure to receive notice.

- (F) If a private employer is a contractor, the private employer shall maintain the contact phone numbers of all subcontractors and sub-subcontractors performing services for the private employer. The private employer shall provide the contact phone numbers or a contact phone number, as applicable, to the director pursuant to an audit or investigation within seventy-two hours of the director's request.

The Contractor agrees to provide to the Owner upon request any documentation required to establish the applicability of the South Carolina Illegal Immigration Reform Act (Amended) to the contractor, subcontractor or sub-subcontractor. The Contractor further agrees that it will upon request provide the Owner with any documentation required to establish that the Contractor and any subcontractors or sub-subcontractors are in compliance with the requirements of Title 41, Chapter 8 of the S.C. Code Annotated.

Date: _____

(Signature)

By: _____

Title: _____

(END OF SECTION)

EMPLOYMENT VERIFICATION

00600-3

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

**SECTION 00606
NOTICE TO PROCEED**

TO: _____

PROJECT: **NORTH SIDE WATER STORAGE TANK**

OWNER: City of Georgetown, South Carolina

PROJECT NUMBER: #1508

This is your Notice to Proceed with the Work, on the above-mention Project, in accordance with the Agreement dated _____ 20 ____ . You are authorized to commence work on _____ 20 ____ , and you are required to complete the Work within _____ (460) consecutive calendar days thereafter.

The date of final completion for all Work is therefore: _____ 20 ____ .

You are required to return an acknowledged copy of this Notice to Proceed to the Owner. Dated this _____ day of _____, 20 ____ .

CITY OF GEORGETOWN, SOUTH CAROLINA

(Signature)

By: _____

Title: _____

Acceptance of Notice

Receipt of the above Notice to Proceed is hereby acknowledged this the _____ day of _____, 20 ____ .

(Signature)

By: _____

Title: _____

(END OF SECTION)

NOTICE TO PROCEED
00606-1

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

**SECTION 00610
APPLICATION FOR PAYMENT**

TO: CITY OF GEORGETOWN, SC PAY REQUEST NO.: _____

FROM: _____

Distribution to:

VIA: _____

Owner

PROJECT North Side Water Storage Tank

Design Professional

Contractor

PROJECT NO.: _____

DATE: _____

CONTRACT FOR: _____

CONTRACTOR'S APPLICATION FOR PAYMENT

CHANGE ORDER SUMMARY			
Change Orders approved in previous months by Owner		ADDITIONS	DEDUCTIONS
		TOTALS:	
Approved this Month			
Number	Date Approved		
TOTALS:			
Net changes by Change Order			

The undersigned Contractor certifies that to the best of the Contractor's knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents, that all amounts have been paid by the Contractor for Work for which previous Certificates of Payment were issued and payments received from the Owner, and that current payment shown herein are now due.

CONTRACTOR:

By: _____

Date: _____

APPLICATION FOR PAYMENT

00610-1

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

Application for Payment, as indicated below, in connection with the Contract.

(Continuation Sheet is attached)

1 – ORIGINAL CONTRACT SUM	\$
2 – Net changes by CHANGE Orders	\$
3 – CONTRACT SUM TO DATE (Line 1 + Line 2)	\$
4 – TOTAL COMPLETED AND STORED TO DATE ("G" on Continuation Sheet)	\$
5 – RETAINAGE ("I" on Continuation Sheet)	\$
6 – TOTAL EARNED LESS RETAINAGE (Line 4 – Line 5)	\$
7 – LESS PREVIOUS CERTIFICATES FOR PAYMENT	\$
8 – CURRENT PAYMENT DUE	\$
9 – BALANCE TO FINISH, PLUS RETAINAGE (Line 3 – Line 5)	\$

State of: _____ County of: _____

Subscribed and sworn to before me this _____ day of _20____.

Notary Public: _____ My Commission Expires: _____

CONTRACTOR'S APPLICATION FOR PAYMENT

In accordance with the Contract Documents, based on on-site observations and the data comprising the above application, the Design Professional certifies to the Owner that to the best of the Design Professional's knowledge, information and belief the Work has progressed as indicated, the quality of the Work is in accordance with the Contract Documents, and the Contractor is entitled to payment of the AMOUNT CERTIFIED. Some defects or problems with construction items may not be determined until final testing and operation of the system is performed. The Design Professional cannot be held liable for approval for partial payments for the installation of these items from which the evidence of defects or problems were not determined until after the request for payment was approved.

AMOUNT CERTIFIED \$ _____

(Attach explanation if amount certified differs from amount applied for.)

DESIGN PROFESSIONAL:

By: _____ Date: _____

OWNER:

By: _____ Date: _____

This Certificate is not negotiable. The AMOUNT CERTIFIED is payable only to the Contractor named herein. Issuance, payment and acceptance of payment are not without prejudice to any rights of the Owner or Contractor under this Contract.

APPLICATION FOR PAYMENT

00610-2

SECTION 00620
CONTRACTOR'S AFFIDAVIT

The State of _____ Date: _____

The County of _____ The City of _____

_____ of _____
(Officer's Name) (Officer's Title) (Contractor's Name)

being duly sworn, deposed and says that _____ has furnished
(Contractor's Name)

labor and materials entering into the _____
(Project Name)

dated _____ with the City of Georgetown, South Carolina.

_____ states further that this officer has full knowledge of all
(Contractor's Name)

obligations for such labor and materials which have entered into and become part of that certain project known and designated above, and that this officer further deposes and says that all debts and other obligations for such labor and materials have been fully and completely paid for in good and lawful money of the United States of America and that there are no suits for damages against them proceeding, prospective and/or that there are no suits for damages against them proceeding, prospective, or otherwise, in consequence of their operations on the above said project.

The said _____ will hold the Owner, the City of Georgetown
(Contractor's Name)

South Carolina, blameless of any and all mechanic's liens that may be hereafter entered or filed for record, so as to constitute charge against said premises for work or labor done or materials furnished by them.

IN WITNESS HEREOF, this officer has heretofore put his hand and seal:

(Officer's Name)

I, Notary Public in and for the above named County and State do hereby certify that _____ personally know to me to be the

(Officer's Name)

affiant in the foregoing Affidavit, personally appeared before me this day and, having been duly sworn, deposed and says the facts set forth in the above Affidavit are true and correct.

WITNESS my hand and seal this _____ day of _____ 20__.

Notary Public for the State of _____

My Commission Expires: _____

CONTRACTOR'S AFFIDAVIT

00620-1

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

**SECTION 00630
CONTRACT CHANGE ORDER**

DATE: _____
CHANGE ORDER #: _____

PROJECT: North Side Water Storage Tank
PROJECT # 1508

Description of and Reason for Change: _____

Itemization of Proposed Change and Basis for Payment

Original Contract Price \$ _____

Previous Change Orders \$ _____

This Change, (An Addition) (A Deduction) of \$ _____

Proposed Revised Contract Price \$ _____

Additional funds shall be provided in the following manner: _____

Extension of Contract Time Required: _____ Days.

Revised Contract Completion Date: _____

Accepted by the Contractor:

By: _____

Date: _____

Recommended by: _____

By: _____

Date: _____

Approved by the Owner:

By: _____

Date: _____

CONTRACT CHANGE ORDER

00630-1

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

**SECTION 00700
GENERAL CONDITIONS**

1. **CONTRACT AND CONTRACT DOCUMENTS.** The drawings (plans), specifications and addenda, hereinafter enumerated in Section 00005, shall form part of this contract and the provisions thereof shall be as binding upon the parties hereto as if they were herein fully set forth. The table of contents titles, heading, running headlines, and marginal notes contained herein and in said documents are solely to facilitate reference to various provisions of the contract documents and in no way affect, limit, or cast light on the interpretations of the provisions to which they refer.

Contents

1. Contract and Contract Documents	27. Acceptance of Final Payment as Release
2. Definitions	28. Payments by Contractor
3. Additional Instructions and Detail Drawings	29. Insurance
4. Shop Drawings and Samples	30. Contract Security
5. Materials, Services, and Facilities	31. Assignments
6. Contractor's Title to Materials	32. Mutual Responsibility of Contractors
7. Inspection and Testing of Materials	33. Separate Contracts
8. "Or Equal" Clause	34. Subcontracting
9. Patents	35. Design Professional's
10. Surveys, Laws, and Regulations	36. Stated Allowances
11. Contractor's Obligations	37. Use of Premises and Removal of Debris
12. Weather Conditions	38. Quantities of Estimate
13. Protection of Work and Property, Emergency	39. Rights-of-Way and Suspension of Work
14. Interpretations	40. Warranty for One Year After Completion of Contract
15. Reports, Records, and Data	41. Notice and Service Thereof
16. Superintendence by Contractor	42. Required Provisions Deemed Inserted
17. Changes in Work	43. Protection of Lives and Health
18. Extras	44. Wages and Overtime Compensation
19. Time for Completion and Liquidated Damages	45. Prohibited Interests
20. Correction of Work	46. Conflicting Conditions
21. Subsurface Conditions Found Different	47. Indemnification
22. Claims for Extra Cost	
23. Right of Owner to Terminate Contract	
24. Construction Schedule and Periodic Estimates	
25. Payments to Contractor	
26. Acceptance of Work and Final Payment as Release	

2. **DEFINITIONS.** The following terms as used in this contract are respectively defined as follows:

NORTH SIDE WATER STORAGE TANK

PROJECT #1508

- 1) Wherever in the specifications or upon the drawings the words “directed”, “required”, “permitted”, “ordered”, “designated”, “prescribed”, or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation or prescription of the City is intended; and similarly, the words “approved”, “acceptable”, “satisfactory”, or words of like import shall mean approved by, or acceptable to, or satisfactory to the City, unless otherwise expressly stated.
 - A Contractor. A person, firm, or corporation with whom the contract is made by the Owner.
 - B Subcontractor. A person, firm, or corporation supplying labor and materials, or only labor, for work at the site of the project for and under separate contract or agreement with the Contractor.
 - C Work on or at the Project. Work to be performed at the location of the project, including the transportation of materials and supplies to or from the location of the project by employees of the Contractor and any Subcontractor.
- 2) ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS. The Contractor will be furnished additional instructions and detail drawings as necessary to carry out the work included in the Contract. The additional drawings and instructions thus supplied to the Contractor will coordinate with the Contract Documents and will be so prepared that they can be reasonably interpreted as part thereof. The Contractor shall carry on the work in accordance with the additional detail drawings and instructions. The Contractor and Design Professional will prepare jointly:
 - A A schedule fixing the dates at which special detail drawings will be required; such drawings, if any, to be furnished by the Design Professional in accordance with said schedule; and
 - B A schedule fixing the respective dates for the submission of shop drawings, the beginning of manufacture, testing, and installation of materials, supplies, and equipment, and the completion of the various parts of the work; each such schedule to be subject to change from time to time in accordance with the progress of the work.
- 3) SHOP DRAWINGS AND SAMPLES. Submit to the Design Professional for approval, in accordance with the requirement of Section 01340
 - A Samples. Contractor shall also submit to the Design Professional for approval, all samples required by Section 01340. All samples will have been checked by and stamped

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

- 4) with the approval of the Contractor, identified clearly as to material, manufacturer, any pertinent catalog numbers and the use for which intended.
- A Deviations. At the time of each submission, Contractor shall in writing call the Design Professional's attention to any deviations that the Shop Drawings or Samples may have from the requirements of the Contract Document.
- B Design Professional's Review. Design Professional will review and approve with reasonable promptness Shop Drawings and Samples, but his review and approval shall be only for conformance with the design concept of the project and for compliance with the information given in the Contract Documents. The approval of a separate item as such will not indicate approval of the assembly in which the item functions. Contractor shall make any corrections required by Design Professional and shall return the required number of corrected copies of Shop Drawings and resubmit new samples until approved. Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections called for by Design Professional on previous submissions. Contractor's stamp of approval on any Shop Drawing or sample shall constitute a representation to Owner and Design Professional that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data or he assumes full responsibility for doing so, and that he has reviewed or coordinated each Shop Drawing or sample with the requirements of the work and Contract Documents.
- C Contractor's Records. Where a Shop Drawing or sample submission is required by the Specifications, no related work shall be commenced until the submission has been approved by the Design Professional. A copy of each approved Shop Drawing and each approved sample shall be kept in good order by Contractor at the site and shall be available to Design Professional.
- D Contractor's Responsibility. Design Professional's approval of Shop Drawings or sample shall not relieve Contractor from his responsibility for any deviations from the requirements of the Contract Documents unless Contractor has in writing called the Design Professional's attention to such deviation at the time of submission and Design Professional has given written approval to the specific deviation, nor shall any approval by Design Professional relieve Contractor from Responsibility for errors or omissions in the Shop Drawings.
- 5) MATERIALS, SERVICES, AND FACILITIES shall be furnished by the Contractor.
- A It is understood that except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, gas, lights, power, transportation, superintendent, taxes, insurance, temporary construction of every nature, and all other services and facilities of every nature whatsoever necessary to execute, complete, and deliver the work within the specified time.

NORTH SIDE WATER STORAGE TANK
PROJECT #1508

- B Any work necessary to be performed after regular working hours, on Sundays, or legal holidays, shall be performed without additional expense to the Owner.
- 6) CONTRACTOR'S TITLE TO MATERIALS. No materials or supplies for the work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him in the work, free from all liens, claims, or encumbrances.
- 7) INSPECTION AND TESTING OF MATERIALS. Unless otherwise specifically provided for in the specifications, the inspection and testing of material and finished articles to be incorporated in the work at the site shall be made by bureaus, laboratories, or agencies approved by Owner. The cost of such inspection and testing shall be paid by the Contractor.
- A Certification by Contractor. Where the detailed specifications call for certified copies of mill or shop tests to establish conformance of certain materials with the specifications, it shall be the responsibility of the Contractor to assure delivery of such certifications to the Owner. No materials or finished articles shall be incorporated in the work until such materials and finished articles have passed the required tests. The Contractor shall promptly segregate and remove rejected material and finished articles from the site of the work.
- 8) "OR EQUAL" CLAUSE. The phrase "or equal" shall be construed to mean that material or equipment will be acceptable only when, in the judgment of the Design Professional, they are composed of parts of equal quality, equal workmanship and finish, designed and constructed to perform or accomplish the desired result as efficiently as the indicated brand, pattern, grade, class, make, or model. Written approval must be obtained from the Design Professional prior to purchase of proposed substitution.
- 9) PATENTS. The Contractor shall hold and save the Owner and its officers, agents, servants, and employees harmless from liability of any nature or kind, including cost and expenses for, or on account of, any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the Owner, unless otherwise specifically stipulated in the Contract Documents. If the Contractor uses any design, device, or material covered by letter, patent, or copyright, he shall provide for such use by suitable agreement with the Owner of such patented or copyrighted design, device, or material. It is mutually agreed and understood that, with exception, the contract prices shall include all royalties or costs arising from the use of such design, device, or materials, in any way involved in the work. The Contractor and/or his sureties shall indemnify and save harmless the Owner of the project from any and all claims for infringements by reason of the use of such patented or copyrighted design, device, or materials or any trademark or copyright in connection with work agreed to be performed under this contract, and shall indemnify the Owner for any cost, expense, or damage which it may be obligated to pay by reason of such infringement at any time during the prosecution of the work or after completion of the work.

10) SURVEYS, LAWS, AND REGULATIONS. The Contractor shall comply with the following:

A Construction staking shall be the responsibility of the Contractor.

B Laws and Regulations. The Contractor shall keep himself fully informed of all laws, ordinances, and regulations of the State, City, and County in any manner affecting those engaged or employed in the work, or the materials used in the work, or in any way affecting the conduct of the work, and of all orders and decrees of bodies or tribunals having any jurisdiction or authority over same. If any discrepancy or inconsistency should be discovered in this contract, or in the drawings or specifications herein referred to, in relation to any such law, ordinance, regulation, order, or decree, he shall forthwith report the same in writing to the Owner. He shall, at all times, himself observe and comply with all such existing and future laws, ordinance, and regulations (to the extent that such requirements do not conflict with Federal laws or regulations) and shall protect and indemnify the Owner and its agents against any claims or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or by his employees.

11) CONTRACTOR'S OBLIGATIONS. The Contractor shall, in good workman-like manner do and perform all work and furnish all supplies and materials, machinery, equipment, facilities, and means, except as herein otherwise expressly specified, necessary or proper to perform and complete all the work required by this contract, within the time herein specified, in accordance with provisions of this contract and said specifications, and in accordance with the plans and drawings covered by this contract and any and all supplemental plans and drawings and in accordance with the directions of the Design Professional as given from time to time during the progress of the work. He shall furnish, erect, maintain, and remove such construction plant and such temporary works as may be required. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitation of the contract and specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Design Professional and the Owner.

12) WEATHER CONDITIONS. In the event of temporary suspension of work or during inclement weather, or whenever the Design Professional shall direct, the Contractor will, and will cause his subcontractors to, protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Design Professional, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his Subcontractors to so protect its work, such materials shall be removed and replaced at the expense of the Contractor.

13) PROTECTION OF WORK AND PROPERTY, EMERGENCY. The Contractor shall at all times safely guard the Owner's property from injury or loss in connection with this contract. He shall at all times safely guard and protect his own work and that of adjacent property from damage. The Contractor shall replace or make good any such damage, loss, or injury. In case of emergency which threatens loss or injury of property and/or safety of life, the Contractor will be allowed to act, without previous instructions from the Design Professional, in a diligent manner. He shall notify the Design Professional immediately thereafter. Any claim for compensation by the Contractor due to

such extra work shall be promptly submitted to the Design Professional for approval. The amount of reimbursement claimed by the Contractor on account of any emergency action shall be determined in the manner provided in paragraph entitled "Changes in Work" of these specifications.

- 14) INTERPRETATIONS. If any person contemplating submitting a bid for the proposed contract is in doubt as to the true meaning of any part of these proposed contract documents, he may submit to the Design Professional a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt and actual delivery. Any interpretation of such documents will be made only by addendum duly issued, and a copy of such addendum will be mailed or delivered to each person receiving a set of such documents. The Owner will not be responsible for any other explanation or interpretation of such documents which anyone presumes to make on behalf of the Owner before expiration of the ultimate time set for the receipt of bids.

- 15) REPORTS, RECORDS, AND DATA. The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data as the Owner may request concerning work performed or to be performed under this contract. See Section 01720 Project Record Documents.

- 16) SUPERINTENDENCE BY CONTRACTOR. The Contractor shall employ only competent and skilled men on the work. The Contractor shall have competent Superintendent or Foreman present at all times when the work is in progress, who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Design Professional and shall be one who can be continued in that capacity for the particular job involved unless he ceases to be on the Contractor's payroll. The Contractor shall, upon demand from the Design Professional, immediately remove any superintendent, foreman, or workman whom the Design Professional may consider incompetent or undesirable.

- 17) CHANGES IN WORK. No changes in the work covered by the approved contract documents shall be made without having prior written approval of the Owner. For the work performed by General Contractor, charges or credits for the work covered by the approved change shall be determined by one or more, or a combination of, the following methods:
 - A Unit bid prices previously approved.
 - B An agreed upon lump sum.
 - C The actual cost of:
 - 1 Labor, including social security, unemployment insurance, and workers' compensation insurance.
 - 2 Materials and supplies, including cost of transportation, entering permanently into the work.
 - 3 The ownership or rental cost of equipment during the time of use for the extra work.
 - 4 Power and consumable supplies for the operation of power equipment.

To the cost under (C) there shall be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) of the estimated cost of the work. This fee shall be compensation to cover the cost of supervision, overhead, insurance, bond, profit, and any other general expenses.

For work performed by a Subcontractor, change order payment shall be made on the same basis as above to which the General Contractor may not exceed Ten Percent (10%). This fee shall be compensation to cover the costs of supervision, overhead, insurance, bond, profit, and any other general expenses.

- 18) For work performed by a Subcontractor, change order payment shall be made on the same basis as above to which the General Contractor may not exceed Ten Percent (10%). This fee shall be compensation to cover the costs of supervision, overhead, insurance, bond, profit, and any other general expenses.
- 19) EXTRAS. Without invalidating the contract, the Owner may order extra work or make changes by altering, adding to, or deducting from the work, the contract sum being adjusted accordingly, and the consent of the surety being first obtained where necessary or desirable. All the work of the kind bid upon shall be paid for at the price stipulated in the proposal, and no claims for any extra work or materials shall be allowed unless the work is ordered in writing by the Owner, or the Design Professional acting officially for the Owner, and the price is stated in such order. Extra work shall be performed only upon the execution of authorized change orders as set forth in the preceding paragraph.
- 20) TIME FOR COMPLETION AND LIQUIDATED DAMAGES. It is hereby understood and mutually agreed by and between the Contractor and the Owner that the date of beginning and the time for completion as specified in the contract of the work to be done hereunder are essential conditions of this contract; and it is further mutually understood and agreed that the work embraced in this contract shall be commenced on a date to be specified in the Notice to Proceed.
- A To any preference, priority, or allocation order duly issued by the Government.
 - B To unforeseeable cause beyond the control and without the fault or negligence of the Contractor including, but not restricted to, acts of the public enemy, acts of the Owner, acts of another contractor in the performance of a contract with the Owner; fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, hurricanes, and tornadoes.
 - C To any delays of subcontractors or suppliers occasioned by any of the causes specified in subsections (A) and (B) of this article

Provided, further that the Contractor shall, within seven (7) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the contract, notify the Owner in writing of the causes of delay, who shall ascertain the facts and extent of delay and notify the Contractor with a reasonable time of its decision in the matter, and grant such extension of time as the Owner shall deem suitable and just.

Normal weather conditions for the project area are taken into consideration in the time for completion of the contract; therefore, no extension of time will be extended for normal weather conditions, with the exception of hurricanes and tornadoes.

21) CORRECTION OF WORK. All work, all materials, whether incorporated in the work or not, all processes of manufacturer, and all methods of construction, shall be at all times and places subject to the inspection of the Design Professional, who shall be the final judge of the quality and suitability of the work, materials, processes of manufacture, and methods of construction of the purposes for which they are used. Should they fail to meet his approval, they shall be forthwith reconstructed, made good, replaced and/or corrected, as the case may be, by the Contractor at his own expense. Rejected material shall immediately be removed from the site. If, in the opinion of the Design Professional, it is undesirable to replace any defective or damaged materials or to reconstruct or correct any portion of the work injured or not performed in accordance with the contract documents, the compensation to be paid to the Contractor hereunder shall be reduced by such amount as, in the judgment of the Design Professional, shall be equitable.

22) SUBSURFACE CONDITIONS FOUND DIFFERENT. Should the Contractor encounter subsurface and/or latent conditions at the site materially differing from those shown on the plans or indicated in the specifications, he shall immediately give notice to the Design Professional of such conditions before they are disturbed. The Design Professional will thereupon promptly investigate the conditions, and if he finds that they materially differ from those shown on the plans or indicated in the specifications, he will, in a timely manner, make such changes in the plans and/or specifications as he may find necessary; any increase or decrease of cost resulting from such changes to be adjusted in the manner provided in paragraph 17 of these specifications.

A Where no specific subsurface conditions are indicated or specified, no increase in cost will be considered in regards to subsurface conditions encountered

23) CLAIMS FOR EXTRA COSTS. No claim for extra work or cost shall be allowed unless the same was done in pursuance of a written order of the Design Professional, as aforesaid, and the claim presented with the first estimate after the changes or extra work is done. When work is performed under the terms of subparagraph 17(C) of these specifications, the Contractor shall furnish satisfactory bills payrolls and vouchers covering all items of cost and when requested by the Owner, give the Owner access to accounts relating thereto.

24) RIGHT OF OWNER TO TERMINATE CONTRACT. In the event that any of the provisions of this contract are violated by the Contractor or by any of his subcontractors, the Owner may serve written notice upon the Contractor and the surety of its intention to terminate the contract, such notices to contain the reasons for such intention to terminate the contract, and unless within ten (10) days after the serving of such notice upon the Contractor, such violation or delay shall cease and satisfactory arrangement or correction be made, the contract shall, upon the expiration of said ten (10) days, cease and terminate. In the event of any such termination, the Owner shall immediately serve notice thereof upon the surety and the Contractor, and the surety shall have the right to take over and perform the contract; provided, however, that if the surety does not commence performance thereof within ten (10) days from the date of the mailing to such surety of notice of termination, the Owner may take over the work and prosecute same to completion by the contract or by force account for the account and at the expense of the Contractor, and the Contractor and his surety shall be liable to the Owner for any excess cost occasioned thereby, and in such event the Owner may take

possession of and utilize in completion the work such materials, appliances, and plant as may be on the site of the work and necessary therefore. If the Contractor should die, be declared an incompetent, be declared bankrupt or insolvent, make an assignment for the benefit of creditors during the term of his contract, the Owner may terminate the contract in the manner and under the procedure set forth above with the exception that no notices to the Contractor shall be required, but in lieu thereof, the Owner must make a reasonable effort to notify the estate of the Contractor, his guardian, assignee, or legal representative of the intention to terminate and fact of termination, if there is any such guardian, assignee, or legal representative at the time of the Owner desires to terminate.

25) CONSTRUCTION SCHEDULE AND PERIODIC ESTIMATES. Immediately after execution and delivery of the contract and before the first partial payment is made, the Contractor shall deliver to the Owner

- A Construction Schedule. An estimated construction progress schedule in form satisfactory to the Owner, showing the proposed dates of commencement and completion of each of the various subdivisions of work required under the contract documents and the anticipated amount of each monthly payment that will become due the Contractor in accordance with the progress schedule.
- B Contractor's Schedule of Values. The Contractor shall also furnish:
 - 1 A Schedule of Values giving a complete breakdown of the contract price; and;
 - 2 Itemized Schedule of Values will be used for the purpose of making partial payments thereon. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for addition to or deductions from the contract price.
- C Materials and Equipment Delivery Schedule. The Contractor shall also prepare a schedule of anticipated shipping dates for materials and equipment. It is intended that equipment and materials be so scheduled as to arrive at the job site just prior to time for installation to prevent excessive materials on hand for inventory and the necessity for extensive storage facilities at the job site.

26) PAYMENT TO CONTRACTOR shall be made according to the following:

- A No later than thirty (30) days after the City's Design Professional approves the request for payment. The Owner shall make a progress payment to the Contractor on the basis of a duly certified approved estimate of the work performed during the preceding calendar month under this contract. The City requires that checks are to be mailed by USPS to the contractor. To insure the proper performance of this contract, the Owner will retain a portion of each estimate until final completion and acceptance of all work covered by this contract in accordance with the following:
 - 1 Retention is 10% of payment claimed until construction is complete.
- B In preparing estimates, the material delivered on the site and preparatory work done may be taken into consideration.

C All material and work covered by partial payments shall thereupon become the sole property of the Owner, but this provision shall not be construed as relieving the Contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged worked, or as a waiver of the right of the Owner to require the fulfillment of all the terms of the contract.

D Owner's Right to Withhold Certain Amounts and Make Application Thereof. The Contractor agrees that he will indemnify and save the Owner harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, material, men, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this contract. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If the Contractor fails so to do, then the Owner may, after having served written notice on the contractor, either pay unpaid bills, of which the Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of this contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon the Owner to either the Contractor or his surety. In paying any unpaid bills of the Contractor, the Owner shall be deemed the agent of the Contractor, and any payment so made by the Owner shall be considered as a payment made under the contract by the Owner to the Contractor, and the Owner shall not be liable to the Contractor for any such payment made in good faith.

27) ACCEPTANCE OF WORK AND FINAL PAYMENT. Before final acceptance of the work and payment to the Contractor of the percentage retained by the Owner, the following requirements shall be compiled with:

A Final Inspection. Upon notice from the Contractor that their work is completed, the Design Professional will make a final inspection of the work and shall notify the Contractor of all instances where their work fails to comply with the specifications, as well as any defects he may discover. The Contractor shall immediately make such alterations as are necessary to make the work comply with the specifications and to satisfaction of the Design Professional.

B Operating Test. After the alterations for compliance with the specifications have been made, and before acceptance of the whole or any part of the work, it shall be subjected to test to determine that it is in accordance with the specifications. The Contractor shall maintain all work in first class condition for a thirty (30) day operating period after the work has been completed as a whole, the final inspection has been made, and the Design Professional has notified the Contractor in writing that the work has been finished to his satisfaction. The retained percentage as provided herein will not become due or payable to the Contractor until after the thirty (30) day operating period has expired.

C Cleaning Up. Before the work is considered as complete, all rubbish and unused material due to or connected with the construction must be removed and the premises left in a

condition satisfactory to the Owner. Streets, curbs, crosswalks, pavements, sidewalks, fences, and other public and private property disturbed or damages should be restored to their former condition. Final acceptance will be withheld until such work is finished.

- D Liens. Final acceptance of the work will not be granted and the retained percentage will not be due or payable until the Contractor has furnished the Owner proper and satisfactory evidence under oath that all claims for labor and material employed or used in the construction of the work under this contract have been settled, and that no legal claims can be filed against the Owner for such labor or material.
- E Final Estimate. Upon completion of all cleaning up, alterations, and repairs required by the final inspection or operating test, the satisfactory completion of the operating test, and upon submitting proper and satisfactory evidence to the Owner that all claims have been settled, the Contractor shall then prepare his final estimate. After review and approval of the final estimate by the Design Professional and the Owner, the payment shall then become due.

28) ACCEPTANCE OF FINAL PAYMENT AS RELEASE. The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others relating to or arising out of this work. No payment, final or otherwise, shall operate to release the Contractor of his sureties from any obligations under this Contract or his sureties from any obligations under this Contract or the performance and payment bond.

29) PAYMENTS BY CONTRACTOR. The Contractor shall pay:

- A For all transportation and utility services not later than the 20th day of the calendar month following that in which services are rendered;
- B For all materials, tools, and other expendable equipment to the extent of ninety (90) percent of the cost thereof not later than the 20th day of the calendar month following that in which such materials, tools, and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the 30th day following completion of that part of the work in or on which such materials, tools, and equipment are incorporated or used; and
- C To each of his subcontractors not later than the 5th day following each payment to the Contractor, the respective amounts allowed the Contractor on account of the work performed by his subcontractors to the extent of each subcontractor's interest therein.

30) INSURANCE. The Contractor shall procure and shall maintain during the life of this contract, whether such operation be by himself or by a subcontractor or any- one directly or indirectly employed by either of them, such insurance as required by statute and/or ordinance to adequately protect the Owner from any claims or damages, including bodily injury or death, which may arise

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from them during operations under this contract

A Limits of Liability. Insurance shall be obtained for not less than the limits of liability as specified in Section 00110 entitled INSURANCE REQUIREMENTS.

B Certificates of Insurance. The Contractor shall furnish the Owner certificates shown in the type, amount, class of operations covered, effective dates, and dates of expiration of the policies. Certificates showing proof of such insurance shall be submitted to the Owner prior to commencement of services under this Agreement. Such certificates shall contain substantially the following statement: "The insurance covered by this certificate will not be canceled or materially altered except after ten (10) days written notice has been received by the Owner". Further, it shall be an affirmative obligation upon the Contractor to advise the City's Risk Manager within two days of the cancellation or substantive

31) CONTRACT SECURITY. The Contractor shall furnish a one hundred and ten (110) percent performance bond and a one hundred (100) percent payment bond as security for the faithful performance of this contract, as security for the payment of all persons performing labor on the project under this contract, and furnishing materials in connection with this contract. The performance bond and payment bond shall be in separate instruments. Before the final acceptance, each bond must be approved by the Owner.

32) ASSIGNMENTS. The Contractor shall not assign the whole or any part of this contract or any moneys due or to become due hereunder without written consent of the Owner. In case the Contractor assigns all or any part of any moneys due or to become due under this contract, the instrument of assignment shall contain a clause substantially to the effect that is agreed that the right of assignee in and to any moneys due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

33) MUTUAL RESPONSIBILITY OF CONTRACTORS. If through acts of neglect on the part of the Contractor, any other contractor or any sub-contractor shall suffer loss or damage on the work, the Contractor agrees to settle with such other contractor or subcontractor by agreement or arbitration. If such other contractor or subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained, the Owner shall notify the Contractor, who shall indemnify and save harmless the Owner against any such claim.

34) SEPARATE CONTRACTS. The Contractor shall coordinate his operations with those of other contractors. Cooperation will be required in the arrangement for the storage of materials and in the detailed execution of the work. The Contractor, including his subcontractor, shall keep informed of the progress and the detail work of other contractors and shall notify the Design Professional immediately of lack of progress or defective workmanship on the part of other contractors. Failure of a contractor to keep informed of the work progressing on the site and failure to give notice of lack of progress or defective workmanship by others shall be construed as acceptance by him of the status of the work as being satisfactory for proper coordination with his own work.

35) SUBCONTRACTING shall comply with the following:

- A The Contractor may utilize the services of specialty contractors on those parts of the work which under normal contracting practices are performed by specialty subcontractors.
- B The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require.
- C The Contractor shall be as fully responsible to the Owner for the acts and omissions of his subcontractors, and of persons either directly or indirectly employed by them, as he for the acts and omissions of persons employed by him.
- D The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of General Conditions and other contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contract under any provisions of the contract documents.
- E Nothing contained in this contract shall create any contractual relation between any subcontractor and the Owner.

36) DESIGN PROFESSIONAL'S AUTHORITY. The Design Professional shall determine the amount, quality, acceptability, and fitness of the several kinds of work and materials which are to be paid for under this contract and shall decide all questions which may arise in relation to said work and the construction thereof. The Design Professional's estimates and decisions shall be final and conclusive, except as herein otherwise expressly provided. In case any questions shall arise between the parties hereto relative to said contract or specifications, the determination or decision of the Design Professional shall be a condition precedent to the right of the Contractor to receive any money or payment for work under this contract affected in any manner or to any extent by such questions.

- A Interpretation of Drawings and Specifications. The Design Professional shall decide the meaning and intent of any portion of the specifications and of any plans or drawings where the same may be found obscure or be in dispute. Any differences or conflicts in regard to their work, which may arise between the Contractor under this contract and other contractors performing work for the Owner, shall be adjusted and determined by the Design Professional.

37) STATED ALLOWANCES. An allowance has been provided on the bid form for work associated with the SCADA system to be provided as part of the work.

38) USE OF PREMISES AND REMOVAL OF DEBRIS. The Contractor expressly undertakes at his own expense:

- A To take every precaution against injuries to persons or damage to property. To make

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arrangements with adjacent property owners for parking of equipment if necessary.

- B To store his apparatus, materials, supplies, and equipment in such orderly fashion at the site of the work as will not unduly interfere with the progress of his work or the work of any other contractors.
- C To place upon the work or any part thereof only such loads as are consistent with the safety of that portion of the work.
- D To clean up frequently all refuse, rubbish, scrap materials, and debris caused by his operations, to the end that at all times the site of the work shall present a neat, orderly, and workmanlike appearance.
- E Before final payment to remove all surplus material, false work, temporary structures, including foundations thereof, plant of any description and debris of every nature resulting from his operations, and to put the site in a neat, orderly condition.
- F To effect all cutting, fitting, or patching of his work required to make the same conform to the plans or specifications, and, except with the consent of the Design Professional, not to cut or otherwise alter the work of any other contractor.

39) QUANTITIES OF ESTIMATE. The estimated quantities of work to be done and materials to be furnished under this contract, shown in any of the documents, including the proposal, are given for use in comparing bids, and the right is especially reserved except as herein otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by the Owner to complete the work contemplated by this contract, and such increase or diminution shall in no way vitiate this contract, nor shall any such increase or diminution give cause for claims or liability for damages.

40) RIGHTS-OF-WAY AND SUSPENSION OF WORK. The Owner shall furnish all land and rights-of-way necessary for the carrying out of this contract and the completion of the work herein contemplated, and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired, and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way.

Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation or by reason of its ability to procure any lands or rights-of-way for said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay or to withdraw from the contract except by consent of the Owner; but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

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41) GENERAL WARRANTY FOR ONE YEAR AFTER SUBSTANTIAL COMPLETION OF CONTRACT. For a period of at least one (1) year after the substantial completion of the contract, the Contractor warrants the fitness and soundness of all work done and materials and equipment put in place under the contract, and neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility

42) NOTICE AND SERVICE THEREOF. Any notice to any Contractor from the Owner relative to any part of this contract shall be in writing and considered delivered and the service thereof completed, when said notice is posted by registered mail to said Contractor or his authorized representative on the work, or is deposited in the regular United States Mail in sealed, postage prepaid envelope, and the receipt thereof is acknowledged by the Contractor.

A Owner's Notice. All papers required to be delivered to the Owner shall be delivered as indicated in Section 00015 entitled REFERENCES.

43) REQUIRED PROVISIONS DEEMED INSERTED. Each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein, and the contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or is not correctly inserted, then upon the application of either party, the contract shall forthwith be physically amended to make such insertion or correction.

44) PROTECTION OF LIVES AND HEALTH. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

A All persons on the Site or who may be affected by the Work:

B All the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

C Other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and Underground Facilities and other utility owners when prosecution

of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property. All damage, injury, or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Design Professional or Design Professional's Consultant, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them). Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Design Professional has issued a notice to Owner and Contractor that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

- 45) WAGES AND OVERTIME COMPENSATION. The Contractor and each of his subcontractors shall comply with all applicable State and local laws or ordinances with respect to the hours worked by laborers and mechanics engaged in work on the project and with respect to compensation for overtime.
- 46) PROHIBITED INTERESTS. No official of the Owner, who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept, or approve or to take part in negotiating, making, accepting, or approving any architectural, engineering, inspection, construction, or material supply contract or any sub-contract in connection with the construction of the project, shall become directly or indirectly interested personally in this contract or in any part hereof. No officer, employee, architect, attorney, engineer, or inspector of and on behalf of the Owner to exercise any legislative, executive, supervisory, or other similar functions in connection with the construction of the project shall become directly or indirectly interested personally in this contract or in any part hereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.
- 47) CONFLICTING CONDITIONS. Any provisions in any of the Contract Documents which may be in conflict or inconsistent with any of the paragraphs in these General Conditions shall be void to the extent of such conflict or inconsistency.
- 48) INDEMNIFICATION
- A The Contractor will indemnify and hold harmless the Owner, the Design Professional, and their agents and employees from and against all claims, damages, losses, and expenses including attorney's fees arising out of or resulting from the performance of the Work, provided that any such claims, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act of omission of the Contractor and Sub-Contractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.
 - B In any and all claims against the Owner or the Design Professional, or any of their agents or employees, by an employee of the Contractor, any Sub-Contractor, anyone directly employed by any of them, or anyone for whose acts any of them may be liable, the

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indemnification obligation shall not be limited in any way by limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts, or other employee benefit acts.

(END OF SECTION)

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 00800
SUPPLEMENTARY CONDITIONS

1. **WORKING HOURS**

The contractor is allowed to work during normal working hours from 7:00 AM to 7:00 PM. If the contractor chooses to work outside normal working hours then it is the Contractor's responsibility to contact all residents within the project limit and give them a notice of work being performed at least twenty four (24) hours prior to the start of work. All efforts must be made by the contractor to notify the residents verbally. If all efforts of verbal notifications fail, then the Contractor may use a door hanger to notify the resident. A copy of the door hanger must be sent to the project manager for approval.

2. **BUSINESS LICENSE AND PERMITS.**

The selected contractor shall be required to obtain all applicable City of Georgetown permits and business licenses. Contact Jestin Gilliard, Revenues Manager, 843-545-4041 to obtain a City business license. These expenses shall be included in the total bid unit price.

3. **PROJECT SCHEDULE OF EVENTS**

The following is the schedule of events listed in the order of occurrence, showing the major milestones from issuance of the RFP to the contract award.

MILESTONE EVENT	DATE
1. BID ADVERTISEMENT	JUNE 27, 2017
2. DEADLINE FOR QUESTIONS	2:00 PM, JULY 18, 2017
3. DEADLINE FOR ADDENDA(S) TO BE POSTED TO CITY'S WEBSITE WWW.COGSC.COM UNDER "BIDS".	3:00 PM, JULY 20, 2017
4. BID DUE DATE	2:00 PM, JULY 25, 2017
5. APPROVAL OF CONTRACT BY CITY COUNCIL (TENTATIVE)	AUGUST 17, 2017
6. NOTICE TO PROCEED (TENTATIVE)	SEPTEMBER 18, 2017
7. COMPLETION DATE	460 DAYS AFTER NOTICE TO PROCEED

**SECTION 00900
DRAWING INDEX**

TITLE	SHEET NO.
COVER	G-00
ABBREVIATION AND LEGEND	G-01
WATER STORAGE TANK SITE PLAN	CS01
WATERLINE PLAN AND PROFILE (STA.0+00 TO 9+50)	C-01
WATERLINE PLAN AND PROFILE (STA.9+50 TO 19+50)	C-02
WATERLINE PLAN AND PROFILE (STA.19+50 TO 27+22)	C-03
ELEVATED TANK PLAN, SECTION AND DETAILS	C-501
DETAILS	C-502
SEDIMENT AND EROSION CONTROL NOTES	CE01
SEDIMENT AND EROSION CONTROL DETAILS	CE02
SEDIMENT AND EROSION CONTROL DETAILS	CE03
ALTITUDE VALVE REPLACEMENT PLAN VIEW (ALT. ADDER #1)	D-01
ALTITUDE VALVE REPLACEMENT PROFILE VIEW (ALT. ADDER #1)	D-02

(END OF SECTION)

DRAWING INDEX
00900-1

SECTION 01060 REGULATORY REQUIREMENTS

The following requirements of Regulatory Agencies having an interest in this project are hereby made a part of this Contract.

- 1.1 The construction of the project, including the letting of the contracts in connection therewith, shall conform to the applicable requirements of State, territorial and local laws and ordinances to the extent that such requirements do not conflict with Federal laws and this subchapter.
- 1.2 South Carolina Sales Tax: All applicable South Carolina sales tax shall be to the account of the Contractors.
- 1.3 Use of chemicals: All chemicals used during the project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, must show approval of EPA or USDA. Use of all such chemicals and disposal of residues shall be in strict conformance with instructions.
- 1.4 Safety and Health Regulations: The Contractor shall comply with the Department of Labor Safety and Health Regulations for construction promulgated under the Occupational Safety and Health Act of 1970 (PL 91-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (PL 91-54)
- 1.5 The Contractor shall comply with Part V of the South Carolina Manual on Uniform Traffic Control Devices for Streets and Highways.
- 1.6 Inspection by Agencies: The representatives of the South Carolina Department of Health and Environmental Control, USDA Rural Development, Environmental Protection Agency, Department of Natural Resources and the Corps of Engineers shall have access to the work wherever it is, in preparation or in progress, and the Contractor shall provide proper facilities for such access and inspection.
- 1.7 Withholding for non-residents shall comply with the following:
 - A. Attention of non-residents Contractors is invited to Code Sections 12-8-540 and 12-8-550 as amended effective July 1, 1994, Section 49, Appropriations Bill, Part II.
 - B. If a non-resident Contractor is the successful bidder on this project, he/she shall be required to provide the Owner with an Affidavit (Form I-312, Nonresident Taxpayer Registration Affidavit Income Tax Withholding) affirming registration with the South Carolina Department of Revenue or the South Carolina Secretary of State's office. (Refer to attached form)
 - C. Forms to register for all taxes administered by the South Carolina Department of Revenue may be obtained by calling the License and Registration Section at (803) 737-4872 or writing to South Carolina Department of Revenue, Registration Unit, Columbia, South Carolina 29214-0140.
 - D. In the absence of an Affidavit being provided, withholding in the amount of two (2) percent of the contract price will be made by the Owner.

- 1.8 Bypassing of Wastewater: No wastewater bypassing will be permitted during construction unless a schedule has been approved by the South Carolina Department of Health and Environmental Control (SC DHEC), and if required pursuant to the terms of the NPDES Permit.
- A. Schedule work to minimize bypassing
 - B. Coordinate all work which will affect operation of the existing facility with the Owner and the Engineer to assure the least amount of interruption possible to the operation of the facility.
 - C. Make no connections to the existing facility diverting flow to the new facility until directed by the Engineer.

END OF SECTION

**SECTION 01061
PERMITS AND RIGHTS-OF-WAY**

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work Included: This section established requirements pertaining to the securing and paying for licenses, building permits, right-of-way, etc. necessary for the construction of the project.
- B. Work Not Include: Owner will obtain and provide to the Contractor, as required, copies of the following:
 - 1. South Carolina Department of Transportation Encroachment Permit for work in the State Right-of-Way
- C. Related Work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional requirements for field engineering also may be described in other Sections of these Specifications. These include but are not limited to the following:
 - a) None

1.2 SUBMITTALS

- A. Submit to the Design Professional satisfactory evidence that all necessary licenses, building permits, etc., have been secured prior to commencing the work.

PART 2 – EXECUTION

2.1 BUSINESS LICENSE

- A. Determine licenses necessary to perform the work at project location.
- B. Obtain all necessary licenses and/or permits required, whether of temporary or permanent nature.

2.2 BUILDING PERMITS

- A. Secure and pay for all building permits required, whether temporary or permanent nature.

2.3 RIGHT-OF-WAY, EASEMENTS

- A. Owner will provide necessary rights-of-way or easements for construction of utility lines, roads and sidewalks whether on privately or publicly owned property
- B. The Contractor shall confine their activities to the provided rights-of way and/or easements
- C. The Owner will provide no other rights-of way and/or easements over the property.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 01210
PRE-CONSTRUCTION CONFERENCE

PART 1 – GENERAL

- A. The Design Professional will schedule a conference after Notice of Award.
- B. Attendance Required: Design Professional, Owner, Permitting Agencies and Contractor.
- C. Agenda:
 - 1. Organization of contractor's personnel and subcontractors, material suppliers and the Design Professional.
 - 2. Channels for communication.
 - 3. Construction schedule and sequence of work.
 - 4. Processing of submittals and shop drawings submitted to the Design Professional for review.
 - 5. Processing of field decisions and change orders.
 - 6. Rules governing performance of work.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 01220 PROJECT MEETINGS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: To enable orderly review during progress of the Project, and to provide for systematic discussion of problems, the Design Professional will conduct project meetings throughout the construction period.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. The Contractor's relations with his subcontractors and materials suppliers, and discussions relative thereto, are the Contractor's responsibility and normally are not part of the project meetings content.

1.2 QUALITY ASSURANCE

- A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the meetings.

1.3 SUBMITTALS

- A. Agenda items: To the maximum extent practicable, advise the Design Professional at least 48 hours in advance of project meetings regarding items to be added to the agenda.
- B. Minutes:
 - 1. The Design Professional will compile Minutes of each project meeting, and will furnish three copies to the Contractor and required copies to Owner.
 - 2. Recipients of copies may make and distribute such other copies as they wish.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION

3.1 MEETING SCHEDULE

- A. Project meetings will be held as needed.
- B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION

- A. The meeting will be held in the City of Georgetown – Exact location to be determined.

3.3 PROJECT MEETINGS

A. Attendance:

1. To the maximum extent practicable, assign the same person or persons to represent the Contractor at project meetings throughout progress of the Work.
2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

B. Minimum agenda:

1. Review progress of the Work since last meeting, including status of submittals for approval.
2. Identify problems that impede planned progress.
3. Develop corrective measures and procedures to regain planned schedule.
4. Complete other current business.

3.4 Revision to Minutes:

- A. Unless published Minutes are challenged in writing prior to the next regularly scheduled progress meeting, they will be accepted as properly stating the activities and decisions of the meeting.
- B. Persons challenging published Minutes shall reproduce and distribute copies of the challenged to all Minutes.
- C. Challenge to Minutes shall be settled as priority portion of “old business” at the next regularly scheduled meeting.

END OF SECTION

SECTION 01340 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Make submittals required by the Contract Documents and revise and resubmit as necessary to establish compliance with the specified requirements.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.
 - 2. Individual requirements for submittals also may be described in pertinent sections of these specifications.
- C. Work not included:
 - 1. Un-required submittals will not be reviewed by the Design Professional.
 - 2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Design Professional.

1.2 QUALITY ASSURANCE

- A. Coordination of submittals:
 - 1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.
 - 2. Verify that each item and the submittal for it conform in all respects with the specified requirements.
 - 3. By affixing the Contractor's signature to each submittal, certify that this coordination has been performed.
 - 4. Review and coordinate each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
- B. Completeness of submittal:
 - 1. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Design Professional the services, materials, and equipment Contractor proposes to provide and to enable Design Professional to review the information for the limited purposes.
 - 2. Determine and verify all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto.

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

C. “Or equal”:

1. Where the phrase “or equal” occurs in the Contract Documents, do not assume that the materials, equipment or methods will be considered as equal unless the item has been specifically so approved for this Work by the Design Professional.
2. The decision of the Design Professional shall be final.

D. The Design Professional shall assume that no shop drawing or related submittal comprises a variation unless the Contractor advises the Design Professional otherwise in writing.

1.3 SUBMITTALS

- A. Within 10 calendar days after the Contractor has received the Owner’s notice to proceed, submit:
 1. Schedule for submittals including specification section, type or submittal and submittal date.
 2. Construction schedule.
 3. Schedule of partial payment request.
- B. Make submittals of shop drawings, samples, substitution requests and other items in accordance with the provisions of this Section.

PART 2 – PRODUCTS

2.1 SHOP DRAWINGS

- A. Scale and measurements: Make shop drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of connection to the Work.
- B. Large prints (11” x 17” or larger):
 1. Submit shop drawings in the form of white copies.
 2. Blueprints will not be acceptable.
- C. Manufacturer’s literature:
 1. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents are being submitted for review.
 2. Cross out or strikethrough all data not pertinent to the submittal.
 3. Submit the number of copies which are required to be returned, plus four copies of electrical and three copies of all other submittals which will be retained by the Design Professional.
- D. Number of copies:
 1. Submit the number of copies which are required to be returned, plus three copies which will be retained by the Design Professional.

2. Electrical shop drawings: submit the number of copies which are required to be returned, plus four copies which will be retained by the Design Professional.
- E. Do not begin fabrication of equipment or materials prior to Design Professional's approval of shop drawings.

2.2 VARIATIONS

- A. With each submittal, provide specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Design Professional for review and approval of each such variation.
- B. Provide an explanation of why the item(s) submitted are considered to be equal to the item(s) specified.
- C. Failure to submit a written notice will result in rejection of the submittal.

2.3 SAMPLES

- A. Provide sample or samples identical to the precise article proposed to be provided. Identify as described under "Identification of submittals" below.
 1. Unless otherwise specified, submit samples in the quantity which is required to be returned, plus one which will be retained by the Design Professional.
 2. By prearrangement in specific cases, a single sample may be submitted for review and, when approved, when installed in the work at a location agreed upon by the Design Professional.

2.4 COLORS AND PATTERNS

- A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available to the specified products, submit accurate color and pattern charts to the Design Professional for selection.

PART 3 – EXECUTION

3.1 CONTRACTOR'S REVIEW OF SUBMITTALS

- A. Before submitting a shop drawing or any related material, Contractor shall:
 1. Determine and verify all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto.
 2. Determine and verify the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the work.
 3. Review each such submission for conformance with the means, methods, techniques, sequences, and operations of construction, and safety precautions and programs incidental thereto, all of which are the sole responsibility of Contractor.

SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

4. Approve each such submission before submitting it.
5. Stamp and sign each such submission before submitting it.
- B. Shop drawings and related materials shall be returned with comments provided that each submission has been specified and is stamped by the Contractor.
- C. Shop drawings or material not specified or which have not been approved by the Contractor shall be returned without comment.
- D. Contractor is to utilize the following stamp on all shop drawing submittals:

This shop drawing has been reviewed by (Contractor) and approved with respect to the means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incidental thereto. (Contractor) also warrants that this shop drawing complies with contract documents and comprises no variations thereto.

By:

Date:

- E. Design Professional's review and approval shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of the General Conditions and Design Professional has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Design Professional's review and approval shall not relieve Contractor from responsibility for complying with the requirements of the General Conditions.

3.2 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals
 1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 2. On re-submittals, cite the original submittal number for reference.
- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.
- C. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.
- D. Maintain an accurate submittal log for the duration of the work, showing current status of all submittals at all times. Make the submittal log available to the Design Professional for his review upon request.

3.3 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
 - 1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 - 2. The Contractor may be held liable for delays so occasioned.

3.4 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.
- B. In scheduling, allow at least ten (10) days for review by the Design Professional following his receipt of the submittal.

3.5 RESUBMITTAL SCHEDULE

- A. For submittals marked “Furnish as Corrected” by the Design Professional, re-submittal shall be within ten (10) days of the review shown on the Design Professional’s shop drawing review stamp.
- B. For submittals marked “Revise and Re-Submit”, “Submit Specified Item”, or “Rejected”, re-submittal shall be within ten (10) days of the review data shown on the Design Professional’s shop drawing review stamp.

3.6 DESIGN PROFESSIONAL’S REVIEW

- A. Review by the Design Professional does not relieve the Contractor from responsibility for errors which may exist in the submitted data.
- B. Design Professional will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Design Professional.
- C. Design Professional’s review and approval will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given to the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
- D. Design Professional’s review and approval will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto.
- E. The review and approval of a separate item as such will not indicate approval of the assembly in which the items functions.
- F. Revisions:
 - 1. Make revisions required by the Design Professional.

2. If the Contractor considers any required revision to be a change, he/shell shall so notify the Design Professional as provided for in the General Conditions.
 3. Make only those revisions directed or approved by the Design Professional.
- G. Submittals which have been reviewed and returned to the Contractor marked “Revise and Re-submit” or “Rejected” and which are re-submitted and not in an approvable state, will not be reviewed a third time unless payment for the third and any subsequent review is by the Contractor. The engineering costs for review shall be equal to the Design Professional’s charges to the Owner under the terms of the Agreement with the owner.

END OF SECTION

SECTION 01400

QUALITY REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Provide workforce and equipment as are required for proper completion of the Work including, but not necessarily limited to:
 - 1. All work described in the Project Manual
 - 2. Additional work mutually agreed upon by the Owner and the Contractor
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Additional requirements for quality requirements also may be described in other Sections of these Specifications. These include but are not limited to the following:
- C. Work by others:
 - 1. An inspection and testing agency may be retained by the Owner or the Design Professional to perform field and laboratory testing and soil evaluations to verify compliance of the work with the requirements of this and other specifications and to ensure the achievement of the intents and purposes of the work.
 - 2. The performance or lack of performance of such tests and inspections shall not be construed as granting relief from the requirements of these specifications or the other contract documents

1.2 QUALITY ASSURANCE

- A. The Contractor shall have a written Quality Control Program and Inspection Procedures document that shall provide details of how compliance with the requirements of these specifications and the shop and placement drawings shall be achieved.
- B. The Contractor shall use an adequate number of skilled personnel, who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specification requirements and the methods needed for the proper performance of the work of this Specification.
- C. The Contractor shall utilize equipment adequate in type, number, size and capacity to accomplish the work of this Specification in a safe and timely manner.
- D. The Owner reserves the right to make inspections at any time at the source of supply of materials, at the place of preparation of materials, and during execution of all work.

1.3 EXISTING SITE CONDITIONS

- A. Before starting work the Contractor shall thoroughly examine the site to ascertain conditions under which the work must be performed.
- B. The Contractor is responsible for familiarizing himself with the existing site conditions and be prepared to adequately care for and safeguard himself, his workers, and the Owner from damage.
- C. Existing Utilities
 - 1. There now may exist in the construction area potable and non-potable water distribution systems, wastewater and storm water collection systems, natural gas and electrical power distribution systems, telecommunication systems and other utilities.
 - 2. These utilities are both underground and overhead and their location, as shown on the plans, is approximate and is for information purposes only. In addition other utilities not shown on the plans may exist.
 - 3. The South Carolina Underground Utility Damage Prevention Act (S.C. Ann Code, 58-35-10, CT-SEQ, Supp. 1978) requires persons to ascertain the location of underground utilities, prior to excavation and demolition. The Act also requires such persons to give timely notice of intent to excavate or demolish prior to commencing such operations.

PART 3 – EXECUTION

3.1 PRE-CONSTRUCTION EXAMINATION

- A. General
- B. Before starting work the Contractor shall thoroughly examine the site to ascertain conditions under which the work must be performed.
- C. Existing Facilities to Remain
- D. Take protective measures to prevent existing facilities within the work area that are not designated for removal from being damaged by the work.
- E. Survey Monuments
 - 1. Locate and protect from damage any survey monuments within the work area. Properly relocate or witness any monument that must be disturbed by the work. After completion of the work, restore monument witnesses.
- F. Immediately notify Design Professional of any discrepancies between the plans and the actual site conditions, or of any obstruction that will prevent or adversely affect the contractor's ability to complete the Work.

3.2 EXISTING OR COMPLETED UTILITIES

- A. Unless shown to be removed protect active utility lines shown on the drawings or otherwise made known to the Contractor.
- B. Use care in moving machinery and equipment over existing or newly installed pipes

QUALITY REQUIREMENTS

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and utilities during construction so as not to cause damage to completed work.

- C. Do not use power-driven equipment to excavate closer than 2 feet from any existing utility or structure. For work immediately adjacent to, or for excavation exposing an existing utility or other structure, use manual or light equipment excavation methods until the obstruction is cleared.
- D. Support uncovered pipes and other existing work affected by the excavation until they are properly supported by backfill.
- E. Take the necessary precautions to maintain services provided by all active utility lines in the construction area. If service is interrupted as a result of the Work, immediately restore service by repairing the damaged utility.
- F. If during construction active utility lines not shown on the drawings or otherwise made known to the Contractor are encountered or if active utility lines will interfere with the work, immediately notify the Design Professional

END OF SECTION

SECTION 01500 TEMPORARY FACILITIES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Provide temporary facilities needed for the work including, but not necessarily limited to:
 - 1. Temporary utilities such as heat, water, toilet facility, and electricity.
 - 2. Temporary controls.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.

PART 2 – PRODUCTS

2.1 UTILITIES

- A. Water:
 - 1. Provide necessary temporary piping and water supply and, upon completion of the work, remove such temporary facilities.
 - 2. The Owner shall provide water used in construction. The Contractor shall obtain a construction meter from the Owner and coordinate water source with the Owner.
- B. Electricity:
 - 1. Provide necessary temporary wiring and, upon completion of the work remove such temporary facility.
 - 2. Provide and pay for electricity used in construction.
- C. Heating: Provide and maintain heat necessary for proper conduction of operations needed in the work.

2.2 BARRIERS

- A. Provide barriers as needed to prevent unauthorized entry into construction areas and to protect existing facilities, plant life and adjacent properties from damage.

PART 3 – EXECUTION

3.1 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.
- B. Remove such temporary facilities and controls as rapidly as progress of the work will permit, or as directed by the Design Professional.

END OF SECTION

**TEMPORAY FACILITIES
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SECTION 01640 PRODUCT HANDLING

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included: Protect products scheduled for use in the work by means including, but not necessarily limited to, those described in this Section.
- B. Related work:
 - 1. Documents affecting work of this Section include, but are not necessarily limited to General Conditions, Supplementary Conditions and Sections in Division 1 of these specifications.
 - 2. Additional procedures also may be prescribed in other Sections of these specifications.

1.2 QUALITY ASSURANCE

- A. Include within the Contractor's quality assurance program such procedures as are required to assure full protection of work and materials.

1.3 MANUFACTURE'S RECOMMENDATIONS

- A. Except as otherwise approved by the Design Professional, determine and comply with manufacture's recommendations on product handling, storage and protection.

1.4 PACKAGING

- A. Deliver products to the job site in their manufacturer's original container, with labels intact and legible.
 - 1. Maintain packaged materials with seals unbroken and labels intact until time of use.
 - 2. Promptly remove damaged material and unsuitable items from the job site and promptly replace with material meeting the specified requirements, at no additional cost to the Owner.
- B. The Design Professional may reject as non-complying such material and products that do not bear identification satisfactory to the Design Professional as to manufacture, grade, quality and other pertinent information.

1.5 PROTECTION OF MATERIAL AND WORK

- A. General:
 - 1. Carefully and properly protect all materials of every description, both before and after being used in the Work in accordance with manufacturer's recommendations.
 - 2. Provide any enclosing or special protection from weather deemed necessary by the Design Professional at no additional cost to the Owner.

B. Partial payments under the Contract will not relieve the Contractor from responsibility.

1. When materials and work at the site that have been partially paid for are not adequately protected by the Contractor, such materials will be protected by the Owner at the expense of the Contractor and no further partial payment thereon will be made.
2. Maintain finished surfaces clean, unmarred, and suitably protected until accepted by the Owner.

1.6 STORAGE

- A. Store all items of equipment, component parts, etc., in accordance with the manufacturer's recommendations or as may otherwise be necessary to prevent damage or deterioration of any sort.
- B. Electrical and control equipment:
 1. Store in a dry area protected from dust and humidity.
 2. Equipment can be protected by a weatherproof cover if shipped to the site no more than two (2) weeks prior to installation and energization.

1.7 REPAIRS AND REPLACEMENTS

- A. In the event of damage, promptly make replacements and repairs to the approval of the Design Professional and at no additional cost to the Owner.
- B. Additional time required to secure replacements and to make repairs will not be considered by the Design Professional to justify an extension in the contract time or completion.

END OF SECTION

SECTION 01650 GENERAL EQUIPMENT REQUIREMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Requirements relating to providing of equipment and services specified in other Sections of these specifications
- B. Related Work:
 - 1. Documents affecting work of this Section include, but not limited to, General Conditions, Supplementary Conditions, and Section of Division 01 of these specifications.
 - 2. Additional provisions concerning this work may be stated in other sections of these specifications
 - 3. Where new equipment is to be installed into existing structures or systems, verify the plan dimensions with existing dimensions and note any discrepancies on the shop drawings.
- C. Allotted space and modifications:
 - 1. Equipment furnished under this Section shall be installed at the location and in the space allotted on the Contract Drawings
 - 2. Any piping, wiring, structural, drawings or other modifications required to accommodate equipment offered other than that shown on the Drawings, or specified, shall be completed at no additional cost to the Owner.

1.2 QUALITY ASSURANCE

- A. Equipment manufactures shall:
 - 1. Upon request of the Design Professional, provide a detailed list of installations of comparable function.
 - 2. Guarantee the availability of repair parts and service for a period of not less than five (5) years.
 - 3. Provide each component with a serial number and maintain a record of the same.
- B. Equipment in each Section shall be by a single manufacturer regularly engaged in the development of equipment designed for the intended function.

PART 2 – PRODUCTS

2.1 GENERAL

- A. Supply all materials, tools, equipment, labor, and supervision to properly complete the installation of equipment, piping, wiring, controls, etc. in compliance with the contract documents.

2.2 IDENTIFICATION

- A. Provide stamped identification labels on motors, pumps, and other equipment with pertinent information including serial number(s), model number(s), capacities, voltage, amps, etc.
- B. Label shall be either aluminum or stainless steel, attached with matching hardware.

2.3 LUBRICANTS AND LUBRICATING EQUIPMENT

- A. Provide and install necessary oils, greases, etc., for initial operation of equipment.
- B. Where manufacturer's recommendations include changing of initial lubricants after 1,000 hours or less of operation, provide sufficient lubricants to make the change.
- C. Provide one of every type lubricating gun required to properly maintain the equipment.

2.4 OPERATION, MAINTENANCE AND SERVICE MANUALS

- A. Prepare and submit for the Owner's use copies of O&M Manual for each piece of equipment.
 - 1. Three (3) bound paper copies
 - 2. One (1) electronic copy
- B. Submit Manuals 60 days prior to delivery of equipment.
- C. Manuals shall be specific to the equipment supplied.
 - 1. Manuals applicable to many different configurations and which require the operator to selectively read portions of the instructions will not be accepted.
 - 2. The equipment model that the Manual applies to shall be indicated by an arrow.
- D. Provide a Table of Contents specific to each Manual.
- E. At the beginning of each Manual, provide a description of the equipment to include model numbers, purchase order numbers, serial numbers, motor information, and performance and design criteria.
- F. Correlate Manuals with the approved shop drawings and include the following minimum information:
 - 1. Parts list, including recommended spare parts list.
 - 2. Guaranties
 - 3. Recommended maintenance instructions.
 - 4. Recommended lubricants and lubrication instructions.
 - 5. Address and telephone number of the source for repairs, spare parts and service.

6. Detailed description of operating procedure for the item of equipment specifically written for this installation, including start-up and shutdown procedures.
 7. Equipment performance specifications, including pump curves.
 8. Results of start-up and any further recommendations resulting from start-up.
 9. Current cost for each recommended spare part and agreement to provide updated costs at Owners request
- G. Provide a maintenance and lubrication schedule to be a summary of all preventative maintenance and lubrication, including the following information:
1. Title.
 2. Type of activity (inspection, adjustment, oil change, etc.).
 3. Brief description of the activity
 4. Type of lubricant.
 5. Frequency (daily, weekly, etc.).
- H. The manufacturer shall provide the Owner with a log chart to record all servicing and maintenance required during the equipment warranty period.
- I. For process oriented equipment, treatment plants, etc., provide a detailed description of the process operation and trouble-shooting of problems.
- J. Provide clear and legible copies. Type parts list, etc.
- K. Layout and detail drawings shall be reduced to 11" x 17", unless written approval/directive is received from the Design Professional prior to submittal of the Manuals.
- L. Binding Manuals
1. Provide clearly labeled front cover.
 2. Bound in a three ring binder, a comb binder or a coil binder. Comb and coil binders require a clear vinyl front cover and a solid black vinyl back cover.
 3. Manuals exceeding 1/4" thickness shall use a three ring binder.
 4. Provide multiple binders for Manuals exceeding 2" thickness. Breaks in Manuals shall occur at logical points such as new chapters or sections.
 5. Provide sheet lifters if binder is more than 66% full.

PART 3 – EXECUTION

3.1 GENERAL

- A. Provide information that is requested without undue delay
- B. Deliver O&M Manuals to the Design Professional for review and approval with transmittal notice to Owner.

GENERAL EQUIPMENT REQUIREMENTS

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- C. Properly lubricate all equipment prior to start-up.
 - D. Work under sections requiring submittal of O&M Manual will not be considered completed and final payment will not be made until all Manuals have been submitted and approved.
 - E. Provide revisions to Manuals to reflect any changes made during the installation and start-up of equipment.
- 3.2 WARRANTY PERIOD
- A. All warranties shall be for a period of at least one (1) year, unless otherwise noted.
 - B. Equipment warranties shall commence after project acceptance by the owner followed by successful operation for a thirty (30) day period.
 - C. Contractor shall be notified in writing of the beginning and ending dates of the warranty period.

END OF SECTION

SECTION 01660 TECHNICAL SERVICES

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included shall be providing technical services to ensure the proper installation and training of Owner's personnel in the operational and maintenance procedures for equipment
- B. Related work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Other requirements for technical services are stated in other sections of these Specifications.

1.2 QUALITY ASSURANCE

- A. Provide the services of qualified service engineers, process engineers, technicians, or other qualified persons.
- B. Qualifications of personnel provided are subject to approval of the Design Professional. The services of personnel determined to be not qualified shall not be considered a part of the period of service specified.

1.3 SUBMITTALS

- A. Submit credentials of all process engineers to Design Professional for approval at least thirty (30) days prior to their scheduled period of service.
- B. Upon request submit credentials of all other personnel to Design Professional for review

PART 2 – PRODUCTS

2.1 REPORTS

- A. Provide written copies of reports, certified test results, etc. complying with other Sections of these Specifications.

PART 3 – EXECUTION

3.1 GENERAL

- A. Where services is required by a manufacturer, it shall be extended to all other items of equipment provided by the manufacturer, whether individually specified or not.
- B. A day of service is defined as not less than eight (8) working hours performed between the hours of 0700 and 1900 (Eastern Time Zone), unless otherwise required.

- C. Work in excess of eight (8) hours on the same day shall not constitute an additional day of service.
 - D. A trip is defined as a scheduled visit to the project site for the express purpose of providing technical services specified.
 - E. Travel time to or from the project site is not part of the service time.
- 3.2 PERIOD OF SERVICE
- A. Provide the number of days of service and the number of trips as indicated in the individual equipment section.
- 3.3 FIELD MEASUREMENTS
- A. Measure and record amperage, voltage, speed (rpm) and other performance information at operating conditions of the equipment.
 - B. Include all measurements of the equipment.

END OF SECTION

SECTION 01700 CONTRACT CLOSEOUT

PART 1 – GENERAL

1.1 DESCRIPTION

- A. Work included shall be providing compliance with the requirements of the General Conditions of these Specifications for administrative procedures in closing out the project work.
- B. Related work:
 - 1. Documents affecting work of this section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
 - 2. Other requirements for technical services are stated in other sections of these Specifications.
 - 3. Section 00620 – Contractors Affidavit.
 - 4. Section 01600 – Technical Services
 - 5. Section 01720 – Project Record Documents

1.2 SUBSTANTIAL COMPLETION

- A. The Contractor shall notify the Design Professional that, in his/her opinion, the project is substantially complete. A written statement listing items complete shall be submitted.
- B. Upon receipt of the Contractor's notice, the Design Professional shall make an observation to determine if substantial completion is provided.
- C. If, in the Design Professional's opinion, the project is not substantially complete, a written notice to the Contractor shall follow outlining reasons and deficiencies in work that comprised the Design Professional's decision. The Design Professional's decision shall be final.

1.3 FINAL OBSERVATION

- A. The Design Professional will make a final observation for the Contractor after all items noted in the substantial completion observation have been corrected. The Contractor shall notify the Design Professional in writing when a final observation is needed. Incomplete and/or defective work shall be given to the Contractor by written notice.

1.4 RE-OBSERVATION

- A. Re-observation required due to failure by the Contractor to make previously noted corrections will be performed by the Design Professional.
- B. Cost for such observations will be due to and payable by the Contractor at a rate equal to charges to the Owner for similar work.
- C. Re-observations will continue until the work is acceptable to the Design Professional.

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1.5 COMPLETION BY CONTRACTOR

- A. When the Design Professional finds the Contractor's work acceptable, the Contractor shall be given such notice and should proceed with closeout submittals.
- B. Closeout submittals shall contain at least the following:
 - 1. Project record documents.
 - 2. Equipment operation and maintenance manuals and copies of start-up reports.
 - 3. Warranties and bonds.
 - 4. Spare parts and manuals.
 - 5. Evidence of payment and release to liens per General Conditions.
 - 6. Contractors Affidavit.

1.6 FINAL PAYMENT

- A. Final payment to the Contractor will be made upon completion of previous items and others required by these specifications. A final statement shall be forwarded to the Design Professional. The statement shall address:
 - 1. Previous change orders.
 - 2. Unit Prices.
 - 3. Deductions for uncorrected work.
 - 4. Deductions for liquidated damages.
 - 5. Deductions for re-testing work.
 - 6. Deductions for re-observation.
 - 7. Deductions for shop drawing review.
 - 8. Adjusted contract sum.
 - 9. Previous payments.
 - 10. Amount Due.
- B. When required, the Design Professional will prepare a contract change order for adjustments not previously made.

PART 2 – PRODUCTS (NOT APPLICABLE)

PART 3 – EXECUTION (NOT APPLICABLE)

END OF SECTION

CONTRACT CLOSEOUT
01700-2

SECTION 01720 PROJECT RECORD DOCUMENTS

PART 1 – GENERAL

1.1 DESCRIPTION

A. Work included:

1. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.1 below.
2. Upon completion of the Work, deliver the recorded changes to the Design Professional

B. Related work:

1. Documents affecting work of this Section include, but are not necessarily limited to, General Conditions, Supplementary Conditions, and Sections in Division 1 of these Specifications.
2. Additional requirements for field engineering also may be described in other Sections of these Specifications. These include but are not limited to the following:

1.2 QUALITY ASSURANCE

- A. Delegate the responsibility for maintenance of Record Documents to one person on the Contractor's staff as approved by the Design Professional.
- B. Accuracy of records shall be such that future search for items shown on the Project Record Documents may rely reasonably on the information provided under this Section of the Work

1.3 SUBMITTALS

- A. The Design Professional's approval of the current status of Project Record Documents may be a prerequisite to the Design Professional's approval of requests for progress payment and request for final payment under the Contract.
- B. Prior to submitting each request for progress payment, secure the Design Professional's approval of the current status of the Project Record Documents.
- C. Prior to submitting request for final payment, submit the final Project Record Documents to the Design Professional and secure his approval.

1.4 PRODUCT HANDLING

- A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer to the Design Professional.
- B. In the event of loss of recorded data, use all means necessary to again secure the data to the Design Professional's approval
 1. Such means shall include, if necessary in the opinion of the Design Professional, removal and replacement of concealing materials.

2. In such case, provide replacements to the standards originally required by the Contract Documents

PART 2 - PRODUCTS

2.1 JOB SET DOCUMENTS

- A. Promptly following receipt of the Owner's Notice to Proceed, secure from the Design Professional, at no charge to the Contractor, one complete set of all Documents comprising the Contract

PART 3 - EXECUTION

3.1 MAINTENANCE JOB SET DOCUMENTS

- A. Immediately upon receipt of the job set described in above paragraph titled "JOB SET DOCUMENTS", identify each of the Documents with the title, "RECORD DOCUMENTS- JOB SET".
- B. Preservation:
 1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities will be performed, devise a suitable method for protecting the job set to the approval of the Design Professional.
 2. Do not use the job set for any purpose except entry of new data and for review by the Design Professional.
 3. Maintain the job set at the site of Work as that site is designated by the Design Professional.
- C. Submittals:
 1. Submit "marked-up" set of drawings to the Design Professional
 2. Make any necessary additions as required by the Design Professional

END OF SECTION

SECTION 01 24 00
EQUIPMENT ALLOWANCES / SERVICES

PART 1 GENERAL

1.1 SCOPE

- A. The Contractor shall furnish services and install the equipment identified in the Equipment Allowances subject to all provisions of these Specifications.
- B. In the event of failure of manufacture to perform, whether Goods, Special Services or schedule for such, the Contractor's sole remedy shall be against the manufacturer under the terms and conditions of its procurement agreement with the manufacturer. The Owner and Engineer do not warrant the performance of the manufacturer.

1.2 COSTS

- A. The Contractor shall include, in the Bid Total, the Equipment Allowances specified in the Bid for the purchase of services and equipment pre-selected by the Owner. These allowances shall cover the cost of the equipment and services, as specified in this Section or other Specification Sections, and Freight-on-Board (FOB) Job Site.
- B. The Contractor's applicable taxes, unloading, storage, handling, labor, installation, and overhead costs, plus profit and other expenses contemplated for the allowances shall be included in the total bid price and not in the allowances.
- C. If the terms and conditions of purchase of equipment and services differ from those given in these Contract Documents, then the Contractor shall include the cost of the differences in Item 1 of the Bid.

1.3 ADJUSTMENT OF COSTS

- A. Should the final invoice amount for special services or equipment be more or less than the specified amount of the allowance, the Contract will be adjusted by a change order. Such adjustment shall be limited to the cost directly attributable to changes authorized by the Engineer and Owner for a change in scope, schedule or terms and conditions.
- B. The amount of change order will not recognize any changes in unloading, storage, handling, labor, installation, and overhead costs, nor profit and other expenses caused by the adjustment of the final invoice amount. The change order will recognize changes in applicable taxes.

1.4 DOCUMENTATION

Submit copies of new invoices from the vendors with each periodic payment request.

1.5 SCHEDULE OF EQUIPMENT ALLOWANCES

- A. Cash Allowance A: SCADA
Allow the amount shown on the Bid for equipment and services provided by MR Systems as

City of Georgetown
Northside Water Storage Tank
WKD Project Number 20160218.00.CH
June 2017

Equipment Allowance
01 24 00 - 1

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specified in Section 25 31 00 of these Specifications with detailed scope of supply provided in Appendix B.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 03 11 13

STRUCTURAL CONCRETE FORMWORK

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section provides information regarding structural concrete formwork to be used for this project.

1.2 SUBMITTALS

- A. The following shall be submitted in accordance with Section 01 33 00 – Submittal Procedures:

1. SD-02 Shop Drawings:

Formwork: Drawings showing details of formwork, including dimensions of fiber voids, joints, supports, studding and shoring, and sequence of form and shoring removal.

2. SD-03 Product Data

Design: Design analysis and calculations for form design and methodology used in the design.

Form Materials: Manufacturer's data including literature describing form materials, accessories, and form releasing agents.

Form Releasing Agents: Manufacturer's recommendation on method and rate of application of form releasing agents.

3. SD-04 Samples:

Fiber Voids: One sample unit of fiber voids prior to installation of the voids.

1.3 GENERAL REQUIREMENTS

- A. Formwork shall be designed in accordance with methodology of ACI 347R for anticipated loads, lateral pressures, and stresses. Forms shall be capable of producing a surface which meets the requirements of the class of finish specified in Section 03300 Cast-in-Place Structural Concrete. Forms shall be capable of withstanding the pressures resulting from placement and vibration of concrete.

1.4 STORAGE AND HANDLING

- A. Fiber voids shall be stored above ground level in a dry location. Fiber voids shall be kept dry until installed and overlaid with concrete.

PART 2 PRODUCTS

2.1 FORM MATERIALS

- A. Forms For Class A and Class B Finish: Forms for Class A and Class B finished surfaces shall be plywood panels conforming to DOC PS 1, Grade B-B concrete form panels, Class I or II. Other form materials or liners may be used provided the smoothness and appearance of concrete produced will be equivalent to that produced by the plywood concrete form panels. Forms for round columns shall be the prefabricated seamless type.
- B. Forms For Class C Finish: Forms for Class C finished surfaces shall be shiplap lumber; plywood conforming to DOC PS 1, Grade B-B concrete form panels, Class I or II; tempered concrete form hardboard conforming to AHA A135.4; other approved concrete form material; or steel, except that steel lining on wood sheathing shall not be used. Forms for round columns may have one vertical seam.
- C. Forms For Class D Finish: Forms for Class D finished surfaces, except where concrete is placed against earth, shall be wood or steel or other approved concrete form material.
- D. Retain-In-Place Metal Forms: Retain-in-place metal forms for concrete slabs and roofs shall be as specified in Section 05300 Steel Decking.
- E. Form Ties: Form ties shall be factory-fabricated metal ties, shall be of the removable or internal disconnecting or snap-off type, and shall be of a design that will not permit form deflection and will not spall concrete upon removal. Solid backing shall be provided for each tie. Except where removable tie rods are used, ties shall not leave holes in the concrete surface less than 1/4 inch nor more than 1 inch deep and not more than 1 inch in diameter. Removable tie rods shall be not more than 1-1/2 inches in diameter.
- F. Form Releasing Agents: Form releasing agents shall be commercial formulations that will not bond with, stain or adversely affect concrete surfaces. Agents shall not impair subsequent treatment of concrete surfaces depending upon bond or adhesion nor impede the wetting of surfaces to be cured with water or curing compounds.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Formwork: Forms shall be mortar tight, properly aligned and adequately supported to produce concrete surfaces meeting the surface requirements specified in Section 03300 Cast-in-Place Structural Concrete and conforming to construction tolerance given in TABLE 1. Where concrete surfaces are to have a Class A or Class B finish, joints in form panels shall be arranged as approved. Where forms for continuous surfaces are placed in successive units, the forms shall fit over the completed surface to obtain accurate alignment of the surface and to prevent leakage of mortar. Forms shall not be reused if there is any evidence of surface wear and tear or defects which would impair the quality of the surface. Surfaces of forms to be reused shall be cleaned of mortar from previous concreting and of all other foreign material before reuse. Form ties that are to be completely withdrawn shall be coated with a nonstaining bond breaker.

3.2 CHAMFERING

- A. Except as otherwise shown, external corners that will be exposed shall be chamfered, beveled, or rounded by moldings placed in the forms.

3.3 COATING

- A. Forms for Class A and Class B finished surfaces shall be coated with a form releasing agent before the form or reinforcement is placed in final position. The coating shall be used as recommended in the manufacturer's printed or written instructions. Forms for Class C and D finished surfaces may be wet with water in lieu of coating immediately before placing concrete, except that in cold weather with probable freezing temperatures, coating shall be mandatory. Surplus coating on form surfaces and coating on reinforcing steel and construction joints shall be removed before placing concrete.

3.4 REMOVAL OF FORMS

- A. Forms shall be removed preventing injury to the concrete and ensuring the complete safety of the structure. Formwork for columns, walls, side of beams and other parts not supporting the weight of concrete may be removed when the concrete has attained sufficient strength to resist damage from the removal operation but not before at least 24 hours has elapsed since concrete placement. Supporting forms and shores shall not be removed from beams, floors and walls until the structural units are strong enough to carry their own weight and any other construction or natural loads. Supporting forms or shores shall not be removed before the concrete strength has reached 90 percent of design strength, as determined by field cured cylinders or other approved methods. This strength shall be demonstrated by job-cured test specimens, and by a structural analysis considering the proposed loads in relation to these test strengths and the strength of forming and shoring system. The job-cured test specimens for form removal purposes shall be provided in numbers as directed and shall be in addition to those required for concrete quality control. The specimens shall be removed from molds at the age of 24 hours and shall receive, insofar as possible, the same curing and protection as the structures they represent.

TABLE 1

TOLERANCES FOR FORMED SURFACES

1. Variations from the plumb:	In any 10 feet of length ----- 1/4 inch
a. In the lines and surfaces of columns, piers, walls and in arises	Maximum for entire length ----- 1 inch
b. For exposed corner columns, control-joint grooves, and other conspicuous lines	In any 20 feet of length ----- 1/4 inch Maximum for entire length----- 1/2 inch
2. Variation from the level or from the	In any 10 feet of length -----1/4 inch

grades indicated
on the drawings:

In any bay or in any 20
feet of length----- 3/8 inch

a. In slab soffits,
ceilings, beam soffits,
and in arises, measured
before removal of
supporting shores

Maximum for entire
length ----- 3/4 inch

b. In exposed lintels,
sills, parapets,
horizontal grooves,
and other conspicuous
lines

In any bay or in any 20 feet of
length ----- 1/4 inch
Maximum for entire
length----- 1/2 inch

3. Variation of the linear
building lines from
established position
in plan

In any 20 feet ----- 1/2 inch
Maximum ----- 1 inch

4. Variation of distance
between walls, columns,
partitions

1/4 inch per 10 feet of distance,
but not more than 1/2 inch in any
one bay, and not more than 1 inch
total variation

5. Variation in the
sizes and locations
of sleeves, floor
openings, and wall opening

Minus ----- 1/4 inch
Plus ----- 1/2 inch

6. Variation in
cross-sectional
dimensions of columns
and beams and in the
thickness of slabs and walls

Minus ----- 1/4 inch
Plus ----- 1/2 inch

7. Footings:

a. Variation of dimensions
in plan

Minus ----- 1/2 inch
Plus ----- 2 inches
when formed or plus 3 inches
when placed against unformed
excavation

b. Misplacement of
eccentricity

2 percent of the footing
width in the direction of
misplacement but not more than
2 inches

c. Reduction in thickness
of specified thickness

Minus ----- 5 percent

8. Variation in steps:

Riser ----- 1/8 inch

a. In a flight of stairs

Tread ----- 1/4 inch

b. In consecutive steps

Riser ----- 1/16 inch

Tread ----- 1/8 inch

END OF SECTION

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Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 03 20 01

CONCRETE REINFORCEMENT

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section provides information regarding concrete reinforcement to be used for this project.

1.2 SUBMITTALS

- A. The following shall be submitted in accordance with Section 01 33 00 – Submittal Procedures:

1. SD-02 Shop Drawings:

Reinforcement: Detail drawings showing reinforcing steel placement, schedules, sizes, grades, and splicing and bending details. Drawings shall show support details including types, sizes and spacing.

2. SD-03 Product Data:

Welding: A list of qualified welder's names.

3. SD-07 Certificates:

Reinforcing Steel: Certified copies of mill reports attesting that the reinforcing steel furnished contains no less than 25 percent recycled scrap steel and meets the requirements specified herein, prior to the installation of reinforcing steel.

1.3 WELDING

- A. Welders shall be qualified in accordance with AWS D1.4. Qualification test shall be performed at the worksite and the Contractor shall notify the Engineer 24 hours prior to conducting tests. Special welding procedures and welders qualified by others may be accepted as permitted by AWS D1.4.

1.4 DELIVERY AND STORAGE

- A. Reinforcement and accessories shall be stored off the ground on platforms, skids, or other supports.

PART 2 PRODUCTS

2.1 DOWELS

- A. Dowels shall conform to ASTM A 675/A 675M, Grade 80. Steel pipe conforming to ASTM A 53, Type E or S, Grade B, may be used as dowels provided the ends are closed with metal or plastic inserts or with mortar.

2.2 FABRICATED BAR MATS

- A. Fabricated bar mats shall conform to ASTM A 184/A 184M.

2.3 REINFORCING STEEL

- A. Reinforcing steel shall be deformed bars conforming to ASTM A 615/A 615M or ASTM A 706/A 706M, grades and sizes as indicated. Cold drawn wire used for spiral reinforcement shall conform to ASTM A 82. In highly corrosive environments or when directed by the Engineer, reinforcing steel shall conform to ASTM A 767/A 767M or ASTM A 775/A 775M as appropriate.

2.4 WELDED WIRE FABRIC

- A. Welded wire fabric shall conform to ASTM A 185 or ASTM A 497. When directed by the Engineer for special applications, welded wire fabric shall conform to ASTM A 884/A 884M.

2.5 WIRE TIES

- A. Wire ties shall be 16 gauge or heavier black annealed steel wire.

2.6 SUPPORTS

- A. Bar supports for formed surfaces shall be designed and fabricated in accordance with CRSI MSP-1 and shall be steel or precast concrete blocks. Precast concrete blocks shall have wire ties and shall be not less than 4 inches square when supporting reinforcement on ground. Precast concrete block shall have compressive strength equal to that of the surrounding concrete. Where concrete formed surfaces will be exposed to weather or where surfaces are to be painted, steel supports within 1/2 inch of concrete surface shall be galvanized, plastic protected or of stainless steel. Concrete supports used in concrete exposed to view shall have the same color and texture as the finish surface. For slabs on grade, supports shall be precast concrete blocks, plastic coated steel fabricated with bearing plates, or specifically designed wire-fabric supports fabricated of plastic.

2.7 SYNTHETIC FIBER REINFORCEMENT

- A. Synthetic fiber shall be polypropylene with a denier less than 100 and a nominal fiber length of 2 inches.

PART 3 EXECUTION

3.1 REINFORCEMENT

- A. Reinforcement shall be fabricated to shapes and dimensions shown and shall conform to the requirements of ACI 318/318R. Reinforcement shall be cold bent unless otherwise authorized. Bending may be accomplished in the field or at the mill. Bars shall not be bent after embedment in concrete. Safety caps shall be placed on all exposed ends of vertical concrete reinforcement bars that pose a danger to life safety. Wire tie ends shall face away from the forms.
- B. Placement: Reinforcement shall be free from loose rust and scale, dirt, oil, or other deleterious coating that could reduce bond with the concrete. Reinforcement shall be placed in accordance with ACI 318/318R at locations shown plus or minus one bar diameter. Reinforcement shall not be continuous through expansion joints and shall be as indicated through construction or contraction joints. Concrete coverage shall be as indicated or as required by ACI 318/318R. If bars are moved more than one bar diameter to avoid interference with other reinforcement, conduits or embedded items, the resulting

arrangement of bars, including additional bars required to meet structural requirements, shall be approved before concrete is placed.

- C. Splicing: Splices of reinforcement shall conform to ACI 318/318R and shall be made only as required or indicated. Splicing shall be by lapping or by mechanical or welded butt connection; except that lap splices shall not be used for bars larger than No. 11 unless otherwise indicated. Welding shall conform to AWS D1.4. Welded butt splices shall be full penetration butt welds. Lapped bars shall be placed in contact and securely tied or spaced transversely apart to permit the embedment of the entire surface of each bar in concrete. Lapped bars shall not be spaced farther apart than one-fifth the required length of lap or 6 inches. Mechanical butt splices shall be in accordance with the recommendation of the manufacturer of the mechanical splicing device. Butt splices shall develop 125 percent of the specified minimum yield tensile strength of the spliced bars or of the smaller bar in transition splices. Bars shall be flame dried before butt splicing. Adequate jigs and clamps or other devices shall be provided to support, align, and hold the longitudinal centerline of the bars to be butt spliced in a straight line.

3.2 WELDED-WIRE FABRIC PLACEMENT

- A. Welded-wire fabric shall be placed in slabs as indicated. Fabric placed in slabs on grade shall be continuous between expansion, construction, and contraction joints. Fabric placement at joints shall be as indicated. Lap splices shall be made in such a way that the overlapped area equals the distance between the outermost crosswires plus 2 inches. Laps shall be staggered to avoid continuous laps in either direction. Fabric shall be wired or clipped together at laps at intervals not to exceed 4 feet. Fabric shall be positioned by the use of supports.

3.3 DOWEL INSTALLATION

- A. Dowels shall be installed in slabs on grade at locations indicated and at right angles to joint being doweled. Dowels shall be accurately positioned and aligned parallel to the finished concrete surface before concrete placement. Dowels shall be rigidly supported during concrete placement. One end of dowels shall be coated with a bond breaker.

3.4 SYNTHETIC FIBER REINFORCED CONCRETE

- A. Fiber reinforcement shall be added to the concrete mix in accordance with the applicable sections of ASTM C 1116 and the recommendations of the manufacturer, and in an amount of 0.1 percent by volume.

3.5 SPECIAL INSPECTION AND TESTING FOR SEISMIC-RESISTING SYSTEMS

- A. Special inspections and testing for seismic-resisting systems and components shall be done in accordance with the specifications.

END OF SECTION

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SECTION 03 30 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Formwork and accessories.
 - 2. Shoring, bracing, and anchorage.
 - 3. Reinforcing bars.
 - 4. Welded wire fabric.
 - 5. Inserts and accessories.
 - 6. Cast-in-place concrete.
- B. Related Sections:
 - 1. Section 31 23 16 - Excavation and Backfill: Excavation for Work of this Section.

1.2 REFERENCES

- A. American Concrete Institute:
 - 1. ACI 117 - Standard Specifications for Tolerances for Concrete Construction and Materials.
 - 2. ACI 301 - Specifications for Structural Concrete.
 - 3. ACI 305 - Hot Weather Concreting.
 - 4. ACI 306.1 - Standard Specification for Cold Weather Concreting.
 - 5. ACI 308.1 - Standard Specification for Curing Concrete.
 - 6. ACI 318 - Building Code Requirements for Structural Concrete.
 - 7. ACI 530.1 - Specifications for Masonry Structures.
 - 8. ACI SP-66 - ACI Detailing Manual.
- B. American Forest and Paper Association:
 - 1. AF&PA - National Design Specifications for Wood Construction.
- C. The Engineered Wood Association:
 - 1. APA/EWA PS 1 - Voluntary Product Standard for Construction and Industrial Plywood.
- D. ASTM International:
 - 1. ASTM A184 - Standard Specification for Fabricated Deformed Steel Bar Mats for Concrete Reinforcement.
 - 2. ASTM A496 - Standard Specification for Steel Wire, Deformed, for Concrete Reinforcement.
 - 3. ASTM A615 - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
 - 4. ASTM A775 - Standard Specification for Epoxy-Coated Reinforcing Steel Bars.
 - 5. ASTM A884 - Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Fabric for Reinforcement.
 - 6. ASTM A934 - Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.
 - 7. ASTM C31 - Standard Practice for Making and Curing Concrete Test Specimens in the Field.

8. ASTM C33 - Standard Specification for Concrete Aggregates.
 9. ASTM C39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 10. ASTM C42 - Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
 11. ASTM C94 - Standard Specification for Ready-Mixed Concrete.
 12. ASTM C143 - Standard Test Method for Slump of Hydraulic Cement Concrete.
 13. ASTM C150 - Standard Specification for Portland Cement.
 14. ASTM C172 - Standard Practice for Sampling Freshly Mixed Concrete.
 15. ASTM C173 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
 16. ASTM C231 - Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
 17. ASTM C260 - Standard Specification for Air-Entraining Admixtures for Concrete.
 18. ASTM C494 - Standard Specification for Chemical Admixtures for Concrete.
 19. ASTM C618 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete.
 20. ASTM C685 - Standard Specification for Concrete Made By Volumetric Batching and Continuous Mixing.
 21. ASTM C1017 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete.
 22. ASTM C1064 - Standard Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete.
 23. ASTM C1107 - Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).
 24. ASTM C1218 - Standard Test Method for Water-Soluble Chloride in Mortar and Concrete.
 25. ASTM D994 - Standard Specification for Preformed Expansion Joint Filler for Concrete (Bituminous Type).
 26. ASTM D1751 - Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
 27. ASTM D1752 - Standard Specification for Preformed Sponge Rubber and Cork Expansion Joint Fillers for Concrete Paving and Structural Construction.
 28. ASTM D3963 - Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Reinforcing Steel Bars.
 29. ASTM D6690 - Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
 30. ASTM E96 - Standard Test Methods for Water Vapor Transmission of Materials.
 31. ASTM E1643 - Standard Practice for Installation of Water Vapor Retarders Used in Contact with Earth or Granular Fill under Concrete Slabs.
 32. ASTM E1745 - Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs.
- E. American Welding Society:
1. AWS D1.4 - Structural Welding Code - Reinforcing Steel.
- F. Concrete Reinforcing Steel Institute:
1. CRSI - Manual of Standard Practice.
 2. CRSI - Placing Reinforcing Bars.
- G. West Coast Lumber Inspection Bureau:
1. WCLIB - Standard Grading Rules for West Coast Lumber.

1.3 PERFORMANCE REQUIREMENTS

- A. Vapor Retarder Permeance: Maximum 0.3 perm when tested in accordance with ASTM E96, Procedure A.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Submittal procedures.
- B. Product Data: Submit data on joint devices, attachment accessories, and admixtures.
- C. Shop Drawings: Indicate bar sizes, spacing, locations, and quantities of reinforcing steel and welded wire fabric, bending and cutting schedules, and supporting and spacing devices.
- D. Certificates: Submit AWS qualification certificate for welders employed on the Work.
- E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
 - 1. Submit certified copies of mill test report of reinforcement materials analysis.
- F. Concrete Design Data:
 - 1. Submit a concrete mix design for each concrete strength. Submit separate mix designs when admixtures are required for the following:
 - a. Hot and cold weather concrete work.
 - b. Air entrained concrete work.
 - 2. Identify mix ingredients and proportions, including admixtures.
 - 3. Identify chloride content of admixtures and whether or not chloride was added during manufacture.
- G. Manufacturer's Installation Instructions: Submit installation procedures and interface required with adjacent Work.
- H. Project Record Documents: Accurately record actual locations of embedded utilities and components concealed from view in finished construction.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with ACI 318.
- B. For wood products furnished for work of this Section, comply with AF&PA.
- C. Prepare shop drawings in accordance with ACI SP-66.
- D. Conform to ACI 305 when concreting during hot weather.
- E. Conform to ACI 306.1 when concreting during cold weather.
- F. Acquire cement and aggregate from one source for Work.

1.6 QUALIFICATIONS

- A. Welders: The Engineers expectation is that the welders will be AWS qualified within the previous twelve (12) months.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Maintain concrete temperature after installation at minimum 50 degrees F for minimum 7 days.
- B. Maintain high early strength concrete temperature after installation at minimum 50 degrees F for minimum 3 days.

1.8 COORDINATION

- A. Coordinate placement of joint devices with erection of concrete formwork and placement of form accessories.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Products storage and handling requirements.
- B. Deliver void forms and installation instructions in manufacturer's packaging. Store off ground in ventilated and protected manner to prevent deterioration from moisture.

PART 2 PRODUCTS

2.1 WOOD FORM MATERIALS

- A. Softwood Plywood: APA/EWA PS 1, C Grade, Group 2.
- B. Lumber Forms:
 - 1. Application: Use for edge forms and unexposed finish concrete.
 - 2. Boards: 6-inches or 8-inches in width, ship lapped or tongue and groove, "Standard" Grade Douglas Fir, conforming to WCLIB Standard Grading Rules for West Coast Lumber. Surface boards on four sides.
- C. Plywood Forms:
 - 1. Application: Use for exposed finish concrete.
 - 2. Forms: Conform to PS 1; full size 4 x 8 feet panels; each panel labeled with grade trademark of APA/EWA.
 - 3. Plywood for Surfaces to Receive Membrane Waterproofing: Minimum of 5/8-inch thick; APA/EWA "B-B Plyform Structural I Exterior" grade.
 - 4. Plywood where "Smooth Finish" is required, as indicated on Drawings: APA/EWA "HD Overlay Plyform Structural I Exterior" grade, minimum of 3/4-inch thick.

2.2 PREFABRICATED FORMS

- A. Manufacturers:
 - 1. Aluma-Systems Inc., Burke Co.
 - 2. Economy Forms Corp.
 - 3. Molded Fiber Glass Concrete Forms Co.
 - 4. Perma Tubes.
 - 5. Sonoco Products Co.
 - 6. Symons Corp. Product Western Forms, Inc.
 - 7. Or Engineer approved equal.

- B. Preformed Steel Forms: Minimum 16 gage matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished surfaces.
- C. Glass Fiber Fabric Reinforced Plastic Forms: Matched, tight fitting, stiffened to support weight of concrete without deflection detrimental to tolerances and appearance of finished concrete surfaces.
- D. Pan Type: Steel or glass fiber of size and profile required.
- E. Tubular Column Type: Round, spirally wound laminated fiber material; surface treated with release agent, non-reusable, sizes as indicated on Drawings.
- F. Void Forms: Moisture resistant treated paper faces, biodegradable, structurally sufficient to support weight of wet concrete mix until initial set; 4 inches thick.
- G. Steel Forms: Sheet steel, suitably reinforced and designed for particular use indicated on Drawings.
- H. Form Liners: Smooth, durable, grainless, and non-staining hardboard, unless otherwise indicated on Drawings.
- I. Framing, Studding, and Bracing: Stud or No. 3 structural light framing grade.

2.3 ARCHITECTURAL FORM LINERS

- A. Architectural Form Liners: As indicated on Drawings.

2.4 FORMWORK ACCESSORIES

- A. Form Ties: Removable type, adjustable length, with waterproofing washer, free of defects capable of leaving holes larger than 1 inch in concrete surface, and leaving no metal within 1 inch of exposed surface.
- B. Spreaders: Standard non-corrosive metal form clamp assembly of type acting as spreaders and leaving no metal within 1 inch of concrete face. Wire ties, wood spreaders, or through bolts are not permitted.
- C. Form Anchors and Hangers:
 - 1. Do not use anchors and hangers exposed concrete leaving exposed metal at concrete surface.
 - 2. Symmetrically arrange hangers supporting forms from structural steel members to minimize twisting or rotation of member.
 - 3. Penetration of structural steel members is not permitted.
- D. Form Release Agent: Colorless mineral oil that will not stain concrete or absorb moisture or impair natural bonding or color characteristics of coating intended for use on concrete.
 - 1. Manufacturers:
 - a. Arcal Chemical Corporation, Arcal-80.
 - b. Industrial Synthetics Company, Synthex.
 - c. Nox-Crete Company, Nox-Crete Form Coating.
 - d. or Engineer approved equal.

- E. Corners exposed to view: Fillet and Chamfer; rigid plastic or wood strip type; 3/4 x 3/4 inch size; maximum possible lengths.
- F. Vapor Retarder: Where indicated on Drawings, 6 mil thick polyethylene sheet.
- G. Bituminous Joint Filler: ASTM D1751.
- H. Nails, Spikes, Lag Bolts, Through Bolts, Anchorages: Size, strength, and character to maintain formwork in place while placing concrete.
- I. Water Stops: Polyvinyl chloride, minimum 1,750 psi tensile strength, minimum 50 degrees F to plus 175 degrees F working temperature range, width as shown on Drawings, maximum possible lengths, ribbed profile, preformed corner sections, heat welded jointing.

2.5 REINFORCEMENT

- A. Deformed Reinforcement: ASTM A615; 60 ksi yield strength, steel bars, unfinished or epoxy coated finish as indicated on Drawings.
- B. Deformed Bar Mats: ASTM A184; fabricated from ASTM A615 60 ksi yield strength, steel bars, unfinished or epoxy coated finish as indicated on Drawings.
- C. Welded Plain Wire Fabric: ASTM A185; in flat sheets or coiled rolls; unfinished or epoxy coated finish as indicated on Drawings.

2.6 REINFORCEMENT ACCESSORIES

- A. Tie Wire: Minimum 16 gage annealed type, epoxy coated.
- B. Chairs, Bolsters, Bar Supports, and Spacers: Sized and shaped for strength and support of reinforcement during concrete placement conditions including load bearing pad on bottom to prevent vapor retarder puncture.
- C. Special Chairs, Bolsters, Bar Supports, Spacers Adjacent to Weather Exposed Concrete Surfaces: Plastic-coated steel type; size and shape to meet Project conditions.
- D. Reinforcing Splicing Devices: Exothermic welding type or mechanical threaded type; full tension and compression; sized to fit joined reinforcing.
- E. Epoxy Coating Patching Material: Type as recommended by coating manufacturer.

2.7 REINFORCEMENT FABRICATION

- A. Fabricate concrete reinforcement in accordance with ACI 318.
- B. Form standard hooks for 180 degree bends, 90 degree bend, stirrup and tie hooks; and seismic hooks as indicated on Drawings.
- C. Form reinforcement bends with minimum diameters in accordance with ACI 318.
- D. Fabricate column reinforcement with offset bends at reinforcement splices.

- E. Form spiral column reinforcement from minimum 3/8-inch diameter continuous deformed bar or wire.
- F. Form ties and stirrups from the following:
 - 1. For bars No. 10 and Smaller: No. 3 deformed bars.
 - 2. For bars No. 11 and Larger: No. 4 deformed bars.
- G. Weld reinforcement in accordance with AWS D1.4.
- H. Epoxy-Coated Reinforcement: Clean surfaces, weld and re-protect welded joint in accordance with CRSI.
- I. Locate reinforcement splices not indicated on Drawings, at point of minimum stress. Review location of splices with Engineer.

2.8 SHOP FINISHING

- A. Epoxy Coated Finish for Steel Bars: ASTM A775; ASTM A934 if coating is applied after fabrication.
- B. Epoxy Coated Finish for Steel Wire: ASTM A884, Class A using ASTM A775; ASTM A934 if coating is applied after fabrication.

2.9 SOURCE QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Testing, inspection, and analysis requirements.
- B. When fabricator is approved by authority having jurisdiction, submit certificate of compliance indicating Work performed at fabricator's facility conforms to Contract Documents. Specified shop tests are not required for Work performed by approved fabricator.

2.10 CONCRETE MATERIALS

- A. Cement: ASTM C150, Type I – Normal, Type IA - Air Entraining, Type II – Moderate, Type IIA - Air Entraining, or Type V - Sulfate Resistant Portland type.
- B. High Early Strength Cement: ASTM C150, Type III or Type III – Air Entraining only when indicated on Drawings.
- C. Normal Weight Aggregates: ASTM C33.
 - 1. Coarse Aggregate Maximum Size: In accordance with ACI 318.
- D. Water: ACI 318; potable, without deleterious amounts of chloride ions.

2.11 CONCRETE ADMIXTURES

- A. Manufacturers:
 - 1. Degussa Admixtures, Inc. (Master Builders).
 - 2. Euclid Chemical Co.
 - 3. Fritzpak Concrete Admixtures Co.
 - 4. Grace Construction Products.
 - 5. Larsen Products Corp.

6. L & M Construction Chemicals.
7. Sika Chemical Co.
8. W. R. Meadows Inc.
9. or Engineer approved equal.

B. Air Entrainment: ASTM C260.

C. Chemical: ASTM C494:

1. Type A - Water Reducing.
2. Type B – Retarding.
3. Type C – Accelerating.
4. Type D - Water Reducing and Retarding.
5. Type E - Water Reducing and Accelerating.
6. Type F - Water Reducing, High Range.
7. Type G - Water Reducing, High Range and Retarding.

D. Fly Ash: ASTM C618, Class F or C.

E. Plasticizing: ASTM C1017, Type I - Plasticizing or Type II - Plasticizing and retarding.

2.12 CONCRETE ACCESSORIES

A. Bonding Agent:

1. Not exposed to water after placement: Polyvinyl Acetate.
2. Exposed to water after placement: Latex emulsion or epoxy adhesive.

B. Vapor Retarder: ASTM E1745 Class A; 6 mil thick clear polyethylene film; type recommended for below grade application. Furnish joint tape recommended by manufacturer.

C. Non-Shrink Grout: ASTM C1107, Grade A or B; premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 4,000 psi in 3 days and 7,000 psi in 28 days.

2.13 JOINT DEVICES AND FILLER MATERIALS

A. Joint Filler: ASTM D1751 or ASTM D994; Preformed asphalt impregnated fiberboard or felt, thickness as indicated on Drawings; tongue and groove profile.

B. Sealant: ASTM D6690, Type III.

2.14 CONCRETE MIX

A. Provide concrete to the following criteria:

Material and Property	Measurement	
	Type 1	Type 2
Compressive Strength (28 day)	4,500 psi	4,500 psi
Cement Type	ASTM C150	ASTM 150
Cement Content (minimum)	639 pounds/cu yd	639 pounds/cu yd

Material and Property	Measurement	
	Type 1	Type 2
Aggregate Type	Rounded, normal weight	Angular, normal weight
Water-Cement Ratio (maximum)	0.381 by weight	0.425 by weight
Air Content (plus or minus 1.0 percent)	5.5	6.0
Admixtures	As required	As required
Fly Ash Content (percent of cementitious materials by weight)	25 maximum	25 maximum
Slump (plus or minus 1 inch)	3.5 before admixtures	3.5 before admixtures

- B. Admixtures: Include admixture types and quantities indicated in concrete mix designs only when approved by Engineer.
1. Use accelerating admixtures in cold weather. Use of admixtures will not relax cold weather placement requirements.
 2. Do not use calcium chloride or admixtures containing calcium chloride.
 3. Use set retarding admixtures during hot weather.
 4. Add air entrainment admixture to concrete mix for work exposed to freezing and thawing or deicing chemicals.
 5. For concrete exposed to deicing chemicals, limit fly ash to less than 25 percent of the combined weight of cement and fly ash.
- C. Ready Mixed Concrete: Mix and deliver concrete in accordance with ASTM C94.
- D. Site Mixed Concrete: Mix concrete in accordance with ACI 318.

2.15 CURING COMPOUNDS

- A. Membrane Curing Compound: ASTM C309 Type 1, Class B.
1. Manufacturers:
 - a. Degussa Admixtures, Inc., Confilm.
 - b. Euclid Chemical Co., Kurez W VOX.
 - c. W. R. Meadows, Inc., 1100-Clear Series.
 - d. or Engineer approved equal.
- B. Water: Potable, not detrimental to concrete.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify requirements for concrete cover over reinforcement.

- C. Verify anchors, seats, plates, reinforcement and other items to be cast into concrete are accurately placed, positioned securely, and will not interfere with placing concrete.

3.2 PREPARATION

- A. Prepare previously placed concrete by cleaning with steel brush and applying bonding agent. Remove laitance, coatings, and unsound materials.
- B. In locations where new concrete is doweled to existing work, drill holes in existing concrete, insert steel dowels and pack solid with epoxy.
- C. Remove debris and ice from formwork, reinforcement, and concrete substrates.
- D. Remove water from areas receiving concrete before concrete is placed.
- E. Earth Forms:
 1. Trench earth forms neatly, accurately, and at least 2 inches wider than footing widths indicated on Drawings.
 2. Trim sides and bottom of earth forms.
 3. Construct wood edge strips at top of each side of trench to secure reinforcing and prevent trench from sloughing.
 4. Form sides of footings where earth sloughs.
 5. Tamp earth forms firm and clean forms of debris and loose material before depositing concrete.
- F. Formwork - General:
 1. Provide top form for sloped surfaces steeper than 1.5 horizontal to 1 vertical to hold shape of concrete during placement, unless it can be demonstrated that top forms can be omitted.
 2. Construct forms to correct shape and dimensions, mortar-tight, braced, and of sufficient strength to maintain shape and position under imposed loads from construction operations.
 3. Camber forms where necessary to produce level finished soffits unless otherwise shown on Drawings.
 4. Carefully verify horizontal and vertical positions of forms. Correct misaligned or misplaced forms before placing concrete.
 5. Complete wedging and bracing before placing concrete.
- G. Forms for Smooth Finish Concrete:
 1. Use steel, plywood or lined board forms.
 2. Use clean and smooth plywood and form liners, uniform in size, and free from surface and edge damage capable of affecting resulting concrete finish.
 3. Install form lining with close-fitting square joints between separate sheets without springing into place.
 4. Use full size sheets of form lines and plywood wherever possible.
 5. Tape joints to prevent protrusions in concrete.
 6. Use care in forming and stripping wood forms to protect corners and edges.
 7. Level and continue horizontal joints.
 8. Keep wood forms wet until stripped.
- H. Architectural Form Liners:
 1. Erect architectural side of formwork first.
 2. Attach form liner to forms before installing form ties.

3. Install form liners square and straight, with joints and pattern aligned.
 4. Seal form liner joints to prevent grout leaks.
 5. Dress joints and edges to match form liner pattern and texture.
- I. Forms for Surfaces to Receive Membrane Waterproofing: Use plywood or steel forms. After erection of forms, tape form joints to prevent protrusions in concrete.
 - J. Framing, Studding and Bracing:
 1. Size framing, bracing, centering, and supporting members with sufficient strength to maintain shape and position under imposed loads from construction operations.
 2. Distribute bracing loads over base area on which bracing is erected.
 3. When placed on ground, protect against undermining, settlement, or accidental impact.
 - K. Erect formwork, shoring, and bracing to achieve design requirements in accordance with requirements of ACI 318 ACI 301.
 - L. Arrange and assemble formwork to permit dismantling and stripping. Do not damage concrete during stripping. Permit removal of remaining principal shores.
 - M. Obtain Engineer's approval before framing openings in structural members not indicated on Drawings.
 - N. Install fillet and chamfer strips on external corners of exposed corners.
 - O. Install void forms in accordance with manufacturer's recommendations.
 - P. Do not reuse wood formwork with damaged faces or edges for concrete surfaces to be exposed to view. Do not patch formwork.

3.3 APPLICATION - FORM RELEASE AGENT

- A. Apply form release agent on formwork in accordance with manufacturer's recommendations.
- B. Apply prior to placement of reinforcing steel, anchoring devices, and embedded items.
- C. Do not apply form release agent where concrete surfaces are indicated to receive special finishes or applied coverings that are affected by agent. Soak inside surfaces of untreated forms with clean water. Keep surfaces coated prior to placement of concrete.
- D. Reuse and Coating of Forms: Thoroughly clean forms and reapply form coating before each reuse. For exposed work, do not reuse forms with damaged faces or edges. Apply form coating to forms in accordance with manufacturer's specifications. Do not coat forms for concrete indicated to receive "scored finish". Apply form coatings before placing reinforcing steel.

3.4 INSTALLATION - INSERTS, EMBEDDED PARTS, AND OPENINGS

- A. Install formed openings for items to be embedded in or passing through concrete work.
- B. Locate and set in place items required to be cast directly into concrete.

- C. Coordinate with Work of other sections in forming and placing openings, slots, reglets, recesses, sleeves, bolts, anchors, other inserts, and components of other Work.
- D. Install accessories straight, level, and plumb. Ensure items are not disturbed during concrete placement.
- E. Install water stops continuous without displacing reinforcement. Heat seal joints watertight.
- F. Provide temporary ports or openings in formwork where required to facilitate cleaning and inspection. Locate openings at bottom of forms to allow flushing water to drain.
- G. Close temporary openings with tight fitting panels, flush with inside face of forms, and neatly fitted so joints will not be apparent in exposed concrete surfaces.
- H. Form Ties:
 - 1. Use sufficient strength and sufficient quantity to prevent spreading of forms.
 - 2. Place ties at least 1 inch away from finished surface of concrete.
 - 3. Leave inner rods in concrete when forms are stripped.
 - 4. Space form ties equidistant, symmetrical, and aligned vertically and horizontally unless otherwise shown on Drawings.
 - 5. Set with waterstops.
- I. Arrangement: Arrange formwork to allow proper erection sequence and to permit form removal without damage to concrete.
- J. Construction Joints:
 - 1. Install surfaced pouring strip where construction joints intersect exposed surfaces to provide straight line at joints.
 - 2. Just prior to subsequent concrete placement, remove strip and tighten forms to conceal shrinkage.
 - 3. Show no overlapping of construction joints. Construct joints to present same appearance as butted plywood joints.
 - 4. Arrange joints in continuous line straight, true and sharp.
- K. Embedded Items:
 - 1. Make provisions for pipes, sleeves, anchors, inserts, reglets, anchor slots, nailers, water stops, and other features.
 - 2. Do not embed wood or uncoated aluminum in concrete.
 - 3. Obtain installation and setting information for embedded items furnished under other Specification sections.
 - 4. Securely anchor embedded items in correct location and alignment prior to placing concrete.
 - 5. Verify conduits and pipes, including those made of coated aluminum, meet requirements of ACI 318 for size and location limitations.
- L. Openings for Items Passing Through Concrete:
 - 1. Frame openings in concrete where indicated on Drawings. Establish exact locations, sizes, and other conditions required for openings and attachment of work specified under other sections.
 - 2. Coordinate work to avoid cutting and patching of concrete after placement.
 - 3. Perform cutting and repairing of concrete required as result of failure to provide required openings.

- M. Screeds:
 - 1. Set screeds and establish levels for tops of concrete slabs and levels for finish on slabs.
 - 2. Slope slabs to drain where required or as shown on Drawings.
 - 3. Before depositing concrete, remove debris from space to be occupied by concrete and thoroughly wet forms. Remove freestanding water.
- N. Screed Supports:
 - 1. For concrete over waterproof membranes and vapor retarder membranes, use cradle, pad, or base type screed supports which will not puncture membrane.
 - 2. Staking through membrane is not permitted.
- O. Cleanouts and Access Panels:
 - 1. Provide removable cleanout sections or access panels at bottoms of forms to permit inspection and effective cleaning of loose dirt, debris, and waste material.
 - 2. Clean forms and surfaces against which concrete is to be placed. Remove chips, saw dust and other debris. Thoroughly blow out forms with compressed air just before concrete is placed.

3.5 FORM CLEANING

- A. Clean forms as erection proceeds to remove foreign matter within forms.
- B. Clean formed cavities of debris prior to placing concrete.
- C. Flush with water or use compressed air to remove remaining foreign matter. Ensure that water and debris drain to exterior through clean-out ports.
- D. During cold weather, remove ice and snow from within forms. Do not use de-icing salts. Do not use water to clean out forms unless formwork and concrete construction proceed within heated enclosure. Use compressed air or other means to remove foreign matter.

3.6 FORM REMOVAL

- A. Do not remove forms or bracing until concrete has gained sufficient strength to carry its own weight and imposed loads or removal has been approved by Engineer.
- B. Leave forms in place for minimum number of days as specified in ACI 347.
- C. Loosen forms carefully. Do not wedge pry bars, hammers, or tools against finish concrete surfaces scheduled for exposure to view.
- D. Store removed forms in manner that surfaces to be in contact with fresh concrete will not be damaged. Discard damaged forms.
- E. Twist ties off, point and patch holes with non-shrink grout within 48 hours of form removal.

3.7 ERECTION TOLERANCES

- A. Tolerances: Construct formwork to produce completed concrete surfaces within construction tolerances specified in ACI 117.
- B. Camber slabs and beams in accordance with ACI 318.

3.8 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspect erected formwork, shoring, and bracing to ensure that work is in accordance with formwork design, and that supports, fastenings, wedges, ties, and items are secure.
- C. Notify Engineer after placement of reinforcing steel in forms but prior to placing concrete.
- D. Schedule concrete placement to permit formwork inspection before placing concrete.

3.9 PLACEMENT

- A. Place, support, and secure reinforcement against displacement. Do not deviate from required position beyond specified tolerance.
 - 1. Do not weld crossing reinforcement bars for assembly except as permitted by Engineer.
- B. Do not displace or damage vapor retarder.
- C. Accommodate placement of formed openings.
- D. Space reinforcement bars with minimum clear spacing in accordance with ACI 318.
- E. Maintain concrete cover around reinforcement as indicated in Drawings with a minimum cover as follows:

Reinforcement Location		Minimum Concrete Cover
Footings and concrete formed against earth		3 inches
Concrete exposed to earth or weather	No. 6 bars and larger	2 inches
	No. 5 bars and smaller	1-1/2 inches
Supported slabs, walls, and joists	No. 14 bars and larger	1-1/2 inches
	No. 11 bars and smaller	3/4-inch
Beams and columns		1-1/2 inches
Shell and folded plate members	No. 6 bars and larger	3/4-inch
	No. 5 bars and smaller	1/2-inch

- F. Splice reinforcing only where indicated on Drawings or approved by Engineer. Splice in accordance with splicing device manufacturer's instructions.

3.10 ERECTION TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Install reinforcement within the following tolerances for flexural members, walls, and compression members:

Reinforcement Depth	Depth Tolerance	Concrete Cover Tolerance
Greater than 8 inches	Plus or minus 3/8-inch	Minus 3/8-inch
Less than 8 inches	Plus or minus 1/2-inch	Minus 1/2-inch

- C. Install reinforcement within the tolerances specified in ACI 530.1 for foundation walls.

3.11 PLACING CONCRETE

- A. Place concrete in accordance with ACI 318.
- B. Notify testing laboratory and Engineer minimum 48 hours prior to commencement of operations.
- C. Ensure reinforcement, inserts, embedded parts, formed expansion, and contraction joints are not disturbed during concrete placement.
- D. Install vapor retarder under interior slabs on grade in accordance with ASTM E1643. Lap joints minimum 6-inches and seal watertight by taping edges and ends.
- E. Repair vapor retarder damaged during placement of concrete reinforcing. Repair with vapor retarder material; lap over damaged areas minimum 6 inches and seal watertight.
- F. Separate slabs on grade from vertical surfaces with 1/2 inch thick joint filler.
- G. Place joint filler in slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- H. Extend joint filler from bottom of slab to within 1/2 inch of finished slab surface.
- I. Install construction joint devices in coordination with slab pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- J. Install joint device anchors. Maintain correct position to allow joint cover to be flush with floor and wall finish.
- K. Install joint covers in longest practical length, when adjacent construction activity is complete.
- L. Deposit concrete at final position. Prevent segregation of mix.
- M. Place concrete in continuous operation for each panel or section determined by predetermined joints.
- N. Consolidate concrete.
- O. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken. Keep records on site in Contractor's office or file with Engineer.
- P. Place concrete continuously between predetermined expansion, control, and construction joints.
- Q. Do not interrupt successive placement; do not permit cold joints to occur.

- R. Place floor slabs in pattern indicated.
- S. Saw cut joints prior to concrete set. Thickness and depth as indicated on Drawings
- T. Screed floors and slabs on grade level, maintaining surface flatness of maximum 1/4 inch in 10 feet.

3.12 SEPARATE FLOOR TOPPINGS

- A. Prior to placing floor topping, roughen substrate concrete surface and remove deleterious material. Broom and vacuum clean.
- B. Place required dividers, edge strips, reinforcing and other items to be cast in.
- C. Apply bonding agent to substrate.
- D. Place concrete floor toppings to required lines and levels.
- E. Screed toppings level, maintaining surface flatness of maximum 1/8 inch in 10 feet.

3.13 CONCRETE FINISHING

- A. Provide formed concrete surfaces to be left exposed smooth rubbed, sand float, or sack rubbed finish as indicated on Drawings.
- B. Finish concrete floor surfaces in accordance with ACI 318 ACI 301.
- C. Steel trowel surfaces which are indicated to be exposed.
- D. In areas with floor drains, maintain floor elevation at walls; pitch surfaces uniformly to drains at 1/8 inch per foot nominal or as indicated on Drawings.

3.14 CURING AND PROTECTION

- A. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
 - 1. Protect concrete footings from freezing for minimum five days.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.
- C. Cure concrete in accordance with ACI 308.1 using method approved by Engineer.
- D. Maintain 100 percent coverage over floor slab areas continuously for seven days.

3.15 FIELD QUALITY CONTROL

- A. Section 00 14 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Field inspection and testing will be performed by Owner's testing laboratory in accordance with ACI 318.

- C. Provide free access to Work and cooperate with appointed firm.
- D. Reinforcement Inspection:
 - 1. Placement Acceptance: Specified and ACI 318 material requirements and specified placement tolerances.
 - 2. Welding: Inspect welds in accordance with AWS D1.1.
 - 3. Periodic Placement Inspection: Inspect for correct materials, fabrication, sizes, locations, spacing, concrete cover, and splicing.
 - 4. Continuous Weld Inspection: Inspect reinforcement as required by ACI 318.
 - 5. Periodic Weld Inspection: Other welded connections.
- E. Concrete Inspections:
 - 1. Continuous Placement Inspection: Inspect for proper installation procedures.
 - 2. Periodic Curing Inspection: Inspect for specified curing temperature and procedures.
- F. Strength Test Samples:
 - 1. Sampling Procedures: ASTM C172.
 - 2. Cylinder Molding and Curing Procedures: ASTM C31, cylinder specimens, standard cured or field cured.
 - 3. Sample concrete and make one set of 4 cylinders for every 50 cubic yards or less of each class of concrete placed each day and for every 5,000 square feet of surface area for slabs and walls.
 - 4. When volume of concrete for any class of concrete would provide less than five sets of cylinders, take samples from five randomly selected batches or from every batch when less than five batches are used.
- G. Field Testing:
 - 1. Slump Test Method: ASTM C143.
 - 2. Air Content Test Method: ASTM C173 or ASTM C231.
 - 3. Temperature Test Method: ASTM C1064.
 - 4. Measure slump and temperature for each compressive strength concrete sample.
 - 5. Measure air content in air entrained concrete for each compressive strength concrete sample.
- H. Cylinder Compressive Strength Testing:
 - 1. Test Method: ASTM C39.
 - 2. Test Acceptance: In accordance with ACI 318.
 - 3. Test one cylinder at 7 days.
 - 4. Test one cylinder at 14 days.
 - 5. Test one cylinder at 28 days.
 - 6. Retain one cylinder for testing when requested by Engineer.
 - 7. Dispose remaining cylinders when testing is not required.
- I. Core Compressive Strength Testing:
 - 1. Sampling and Testing Procedures: ASTM C42.
 - 2. Test Acceptance: In accordance with ACI 318.
 - 3. Drill three cores for each failed strength test from concrete represented by failed strength test.
- J. Water Soluble Chloride Ion Concentration Test Method: ASTM C1218; tested at 28 days.
 - 1. Maximum Concentration: As permitted by applicable code.

- K. Maintain records of concrete placement. Record date, location, quantity, air temperature, and test samples taken.

3.16 PATCHING

- A. Allow Engineer to inspect concrete surfaces immediately upon removal of forms.
- B. Excessive honeycomb or embedded debris in concrete is not acceptable. Notify Engineer upon discovery.
- C. Patch imperfections as directed by Engineer in accordance with ACI 318.

3.17 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not conforming to required lines, details, dimensions, tolerances, or specified requirements.
- B. Repair or replacement of defective concrete will be determined by Engineer.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Engineer for each individual area.

3.18 SCHEDULE - CONCRETE TYPES AND FINISHES

- A. Foundation Walls: 3,000 psi 28 day concrete, form finish with honeycomb filled surface.
- B. Underside of Supported Floors and Structure Exposed to View: 4,000 psi, 28-day concrete, sack rubbed finish.

3.19 SCHEDULE – REINFORCEMENT

- A. Reinforcement for Superstructure Framing Members: Deformed bars, unfinished.
- B. Reinforcement for Foundation Wall Framing Members and Slab-on-Grade: Deformed bars and wire fabric, epoxy coated finish.
- C. Reinforcement for Parking Structure Framing Members: Deformed bars, epoxy-coated finish.

END OF SECTION

SECTION 25 31 00

INSTRUMENTATION AND CONTROLS

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section provides information regarding instrumentation and controls to be used for this project. The work under this section will be performed by MR Systems. An allowance for this work is included in the bid form.

1.2 GENERAL REQUIREMENTS

- A. Contractor shall furnish all labor, equipment, and material necessary to provide instrumentation and control as shown on the drawings and described in the specifications.
- B. The Contractor shall install all required equipment including wiring, piping, conduits and necessary mounting and accessory equipment to provide a complete operating, monitoring and control system.
- C. Electrical controls, switches, conduits, relays, starters, etc. and wiring required for operation of the equipment shall be of the highest quality with regard to materials and workmanship, and shall be furnished and installed under the Electrical Section of these specifications.
- D. All piping including drains, impulse and signal piping, valves and fittings shall be of the highest quality and shall be furnished and installed per the requirements of the Piping Section of these specifications.
- E. Wiring and piping shall be installed in compliance with all applicable codes, and in accordance with the recommendations as set forth by the supplier of the equipment under this section.
- F. Equipment manufacturer shall supply the following equipment to the Contractor for installation by the Contractor.

1.3 EQUIPMENT

- A. The following equipment will be provided as a part of this project:

TBD (waiting on scope from MR Systems)

1.4 RESPONSIBILITY AND COORDINATION

- A. It shall be the responsibility of the general contractor to furnish, install and place in successful operation a completely integrated process control system for monitoring and control of this facility. All of the requirements for the system to be furnished shall be as defined in the plans and specifications shall be considered together and neither shall be considered complete without the other. The Contractor shall be responsible for all details, which may be necessary to properly install, adjust and place in operation the complete installation. The Contractor shall assume full responsibility for additional costs, which may result from any unauthorized deviation from the specification.

- B. Because of the specialized nature of instrumentation and controls, the Contractor shall assign to a single instrumentation and controls manufacturer full responsibility for the functional operation of all new and modified instrumentation and systems to be implemented under this contract. As part of this responsibility, a single selected manufacturer shall be required to perform all engineering necessary in order to select, furnish, supervise installation and connection of, calibrate and place into successful operation all sensors, instruments, control devices, flowmeters, alarming equipment, all control and monitoring panels, and all components of the plant monitoring and control system required under this contract.

1.6 MANUFACTURER'S SERVICES

- A. Services of a factory-trained, qualified, service representative employed by the responsible Manufacturer shall be provided to inspect the complete equipment installation to ensure that it is installed in accordance with the Manufacturer's recommendation. He shall make all adjustments necessary to place the system in trouble-free operation and instruct the Owner's operating personnel in the proper care and operation of the equipment furnished. Salesmen, employees of representatives, or systems integrators are not acceptable.
- B. A minimum of two (2) days shall be supplied for start-up assistance.
- C. The equipment manufacturer's quotation shall also include an instrumentation maintenance contract to include the services of a factory-trained service representative employed by the Manufacturer for normal and/or preventive maintenance, calibration, and repair of all equipment specified under this section.
- D. Proper operation notwithstanding, all equipment will be inspected during regular working hours, at intervals of approximately 90 days and all routine maintenance performed. The equipment manufacturer shall also maintain a stock of routine maintenance supplies and spare components sufficient for foreseeable needs. Service and maintenance contract day shall be 8 hours on site, not including travel time.

1.7 MANUFACTURER'S GUARANTEE

- A. The selected equipment manufacturer shall guarantee that the materials and/or workmanship of the equipment furnished are free from defects for a period of one (1) year from date of plant start-up, providing the equipment has been operated and maintained in accordance with the manufacturer's recommendations.

1.8 ADDITIONAL REQUIREMENTS

- A. General: All front panel mounted instrumentation shall be similar in appearance and it shall be furnished in flat black unless otherwise specified.
- B. Training: The Contractor shall require that the instrumentation and control system manufacturer plan, schedule and conduct a thorough and comprehensive training program designed to meet the general and specific needs of the Owner's operating and maintenance personnel. The training program shall include customized training at the owner's plant site if specified.

Training, except that conducted during start-up and maintenance visits by service technicians, shall be conducted by professional training specialists employed by the instrumentation and control system manufacturer. Factory training shall be conducted in regularly scheduled sessions at the Manufacturer's training facility. As part of his bid

package, each respective manufacturer/supplier shall include a copy of this published training schedule along with a published standard price list for same. Training conducted for this project shall be customized toward the specific processes of the owner's facility to the maximum extent possible.

- C. Manufacturer's Data and Drawings: The selected equipment manufacturer shall submit complete sets of the following information for the Engineer's approval:
1. Job index sheets.
 2. Specification check sheets.
 3. Dimension drawings, wiring and/or piping drawings for field and pipeline mounted equipment.
 4. Equipment specification sheets (one reference set only).
 5. For all control panels: fabrication and nameplate legend drawings and internal wiring schematic drawings.
- Systems schematic drawings illustrating all components being supplied, complete with electrical interconnections.
- D. Computer input/output lists and a written description of the control strategy to be applied to the various process areas. For process computer systems: system block diagram and control room layout drawings.
- E. Although a complete submittal is preferable and desirable, it shall be permissible for the equipment manufacturer to submit only part of the above information first in the interest of accelerating the submittal process. A partial submittal shall only be furnished upon approval by the Engineer. A partial submittal shall include at least the following:
1. Job index sheets.
 2. Specification check sheets.
 3. Equipment dimension drawings only.
 4. Panel fabrication drawings only.
- F. After approval, the Manufacturer shall furnish complete bound sets of the above information plus the following:
1. Individual Operating and Maintenance Instruction Bulletins for each piece of equipment furnished. Complete parts list for each piece of equipment furnished.

1.9 Electrical Work

- A. Electrical work shall conform to Division 16 Electrical requirements. Manual or automatic control, protective or signal devices and power circuits required for the operation herein specified and any control wiring required for controls and devices not shown on electrical plans shall be provided under this section of the specifications.

PART 2 PRODUCTS

- A. Not Used.

PART 3 EXECUTION

3.1 MAINTENANCE CONTRACT

City of Georgetown
 Northside Water Storage Tank
 WDK Project Number 20160218.00.CH
 June 2017

Instrumentation and Controls
 25 31 00-3

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

- A. The Instrument Manufacturer shall furnish the Owner with a one (1) year (see Section 25 31 00) preventive maintenance and calibration, emergency service repairs, replacement of defective or worn parts or devices and accessories such as charts, ink and expendable items, and regularly scheduled adjustments to the instrumentation to insure proper operation and reliability. The service shall be performed by technicians employed directly by the Manufacturer. The service technicians shall be equipped with all tools and test equipment necessary for calibration and repair. The maintenance contract shall go into effect immediately following acceptance of the equipment.

3.2 PERIODIC MAINTENANCE

- A. Preventive or corrective maintenance shall include a systematic and periodic examination of each device supplied under this section. This equipment shall be calibrated, cleaned, lubricated, adjusted or aligned to insure proper operation. This preventive maintenance shall be rendered such that each component will be tested at least four times annually. The calibration shall include the simulation of the process variable signal where applicable. There shall be a minimum of three cardinal points checked which will be 10, 50 and 90% of the input scale. The output will be simultaneously checked and adjustments made to conform to the Manufacturer's tolerance with respect to accuracy, linearity, and repeatability or hysteresis.

3.3 EMERGENCY SERVICE

- A. Emergency service shall be provided during normal working hours (8:00 a.m. to 5:00 p.m. Monday through Friday) to correct any hardware defect or failure and to apply the appropriate corrective action to restore the defective device to the Manufacturer's original specifications or tolerances. This service shall be provided by a qualified instrument technician directly employed by the Manufacturer within hours after notification. Should unscheduled or emergency service be requested by the Owner, which after investigation does not reveal any defect in the equipment for which the Manufacturer is responsible, the Manufacturer may invoice for such services at prevailing demand rates.

3.4 SPARES

- A. As part of this maintenance service, all parts shall be provided by the Manufacturer at no additional cost. Transfer of ownership shall take place when a part is installed in the Owner's instrumentation or other equipment covered by the contract.

3.5 RECORD KEEPING

- A. The Manufacturer shall prepare and furnish a maintenance record keeping system consisting of a random access card file system. The random access card file system shall contain a separate card for each instrument or device to be serviced under this contract. Pertinent service data and work performed shall be entered on the cards by the Manufacturer's service technician. The maintenance record keeping system shall be used to provide a daily work record and provide information for evaluating system failures.

3.6 TRAINING

- A. The Manufacturer shall be required to provide in-plant training services to plant operating and maintenance personnel. This training shall include theory of operation, calibration adjustments and troubleshooting techniques.

3.7 ACCESS TO PLANT

- A. Entry onto the plant's premises at times other than normal working hours will be with the express permission of the Owner only. The Owner agrees to maintain insurance and indemnify the Manufacturer's property and personnel against all perils normally insured.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

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SECTION 26 00 00

ELECTRICAL

PART 1 GENERAL

1.1 SCOPE

- A. This section of the specifications includes the furnishing and installation of all labor, materials, tools, equipment, operations necessary for the proper execution and completion of all electrical work indicated on the drawings and specified herein.
- B. The Contractor shall furnish and install all conduits, cable, systems for power, and shall furnish and install raceways for special systems as specified herein and as indicated on the electrical drawings, complete and ready to operate in every respect, including connection of Owner furnished equipment, if applicable.
- C. Contractor shall coordinate cable and conduit with actual equipment provided prior to installing conduit and cable.

1.2 CODES AND ORDINANCES

- A. All electrical work and materials shall comply with the National Electrical Code (NEC), the National Electrical Safety Code (NESC), American Society for Testing and Material (ASTM), Insulated Cable Engineers Association (ICEA), National Electrical Manufacturers Association (NEMA), National Fire Protection Association (NFPA), Underwriters' Laboratories (UL) and applicable local codes and regulations.
- B. All electrical equipment shall be UL listed.
- C. If discrepancies occur between laws, codes, ordinances, rules and regulations, and the specifications or drawings, each discrepancy shall be called to the attention of the Engineer in writing before the bids are submitted. That work which is shown or specified in violation of these rules and regulations shall be done in compliance with the regulations, and no claim for additional cost required to make implied systems complete will be accepted.

1.3 UTILITY COORDINATION, PERMITS AND FEES

- A. The Contractor shall coordinate and pay for the installation of all required power service modifications with the local power utility and provide equipment in full conformance with their requirements. The power utility is the City of Georgetown (843) 545-4600.
- B. The Contractor shall obtain all permits and inspections required for the completion of this contract. Load sheet shall be coordinated by Contractor.
- C. The Contractor shall obtain all applicable electrical permits.

1.4 WORKMANSHIP

- A. Workmanship in the fabrication, preparation, and installation of materials and equipment shall conform to the best standards of practice of the trades involved. Work shall be performed by experienced and skilled electricians and mechanics under the supervision

of a competent foreman. Substandard workmanship will be cause for rejection of work and replacement by Contractor.

1.5 DRAWINGS AND SPECIFICATIONS

- A. The drawings show the location and arrangement of conduits, ducts, and equipment, together with details of connections of certain principal items. The layout shown shall be followed as closely as circumstances will permit, but the Contractor shall lay out his work so as to avoid conflict with other contractors and trades, and to avoid any unnecessary cutting or damage to walls, floors, and supporting structural members. The Contractor shall install at the proper time all necessary sleeves, hangers and inserts which will be required for the completion of his work, and shall be solely responsible for the accurate and proper location of the above items.
- B. The Contractor shall refer to the general drawings and cooperate fully with other contractors and trades while installing electrical equipment because of close space limits. In case of conflict, the Engineer shall be notified before proceeding with installation.
- C. The drawings and specifications complement each other and together are intended to give a complete description of the work. Any item of equipment or note of work to be done as shown on plans and not mentioned in the specifications, or mentioned in specifications and not shown on plans, shall be furnished the same as if mentioned or shown in both places. If conflicts exist, then the most stringent method shown or described should apply.
- D. Any discrepancy, omission, or conflict found in plans or specifications shall be called to the immediate attention of the Engineer, prior to receipt of bids.
- E. The drawings are not intended to show complete details. It is the Contractor's responsibility to comply with the evident intent for centering and symmetric arrangement. The Contractor shall take all field measurements and be responsible therefore. Exact locations are to be defined in the field and shall be satisfactory to the Engineer.

1.6 CUTTING AND PATCHING

- A. Any cutting of walls or structures required for the installation of work under this section shall be done by the Contractor. Holes through walls for passage of conduits shall be properly and neatly sleeved and grouted. Sleeves through exterior walls shall be effectively sealed against passage of water. All disturbed areas shall be refinished and left in a finished and matching condition and shall meet the approval of the Engineer.

1.7 ALLOWANCE FOR ADDITIONAL WORK

- A. Before proceeding with any work for which compensation may be claimed or the Owner may claim credit, a detailed estimate shall be submitted and approved in writing. No claim for addition to the contract will be valid unless so ordered and approved by the Owner and Engineer.

1.8 AS INSTALLED PRINTS

- A. This Contractor shall maintain a set of prints, showing exact location of all relocated equipment, concealed equipment, service accesses, hand holes, underground duct banks, and all other changes to the plans. This set of prints shall be kept current and turned over to the Engineer upon completion of the job. Dimensions shall be shown to locate all underground conduit duct banks from permanent reference points.

1.9 INCIDENTAL CONSTRUCTION WORK

- A. All openings as required for the electrical work shall be provided by the Contractor. The Contractor shall do all cutting and fitting of his work and of other work that may be required to make the several parts come together properly and to fit his work to receive or be received by the work of other Contractors as shown upon, or reasonably implied by the drawings and specifications. He shall properly complete and finish up his work after other contractors have finished as the Engineer may direct. All excavating required for the installation of the system shall be done by the Contractor. Backfill shall be accomplished as specified in the appropriate section of the specifications.

1.10 CLEANING AND PAINTING

- A. The Contractor shall at all times keep the Owner's premises, adjoining driveways and streets clean of rubbish caused by the Contractor's operations and at the completion of the work shall remove all the rubbish from and about the premises, all his tools, equipment, temporary work, surplus material and shall leave the work clean and ready for use.
- B. The Contractor shall be required to perform touch-up painting on factory finished equipment installed under this contract where necessary to repair damaged areas. All metal exposed to weather shall be properly painted. Any equipment installed exposed to weather shall have all damaged areas cleaned, primed, and be painted by the Contractor.

1.11 GUARANTEE

- A. The Contractor shall guarantee all materials, equipment, and workmanship in this contract against defects and failures of any nature for a period of one year from date on which the system is accepted. Apparatus furnished by the Contractor shall be guaranteed to be satisfactory when operated under rated conditions in accordance with manufacturer's instructions and to be of size, function, and capacity specified on drawings or in the specifications. Upon notice from the Engineer or Owner, he shall immediately check the system, make necessary repairs or adjustments as required due to faulty workmanship, materials, faults, operation, or equipment, without cost to the Owner, and instruct the Owner in proper operation, adjustment, and care of the systems.

1.12 IDENTIFICATION

- A. All equipment shall be identified and properly marked. All marking must meet the Engineer's approval. All markers shall be of appropriate size. Each motor Control Panel, transformer, panel, contactor, starter, and other piece of electrical equipment shall be identified as to their service.
- B. All disconnect switches, junction boxes, motor controllers, and other equipment requiring electrical power connection shall be marked with voltage present, as appropriate to designate 120, 208, 240, 277, or 480 volts and single or three phase, as applicable.

1.13 MAINTENANCE AND OPERATING INSTRUCTIONS

- A. The Contractor shall furnish to the Engineer five (5) complete sets of applicable drawings, instructions and parts lists on all equipment furnished, providing names and addresses of manufacturers or subcontractors and suppliers. Two (2) copies of manufacturer's warranties on all equipment shall be provided to the Owner and one (1) copy to the

Engineer.

- B. Upon acceptance and approval of this project the one-year warranty period on all equipment and systems by this Contractor shall start, from that date.

1.14 SHOP DRAWINGS

- A. Upon award of the contract, the Contractor shall submit to the Engineer for approval, a list of all proposed subcontractors and materials he proposes to utilize and five (5) sets of shop drawings consisting of detailed drawings or manufacturer's cuts of all manufactured equipment he proposes to use on the job. The drawings or cuts shall show details of construction and arrangement of all pertinent data pertaining to equipment proposed to be furnished. The approval of the Engineer shall be obtained before equipment is ordered for delivery. It will be the duty of the Contractor to verify quantities, dimensions, and details, and determine suitability of equipment for installation in space provided. Approval of shop drawings by the Engineer does not relieve the Contractor of the responsibility for coordination, dimensions, quantities or conformance with contract documents.
- B. The Contractor shall check and initial shop drawings making such notations and corrections as may be appropriate or necessary to comply with contract documents before submission to the Engineer.

1.15 STORAGE AND PROTECTION OF MATERIALS AND EQUIPMENT

- A. The Contractor shall be responsible for furnishing suitable shelter and protection for all materials and equipment stored on the job. Equipment shall be protected from damage from any source both during storage and after installation until completion of the job. No damaged equipment will be accepted.

PART 2 MATERIALS

2.1 ELECTRICAL MATERIALS AND METHODS

- A. Materials and workmanship on all work installed under this contract shall be new and of the best quality and shall conform to the best practice for such work and be installed in accordance with manufacturer's recommendations and instructions, including all hardware and accessories recommended or appropriate. Any work or materials not specifically mentioned in these plans and specifications, but required to make this job a complete and workable system shall be furnished and installed by the Contractor.
- B. Substitution for equipment specified must be equal in every respect and the Contractor shall base his proposal on the quality of materials and equipment covered in these specifications and shown on the drawings.
- C. Where substitutions alter the design or space requirements indicated on the plans, the Contractor shall include all items of cost for the revised design and construction, including the cost of any changes or modifications in structural or mechanical details and electric service resulting from substitution of electrical equipment, and the cost of all allied trades involved.

- D. All manufactured and fabricated assemblies of electrically operated equipment furnished under this contract shall have Underwriters Laboratories approval or U. L. Re-examination listing in every case where such approval has been established for the particular type of materials or devices in question.

2.2 CONDUITS AND RACEWAYS

- A. All wiring shall be in conduit or other approved raceways except as shown on the drawings or otherwise specified, and shall be concealed unless otherwise noted. Conduit shall be one of the types listed below.
- B. CONDUIT TYPES
1. Rigid Steel Conduit. Rigid steel conduit shall be heavy wall, hot-dip galvanized, and shall conform to Fed Spec WW-C-581 and ANSI C80.1, and UL 6.
 2. Intermediate Metal Conduit (IMC). IMC shall be hot-dip galvanized and shall conform to Fed Spec WW-C-581 and UL 1242.
 3. Liquid tight Flexible Metal Conduit. Liquid tight flexible metal conduit shall be hot-dip galvanized steel, shall be covered with a moisture proof polyvinyl chloride jacket, and shall be UL labeled.
 4. PVC-Coated Rigid Steel Conduit. The conduit shall be rigid steel, hot-dip galvanized with a 40 mils thick PVC coating and a 2 mil thick interior coating. PVC coated rigid steel conduit shall be as manufactured by Ocal, Perma-Cote, Robroy Industries, or Engineers Approved Equal.
- C. CONDUIT INSTALLATION
1. Rigid steel conduit shall be installed in masonry walls, concrete slabs, and cast-in-place walls.
 2. Intermediate metal conduit shall be installed in exposed indoor locations.
 3. Rigid steel conduit shall be rigidly supported by hot-dip galvanized hardware and framing materials, including nuts and bolts. Terminations and connections shall be taper threaded. Conduits shall be reamed, free of burrs, and terminated with conduit bushings.
 4. PVC-coated rigid steel conduit shall be installed in all exposed outdoor locations. Conduit shall be rigidly supported by PVC-coated mounting hardware and framing materials. Nuts and bolts shall be stainless steel. All damaged coatings shall be repaired according to the manufacturer's instructions. PVC-coated rigid steel conduit shall be threaded and installed as recommended by the conduit manufacturer. Threading tools used for steel conduit shall not be used to thread PVC-coated rigid steel conduit.
 5. Liquid tight flexible metal conduit with watertight connectors shall be installed for final connections to dry type transformers, motors, equipment with moving parts, and where indicated on the drawings. Conduit shall be installed without sharp bends and in minimum lengths required for the application but not longer than 4'-0", unless acceptable to the Engineer.
 6. All direct buried underground conduit shall be rigid steel conduit coated with thixotropic coal tar paint or PVC coated rigid steel conduit.
 7. Underground conduits shall be concrete encased under roadways and where indicated on the drawings.
 8. Conduit connections to sheet metal enclosures shall be securely fastened by locknuts inside and outside. Conduits shall be installed between the reinforcing steel in walls or slabs which have reinforcement in both faces. In slabs which have only a single layer of reinforcing steel, conduits shall be placed under the

reinforcement. Conduit shall be neatly grouted into any openings cut into concrete and masonry structures. Conduits shall be capped during construction to prevent entrance of dirt, trash, and water.

9. All conduits that enter enclosures shall be terminated by fittings which ensure that the NEMA rating of the enclosure is not affected or changed. A corrosion-resistant coating shall be applied to all conduits that turn out of concrete, masonry, or earth indoors. The coating shall consist of a heavy coat of coal tar paint extending one inch on each side of the point of turn-out.
10. Concrete encased conduit shall have minimum concrete thickness of 2 inches between conduits, six inches above and below conduits. Underground conduit bend radius shall be not less than 2 feet at vertical risers nor less than 3 feet elsewhere. Underground conduits and conduit banks shall have 2-foot minimum earth cover except where indicated otherwise. Underground conduits shall be sloped to drain from panels. Instrument and telephone cables shall be separated from all power wiring in conduits raceways, boxes, and handholes.
11. After cable has been installed and connected, conduit ends shall be sealed by nonhardening duct sealing compound forced into conduits to a minimum depth equal to the conduit diameter. This shall apply for all conduits at handholes and building entrance junction boxes, and for one inch and larger conduit connections to equipment.
12. All exposed conduit runs shall be so located that pull or junction boxes will not be made inaccessible due to inadequate clearance with piping or equipment.
13. All conduits used for service entrance feeders from supply point to first overcurrent device shall be bonded with suitable bonding locknuts and/or bonding insulating bushings, or by separate copper bonding conductor.

2.3 CONDUCTORS

A. GENERAL

1. The Contractor shall furnish and install all wire and cable necessary to complete the work herein outlined and as shown on drawings, except such items as are specifically noted as being furnished by others. All wiring in the entire system must be color coded and all conductors shall have their size, voltage, manufacturer, and type clearly marked on the outer covering. All wire and cable shall be as herein specified or as shown on the drawings. Wire and cable shall be as manufactured by Okonite, Belden, Anaconda, Rome, General Cable, or or Engineers Approved Equal.

B. CONDUCTORS

1. Conductors shall consist of annealed copper wire of size indicated on drawings or as may be specified herein. No conductors smaller than #12 AWG copper shall be used unless otherwise indicated on the drawings. All conductors up to and including #10 AWG shall be solid copper and all conductors of #8 AWG and larger shall be copper of size indicated on drawings or, as may be specified herein, Class B concentric stranded construction, unless specified otherwise herein or on drawings.

C. WIRE INSULATION

1. All wire and cable unless otherwise specified shall be single conductor type THWN or THHN 600 volt insulation. Service entrance conductors shall be RHH/RHW-USE type insulation. Conductors shall be color coded - black, red, orange, white, on 240/120 volt systems.

D. INSTALLATION

1. The Engineer reserves the right to inspect any and all joints in wiring. If the joint

is already taped, the Contractor shall properly retape after inspection. Conductors shall be continuous without joints or splices in runs between outlet boxes. All splices shall be made at boxes only.

E. SPLICES AND TERMINATIONS:

1. Splices shall be made by use of mechanical connectors of the following manufacturers' types, T & B, "Sta-Kon", Burndy, "Crimpit"; Minnesota Mining and Manufacturing Company, "Scotchlock" Ideal, "Wing-Nuts", or Engineers Approved Equal. Conductors size #8 AWG and larger shall be spliced and connected with suitable solderless, mechanical lugs and connectors. All splices, taps, and connections shall be insulated with Scotch electrical tape as made by Minnesota Mining & Manufacturing Company or Engineers Approved Equal as applicable to installation.

2.4 SUPPORTING DEVICES

A. GENERAL

1. All secondary electrical devices such as outlet boxes, poles, bases, switches, and receptacles shall be located generally as shown on the drawings. No device utilized by the handicapped shall be more than 4'-0" AFF. to top.

B. OUTLET AND SWITCH BOXES

1. Boxes exposed, in masonry walls and cast-in-place walls shall be cast metal with conduit hubs, Crouse Hinds Type FS or equal. Intermediate oversize type plates shall be used where standard plate; will not cover opening. All adjacent plates shall match and be intermediate type also.
2. All exterior mounted boxes shall have approved weather-proof plates and/or covers and all surface installed boxes shall have stamped steel device plates.

C. OUTLET LOCATIONS

1. All outlets for receptacles or switches shall be installed in the location shown on the drawings. The Contractor shall study the general building plans in relation to the spaces surrounding each outlet in order that his work may fit the other work required by these specifications and plans as well as the work of other trades. When necessary, the Contractor shall relocate outlets so that when fixtures or other fittings are installed, they will be symmetrically located according to room layout and will not interfere with other work or equipment.
2. Unless otherwise indicated on the drawings, the top of outlet boxes shall be placed at the following distances from finished floors:
3. Power Panelboards - top of cabinet 6'-6" above floor. Safety switches and/or circuit breakers - handle not over 6'-6" above floor.
4. The Electrical Contractor is cautioned to review general drawings to confirm location of equipment and to adjust the exact installed location of receptacles and devices accordingly to avoid interference between electrical devices and equipment. Responsibility for locating in the field is the Contractor's and the Engineer should be contacted for clarification before installation.

D. STRUCTURAL STEEL

1. The Contractor shall provide miscellaneous structural steel necessary to mount electrical equipment to walls, beams and joists. All structural steel furnished shall be standard shapes and sizes and shall be free from rust and/or scale. All interior steel shall be firmly and rigidly welded or bolted in place. All structural steel shall be structural quality conforming with ASTM A7-497. All exterior steel shall be painted by the Contractor as approved by the Engineer.

E. TAP AND PULL BOXES

1. Boxes shall be of code gauge galvanized sheet steel but not less than 14 gauge metal. Holes for raceways shall be drilled on the job. Where necessary for boxes to be supported away from the ceiling or beams, strap iron or threaded rod shall be used for supports.
2. Boxes shall have covers fastened on with screws. Sizes of boxes shall be determined by NEC requirements. In concealed wiring areas, boxes shall be installed flush with the finished surfaces and provided with oversized covers.

F. SECONDARY SYSTEMS

1. The Contractor shall furnish and install all conduit, junction boxes, outlet boxes, and plates for conduit systems as indicated on the drawings.

2.5 GROUNDING

- A. All electrical systems and equipment connected under this contract shall be grounded in strict accordance with the National Electrical Code and state and local regulations. Provide a green TW insulated equipment grounding conductor in all conduits. It is intended that equipment grounding is not dependent on conduit terminations.
- B. Metal raceways, metal enclosures or electrical devices, switchgear enclosures, transformer frames, and other equipment shall be completely grounded in an approved manner prescribed by the NEC. All necessary conduit, conductors, clamps and connectors for the grounding system shall be furnished, installed and connected by the Electrical Contractor. The ground connection shall be to a driven ground rod and pumping station piping. The pipe connection shall consist of a ground fitting that bonds both conduit and conductor to the pipe.
- C. All ground conductors shall be bare or green insulated in accordance with the National Electrical Code, soft drawn copper cable or bar, not smaller than 12 AWG. Ground cable splices and joints which will be inaccessible upon completion of construction shall meet the requirements of IEEE Standard 837, and shall be Cadweld "Exothermic", Burndy "Hyground" type, Steel City or Engineers Approved Equal. Ground cable near the base of a structure shall be in earth and as far from the structure as the excavation permits but not closer than 6 inches.
- D. Ground connections to equipment and ground buses shall be by copper or high conductivity copper alloy ground lugs or clamps. Connections to enclosures not provided with ground buses or ground terminals shall be by clamp type lugs added under permanent assembly bolts or under new bolts drilled and added through enclosures or by grounding locknuts or bushings.
- E. Ground rods not described elsewhere shall be 5/8 inch diameter by 8 feet long, with a copper jacket bonded to a steel core.

2.6 POWER PANELS

- A. Except as individually described, each power panel without neutral shall be dead-front, circuit breaker, panelboard type in accordance with the drawings and the following.
- B. The panel shall have surface-mounted enclosure NEMA 1 enclosure. The enclosure shall have a door with latch and lock. A directory inside the door shall have a panel and all circuit identities neatly typewritten at completion of the contract.

- C. Circuit breakers shall be thermal-magnetic, bolt-in, individually front replaceable, and shall indicate "On", "Off", and "Tripped". Breakers indicated as multiple-pole shall be common trip. Breakers for 480 volts shall be rated 600 volts with interrupting ratings not less than 22,000 amperes at 480 volts. Handle clips to prevent casual operation of breakers shall be provided for 10 percent (minimum of two) of the breakers and applied to the circuits directed. Breakers and provisions for future breakers shall be provided in the quantities, poles, and ampere ratings indicated. Breakers in panelboard shall be three pole, 20 amperes, except as otherwise indicated.
- D. The panel shall have 3 phase buses insulated from the cabinet, and a ground bus. Buses shall be copper, with ampere and voltage ratings and main lugs or breaker as indicated. The ground bus shall be similar to a neutral bus and shall have a good ground connection to the cabinet, a removable bond to the neutral bus, clamp type lugs for the ground cable in each supply conduit, and connections for a ground cable in each load conduit.
- E. Transient Voltage Surge Suppression (TVSS) shall be provided for each panel board herein. TVSS shall be suitable for use on a 480Y/277V 3-phase 4-wire grounded wye system. Maximum Suppressed Voltage Rating (SVR) per UL1449 3rd Edition shall not exceed 800 volts for L-N, N-G, & L-G and 1500 volts for L-L. Minimum life shall be 2000 current surges of 5,000 amperes on a 10 x 20 microsecond wave shape, and the subsequent power-follow current, per phase. The total surge current based on an 8 x 20 microsecond waveform that the device is capable of surviving shall not be less than 200kA per phase or 100kA per mode. TVSS shall be integral to the panel or mounted directly adjacent to the panel and connect to the buss through a disconnecting means. Overcurrent protection shall be as recommended by the manufacturer. TVSS shall have visual and audible status indication plus form "C" relay contacts that change state when the TVSS has been damaged or is no longer providing protection. TVSS shall be UL1449 Third Edition listed.

2.7 LIGHTING PANELS (LP):

- A. Unless otherwise specified, each lighting and appliance panelboard shall be dead-front, circuit breaker type, 208Y/120 volt, 3-phase or 120/240V single phase panelboard as indicated on the drawings.
- B. Panelboards shall have a NEMA 1 enclosure rating and shall be surface mounted. The front cover shall be hinged to the cabinet. The front cover shall have a door with latch and lock. A directory inside the door shall have the panel and all circuit identities neatly typewritten at completion of the contract.
- C. Circuit breakers shall be thermal-magnetic, bolt-in, individually front replaceable, and shall indicate "On", "Off", and "Tripped". Breakers indicated, as multiple-pole shall be common trip. Breakers shall have interrupting ratings not less than 10,000 amperes. Handle clips to prevent casual operation of breakers shall be provided for 10 percent (minimum of two) of the breakers and applied to the circuits directed. Breakers and provisions for future breakers shall be provided in the quantities, poles, and ampere ratings indicated on the drawings. Breakers shall be single pole, 20 amperes, unless otherwise indicated.
- D. Panelboards shall have main and neutral buses insulated from the cabinet, and a ground bus. Buses shall be copper, with ampere ratings and main lugs or main breaker as indicated. The ground bus shall be similar to a neutral bus and shall have a good ground connection to the cabinet, a removable bond to the neutral bus, and clamp type lugs for the ground conductors.

- E. Panelboards shall be provided with a Surge Protection Device (SPD)/Transient Voltage Surge Suppression (TVSS).
- F. Panelboards shall be labeled as Suitable for Use as Service Equipment (SUSE) where required or as indicated on the drawings.
- G. Each panelboard shall have a nameplate securely fastened to the front cover. Nameplates shall be laminated black-over-white plastic, with 1/4 inch engraved letters that correspond to the panel identification as indicated in each panel schedule.
- H. Panelboard shall be provided with a TVSS unit. TVSS shall be suitable for use on a 208Y/120V 3-phase, 4-wire grounded wye system. Maximum Suppressed Voltage Rating (SVR) per UL1449 3rd Edition shall not exceed 400 volts for L-N, N-G, & L-G and 800 volts for L-L. The total surge current based on an 8 x 20 microsecond waveform that the device is capable of surviving shall not be less than 100kA per phase or 50kA per mode. TVSS shall be integral to the panel or mounted directly adjacent to the panel and connect to the buss through a disconnecting means. Overcurrent protection shall be as recommended by the manufacturer. TVSS shall have visual and audible status indication plus form "C" relay contacts that change state when the TVSS has been damaged or is no longer providing protection. TVSS shall be UL1449 2nd Edition listed.

2.8 SWITCHES

- A. Wall switches shall be 20 amperes, 120/277 volts, Arrowhart 1221 through 1224, Hubbell 1221 through 1224, Eagle 1221 through 1224, or Engineers Approved Equal and shall be mounted 3'-6" AFF unless otherwise indicated on the drawings.

2.9 RECEPTACLES

- A. Receptacles shall be duplex, three-wire, grounding, 20 amperes, 125 volts, Arrowhart 5362, Hubbell 5362, Eagle 5362, or equal for 120 volt circuits. Ground fault receptacles shall be duplex, 20 amperes, 125 volts, Arrowhart GF5352, Hubbell GF5352, Eagle GF5352, or or Engineers Approved Equal. Receptacles shall be mounted eighteen inches AFF unless otherwise indicated on the drawings.

2.10 LIGHTING FIXTURES

- A. The Contractor shall furnish and install all lighting fixtures as called for on the drawings or as herein specified. All fixtures shall be new, industrial grade, and as specified on the drawings.
- B. Ballasts supplied with fluorescent fixtures shall be electronic, premium grade, approved by Underwriters' Laboratories, and properly applied for each installation.
- C. The neutral conductor of lighting systems must be of the same size as the other conductors or larger. On three wire systems, the load shall be divided as evenly as possible on each "outside" or phase conductor. Neutral conductors shall be identified throughout.
- D. The Contractor shall furnish and install all lamps required for all fixtures. All lamps shall be of size and type specified; manufactured by General Electric, Westinghouse, Sylvania, or Engineers Approved Equal. Fluorescent lamps shall be cool white. All lamps shall be warranted by the Contractor for the published rated life. Four weeks after acceptance of the system, the Contractor shall check all lighting fixtures and replace lamps and/or ballasts that have failed during this period of time.

2.11 SEPARATELY ENCLOSED CIRCUIT BREAKER DISCONNECTS

- A. Circuit breakers shall be 3 phase, 480 volt, molded case circuit breakers of not less than 22,000 amperes interrupting rating at 480 volts ac, complete with thermal and instantaneous trip elements. NEMA Type 4X stainless steel enclosures shall be provided for outdoor locations. These breakers shall be manually operated with quick-make, quick-break, trip-free toggle mechanism. Bimetallic thermal elements shall withstand sustained overloads and short-circuit currents without injury and without affecting calibration.
- B. Circuit breakers shall have "On", "Off", and "Tripped" indication and pad-lockable exterior handles.
- C. Circuit breakers shall have engraved or etched legends ("On", "Off", and "Tripped") as described on the drawings. Circuit breakers shall have nameplates identifying related equipment, and unit numbers where applicable. Nameplates shall be laminated black-over-white plastic, with 1/8 inch engraved letters, and shall be securely fastened to the circuit breaker.

2.12 DRY TYPE TRANSFORMERS

- A. Dry-type transformers shall be air-cooled, 60 Hertz, two winding type, single or three phase as indicated. Voltage rating shall be 480-208/120 volts delta primary, wye secondary for three phase units, unless otherwise shown, KVA rating as indicated. Transformers for 30-KVA and above are to have four (4) 2-1/2% FCBN taps and two (2) FCAN, suitable for indoor service and arranged for floor or wall mounting as indicated. Insulation for 30-KVA and above shall be Class H with an average temperature rise not exceeding 150° C. based on 40° C. ambient at full load. Below 30-KVA, Class B, F or H insulation and two (2) 5% FCBN taps. UL listing mark is required. Three phase transformers shall have separate coil winding for each phase.
- B. Mount transformers on rubber-in-shear vibration dampeners or integral vibration dampeners. Rated sound level shall not be less than 5% below NEMA maximums. Make all external wiring connections to units with flexible steel Sealtite conduit. Transformers 30-KVA and above are to be Westinghouse Type DT-3, General Electric Type QL, Sorgel, Heavy-Duty, Jefferson, Wide-Lite, or Engineers Approved Equal. Below 30-KVA Westinghouse Type EPT. General Electric Type M or equal single phase Cutler-Hammer Type, General Electric Type QM or Engineers Approved Equal.
- C. Transformer "TX" shall be wall mounted and shall be provided with the manufacturers' wall mounting kit.
- D. All floor-mounted transformers shall be installed on a 4" concrete pad.

2.13 ELECTRIC UNIT HEATERS:

- A. Electric unit heaters shall be heavy duty and shall include fan and motor assembly, built-in contactor, built-in thermostat, disconnect switch, control transformer as required. Unit heater shall be suitable for use with power supply indicated on the drawings. Heater elements shall be steel plate, fin type with elements brazed to common fins for maximum strength and heat

transfer. Each unit heater fan motor shall be provided with automatic reset thermal overload protection. Unit heater shall be provided with suitable mounting hardware.

- B. Each unit heater shall have a capacity as indicated on the drawings. Electric unit heaters shall be as manufactured by Markel, Chromalux, Brasch or or Engineers Approved Equal.

2.14 THERMOSTATS:

- A. Thermostats for exhaust fans and ventilators shall be provided as indicated on the drawings and specified herein. Wall-mounted thermostat shall be mounted 5'-6" above finished floors. Insulating spacers for thermostats mounted on exterior building walls shall be provided. Thermostats shall be two-position line voltage thermostats. The thermostats shall have a dpdt switch rated for 1 HP at 120 VAC. The thermostats shall have a range of 35 F to 100 F with a non-adjustable differential of 2 degrees F, and shall be Honeywell, Penn Controls, Greenheck or Engineers Approved Equal.

2.15 EXHAUST FANS:

- A. Exhaust shall be provided as indicated on the drawings and specified herein. Fans shall be rated in accordance with AMCA standards, or shall bear the AMCA Certified Rating Label, and shall be UL listed.
- B. Fan noise level tests and ratings shall be made and published in accordance with AMCA Standards 300 and 301. Fan sound ratings and sound test verifications shall be furnished with each fan submittal.
- C. Exhaust shall include accessories shall include gravity damper with louver, personnel safety guard, and insect screen. The propeller fans shall have steel aluminum blades, shall be statically and dynamically balanced to ensure quiet, vibration-free operation, and shall be suitable for mounting as indicated. Fan motors shall be open drip proof, with permanently lubricated, double-sealed ball bearings.
- D. Fans shall include back draft damper with linked blades and fan guard. Provide each fan motor and drive shall be isolated from fan enclosure by rubber-in-shear or spring type isolators standard with manufacturer.
- E. Capacities shall be as indicated on the drawings.
- F. Propeller fans shall be Greenheck, Penn Ventilator, ILG or Engineers Approved Equal.

END OF SECTION

SECTION 31 10 00 SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Removing surface debris.
 - 2. Removing designated paving, curbs, and slabs.
 - 3. Removing designated trees, shrubs, and other plant life.
 - 4. Removing abandoned utilities and structures where indicated.
 - 5. Plugging abandoned utilities and filling abandoned structures where indicated.
 - 6. Protecting plant life and structures designated to remain.
- B. Related Sections:
 - 1. Section 31 23 16 - Excavation and Fill: Topsoil and subsoil removal, proof rolling.
 - 2. Section 31 25 13 - Erosion Controls: Controlling sediment and erosion from Work of this section.

1.2 REFERENCES

- A. SCDOT Standard Specifications:
 - 1. Standard Specifications for Highway Construction, 2007, published by the South Carolina Department of Transportation.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with Section 201 of the SCDOT Standard Specifications.
- B. Maintain one copy of document on site.
- C. Conform to applicable code for environmental requirements and disposal of debris.

PART 2 PRODUCTS – NOT USED.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify existing plant life designated to remain is tagged or identified.
- C. Identify waste area or salvage area for placing removed materials when materials are indicated to remain on site.

3.2 PREPARATION

- A. Call local utility line information service indicated on Drawings not less than three (3) working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

3.3 PROTECTION

- A. Locate, identify, and protect from damage utilities indicated to remain.
- B. Protect trees, plant growth, and features designated to remain as final landscaping.
- C. Protect bench marks and survey control points from damage or displacement.

3.4 CLEARING

- A. Remove trees and shrubs within areas indicated on Drawings.
- B. Remove stumps, main root ball, root system, surface rock, and pavements to depth of 12 inches below proposed subgrade elevation.
- C. Clear undergrowth and deadwood without disturbing subsoil.

3.5 REMOVAL

- A. Remove debris, rock, and extracted plant life from site.
- B. Remove paving, curbs, and site slabs.
- C. Where indicated on Drawings partially remove paving, curbs, and slabs. Neatly saw cut edges at right angle to surface.
- D. Remove abandoned utilities. Indicate removal termination point for underground utilities on Record Documents.
- E. Continuously clean-up and remove waste materials from site. Do not allow materials to accumulate on site.
- F. Do not burn or bury materials on site unless authorized in writing by authority having jurisdiction.
- G. Leave site in clean condition.

3.6 SCHEDULES – NOT USED

END OF SECTION

SECTION 31 23 16 EXCAVATION AND FILL

PART 1 GENERAL

1.1 SUMMARY

Section Includes:

1. Excavating topsoil.
2. Excavating subsoil for buildings, pavements, and landscape.
3. Backfilling building perimeter to subgrade elevations.
4. Backfilling site structures to subgrade elevations.
5. Filling under pavements or slabs-on-grade.
6. Undercutting and filling over-excavation.
7. Disposal of excess material.

Related Sections:

1. Section 31 10 00 – Site Clearing: Clearing site prior to excavation.
2. Section 31 25 13 – Erosion Controls: Controlling sediment and erosion from Work of this section.
3. Section 31 23 17 – Trenching: Excavating and backfilling for utilities.
4. Section 03 30 00 – Cast-in-Place Concrete

1.2 REFERENCES

SCDOT Standard Specifications:

1. Standard Specifications for Highway Construction, 2007, published by the South Carolina Department of Transportation.

American Association of State Highway and Transportation Officials:

1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.

ASTM International:

1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
2. ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand-Cone Method.
3. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
5. ASTM D2419 - Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate.
6. ASTM D2487 - Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
7. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
8. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 SUBMITTALS

Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan.
- C. Dewatering Plan: Describe dewatering methods to be used to keep excavations dry if required.
- D. Samples: Submit, in air-tight containers, 10-pound sample of each type of fill to testing laboratory.
- E. Materials Source DOT Approval: Submit certification that aggregate and soil material suppliers are approved by the State Department of Transportation.

Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.4 CLOSEOUT SUBMITTALS

Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

- B. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with Division 200 – Earthwork of the SCDOT Standard Specifications.

Maintain one copy of document on site.
- C. Prepare excavation protection plan under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of Project location.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil: Original surface soil typical of the area which is capable of supporting native plant growth. It shall be free of large stones, roots, waste, debris, contamination, or other unsuitable material which might hinder plant growth.
- B. Subsoil: Clean natural soil with a plasticity index of 15 or less that is free of clay, rock, or gravel lumps larger than 2 inches in any dimension, debris, waste, frozen material, and any other deleterious material that might cause settlement. Suitable material excavated from the site may be used as subsoil fill under optimum moisture conditions.
- C. Granular Fill: Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SW, SP, SP-SM, or SP-SC.

- D. Structural Fill: Clean course aggregate Gradation No. 57 conforming to Sections 801 of the SCDOT Standard Specifications.
- E. Borrow Material: Conform to subsoil requirements.

2.2 ACCESSORIES

- A. Geotextile Fabric: Non-woven, non-biodegradable, conforming to Section 804 of the SCDOT Standard Specifications.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify survey bench mark and intended elevations for the Work are as indicated on Drawings.
- C. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- D. Verify underground structures are anchored to their own foundations to avoid flotation after backfilling.
- E. Verify structural ability of unsupported walls to support loads imposed by fill.

3.2 PREPARATION FOR EXCAVATION

- A. Call Local Utility Line Information service as indicated on Drawings not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Identify required lines, levels, contours, and datum.
- C. Notify utility company to remove and relocate utilities.
- D. Protect utilities indicated to remain from damage.
- E. Protect plant life, lawns, rock outcropping, and other features remaining as portion of final landscaping.
- F. Protect bench marks, survey control point, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, re-landscaped, or regraded without mixing with foreign materials for use in finish grading.
- B. Do not excavate wet topsoil.

- C. Stockpile in area designated on site and protect from erosion.
- D. Remove from site excess topsoil not intended for reuse.

3.4 SUBSOIL EXCAVATION

- A. Underpin adjacent structures which may be damaged by excavation work.
- B. Excavate subsoil to accommodate building foundations, structures, slabs-on-grade, paving, landscaping, and construction operations.
- C. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity.
- D. Slope banks with machine to angle of repose or less until shored.
- E. Do not interfere with 45-degree bearing splay of foundations.
- F. Grade top perimeter of excavation to prevent surface water from draining into excavation.
- G. Trim excavation. Remove loose matter.
- H. Remove lumped subsoil, boulders, and rock up to 1/3 cubic yard measured by volume.
- I. Notify Engineer and testing agency of unexpected subsurface conditions.
- J. Correct areas over excavated with granular fill and compact as required for fill areas.
- K. Remove excess and unsuitable material from site.
- L. Repair or replace items indicated to remain damaged by excavation.
- M. Excavate subsoil from areas to be further excavated, re-landscaped, or regraded.
- N. Do not excavate wet subsoil or excavate and process wet material to obtain optimum moisture content.
- O. Remove from site excess subsoil not intended for reuse.
- P. Benching Slopes: Horizontally bench existing slopes greater than 3:1 to key placed fill material into slope to provide firm bearing.
- Q. Stability: Replace damaged or displaced subsoil as specified for fill.

3.5 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures, and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support excavations more than five (5) feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.

- C. Design sheeting and shoring to be left in place as part of the completed Work, cut off minimum 18 inches below finished subgrade, or design sheeting and shoring to be removed at completion of excavation work.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to new and existing Work from settlement, water, or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.6 SURFACE WATER CONTROL

- A. Control and remove unanticipated water seepage into excavation.
- B. Provide ditches, berms, and other devices to divert and drain surface water from excavation area as specified in Section 31 25 13 – Erosion Controls.
- C. Divert surface water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.

3.7 DEWATERING

- A. Design and provide dewatering system to permit Work to be completed on dry and stable subgrade.
- B. Operate dewatering system continuously until backfill is minimum two (2) feet above normal ground water table elevation.
- C. When dewatering system cannot control water within excavation, notify Engineer and stop excavation work.
 - 1. Supplement or modify dewatering system and provide other remedial measures to control water within excavation.
 - 2. Demonstrate dewatering system operation complies with performance requirements before resuming excavation operations.
- D. Modify dewatering systems when operation causes or threatens to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells.
- E. Discharge ground water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.
- F. Remove dewatering and surface water control systems after dewatering operations are discontinued.

3.8 PROOF ROLLING

- A. Proof roll areas to receive fill, pavement and building slabs to identify areas of soft yielding soils.
 - 1. Use loaded tandem-axle pneumatic tired dump truck or large smooth drum roller.
 - 2. Load equipment to maximum 50 tons gross weight and make a minimum of four passes with two passes perpendicular to the others.
- B. Undercut such areas to firm soil, backfill with granular fill, and compact to density equal to or greater than requirements for subsequent fill material.

- C. Do not proof roll or undercut until soil has been dewatered.

3.9 BACKFILLING

- A. Scarify subgrade surface to depth of four (4) inches.
- B. Compact subgrade to density requirements for subsequent backfill materials.
- C. Backfill areas to contours and elevations with unfrozen materials.
- D. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- E. Place fill material in continuous layers and compact in accordance with Schedule at end of this Section.
- F. Employ placement method that does not disturb or damage other work.
- G. Maintain optimum moisture content of backfill materials to attain required compaction density.
- H. Support foundation walls and structures prior to backfilling.
- I. Backfill simultaneously on each side of unsupported foundation walls and structures until supports are in place.
- J. Slope grade away from building minimum 2 percent slope for minimum distance of 10 feet, unless noted otherwise.
- K. Make gradual grade changes. Blend slope into level areas.
- L. Remove surplus backfill materials from site.

3.10 BRIDGING DEGRADED SOILS – NOT USED

3.11 TOLERANCES

- A. Top Surface of Backfilling Within Building and Paved Areas: Plus or minus 1 inch from required elevations.
- B. Top Surface of Backfilling Within Landscape Areas: Plus or minus 2 inches from required elevations.

3.12 PROTECTION

- A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.
- B. Protect bottom of excavations and soil adjacent to and beneath foundation from freezing.

- C. Protect structures, utilities, and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth operations.
- D. Repair or replace items indicated to remain damaged by excavation or filling.

3.13 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Independent laboratory, field inspecting, testing, adjusting, and balancing.
- B. Request visual inspection of bearing surfaces by Engineer and inspection agency before installing subsequent work.
- C. Laboratory Material Tests: In accordance with ASTM D1557 or AASHTO T180.
- D. In-Place Compaction Tests: In accordance with the following:
 - 1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- E. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
- F. Frequency of Tests:
 - 1. Building and Pavement Areas: Twice per lift for every 5,000 square feet.
 - 2. Landscape Areas: Twice per lift for every 10,000 square feet.

3.14 SCHEDULES

- A. Under Pavement and Slabs:
 - 1. Maximum 8-inch compacted depth.
 - 2. Compact material to a minimum of 95 percent of maximum density, except the top 12 inches.
 - 3. Compact top 12 inches to a minimum of 98 percent of maximum density.
- B. Under Landscape Areas:
 - 1. Maximum 8-inch compacted depth.
 - 2. Compact to minimum 90 percent of maximum density.
- C. Footing Foundation Fill:
 - 1. Structural fill to maximum 12-inch compacted depth.
 - 2. Compact to 98 percent of maximum density.

END OF SECTION

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SECTION 31 23 17 TRENCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 1. Excavating trenches for utilities and utility structures.
 2. Bedding.
 3. Backfilling and compacting to subgrade elevations.
 4. Sheeting and Shoring.
 5. Dewatering.
 6. Compacting backfill material.
- B. Related Sections:
 1. Section 31 23 16 – Excavation and Fill: Topsoil and subsoil removal from site surface.
 2. Section 31 25 13 – Erosion Controls: Controlling sediment and erosion from Work of this section.
 3. Section 33 11 00 – Water Utility Distribution Piping: Water Distribution Piping and bedding.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop.
- B. ASTM International:
 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 2. ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand-Cone Method.
 3. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 4. ASTM D2167 - Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 5. ASTM D2487 – Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System).
 6. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 7. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- C. SCDOT Standard Specifications:
 1. Standard Specifications for Highway Construction, 2007, published by the South Carolina Department of Transportation.

1.3 DEFINITIONS

- A. Utility: Any buried pipe, duct, conduit, or cable.
- B. Utility Structures: Manholes, catch basins, inlets, valve vaults, hand holes, and other utility access structures as indicated on Drawings.
- C. Trench Terminology:
 - 1. Foundation: Area under bottom of trench supporting bedding.
 - 2. Bedding: Fill placed under utility pipe.
 - 3. Haunching: Fill placed from bedding to center line of pipe.
 - 4. Initial Backfill: Fill place from center line to 6 to 12 inches above top of pipe.
 - 5. Final Backfill: Fill placed from initial backfill to subgrade.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Excavation Protection Plan: Describe sheeting, shoring, and bracing materials and installation required to protect excavations and adjacent structures and property; include structural calculations to support plan. Prepare excavation protection plan under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of South Carolina.
- C. Dewatering Plan if required: Describe methods of dewatering and disposal of water.
- D. Product Data: Submit data for geotextile fabric indicating fabric and construction.
- E. Samples: Submit to testing laboratory, in air-tight containers, 10-pound sample of each type of fill.
- F. Materials Source: Submit name of imported fill material suppliers.
- G. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with Division 200 of SCDOT Standard Specifications.
- B. Maintain one copy of document on site.

1.6 FIELD MEASUREMENTS

- A. Verify field measurements prior to fabrication.

1.7 COORDINATION

- A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.

PART 2 PRODUCTS

2.1 BACKFILL MATERIALS

- A. Subsoil Fill: Clean natural soil with a plasticity index of 15 or less that is free of clay, rock, or gravel lumps larger than 2 inches in any dimension; debris; waste; frozen material; and any other deleterious material that might cause settlement. Suitable material excavated from the site may be used as subsoil fill under optimum moisture conditions.
- B. Granular Fill: Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SW, SP, SP-SM or SP-SC.
- C. Foundation Stone: Clean course aggregate Gradation No. 57 conforming to Sections 801 of the SCDOT Standard Specifications.
- D. Bedding and Haunching Material:
 - 1. Rigid Pipe: Granular Fill.
 - 2. Flexible Pipe: Foundation Stone.
- E. Bedding for Structures: Foundation Stone.
- F. Initial Backfill to 6 inches Minimum Above Utility:
 - 1. Rigid Pipe: Subsoil Fill.
 - 2. Flexible Pipe: Foundation Stone.
- G. Final Backfill to Subgrade:
 - 1. Under Pavement: Granular Fill.
 - 2. Under Landscape: Subsoil Fill.

2.2 ACCESSORIES

- A. Geotextile Fabric: Non-woven, non-biodegradable conforming to Section 804 of the SCDOT Standard Specifications.
- B. Concrete: Concrete conforming to Section 701 of the SCDOT Standard Specifications.
 - 1. Compressive strength of 3,000 psi at 28 days.
 - 2. Air entrained.
 - 3. Water cement ratio of 0.488 with rounded aggregate and 0.532 with angular aggregate.
 - 4. Maximum slump of 3.5 inches for vibrated concrete and 4 inches for non-vibrated concrete.
 - 5. Minimum cement content of 564 lbs per cubic yard for vibrated and 602 lbs. per cubic yard for non-vibrated concrete.

PART 3 EXECUTION

3.1 PREPARATION

- A. Call local utility line information service indicated on Drawings not less than three (3) working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.

- B. Identify required lines, levels, contours, and datum locations.
- C. Protect plant life, lawns, rock outcropping, and other features remaining as portion of final landscaping.
- D. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- E. Maintain and protect above and below grade utilities indicated to remain.
- F. Establish temporary traffic control and detours when trenching is performed in public right-of-way. Relocate controls and reroute traffic as required during progress of Work.

3.2 LINES AND GRADES

- A. Excavate to lines and grades indicated on Drawings.
 - 1. Owner reserves right to make changes in lines, grades, and depths of utilities when changes are required for Project conditions.
- B. Use laser-beam instrument with qualified operator to establish lines and grades.

3.3 TRENCHING

- A. Excavate subsoil required for utilities.
- B. Perform excavation within 48 inches of existing utility service in accordance with utility's requirements.
- C. Do not advance open trench more than 200 feet ahead of installed pipe.
- D. Remove water or materials that interfere with Work.
- E. Trench Width: Excavate bottom of trenches maximum 16 inches wider than outside diameter of pipe or as indicated on Drawings.
- F. Excavate trenches to depth indicated on Drawings. Provide uniform and continuous bearing and support for bedding material and pipe.
- G. Maintain vertical faces to an elevation equal to 12 inches above top of pipe.
 - 1. When Project conditions permit, side walls may be sloped or benched above this elevation.
 - 2. When side walls cannot be sloped, provide sheeting and shoring to protect excavation as specified in this Section.
- H. Support Utilities and Structures:
 - 1. Keep trench width at top of trench to practical minimum to protect adjacent or crossing utility lines
 - 2. Support utilities crossing trench by means acceptable to utility company.
 - 3. Do not interfere with 45-degree bearing splay of foundations.
 - 4. Provide temporary support for structures above and below ground.

- I. When subsurface materials at bottom of trench are loose or soft, excavate to firm subgrade or to depth directed by Engineer.
 - 1. Cut out soft areas of subgrade not capable of compaction in place.
 - 2. Backfill with foundation stone and compact to density equal to or greater than requirements for subsequent backfill material.
- J. Trim Excavation: Hand trim for bell and spigot pipe joints where required. Remove loose matter.
- K. Correct areas over excavated areas with compacted backfill as specified for authorized excavation or replace with fill concrete as directed by Engineer.
- L. Place geotextile fabric over trench foundation stone prior to placing subsequent bedding materials.

3.4 SHEETING AND SHORING

- A. Sheet, shore, and brace excavations to prevent danger to persons, structures, and adjacent properties and to prevent caving, erosion, and loss of surrounding subsoil.
- B. Support trenches more than 5 feet deep excavated through unstable, loose, or soft material. Provide sheeting, shoring, bracing, or other protection to maintain stability of excavation.
- C. Design sheeting and shoring to be removed at completion of excavation work unless approved by Engineer.
- D. Repair damage caused by failure of the sheeting, shoring, or bracing and for settlement of filled excavations or adjacent soil.
- E. Repair damage to new and existing Work from settlement, water, or earth pressure or other causes resulting from inadequate sheeting, shoring, or bracing.

3.5 SURFACE WATER CONTROL

- A. Control and remove unanticipated water seepage into excavation.
- B. Provide ditches, berms, and other devices to divert and drain surface water from excavation area as specified in Section 31 25 13 – Erosion Controls.
- C. Divert surface water and seepage water within excavation areas into sumps or settling basins prior to pumping water into drainage channels and storm drains.

3.6 DEWATERING

- A. Design and provide dewatering system to permit Work to be completed on dry and stable subgrade.
- B. Operate dewatering system continuously until backfill is minimum 2 feet above normal ground water table elevation.

- C. When dewatering system cannot control water within excavation, notify Engineer and stop excavation work.
 - 1. Supplement or modify dewatering system and provide other remedial measures to control water within excavation.
 - 2. Demonstrate dewatering system operation complies with performance requirements before resuming excavation operations.
- D. Modify dewatering systems when operation causes or threatens to cause damage to new construction, existing site improvements, adjacent property, or adjacent water wells.
- E. Discharge ground water and seepage water within excavation areas through filter bags or into settling basins prior to pumping water into drainage channels and storm drains.
- F. Remove dewatering and surface water control systems after dewatering operations are discontinued.

3.7 BEDDING, HAUNCHING, AND INITIAL BACKFILL

- A. Place bedding full width of trench to the depth indicated on Drawings and compact to 95 percent maximum density. Excavate for pipe bells.
- B. Install utility pipe and conduit in accordance with the respective utility section.
- C. Support pipe uniformly along entire length of pipe.
- D. Carefully place haunching material to center of pipe, rod and tamp material to fill voids and provide uniform support of pipe haunches. Compact to 90 percent maximum density.
- E. Carefully place initial backfill to 6 inches above top of pipe or to depth indicated on Drawings. Compact to 95 percent maximum density.

3.8 FINAL BACKFILLING TO SUBGRADE

- A. Backfill trenches to contours and elevations with unfrozen fill materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen, or spongy subgrade surfaces.
- C. Place fill material in continuous layers and compact in accordance with schedule at end of this Section.
- D. Employ placement method that does not disturb or damage utilities in trench or foundation perimeter drainage.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Do not leave more than 50 feet of trench open at end of working day.
- G. Protect open trench to prevent danger to the public.

3.9 DISPOSAL OF EXCESS MATERIAL

- A. Dispose of excess material offsite and legally.

- B. Furnish Engineer with certificate of disposal site or agreement from private property owner.

3.10 TOLERANCES

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Top Surface of Backfilling: Plus or minus 1 inch from required elevations.

3.11 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Perform laboratory material tests in accordance with ASTM D1557 or AASHTO T180.
- C. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- D. When tests indicate Work does not meet specified requirements, remove Work, replace, compact, and retest.
- E. Frequency of Tests: Two (2) tests per lift for every 1000 feet of trench.

3.12 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 - Execution and Closeout Requirements: Protecting finished work.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

3.13 SCHEDULE OF COMPACTION

- A. Under Pavement and Slabs:
 - 1. Granular Fill in maximum 8-inch loose lifts.
 - 2. Compact to minimum 95 percent maximum density except the top 12 inches.
 - 3. Compact top 12 inches to minimum 98 percent maximum density.
- B. Under Landscape Areas:
 - 1. Subsoil Fill in maximum 8-inch loose lifts.
 - 2. Compact to minimum 90 percent maximum density.
- C. In Unstable or Unsuitable Trench Foundation Areas:
 - 1. Foundation Stone in maximum 12-inch loose lifts.
 - 2. Compact to 98 percent maximum density.

END OF SECTION

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SECTION 31 25 13 EROSION CONTROLS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes installing, maintaining and removing:
 - 1. Silt Fence.
 - 2. Temporary Construction Entrances.
 - 3. Diversion Channels.
 - 4. Sediment Traps.
 - 5. Rip Rap.
 - 6. Stone Check Dams.
 - 7. Inlet Protection.
 - 8. Site Stabilization.
- B. Related Sections:
 - 1. Section 31 10 00 – Site Clearing.
 - 2. Section 31 23 16 – Excavation and Fill.
 - 3. Section 31 23 17 - Trenching
 - 4. Section 32 92 19 – Seeding.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO T180 - Standard Specification for Moisture-Density Relations of Soils Using a 4.54-kg (10-pound) rammer and a 457-mm (18-inch) drop.
- B. ASTM International:
 - 1. ASTM D698 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)).
 - 2. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (6,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 3. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 4. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
- C. SCDOT Standard Specifications:
 - 1. Standard Specifications for Roads and Structures, 2007, published by the South Carolina Department of Transportation.
- D. SC DHEC Best Management Practices.
 - 1. South Carolina Department of Health and Environmental Control Storm Water Management Best Management Practices, 2005, South Carolina Department of Health and Environmental Control.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Product Data: Submit data on geotextile, posts, woven wire, concrete mix design, and pipe.
- C. Manufacturer's Certificate: Certify products and aggregates meet or exceed specified requirements.
- D. Closeout Submittals: Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.

1.4 QUALITY ASSURANCE

- A. Standard of quality shall conform to the standards and practices set forth in: "South Carolina Storm Water Management and Sedimentation Control Handbook for Land Disturbance Activities," August 2003 or latest edition and "South Carolina Department of Health and Environmental Control Storm Water Management Best Management Practices," July 2005 or latest edition.
- B. Maintain one copy of document on site.

1.5 PRE-INSTALLATION MEETINGS

- A. Convene minimum one week prior to commencing work of this Section.

PART 2 PRODUCTS

2.1 GEOTEXTILE MATERIALS

- A. Engineering Fabric Materials: Non-biodegradable conforming to Section 815.02 of SCDOT Standard Specifications:
 - 1. Silt Fence: Type 3, Class A or B Engineering Fabric.
 - 2. Under Rip Rap or Construction Entrances: Type 2 Engineering Fabric.

2.2 STONE, AGGREGATE, AND SOIL MATERIALS

- A. Stone for Sediment Trap and Check Dam: Class B erosion control stone conforming to Division 800 of the SCDOT Standard Specifications. Minimum size 5 inches, midrange size 9 inches, and maximum size 16 inches equally distributed.
- B. Washed Stone: Coarse aggregate, Gradation No. 57 conforming to Division 800 of the SCDOT Standard Specifications.
- C. Aggregate for Construction Entrance: Coarse aggregate, Gradation No. 4 or larger with maximum size of 3 inch, conforming to Division 800 of the SCDOT Specifications.
- D. Soil Fill: Clean natural soil with a plasticity index of 15 or less that is free of clay, rock, or gravel lumps larger than 2 inches in any dimension; debris; waste; frozen material; and any other deleterious material that might cause settlement. Suitable material excavated from the site may be used as soil fill under optimum moisture conditions.

2.3 PLANTING MATERIALS

- A. General: Conform to South Carolina rules and regulations as specified in Section 810 of the SCDOT Standard Specifications for seed, agricultural ground limestone, fertilizers, and mulch.
- B. Temporary Seed Mixture:
 - 1. Late winter and early spring: Rye and Annual Lespedeza (Kobe)
 - 2. Summer: German Millet.
 - 3. Fall: Rye.
- C. Fertilizer: Commercial grade; recommended for grass.
- D. Lime: ASTM C602, Class O agricultural ground limestone containing a minimum 80 percent calcium carbonate equivalent.
- E. Mulch: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.

2.4 CONCRETE

- A. Concrete: Class B concrete conforming to Section 701 of the SCDOT Standard Specifications.
 - 1. Compressive strength of 2,500 psi at 28 days.
 - 2. Air entrained.
 - 3. Water cement ratio of 0.488 with rounded aggregate and 0.567 with angular aggregate.
 - 4. Maximum slump of 2.5 inches for vibrated concrete and 4 inches for non-vibrated concrete.
 - 5. Minimum cement content of 508 lbs per cubic yard for vibrated and 545 lbs per cubic yard for non-vibrated concrete.

2.5 PIPE MATERIALS

- A. Pipe: Corrugated steel pipe and fittings conforming to Section 715.2.3 of SCDOT Standard Specifications.

2.6 ACCESSORIES

- A. Posts for Silt Fence and Inlet Protection: Steel posts 5 feet long, 1-3/8 inches wide, minimum weight 1.25 lbs/ft. conforming to Section 815.4.6 of the SCDOT Standard Specifications.
- B. Woven Wire Fence for Silt Fence: Minimum 32 inches high, minimum 5 horizontal wires, vertical wires spaced 12 inches apart, minimum 10 gage top and bottom wires, and minimum 12-1/2 gage; all other wires conforming to Section 815 of the SCDOT Standard Specifications.
- C. Attachment Devices for Silt Fence: No. 9 staple, minimum 1-1/2 inches long, or other approved attachment devices.
- D. Hardware Cloth for Inlet Protection: 24 gage, 1/4-inch mesh opening hardware cloth.

- E. Trash Rack for Pipe Riser: Cone shaped with #4 bars welded at each intersection of bars and sized to fit pipe riser. Conform to Division 800 of the SCDOT Standard Specifications.

2.7 SOURCE QUALITY CONTROL (AND TESTS)

- A. Section 01 40 00 - Quality Requirements: Testing, inspection, and analysis requirements.
- B. Perform tests on cement, aggregates, and mixes to ensure conformance with specified requirements.
- C. Make rock available for inspection at producer's quarry prior to shipment. Notify Architect/Engineer at least seven (7) days before inspection is allowed.
- D. Allow witnessing of inspections and tests at manufacturer's test facility. Notify Architect/Engineer at least seven (7) days before inspections and tests are scheduled.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify compacted subgrade is acceptable and ready to support devices and imposed loads.
- C. Verify gradients and elevations of base or foundation for other work are correct.

3.2 SILT FENCE

- A. Install in accordance with Section 815 of the SCDOT Standard Specifications at locations shown on Drawings.
- B. Use wire fence with Class A fabric.
- C. Class B fabric may be used without woven wire backing subject to the following:
 1. Fabric is approved by Architect/Engineer.
 2. Maximum post spacing is 6 feet.
 3. Posts are inclined toward runoff source not more than 20 degrees from vertical.

3.3 TEMPORARY CONSTRUCTION ENTRANCES

- A. Excavate and compact subgrade as specified in Section 31 23 16 – Excavation and Fill.
- B. Install construction entrances to the dimensions and locations as shown on Drawings. Minimum thickness is 6 inches.
- C. Mound aggregate near intersection with public road to prevent site runoff entering road.
- D. Periodically dress entrances with 2-inch thick course aggregate when aggregate becomes clogged with soil.

3.4 DIVERSION CHANNELS

- A. Excavate channel as specified in Section 31 23 16 – Excavation and Fill.
- B. Windrow excavated material on low side of channel.
- C. Compact to 95 percent maximum density.
- D. On entire channel area, apply soil supplements and sow seed as specified in Section 32 92 19 – Seeding.
- E. Mulch seeded areas with hay as specified in Section 32 92 19 – Seeding.

3.5 SEDIMENT TRAPS

- A. Clear site as specified in Section 31 10 00 – Site Clearing.
- B. Construct trap by excavating and forming embankments as specified in Section 31 23 16 – Excavation and Fill.
- C. Place coarse aggregate or rock at outlet as indicated on Drawings.
- D. Place geotextile fabric as specified for rock lining.
- E. On entire sediment trap area, apply soil supplements and sow seed as specified in Section 32 92 19 – Seeding.
- F. Mulch seeded areas with hay as specified in Section 32 92 19 – Seeding.
- G. Clean trap of accumulated sediment when directed but no less than when trap is half-full of sediment.

3.6 ROCK LINING (RIP RAP)

- A. Excavate to depth of rock lining as indicated on Drawings or nominal placement thickness as follows. Remove loose, unsuitable material below bottom of rock lining and replace with suitable material. Thoroughly compact and finish entire foundation area to firm, even surface.
- B. Lay and overlay geotextile fabric over substrate. Lay fabric parallel to flow from upstream to downstream. Overlap edges upstream over downstream and upslope over downslope. Provide a minimum overlap of three (3) feet. Offset adjacent roll ends a minimum of 5 feet when lapped. Cover fabric as soon as possible and in no case leave fabric exposed more than four (4) weeks.
- C. Carefully place rock on geotextile fabric to produce an even distribution of pieces with minimum of voids and without tearing geotextile.
- D. Unless indicated otherwise, place full course thickness in one operation to prevent segregation and avoid displacement of underlying material. Arrange individual rocks for uniform distribution.

3.7 STONE CHECK DAM

- A. Determine length required for ditch or depression slope and excavate backfill, and compact foundation area to firm, even surface.
- B. Place Class B erosion control stone in an even distribution of rock pieces with minimum voids to the indicated shape, height, and slope.
- C. Construct washed stone filter blanket against upstream face of stone check dam to the thickness indicated on Drawings.

3.8 INLET PROTECTION

- A. Install four posts around drainage structure and attach hardware cloth as indicated on Drawings.
- B. Place Class B erosion control stone at base of fabric and mound at approximately 2:1.
- C. Place washed stone filter blanket on upstream side(s).

3.9 SITE STABILIZATION

- A. Incorporate erosion control devices indicated on the Drawings into the Project at the earliest practicable time.
- B. Construct, stabilize, and activate erosion controls before site disturbance within tributary areas of those controls.
- C. Stockpile and waste pile heights shall not exceed 35 feet. Slope stockpile sides at 2:1 or flatter.
- D. Stabilize any disturbed area of affected erosion control devices on which activity has ceased and which will remain exposed for more than 20 days.
 - 1. During non-germinating periods, apply mulch at recommended rates.
 - 2. Stabilize disturbed areas which are not at finished grade and which will be disturbed within one year in accordance with Section 32 92 19 – Erosion Controls at 75 percent of permanent application rate with no topsoil.
 - 3. Stabilize disturbed areas which are either at finished grade or will not be disturbed within one year in accordance with Section 32 92 19 – Erosion Controls permanent seeding specifications.
- E. Stabilize diversion channels, sediment traps, and stockpiles immediately.

3.10 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspect erosion control devices on a weekly basis and after each runoff event. Make necessary repairs to ensure erosion and sediment controls are in good working order.
- C. Perform laboratory material tests in accordance with ASTM D1557 or AASHTO T180.

- D. Perform in place compaction tests in accordance with the following:
 - 1. Density Tests: ASTM D1556, ASTM D2167, or ASTM D2922.
 - 2. Moisture Tests: ASTM D3017.
- E. When tests indicate Work does not meet specified requirements, remove Work, replace, and retest.
- F. Frequency of Tests: Twice per lift for every 10,000 square feet.

3.11 CLEANING

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for cleaning.
- B. When sediment accumulation in sedimentation structures has reached a point one-half depth of sediment structure or device, remove and dispose of sediment.
- C. Do not damage structure or device during cleaning operations.
- D. Do not permit sediment to erode into construction or site areas or natural waterways.
- E. Clean channels when depth of sediment reaches approximately one-half channel depth.

3.12 SCHEDULES

- A. Erosion Control Schedule:

Erosion Control Element	Location	Size
Silt Fence	*	*
Temporary Construction Entrance	As Needed	As Needed
Diversion Channel	NA	
Sediment Trap	NA	
Rock Lining (Rip Rap)	NA	
Stone Check Dams	NA	
Inlet Protection	As Needed	As Needed
Sediment Pond	NA	NA

*As Shown of Construction Plans

END OF SECTION

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SECTION 32 31 13
CHAIN LINK FENCES AND GATES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fence framework, fabric, and accessories.
2. Excavation for post bases.
3. Concrete foundation for posts and center drop for gates.
4. Manual gates and related hardware.
5. Barbed wire.
6. Privacy slats.

1.2 REFERENCES

A. ASTM International:

1. ASTM A121 - Standard Specification for Zinc-Coated (Galvanized) Steel Barbed Wire.
2. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
3. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
4. ASTM A392 - Standard Specification for Zinc-Coated Steel Chain-Link Fence Fabric.
5. ASTM A491 - Standard Specification for Aluminum-Coated Steel Chain-Link Fence Fabric.
6. ASTM A585 - Standard Specification for Aluminum-Coated Steel Barbed Wire.
7. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
8. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.
9. ASTM B429 - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube.
10. ASTM F567 - Standard Practice for Installation of Chain-Link Fence.
11. ASTM F668 - Standard Specification for Poly (Vinyl Chloride) (PVC)-Coated Steel Chain Link Fence Fabric.
12. ASTM F900 - Standard Specification for Industrial and Commercial Swing Gates.
13. ASTM F934 - Standard Specification for Standard Colors for Polymer-Coated Chain Link Fence Materials.
14. ASTM F1043 - Standard Specification for Strength and Protective Coatings on Metal Industrial Chain Link Fence Framework.
15. ASTM F1083 - Standard Specification for Pipe, Steel, Hot-Dipped Zinc-Coated (Galvanized) Welded, for Fence Structures.
16. ASTM F1183 - Aluminum Alloy Chain Link Fence Fabric.
17. ASTM F1184 - Standard Specification for Industrial and Commercial Horizontal Slide Gates.

B. Chain Link Fence Manufacturers Institute:

1. CLFMI - Product Manual.

- C. SCDOT Standard Specifications:
 - 1. Standard Specifications for Highway Construction, 2007, published by the South Carolina Department of Transportation.

1.3 SYSTEM DESCRIPTION

- A. Fence Height: 8'0"
- B. Line Post Spacing: 12 feet maximum.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, gates, and schedule of components.
- C. Product Data: Submit data on fabric, posts, accessories, fittings and hardware.
- D. Manufacturer's Installation Instructions: Submit installation requirements including post foundation anchor bolt templates if required.
- E. Samples: Submit two 12 x 12 inch samples of fence fabric, and 12 x 12 inch in size illustrating construction and finish.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Closeout procedures.
- B. Project Record Documents: Accurately record actual locations of property perimeter posts relative to property lines and easements.
- C. Operation and Maintenance Data: Procedures for submittals.

1.6 QUALITY ASSURANCE

- A. Supply material in accordance with CLFMI - Product Manual.
- B. Perform installation in accordance with ASTM F567.

1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this Section with minimum five (5) years experience.
- B. Installer: Company specializing in performing work of this section with minimum five (5) years experience.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver fence fabric and accessories in packed cartons or firmly tied rolls.
- B. Identify each package with manufacturer's name.

- C. Store fence fabric and accessories in secure and dry place.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers:
1. Anchor Fence Inc.
 2. Cyclone Inc.
 3. Page Aluminized Steel Corp.
 4. Boundary Fence and Railing Systems, Inc.
 5. Or Engineer Approved Equal

2.2 MATERIALS

- A. Steel Pipe Framing: ASTM F1083 Schedule 40 galvanized steel pipe, welded construction; coating conforming to ASTM F1043 Type A on pipe exterior and interior.
- B. Hot Rolled Steel Framing: ASTM A1011 hot rolled steel strip, cold formed to pipe configuration, longitudinally welded construction, minimum Grade 50; coating conforming to ASTM F1043 Type B on pipe exterior and interior.
- C. Steel Fence Fabric: ASTM A392 zinc coated wire fabric or ASTM A491 aluminum coated wire fabric.
- D. Aluminum Alloy Pipe Framing: ASTM B429.
- E. Aluminum Alloy Fence Fabric: ASTM F1183
- F. Barbed Wire: ASTM A121 galvanized steel or ASTM A585 aluminum coated steel; 12 gage thick wire, 2 strands, and 4 points at 3 inch on center.
- G. Barbed Tape: Stainless steel, 0.025 inch thick x 1 inch wide, coil diameter of 24 inch, die stamped to produce 4 barbed points at 4 inches on center; cold clench over stainless steel core.

2.3 COMPONENTS

- A. Nominal fence height less than 6 feet:
1. Line Posts: 1.9-inch diameter.
 2. Corner and Terminal Posts: 2.88-inch.
 3. Gate Posts: 3.5-inch diameter.
 4. Top and Brace Rail: 1.66-inch diameter, plain end, sleeve coupled.
 5. Gate Frame: 1.66-inch diameter for welded fabrication.
- B. Nominal Fence height 6 feet or more:
1. Line Posts: 2.38-inch diameter.
 2. Corner and Terminal Posts: 3.5 inch.
 3. Gate Posts: 4.5-inch diameter.
 4. Top and Brace Rail: 1.66-inch diameter, plain end, sleeve coupled.
 5. Gate Frame: 1.66-inch diameter for welded fabrication.

- C. Fabric: Two (2) inch diamond mesh interwoven wire, 11 gage thick steel, 9 gage thick aluminum, top selvage knuckle end closed, bottom selvage knuckle end closed.
- D. Tension Wire: 7 gage thick steel, single strand.
- E. Tension Band: 3/16-inch thick by 3/4 inch wide steel.
- F. Tie Wire: Aluminum steel wire, 9-gage or 6-gage as indicated.

2.4 ACCESSORIES

- A. Caps: Cast steel galvanized, galvanized pressed steel, malleable iron galvanized, or aluminum alloy; sized to post diameter, set screw retainer.
- B. Fittings: Sleeves, bands, clips, rail ends, tension bars, fasteners and fittings; galvanized steel.
- C. Extension Arms: Cast steel galvanized or galvanized pressed steel to accommodate 3 strands of barbed wire, single arm, for placing vertical or sloped to 45 degrees as indicated on Drawings.
- D. Gate Hardware: Fork latch with gravity drop, center gate stop and drop rod; two 180 degree gate hinges for each leaf and hardware for padlock keyed to match hardware as directed by Architect/Engineer.

2.5 GATES

- A. General:
 - 1. Gate Types, Opening Widths and Directions of Operation: As indicated on Drawings.
 - 2. Design gates for operation by one person.
 - 3. Deliver gates factory assembled.
 - 4. Finish is to be galvanized, aluminum coated, or PVC coated to match fence.
- B. Swing Gates:
 - 1. Fabricate gates to permit 180 degree swing.
 - 2. Gates Construction: ASTM F900 with welded corners. Use of corner fittings is not permitted.
 - 3. Track: Combined, integral track and rail.
 - 4. Rail: Aluminum extrusion; minimum total weight of 3.72 lb/ft; designed to withstand reaction load of 2,000 lbs.
 - 5. Roller Track Assembly: Two swivel type, zinc, die cast trucks having four, sealed lubricant ball bearing wheels minimum 2 inches diameter by 9/16 inches width designed for same reaction load as rail. Provide two side-rolling wheels for each gate leaf to maintain alignment of truck in track.
 - 6. Fasten trucks to post brackets by minimum 7/8 inch diameter, 1/2 inch shank ball bolts.
 - 7. Provide galvanized steel guide wheel assemblies consisting of two rubber wheels of minimum 4 inch diameter with oil-impregnated bearings for each supporting post.
 - 8. Attach guide wheel assembly to post so bottom horizontal member rolls between wheels and permitting adjustment to maintain plumb gate frames and proper alignment.

2.6 PRIVACY SLATS (NOT USED)

- A. Privacy Slats: Vinyl strips, flat tube configuration, sized to fit fence fabric, color as selected.

2.7 FINISHES

- A. Galvanized Components and Fabric: Galvanized to ASTM A123/A123M for components; ASTM A153/A153M for hardware; ASTM A392 for fabric; 2.0 oz/sq. ft. coating.
- B. Aluminum Coated Components and Fabric: Aluminum coating to ASTM A792/A792M for components and ASTM A491 for fabric; 0.40 oz/sq. ft.
- C. Vinyl Coated Components and Fabric: Vinyl coating, 10 mil thick, over metallic coated wire, medium green, dark green or black color in accordance with ASTM F934 as indicated on Drawings.
- D. Hardware: Galvanized to ASTM A153/A153M, 2.0 oz/sq. ft. coating.
- E. Accessories: Same finish as framing.

2.8 CONCRETE

- A. Concrete for foundations: Concrete conforming to Divisions 500 and 700 of the SCDOT Standard Specifications.
 - 1. Compressive strength of 3,000 psi at 28 days.
 - 2. Air entrained.
 - 3. Water cement ratio of 0.488 with rounded aggregate and 0.532 with angular aggregate.
 - 4. Maximum slump of 3.5 inch for non-vibrated concrete and 4 inch for vibrated concrete.
 - 5. Minimum cement content of 564 lbs per cubic yard for non-vibrated and 602 lbs per cubic yard for vibrated concrete.

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install framework, fabric, accessories, and gates in accordance with ASTM F567.
- B. Set intermediate, terminal, gate, and corner posts plumb, in concrete footings with top of footing 2 inches above finish grade. Slope top of concrete for water runoff.
- C. Footing Depth from Finished Grade:
 - 1. Line Posts for Nominal Fence Height Less Than 6 Feet: 2.25 feet.
 - 2. Line Posts for Nominal Fence Height 6 Feet or More: 2.5 feet.
 - 3. Corner, Gate, Pull, and Terminal Posts: 3 feet.
- D. Brace each gate and corner post to adjacent line post with horizontal center brace rail and diagonal truss rods. Install brace rail one bay from end and gate posts.

- E. Install top rail through line post tops and splice with 6 inch long rail sleeves.
- F. Install center and bottom brace rail on corner gate leaves.
- G. Place fabric on outside of posts and rails.
- H. Do not stretch fabric until concrete foundation has cured 28 days.
- I. Stretch fabric between terminal posts or at intervals of 100 feet maximum, whichever is less.
- J. Position bottom of fabric 2 inches above finished grade.
- K. Fasten fabric to top rail, line posts, braces, and bottom tension wire with tie wire at maximum 15 inches on centers.
- L. Attach fabric to end, corner, and gate posts with tension bars and tension bar clips.
- M. Install bottom tension wire stretched taut between terminal posts.
- N. Install support arms sloped inward, outward, or vertical as indicated and attach barbed wire; tension, and secure.
- O. Support gates from gate posts. Do not attach hinged side of gate from building wall.
- P. Install gate with fabric and barbed wire overhang to match fence. Install three hinges on each gate leaf. Install latch, catches, and drop bolt.
- Q. Provide concrete center drop to footing depth and drop rod retainers at center of double gate openings.
- R. Connect to existing fence at an existing terminal post, new terminal post, or an existing line post converted to terminal post by installation of brace rails and brace rods.
- S. Install posts with 6 inches maximum clear opening from end posts to buildings, fences, and other structures.
- T. Excavate holes for posts to diameter and spacing indicated on Drawings without disturbing underlying materials.
- U. Center and align posts. Place concrete around posts, and vibrate or tamp for consolidation. Verify vertical and top alignment of posts and make necessary corrections.
- V. Extend concrete footings 1 inch above grade and trowel, forming crown to shed water.
- W. Allow footings to cure minimum 7 days before installing fabric and other materials attached to posts.

3.2 PRIVACY SLATS (NOT USED)

- A. Install slat inserts in diagonal pattern woven through fence fabric.
- B. Fasten slats according to manufacturer's instructions.

3.3 ERECTION TOLERANCE

- A. Section 01 40 00 - Quality Requirements: Tolerances.
- B. Maximum Variation from Plumb: 1/4 inch.
- C. Maximum Offset from Indicated Position: 1 inch.
- D. Minimum distance from property line: 6 inches.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

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SECTION 32 92 19 SEEDING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fertilizing.
 - 2. Seeding.
 - 3. Hydroseeding.
 - 4. Mulching.
 - 5. Maintenance.
- B. Related Sections:
 - 1. Section 31 10 00 – Site Clearing.
 - 2. Section 31 23 16 – Excavation and Fill.
 - 3. Section 31 23 17 – Trenching.
 - 4. Section 32 25 13 – Erosion Control.

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM C602 - Standard Specification for Agricultural Liming Materials.
- B. SCDOT Standard Specifications:
 - 1. Standard Specifications for Roads and Structures, 2007, published by the South Carolina Department of Transportation.
- C. SC DHEC Best Management Practices.
 - 1. South Carolina Department of Health and Environmental Control Storm Water Management Best Management Practices, 2005, South Carolina Department of Health and Environmental Control.

1.3 SUBMITTALS

- A. Section 01 33 00 – Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data for seed mix, fertilizer, mulch, and other accessories.
- C. Test Reports: Indicate topsoil nutrient and pH levels with recommended soil supplements and application rates.
- D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- E. Invoices or proof of purchase to verify quantities specified.
- F. Operation and Maintenance Data: Include maintenance instructions, cutting method and maximum grass height; and, types, application frequency, and recommended coverage of fertilizer.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with Section 810 of SCDOT Standard Specifications.

- B. Maintain copy of document on site.

1.5 QUALIFICATIONS

- A. Seed Supplier: It is the Engineer's expectation that the company specializing in manufacturing products specified in this Section with 3 years documented experience.
- B. Installer: Company specializing in performing work of this Section with minimum 5 years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.
- B. Deliver grass seed mixture in sealed containers showing percentage of seed mix, germination, inert matter and weeds; year of production; net weight; date of packaging; and location of packaging. Seed in damaged packaging is not acceptable.
- C. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

1.7 MAINTENANCE SERVICE

- A. Maintain seeded areas immediately after placement until grass is well established and exhibits vigorous growing condition for minimum of three (3) cuttings.

PART 2 PRODUCTS

2.1 TOPSOIL MATERIALS

- A. Topsoil: Original surface soil typical of the area, which is capable of supporting native plant growth; free of large stones, roots, waste, debris, contamination, or other unsuitable material, which may be detrimental to plant growth; pH value of 5.4 to 7.0.

2.2 SEED MIXTURE

- A. Furnish materials in accordance with South Carolina Board of Agriculture rules and regulations as specified in Section 810 of SCDOT Standard Specifications.

2.3 ACCESSORIES

- A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.
- B. Fertilizer: Commercial grade; recommended for grass; of proportion necessary to eliminate deficiencies of topsoil, as indicated in analysis. When test is not available, use 10-10-10 mixture of Nitrogen, phosphoric acid, and soluble potash.
- C. Lime: ASTM C602, Class T or Class O agricultural limestone containing a minimum 80 percent calcium carbonate equivalent.

- D. Water: Clean, fresh and free of substances or matter capable of inhibiting vigorous growth of grass.
- E. Erosion Fabric: As specified per the plan details.
- F. Herbicide: As required to combat type of weeds encountered.
- G. Stakes: Softwood lumber, chisel pointed.
- H. String: Inorganic fiber.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting Work.
- B. Verify prepared soil base and topsoil are ready to receive the Work of this Section.

3.2 FERTILIZING

- A. Apply lime at application rate recommended by soil analysis. Work lime into top 6 inches of soil.
- B. Apply fertilizer at application rate recommended by soil analysis.
- C. Apply after smooth raking of topsoil and prior to roller compaction.
- D. Do not apply fertilizer at same time or with same machine used to apply seed.
- E. Mix fertilizer thoroughly into upper 2 inches of topsoil.
- F. Lightly water soil to aid dissipation of fertilizer. Irrigate top level of soil uniformly.

3.3 SEEDING

- A. Apply seed evenly in two intersecting directions at the rates shown above. Rake in lightly.
- B. Do not seed areas in excess of that which can be mulched on same day.
- C. Do not sow immediately following rain, when ground is too dry, or when winds are over 12 mph.
- D. Roll seeded area with roller not exceeding 112 lbs/linear foot.
- E. Immediately following seeding and rolling, apply mulch to thickness of 1/8 inch. Maintain clear of shrubs and trees.
- F. Apply water with fine spray immediately after each area has been mulched. Saturate to 4 inches of soil.

3.4 HYDROSEEDING

- A. Apply fertilizer, mulch and seeded slurry with hydraulic seeder at rate of 6 lbs per 1,000 square feet evenly in one pass.
- B. Apply water with fine spray immediately after each area has been hydroseeded. Saturate to 4 inches of soil and maintain moisture levels two to four inches.

3.5 SEED PROTECTION

- A. Identify seeded areas with stakes and string around area periphery. Set string height to 12 inches. Space stakes at 5 feet on center.
- B. Cover seeded slopes where grade is greater than 3 H:1 V with erosion fabric. Roll fabric onto slopes without stretching or pulling.
- C. Lay fabric smoothly on surface, bury top end of each section in 6 inch deep excavated topsoil trench. Overlap edges and ends of adjacent rolls minimum 12 inches. Backfill trench and rake smooth, level with adjacent soil.
- D. Secure outside edges and overlaps at 36 inch intervals with stakes.
- E. Lightly dress slopes with topsoil to ensure close contact between fabric and soil.
- F. At sides of ditches, lay fabric laps in direction of water flow. Lap ends and edges minimum 6 inches.

3.6 MAINTENANCE

- A. Mow grass at regular intervals to maintain at maximum height of 2-1/2 inches. Do not cut more than 1/3 of grass blade at each mowing. Perform first mowing when seedlings are 40 percent higher than desired height.
- B. Neatly trim edges and hand clip where necessary.
- C. Immediately remove clippings after mowing and trimming. Do not let clippings lay in clumps.
- D. Water to prevent grass and soil from drying out.
- E. Roll surface to remove minor depressions or irregularities.
- F. Control growth of weeds. Apply herbicides. Remedy damage resulting from improper use of herbicides.
- G. Immediately reseed areas showing bare spots.
- H. Repair washouts or gullies.
- I. Protect seeded areas with warning signs during maintenance period.

END OF SECTION

SECTION 33 05 19
PRESSURE PIPING TIED JOINT RESTRAINT SYSTEM

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Tied joint restraint system.
- B. Related Sections:
 - 1. Section 31 23 17 – Trenching: Excavation and backfill for Work of this Section.
 - 2. Section 33 11 00 – Water Utility Distribution Piping: Pipe to be restrained.

1.2 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI B1.1 - Unified Inch Screw Threads.
- B. ASTM International (ASTM):
 - 1. ASTM A36 - Standard Specification for Carbon Structural Steel.
 - 2. ASTM A123 - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
 - 3. ASTM A143 - Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement.
 - 4. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 5. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
 - 6. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
 - 7. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts.
 - 8. ASTM A588 - Specification for High Strength Low-Alloy Structural Steel with 50 ksi (345 MPa) Minimum Yield Point to 4 in. (100 mm) Thick.
 - 9. ASTM B633 - Specification for Electrodeposited Coating of Zinc on Iron and Steel.
 - 10. ASTM F436 - Specification for Hardened Steel Washers.

1.3 DESIGN REQUIREMENTS

- A. Provide pressure pipeline with restrained joints at bends, tees, and changes in direction.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Indicate restrained joint details and materials being utilized. Submit layout drawings showing piece numbers and locations. Also, indicate restrained joint locations.
- C. Product Data: Submit catalog data for restrained joint details and installation instructions.

- D. Design Data: Submit design calculations showing determination of restrained lengths and submit joint restraint details. Use joint restraint devices specifically designed for applications described in manufacturer's data.
- E. Manufacturer's Installation Instructions: Submit installation instructions.
- F. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
- G. Project Record Documents: Record actual locations of joint restraints.

1.5 QUALIFICATIONS

- A. Manufacturer: Engineers recommendation is that the selected manufacturer be specialized in manufacturing products specified in this Section have a minimum of three (3) years' experience.
- B. Installer: Engineers recommendation is that the Company specializing in performing work of this Section has a minimum of 3 years documented experience.
- C. Design tied joint restraint system under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of Project location.

PART 2 PRODUCTS

2.1 TIED JOINT RESTRAINT SYSTEM

- A. Manufacturers:
 - 1. Dresser Piping Specialties.
 - 2. Ebaa Iron Sales, Inc.
 - 3. Star Pipe Products, Inc.
 - 4. Or Engineer Approved Equal.

2.2 MATERIALS

- A. Steel Types:
 - 1. High Strength Low-Alloy Steel, ASTM A588, heat-treated.
 - 2. High Strength Low-Alloy Steel, ASTM A588.
 - 3. Carbon Steel ASTM A36.
 - 4.

2.3 COMPONENTS

- A. Tie Bolts:
 - 1. 5/8 inch for 2 inch and 3 inch mechanical joints, 3/4 inch for 4 inch to 12 inch mechanical joints and flanged joints, ASTM A588, Grade B; ASTM A325, Type 3, except increase tensile strength of full-body threaded section to 40,000 pounds minimum for 5/8 inch and 60,000 pounds minimum for 3/4 inch by heat-treating (quenching and tempering) to manufacturer's reheat and hardness specifications.
 - 2. 3/4 inch for 14 inch to 24 inch mechanical joints, ASTM A588, Grade B; ASTM A325, Type 3.
 - 3. 1 inch for 30 inches and larger mechanical joints and flanged joints, ASTM A588, Grade B; ASTM A325, Type 3; except increase tensile strength of full-

body thread section to 100,000 pounds minimum by heat-treating (quenching and tempering) to manufacturer's reheat and hardness specifications.

- B. Tie Nut: Hex nut for each tie bolt and tie rods; ASTM A563, Grade C3; plain, zinc plated, or galvanized.
- C. Tiepin: 3/4 inch round bar stock for use on bends and hydrants, 6-inch hairpin shape, ASTM A588; ANSI B1.1; plain, zinc plated, or galvanized.
- D. Tie Coupling: Used to extend continuous threaded rods and provided with center stop to aid installation; ASTM A588; plain, zinc plated, or galvanized.
- E. Tie Clamp: Retainer clamp for ductile iron, asbestos cement and polyvinyl chlorite, push-on pipe in front of bell; ASTM A36; ASTM A307; ASTM A563, Grade A; plain, zinc plated, or galvanized.
- F. Tie Rod: Continuous threaded rod for cutting to desired lengths; ASTM A588, Grade B; ASTM A325, Type 3; ANSI B1.1; plain zinc plated, or galvanized.
- G. Tie Bar: Steel bar used to restrain push-in plugs; ASTM A36; plain, zinc plated, or galvanized.
- H. Tie Washer: Round flat washers; ASTM A588, ASTM F436, Type 3; plain, zinc plated, or galvanized.

2.4 FACTORY APPLIED FINISHES – STEEL

- A. Items to be zinc plated or galvanized to meet the following requirements:
 - 1. ASTM B633 for electrodeposited coating of zinc on steel.
 - 2. ASTM A153 for galvanizing iron and steel hardware.
 - 3. Galvanizing for rolled, pressed, and forged steel shapes: ASTM A123; minimum 2.0 ounces per square foot coating thickness; galvanize after fabrication.

PART 3 EXECUTION

3.1 PREPARATION

- A. Verify pipe and fittings are ready to receive work.
- B. Field measure and verify conditions.
- C. Clean surfaces of pipe and fittings to receive tied joint restraint system.

3.2 INSTALLATION

- A. Excavate and Backfill in accordance with Section 31 23 17 – Trenching.
- B. Install pipe and fittings in accordance with Section 33 34 00 – Sanitary Utility Sewerage Force Main.
- C. Install joint restraint system so joints are mechanically locked together to prevent joint separation.

3.3 ERECTION TOLERANCES

- A. Torque nuts on mating threaded fasteners to 45-foot pounds to 60-foot pounds for 5/8 inch nut.
- B. Torque nuts on mating threaded fasteners to 75-foot pounds to 90-foot pounds for 3/4 inch nut.
- C. Torque 1 inch nuts to 100-foot pounds to 120-foot pounds.

END OF SECTION

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SECTION 33 05 23
TRENCHLESS UTILITY INSTALLATION (JACKING)

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavation and backfill for approach trenches and pits.
 - 2. Excavation for Casing pipe.
 - 3. Carrier pipe.
 - 4. Disposal of excess materials.
- B. Related Sections:
 - 1. Section 03 30 00 - Cast-In-Place Concrete.

1.2 REFERENCES

- A. American Association of State Highway and Transportation Officials:
 - 1. AASHTO H20 - Standard Specification for Live Loading.
 - 2. AASHTO M133 - Standard Specification for Preservatives and Pressure Treatment Processes for Timber.
- B. American Railway Engineering and Maintenance-of-Way Association:
 - 1. AREMA - Manual for Railway Engineering.
- C. ASTM International:
 - 1. ASTM A36 - Standard Specification for Carbon Structural Steel.
 - 2. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 3. ASTM A139 - Standard Specification for Electric fusion (Arc) Welded steel Pipe (NPS 4-inch and over).
 - 4. [ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.]
 - 5. [ASTM A449 - Standard Specification for Quenched and Tempered Steel Bolts and Studs.]
 - 6. [ASTM A1011- Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.]
- D. American Welding Society:
 - 1. AWS D1.1 - Structural Welding Code - Steel.
- E. National Utility Contractors Association:
 - 1. NUCA - Pipe Jacking & Micro-tunneling Design Guide.
 - 2. NUCA - Trenchless Excavation Construction Equipment & Methods Manual.
- F. SCDOT Standard Specifications:
 - 1. Standard Specifications for Highway Construction, 2007, published by the South Carolina Department of Transportation.
- G. Norfolk Southern NSCE-8 SPECIFICATIONS

1.3 DESIGN REQUIREMENTS

- A. The end of casing pipe to extend a minimum of six (6) feet from the edge of pavement / back of curb.
- B. The top of the casing pipe shall be a minimum of four (4) feet below the crown of the finished asphalt roadway.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals
- B. Shop Drawings: Prepare scaled shop Drawings to supplement Drawings, signed and sealed by Professional Engineer.
 - 1. Include details of casing, jacking head, sheeting, and other falsework for trenches and pits and support for adjacent facilities, field sketches, and other details to complete the Work.
 - 2. Show relation of proposed installation to adjacent facilities and natural features over installation, angle of installation, right-of-way lines, and general layout of built facilities.
 - 3. Show cross-section or sections from field survey showing installation in relation to actual profile of ground.
- C. Submit history of previous work completed of equivalent nature and scope. Include qualification and experience of key personnel.
- D. Installation Plan: Submit description of proposed construction plan, dewatering plan, and plan to establish and maintain vertical and horizontal alignment.
- E. Submit emergency response procedures to handle situations when conduit is compromised and jeopardizes integrity of installation or safety.
- F. Submit written report results of visual check prior to installation of carrier pipe of entire length of casing or liner, to verify there are no voids or defective joints.
- G. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of casing or tunnel liner, carrier pipe, and invert elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.

1.6 QUALITY ASSURANCE

- A. Perform work in accordance with the latest SCDOT Standard Specifications, the "Utilities Accommodation Manual" dated September 1, 2011, the NUCA Trenchless Excavation Construction Equipment and Methods Manual, NUCA Pipe Jacking & Micro-tunneling Design Guide, and AREMA when jacking under railroads.
- B. Maintain one copy of each document on site.

1.7 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this section with minimum five years documented experience.
 - 1. Work Experience: Include projects of similar magnitude and conditions.
 - 2. Furnish list of references upon request.

1.8 PRE-INSTALLATION MEETINGS

- A. Convene minimum one week prior to commencing work of this Section.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping and jacking systems from entry of foreign materials and water by temporary covers, completing sections of work, and isolating parts of completed system.
- D. Accept system components on site in manufacturer's original containers or configuration. Inspect for damage.
- E. Use wooden shipping braces between layers of stacked pipe. Stack piping lengths no more than three layers high.
- F. Store field joint materials indoors in dry area in original shipping containers. Maintain storage temperature of 60 to 85 degrees F.
- G. Support casing and carrier pipes with nylon slings during handling.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Conduct operations so as not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures or utilities, and landscape in immediate or adjacent areas.

1.11 FIELD MEASUREMENTS

- A. Verify invert elevations of existing work prior to excavation and installation of casing or tunnel.

PART 2 PRODUCTS

2.1 CASING AND JACKING PIPE MATERIALS

- A. Steel Casing Pipe: Steel complying with ASTM A139 for Grade B with minimum yield strength of 35,000 psi.
- B. Provide ends suitable for field welding.

C. Minimum wall thickness as follows:

<u>Diameter of Casing</u>	<u>Minimum Wall Thickness</u>
28 thru 32	1/2"

2.2 CARRIER PIPE MATERIALS

A. DIP - Sanitary Utility Sewerage Force Mains: As specified in Section 33 34 00.

2.3 PIPELINE CASING SPACERS

- A. For piping installed in casing provide pipeline casing spacers.
- B. Provide a minimum of 1 spacer per ten linear feet of pipe for ductile iron pipe and a minimum of 1 spacer per six linear feet for PVC pipe.
- C. Provide spacer with shell of 14-gauge T-316 stainless steel
- D. Provide shell liner of .090" thick PVC, 85-90 durometer.
- E. Provide 5/16" stainless steel connecting bolts and lock nuts, minimum three (3) per flange.
- F. Runners from 2' wide ultra-high molecular weight polymer with a high resistance to abrasion and a coefficient of friction of 0.11-0.13 in accordance with ASTM D 1894
- G. Support runners on 14-gauge reinforced T-316 stainless steel risers welded to shell.
- H. All metal surfaces to be fully passivated.
- I. The diameter as measured over the runners shall exceed the pipeline bell or coupling outside diameter.
- J. Provide pipeline casing spacers as manufactured by Cascade Manufacturing, Pipeline Seal and Insulator, Inc. or approved equal.

2.4 End Seals

- A. Provide 1/8" thick rubber end seal to seal each end of the casing.
- B. Secure to casing and carrier pipe with T-316 stainless steel bands.
- C. Acceptable manufacturers: Cascade Manufacturing, Pipeline Seal and Insulator, Inc. or approved equal.

2.5 COVER MATERIALS

- A. Soil Backfill for Trench Approaches and Pits to Finish Grade: As specified in Section 33 23 17 - Trenching.

2.6 ACCESSORIES

- A. Supports and Insulators:

1. Steel and Plastic: 14 gage stainless steel band, 5/16-inch stainless steel flange bolts, heavy duty PVC liner, polyethylene or phenolic skids.
2. Plastic: Polyethylene casing insulator band and skids with stainless steel bolts.

B. Steel Strapping: ASTM A36.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify connection to existing piping system size, location, and invert elevations are in accordance with Drawings.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Locate, identify, and protect utilities indicated to remain from damage.
- C. Notify utility company to remove and relocate utilities.
- D. Protect plant life, lawns, rock outcroppings] and other features remaining as portion of final landscaping.
- E. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- F. Establish minimum separation of from other utility piping in accordance with local code.

3.3 EXCAVATION AND BACKFILL

- A. Excavate and backfill in accordance with Section 31 23 17 - Trenching.

3.4 DEWATERING

- A. Intercept and divert surface drainage precipitation and groundwater away from excavation through use of dikes, curb walls, ditches, pipes, sumps, or other means.
- B. Develop substantially dry subgrade for prosecution of subsequent operations.
- C. Comply with SCDHEC requirements for dewatering to any watercourse, prevention of stream degradation, and erosion and sediment control.

3.5 EXISTING WORK

- A. Maintain access to existing facilities and other remaining active installations requiring access. Modify installation as necessary to maintain access.

3.6 PITS OR APPROACH TRENCHES

- A. Excavate approach trenches or pits in accordance with shop drawings and as site conditions require.
- B. Ensure casing entrance face as near perpendicular to alignment as conditions permit.
- C. Establish vertical entrance face at least 1 foot above top of casing.
- D. Install dewatering measures and excavation supports as specified in Section 31 23 17 - Trenching.

3.7 CASING PIPE INSTALLATION

- A. Boring:
 - 1. Push pipe into ground with boring auger rotating within pipe to remove spoil. Do not advance cutting head ahead of casing pipe except for distance necessary to permit cutting teeth to cut clearance for pipe. Arrange machine bore and cutting head to be removable from within pipe. Arrange face of cutting head to provide barrier to free flow of soft material.
 - 2. When unstable soil is encountered during boring retract cutting head into casing to permit balance between pushing pressure and ratio of pipe advancement to quantity of soil.
 - 3. When voids develop greater than outside diameter of pipe by approximately one inch, grout to fill voids.
 - 4. When boring is obstructed, abandon boring, relocate jack or tunnel as directed by Engineer.
- B. Jacking
 - 1. Construct adequate thrust wall normal to proposed line of thrust.
 - 2. Impart thrust load to pipe through suitable thrust ring sufficiently rigid to ensure uniform distribution of thrust load on full pipe circumference.

C. Drilling and Jacking

1. Use oil field type rock roller bit or plate bit made up of individual roller cutter units solidly welded to pipe which is turned and pushed for its entire length by drilling machine to give bit necessary cutting action.
 2. Inject high density slurry (oil field drilling mud) to head as cutter lubricant. Inject slurry at rear of cutter units to prevent jetting action ahead of pipe.
- D. Mining and Jacking: Utilize manual hand-mining excavation from within casing pipe as casing is advanced with jacks, allowing minimum ground standup time ahead of casing pipe.

3.8 PRESSURE GROUTING

- A. Pressure grout annular space between casing pipe and surrounding earth.

3.9 CARRIER PIPE INSTALLATION

- A. Clean, inspect, and handle pipe in accordance with applicable Section for carrier pipe.
- B. Exercise care to prevent damage to pipe joints when carrier pipe is placed in casing.
- C. Support pipeline within casing so no external loads are transmitted to carrier pipe. Attach supports to barrel of carrier pipe; do not rest carrier pipe on bells.
1. Use minimum 2 supports per joint of carrier pipe.
- D. Seal Ends per section 2.4.

3.10 TOLERANCES

- A. Do not over cut excavation by more than 1 inch greater than outside diameter of casing pipe.
- B. Install casing pipe to vertical and horizontal alignment on Drawings within plus or minus 3 inches prior to installation of carrier pipe.
- C. Install pipe bells with minimum ½-inch clearance to casing.

3.11 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting and testing.
- B. Compaction Testing: As specified in Section 31 23 17 - Trenching.
- C. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.

3.12 REMOVAL OF FACILITIES AND CONTROLS

- A. Remove temporary facilities for casing installation and jacking operations in accordance with Section 01 50 00 - Temporary Facilities and Controls.

END OF SECTION

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SECTION 33 05 24
UTILITY HORIZONTAL DIRECTIONAL DRILLING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Excavation and backfill for approach trenches and pits.
 - 2. Horizontal directional drilling.
 - 3. Pipe and accessories.
 - 4. Testing of Pipe
- B. Related Sections:
 - 1. Section 03 30 10 - Cast-In-Place Concrete.
 - 2. Section 31 23 15 - Excavation and Fill.
 - 3. Section 31 23 17 - Trenching excavating and backfilling access pits

1.2 REFERENCES

- A. ASTM International:
 - 1. ASTM F1962 - Standard Guide for Use of Maxi-Horizontal Directional Drilling for Placement of Polyethylene Pipe or Conduit Under Obstacles, Including River Crossings.
- B. National Utility Contractors Association:
 - 1. NUCA - HDD Installation Guidelines.

1.3 DESIGN REQUIREMENTS

- A. Design Criteria:
 - 1. Drilling Steering System: Remote with continuous electronic monitoring of boring depth and location.
 - 2. Directional Change Capability: 90 degree with 35 foot radius curve.
 - 3. Minimum distance for single bores and between boring pits:
As shown on construction plans.
 - 4. Ratio of Reaming Diameter to Pipe Outside Diameter:
 - a. Nominal Pipe Diameter of 6 Inches and Smaller: 1.5 maximum.
 - b. Nominal pipe diameter larger than 6 Inches: Submit recommended ratio and reaming procedures for review.

1.4 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.

- B. Shop Drawings:
 - 1. Submit technical data for equipment, method of installation, and proposed sequence of construction.
 - 2. Include information pertaining to pits, dewatering, method of spoils removal, equipment size and capacity, equipment capabilities including installing pipe on radius, type of drill bit, drilling fluid, method of monitoring line and grade and detection of surface movement, name plate data for drilling equipment, and mobile spoils removal unit.
- C. Product Data:
 - 1. Identify source of water used for drilling.
 - 2. Submit copy of approvals and permits for use of water source.
- D. Installer Qualifications: Submit history of previous work completed of equivalent nature and scope. Include qualification and experience of key personnel.
- E. Manufacturer's Certificate: Certify products meet or exceed specified requirements.

1.5 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Project Record Documents: Record actual locations of pipe and invert elevations.
- C. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.
- D. Record actual depth of pipe at 25 feet intervals.
- E. Record actual horizontal location of installed pipe.
- F. Show depth and location of abandoned bores.
- G. Record depth and location of drill bits and drill stems not removed from bore.

1.6 QUALITY ASSURANCE

- A. Perform work in accordance with the following:
 - 1. NUCA HDD Installation Guidelines.
 - 2. ASTM F1962.
- B. Maintain one copy of documents on site.

1.7 QUALIFICATIONS

- A. Installer: Company specializing in performing work of this Section with minimum 5 years documented experience.
 - 1. Work Experience: Include projects of similar scope and conditions.
 - 2. Furnish list of references upon request.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

- B. Provide temporary end caps and closures on piping and fittings until pipe is installed.
- C. Protect pipe from entry of foreign materials and water by temporary covers, completing sections of work, and isolating parts of completed system.
- D. Accept products on site in manufacturer's original containers or configuration. Inspect for damage.
- E. Use shipping braces between layers of stacked pipe. Stack piping lengths no more than three layers high.
- F. Store field joint materials indoors in dry area in original shipping containers. Maintain storage temperature of 60 to 85 degrees F.
- G. Support pipes with nylon slings during handling.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 - Product Requirements: Environmental conditions affecting products on site.
- B. Conduct operations so as not to interfere with, interrupt, damage, destroy, or endanger integrity of surface or subsurface structures or utilities, and landscape in immediate or adjacent areas.

PART 2 PRODUCTS

2.1 DRILLING FLUID

- A. Drilling Fluid: Liquid bentonite clay slurry; totally inert with no environmental risk.

2.2 PIPE

- A. Polyethylene Pipe: AWWA C901 for DR9 200 psig pressure rating:
 - 1. Fittings: AWWA C901 molded or fabricated.
 - 2. Joints: Butt fusion.
- B. Fusible Polyvinyl Chloride (PVC): AWWA C900 and AWWA C905 for DR21, 200 psi marked with NSF 61 designation for potable water use.
 - 1. Fittings: PVC, AWWA C900 and AWWA C905
 - 2. Joints: Butt fusion.

2.3 FILL MATERIALS

- A. Backfill: Excavated subsoil or granular fill per Section 31 23 16 – Excavation and Fill and Section 31 23 17 – Trenching.

2.4 WATER SOURCE

- A. Water: Potable.

2.5 UNDERGROUND PIPE MARKERS

- A. Trace Wire: Electronic detection materials for non-conductive piping products.
 - 1. Unshielded 10 gage copper wire.
 - 2. Conductive tape.

2.6 GROUT

- A. Fill and Seal Grout at Pipe Ends: Mortar conforming to SCDOT Standard Specifications proportioned as described below. Do not add more water than is necessary to make a workable mixture.
 - 1. Mix No. 1: 1 part Portland cement, 1/4 part hydrated lime, 3-3/4 parts mortar sand (maximum).
 - 2. Mix No. 2: 1 part Portland cement, 1 part masonry cement, 6 parts mortar sand (maximum).
- B. Pressure Grout Mix: One part Portland cement, and six parts mortar sand mixed with water to consistency applicable for pressure grouting.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify connection to existing piping system size, location, and invert elevations are in accordance with Drawings.

3.2 PREPARATION

- A. Call Local Utility Line Information service at number shown on Drawings not less than three working days before performing Work.
 - 1. Request underground utilities to be located and marked within and surrounding construction areas.
- B. Locate, identify, and protect utilities indicated to remain from damage.
- C. Notify utility company to remove and relocate utilities.
- D. Identify required lines, levels, contours, and datum locations.
- E. Protect plant life, lawns, rock outcroppings and other features remaining as portion of final landscaping.
- F. Protect bench marks, survey control points, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- G. Establish minimum separation between utilities in accordance with applicable code.
- H. Establish pipe elevations with not less than three and one half feet (3 ½) feet of cover.

3.3 DEWATERING

- A. Intercept and divert surface drainage, precipitation, and groundwater away from excavation through use of dikes, curb walls, ditches, pipes, sumps or other means.
- B. Develop and maintain substantially dry subgrade during drilling and pipe installation.
- C. Comply with State and Municipal requirements for discharging water to watercourse, preventing stream degradation, and erosion and sediment control.

3.4 EXISTING WORK

- A. Maintain access to existing facilities and services indicated to remain. Modify pipe installation to maintain access to existing facilities.

3.5 EXCAVATION

- A. Excavate subsoil as specified in Section 31 23 16 – Excavation and Fill and Section 31 23 17 – Trenching.
- B. Excavate approach trenches and pits in accordance with shop drawings and as site conditions require. Minimize number of access pits.
- C. Provide sump areas to contain drilling fluids.
- D. Install excavation supports as specified in Section 31 23 16 – Excavation and Fill and Section 31 23 17 – Trenching.
- E. Restore areas after completion of drilling and carrier pipe installation.

3.6 DRILLING

- A. Drill pilot bore with vertical and horizontal alignment as indicated on shop drawings.
- B. Guide drill remotely from ground surface to maintain alignment by monitoring signals transmitted from drill bit.
 - 1. Monitor depth, pitch, and position.
 - 2. Adjust drill head orientation to maintain correct alignment.
- C. Inject drilling fluid into bore to stabilize hole, remove cuttings, and lubricate drill bit and pipe.
- D. Continuously monitor drilling fluid pumping rate, pressure, viscosity, and density while drilling pilot bore, back reaming, and installing pipe to ensure adequate removal of soil cuttings and stabilization of bore.
 - 1. Provide relief holes when required to relieve excess pressure.
 - 2. Minimize heaving during pullback.
- E. Calibrate and verify electronic monitor accuracy during first 50 feet of bore in presence of Engineer before proceeding with other drilling. Excavate minimum of four test pits spaced along first 50 feet bore to verify required accuracy. When required accuracy is not met, adjust equipment or provide new equipment capable of meeting required accuracy.

- F. After completing pilot bore, remove drill bit.

3.7 DRILLING OBSTRUCTIONS

- A. When obstructions are encountered during drilling, notify Engineer immediately. Do not proceed around obstruction without Engineer's approval.
- B. For conditions requiring more than 3-foot deviation in horizontal alignment, submit new shop drawings to Engineer for approval before resuming work.
- C. Maintain adjusted bore alignment within easement or right-of-way.

3.8 PIPE INSTALLATION

- A. After completing pilot bore, remove drill bit. Install reamer and pipe pulling head.
 - 1. Select reamer with minimum bore diameter required for pipe installation.
- B. Attach pipe to pipe pulling head. Pull reamer and pipe to entry pit along pilot bore.
- C. Inject drilling fluid through reamer to stabilize bore and lubricate pipe.
- D. Install piping with horizontal and vertical alignment as shown on Drawings.
- E. Protect and support pipe being pulled into bore so pipe moves freely and is not damaged during installation.
- F. Do not exceed pipe manufacturer's recommended pullback forces.
- G. Install trace wire continuous with each bore. Splice trace wire only at intermediate bore pits. Tape or insulate trace wire to prevent corrosion and maintain integrity of pipe detection.
 - 1. Terminate trace wire for each pipe run at structures along pipe system.
 - 2. Provide extra length of trace wire at each structure, so trace wire can be pulled 3 feet out top of structure for connection to detection equipment.
 - 3. Test trace wire for continuity for each bore before acceptance.
- H. Provide sufficient length of pipe to extend past termination point to allow connection to other pipe sections.
- I. Allow minimum of 24 hours for stabilization after installing pipe before making connections to pipe.
- J. Mark location and depth of bore with spray paint on paved surfaces, and wooden stakes on non-paved surfaces at 25-foot intervals.

3.9 SLURRY REMOVAL AND DISPOSAL

- A. Contain excess drilling fluids at entry and exit points until recycled or removed from site. Provide recovery system to remove drilling spoils from access pits.
- B. Remove, transport and legally dispose of drilling spoils off site.
 - 1. Do not discharge drilling spoils in sanitary sewers, storm sewers, or other drainage systems.

- 2. When drilling in suspected contaminated soil, test drilling fluid for contamination before disposal.
 - C. When drilling fluid leaks to surface, immediately contain leak and barricade area from vehicular and pedestrian travel before resuming drilling operations.
 - D. Complete cleanup of drilling fluid at end of each workday.
- 3.10 BACKFILL
- A. Install backfill and compact as specified in Section 31 23 17 – Trenching.
 - B. Backfill approach trenches and pits with subsoil fill to contours and elevations indicated on Drawings or of surrounding existing grade.
- 3.11 ERECTION TOLERANCES
- A. Section 01 40 00 - Quality Requirements: Tolerances.
 - B. Maximum Variation From Horizontal Position: 12 inches.
 - C. Maximum Variation From Vertical Elevation: 2 inches.
 - D. Minimum Horizontal and Vertical Clearance from Other Utilities: 12 inches.
 - E. When pipe installation deviates beyond specified tolerances, abandon bore, remove installed pipe, re-bore, and reinstall pipe in correct alignment.
 - F. Fill abandoned bores greater than 3 inches in diameter with grout or flowable fill material.
- 3.12 FIELD QUALITY CONTROL
- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
 - B. Leakage Testing: Upon completion of pipe installation, test pipe in accordance with the following:
 - 1. Section 33 11 00 – Water Utility Distribution Piping.
 - 2. Section 33 12 13 – Water Service Connections.
 - 3. Section 33 13 00 – Disinfecting Water Utility Distribution.
 - C. Compaction Testing: As specified in Section 31 23 17 – Trenching.
 - D. When tests indicate Work does not meet specified requirements, remove Work, replace and retest.
- 3.13 CLEANING
- E. Upon completion of drilling and pipe installation, remove drilling spoils, debris, and unacceptable material from approach trenches and pits. Clean up excess slurry from ground.
 - F. Restore approach trenches and pits to original condition.

END OF SECTION

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SECTION 33 11 00
WATER UTILITY DISTRIBUTION PIPING

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 1. Pipe and fittings for potable water line and fire water line.
 2. Valves and Valve Boxes
 3. Fire Hydrants.
 4. Tapping Sleeves and Valves.
 5. Air Release valves.
 6. Underground pipe markers.
 7. Thrust Blocking.
 8. Pressure Testing
- B. Related Sections:
 1. Section 31 23 17 – Trenching: Excavation and backfill requirements.
 2. Section 33 05 23 – Trenchless Utility Installation (Jacking): Waterline installation under roadways and other obstructions.
 3. Section 33 05 24 – Utility Horizontal Direction Drilling. Waterline installation under wetlands and other obstructions.
 4. Section 33 12 13 – Water Service Connections: Tapping and Backflow prevention at water main.
 5. Section 33 13 00 – Disinfecting of Water Utility Distribution: Disinfection of water piping.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

- A. General: Each unit price includes excavation, bedding, backfill, stockpiling, and disposal of excess material in accordance with Section 31 23 17 - Trenching. No payment will be made for over excavated Work or for replacement materials. Each unit price includes testing for leakage and disinfection.
- B. Pipe and Fittings:
 1. Basis of Measurement: By the linear foot from center to center of fittings.
 2. Basis of Payment: Includes pipe, fittings, concrete thrust restraints, tied joint restraints, and metal bars and bolts used in thrust restraint.
- C. Gates Valve and box:
 1. Basis of Measurement: By the unit.
 2. Basis of Payment: Includes valve, valve box, fittings, support, and accessories.
- D. Hydrant and valve assembly:
 1. Basis of Measurement: By the unit.
 2. Basis of Payment: Includes aggregate, concrete thrust restraint and support, tied joints restraint, hydrant, valve, valve box, fittings, accessories, and pipe from main to valve and pipe from valve to hydrant. If hydrant is located at end of a line, payment will be made for installation from valve to hydrant.

- E. Tapping Sleeve and Valve:
 - 1. Basis of Measurement: By the unit.
 - 2. Basis of Payment: Includes sleeve, valve, valve box, fittings, support, accessories, and witness by authority having jurisdiction.
- F. Air Release Valve:
 - 1. Basis of Measurement: By the unit.
 - 2. Basis of Payment: Includes valve, valve vault, fittings, and accessories.
- G. Blow Off Assembly:
 - 1. Basis of Measurement: By the unit.
 - 2. Basis of Payment: Includes pipe, fittings, and accessories.
- H. Pressure testing: Will not be measured for payment.

1.3 REFERENCES

- A. American Society of Mechanical Engineers:
 - 1. ASME B16.1 - Cast Iron Pipe Flanges and Flanged Fittings.
- B. American Water Works Association:
 - 1. AWWA C104 - ANSI Standard for Cement Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
 - 2. AWWA C110 - Standard for Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (76 mm Through 1,219 mm), for Water.
 - 3. AWWA C111 - Standard for Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings.
 - 4. AWWA C115 - Standard for Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges.
 - 5. AWWA C151 - Standard for Ductile-Iron Pipe, Centrifugally Cast.
 - 6. AWWA C153 - Standard for Ductile-Iron Compact Fittings.
 - 7. AWWA C500 - Metal-Seated Gate Valves for Water Supply Service.
 - 8. AWWA C502 - Dry-Barrel Fire Hydrants.
 - 9. AWWA C504 - Rubber-Sealed Butterfly Valves.
 - 10. AWWA C509 - Resilient-Seated Gate Valves, 3 in. through 12 in. NPS, for Water and Sewage Systems.
 - 11. AWWA C550 - Protecting Interior Coatings for Valves and Hydrants.
 - 12. AWWA C600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - 13. AWWA C605 - Underground Installation of PVC and PVCO Pressure Pipe and Fittings.
 - 14. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe, and Fabricated Fittings, 4 in. through 12 in. (100 mm through 300 mm), for Water Distribution.
- C. ASTM International:
 - 1. ASTM A36 – Standard Specification for Carbon Structural Steel
 - 2. ASTM A53 - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
 - 3. ASTM A126 - Standard Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
 - 4. ASTM A153 - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
 - 5. ASTM A307 - Standard Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.

- 6. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).
 - 7. ASTM D3139 - Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.
 - 8. ASTM F477 - Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.
- D. Manufacturer's Standardization Society of the Valve and Fittings Industry:
 - 1. MSS SP-60 - Connecting Flange Joint between Tapping Sleeves and Tapping Valves.
 - E. National Sanitation Foundation:
 - 1. NSF 61 - Drinking Water System Components - Health Effects
 - F. National Fire Protection Association:
 - 1. NFPA 281 - Recommended Practice for Fire Flow Testing and Marking of Hydrants.
 - G. SCDOT Standard Specifications:
 - 1. Standard Specifications for Roads and Structures, 2007 or current issue, published by the South Carolina Department of Transportation.
- 1.4 DEFINITIONS
- 1.5 Utility Company: Marlboro Water Company.
- 1.6 SUBMITTALS
- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
 - B. Shop Drawings: Indicate piping layout, including piping specialties.
 - C. Product Data: Submit data on pipe materials, pipe fittings, valves, hydrants, and accessories.
 - D. Manufacturer's Certificate: Certify products meet or exceed specified requirements.
 - E. Project Record Documents: Record actual locations of piping mains, valves, connections, thrust restraints, and invert elevations.
 - F. Identify and describe unexpected variations to subsoil conditions or discovery of uncharted utilities.
- 1.7 QUALITY ASSURANCE
- A. Perform work in accordance with utility company standards.
 - B. Maintain one copy of each document on site.
- 1.8 DELIVERY, STORAGE, AND HANDLING
- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.

- B. Deliver and store valves in shipping containers with manufacturer's name and pressure rating labeling in place.
- C. Block individual and stockpiled pipe lengths to prevent moving.
- D. Do not place pipe or pipe materials on private property or in areas obstructing pedestrian or vehicle traffic.
- E. Store polyethylene materials out of sunlight.

PART 2 PRODUCTS

2.1 WATER PIPING

- A. Ductile Iron Pipe (DIP): AWWA C151. Bituminous outside coating: AWWA C151. Cement Mortar Lining: AWWA C104.
 - 1. Pipe Thickness Class: 50
 - 2. Pressure Rating: 200 psi. Fittings: Ductile iron, AWWA C110. Compact fittings, Ductile Iron, AWWA C153.
 - a. Pressure Rating: 200 psi minimum.
 - b. Coating: Bituminous Coating, AWWA C110.
 - c. Lining: Cement Mortar Lining, AWWA C104
 - 3. Joints:
 - a. Mechanical Joints: AWWA C111.
 - b. Push-On Joints: AWWA C111.
 - c. Flanged Joints: AWWA C115.
 - d. Boltless Restrained Joints: Boltless, push-on type, joint restraint independent of joint seal. Conform to pipe manufacturers specifications.
 - e. Tied Restrained Joints: Per Section 33 05 19.

2.2 TAPPING SLEEVES AND VALVES

- A. Manufacturers:
 - 1. American Flow Control
 - 2. Clow Valve Company
 - 3. Mueller Company
 - 4. Or Engineer Approved Equal
- B. Tapping Sleeves:
 - 1. Ductile iron or cast-iron dual compression type.
 - 2. Outlet Flange Dimensions and Drilling: MSS SP-60.
- C. Tapping Valves:
 - 1. AWWA C500, double disc with non-rising stem. Inlet flanges shall conform to ASME/ANSI B16.1, Class 125 and MSS SP-60. Mechanical joint outlets shall conform to AWWA C111.

2.3 RESILIENT WEDGE GATE VALVES

- A. Manufacturers:
 - 1. American Flow Control
 - 2. Clow Valve Company

3. Mueller Company
4. Prattt
5. Or Engineer Approved Equal

B. Furnish materials in accordance with utility company or governing agency requirements.

- C. Resilient Wedge Gate Valves: AWWA C509; iron body, bronze or ductile iron.
1. Resilient seats.
 2. Stem: Non-rising bronze stem.
 3. Operating Nut: Square; open counterclockwise unless otherwise indicated.
 4. Ends: Flanged, mechanical joint or bell end connections.
 5. Coating: AWWA C550; interior/exterior.
 6. Sizes 12-Inch Diameter and Smaller: 200 psig.
 7. Sizes 16-Inch Diameter and Larger: 150 psig.

2.4 VALVE BOXES

- A. Vales 12-Inch Diameter and Smaller: Cast iron, two-piece, screw type.
- B. Valves Larger Than 12-Inch Diameter: Cast iron, three-piece, screw type; round base.
- C. Cast iron lid marked "WATER".

2.5 CONCRETE FOR THRUST RESTRAINT, ENCASEMENT AND CRADLES

- A. Concrete: Class 2500 (Non Structural) Concrete conforming to Division 700, Section 701, Subsection 701.1 of the South Carolina Department of Transportation Standard Specifications for Highway Construction, 2007.
1. Compressive strength of 2,500 psi at 28 days.
 2. Air entrained.
 3. Water cement ratio of 0.56 with Marine Limestone aggregate, 0.52 with Gravel aggregate, and 0.54 with Crushed Stone aggregate.
 4. Maximum slump of 2.5 inch for vibrated concrete and 4 inch for non-vibrated concrete.
 5. Minimum cement content of 494 pounds per cubic yard.

2.6 BEDDING AND COVER MATERIALS

- A. Bedding for Rigid Pipe (DIP, PVC C900, PVC C905, and PCCP): Clean sand, slightly silty sand, or slightly clayey sand having a Unified Soil Classification of SP, SP-SM or SP-SC.
- B. Bedding for Flexible Pipe (PVC-IPS): Clean course aggregate Gradation No. 57 conforming to Sections 1005 and 1006 of the South Carolina Department of Transportation Standard Specifications.
- C. Backfill Around Pipe and Above Pipe: As specified in Section 31 23 17 -Trenching.

2.7 ACCESSORIES

- A. Polyethylene Jackets: AWWA C105 polyethylene jacket. Single layer, lapped over pipe joint, and secured with 10 mil polyethylene tape.
- B. Steel rods, bolt, lugs and brackets: ASTM A36 or ASTM A307 carbon steel.

PART 3 EXECUTION

3.1 PREPARATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify existing utility water main size, location, and inverts are as indicated on Drawings.

3.2 EXCAVATION

- A. Excavate pipe trench in accordance with Section 31 23 17 - Trenching for Work of this Section. Hand trim excavation for accurate placement of pipe to elevations indicated on Drawings.
- B. Dewater excavations to maintain dry conditions and preserve final grades at bottom of excavation.
- C. Provide sheeting and shoring as required.
- D. Place bedding material at trench bottom, level fill materials in one continuous layer not exceeding 8 inches in compacted depth; compact to 95 percent.

3.3 INSTALLATION – PIPE

- A. Install ductile iron pipe and fittings in accordance with AWWA C600 and manufactures' instructions.
- B. Install PVC pipe in accordance with AWWA C605 and manufactures' instructions.
- C. Handle and assemble pipe in accordance with manufacturer's instructions and as indicated on Drawings.
- D. Steel Rods, Bolt, Lugs, and Brackets: Coat buried steel with one coat of coal tar coating before backfilling.
- E. Maintain minimum 10-foot horizontal separation and 18-inch vertical separation of water main from sewer piping or as required by local code.
- F. Install pipe to indicated elevation to within tolerance of 1/2 inch.
- G. Cut pipe ends square, ream pipe and tube ends to full pipe diameter, remove burrs. Use only equipment specifically designed for pipe cutting. The use of chisels or hand saws will not be permitted. Grind edges smooth with beveled end for push-on connections.
- H. Remove scale and dirt on inside and outside before assembly.
- I. Flanged Joints: Not to be used in underground installations except within structures.
- J. Route pipe in straight line. Relay pipe that is out of alignment or grade.
- K. Install pipe with no high points. If unforeseen field conditions arise which necessitate high points, install air release valves as directed by Architect/Engineer.

- L. Install pipe to have bearing along entire length of pipe. Excavate bell holes to permit proper joint installation. Do not lay pipe in wet or frozen trench.
- M. Prevent foreign material from entering pipe during placement.
- N. Install pipe to allow for expansion and contraction without stressing pipe or joints.
- O. Close pipe openings with watertight plugs during work stoppages.
- P. Install access fittings to permit disinfection of water system performed under Section 33 13 00 – Disinfecting Water Utility Distribution Piping.
- Q. Install underground marking tape continuously 12 inches above pipe line.
- R. Establish elevations of buried piping with not less than 3 feet of cover. Measure depth of cover from final surface grade to top of pipe barrel.

3.4 INSTALLATION - VALVES

- A. Install valves in conjunction with pipe installation; set valves plumb.
- B. Provide buried valves with valve boxes installed flush with finished grade.

3.5 INSTALLATION - TAPPING SLEEVES AND VALVES

- A. Install tapping sleeves and valves in accordance with utility company requirements, as indicated on Drawings, and in accordance with manufacturer's instructions.
- B. Have Engineer witness tap –Verify. If not, go with A and C.
- C. Excavate and expose pipe to be tapped, install tapping sleeve and valve, and have utility company perform tap.

3.6 POLYETHYLENE ENCASEMENT

- A. Encase Ductile Iron piping in polyethylene where indicated on Drawings to prevent contact with surrounding backfill material.
- B. Install in accordance with AWWA C105.
- C. Terminate encasement 3 to 6 inches above ground where pipe is exposed.

3.7 CONCRETE THRUST RESTRAINT

- A. Provide valves, tees, bends, caps, plugs, and dead ends with concrete thrust blocks as indicated on Drawings.
- B. Pour concrete thrust blocks against undisturbed earth. Locate thrust blocks at each elbow or change of pipe direction to resist resultant force and so pipe and fitting joints will be accessible for repair.
- C. Do not encase fitting joints and flanges.

3.8 TIED JOINT RESTRAINT

- A. Install tied joint restraint systems in accordance with Section 33 05 19 – Pressure Piping Tied Joint Restraint System.

3.9 SERVICE CONNECTIONS

- A. Install service connections in accordance with Section 33 12 13 – Water Service Connections.

3.10 BACKFILLING

- A. Backfill and compact around sides and to top of pipe in accordance with Section 31 23 17 - Trenching.
- B. Maintain optimum moisture content of material to attain required compaction density.

3.11 DISINFECTION OF POTABLE WATER PIPING SYSTEM

- A. Flush and disinfect system in accordance with Section 33 13 00 - Disinfecting Water Utility Distribution.

3.12 FIELD QUALITY CONTROL

- A. Section 01 40 00 – Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Compaction Testing: Perform soil compaction tests in accordance with Section 31 23 17 – Trenching.
- C. Pressure Tests: Perform pressure test on potable water distribution system in accordance with AWWA C600.
- D. Notification: Notify Engineer, utility company, Owner, and testing agency 72 hours in advance of test and have witness test.
- E. Test Pressure: Not less than 200 psi or 50 psi in excess of maximum static pressure, whichever is greater.
- F. Pressure Test Procedure:
 1. After completion of pipeline installation, including backfill, but prior to final connection to existing system, conduct concurrent pressure and leakage tests.
 2. Provide equipment required to perform leakage and pressure tests.
 3. Conduct tests for at least two-hour duration.
 4. No pipeline installation will be approved when pressure varies by more than 5 psi at completion of hydrostatic pressure test.
 5. Before applying test pressure, completely expel air from section of piping under test. Provide corporation cocks so air can be expelled as pipeline is filled with water. After air has been expelled, close corporation cocks and apply test pressure. At conclusion of tests, remove corporation cocks removed and plug resulting piping openings.
 6. Slowly bring piping to test pressure and allow system to stabilize prior to conducting leakage test. Do not open or close valves at differential pressures above rated pressure.

7. Examine exposed piping, fittings, valves, hydrants, and joints carefully during pressure test. Repair or replace damage or defective pipe, fittings, valves, hydrants, or joints discovered, following pressure test.
8. No pipeline installation will be approved when leakage is greater than that determined by the following formula:

$L = (SD\sqrt{P}) / 148,000$
L = allowable, in gallons per hour
S = length of pipe tested, in inches
D = nominal diameter of pipe, in inches
P = average test pressure during leakage test, in pounds per square inch (gauge)

9. When leakage exceeds specified acceptable rate, locate source and make repairs. Repeat test until specified leakage requirements are met.

END OF SECTION

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Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 33 13 00
DISINFECTING WATER UTILITY DISTRIBUTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes disinfection of potable water distribution and transmission system; and testing and reporting results.
- B. Related Sections:
 - 1. Section 33 11 00 - Water Utility Distribution Piping: Piping Product and Execution requirements for installation, testing, of water distribution piping.
 - 2. Section 33 12 13 - Water Service Connections.
 - 3. Section 33 21 13 - Public Water Supply Wells: Product and Execution requirements for installation, testing, and disinfection of water wells.

1.2 REFERENCES

- A. American Water Works Association:
 - 1. AWWA B300 – Standard for Hypochlorites.
 - 2. AWWA B301 – Standard for Liquid Chlorine.
 - 3. AWWA B302 – Standard for Ammonium Sulfate.
 - 4. AWWA B303 – Standard for Sodium Chlorite.
 - 5. AWWA C600 – Standard for Installation of Ductile-Iron Water Mains and Their Appurtenances.
 - 6. AWWA C651 – Standard for Disinfecting Water Mains.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit procedures, proposed chemicals, and treatment levels for review.
- C. Test Reports: Indicate results comparative to specified requirements.
- D. Certificate: Certify cleanliness of water distribution system meets or exceeds specified requirements.

1.4 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 - Execution and Closeout Requirements: Requirements for submittals.
- B. Disinfection Report:
 - 1. Type and form of disinfectant used.
 - 2. Date and time of disinfectant injection start and time of completion.
 - 3. Test locations.
 - 4. Name of person collecting samples.
 - 5. Initial and 24 hour disinfectant residuals in treated water in ppm for each outlet tested.
 - 6. Date and time of flushing start and completion.
 - 7. Disinfectant residual after flushing in ppm for each outlet tested.
- C. Bacteriological Report:
 - 1. Date issued, project name, and testing laboratory name, address, and telephone number.
 - 2. Time and date of water sample collection.
 - 3. Name of person collecting samples.
 - 4. Test locations.
 - 5. Initial and 24 hour disinfectant residuals in ppm for each outlet tested.
 - 6. Coliform bacteria test results for each outlet tested.
 - 7. Certify water conforms, or fails to conform, to bacterial standards of authority having jurisdiction.
- D. Water Quality Certificate: Certify water conforms to quality standards of authority having jurisdiction, suitable for human consumption.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with AWWA C651; maintain one copy of document on site.

PART 2 PRODUCTS

2.1 DISINFECTION CHEMICALS

- A. Chemicals: AWWA B300, Hypochlorite, AWWA B301, Liquid Chlorine, AWWA B302, Ammonium Sulfate, and AWWA B303, Sodium Chlorite.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify piping system has been cleaned, inspected, and pressure tested.
- C. Perform scheduling and disinfecting activity with start-up, water pressure testing, adjusting and balancing, and demonstration procedures, including coordination with related systems.

3.2 INSTALLATION

- A. Provide and attach required equipment to perform the Work of this Section.
- B. Perform disinfection of water distribution system.
- C. Introduce treatment into piping system.
- D. Maintain disinfectant in system for 24 hours minimum.
- E. Flush, circulate, and clean until required cleanliness is achieved; use municipal domestic water.
- F. Replace permanent system devices removed for disinfection.

3.3 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Disinfection, Flushing, and Sampling:
 - 1. Notify Engineer, utility company, Owner, and testing agency 72 hours in advance of test and have witness test.
 - 2. Disinfect pipeline installation in accordance with AWWA C651 Use of liquid chlorine is not permitted.
 - 3. Upon completion of retention period required for disinfection, flush pipeline until chlorine concentration in water leaving pipeline is no higher than that generally prevailing in existing system or is acceptable for domestic use.
 - 4. Legally dispose of chlorinated water. When chlorinated discharge may cause damage to environment, apply neutralizing chemical to chlorinated water to neutralize chlorine residual remaining in water.
 - 5. After final flushing and before pipeline is connected to existing system or placed in service, employ an approved independent testing laboratory to sample, test, and certify water quality suitable for human consumption.

END OF SECTION

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Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 33 13 13 WATER STORAGE TANK DISINFECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Water tank disinfection.
 - 2. Bacteriological testing.
- B. Related Sections:
 - 1. Section 09 97 14 - Steel Water Storage Tank Painting.
 - 2. Section 09 97 24 - Concrete Water Storage Tank Painting.
 - 3. Section 33 16 13 - Aboveground Water Utility Storage Tanks.
 - 4. Section 33 16 19 - Elevated Water Utility Storage Tanks.

1.2 REFERENCES

- A. American Water Works Association:
 - 1. AWWA C652 - Disinfection of Water Storage Facilities.

1.3 SUBMITTALS

- A. Section 01 33 00 - Submittal Procedures: Requirements for submittals.
- B. Disinfection Procedure: Submit procedure description including type of disinfectant to and calculations indicating quantities of disinfectants required to produce specified chlorine concentration in accordance with Section 3 and 4 of AWWA C652.
- C. Test Reports: Indicate results of bacteriological and residual chlorine laboratory test reports.
- D. Manufacturer's Certificate:
 - 1. Certify Products meet or exceed specified requirements.
 - 2. Certify disinfectants meet or exceed AWWA Standards requirements.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with AWWA C652.
- B. Maintain one copy of each document on site.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 - Product Requirements: Requirements for transporting, handling, storing, and protecting products.
- B. Store disinfectants in cool, dry place away from combustibles such as wood, rags, oils and grease.

- C. Handle disinfectants with caution; protect skin and eyes from contact; avoid breathing vapors; wear gloves, aprons, goggles, and vapor masks.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Furnish personnel working inside tank during disinfection with equipment to comply with Federal and State regulations for work conducted in hazardous atmosphere.
- B. Neutralize disinfectant solution before disposal.
- C. Legally dispose of disinfection solution off Project site.
- D. Repair damage caused by disinfectant solution and disinfection procedures.

PART 2 PRODUCTS

2.1 DISINFECTANTS

- A. Chlorine Forms: In accordance with AWWA C652, Section 3.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Conduct inspection of tank interior before beginning disinfection.
 - 1. Verify tank is clean and free of polluting materials.
 - 2. Verify tank pipe and vent connections are properly made and clear of obstructions.
 - 3. Verify paint is thoroughly cured in accordance with paint manufacturer's instructions.

3.2 PREPARATION

- A. Protect aquatic life and vegetation from damage from disinfectant solution purged from tank.

3.3 APPLICATION

- A. Use any one or a combination of the three methods for disinfecting tank specified in Section 4 of AWWA C652:
 - 1. Chlorination Method 1.
 - 2. Chlorination Method 2.
 - 3. Chlorination Method 3.

3.4 FIELD QUALITY CONTROL

- A. Section 01 40 00 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Collect samples of water from filled tank for bacteriological analysis in accordance with Section 4.4 of AWWA C652; take inlet and outlet water samples.

- C. Test water samples in accordance with American Waterworks Association Standard D102-78 and SCDHEC Standards.
- D. When water samples fail to meet Standards for potable water perform the following corrective measures until water quality conforms to Standards:
 - 1. Inlet and Outlet Water Sample Failure: Eliminate source of contamination in water supply, repeat disinfection, and retest water quality.
 - 2. Outlet Water Sample Failure: Repeat disinfection, and retest water quality.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

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SECTION 40 05 13

PLANT PROCESS PIPING AND EQUIPMENT

PART 1 GENERAL

1.1 DESCRIPTION

- A. This section provides information regarding plant process piping and equipment to be used for this project.

1.2 GENERAL REQUIREMENTS

- A. This specification covers the requirements for above and below grade process pipe, pipe supports, fittings, equipment and accessories located both inside and outside of the treatment plant.
- B. Design Requirements: Support systems shall be selected and designed within the specified spans and component requirements. The absence of pipe supports and details on the contract drawings does not relieve the Contractor of responsibility for sizing and providing supports throughout facility. The structural design, selection, fabrication and erection of piping support system components shall satisfy the seismic requirements as indicated, accounting for a 2000 psf soil bearing capacity, a maximum wind speed of 110 mph, a maximum ambient air temperature of 90 degrees F and a minimum ambient air temperature of 10 degrees F.

Contractor shall provide mechanical restraints as required for all underground piping. Contractor shall provide calculations for determining length of pipe to be restrained.

- C. Performance Requirements: The pressure ratings and materials specified represent minimum acceptable standards for piping systems. The piping systems shall be suitable for the services specified and intended. Each piping system shall be coordinated to function as a unit. Flanges, valves, fittings and appurtenances shall have a pressure rating no less than that required for the system in which they are installed.
1. Buried Piping Systems: Piping systems shall be suitable for design conditions, considering the piping both with and without internal pressure. Consideration shall be given to all operating and service conditions both internal and external to the piping systems.
 2. Above Grade Piping Systems: Piping systems shall be suitable for design conditions, considering the piping both with and without internal pressure, and installation factors such as insulation, support spans, and ambient temperatures. Consideration shall be given to all operating and service conditions both internal and external to the piping systems.

1.3 SUBMITTALS

- A. The following shall be submitted in accordance with Section 01 33 00 – Submittal Procedures:

1. SD-02 Shop Drawings:

Pipe and Equipment

Equipment shop drawings including support system detail drawings showing piping systems and appurtenances, such as mechanical joints, valves, local indicators and hangers, including a complete list of equipment and materials. As-built drawings showing pipe anchors and guides, and layout of piping systems relative to other parts of the work including clearances for maintenance and operation. As-built piping and instrumentation diagrams (P&IDs) identifying and labeling equipment, instrumentation, valves, vents, drains, and all other inline devices; if the contract drawings contained P&IDs, the P&IDs found in the contract drawings shall be revised to reflect the constructed process system, as directed by the Engineer.

2. SD-03 Product Data:

Qualifications

A statement certifying that the Contractor has the specified experience.

Welders

The names of all qualified welders, their identifying symbols, and the qualifying procedures for each welder including support data such as test procedures used, standards tested to, etc.

Waste Water Disposal

The method proposed for disposal of waste water from hydrostatic tests and disinfection, and all required permits, prior to performing hydrostatic tests.

Assistance and Training

A signed statement certifying that the installation is satisfactory and in accordance with the contract drawings and specifications and the manufacturer's prescribed procedures and techniques, upon completion of the project and before final acceptance.

Delivery, Storage and Handling

Material safety data sheets

Materials and Equipment

Manufacturer's descriptive and technical literature for each piping system, including design recommendations; pressure and temperature ratings; dimensions, type, grade and strength of pipe and fittings; thermal characteristics

(coefficient of expansion and thermal conductivity); and chemical resistance to each chemical and chemical mixture in the liquid stream.

Installation

The manufacturer's installation recommendations or instructions for each material or procedure to be utilized, including materials preparation.

Pipe Schedule

A list of piping systems, pressure ratings and source of supply for each piping system broken out by material, size and application as indicated on the contract drawings. A list of any special tools necessary for each piping system and appurtenances furnished for adjustment, operation, maintenance and disassembly of the system.

Valve Schedule

Operator Schedule

A list of valve materials, pressure ratings, valve operator's materials, air supply pressure, electrical service requirements, location, source of supply, and reference identification as indicated in the contract drawings. A list of any special tools necessary for each valve type and appurtenances furnished for adjustment, operation, maintenance and disassembly.

3. SD-07 Certificates:

Plastic Piping System

Documentation certifying that the manufacturer of each thermoplastic piping system is listed with the Plastic Pipe Institute as meeting the recipe and mixing requirements of the resin manufacturer for the resin used to manufacture each of the respective thermoplastic pipe systems.

4. SD-10 Operation and Maintenance Data:

Piping and Appurtenances

Six copies each of operation and maintenance manuals in indexed booklet form. Operation manuals shall detail the step-by-step procedures required for specialized startup, operation and shutdown of piping systems, and shall include the manufacturer's name, model number, parts list and brief description of piping equipment such as valves and other appurtenances and their basic operating features. Maintenance manuals shall list routine maintenance procedures and troubleshooting guides for the equipment, and shall include piping layout and valve locations.

1.4 QUALIFICATIONS

- A. Subcontractor: Subcontractor shall have successfully completed at least 3 projects of the same scope and size or larger within the last 6 years. Subcontractor shall demonstrate

specific experience in regard to the system installation to be performed. Owner reserves the right to reject any subcontractor that does not meet these requirements.

- B. Welders: The welding of pressure piping systems shall be in accordance with qualifying procedures using performance qualified welders and operators.

1.5 GENERAL JOB REQUIREMENTS

- A. Piping materials and appurtenances shall be as specified and as shown on the drawings, and shall be suitable for the service intended. Piping materials, appurtenances and equipment supplied as part of this contract shall be new and unused except for testing equipment. Components that serve the same function and are the same size shall be identical products of the same manufacturer. The general materials to be used for the piping systems are indicated by service in the contract drawings.
- B. Components: Piping equipment and appurtenances shall be new products of equal material and ratings as the connecting pipe.
- C. Standard Products: Material and equipment shall be the standard products of a manufacturer regularly engaged in the manufacturing of the products and shall essentially duplicate items that have been in satisfactory use for at least 2 years prior to bid opening. Nominal sizes for standardized products shall be used. Pipe, valves, fittings and appurtenances shall be supported by a service organization that is, in the opinion of the Engineer, reasonably convenient to the site.
- D. Identification: Each piece of pipe shall bear the ASTM designation and all other markings required for that designation. Valves shall bear a securely attached tag with the manufacturer's name, valve model number, and valve identification permanently displayed.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Materials delivered and placed in storage shall be stored with protection from the weather, excessive humidity variation, excessive temperature variation, dirt, dust and/or other contaminants. Proper protection and care of material before, during and after installation is the Contractor's responsibility. Any material found to be damaged shall be replaced at the Contractor's expense. During installation, piping shall be capped to keep out dirt and other foreign matter. A material safety data sheet shall accompany each chemical delivered for use in pipe installation. At a minimum, this includes all solvents, solvent cements, glues and other materials that may contain hazardous compounds. Handling shall be in accordance with ASTM F 402. Materials shall be stored with protection from puncture, dirt, grease, moisture, mechanical abrasions, excessive heat, ultraviolet (UV) radiation damage, or other damage. Pipe and fittings shall be handled and stored in accordance with the manufacturer's recommendation. Plastic pipe shall be packed, packaged and marked in accordance with ASTM D 3892.

1.7 PROJECT/SITE CONDITIONS

- A. Environmental Requirements: Buried piping at the site may be subject to corrosion from the surrounding soil. Piping system design, supply and installation shall address the external corrosion conditions so indicated.
- B. Existing Conditions: The Contractor shall be responsible for the verification of existing piping locations and elevations. Prior to ordering materials, the Contractor shall expose

all existing pipes which are to be connected to new pipelines. The Contractor shall verify the size, material, joint types, elevation, horizontal location, and pipe service of existing pipes, and inspect size and location of structure penetrations to verify adequacy of wall sleeves, and other openings before installing connecting pipes.

- C. Verification of Dimensions: After becoming familiar with all details of the work, the Contractor shall verify all dimensions in the field, and shall advise the Engineer of any discrepancy before performing the work.

1.8 SEQUENCING AND SCHEDULING

- A. For slab, floor, wall, and roof penetrations, the Contractor shall have onsite pertinent wall pipes and sleeves before they are required for placement in concrete forms. The Contractor shall verify and coordinate the size and location of building and structure pipe penetrations before forming and placing concrete.

1.9 MAINTENANCE

- A. Extra Materials: Concurrent with delivery and installation of the specified piping systems and appurtenances, spare parts for each different item of material and equipment specified that is recommended by the manufacturer to be replaced any time up to 3 years of service shall be furnished. For each type and size of valve, the following extra materials shall be provided: lubricator, lubricant (with appropriate temperature rating), lubricator/isolating valve; galvanized operating wrench, 4 feet long, for T-handled operators; galvanized operating key for cross handled valves. Extra materials shall include 2 of the following spare parts for each type and size of valve: gaskets; O-ring seals; diaphragms (molded); all elastomer parts; stem packing; seat rings and seat ring pulling tool.

PART 2 PRODUCTS

2.1 DUCTILE IRON PIPING SYSTEM

- A. Ductile Iron Pipe: Ductile iron pipe shall be in accordance with ANSI A21.50/AWWA C150 and conform to the requirements of A21.51/AWWA C151, latest standards. Push-on, and restrained joint pipe shall have a minimum rated working pressure of 150 psi. All buried pipe shall be pressure class as follows:

Pipe Sizes (inch)	Pressure Class (psi)
4-12	350
14-20	250
24	200
30-64	150

Pipe wall thickness shall be in accordance to bury depth as shown on drawings. Flange pipe or Victaulic grooved pipe shall be class 53. Direct tapping may be used in lieu of service saddles as per AWWA C800. Welded-on outlets may be used where appropriate in lieu of fittings.

- B. Welded-On Outlets: Welded-on outlets may be used in lieu of the tees shown on the plans. All welded-on outlets shall be rated for a working pressure of 250 psi and shall

have a minimum safety factor of 2.0; except that 36" welded-on outlets for 54"-64" parent pipe diameters shall be rated at 200 psi. Welded-on outlets may be provided as a radial (tee) outlet, a tangential outlet, or a lateral outlet. Parent pipe and branch pipe shall meet hydrostatic test requirements in accordance with AWWA C151, section 51-9, prior to fabrication.

All joints on welded-on branch outlets shall be provided in accordance with the latest revision of ANSI/AWWA C111/A21.11 and/or ANSI/AWWA C115/A21.15, as applicable. All outlets shall be fabricated from centrifugally cast ductile iron pipe designed in accordance with ANSI/AWWA C150/A21.50 and manufactured in accordance with ANSI/AWWA C151/A21.51.

All welds must be produced using 55% nickel iron welding rod or wire. Carbon steel electrodes will not be acceptable. Both branch and parent outlet pipe shall be class 53. After fabrication each outlet pipe shall be air tested to 15 psi to insure weld integrity. A soap and water solution shall be applied during the testing procedure to inspect the weld for leakage. Any welds that show air seepage shall be refabricated and retested. Welded-on bosses will not be permitted. All welded-on outlets shall be done at manufacturer's plant.

The type of pipe end for the branch outlet shall be as specified or indicated on the drawings. The maximum size and laying length of the welded-on branch outlet shall be recommended by the pipe manufacturer and acceptable to the Engineer for the field conditions and connecting pipe or valve. Pipe embedment material and trench backfill shall be placed and compacted under and around each side of the outlet to hold the pipe in proper position and alignment during subsequent pipe jointing, embedment, and backfilling operations.

- C. Ductile Iron Pipe Joints: Ductile iron pipe and fittings shall be furnished with push-on joints, push-on restrained joints, mechanical joints, flanged joints, and grooved joints as required. Pipe ends (spigot end, bell, and socket) for all pipe shall be gauged with suitable gauges at sufficiently frequent intervals to ensure compliance to the standard dimensions of ANSI/AWWA C151/A1.5, latest addition.
 - 1. Push-on Joints: Push-on joints shall conform to ANSI A21.11/AWWA C111 approved Fastite, Tyton, Belltite, or Engineer Approved Equal.
 - 2. Flange Joints: Flange joints shall conform to ANSI A21.15/AWWA C115. Bolts and nuts shall conform to ANSI A21.11/AWWA C111.
 - 3. Restrained Joints: Restrained joints shall be American Fast-Grip, Flex-Ring, Field Flex-Ring, Lok-Ring, Ebba Megalug, Sigma One-Lok or Engineer Approved Equal. River crossing pipe shall be American Flex-Lok (ball and socket) or Engineer Approved Equal.
- D. Ductile Iron Fittings:
 - 1. Mechanical Fittings/Restrained Fittings: Mechanical fittings/restrained fittings shall conform to ANSI A21.53/AWWA C153 or A21.10/AWWA C110.
 - 2. Flanged Fittings: Flanged fittings shall conform to ANSI A21.10/AWWA C110. The AWWA C110 fitting flanges shall have facing and drilling which match AWWA C115 threaded-on flanges which also match ANSI B16.1 class 125 flanges except where class 250 are specifically noted.

E. Linings and Coatings:

1. Water Linings: Ductile iron pipe, specials, and fittings shall be lined with cement mortar lining in accordance with AWWA C104.
2. Coatings: Ductile iron pipe and fittings for buried service shall receive a 1 mil asphaltic coating in accordance with ANSI A21.51. All exposed piping shall be primed at manufacturer's plant with Wasser FerroClad or Tnemec 37H-77, Tnemec 140-1211, or Engineer Approved Equal.

2.2 PLASTIC PIPING SYSTEM

A. Polyvinyl Chloride (PVC)

1. PVC Pipe: PVC, ASTM D 1784, minimum cell classification 12545-C, pipe shall be Schedule 80 conforming to ASTM D 1785.
2. PVC Tubing: Tubing shall be flexible and clear with nominal size and wall thickness in accordance with Pipe Schedule.
3. PVC Joints: The piping system shall be joined by socket-weld or flanged connections except where connecting to unions, valves, and equipment with threaded connections that may require future disassembly. Connections at those points shall be threaded and back-welded. Tubing connections shall use compression fittings.
4. PVC Fittings: The schedule rating for the fittings shall not be less than that for the associated pipe. Fittings shall be ASTM D 1784, minimum cell classification, PVC conforming to the requirements of ASTM D 2466, socket type.
 - a. Push-on Joints: Push-on type joints shall be sealed with ethylene propylene rubber (EPR) gaskets in accordance with ASTM F 477.
 - b. Flanged Fittings: Flanges and flanged fittings shall be Class 125, one piece, molded hub type, flat faced, and shall conform to ASME B16.1. Flanges shall be complete with one-piece, molded PVC stub ends. Flanged connections shall have the same pressure rating as the pipe or greater. Bolting shall be stainless steel, ASTM A 193/A 193M, Grade B8 hex head bolts and ASTM A 194/A 194M, Grade 8 hex head nuts. Bolts shall be provided with washers of the same material as the bolts. Gaskets shall be full-faced, maximum 1/8 inch thick, fabricated from ethylene propylene rubber (EPR) in accordance with ASME B16.21. When the mating flange has a raised face, a flat ring gasket shall be used and a filler gasket shall be provided between outer diameter of the raised face and the flange outer diameter to protect the PVC flange from bolting moment.

5. PVC Solvent Cement: Socket connections shall be joined with PVC solvent cement conforming to ASTM D 2564. Manufacture and viscosity shall be as recommended by the pipe and fitting manufacturer to assure compatibility. Joints shall be prepared with primers conforming to ASTM F 656 prior to cementing and assembly.

B. Chlorinated Polyvinyl Chloride (CPVC)

1. CPVC Pipe: CPVC, ASTM D 1784, minimum cell classification 23447, pipe shall be Schedule 80 conforming to ASTM F 441/F 441M.
2. CPVC Joints: The piping system shall be joined by socket-weld or flanged connections except where connecting to unions, valves, and equipment with threaded connections that may require future disassembly. Connections at those points shall be threaded and back-welded.
3. CPVC Fittings: The schedule rating for the fittings shall not be less than that for the associated pipe. Fittings shall be ASTM D 1784, cell classification 23447, CPVC conforming to the requirements of ASTM F 438, socket type.
 - a. Push-on Joints: Push-on type joints shall be sealed with ethylene propylene rubber (EPR) gaskets in accordance with ASTM F 477.
 - b. Flanged Fittings: Flanges and flanged fittings shall be Class 125, one piece, molded hub type, flat faced, and conforming to ASME B16.1. Flanges shall be complete with one-piece, molded CPVC stub ends. Flanged connections shall have the same pressure rating as the pipe or greater. Bolting shall be stainless steel, ASTM A 193/A 193M, Grade B8 hex head bolts and ASTM A 194/A 194M, Grade 8 hex head nuts. Bolts shall be provided with washers of the same material as the bolts. Gaskets shall be full-faced, maximum 0.125 inch thick, fabricated from ethylene propylene rubber (EPR) in accordance with ASME B16.21. When the mating flange has a raised face, a flat ring gasket shall be used and a filler gasket shall be provided between outer diameter of the raised face and the flange outer diameter to protect the CPVC flange from the bolting moment.
4. Solvent Cement: Socket connections shall be joined with PVC solvent cement conforming to ASTM F 493. Manufacture and viscosity shall be as recommended by the pipe and fitting manufacturer to assure compatibility.

C. Polyethylene (PE):

1. PE Pipe: The pipe shall be extruded from PE, ASTM D 3350 with a minimum cell classification of 324433-C. The PE pipe shall be manufactured to an SDR rating in accordance with ASTM D 3035 for piping systems less than 4 inches in diameter, or in accordance with ASTM F 714 for piping systems with a diameter equal to or greater than 4 inches, so that the pressure rating of the pipe shall be consistent for all pipe sizes.
2. PE Tubing: Tubing shall be flexible crosslinked PE conforming to ASTM D 3350, minimum cell classification 35400, and dimensioned in accordance with ASTM F 876 with nominal size in accordance with Pipe Schedule.

3. PE Joints: PE pipe shall be joined by thermal butt-fusion, except where connecting to valves and equipment that may require future disassembly, then joints shall be flanged.
4. PE Fittings: PE fittings shall have the same or higher pressure rating as the pipe when installed in accordance with the latest technical specifications. PE fittings shall be molded. Butt-fusion fittings shall conform to ASTM D 3261.
 - a. Couplings: Couplings and saddle joints shall be joined by electrofusion in accordance with ASTM F 1055.
 - b. Flanged Fittings: Flanges and flanged fittings shall be Class 125. Flanges shall be complete with one-piece, molded PE stub ends. Flanged connections shall have the same pressure rating as the pipe or greater. Bolting shall be stainless steel, ASTM A 193/A 193M, Grade B8 hex head bolts and ASTM A 194/A 194M, Grade 8 hex head nuts. Bolts shall be provided with washers of the same material as the bolts. Gaskets shall be full-faced, maximum 1/8 inch thick, fabricated from ethylene propylene rubber (EPR) in accordance with ASME B16.21.

2.3 INSULATION

- A. All piping installed in a location subject to freezing shall be insulated with a PVC sheath covering the insulation.

2.4 ISOLATION JOINTS AND COUPLINGS

- A. Dielectric Fittings: Dielectric fittings shall be provided between threaded ferrous and nonferrous metallic pipe, fittings and valves. Dielectric fittings shall prevent metal-to-metal contact of dissimilar metallic piping elements and shall be suitable for the required working pressure, temperature and corrosive application.
- B. Isolation Joints: Isolation joints shall be provided between nonthreaded ferrous and nonferrous metallic pipe fittings and valves. Isolation joints shall consist of an isolation gasket of the dielectric type, isolation washers and isolation sleeves for flange bolts. Isolation gaskets shall be full faced with an outside diameter equal to the flange outside diameter. Bolt isolation sleeves shall be full length. Units shall be of a shape to prevent metal-to-metal contact of dissimilar metallic piping elements.
- C. Sleeve-Type Couplings: Sleeve-type couplings shall be used for joining plain end pipe sections in a flexible manner with a diameter to properly fit the pipe. A coupling shall consist of one ductile iron middle ring, two ductile iron followers, two elastomeric wedge section gaskets and elliptic-neck, track-head steel bolts designed to properly compress the gaskets. For pipe sizes 2 inches and larger, the followers shall be ASTM A 395/A 395M, and the middle ring shall be ASTM A 513 with AWWA C111 bolting, light pattern coupling. Gaskets shall be natural rubber. Split sleeve-type couplings may be used in aboveground installations under special situations and when approved in advance by the Engineer.

2.5 VALVES

- A. General Requirements For Valves: Valves shall include operator, actuator, handwheel, chain wheel, extension stem, floor stand, worm and gear operator, operating nut, chain, wrench, and all other accessories required for a complete operation. The valves shall be

suitable for the intended service. Renewable parts are not to be of a lower quality than those specified. Valves shall be the same size as adjoining pipe. Valve ends shall be compatible with adjacent piping system. An operator shall be sized to operate the associated valve for the full range of pressures and velocities. Valves will open by turning counterclockwise. Operators, actuators, and accessories shall be factory mounted.

- B. **Factory Finishing:** Valves shall have an epoxy lining and coating in accordance with AWWA C550 unless otherwise specified. The epoxy shall be either a two-part liquid material or a heat-activated (fusion) material except that only a heat-activated material shall apply if a valve coating is specified as "fusion" or "fusion bonded" epoxy. The epoxy lining and coating shall have a minimum 7.0 mils dry film thickness except where it is limited by valve operating tolerances. Exposed valves shall be finished in accordance with Section 09900 Paints and Coatings and painted following installation and startup.
- C. **Swing Check Valve with Air Cushioned Cylinder:** Swing check valve with air cushion cylinder shall be constructed of heavy ductile iron body with a stainless steel body seat ring and single continuous steel shaft for attachment of outside weight and lever and totally enclosed air cushion cylinder.

The valve shall prevent the return of water back through the valve on pump shutoff or power failure and be tight seating. The seat ring must be renewable and securely held in place by stainless steel screws.

The cushion cylinder assembly shall be externally attached to the side of the valve body with the cylinder piston rod connected to the external lever arm in a manner to lift the piston upwards when flow starts and downwards when flow stops to compress the entrapped air in the cylinder for cushion closing. The cushion cylinder shall be fitted with an adjustable valve to increase or decrease air compression in the cylinder.

The valve disc shall be ductile iron suspended from a stainless steel shaft which shall pass through a stuffing box and be connected to the cushion cylinder on the outside of the valve.

Valve shall be "fusion bond" lined and coated. Materials shall be certified to the following ASTM specifications:

Body, Cover Disc Levers	Ductile Iron	ASTM A536, Gr65-45-12
Disc Arm	Ductile Iron	ASTM A536, Gr65-45-12
Seat	Stainless Steel	ASTM A296 T304
Seat Ring	Buna-N	80 Durometer
Gasket	Composition or Buna-N	Fiber Rubber
Pivot Shaft	Stainless Steel	ASTM A582 T303
Studs, Bolts, Nuts	Stainless Steel	Commercial
Cushion Cylinder	Aluminum Alloy	
Stuffing Box Packing	Composition	Teflon

D. Check Valves:

1. Swing Check Valves: Swing check valves shall conform to the following:
 - a. Swing check valves, 2 inches through 36 inches, shall conform to AWWA C508, and have ASME B16.1 Class flanged, end connections. Valves shall have a cast iron body, bronze-mounted disc, solid bronze hinges, and a stainless steel hinge shaft. Valves 14 inches through 36 inches shall be rated for 150 psig service at 140 degrees F. Valves shall be fitted with an adjustable outside lever and weight. An increasing-pattern body valve may be used where increased outlet piping size is shown.
4. Ball Check Valve: Ball check valves, 1 inch and larger, shall be in accordance with ASME B16.11 threaded ends, and TP316 stainless steel bodies with a cleanout and floating type butadiene acrylonitrile covered metal ball. Valves shall be rated for 100 psig service and shall be suitable for vertical or horizontal flow.
5. Thermoplastic Ball Valve: Thermoplastic ball valves, 6 inches and smaller, shall be rated for 150 psig service at 120 degrees F, and have ASTM D 1784, minimum cell classification, polyvinyl chloride (PVC) or chlorinated polyvinyl chloride (CPVC), balls, and stems. Valves shall be end entry, double union design, with solvent-weld socket ends connections, a ethylene propylene diene monomer (EPDM) seat, and ethylene propylene diene monomer (EPDM) O-ring stem seals. Valves shall have hand lever operators.

E. Gate Valves:

1. General Service Gate Valves: General service gate valves shall conform to the following:
 - a. Gate valves, 2 inches and smaller, shall have bronze bodies and stems, screwed bronze bonnets, single solid split wedge bronze discs, and non-rising stems. Valves shall be rated for 175 psig service and conform to ASME B16.34 Class. End connections shall be ASME B16.11 threaded. Valves shall be equipped with handwheel operators.
 - b. Gate valves, 2.5 inches and larger, shall have cast-iron bodies with iron trim. Valves shall meet the requirements of AWWA C500 and have Class 125 flanged or mechanical joint end connections. Bonnet shall be a NRS Bolted type. Discs shall be double type of rubber coated ductile iron construction, and have nonrising stems. Each gate valve, 16 inches and larger, shall include a by-pass of the same materials as the gate valve. The bypass shall meet the requirements of AWWA C500. Valves shall be rated for 200 psig service. Valves shall be equipped with a 2" square nut, or handwheel pneumatically actuated or electrically actuated operators as shown.

F. Altitude Control Valves

1. Approved Manufacturers
 - a. Golden Anderson
 - b. Ross Valve

- c. Approved Equal
2. Application Model Number

Single Acting Altitude Valves with Back Pressure Sustaining Function

- a. Golden Anderson, Series 5000
Northside Elevated Tank: 8" valve, globe pattern
Yogi Bear Tank: 10" valve, angle pattern
 - b. Ross Valve model 210-09
North Side Elevated Tank: 8" valve, globe pattern
Yogi Bear Tank: 10" valve, angle pattern
 - c. Approved Equal
3. Complete Assemblies
- Altitude valves shall be complete, with all necessary operating appurtenances included in the work under this section.
- a. Interior Lining and Exterior Coating
 - 1. An epoxy coating shall be applied to internal and external ferrous valve surfaces. Coating shall be per AWWA C550. Unless otherwise, herein.
4. Altitude Valve
- a. The altitude valve shall consist of globe/angle valve angle pattern with the appropriate control system.
 - b. The control system shall consist of auxiliary valves working in conjunction with the pilot valve to control the main valve. The pilot valve is to be spring-controlled based upon water level pressure in the tank. The spring range shall be 10-150 feet of water.
 - c. Back pressure function shall be adjustable within the range of 30-60 psi.
 - d. Altitude valve shall be provided with an over-ride solenoid and control piping for opening and closing the valve via SCADA signal, regardless of water level.
5. Manufacturer's Services
- a. A manufacturer's representative for the equipment specified herein shall be present at the job site and/or classroom designated by the Owner for that minimum personnel days listed for the services hereunder, travel time excluded:
 - 1. One (1) personnel day for equipment start-up, and one (1) personnel day for post start-up training.
 - 2. Start-up services and training of Owner's personnel shall be at such times as coordinated with the Owner.

- G. Operators: Contractor shall provide electric operators for all modulating valves. Contractor may provide electric or pneumatic operators for open/close valves, but must

supply pneumatic lines (including valves and appurtenances) for pneumatic valves and electric wire conduit disconnects, etc. for electric valves.

1. Manual Operator: The force in a manual operator shall not exceed 39.3 pound under any operating condition, including initial breakaway. The operator shall be equipped with gear reduction when force exceeds 39.3 pound. The manual operator shall be a self-locking type or shall be equipped with a self-locking device. A position indicator shall be supplied on quarter-turn valves. Worm and gear operators shall be a one-piece design with worm-gears of gear bronze material. Worm shall be hardened alloy steel with the thread ground and polished. Traveling nut type operators shall have threader steel reach rods with an internally threaded bronze or ductile iron nut.
 - a. Exposed Operators: Exposed operators shall have galvanized and painted handwheels. Lever operators are allowed on quarter-turn valves 8 inches and smaller. Cranks shall be supplied on gear type operators. If located off of the operator floor, chain wheel operator with tiebacks, extension stem, floor stands, and other accessories shall be provided to permit operation from normal operation level. Valve handles shall be capable of padlocking, and wheels shall be lockable with a chain and padlock.
 - b. Underground Operators: Buried service operators on valves larger than 2.5 inches shall have a 2 inch operating nut. Buried operators on valves 2 inches and smaller shall have a cross handle for operation by a forked key. The moving parts of valve and operator shall be enclosed in housing to prevent contact with the soil. Buried service operators for quarter-turn valves shall be designed to withstand an input torque of 450 foot-pound of input torque at the fully open or fully closed positions, and shall be grease packed and gasketed to withstand a submersion in water to 10.2 psig. Buried valves shall have extension stems, bonnets, and valve boxes.

2.6 DRAINS

- A. Valved drains may not be shown on the detailed drawings for individual pipelines; their absence will not relieve the Contractor of the responsibility for providing and installing them as indicated in the piping and instrumentation diagrams to complete the piping system for the use intended.
- B. Sizes: For pipelines 2.5 inches and larger, drains shall be 1.0 inch and equipped with ball valves. For pipelines 2 inches and smaller, drains shall be 0.5 inch and equipped with ball valves.

2.7 SAMPLE TAPS

- A. Sample taps, shown on the drawings and the P&ID drawings of the contract drawings, shall be installed utilizing the injection quill material and size as shown on the drawings. Sample taps may not be shown on the detailed drawings of the individual pipelines; however, their absence shall not relieve the Contractor of the responsibility for providing them.

2.8 MISCELLANEOUS PIPING COMPONENTS

C. Indicating Devices:

- 1. Pressure and Vacuum Gauges: Pressure and vacuum gauges shall be stem mounted, with stainless steel cases and glycerine-filled dials. The gauge sensors shall be C-Type Bourdon tube actuated and constructed of stainless steel. The gauges shall be equipped with TP316L stainless steel threaded 0.25 inch male connections. The dials of the gauges shall be 6 inches in diameter with scale readings in psig and feet of water ranging from zero to approximately twice the anticipated process operating or equipment pressure. A slotted adjustable pointer shall be provided with accuracy to conform to ASME B40.1, Grade A. A lever handled gauge cock and filter type snubber shall be provided.

2.9 PIPE SUPPORTS AND PENETRATIONS

- A. Auxiliary steel shall be provided by the Contractor where the support of piping systems and equipment is required between building structural elements. Light gauge and structural steel shapes shall conform to the requirements of ASTM A 36/A 36M. The Contractor shall have the option to use pre-engineered support systems of electrogalvanized steel products. However, a mixture of support system manufacturers products is not permitted. Where auxiliary steel is indicated as stainless steel, the Contractor shall provide TP304 stainless steel conforming to ASTM A 167, No. 1 Finish.
- B. Pipe Supports: Where pipe supports contact bare piping or in-line devices, provide supports of compatible material so that neither shall have a deteriorating action on the other.
 - 1. Beam Clamps: For upper attachments on structural steel, the Contractor shall provide beam clamps of ASTM A 36/A 36M carbon steel or ASTM A 181/A 181M forged steel. Holes drilled in structural steel for hanger support rods will not be permitted. Clamps shall be provided with hardened steel cup-point set screws and lock-nuts for anchoring in place. Clamp size selection shall only be based on the support of the required load.
 - 2. Riser Clamps: Vertical runs of piping shall be supported at each floor, or closer where required, with ASTM A 36/A 36M carbon steel clamps bolted around pipes and attached to the building construction. Copper plated clamps shall be provided for copper tubing support. Two bolt-type clamps designed for installation under insulation shall be used on insulated pipe runs.

3. Brackets: Where piping is run adjacent to walls or steel columns, the Contractor shall provide welded ASTM A 36/A 36M steel brackets, pre-punched with a minimum of two fastener holes.
4. Offset Pipe Clamp: Where pipes are indicated as offset from wall surfaces, a double-leg design two-piece pipe clamp shall be supplied by the Contractor.
5. Racks: Multiple pipe racks or trapeze hangers shall be fabricated from ASTM A 36/A 36M steel and designed to suit the conditions at the points of installation. Pipes shall be kept in their relative positions to each other by the use of clamps or clips. Pipelines subject to thermal expansion must be free to slide or roll.
6. Hangers: Hangers shall be fabricated of malleable iron, ASTM A 47/A 47M. All hangers shall be of a uniform type and material for a given pipe run and application. Coated or plated hangers shall be used to isolate steel hangers from dissimilar metal tube or pipe. Hangers for pipe sizes 2.5 inches or larger shall incorporate a means of vertical adjustment after erection while supporting the load.
7. Hanger Rods: Hanger rods shall be carbon steel conforming to ASTM A 576. The diameter of the rods for piping system support shall conform to the contract drawings.

PART 3 EXECUTION

3.1 PREPARATION

- A. Protection: Pipe and equipment openings shall be closed with caps or plugs during installation. Equipment shall be protected from dirt, water, and chemical or mechanical damage.
- B. System Preparation:
 1. Pipe and Fittings: Pipe and fittings shall be inspected before exposed piping is installed or buried piping is lowered into the trench. The Contractor shall clean the ends of pipes thoroughly, remove foreign matter and dirt from inside of pipes, and keep piping clean during and after laying.
 2. Damaged Coatings: The Contractor shall repair damaged coating areas in the field with material equal to the original coating, except for damaged glass-lined pipe which shall be promptly removed from the site. The Contractor shall not install damaged piping materials. Field repair of damaged and uncoated areas of galvanized piping shall conform to ASTM A 780.
 3. Field Fabrication: The Contractor shall notify the Engineer at least 2 weeks prior to the field fabrication of pipe or fittings and at least 3 days prior to the start of any surface preparation or coating application work. Field welding shall be performed in accordance with specifications. Welding electrodes shall be provided in accordance with Table 4.1 of AWS D1.1 as required for the applicable base metals and welding process. Fabrication of fittings shall be performed in accordance with the manufacturer's instructions.

3.2 EXPOSED PIPING INSTALLATION

- A. Exposed piping shall be run as straight as practical along the alignment shown on the contract drawings and with a minimum of joints. Piping and appurtenances shall be installed in conformance with reviewed shop drawings, manufacturer's instructions and ASME B31.3. Piping shall be installed without springing or forcing the pipe.
- B. Anchors and Fasteners: Impact expansion (hammer and explosive charge drive-type) anchors and fastener systems are not acceptable. Lead shields, plastic or fiber inserts, and drilled-in plastic sleeve/nail drive systems are also not acceptable.
 - 1. Drilled-In Expansion Anchors and Fasteners: Anchors shall be designed to accept both machine bolts and/or threaded rods. Such anchors shall consist of an expansion shield and expander nut contained inside the shield. The expander nut shall be fabricated and designed to climb the bolt or rod thread and simultaneously expand the shield as soon as the threaded item, while being tightened, reaches, and bears against the shield bottom. The shield body shall consist of four legs, the inside of each shall be tapered toward shield bottom (or nut end). The end of one leg shall be elongated and turned across shield bottom. The outer surface of shield body shall be ribbed for grip-action. The expander nut shall be of square design with sides tapered inward from bottom to top. The anchor materials of construction shall be TP304 stainless steel of 43,541 psi minimum tensile strength. Fasteners shall be machine bolts for use with above anchors; nuts and washers shall conform to ASTM A 194/A 194M. The anchor length, diameter, and embedment depth shall meet the manufacturer's requirements for the maximum allowable working load of the application. The anchor/fastener assembly shall be UL listed with a one-piece stud (bolt) that has integral expansion wedges, nuts and washers. The stud shall be constructed of TP304 stainless steel, and nut and washer of TP304 stainless steel. The anchor length, diameter, and embedment depth shall meet the manufacturer's requirements for the maximum allowable working load of the application.
 - 2. Drilled-In Adhesive Anchors: The anchors shall be composed of an anchor rod assembly and an anchor rod adhesive cartridge. The anchor rod assembly shall be a chamfered and threaded stud rod of TP304 stainless steel with a nut and washer of TP316 stainless steel. The anchor length, diameter, and embedment depth shall meet the manufacturer's requirements for the maximum allowable working load of the application. The adhesive cartridge shall be a sealed capsule containing premeasured amounts of resin, quartz sand aggregate, and a hardener contained in a separate vial within the capsule. The capsule ingredients shall be activated by the insertion procedure of the anchor rod assembly.
- C. Piping Flexibility Provisions: Thrust protection shall be provided as required. Flexible couplings and expansion joints shall be installed at connections to equipment, and where shown on the contract drawings. Additional pipe anchors and flexible couplings beyond those shown on the contract drawings, shall be provided to facilitate piping installation, in accordance with reviewed shop drawings.
- D. Couplings, Adapters and Service Saddles: Pipes shall be thoroughly cleaned of oil, scale, rust, and dirt in order to provide a clean seat for gaskets. Gaskets shall be wiped clean prior to installation. Flexible couplings and flanged coupling adapter gaskets shall be lubricated with the manufacturer's standard lubricant before installation on the pipe

ends. Couplings, service saddles, and anchor studs shall be installed in accordance with manufacturer's instructions. Bolts shall be tightened progressively, drawing up bolts on opposite sides a little at a time until all bolts have a uniform tightness. Torque-limiting wrenches shall be used to tighten bolts.

- E. Piping Equipment/Component Installation: Piping components and indicators shall be installed in accordance with manufacturer's instructions. Required upstream and downstream clearances, isolation valves, and miscellaneous devices shall be provided for an operable installation. Straight runs of piping upstream and downstream of flow measuring devices shall be as shown in the contract drawings. The upstream and downstream lengths of undisturbed piping shall be in accordance with flow indicator manufacturer's recommendations.
 - 1. Backflow Preventers: Backflow preventers shall be installed with nameplate and test cocks accessible from front of unit, and with a minimum clearance of 12 inches between the port and grade. The assemblies shall be installed in accordance with local codes and shall discharge to an open drain with an air gap; vertical installation is prohibited.
 - 2. Local Indicators: All direct-reading indicator devices, thermometers, and pressure gauges shall be installed so that they can be easily read from floor level, and are readily accessible for maintenance and service. Pressure gauges and thermometers shall be installed where indicated in the contract drawings. Field calibration of all indicators shall be performed at time of installation to ensure measuring and reading accuracy. Differential pressure gauges shall be installed across the process equipment indicated in the contract drawings, in accordance with the manufacturer's recommendations, and arranged for easy observation.
- F. Pipe Flanges: Pipe flanges shall be set level, plumb, and aligned. Flanged fittings shall be installed true and perpendicular to the axis of the pipe. The bolt holes shall be concentric to the centerline of the pipe and shall straddle the vertical centerline of the pipe.
- G. Valve Locations: Valves shall be located in accordance with the contract drawings where actuators are shown. Where actuators are not shown, valves shall be located and oriented to permit easy access to the valve operator, and to avoid interferences.
- H. Pipe Tap Connections: Taps to pipe barrels are unacceptable. Taps to ductile iron piping shall be made only with a service saddle or at a tapping boss of a fitting, valve body, or equipment casting. Taps to steel piping shall be made only with a welded threadolet connection.
- I. Plastic Pipe Installation: All plastic pipe shall be cut, made up, and installed in accordance with the pipe manufacturer's recommendations. Heat joining shall be performed in accordance with ASTM D 2657. Electrofusion joining shall be performed in accordance with ASTM F 1290. Schedule 40 pipe shall not be threaded. Schedule 80 threaded nipples shall be used where necessary to connect to threaded valves or fittings. Strap wrenches shall be used for tightening threaded plastic joints, and care shall be taken not to over tighten these fittings. Pipe shall not be laid when the temperature is below 40.1 degrees F, nor above 90 degrees F when exposed to direct sunlight. Any plastic pipe installed above grade and outdoors shall be ultraviolet (UV) protected or UV resistant. The pipe ends that are to be joined shall be shielded from direct sunlight prior to and during the laying operation. Adequate ventilation shall be provided when working

with pipe joint solvent cement and the handling of solvent cements, primers and cleaners shall be in accordance with ASTM F 402. The Contractor shall provide and install supports and hangers in accordance with the manufacturer's recommendations. Where plastic pipe is subjected to severe temperature fluctuations, provisions for expansion and contraction must be provided. This shall be accomplished with the use of expansion joints and offset piping arrangements. All lines shall be hydrostatically tested at 1.5 X the maximum operating pressures.

1. PVC Piping: Solvent-cemented joints shall be constructed in accordance with ASTM D 2855.

J. Insulation: Insulation shall be installed on piping as indicated on the Pipe Schedule.

3.3 CONNECTING DISSIMILAR PIPE

- A. Flexible transition couplings, dielectric fittings and isolation joints shall be installed in accordance with the manufacturer's instructions.

3.4 EXTERNAL CORROSION PROTECTION

- A. Protect all pipe and piping accessories from corrosion and adverse environmental conditions.
- B. Above Grade Metallic Piping: Nonferrous and stainless steel piping shall not be painted except for aluminum alloy piping. Where dissimilar metals are joined, isolation joints shall be used.
 1. Ferrous Piping: All piping, valves and appurtenances will be painted following installation.

3.5 VALVE INSTALLATION

- A. Flanged valve bolt holes shall be installed so as to straddle the vertical centerline of pipe. Flanged faces shall be cleaned prior to inserting the gasket and bolts, and then the nuts shall be tightened progressively and uniformly. Threaded ends shall have the threads cleaned by wire brushing or swabbing prior to installation.
- B. Valve Orientation: The operating stem of a manual valve shall be installed in a vertical position when the valve is installed in horizontal runs of pipe having centerline elevations 4.5 feet or less above finished floor, unless otherwise shown on contract drawings. The operating stem of a manual valve shall be installed in a horizontal position in horizontal runs of pipe having centerline elevations between 4.5 feet and 6.75 feet above finish floor, unless otherwise shown on contract drawings. Automatic valves shall be installed in accordance with the manufacturer's instructions.
 1. Butterfly Valves: Orientation of butterfly valves shall take into account changes in pipe direction. Valve shafts shall be oriented so that unbalanced flows caused by pipe direction changes or other disturbances are equally divided to each half of the disc.

2. Plug Valves: If a plug valve seat position is not shown in the contract drawings, locate the seat position as follows: for horizontal flow, the flow shall produce an "unseating" pressure, and the plug shall open into the top half of valve; and for vertical flow, the seat shall be installed in the highest portion of the valve.
- C. Isolation Valve: Safety isolation valves shall be installed on compressed air supplies. The valve shall be located to provide accessibility for control and maintenance. If necessary, access doors shall be installed in finished walls and plaster ceilings for valve access.
 - D. Operator Extension Stems: Where the depth of the valve is such that its centerline is more than 5 feet below grade, an operator extension stem shall be furnished with a 2 inch operating nut to bring the operating nut to a point 6 inches below the surface of the ground and/or box cover. The operating nut shall be located in a floor box.
 - E. Torque Tube: Where the operator for quarter-turn valve is located on a floor stand, an extension stem torque tube shall be furnished, properly sized for the maximum torque capacity of the valve.
- 3.6 AIR RELEASE, DRAINS AND SAMPLE PORTS
- A. Sample ports shall be provided where indicated on the contract drawings. The Contractor shall install specified vents at piping high points for entrapped air release and install drains in the low points of pipelines regardless of whether shown on contract drawings.
- 3.7 PIPING SUPPORT SYSTEMS INSTALLATION
- A. The absence of pipe supports and details on the contract drawings shall not relieve the Contractor of responsibility for sizing and providing supports throughout plant.
 - B. General Support Requirements: Pipe support systems shall meet the requirements of MSS SP-58. Contractor-designed and selected support systems shall be installed in accordance with MSS SP-69, and as specified herein. Piping connections to equipment shall be supported by pipe supports and not off the equipment. Large or heavy valves, fittings, and/or equipment shall be supported independently of associated piping. Pipes shall not be supported off other pipes. Supports shall be provided at piping changes in direction or in elevation, adjacent to flexible joints and couplings, and where otherwise shown on the contract drawings. Pipe supports and hangers shall not be installed in equipment access areas or bridge crane runs. Hanging pipes shall be braced against horizontal movement by both longitudinal and lateral sway bracing. At each channel type support, every pipe shall be provided with an intermediate pipe guide, except where pipe anchors are required. Existing support systems may be used to support additional new piping only if the Contractor can demonstrate that the existing support systems are adequate for the additional loads, or if the existing systems are strengthened to support the additional loads. Pedestal type pipe supports shall be provided under base flanges adjacent to rotating equipment and where required to isolate vibration.
 - C. Support of Insulated Piping: The Contractor shall install oversized supports to fit the insulation inserts. Supports shall be provided with galvanized or stainless steel protection shields and oversized rollers.

- D. Dielectric Barriers: Dielectric barriers shall be installed between supports and copper or stainless steel piping, and between stainless steel supports and non-stainless steel ferrous piping.

3.8 PIPE IDENTIFICATION, PAINTING AND COLOR CODING

- A. Color, coating, and lettering requirements for exposed piping shall be in accordance with Section 09900 Paints and Coatings. Except where piping is required to be completely painted in its code color, piping or its insulation covering may be banded either with plastic adhesive tapes or painted stripes around pipe designating piping contents. A single individual band, of plastic adhesive tape or paint, designating pipe contents shall be provided with sufficient length to permit the stenciling of pipe contents in letters. Identification shall be provided at branch connections, inlets and outlets of equipment, every 20 feet of straight run, upstream of valves, and within 4 feet of entrance to or exit from wall curtains, or other similar type barrier. Plastic wrap around labels may be used in lieu of painting.

3.9 FIELD QUALITY CONTROL

- A. Buried Piping: After the pipe is laid, the joints completed and the trench partially backfilled leaving the joints exposed for examination, the newly laid piping or any valved section of piping shall, unless otherwise specified, be subjected for 2 hours to a hydrostatic test pressure of 150 psig as listed in the Pipe Schedule in the contract drawings. Each valve shall be opened and closed several times during the test. Exposed pipe, joints, fittings, and valves shall be carefully examined during the partially open trench test. Joints showing visible leakage shall be replaced as necessary. Defective pipe, joints, fittings, and valves found during the pressure test shall be removed and replaced with new material, and the test repeated until the test results are satisfactory. The requirement for the joints to remain exposed for the hydrostatic tests may be waived by the Engineer when one or more of the following conditions are encountered: (1) wet or unstable soil conditions in the trench; (2) compliance would require maintaining barricades and walkways around and across an open trench in a heavily used area that would require continuous surveillance to assure safe conditions; or (3) maintaining the trench in an open condition would delay completion of the Contract. The Contractor may request a waiver, setting forth in writing the reasons for the request and stating the alternative procedure proposed to comply with the hydrostatic tests. Backfill placed prior to the tests shall be placed in accordance with the requirements of Section 31 23 16 and Section 31 23 17.
- B. Exposed Piping: Hydrostatic testing shall be conducted in accordance with ASME B31.3. Piping systems shall be tested under normal service conditions (as indicated in the Pipe Schedule in the contract drawings) to demonstrate compliance. The test pressure shall not be less than 1.5 times the design pressure. Water shall be used as the hydrostatic test fluid. The Contractor shall provide clean test water of such quality to prevent corrosion of the piping system materials. Air release vents shall be opened at all high points of the piping system in order to purge air pockets while the piping system is filling.
- C. Pipe Leakage Tests: Unless approved by the Engineer, leakage testing shall be conducted after the pressure tests have been satisfactorily completed. The duration of each leakage test shall be at least 2 hours, and during the test the piping shall be subjected to not less than 150 psig pressure. Leakage is defined as the quantity of the test liquid, water that is supplied to the piping system, or any valved or approved section thereof, in order to maintain pressure within 5 psi of the specified leakage test pressure after the piping has been filled with the test liquid and all air is expelled. No piping

installation will be accepted if leakage exceeds the allowable leakage determined by the following formula:

$$L = C_f \times N \times D \times P^{0.5}$$

C_f = conversion factor = 0.0001351

L = allowable leakage, gallons per hour

N = number of joints in the length of piping tested

D = nominal pipe diameter, inches

P = average test pressure during the test, psig.

Should any test disclose leakage greater than that allowed, the leaks shall be located and repaired until the leakage is within the specified allowance, without additional cost.

- D. Valve Testing: Valves may either be tested while testing pipelines, or as a separate step. It shall be demonstrated that valves open and close smoothly with operating pressure on one side and atmospheric pressure on the other, and in both directions for two-way valve applications. The Contractor shall count and record the number of turns required to open and close each valve, and account for any discrepancies with manufacturer's data. Air and vacuum relief valves shall be examined as the associated pipe is being filled to verify venting and seating is fully functional. The Contractor shall set, verify, and record set pressures for all relief and regulating valves. Self-contained automatic valves shall be tested at both maximum and minimum operating ranges, and reset upon completion of test to the design value. Automatic valves that are not self-contained shall be tested in conjunction with control system testing.

3.10 FINAL CLEANING

- A. Interim Cleaning: The Contractor shall prevent the accumulation of weld rod, weld spatter, pipe cuttings and filings, gravel, cleaning rags, and other foreign material within piping sections during fabrication. The piping shall be examined to assure removal of these and other foreign objects prior to assembly and installation.
- B. Flushing: Following assembly and testing, and prior to final acceptance, piping systems shall be flushed with water to remove accumulated construction debris and other foreign matter. The piping shall be flushed until all foreign matter is removed from the pipeline. The Contractor shall provide all hoses, temporary pipes, ditches, and other items as required to properly dispose of flushing water without damage to adjacent properties. The minimum flushing velocity shall be 2.5 fps. For large diameter pipe where it is impractical to flush the pipe at the minimum flushing velocity, the pipeline shall be cleaned in-place from the inside by brushing and sweeping, then flushing the pipeline at a lower velocity. Cone strainers shall be installed in the flushing connections of attached equipment and left in place until cleaning is completed. Accumulated debris shall be removed through drains, or by removing spools or valves.
- C. Disinfection: Disinfect in accordance with Section 33 11 00 and 33 13 00.

3.11 WASTE WATER DISPOSAL

- A. The water used for testing, cleaning, flushing and/or disinfection shall be disposed of in accordance with all applicable regulations. Disposal is solely the responsibility of the Contractor. The method proposed for disposal of waste water shall be provided to, and approved by, the Engineer prior to performing any testing, cleaning, flushing and disinfection activities.

3.12 SCHEDULES

- A. The Contractor shall comply with the following schedules found in the contract drawings:
Pipe Schedule and Valve Schedule.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SECTION 43 43 21
PEDESPHERE ELEVATED WATER STORAGE TANK

PART 1 GENERAL

1.1 SUMMARY

A. Scope

The Contractor shall be responsible for all labor, materials and equipment necessary for the design, fabrication, construction, painting, disinfection and testing of an elevated, welded carbon steel water storage tank supported by a steel support pedestal. Design and construction of the Elevated Tank shall conform to all requirements of AWWA D100 Standard for Welded Carbon Steel Tanks for Water Storage, except as modified by the requirements of these contract documents.

1.2 QUALIFICATIONS OF MANUFACTURER

- A. The design and construction of the water storage tank shall only be undertaken by a Contractor with a minimum of five years experience with elevated tank construction. The Contractor must be able to demonstrate experience through the design and construction of at least five similar style water tanks. The Contractor shall not subcontract the design or erection of the steel tank, pedestal and base cone support structure.

1.3 SUBMITTALS

- A. No bid will be considered unless this information is provided with the proposal:

1. A list of five similar style elevated tanks constructed within the last five years, including the name of the Owner, tank capacity and the Consulting Engineer.
2. A preliminary drawing of the tank showing major dimensions and plate thickness upon which the bid is based, the high and low water levels and the dimensions of the supporting pedestal and base cone.
3. A preliminary preliminary foundation design drawing showing preliminary dimensions and approximate quantities of concrete and reinforcing steel.

1.4 STANDARD SPECIFICATIONS

- A. All work on the water storage tank shall fully conform to the requirements of the latest published editions of the following Standard Specifications:
1. AWWA (American Water Works Association) D100 Standard for Welded Carbon Steel Tanks for Water Storage.
 2. AWWA D102 - Standard for Painting Steel Water Storage Tanks
 3. AWWA C652 - Standard for Disinfection of Water Storage Facilities.
 4. AWS (American Welding Society) D1.1
 5. NSF (National Sanitation Foundation) 61 - Materials in contact with Potable Water.
 6. Steel Structures Painting Council Manual - Volume 1 - Good Painting Practice.
 7. Steel Structures Painting Council Manual - Volume 2 - Systems and Specifications.
 8. ACI 318 - Building Code Requirements for Reinforced Concrete
 9. ACI 301 - Specifications for Structural Concrete
 10. NSF 61 - Drinking Water System Components
 11. SSPC-PA1- Paint Application Specifications

1.5 TANK DETAILS

- A. The elevated tank shall be all-welded construction of the most economical design. All members of structural steel or of reinforced concrete shall be designed to safely withstand the maximum stresses to which they may be subjected during erection and operation.
 - 1. The minimum operating capacity of the storage tank will be 250,000 US gallons.
 - 2. The capacity of the tank, low to high water level, shall be contained within a maximum operating range of 35 feet.
 - 3. The height of the tank, top of foundation to High Water Level, shall be 134 feet.
 - 4. Top of foundation elevation shall be 17.5.
 - 5. The existing ground elevation is 16.0
 - 6. The finished ground elevation shall be 16.0.

1.6 PERMITS, EASEMENTS, ELECTRICAL LINES AND UTILITIES

- A. Permits, licenses, airspace authority approval and easements required for the construction of the tank and associated work shall be provided by the Owner.

1.7 WORKING DRAWINGS

- A. After contract award and prior to construction, the Contractor shall provide engineering drawings and design calculations for the elevated steel tank and the foundation. Drawings shall show the size and location of all structural components and the foundations along with reinforcement details, the required strength and grade of all materials and the size and arrangement of principle piping and equipment. The drawings and calculations shall bear the certification of a professional Engineer licensed in the State of South Carolina. The design coefficients and resultant loads for snow, wind and seismic forces, and the methods of analysis shall be documented.

PART 2 DESIGN

2.1 GENERAL

- A. The structural design of the elevated storage tank shall conform to the following design standards except as modified or clarified as follows:
 - 1. Foundations – AWWA D100 and ACI 318 – Building Code Requirements for Reinforced Concrete.
 - 2. Steel Tank - AWWA D100
 - 3. Steel Tank Painting – AWWA D102.

2.2 ENVIRONMENTAL LOADS – AWWA D100 AND ASCE 7

- A. Wind Load – Wind pressure shall be determined in accordance with AWWA D100, Section 3.1.4. Basic wind speed used in the Wind Pressure formula shall be determined using the mapped site location and Figure 1 of AWWA D100. For tanks located in coastal regions, the Owner's Engineer shall consider the use of an increased basic wind speed as appropriate.

Basic Wind Speed (BWS) =150 MPH

- B. Seismic Load – Seismic loads shall be determined in accordance with AWWA D100, Section 13.
 - 1. See Geotechnical Report for design requirements.

- C. Snow Load - Snow load shall be determined in accordance with AWWA D100, Section 3.1.3.1.

2.3 FOUNDATION

- A. A Geotechnical investigation has been carried out at the site and a copy of the report is included with the Contract Documents. Recommendations for the foundation and allowable bearing capacities are defined in this report. The Owner shall retain the services of the Geotechnical consultant to verify the adequacy of the bearing stratum after the Contractor has carried out the excavation and before any concrete or reinforcement is placed. The concrete foundation shall be designed by the Contractor based upon the recommendations in the geotechnical report. The report must provide the allowable soil bearing pressure with appropriate factors of safety, the active and passive earth pressure coefficients, the angle of soils internal friction, its cohesion, unit weight and recommendations for bearing depth and backfill requirements.

2.4 STEEL TANK

A. General

1. The tank and supporting structure shall be of all-welded steel design and construction. All materials, design, fabrication, erection, welding, testing and inspection of the steel tank shall be in accordance with the applicable sections of AWWA D100 except as modified in this document. The tank shall have a spheroidal shape.
2. The supporting structure shall be a butt-welded single pedestal having a minimum shaft diameter adequate for the capacity and height of tower. Transition sections at the top and bottom of the pedestal shall be in accordance with the manufacturer's standard. The transition from the base to the pedestal shall be a truncated cone with a compression ring. The transition from pedestal to tank shall be a double-curved smooth knuckle.. To ensure an aesthetically pleasing tank the design of the cone and ball plate(s) shall minimize the number and total length of visible weld seams (shop and field). A scaled plate layout sketch must be provided with the bid, or be cause for rejection, noting that the use of any ball plate (excluding roof closure plates) with widths and/or lengths equal to or less than 72" is unacceptable.
3. Minimum Plate Thickness
The minimum thickness for any part of the structure shall be 3/16 inch for parts not in contact with water and 1/4 inch for parts in contact with water. At junctions in plates where meridional forces are discontinuous such as cone to cylinder junctions or cone to base plate junctions, a tension or compression ring may be required to resist radial forces generated by the discontinuous membrane forces. In these regions, allowable stresses shall not exceed the following stress:
4. Tension ring stress shall not exceed the lesser of 15,000 PSI or one half of the minimum specified yield of the plate material.
5. Compression ring stresses shall not exceed 15,000 PSI.
6. The overturning moment used in designing the pedestal and foundation shall include the moment due to eccentricity of the gravity loads caused by deflection of the structure under wind or seismic conditions (i.e. P-delta effect).

2.5 ELECTRICAL

- A. Interior waterproof light sockets with rigid conduit, wiring and switch shall be provided inside the support structure and access tube. Total number and location of lights shall be as shown on the shop drawing submittals. All wiring shall be in conduit. The conduit and wiring shall terminate with

a junction box in the base of the support structure. Duplex outlets shall be installed as shown on the shop drawing submittals. Electric service shall be arranged and provided by the Contractor. Contact the City of Georgetown Electric Utility Department for new service installation at (843) 545-4600.

2.6 GALVANIC CORROSION PROTECTION

- A. Dissimilar metals inside the tank and below the TCL shall be electrically isolated from carbon steel tank components to which they attach. Painting of the dissimilar metals does not eliminate the requirement for isolation.

2.7 GENERAL

The tank and supporting structure shall be of all-welded steel design and construction. All materials, design, fabrication, erection, welding, testing and inspection of the steel tank shall be in accordance

PART 3 CONSTRUCTION

3.1 Concrete Foundation

- A. The foundation shall be designed and constructed to safely and permanently support the structure. The basis of the foundation construction shall be consistent with the soils investigation data included herein at the end of these specifications. Appropriate changes to construction schedule and price will be negotiated if, during excavation, soil conditions are encountered which differ from those described in geotechnical report. The concrete foundation shall be constructed in accordance with ACI 301.
- A. All openings in the support structure shall be properly reinforced. Loads imposed by openings in the base of the support structure and/or the foundation shall be accommodated in the foundation design.

3.2 Steel Tank Construction

- A. General

The erection of the steel tank shall comply with the requirements of Section 10 of AWWA D100 except as modified by these documents.
- B. Welding

All shop and field welding shall conform to AWS and AWWA D100, Section 10. The contractors shall ensure that the welders or welding operators are qualified in accordance with ASME Section IX or ANSI/AWS B2.1.

 1. All welding shall comply with AWWA D100-05.
 2. All welding procedures, welders and welding operators shall be qualified in accordance with ASME Section IX for the processes and positions utilized.
 3. To minimize corrosion and rust staining on the underside of the roof, the roof plate laps and rafter-to-roof plate seams shall be seal welded. The minimum thickness for seal welded roof plates shall be 1/4 inch.
 4. The edges or surfaces of the pieces to be joined by welding shall be prepared by flame cutting, plasma arc cutting, arc gouging, machining, shearing, grinding or chipping and shall be cleaned of detrimental oil, grease, scale and rust. The edges of the pieces may have a protective coating applied to them which need

not be removed before they are welded unless specifically prohibited by the welding procedures.

5. Field and shop welding may be done by the shielded metal arc welding process, the gas metal arc welding process, the flux core arc welding process and the submerged arc welding process.
6. Plates and component members of the tank shall be assembled and welded following erection methods which result in a minimum of distortion from weld shrinkage. Surfaces to be welded shall be free from loose scale, slag, heavy rust, grease, paint and other foreign material.
7. In order to assist in the maximization of the paint's lifecycle, all welds on the tank exterior shall be ground smooth and blended to a NACE-D profile. All welds on the tank interior shall be ground smooth and blended to a NACE-D profile. Welds on the interior dry support column can remain in an as-welded condition but must have a profile adequate for the specified paint system. Engineer/Owner reserves the right to provide third-party inspection to ensure compliance to this requirement.

B. Fabrication

All fabrication and shop assembly shall conform to the requirements of AWWA D100, Section 9, Shop Fabrication.

C. Erection

Plates subjected to stress by the weight or pressure of the contained liquid shall be assembled and welded in such a manner that the proper curvature of the plates in both directions is maintained. Plates shall be assembled and welded together by a procedure that will result in a minimum of distortion from weld shrinkage.

D. Inspection and Testing

Inspection of shop and field welds shall be in accordance with AWWA D100, Section 11, Inspection and Testing. All inspection shall be performed prior to interior and exterior field painting. Radiographic inspection shall be performed by an independent testing agency with all costs included in the Contractor's bid and paid by the Contractor.

E. Roof Lap Joints

All interior lap joints shall be sealed by means of caulking or continuous seal welding. This shall include penetrations of roof accessories.

F. Coatings and Finishes

1. All tank painting and paint testing shall be in accordance with AWWA D102, the Steel Structures Painting Council Specification SSPC-PA1, approved paint manufacturer specifications and as specified herein.
2. Each system shall be from a single manufacturer. The paint products specified are manufactured by Tnemec and the products of other manufacturers may be used subject to review and approval by the engineer.
3. Pre-construction primers may be utilized in the fabrication process to preserve the blast profile and cleanliness. In the field, weld seams and abraded areas will be cleaned on a spot basis. The remaining sound primer will be cleaned to remove dirt and other contaminants. After cleaning the specified coating system will be applied in its entirety in the field at the millages specified.

4. No paint shall be applied when the temperature of the surface to be painted is below the minimum temperature specified by the paint manufacturer, or less than 5 degrees above the dew point temperature. Paint shall not be applied to wet or damp surfaces or when the relative humidity exceeds 85% unless allowed by manufacturer's data sheets. Follow the paint manufacturer's recommendations for the specific paint system used.
5. After erection and before painting, remove slag, weld metal splatter and sharp edges by chipping or grinding. All surfaces that have been welded, abraded or otherwise damaged, shall be cleaned and primed in the field in accordance with the paint system requirements.
6. All areas blasted in the field shall be coated the same day before any rusting occurs.

7. EXTERIOR COATING SYSTEM

- a. Shop Surface Preparation: Spot clean as required to remove all oil and grease from the surface prior to blast cleaning. All surfaces shall be abrasive blast cleaned to a commercial finish in accordance with the recommended methods outlined in the Steel Structures Painting Council Specification SSPC SP-6/NACE No. 3.
- b. Shop Primer: Immediately after abrasive blasting and before any rusting occurs (within 12 hour maximum) apply one coat of aromatic urethane TNEMEC Series 94-H20 (Greenish-Gray) Hydro-Zinc or equal, to a dry film thickness (DFT) range of 2.5 to 3.5 mils.
- c. Field Surface Preparation: After erection and prior to field touch-up priming, all surfaces shall be cleaned to remove all surface contamination including oil, grease, dust, dirt and foreign matter. Weld slag, weld spatter and other sharp or rough projections shall be removed. All rusted, abraded and unpainted areas shall be blast cleaned to a commercial finish in accordance with SSPC SP-6/NACE No. 3.
- d. Field Touch-Up: Spot prime with aromatic urethane TNEMEC 94-H20 (Greenish-Gray) Hydro-Zinc, or 91-H20 (Greenish-Gray) Hydro-Zinc, or equal, to a DFT range of 2.5 to 3.5 mils.
- e. Field Intermediate Coat: Apply one coat of TNEMEC Series 73 Endura-Shield, or equal, to a DFT range of 3.0 to 5.0 mils. The color shall be tinted to contrast the prime coat.
- f. Field Finish Coat: Apply one coat of aliphatic acrylic polyurethane TNEMEC Series 700 HydroFlon or equal, to a DFT range of 2.0 to 3.0 mils. Finish color shall be selected by the Owner.
- g. The total DFT range of the three coat Exterior Paint System shall be 7.5 to 11.5 mils.

8. INTERIOR WET COATING SYSTEM

- a. Shop Surface Preparation: Spot clean as necessary to remove all oil and grease from the surface prior to blast cleaning. All surfaces shall be abrasive blast cleaned to a near-white finish in accordance with SSPC SP-10/NACE No. 2.

- b. Shop Primer: Immediately after abrasive blasting and before any rusting occurs (within 12 hour maximum), apply one coat of TNEMEC Series 94-H20 Greenish Grey Hydro Zinc or equal, to a DFT range of 2.5 to 3.5 mils.
 - c. Field Surface Preparation: After erection and prior to field touch-up priming, all surfaces shall be spot cleaned as required to remove all surface contamination including oil, grease, dust, dirt and foreign matter. Weld slag, weld spatter and other sharp or rough projections shall be removed. All rusted, abraded and unpainted areas shall be blast cleaned to a near white finish in accordance with SSPC SP-10/NACE No. 2.
 - d. Field Touch-Up: Spot Prime Immediately after abrasive blasting and before any rusting occurs (within 12 hour maximum), apply one coat of TNEMEC Series 94-H20 Greenish Grey Hydro Zinc or equal, to a DFT range of 2.5 to 3.5 mils.
 - e. Field Intermediate Coat: TNEMEC Series 140-1255 (Beige) Pota-Pox Plus or Series 140F-1255 (Beige) Pota-Pox Plus (fast cure), or equal, to a DFT range of 4.0 to 6.0 mils.
 - f. Irregular surfaces, including weld seams, bolt heads and nuts, corners and edges, shall be stripe coated by brush or roller after the field spot prime coat has been applied and prior to application of the first full field coat.
 - g. Field Finish Coat: Apply one coat of TNEMEC Series 140-15BL (Tank White) Pota-Pox Plus or Series 140F-15BL (Tank White) Pota-Pox Plus (fast cure), or equal, to a DFT range of 4.0 to 6.0 mils.
 - h. The total DFT range of the two coat Interior Paint System shall be 10.5 to 15.5 mils.
9. INTERIOR DRY COATING SYSTEM
- a. Shop Surface Preparation: Spot clean as necessary to remove all oil and grease from the surface prior to blast cleaning. All surfaces shall be abrasive blast cleaned to a commercial finish in accordance with SSPC SP-6/NACE No. 3.
 - b. Shop Primer: Immediately after abrasive blasting and before any rusting occurs (within 12 hour maximum), apply one coat of polyamide epoxy TNEMEC Series V140-1255 (Beige) Pota-Pox Plus or Series V140F-1255 (Beige) Pota-Pox Plus (fast cure) or equal, to a DFT range of 3.0 to 5.0 mils.
 - c. Field Surface Preparation: After erection and prior to field touch-up priming, all surfaces shall be spot cleaned as required to remove all surface contamination including oil, grease, dust, dirt and foreign matter. Weld slag, weld spatter and other sharp or rough projections shall be removed. All rusted, abraded and unpainted areas shall be blast cleaned to a commercial finish in accordance with SSPC SP-6/NACE No. 3.
 - d. Field Touch-Up: spot prime with polyamidoamine epoxy TNEMEC Series N140-1255 (Beige) Pota-Pox Plus or Series N140F-1255 (Beige) Pota-Pox Plus (fast cure), or equal, to a DFT range of 3.0 to 5.0 mils.
 - e. Field Finish Coat: Apply one coat of polyamidoamine epoxy TNEMEC Series N140-15BL (Tank White) Pota-Pox Plus or Series N140F-15BL (Tank White) Pota-Pox Plus (fast cure) or equal, to a DFT range of 3.0 to 5.0 mils.

- f. The total DFT range of the two coat Interior Paint System shall be 6.0 to 10.0 mils.

10. LETTERING AND LOGO

- a. Lettering and Logo design, shall be as indicated within Appendix C. Lettering/Logo shall be applied using two coats of the same grade paint specified above. Lettering/ Logo color shall be selected by the Owner. Logo locations shall be identified by the Owner during construction.

PART 4 ACCESSORIES

4.1 General

- A. The following accessories shall be provided in accordance with these specifications. All items shall be in full conformity with the current applicable OSHA safety regulations and the operating requirements of the structure.

B. Ladders

- 1. Access ladders shall be provided at the following locations:
 - 1. Grade to upper platform.
 - 2. Upper platform to tank floor manhole.
 - 3. Upper platform to steel tank roof mounted on access tube interior.
 - 4. Exterior of access tube to provide access from the roof manhole to the tank floor.
 - 5. Ladder side rails shall be a minimum 3/8 inch by 2 inches with a 16 inch clear spacing. Rungs shall not be less than 3/4 inch, round or square, spaced at 12 inch centers. The surface of the rungs shall be knurled, dimpled or otherwise treated to minimize slipping. At platforms or landings, the ladder shall extend a minimum 4 feet above the platform. Ladders shall be secured to adjacent structures by brackets located at intervals not exceeding 10 feet. Brackets shall be of sufficient length to provide a minimum distance of 7 inches from the center of the rung to the nearest permanent object behind the ladder.

C. Fall Protection

- 1. Ladders shall be equipped with a fall arrest system meeting OSHA regulations. The system shall be supplied complete with safety harnesses, locking mechanisms, lanyards and accessories for two persons.

D. Upper Platform

An upper platform shall be located at the top of the support pedestal to provide access from the pedestal ladder to the roof access ladder located on the interior of the access tube. Platform shall include a 24" x 36" access hatch with opening to allow ladder and safety device to continue 48" minimum above the platform floor.

E. Roof Handrail

A roof handrail shall be provided surrounding the roof manholes, vents and other roof equipment. Handrail shall comply with OSHA requirements.

F. Condensate Ceiling

Steel condensate ceiling located at the junction of the pedestal shaft and base cone complete with drain and 24" x 36" access hatch with opening to allow ladder and safety device to continue 48"

minimum above the platform floor.

G. Openings

1. Roof Hatches - Provide two access hatches on the roof of the tank. One hatch shall be 30 inch diameter and allow access from the roof to the interior of the tank. The hatch will be hinged and equipped with a hasp for locking. The hatch cover shall have a 2 inch downward edge. The second hatch will be 24 inch diameter and flanged with a removable cover so constructed that an exhaust fan may be connected for ventilation during painting operations. The openings shall have a minimum 4 inch curb.
2. Provide one 30 inch diameter hinged access hatch on the access tube roof. The hatch cover shall have a 2 inch downward edge.

H. Tank Vent

1. The tank vent should be centrally located on the tank roof above the maximum weir crest elevation. The tank vent shall have an intake and relief capacity sufficiently large that excessive pressure or vacuum will not be developed during maximum flow rate. Maximum flow rate should be based on a break in the inlet/outlet pipe when the tank is full. The vent shall be designed, constructed and screened so as to prevent the ingress of wind driven debris, insects, birds and animals. The vent should be designed to operate when frosted over or otherwise clogged. The screens or relief material shall not be damaged by the occurrence and shall return automatically to operating position after pressure or vacuum is relieved.

I. Tank Floor Manhole

1. A minimum 18 x 24 inch elliptical access manhole shall be provided in the tank bottom accessible from the upper platform or from a ladder that extends from the platform to the opening. The hatch shall open inward.
2. Pedestal Hatch - A 24" diameter manhole shall be located near the top of the pedestal for access to the exterior painter's rail located near the tank/pedestal interface. This opening shall be accessible from the upper pedestal platform.

J. Access Tube

1. A minimum 42" diameter access tube will be provided from the top of the pedestal to the tank roof.

K. Rigging

1. Interior and exterior rigging devices shall be provided for painting, inspecting and maintaining the structure and accessories. A continuous bar or tee rail near the top of the exterior support structure shall be provided. The rail may be attached to the support column or steel tank. A painter's rail attached to the roof, pipe couplings with plugs in the roof or other attachments that provide complete access for painting of tank interior shall be furnished.

L. Piping

1. General - Exterior of pipes exposed to stored water shall be coated with tank interior wet system. Exterior of pipes in the pedestal and base cone shall be coated with tank interior dry system.
2. Inlet/Outlet Piping - Provide a 12 inch diameter standard weight steel inlet/outlet pipe that extends vertically from the base of the pedestal to the bottom of the tank. An expansion joint shall be provided in the vertical section of pipe. The expansion joint should be constructed to accommodate any differential movement caused by settlement or thermal expansion and contraction. Inlet/Outlet pipe shall not extend above the LWL.
3. Overflow -The overflow pipe shall be designed to carry the maximum design flow rate of 1200 GPM. The steel overflow pipe will be 10 inch in diameter and shall have a minimum wall thickness of ¼". A suitable weir shall be provided with the crest at High Water Level. The overflow pipe shall extend down from the weir box through the tank, pedestal, and base cone. The overflow pipe shall penetrate the base cone wall approximately 1 to 2 feet above grade and discharge onto a concrete splash pad. The point of discharge shall have a 45 degree elbow and be equipped with a stainless steel screened end.

M. Interior Floor

1. A concrete slab-on-grade shall be provided inside the base cone. The floor shall be a minimum of 6 inches thick, and reinforced with 6x6/W2.9 x W2.9 WWF. Isolation joints shall be provided at junctions with walls, columns, equipment or piping foundations. Slope floor to floor drain.

N. Personnel Door

1. A 36" by 80" access door with a flush threshold shall be located in the base of the pedestal cone. A step over threshold is not acceptable. The door shall be fabricated from steel plate with adequate stiffening and specifically designed for use with the tank. The access door will be equipped with handle, drip cover and dead bolt lock. Commercial hollow metal doors and frames are not acceptable.

O. Identification Plate

1. A tank identification plate shall be mounted near the personnel door. The identification plate shall be corrosion resistant and contain the following information.
 - a. Tank Contractor
 - b. Contractor's project or file number
 - c. Tank capacity
 - d. Height to High Water Level
 - e. Date erected

P. Exterior Lighting

1. Provide three FAA, Type A, L-810, steady-burning obstruction lights at high point of structure. Provide Cooper Industries, or equal.

PART 5 GUARANTEE

5.1 GUARANTEE

- A. The tank Contractor shall guarantee its work for a period of one year from the completion date defined in the contract documents to the extent that it will repair any defects caused by faulty design, workmanship or material furnished under the specifications. If Contractor is not advised of any defects within 30 days of end of guarantee period, guarantee shall be considered fulfilled and complete. Defects caused by damaging service conditions such as electrolytic, chemical, abrasive or other damaging service conditions are not covered by this guarantee.
- B. All guarantees obtained by the tank Contractor from the manufacturer or installer of paint, equipment or accessories not manufactured by tank Contractor shall be obtained for the benefit of the Owner.

END OF SECTION

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

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Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

APPENDIX A

Terracon *GeoReport*

North Side Water Tank Georgetown, South Carolina

May 12, 2017

Terracon Project No. EN175102

Prepared for:

WK Dickson & Co., Inc.
Charleston, SC

Prepared by:

Terracon Consultants, Inc.
North Charleston, South Carolina

terracon.com

Terracon





May 12, 2017

WK Dickson & Co., Inc.
162 Seven Farms Drive, Suite 210
Charleston, SC 29492

Attn: Mr. Bill Young, P.E.
O: 843-416-5560
M: 843-261-3811
E: byoung@wkdickson.com

Re: Geotechnical Engineering Report
North Side Water Tank
Georgetown, South Carolina
Terracon Project No. EN175102

Dear Mr. Young:

Terracon Consultants, Inc. (Terracon) has completed the geotechnical engineering services for the above referenced project. This study was performed in general accordance with our proposal number PEN161156 dated January 19, 2017.

This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations for the proposed project.

We appreciate the opportunity to be of service to you on this project and look forward to providing additional Geotechnical Engineering and Construction Materials Testing services in the future. If you have any questions concerning this report, or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Christina Lee, E.I.T.
Project Geotechnical Engineer



Bryan Shiver, P.E.
Geotechnical Department Manager
SC Registration No. 27816



William B. Wright, P.E.
Senior Consultant

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

REPORT TOPICS

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ATTACHMENTS

SITE LOCATION

EXPLORATION PLAN

EXPLORATION RESULTS

- √ In Situ Logs
- √ Hand Auger Boring Logs

SUPPORTING INFORMATION

- √ General Notes
- √ Unified Soil Classification System

GEOTECHNICAL OVERVIEW

This report presents the results of our geotechnical investigation performed for the North Side Water Tank project located in Georgetown, SC. Our geotechnical scope of work for this project included conducting geotechnical fieldwork, associated engineering analysis, and this geotechnical engineering report.

This report provides recommendations for foundation options, seismic considerations, site preparation, and the other geotechnical related conditions that might affect the proposed construction. The following geotechnical considerations were identified during our investigation:

- n Due to the presence of underlying soft clay layers and the assumed structural loads, there is the potential for significant consolidation-induced settlement for the water tank location. Based on our calculations, we anticipate that the proposed water tank would be adversely affected by excessive static settlement on the order of 4 ½ to 6 inches if supported on a ringwall shallow foundation.
- n We recommend that the proposed structure be supported on a deep foundation system embedded in the very dense sand layer encountered approximately 30 to 43 feet below the existing grade.
- n Due to the presence of potentially liquefiable soils, the 2015 IBC seismic site classification for this site is F. However, if the fundamental period of the structure is less than or equal to 0.5 seconds, the site may reclassify as Class D. The structural engineer should verify if the site class exemption provided by code is available for the proposed structure.
- n Based on our understanding of the structure, we do not expect this site class exception will be met; therefore the site would be classified as a Site Class F per ASCE 7-10 Section 11.4.7. Site Class F sites require that a Site Specific Seismic Response Evaluation (SSSR) be performed to determine the spectral accelerations for the site. If needed, Terracon can provide these services upon request.
- n We estimate that unmitigated total liquefaction induced settlements from the design seismic event may range from **3 to 4 inches** with differential settlement ranging from 50% to 100% of the total. However, if the water tank is supported by a properly designed deep foundation system, then the risk of liquefaction induced settlements will be mitigated.

The recommendations presented herein have been developed on the basis of the subsurface conditions encountered during field investigation and our understanding of the proposed construction. Should changes in the project criteria occur, a review must be made by Terracon to determine if modifications to our recommendations will be required.

GEOTECHNICAL ENGINEERING REPORT
NORTH SIDE WATER TANK
GEORGETOWN, SOUTH CAROLINA
 Terracon Project No. EN175102
 May 12, 2017

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed North Side Water Tank project located in Georgetown, South Carolina. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- n subsurface soil conditions
- n groundwater conditions
- n site preparation and earthwork
- n foundation options
- n soil design parameters
- n seismic evaluation per IBC
- n other geotechnical design parameters

The geotechnical engineering scope of work for this project included the advancement of one Seismic Cone Penetration Test (CPT), three Cone Penetration Tests (CPTs) and one Flat Blade Dilatometer Test (DMT) to depths of 31 to 43 feet below the existing ground surface. Adjacent to the in situ tests, Hand Auger Borings (HABs) were performed to depths of 4 feet below the existing ground surface.

Maps showing the site and testing locations are shown in the **Site Location** and **Exploration Plan** sections, respectively, and logs of the borings are included in the **Exploration Results** section of the **GeoReport** site. These sections are included as an appendix to this report.

PROJECT DESCRIPTION

During the period of collaboration that has transpired since the project was initiated, our understanding of the project conditions has been modified to reflect the following:

Item	Description
Proposed structure	We understand that the site will be developed with a new 250,000 gallon capacity water tank that will be elevated on a single pedestal with a conical base. A floor slab will be included within the base of the water tank. Additionally, an associated water line will be installed with horizontal directional drilling (HDD) that will span approximately 2,400 linear feet.

Geotechnical Engineering Report

North Side Water Tank ■ Georgetown, South Carolina

May 12, 2017 ■ Terracon Project No. EN175102



Item	Description
Structural loads	Based on the plan sheets provided by WK Dickson, we understand that shallow foundations for the water tank would consist of a ringwall foundation. Structural loads, settlement tolerances and dimensions of a ringwall foundation have not been provided. We have assumed the following parameters for our evaluation: § Bearing pressure induced on subgrade - 3,500 psf § Centerline of the ring wall - 20 foot radius We have evaluated both a 5 and 10 foot ringwall foundation width. Based on our calculations, excessive static settlement is anticipated if the water tank is supported on a ringwall foundation and we recommend that a deep foundation system be utilized. Additionally, it appears that there will be a floor slab within the conical base of the water tank. We have assumed that the floor slab will be lightly loaded with a bearing pressure less than 500 psf. If the floor slab is heavily loaded, further review will be necessary.
Grading	Based on conversations with WK Dickson, we understand that fill is not anticipated for the water tank location. Based on the plan sheets provided by WK Dickson, we understand that the depth of the water line will range from approximately 3 to 23 feet below the existing grade.

SITE CONDITIONS

The following description of site conditions is based on our site visit in association with the field exploration.

Item	Description
Site Location	Project site is located off of Anthuan Maybank Drive behind the Georgetown Middle School in Georgetown, SC. § Latitude: 33.38923° § Longitude: -79.29928°
Existing improvements	The proposed water tank location is undeveloped. The proposed water line location is partially undeveloped and partially developed as a drive lane shoulder for the existing Georgetown Middle School.
Current ground cover	The proposed water tank location is wooded. The proposed water line location is partially wooded and partially landscaped grass.
Existing topography	Based on the plan sheets provided by WK Dickson, the existing elevation of the proposed water tank location is approximately 16 feet and existing elevation of the proposed water line location ranges from 15 to 19 feet.

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Our field exploration services were performed in general accordance with the information provided in our **Planned Exploration and Testing Procedures** in the Project Planning stage of the **GeoReport**.

Type of Test	Test Location	Number of Tests	Test Depth
Cone Penetration Test (CPT)	Water Tank	1	40 feet
Seismic Cone Penetration Test (CPT)	Water Tank	1	43 feet
Flat Blade Dilatometer Test (DMT)	Water Tank	1	32 feet
Cone Penetration Test (CPT)	Water Line	2	39 to 42 feet

The approximate location of each test is indicated on the Exploration Plan in Appendix A. The test locations were determined by Terracon and located in the field by Terracon personnel utilizing a commercially available handheld Global Position System (GPS) unit which are typically considered accurate to within ± 10 feet. The locations should be considered accurate only to the degree implied by the means and methods used to define them. The field exploration was performed on April 28, 2017. The in situ tests were advanced with a track mounted Pagani TG73-200 rig.

The field logs and recovered samples were compiled and reviewed by the geotechnical engineer. Final in situ and Hand Auger Boring logs and details for each of the tests can be found in **Exploration Results**.

GEOTECHNICAL MODEL

Subsurface Profile

Based on the results of the field exploration, subsurface conditions on the project site can be generalized as follows:

Water Tank Location – SCPT-01, DMT-02, CPT-03

Description	Approximate Depth to Bottom of Stratum	Material Encountered ¹
Surface	5 inches	Topsoil
Stratum 1	8 feet	Very loose to loose silty sand to clayey sand
Stratum 2	15 feet	Loose to medium dense sand to silty sand
Stratum 3	18 feet	Soft to firm clay to silty clay
Stratum 4	23 feet	Medium dense sand to silty sand
Stratum 5	30 feet	Soft to firm clay to silty clay
Stratum 6	43 feet ²	Dense to very dense sand ³

1. Material descriptions are based on visual classification from HAB samples and correlations with in situ data.
2. Termination of deepest sounding.
3. Stratum 6 is most likely a calcareous layer with limestone fragments typically encountered in the Georgetown area.

Water Line – CPT-04

Description	Approximate Depth to Bottom of Stratum	Material Encountered ¹
Surface	6 inches	Topsoil
Stratum 1	2 feet	Firm to stiff sandy clay
Stratum 2	3 feet	Medium dense silty sand
Stratum 3	9 feet	Soft to firm clay to silty clay
Stratum 4	17 feet	Loose to medium dense sand to silty sand
Stratum 5	19 feet	Very soft clay to silty clay
Stratum 6	22 feet	Loose to medium dense sand to silty sand
Stratum 7	41 feet	Soft to firm clay to silty clay
Stratum 8	42 feet ²	Very dense sand to silty sand ³

1. Material descriptions are based on visual classification from HAB samples and correlations with in situ data.
2. Termination of deepest sounding.
3. Stratum 8 is most likely a calcareous layer with limestone fragments typically encountered in the Georgetown area.

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**Water Line – CPT-05**

Description	Approximate Depth to Bottom of Stratum	Material Encountered ¹
Surface	3 inches	Topsoil
Stratum 1	7 feet	Loose to medium dense silty sand to clayey sand
Stratum 2	8 feet	Soft to firm clay to silty clay
Stratum 3	10 feet	Very loose to loose sand to silty sand
Stratum 4	11 feet	Very soft clay to silty clay
Stratum 5	15 feet	Medium dense sand to silty sand
Stratum 6	18 feet	Loose sand to silty sand
Stratum 7	24 feet	Medium dense sand to silty sand
Stratum 8	36 feet	Soft to stiff clay to silty clay
Stratum 9	39 feet	Medium dense to very dense sand to silty sand ³
1. Material descriptions are based on visual classification from HAB samples and correlations with in situ data. 2. Termination of deepest sounding. 3. Stratum 9 is most likely a calcareous layer with limestone fragments typically encountered in the Georgetown area.		

Conditions encountered at each test location are indicated on the individual test records. Stratification boundaries on the test records represent the approximate location of changes in soil types. The transition between materials may be gradual. Details for each of the tests can be found in **Exploration Results**.

Groundwater Conditions

At the time of our exploration, groundwater was encountered at depths ranging from approximately 5 to 7 feet in the proposed water tank location and from approximately 6 to 7 ½ feet along the proposed water line. The ground water depths were determined by physical measurements in the voids left by in situ testing and by estimating the hydrostatic line (height of water below the ground surface) on the penetrometer porewater pressure (U) graph in the CPT log.

The water levels as observed during field exploration are summarized in the following table and noted on the attached in situ and boring logs, in **Exploration Results**.

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Test	Depth to Groundwater within Voids left from Testing	Estimated Depth to Groundwater based on CPT Pore Pressure Data
SCPT-01	5.3 ft	5.3 ft
CPT-03	6.9 ft	6.9 ft
CPT-04	6.4 ft	6.4 ft
CPT-05	7.5 ft	7.5 ft

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project. The groundwater surface should be checked prior to construction to assess its effect on site work and other construction activities.

Groundwater levels were measured using the following criteria:

- n Physical observation within hand auger borings (HAB).
- n Where not physically encountered in HABs, groundwater levels are measured using a groundwater probe within the voids left by cone penetration tests (CPT).
- n Where not encountered within CPT voids, groundwater levels are estimated using the hydrostatic line (height of water below the ground surface) on the CPT porewater pressure (U) graph shown on the CPT logs.
- n Unless otherwise specified on the logs or in the report, all groundwater measurements are collected during or immediately after drilling.

SEISMIC CONSIDERATIONS

According to the International Building Code 2015 edition (IBC 2015), structures are required to avoid collapse during a design earthquake event. The design earthquake has a 50 year exposure period with a 2% probability of exceedance (i.e. a 2500 year design earthquake). The 2500 year design earthquake has a Moment Magnitude (M_w) of 7.3 and a design Peak Ground Acceleration (PGA_M) of **0.46 g**, as determined by data provided by the IBC 2015 Code and ASCE 7-10. The seismic evaluation of the site identified potentially liquefiable soils. According to the IBC (2015) and ASCE 7-10, this potential for liquefaction classifies the site as Site Class F.

ASCE 7-10 (Section 20.3.1) provides an exception to the Site Class recommendation for structure(s) with a fundamental period equal to or less than 0.5 seconds. This exception states that a site can be classified without considering liquefaction to determine spectral accelerations for structural design. The structural engineer should verify this exception. If the proposed structures meet the requirements of the exception, Seismic Site Class D would be applicable and the following seismic design parameters can be used for the site:

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Code Used	Site Classification
2015 International Building Code (IBC) ¹	D ²
Seismic Design Parameter	Value
F _a	1.20
F _v	1.89
F _{PGA}	1.07
S _{DS}	0.60 g
S _{D1}	0.32 g
PGA _M ³	0.46 g

1. In general accordance with the 2015 International Building Code and ASCE 7-10 Table 20.3-1, and an average weighted shear wave velocity of 802 feet per second collected from in situ testing methods at the site.

2. Based upon the fundamental period exception outlined in ASCE 7-10 Section 20.3.1

3. Based on procedures outlined in ASCE 7-10 for geotechnical hazards

However, based on our understanding of the structure, we do not expect this site class exception will be met; therefore the site would be classified as a Site Class F per ASCE 7-10 Section 11.4.7. Site Class F sites require that a Site Specific Seismic Response Evaluation (SSSR) be performed to determine the spectral accelerations for the site. If needed, Terracon can provide these services upon request.

Liquefaction Potential

Due to the high seismicity of the Coastal Plain of South Carolina, we performed a liquefaction potential analysis to evaluate the stability of the soils. Ground shaking at the foundation of structures and liquefaction of the soil under the foundation are the principal seismic hazards identified for the design of earthquake-resistant structures. Liquefaction occurs when a rapid buildup in water pressure, caused by the ground motion, pushes sand particles apart, resulting in a loss of strength and later densification as the water pressure dissipates. This loss of strength can cause bearing capacity failure while the densification can cause excessive settlement.

While the amount of settlement is dependent on the magnitude and distance from a seismic event, and geologic age of the soil deposit, we estimate that settlements from the design earthquake may range from **3 to 4 inches**. Differential settlement may range from 50% to 100% of the total settlement depending on depth and amount of liquefaction, and location relative to a seismic event epicenter. Design under the IBC allows for buildings to sustain damage during the design earthquake event, but they must remain standing. Therefore, our liquefaction settlement estimate should be reviewed from the standpoint of risk of total collapse of the structure. While the project structural engineer should review our estimates, in our experience, the calculated liquefaction potential facilitates the need for liquefaction mitigation at the site.

However, if the water tank is supported by a deep foundation system then the risk of liquefaction induced settlements will be mitigated. The floor slab within the conical base of the water tank will

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be susceptible to the calculated liquefaction potential. The design team should determine if the risk of liquefaction potential for the floor slab is acceptable. If not, then Terracon should be retained for further review.

SITE PREPARATION

Site Preparation Considerations

Earthwork on the project should be observed and evaluated by Terracon personnel. The evaluation of earthwork should include observation and sufficient testing of Controlled Fill and subgrade preparation, and other geotechnical conditions exposed during the construction of the project.

The initial step in site preparation is to strip the proposed construction area of trees, organic material, topsoil, root balls, and other deleterious material from within the proposed building footprint and parking areas. Stripping should extend a minimum of 5 feet outside the construction area footprint. We anticipate stripping depths to average 6 inches across the site. Voids remaining from the clearing/stripping operation should be backfilled with properly compacted Controlled Fill.

After stripping and subgrade repair is completed, the existing subgrade should be proofrolled with a loaded tandem axle dump truck or other similar approved construction equipment. A geotechnical engineer should monitor proofrolling operations. Areas that pump or rut excessively should be undercut and reworked or replaced with Controlled Fill. The project site should be graded to promote drainage and direct stormwater runoff away both during construction and the operational life of the structures.

Material Types

Controlled Fill should meet the following soil property requirements:

Fill Type ¹	USCS Classification	Acceptable Location for Placement
Controlled/Imported Fill	SP, SP-SM, SP-SW, SW, SM (Passing #200<12%)	All locations
Onsite Soil	SM, SP-SM, SP (Passing #200<25%)	All locations

- Controlled, compacted fill should consist of approved materials that are free of organic matter and other deleterious debris.

Compaction Requirements

ITEM	DESCRIPTION
Fill Lift Thickness	When heavy, self-propelled compaction equipment is used, fill lifts shall have a maximum of 10 inches in loose thickness.
	When hand-guided equipment (i.e. jumping jack or plate compactor) is used, fill lifts shall have a maximum of 2 to 4 inches in loose thickness.
Compaction Requirements¹	The upper 12 inches of the floor slab subgrade should be compacted to 100% of the material's maximum Modified Proctor dry density (ASTM D1557).
	Other structural areas should be compacted to 95% of the material's maximum Modified Proctor dry density (ASTM D1557).
Moisture Content – Controlled Fill or Onsite Soils²	Within the range of $\pm 2\%$ of optimum moisture content value as determined by the Modified Proctor test.
1. Fill should be tested for moisture content and compaction during placement. If the results of the in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the test should be reworked and retested as required until the specified moisture and compaction requirements are achieved. 2. Specifically, moisture levels should be maintained low enough to allow for satisfactory compaction to be achieved without the Controlled Fill material pumping when proofrolled.	

Backfill Construction Observation and Testing

The exposed subgrade and each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the geotechnical engineer's representative prior to placement of additional lifts. We recommend that each lift of fill be tested for density and moisture content at a frequency of one test for every 2,500 square feet for the building area. We recommend one density and moisture content test for every 50 linear feet of compacted utility trench backfill.

Earthwork Construction Considerations

It is anticipated that shallow excavations for the proposed construction can be accomplished with conventional earthmoving equipment. Upon completion of filling/cutting and grading, care should be taken to maintain the subgrade moisture content prior to construction of floor slabs. Construction traffic over the completed subgrade should be avoided to the extent practical. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. If the subgrade should become desiccated, saturated, or disturbed, the affected material should be removed or these materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction and observed by Terracon.

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Surface water should not be allowed to pond on the site and soak into the soil during construction. Construction staging should provide drainage of surface water and precipitation away from the building areas. Any water that collects over or adjacent to construction areas should be promptly removed, along with any softened or disturbed soils. Surface water control in the form of sloping surfaces, drainage ditches and trenches, and sump pits and pumps will be important to avoid ponding and associated delays due to precipitation and seepage.

Terracon should be retained during the construction phase of the project to observe earthwork and to perform necessary tests and observations during subgrade preparation; proofrolling; placement and compaction of controlled compacted fills; backfilling of excavations into the completed subgrade, and just prior to construction of floor slabs.

WATER TANK RECOMMENDATIONS FOR DESIGN AND CONSTRUCTION

Due to the presence of underlying soft clay layers and the assumed structural loads, there is the potential for consolidation-induced settlement for the water tank location. Based on assumed loading conditions and footing dimensions, excessive static settlement is expected for a ringwall foundation, which is further discussed in the following section. Additionally, settlements from a design seismic event may generate 3 to 4 inches of settlement. Based on the magnitude of potential settlement, we recommend that the proposed structure be supported on a deep foundation system embedded in the very dense sand layer encountered approximately 30 to 43 feet below the existing grade.

The recommendations presented herein have been developed on the basis of the subsurface conditions encountered during field investigation and our understanding of the proposed construction. Should changes in the project criteria occur, a review must be made by Terracon to determine if modifications to our recommendations will be required.

Shallow Foundation Considerations

Based on the plan sheets provided by WK Dickson, we understand shallow foundations for the water tank would consist of a ringwall foundation. Structural loadings, settlement tolerances and dimensions of a ringwall foundation have not been provided. We have assumed that the centerline of the ring wall will have a radius of 20 feet and we have evaluated both a 5 and 10 foot ringwall foundation width. The results of our evaluation are presented in the following table:

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Description	5' Ringwall Foundation	10' Ringwall Foundation
Ringwall foundation width	5 feet	10 feet
Allowable Bearing Pressure ¹	3,500 psf	3,500 psf
Embedment below finished grade	5 feet	5 feet
Estimated total static settlement	4 ½ to 5 ½ inches	5 to 6 inches

1. The recommended net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. This assumed any unsuitable fill, debris or soft soils, if encountered, will be undercut and replaced with Controlled Fill.

Based on our assumptions and evaluation, we anticipate that the proposed water tank would be adversely affected by the excessive static settlement. Additionally, the magnitude of liquefaction potential for this site is a concern for a ringwall foundation. As discussed in **Seismic Considerations** section, settlements from the design earthquake may range from 3 to 4 inches and liquefaction mitigation would be necessary for a ringwall foundation. The design team should review our assumptions and settlement estimates to determine if further review by Terracon is necessary to determine if a ringwall foundation is feasible for the water tank.

Based on the calculated magnitude of potential settlement, we recommend that the water tank be supported by a deep foundation system embedded in the very dense sand layer encountered approximately 30 to 43 feet below the existing ground surface.

Deep Foundation Design Recommendations

The proposed structure may be supported on a deep foundation system bearing in the very dense sand layer that was encountered approximately 30 to 43 feet below existing grade. Analysis of the lateral capacity of piles was not performed, and should be evaluated when detailed loads and pile type information becomes available. Design and QA/QC recommendations for deep foundations are presented in the following paragraphs.

Capacities from soils above the very dense sand layer have been estimated using CPT data correlations from SCPT-01 and CPT-03 performed within the water tank location. A factor of safety of 2 was used to determine the allowable capacities. This factor of safety assumes that a pile load test program utilizing a Pile Dynamic Analyzer (PDA) will be conducted to verify/modify the pile design. We recommend a minimum center to center pile spacing of 3 diameters to avoid group effects for axial behavior.

We have provided recommendations for a deep foundation solution consisting of:

- n Driven pre-stressed concrete (PSC) piles in 12 and 14 inch square dimensions
- n Driven steel H-piles in 12x53 and 14x75 dimensions

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In the local area, PSC piles are readily available and their use may provide cost savings. However, the drivability of PSC piles into the very dense sand layer is a concern as refusal may be encountered prior to reaching the target depth. If PSC piles are chosen, consideration should be given to utilizing a 2 to 5 foot stinger on PSC piles in order to aid in drivability in the very dense sand layer. The use of steel H-piles would be beneficial with respect to drivability.

The deep foundation system should be embedded in the very dense sand layer located approximately 30 to 43 feet below the existing ground surface. The following table presents the allowable axial capacities for each deep foundation option. Capacities for additional pile types and sizes can be provided on request.

Deep Foundation Type	Pile Tip Depth Below Existing Grade	Estimate of Allowable Axial Capacity ^{1,2}
12 in SQ PSC	35 to 40 feet	90 tons
14 in SQ PSC		120 tons
HP 12x53		90 tons
HP 14x73		120 tons

1. Factor of safety = 2.

2. Structural engineer should verify structural capacity of the piles.

Driven Pile Installation

Based on our experience with similar projects, air or diesel hammers with a minimum rated energy of 30 to 50 kip-ft should be suitable for pile installation. The outer diameter of the auger used should not exceed the outside diameter (or width) of the piles. It is our experience that driven piles can usually punch through the medium dense sand layers encountered above the very dense sand layer at 30 feet, but there is the possibility of pile refusal. If pile refusal occurs in these sand layers during the test pile program or if vibrations generated during driving through these sand layers exceeds project thresholds, pre-augering may be necessary. If necessary, we expect pre-augering to be limited to a depth of 23 feet below the existing grade.

Upon selection of the pile size and the contractor's driving system, a wave equation analysis of piles (WEAP) of the hammer-pile-soil system should be conducted. The WEAP analysis will determine if the selected hammer has sufficient energy to install the selected pile size to the required length, if the driving stresses (both compressive and tensile) during installation are within acceptable limits, and provide pile driving criteria. Hammer and/or pile sizes can be varied until an acceptable hammer-pile system is found. Upon request, Terracon can provide assistance in evaluating the selected hammer and determining the pile driving criteria.

Driven Pile Quality Control

We recommend that at least two piles be dynamically monitored during installation to evaluate hammer performance and pile driving stresses and integrity. A hammer restrrike should be performed on the test piles a minimum of seven days after installation to determine final capacity. This wait period will account for the time dependent pile capacity gain (i.e. pile “setup” or “freeze”). The piles should be dynamically monitored during installation and hammer restrikes in accordance with ASTM D4945 *Standard Test Method for High-Strain Dynamic Testing of Piles*. An engineering technician, supervised by a registered professional engineer, should monitor and document the production pile installations. A pile driving record should be kept for each individual production pile. The individual pile driving records should have the following minimum information:

- n Pile size and type
- n Final pile embedment depth
- n Pile tip and head elevation
- n Pile installation date and time
- n Spudding information
- n Pile blow counts per one (1) foot interval
- n Relevant Hammer and Cushion Information
- n Hammer Stroke
- n Installation notes (as required)

FLOOR SLABS

We are assuming that the floor slab within the conical base of the water tank is lightly loaded with a bearing pressure less than 500 psf. Based on this assumption, the slab can be supported by in situ soils or properly compacted Control Fill if prepared as described in **Site Preparation**. It should be noted that the floor slab will be susceptible to the liquefaction induced settlements described in **Seismic Considerations**. Concrete floor slabs constructed on grade can be designed using the modulus of subgrade reaction presented in the following table.

Design Recommendations

ITEM	DESCRIPTION
Modulus of subgrade reaction	200 pounds per square inch per inch (psi/in) for point loading conditions
1. Modulus of subgrade value is for a 1 ft by 1 ft area and should be adjusted for appropriate size. 2. This value may be increased depending on the depth of stone placed beneath the slab.	

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If a conventional slab and shallow foundation are used, the structural engineer should design the slab to limit differential movements between the slab and foundation to reduce the possibility of floor slab cracking. Where appropriate, saw-cut control joints and expansion joints should be placed in the slab to help control the location and extent of cracking. For additional recommendations refer to the ACI Design Manual. Floor slab subgrade should be compacted to 95% of its modified Proctor maximum dry density (ASTM D1557).

The use of a vapor retarder should be considered beneath concrete slabs on grade that will be covered with wood, tile, carpet or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer and slab contractor should refer to ACI 302 and ACI 360 for procedures and cautions regarding the use and placement of a vapor retarder/barrier.

Floor Slab Construction Considerations

On most project sites, the site grading is generally accomplished early in the construction phase. However as construction proceeds, the subgrade may be disturbed due to utility excavations, construction traffic, desiccation, rainfall, etc. As a result, the floor slab subgrade may not be suitable for placement of concrete, and corrective action will be required.

We recommend the area underlying the floor slab be rough graded and then proofrolled with a tandem axle dump truck prior to final grading and observed by geotechnical engineer. Areas where unsuitable conditions are located should be repaired by removing and replacing the affected material with properly compacted fill. All floor slab subgrade areas should be moisture conditioned and properly compacted to the recommendations in this report immediately prior to placement of the concrete. Any trenches should be backfilled with Controlled Fill as described in the **Material Types** section in this report.

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**DESIGN CONSIDERATIONS FOR WATER LINE**

The tabulated soil parameters provided below have been developed on the basis of the subsurface conditions encountered during the field investigation along the proposed water line.

Start of Water Line Soil Design Parameters (SCPT-01, CPT-03)

Stratum	Depth (feet)	Soil Type	Average N_{60}	Moist Unit Weight (pcf)	Estimated Cohesion (psf)	Estimated Friction Angle (degrees)
Stratum 1	0.4 to 8	Sand to silty sand	7	105	-	32
Stratum 2	8 to 15	Sand to silty sand	18	110	-	34
Stratum 3	15 to 18	Clay to silty clay	4	100	800	-
Stratum 4	18 to 23	Sand to silty sand	12	115	-	32
Stratum 5	23 to 29	Clay to silty clay	5	105	1000	-
Stratum 6	29 to 43	Sand	55	120	-	36

1. Groundwater encountered at an average depth of 6.1 feet.

Middle of Water Line Soil Design Parameters (CPT-04)

Stratum	Depth (feet)	Soil Type	Average N_{60}	Moist Unit Weight (pcf)	Estimated Cohesion (psf)	Estimated Friction Angle (degrees)
Stratum 1	0.5 to 2	Sandy clay	7	110	1000	-
Stratum 2	2 to 3	Silty sand	14	115	-	32
Stratum 3	3 to 9	Sandy clay to clay	5	110	1200	-
Stratum 4	9 to 17	Sand to silty sand	12	105	-	32
Stratum 5	17 to 19	Clay to silty clay	6	100	600	-
Stratum 6	19 to 22	Sand to silty sand	12	110	-	32
Stratum 7	22 to 41	Clay to silty clay	5	100	1200	-
Stratum 8	41 to 42	Sand to silty sand	38	120	-	36

1. Groundwater encountered at a depth of 6.4 feet.

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**End of Water Line Soil Design Parameters (CPT-05)**

Stratum	Depth (feet)	Soil Type	Average N_{60}	Moist Unit Weight (pcf)	Estimated Cohesion (psf)	Estimated Friction Angle (degrees)
Stratum 1	0.3 to 7	Silty sand to clayey sand	10	110	-	32
Stratum 2	7 to 8	Clay to silty clay	4	105	1000	-
Stratum 3	8 to 10	Sand to silty sand	8	105	-	32
Stratum 4	10 to 11	Clay to silty clay	6	105	800	-
Stratum 5	11 to 15	Sand to silty sand	21	110	-	34
Stratum 6	15 to 18	Sand to silty sand	8	100	-	32
Stratum 7	18 to 24	Sand to silty sand	14	105	-	34
Stratum 8	24 to 36	Clay to silty clay	6	100	1200	-
Stratum 9	36 to 39	Sand to silty sand	27	120	-	36

1. Groundwater encountered at a depth of 7.5 feet.

Design recommendations are beyond the scope of the geotechnical investigation for the water line. The following design considerations are offered:

- Soil classifications are based upon soil behavior type determined by CPT data and published correlations. Correlations are described further in the appendix. No laboratory testing was performed as part of this investigation.
- For submerged unit weight, reduce provided moist unit weights by the unit weight of water for soils beneath the water table.

GENERAL COMMENTS

Our work is conducted with the understanding of the project as described in the proposal, and will incorporate collaboration with the design team prior to completing our services. Terracon has requested verification of all stated assumptions. Revision of our understanding to reflect actual conditions important to our work will be based on these verifications and will be reflected in the final report. The design team should collaborate with Terracon to confirm these assumptions. The design team should also collaborate with Terracon to prepare the final design plans and specifications. This facilitates the incorporation of our opinions related to implementation of our geotechnical recommendations.

Our analysis and opinions are based upon our understanding of the geotechnical conditions in the area, the data obtained from the site exploration performed and from our understanding of the project. Variations will occur between exploration point locations, across the site, or due to the

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modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. So, Terracon should be retained to provide observation and testing services during grading, excavation, foundation construction and other earth-related construction phases of the project. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our scope of services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence are intended for the exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for that specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. In the event that changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

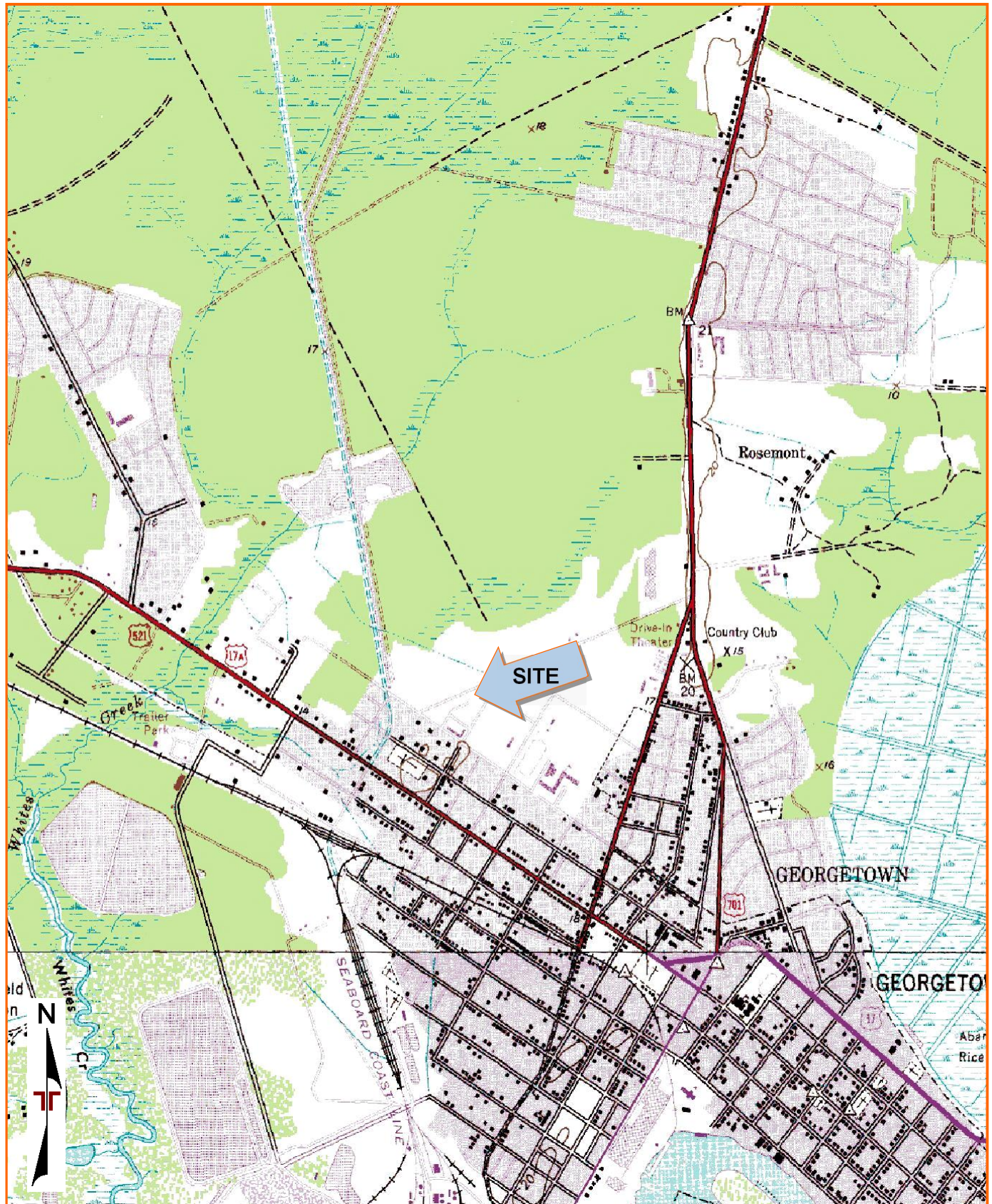
ATTACHMENTS - SITE LOCATION AND EXPLORATION PLAN

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

SITE LOCATION

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 DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS
 NOT INTENDED FOR CONSTRUCTION PURPOSES

 TOPOGRAPHIC MAP IMAGE COURTESY OF THE U.S. GEOLOGICAL SURVEY
 QUADRANGLES INCLUDE: GEORGETOWN NORTH, SC (1/1/1973) and
 GEORGETOWN SOUTH, SC (1/1/1973).

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

EXPLORATION PLAN

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AERIAL PHOTOGRAPHY PROVIDED
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EXPLORATION PLAN

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EXPLORATION PLAN

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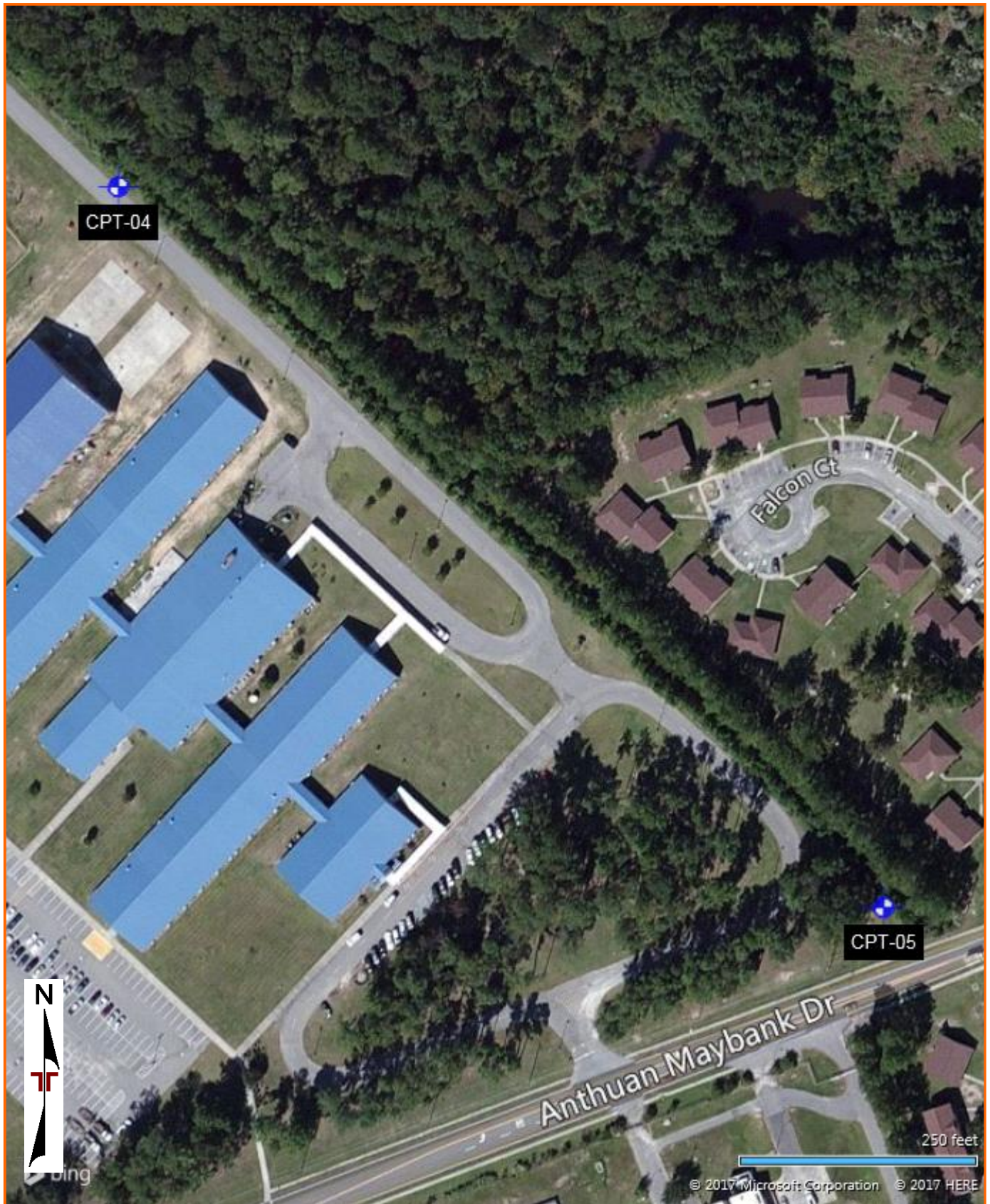


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AERIAL PHOTOGRAPHY PROVIDED
BY MICROSOFT BING MAPS

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

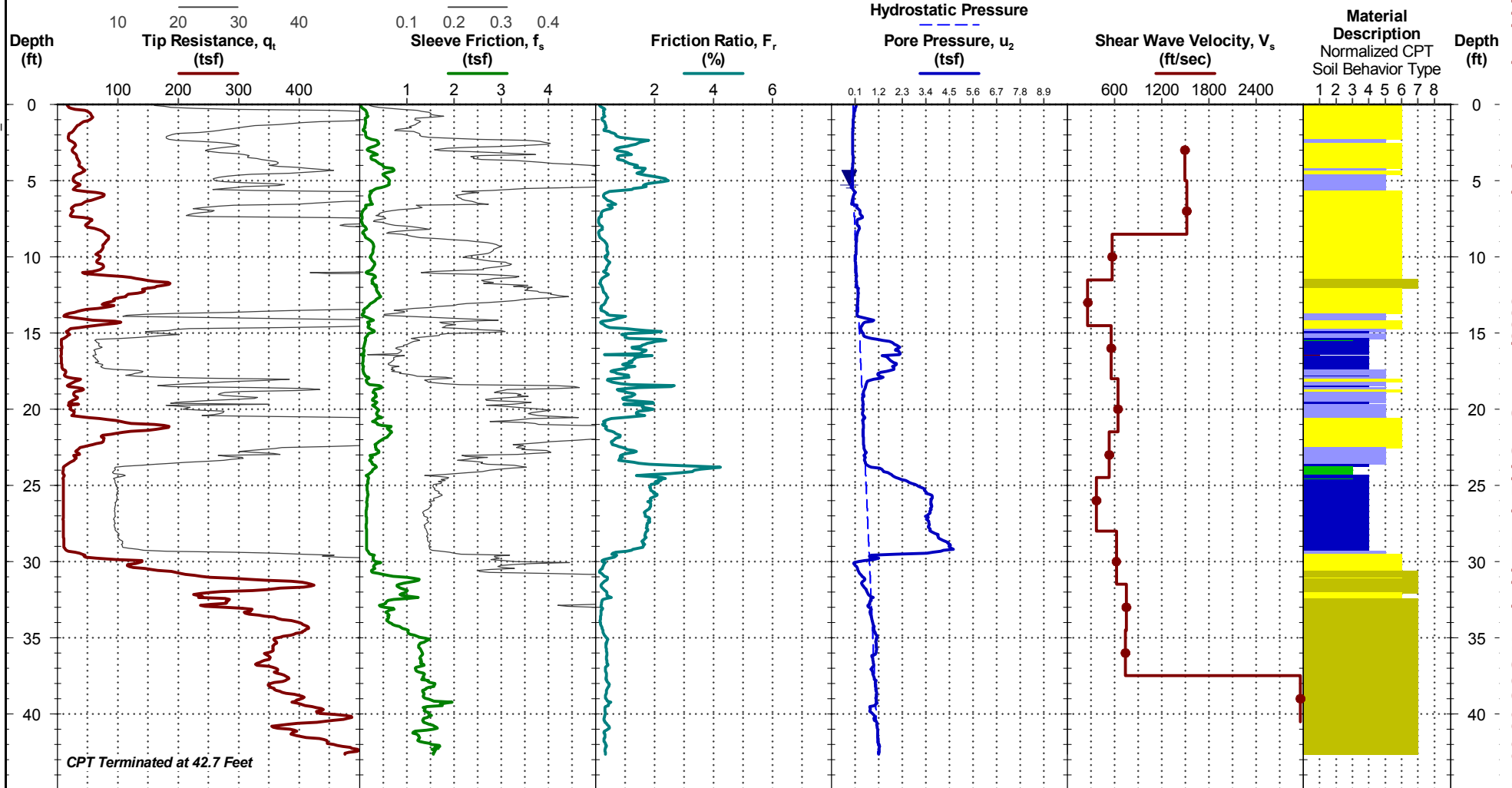
ATTACHMENTS - EXPLORATION RESULTS

CPT LOG NO. SCPT-01

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SC

TEST LOCATION: See Exhibit A-2

SITE: 2400 Anthuan Maybank Drive
Georgetown, SCLatitude: 33.391038°
Longitude: -79.302028°See Terracon's CPT General Notes for
explanation of symbols and abbreviations.Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

- 1 Sensitive, fine grained
- 2 Organic soils - clay
- 3 Clay - silty clay to clay
- 4 Silt mixtures - clayey silt to silty clay
- 5 Sand mixtures - silty sand to sandy silt
- 6 Sands - clean sand to silty sand
- 7 Gravelly sand to dense sand
- 8 Very stiff sand to clayey sand
- 9 Very stiff fine grained

WATER LEVEL OBSERVATION

5.3 ft measured water depth
(used in normalizations and correlations)

Probe no. 7508 with net area ratio of 0.839
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 11/28/2016
Tip and sleeve areas of 10 cm² and 150 cm²
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 4/28/2017

Rig: Pagani TG73-200

Project No.: EN175102

CPT Completed: 4/28/2017

Operator: BR

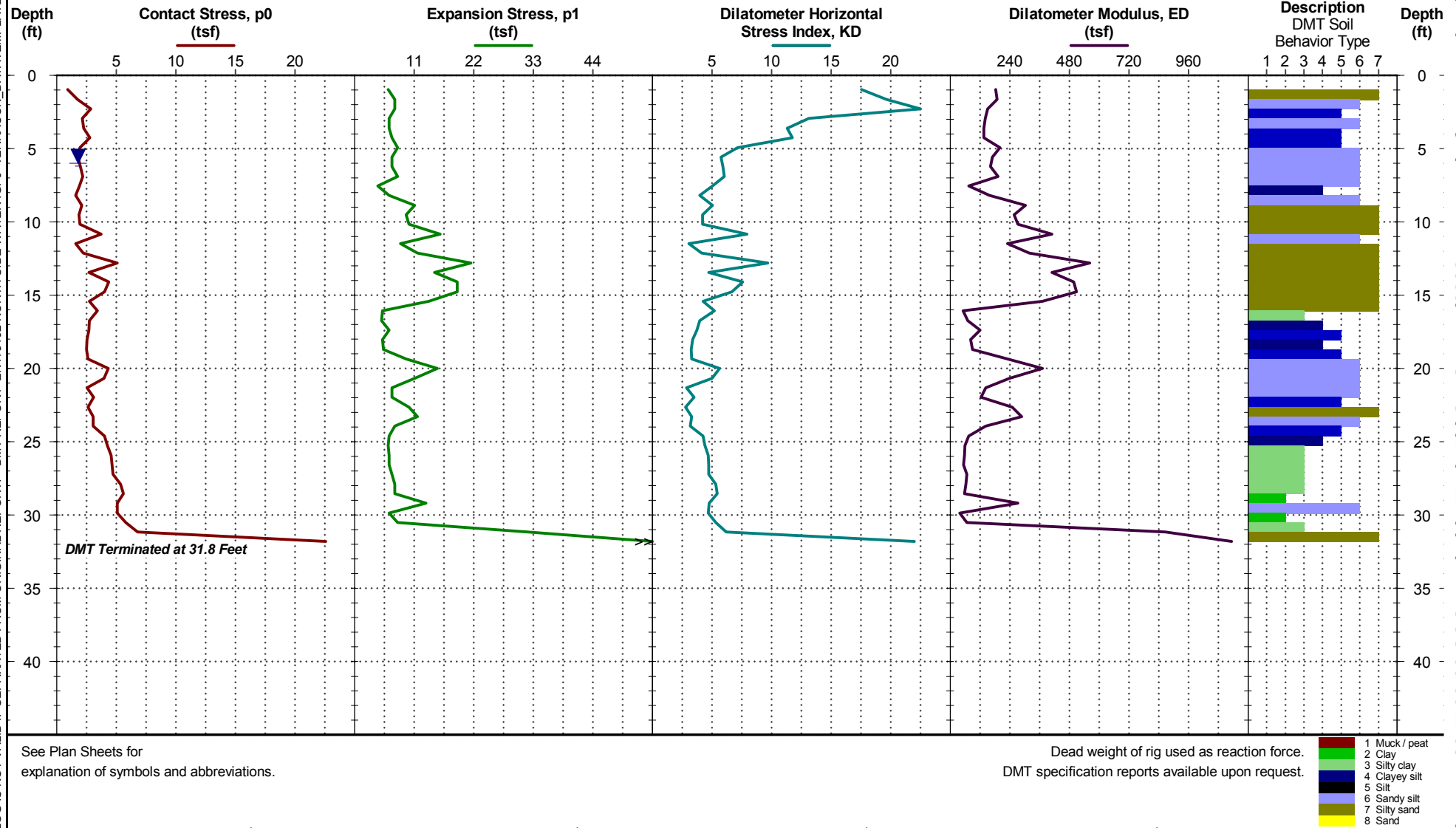
DMT LOG NO. DMT-02

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SC

TEST LOCATION: See Exhibit A-2

SITE: 2400 Anthuan Maybank Drive
Georgetown, SCLatitude: 33.390983°
Longitude: -79.301913°

WATER LEVEL OBSERVATION

6 ft estimated water depth
(used in normalizations and correlations)

Calibrations: ΔA - 0.1 bar; ΔB - 0.6 bar; Z_m - 0 bar
Blade no. 507

Terracon
1450 Fifth St W
North Charleston, SC

DMT Started: 4/28/2017

Rig: Pagani TG73-200

Project No.: EN175102

DMT Completed: 4/28/2017

Operator: BR

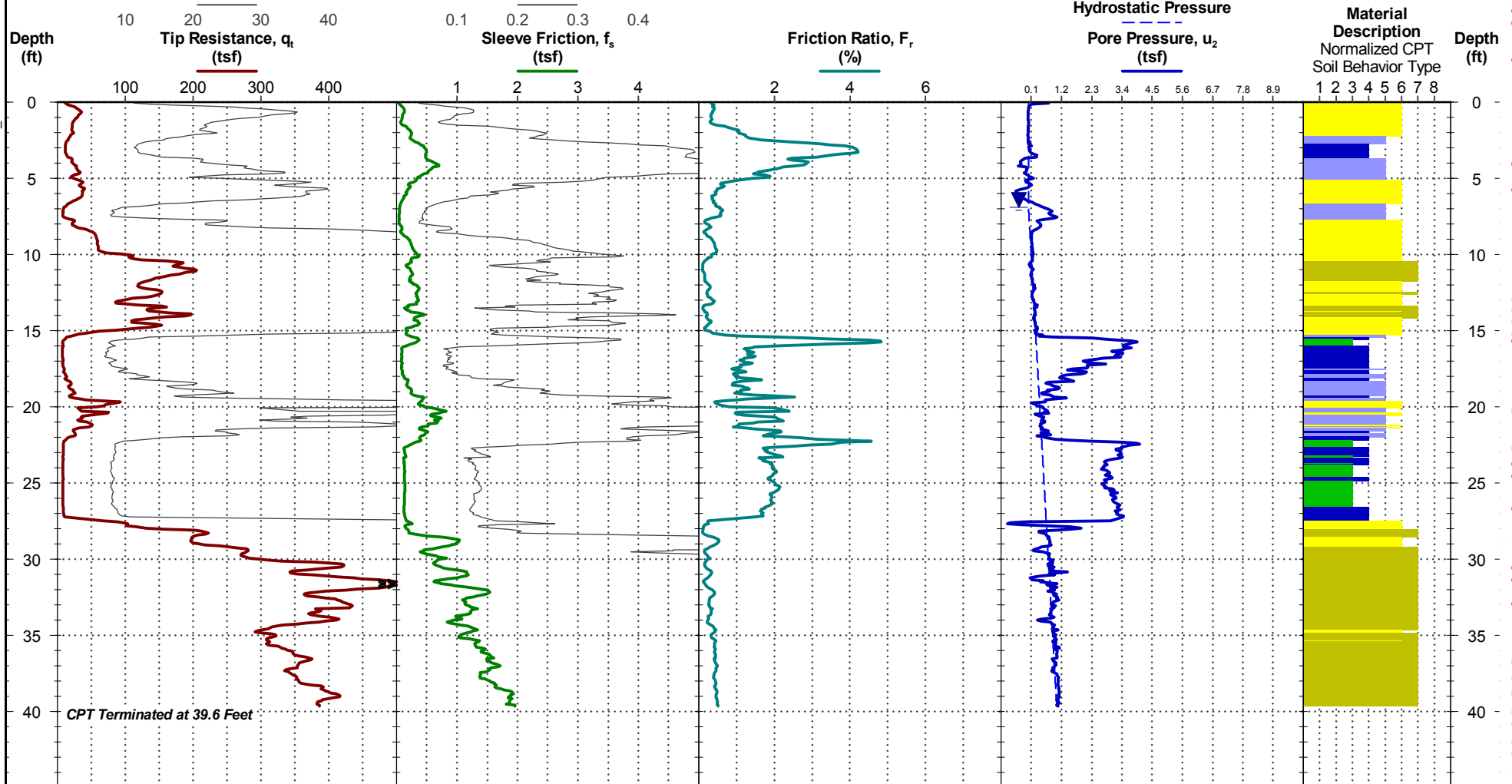
CPT LOG NO. CPT-03

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SC

TEST LOCATION: See Exhibit A-2

SITE: 2400 Anthuan Maybank Drive
Georgetown, SCLatitude: 33.390926°
Longitude: -79.302017°See Terracon's CPT General Notes for
explanation of symbols and abbreviations.Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

- 1 Sensitive, fine grained
- 2 Organic soils - clay
- 3 Clay - silty clay to clay
- 4 Silt mixtures - clayey silt to silty clay
- 5 Sand mixtures - silty sand to sandy silt
- 6 Sands - clean sand to silty sand
- 7 Gravelly sand to dense sand
- 8 Very stiff sand to clayey sand
- 9 Very stiff fine grained

WATER LEVEL OBSERVATION

6.9 ft measured water depth
(used in normalizations and correlations)

Probe no. 7508 with net area ratio of 0.839
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 11/28/2016
Tip and sleeve areas of 10 cm² and 150 cm²
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 4/28/2017

Rig: Pagani TG73-200

Project No.: EN175102

CPT Completed: 4/28/2017

Operator: BR

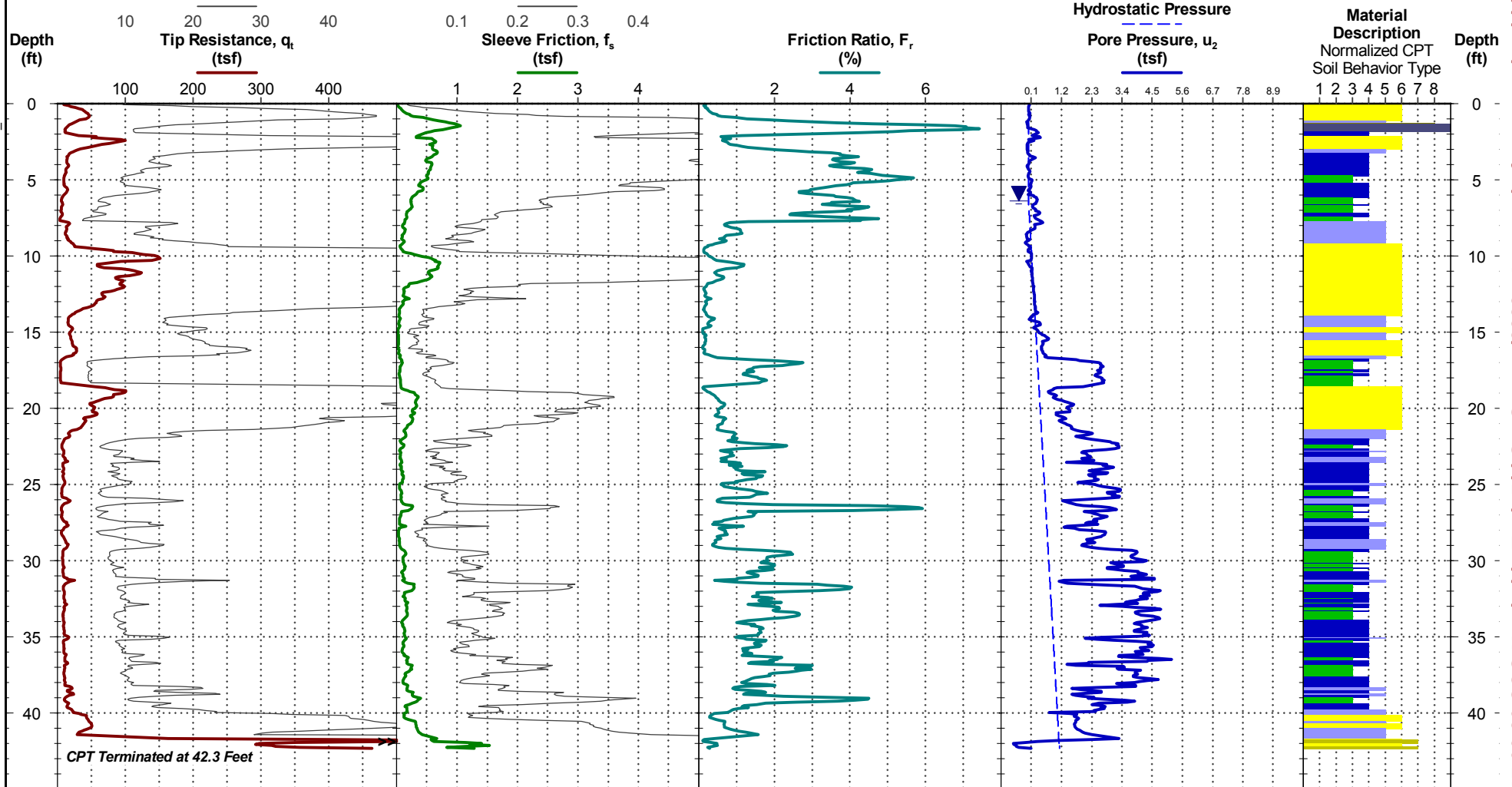
CPT LOG NO. CPT-04

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SC

TEST LOCATION: See Exhibit A-2

SITE: 2400 Anthuan Maybank Drive
Georgetown, SCLatitude: 33.389233°
Longitude: -79.299283°See Terracon's CPT General Notes for
explanation of symbols and abbreviations.Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

- 1 Sensitive, fine grained
- 2 Organic soils - clay
- 3 Clay - silty clay to clay
- 4 Silt mixtures - clayey silt to silty clay
- 5 Sand mixtures - silty sand to sandy silt
- 6 Sands - clean sand to silty sand
- 7 Gravelly sand to dense sand
- 8 Very stiff sand to clayey sand
- 9 Very stiff fine grained

WATER LEVEL OBSERVATION

6.4 ft measured water depth
(used in normalizations and correlations)

Probe no. 7508 with net area ratio of 0.839
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 11/28/2016
Tip and sleeve areas of 10 cm² and 150 cm²
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 4/28/2017

Rig: Pagani TG73-200

Project No.: EN175102

CPT Completed: 4/28/2017

Operator: BR

CPT LOG NO. CPT-05

Page 1 of 1

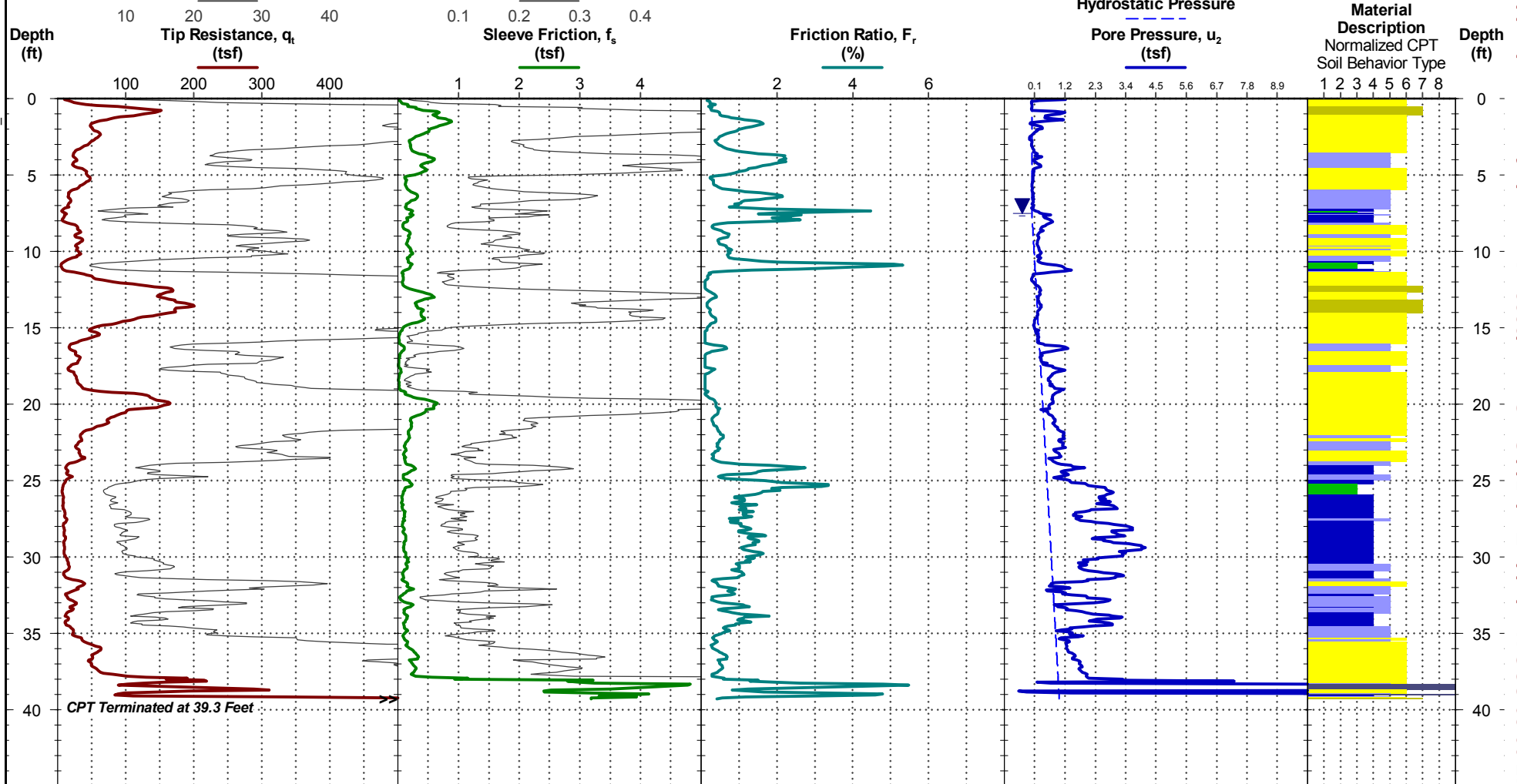
PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SC

TEST LOCATION: See Exhibit A-2

SITE: 2400 Anthuan Maybank Drive
Georgetown, SC

Latitude: 33.387156°
Longitude: -79.296641°



See Terracon's CPT General Notes for explanation of symbols and abbreviations.

Dead weight of rig used as reaction force.
CPT sensor calibration reports available upon request.

- 1 Sensitive, fine grained
- 2 Organic soils - clay
- 3 Clay - silty clay to clay
- 4 Silt mixtures - clayey silt to silty silt
- 5 Sand mixtures - silty sand to sandy silt
- 6 Sands - clean sand to silty sand
- 7 Gravelly sand to dense sand
- 8 Very stiff sand to clayey sand
- 9 Very stiff fine grained

WATER LEVEL OBSERVATION

7.5 ft measured water depth
(used in normalizations and correlations)

Probe no. 7508 with net area ratio of 0.839
U2 pore pressure transducer location
Manufactured by Geotech A.B.; calibrated 11/28/2016
Tip and sleeve areas of 10 cm² and 150 cm²
Ring friction reducer with O.D. of 1.875 in

Terracon
1450 Fifth St W
North Charleston, SC

CPT Started: 4/28/2017

Rig: Pagani TG73-200

Project No.: EN175102

CPT Completed: 4/28/2017

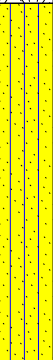
Operator: BR

BORING LOG NO. HAB at SCPT-01

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SCSITE: 2400 Anthuan Maybank Drive
Georgetown, SC

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	Latitude: 33.391038° Longitude: -79.302028°			
	DEPTH			
	TOPSOIL , 5" of Topsoil			
0.4				
	SILTY SAND (SM) , brown			
1.7				
	CLAYEY SAND (SC) , gray and yellow			
4.0				
	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

See Appendix for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.**WATER LEVEL OBSERVATIONS**

Groundwater not encountered ATD

Terracon1450 Fifth St W
North Charleston, SC

Boring Started: 4/28/2017

Boring Completed: 4/28/2017

Drill Rig: NA

Driller: BR

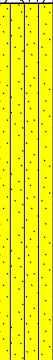
Project No.: EN175102

BORING LOG NO. HAB at DMT-02

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SCSITE: 2400 Anthuan Maybank Drive
Georgetown, SC

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	Latitude: 33.390983° Longitude: -79.301913°			
	DEPTH			
	TOPSOIL , 5" of Topsoil			
0.4				
	SILTY SAND (SM) , brown			
1.7				
	CLAYEY SAND (SC) , gray and yellow			
4.0				
	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand AugerSee Appendix for explanation of symbols and
abbreviations.

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.**WATER LEVEL OBSERVATIONS**

Groundwater not encountered ATD

Terracon1450 Fifth St W
North Charleston, SC

Boring Started: 4/28/2017

Boring Completed: 4/28/2017

Drill Rig: NA

Driller: BR

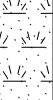
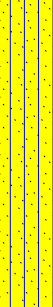
Project No.: EN175102

BORING LOG NO. HAB at CPT-03

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SCSITE: 2400 Anthuan Maybank Drive
Georgetown, SC

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	Latitude: 33.390926° Longitude: -79.302017°			
	DEPTH			
	TOPSOIL , 5" of Topsoil			
0.4				
	SILTY SAND (SM) , brown			
1.5				
	CLAYEY SAND (SC) , gray and yellow			
4.0				
	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

See Appendix for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.**WATER LEVEL OBSERVATIONS**

Groundwater not encountered ATD

Terracon1450 Fifth St W
North Charleston, SC

Boring Started: 4/28/2017

Boring Completed: 4/28/2017

Drill Rig: NA

Driller: BR

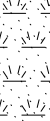
Project No.: EN175102

BORING LOG NO. HAB at CPT-04

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SCSITE: 2400 Anthuan Maybank Drive
Georgetown, SC

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	Latitude: 33.389233° Longitude: -79.299283°			
	DEPTH			
	TOPSOIL , 6" of Topsoil			
0.5	SANDY LEAN CLAY (CL) , gray and yellow			
2.2	SILTY SAND (SM) , gray			
3.3	SANDY LEAN CLAY (CL) , gray and yellow			
4.0	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

See Appendix for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

Groundwater not encountered ATD


1450 Fifth St W
North Charleston, SC

Boring Started: 4/28/2017

Boring Completed: 4/28/2017

Drill Rig: NA

Driller: BR

Project No.: EN175102

BORING LOG NO. HAB at CPT-05

Page 1 of 1

PROJECT: North Side Water Tank

CLIENT: WK Dickson & Company, Inc.
Daniel Island, SCSITE: 2400 Anthuan Maybank Drive
Georgetown, SC

GRAPHIC LOG	LOCATION	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE
	Latitude: 33.387156° Longitude: -79.296641°			
	DEPTH			
	TOPSOIL , 5" of Topsoil			
0.3	SILTY SAND (SM) , brown			
0.8	CLAYEY SAND (SC) , dark brown			
4.0	Boring Terminated at 4 Feet			

Stratification lines are approximate. In-situ, the transition may be gradual.

Advancement Method:
Manual Hand Auger

See Appendix for explanation of symbols and abbreviations.

Notes:

Abandonment Method:
Borings backfilled with soil cuttings upon completion.

WATER LEVEL OBSERVATIONS

Groundwater not encountered ATD


1450 Fifth St W
North Charleston, SC

Boring Started: 4/28/2017

Boring Completed: 4/28/2017

Drill Rig: NA

Driller: BR

Project No.: EN175102

ATTACHMENTS - SUPPORTING DOCUMENTS

GENERAL NOTES

12.A.3

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING			WATER LEVEL		Water Initially Encountered	FIELD TESTS	(HP)	Hand Penetrometer	
	Auger	Split Spoon			Water Level After a Specified Period of Time		(T)	Torvane	
					Water Level After a Specified Period of Time		(b/f)	Standard Penetration Test (blows per foot)	
	Shelby Tube	Macro Core		Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.			(PID)	Photo-Ionization Detector	
							(OVA)	Organic Vapor Analyzer	
	Ring Sampler	Rock Core							
									
	Grab Sample	No Recovery							

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS	RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance Includes gravels, sands and silts.			CONSISTENCY OF FINE-GRAINED SOILS (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
	Descriptive Term (Density)	Standard Penetration or N-Value Blows/Ft.	Ring Sampler Blows/Ft.	Descriptive Term (Consistency)	Unconfined Compressive Strength, Qu, tsf	Standard Penetration or N-Value Blows/Ft.
	Very Loose	0 - 3	0 - 6	Very Soft	less than 0.25	0 - 1
	Loose	4 - 9	7 - 18	Soft	0.25 to 0.50	2 - 4
	Medium Dense	10 - 29	19 - 58	Medium-Stiff	0.50 to 1.00	4 - 8
	Dense	30 - 50	59 - 98	Stiff	1.00 to 2.00	8 - 15
	Very Dense	> 50	≥ 99	Very Stiff	2.00 to 4.00	15 - 30
				Hard	> 4.00	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

<u>Major Component of Sample</u>	<u>Particle Size</u>
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm)
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

<u>Descriptive Term(s) of other constituents</u>	<u>Percent of Dry Weight</u>
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

<u>Term</u>	<u>Plasticity Index</u>
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

**DESCRIPTION OF MEASUREMENTS
AND CALIBRATIONS**To be reported per ASTM D5778:

Uncorrected Tip Resistance, q_c
Measured force acting on the cone
divided by the cone's projected area

Corrected Tip Resistance, q_t
Cone resistance corrected for porewater
and net area ratio effects
 $q_t = q_c + U2(1 - a)$

Where a is the net area ratio,
a lab calibration of the cone typically
between 0.70 and 0.85

Pore Pressure, U1/U2

Pore pressure generated during penetration
U1 - sensor on the face of the cone
U2 - sensor on the shoulder (more common)

Sleeve Friction, f_s

Frictional force acting on the sleeve
divided by its surface area

Normalized Friction Ratio, FR

The ratio as a percentage of f_s to q_t ,
accounting for overburden pressure

To be reported per ASTM D7400, if collected:Shear Wave Velocity, V_s

Measured in a Seismic CPT and provides
direct measure of soil stiffness

DESCRIPTION OF GEOTECHNICAL CORRELATIONS

Normalized Tip Resistance, Q_t

$$Q_t = (q_t - \sigma_{v0}) / \sigma'_{v0}$$

Over Consolidation Ratio, OCR

$$OCR(1) = 0.25(Q_t)$$

$$OCR(2) = 0.33(Q_t)$$

Undrained Shear Strength, S_u

$$S_u = Q_t \times \sigma'_{v0} / N_{k0}$$

N_{k0} is a geographical factor (shown on S_u plot)

Sensitivity, St

$$St = (q_t - \sigma_{v0} / N_{k0}) \times (1 / fs)$$

Effective Friction Angle, ϕ'

$$\phi'(1) = \tan^{-1}(0.373[\log(q_t / \sigma'_{v0}) + 0.29])$$

$$\phi'(2) = 17.6 + 11[\log(Q_t)]$$

Unit Weight

$$UW = (0.27[\log(FR)] + 0.36[\log(q_t / \text{atm})] + 1.236) \times UW_{\text{water}}$$

σ_{v0} is taken as the incremental sum of the unit weights

Small Strain Shear Modulus, G_0

$$G_0(1) = \rho V_s^2$$

$$G_0(2) = 0.015 \times 10^{(0.55k + 1.68)} (q_t - \sigma_{v0})$$

Soil Behavior Type Index, I_c

$$I_c = [(3.47 - \log(Q_t)) + (\log(FR) + 1.22)]^{2.0.5}$$

SPT N_{60}

$$N_{60} = (q_t / \text{atm}) / 10^{(1.1268 - 0.2817k)}$$

Elastic Modulus, E_s (assumes $q_t / q_{t, \text{ultimate}} \sim 0.3$, i.e. FS = 3)

$$E_s(1) = 2.6 \Psi G_0 \text{ where } \Psi = 0.56 - 0.33 \log Q_{t, \text{clean sand}}$$

$$E_s(2) = G_0$$

$$E_s(3) = 0.015 \times 10^{(0.55k + 1.68)} (q_t - \sigma_{v0})$$

$$E_s(4) = 2.5q_t$$

Constrained Modulus, M

$$M = \alpha_M (q_t - \sigma_{v0})$$

For $I_c > 2.2$ (fine-grained soils)

$$\alpha_M = Q_t \text{ with maximum of } 14$$

For $I_c < 2.2$ (coarse-grained soils)

$$\alpha_M = 0.0188 \times 10^{(0.55k + 1.68)}$$

Hydraulic Conductivity, k

$$\text{For } 1.0 < I_c < 3.27 \quad k = 10^{(0.952 - 3.04I_c)}$$

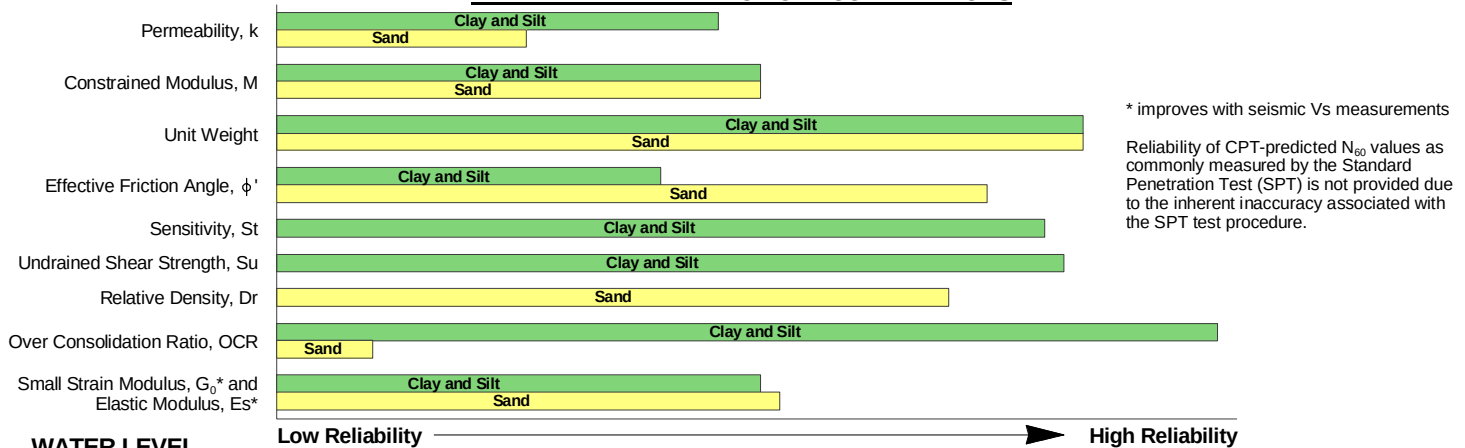
$$\text{For } 3.27 < I_c < 4.0 \quad k = 10^{(-4.52 - 1.37I_c)}$$

Relative Density, Dr

$$Dr = (Q_t / 350)^{0.15} \times 100$$

REPORTED PARAMETERS

CPT logs as provided, at a minimum, report the data as required by ASTM D5778 and ASTM D7400 (if applicable). This minimum data include tip resistance, sleeve resistance, and porewater pressure. Other correlated parameters may also be provided. These other correlated parameters are interpretations of the measured data based upon published and reliable references, but they do not necessarily represent the actual values that would be derived from direct testing to determine the various parameters. The following chart illustrates estimates of reliability associated with correlated parameters based upon the literature referenced below.

RELATIVE RELIABILITY OF CPT CORRELATIONS**WATER LEVEL**

The groundwater level at the CPT location is used to normalize the measurements for vertical overburden pressures and as a result influences the normalized soil behavior type classification and correlated soil parameters. The water level may either be "measured" or "estimated."

Measured - Depth to water directly measured in the field

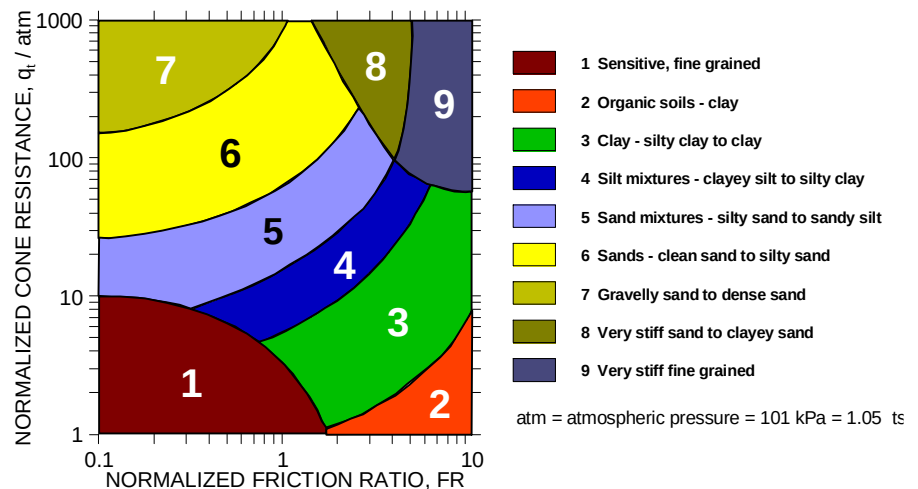
Estimated - Depth to water interpolated by the practitioner using pore pressure measurements in coarse grained soils and known site conditions

While groundwater levels displayed as "measured" more accurately represent site conditions at the time of testing than those "estimated," in either case the groundwater should be further defined prior to construction as groundwater level variations will occur over time.

CONE PENETRATION SOIL BEHAVIOR TYPE

The estimated stratigraphic profiles included in the CPT logs are based on relationships between corrected tip resistance (q_t), friction resistance (f_s), and porewater pressure (U2). The normalized friction ratio (FR) is used to classify the soil behavior type.

Typically, silts and clays have high FR values and generate large excess penetration porewater pressures; sands have lower FRs and do not generate excess penetration porewater pressures. Negative pore pressure measurements are indicative of fissured fine-grained material. The adjacent graph (Robertson et al.) presents the soil behavior type correlation used for the logs. This normalized SBT chart, generally considered the most reliable, does not use pore pressure to determine SBT due to its lack of repeatability in onshore CPTs.

**REFERENCES**

- Kulhavy, F.H., Mayne, P.W., (1997). "Manual on Estimating Soil Properties for Foundation Design," Electric Power Research Institute, Palo Alto, CA.
 Mayne, P.W., (2013). "Geotechnical Site Exploration in the Year 2013," Georgia Institute of Technology, Atlanta, GA.
 Robertson, P.K., Cabal, K.L. (2012). "Guide to Cone Penetration Testing for Geotechnical Engineering," Signal Hill, CA.
 Schmertmann, J.H., (1970). "Static Cone to Compute Static Settlement over Sand," *Journal of the Soil Mechanics and Foundations Division*, 96(SM3), 1011-1043.

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A					Soil Classification	
					Group Symbol	Group Name ^B
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravels: More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels: Less than 5% fines ^C	Cu ≥ 4 and 1 ≤ Cc ≤ 3 ^E	GW	Well-graded gravel ^F	
			Cu < 4 and/or 1 > Cc > 3 ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines: More than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
	Sands: 50% or more of coarse fraction passes No. 4 sieve	Clean Sands: Less than 5% fines ^D	Cu ≥ 6 and 1 ≤ Cc ≤ 3 ^E	SW	Well-graded sand ^I	
			Cu < 6 and/or 1 > Cc > 3 ^E	SP	Poorly graded sand ^I	
		Sands with Fines: More than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}	
Fine-Grained Soils: 50% or more passes the No. 200 sieve	Silts and Clays: Liquid limit less than 50	Inorganic:	PI > 7 and plots on or above “A” line ^J		CL	Lean clay ^{K,L,M}
			PI < 4 or plots below “A” line ^J		ML	Silt ^{K,L,M}
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay ^{K,L,M,N}
			Liquid limit - not dried			Organic silt ^{K,L,M,O}
	Silts and Clays: Liquid limit 50 or more	Inorganic:	PI plots on or above “A” line		CH	Fat clay ^{K,L,M}
			PI plots below “A” line		MH	Elastic Silt ^{K,L,M}
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay ^{K,L,M,P}
			Liquid limit - not dried			Organic silt ^{K,L,M,Q}
Highly organic soils:	Primarily organic matter, dark in color, and organic odor			PT	Peat	

^A Based on the material passing the 3-inch (75-mm) sieve

^B If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^C Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

^D Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay

$$^E Cu = D_{60}/D_{10} \quad Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^F If soil contains $\geq 15\%$ sand, add "with sand" to group name.

^G If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^H If fines are organic, add "with organic fines" to group name.

^I If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^J If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

^K If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

^L If soil contains $\geq 30\%$ plus No. 200 predominantly sand, add "sandy" to group name.

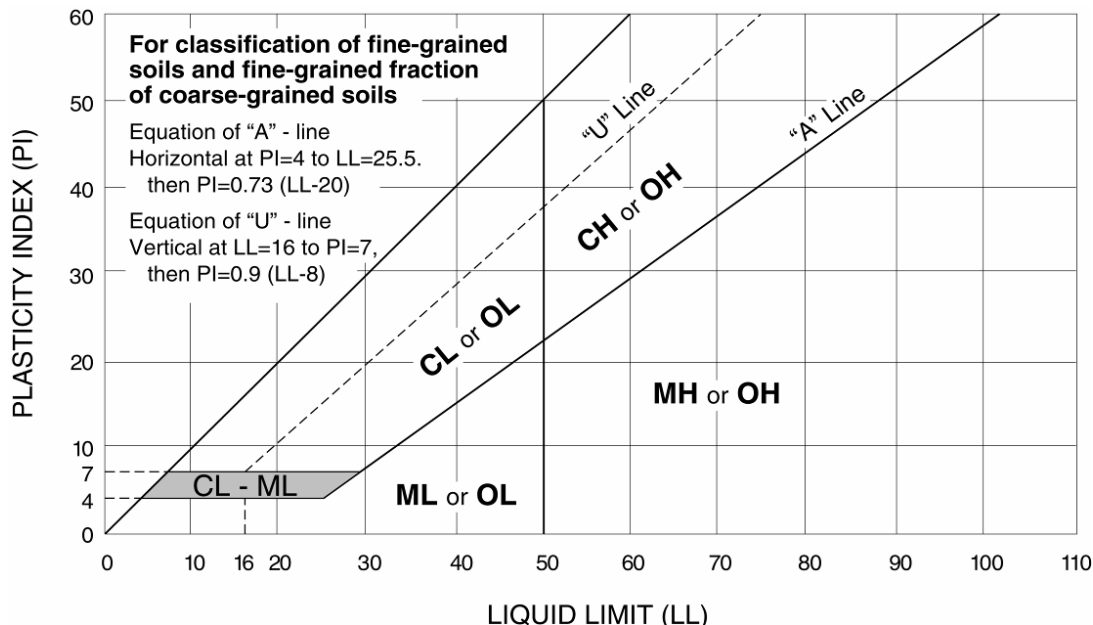
^M If soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

^N $PI \geq 4$ and plots on or above "A" line.

^O $PI < 4$ or plots below "A" line.

^P PI plots on or above "A" line.

^Q PI plots below "A" line.



APPENDIX B

MR SYSTEMS

Customer: City of Georgetown, SC
 Project: Northside Water Storage Tank
 MR Quote #:Q17-4895, Rev. 0



June 27, 2017

Bill of Materials and Labor

Qty	Tag/Loop	Description
<u>New Northside Elevated Storage Tank</u>		
1	New RTU	PLC-based Remote Telemetry Unit Enclosure Size & Materials: NEMA 4X, #304 Stainless Steel, 36" H x 30" W x 12" D Solar Heat Protection: None - Panel mounts inside base of Spheroid Elevated Tank PLC: Modicon Unity Momentum Available I/O: 20 DI, 18 DO, 4 AI, 2 AO Wired I/O: 12 DI, 6 DO, 4 AI, 1 AO AC Power Backup: Battery Backup with two (2) 9 AH Batteries Communications: Spread Spectrum (Unlicensed) Radio (902 to 928 MHz) Operator Interface Terminal: None Miscellaneous Options: Heater & Thermostat, 30 Watt, Pfannenberger Bulkhead-mounted RF Surge Protector, Type N, Female/Female Analog Current Isolator, Phoenix Contact Standard Features: AC Power Surge Protector LED Light Fixture (mounts in top of panel) GFI Utility Outlet RTU Door Limit Switch Digital I/O Surge Protection: Indicating Interposing Relays Analog I/O Surge Protection: MR Kamikaze II Analog Surge Protector
1		Yagi Antenna, Coaxial Cable, Type N Connectors, RF Surge Protector, Grounding Kit, etc. 1 - 10 dB Yagi Antenna, Bluewave 100 ft. - RFS 1/2" 50 Ohm Superflex Coaxial Cable 2 - 1/2" Grounding Kit 4 - RFS Type N 1/2" Connectors, Female 4 - RFS Type N 1/2" Connectors, Male 1 - Heat Shrink for Inline RF Surge Protector 1 - 1/2" or 7/8" Weatherproofing Kit One Lot - Miscellaneous Mounting Hardware
1		RF Surge Protector Enclosure Phoenix Contact CoaxTrab RF Surge Protector mounted in polycarbonate enclosure <i>Note: We have assumed that an Antenna Mounting Bracket will be installed by the Tank Contractor during construction of the new spheroid tank. This bracket would be mounted approximately 40 ft above grade on the side of the tank facing the Water Treatment Plant. A sleeve must also be installed just below the antenna mounting bracket to allow the coaxial cable to exit the interior of the tank for connection to the antenna outside the tank.</i>
1	PIT - Tank Level	Rosemount 3051T Pressure Indicating Transmitter Pressure Upper Range Limit: 150 psi Transmitter Output: 4 - 20 mA with HART protocol Isolation Diaphragm & Process Connection Wetted Parts: 316L SST Sensor Fill Fluid: Silicone Housing Material & Conduit Entry Size: Aluminum, 1/2-14 NPT Mounting Bracket: Bracket for 2" pipe or panel mounting

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

Customer: City of Georgetown, SC
 Project: Northside Water Storage Tank
 MR Quote #:Q17-4895, Rev. 0



June 27, 2017

Bill of Materials and Labor

Qty	Tag/Loop	Description
		Configuration Buttons: Analog Zero and Span Display and Interface Options: LCD Display with Local Operator Interface Approvals: Drinking Water Approval The new RTU will monitor tank level and will operate and monitor the Open/Closed position of the altitude valve as desired by the Owner and Engineer.
1	Door Switch	Tank Door Switch
1		A-B Model 802T-ATP Limit Switch with 2 Form C Contacts with A-B Model 802T-W2 Adjustable Operating Lever
		<u>Existing Yogi Bear Elevated Storage Tank</u>
1	PIT - Tank Level	Rosemount 3051T Pressure Indicating Transmitter Pressure Upper Range Limit: 150 psi Transmitter Output: 4 - 20 mA with HART protocol Isolation Diaphragm & Process Connection Wetted Parts: 316L SST Sensor Fill Fluid: Silicone Housing Material & Conduit Entry Size: Aluminum, 1/2-14 NPT Mounting Bracket: Bracket for 2" pipe or panel mounting Configuration Buttons: Analog Zero and Span Display and Interface Options: LCD Display with Local Operator Interface Approvals: Drinking Water Approval The existing RTU will monitor the new tank level transmitter and will operate and monitor the Open/Closed position of the altitude valve as desired by the Owner and Engineer.
		<u>Water Treatment Plant Polling PLC</u>
1	CTU	PLC-based Central Telemetry Unit for Water Treatment Plant Enclosure Size & Materials: NEMA 12, Painted Carbon Steel, 24" H x 24" W x 10" D Solar Heat Protection: None - Panel mounts inside base of Spheroid Elevated Tank PLC: Allen-Bradley MicroLogix 1400 Available I/O: 20 DI, 12 DO, 4 AI, 2 AO Wired I/O: 4 DI, 2 DO, 0 AI, 0 AO AC Power Backup: Battery Backup with two (2) 9 AH Batteries Communications: Spread Spectrum (Unlicensed) Radio (902 to 928 MHz) Operator Interface Terminal: None Miscellaneous Options: Bulkhead-mounted RF Surge Protector, Type N, Female/Female Standard Features: AC Power Surge Protector LED Light Fixture (mounts in top of panel) GFI Utility Outlet RTU Door Limit Switch

Customer: City of Georgetown, SC
 Project: Northside Water Storage Tank
 MR Quote #:Q17-4895, Rev. 0



June 27, 2017

Bill of Materials and Labor

Qty	Tag/Loop	Description
		Digital I/O Surge Protection: Indicating Interposing Relays
1	Omni Antenna	Omni Antenna and Accessories for WTP Spread Spectrum Antenna Omni Antenna, 7/8" Coaxial Cable, 7/8" Connectors, etc. 1 - 9 dB Omni Antenna, Andrew (formerly Decibel Products) #DB589-Y 150 ft. - RFS Cabling 7/8" Heliac Cable, LC78-50JA-A7 2 - Andrew 7/8" Grounding Kits 4 - 7/8" Connector, Type N, Male or Female 2 - 7/8" Weatherproofing Kit One Lot - Miscellaneous Mounting Hardware
1		RF Surge Protector Enclosure Phoenix Contact CoaxTrab RF Surge Protector mounted in polycarbonate enclosure
	SCADA	Modifications to Existing SCADA System MR Systems has included HMI and PLC labor to modify the existing Intellution SCADA system to accommodate the new Northside Water Storage Tank and the modifications and additions to the existing Yogi Bear Elevated Water Tank. This work also includes establishing communications between Intellution and the new Central Telemetry Unit.

Project Labor

One Lot	Project Engineering, Electrical Design, Mechanical Design, Drafting & Administrative Labor (including Travel & Living expenses) as required to perform final system design and to prepare Submittals and Record Drawings as required by the Contract Documents.
One Lot	HMI Software Applications Development & Graphics Design Labor (including Travel & Living expenses) as required by the Contract Documents.
One Lot	PLC Control Strategy Design & Programming Labor (including Travel & Living expenses) to be performed as required by the Contract Documents.
One Lot	Field Service (including Travel & Living expenses) to provide installation supervision calibrations, startup, training, etc. as required by the Contract Documents.
N/A	Electrical Installation or Terminations (including Travel & Living expenses) to provide installation of conduit, wire, etc. as required by the Contract Documents.
1 Year	Onsite Comprehensive Warranty (including Travel & Living expenses)
One Lot	Freight

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

Customer: City of Georgetown, SC
 Project: Northside Water Storage Tank
 MR Quote #:Q17-4895, Rev. 0



June 27, 2017

Bill of Materials and Labor

Qty	Tag/Loop	Description
Subtotal of Labor and Materials: \$65,000		
State Sales Tax - NOT INCLUDED: \$		
Total Project Cost: \$65,000		

General Notes:

- A *** Sales Representation ***
 Mr. Dave Johnson, P.E., of Heyward, Inc. in Charlotte, NC, is our local sales representative and will contact you prior to the bid with pricing. Dave may be reached at 704-583-2305 (Office) or 803-920-6209 (Cell)
- B *** Technical Questions ***
 For technical or scope of supply questions contact Tom Hopkins of MR Systems, Inc. Keith may be reached at 678-325-2812 (Office) or 770-876-5227 (Cell).
- C *** Installation of Conduit and Wire ***
 This quotation **DOES NOT INCLUDE** the supply or physical installation of conduit or wire unless specifically noted above.
- D *** Equipment Installation ***
 This quotation **DOES NOT INCLUDE** physical installation of field instruments, pipe, tubing, fittings, isolation valves, instrument stands, instrument mounts, control panels, antennas, masts, wooden poles, or other devices or other equipment unless specifically noted above.
- E *** Wiring Terminations ***
 This quotation **INCLUDES** the termination of field wiring to field instruments, control panels, RTU panels, and/or other devices supplied under this scope of supply. Terminations of wiring to equipment supplied by Others are excluded unless specifically noted above.
- F *** Fiber Optics Cable ***
 This quotation **DOES NOT INCLUDE** the supply or physical installation of Fiber Optic Cable.
- G *** Fiber Optic Cable Termination ***
 This quotation **DOES NOT INCLUDE** termination or testing of fiber optics cable.
- H *** Coaxial Cable Installation ***
 This quotation **DOES NOT INCLUDE** the physical installation of coaxial cable or other related components.
- I *** Installation of Communications Towers or Poles ***
 This quotation **DOES NOT INCLUDE** the supply or physical installation of Communication Towers or Poles.
- J *** Contractor License Information ***

Customer: City of Georgetown, SC
 Project: Northside Water Storage Tank
 MR Quote #:Q17-4895, Rev. 0



June 27, 2017

Bill of Materials and Labor

Qty	Tag/Loop	Description
		MR Systems' South Carolina Electrical Contractor's License Number is M108855, EL5 (Unlimited).
K		* Professional Engineering Authorization * As required by the South Carolina Board of Labor, Licensing and Regulation, System Integrators are required to hold a Certificate of Authorization to practice professional engineering in order to perform system integration. MR Systems' Certificate of Authorization Number is C01888.
L		* Terms and Conditions * MR Systems, Inc. General Terms & Conditions of Sale apply to any order resulting from this quotation. Please refer to the link provided below for a copy of our General Terms and Conditions of Sale. https://www.mrsystems.com/sellersterms/

Revision Notes:

EST Rev. 0 Initial Estimate of Probable Construction Costs - 2016-06-27 - THH

Attachment: 2017-06-30 COG Northside Tank Bid Set Specs (2383 : Approval of construction bid for North Water Tank)

DOCUMENT 00 91 13
ADDENDUM

City of Georgetown
North Side Water Storage Tank
Project #1508

WKD Project Number: 20160218.00.CH

ADDENDUM NUMBER: 1

Date Prepared: 07/20/2017

BID DATE: July 25, 2017

TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated June 2017, and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

Specifications

Item 1: Section 00020 – Advertisement for Bids

The Bid date has been changed from July 25, 2017 to September 6, 2017.

Receipt of this addendum must be acknowledged on Page 00311-2 of your Bid Form.

Sincerely,

W. K. Dickson & Co., Inc.
SC Certificate of Authorization No. C00177

SEAL

A. Paul Smith, III, P.E.
Project Manager

NL



Handwritten signature and date: 7.20.2017

City of Georgetown
North Side Water Storage Tank
WKD Project Number: 20160218.00.CH
July 2017

Addendum No. 1
00 91 13 - 1
July 20, 2017

DOCUMENT 00 91 13
ADDENDUM

City of Georgetown
North Side Water Storage Tank
Project #1508

WKD Project Number: 20160218.00.CH

ADDENDUM NUMBER: 2

Date Prepared: 08/24/2017

BID DATE: September 6, 2017

TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated June 2017, and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

Addendum to Geotechnical Engineering Report

1. Attached please find the Site Specific Response Analysis (SSRA) for this project.

Specifications

Item 1: SECTION 33 05 24 UTILITY HORIZONTAL DIRECTIONAL DRILLING

Replace Part 2.2.A with:

- A. **Polyethylene Pipe: Provide 16" IPS, AWWA C901, DR9, 250 psig pressure rating.**
 1. **Fittings: AWWA C901 molded or fabricated.**
 2. **Joints: Butt fusion.**

Replace Part 2.2.B with:

- B. **Fusible Polyvinyl Chloride (fPVC): Provide 12" DIPS, AWWA C900 and AWWA C905, DR18, 235 psi, marked with NSF 61 designation for potable water use.**
 1. **Fittings: PVC, AWWA C900 and AWWA C905**
 2. **Joints: Butt fusion.**

Appendix C

1. Attached, please find Appendix C, Tank Logo.

Item 2: SECTION 43 43 21 PEDESPHERE ELEVATED WATER STORAGE TANK

Replace Part 2.4.A.2 with:

2. The supporting structure shall be a butt-welded single pedestal having a minimum shaft diameter adequate for the capacity and height of tower. Transition sections at the top and bottom of the pedestal shall be in accordance with the manufacturer's standard. The transition from the base to the pedestal shall be a truncated cone with a compression ring. The transition from pedestal to tank shall be a double-curved smooth knuckle. To ensure an aesthetically pleasing tank the design of the cone and ball plate(s) shall minimize the number and total length of visible weld seams (shop and field). A scaled plate layout sketch must be provided with the bid, or be cause for rejection.

Plans

Item 1: Clarification for sheets C-01, C-02, and C-03, pipeline profiles

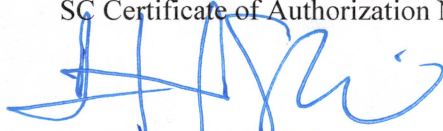
Transitions from HDD installed pipe to open-cut installed pipe are to be accomplished in the following manner:

- A. For fPVC piping, transition connections are to be made as necessitated by the final HDD alignment with 11.25° or 22.5° restrained joint ductile iron bends and/or restrained joint ductile iron solids sleeves. The cost of these connections shall be included in the unit price bid per linear foot for the HDD portions of the project.
- B. For HDPE piping, transition connections are to be made as necessitated by the final HDD alignment with restrained joint ductile iron reducers with HDPE to ductile iron adapters, and 11.25° or 22.5° restrained joint ductile iron bends. The cost of these connections shall be included in the unit price bid per linear foot for the HDD portion of the project.

Receipt of this addendum must be acknowledged on Page 00311-2 of your Bid Form.

Sincerely,

W. K. Dickson & Co., Inc.
SC Certificate of Authorization No. C00177

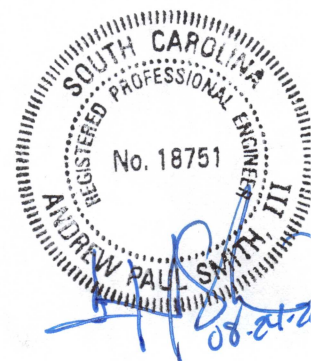


A. Paul Smith, III, P.E.
Project Manager

NL

City of Georgetown
North Side Water Storage Tank
WKD Project Number: 20160218.00.CH
July 2017

SEAL



Addendum No. 2
00 91 13 - 2
August 24, 2017

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

July 25, 2017



WK Dickson & Co., Inc.
162 Seven Farms Drive, Suite 210
Charleston, SC 29492

Mr. Bill Young, P.E.
O: 843-416-5560
M: 843-261-3811
E: byoung@wkdickson.com

Re: Addendum to Geotechnical Engineering Report
Site Specific Response Analysis (SSRA)
North Side Water Tank
Georgetown, South Carolina
Terracon Project Number: EN175102

Dear Mr. Young:

Terracon Consultants, Inc. (Terracon) has completed a Site Specific Response Analysis (SSRA) for the above referenced project. We understand that the fundamental period of the new structure may exceed (structural engineer to confirm) 0.5 seconds which excludes it from the exception allowed by ASCE 7-10 (Section 20.3.1). Therefore,, the IBC 2015 requires an SSRA to be performed.

Site Specific Response Analysis

To further characterize seismic accelerations for structural design purposes, Terracon has performed a SSRA for the North Side Water Tank site. The SSRA was conducted following the procedures outlined in ASCE 7-10 Chapter 21. The SSSE analysis was conducted using linear equivalent methodologies with the computer program SHAKE2000 (distributed by GeoMotions, LLC). Synthetic earthquake time histories and accelerations obtained from SCDOT on a nearby project site were used as inputs into the analysis. In addition, data from nearby Terracon projects and SCDOT was used to supplement soils information below our testing depths at the site.

Based on the results SSRA, the seismic design parameters for the site are outlined in the following table. The Site Specific Design Curve and supporting documents are provided Appendix A of this Addendum.

Site Specific Seismic Design Parameter	Value
S_{DS}	0.48g
S_{D1}	0.40g
PGA_M	0.34g



Addendum to Geotechnical Engineering Report
North Side Water Tank ■ Georgetown, South Carolina
July 25, 2017 ■ Project No. EN175102

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this addendum, or if we may be of further service, please contact us.

Respectfully submitted,
Terracon Consultants, Inc.



Christina Lee, EIT
Project Geotechnical Manager



Bryan T. Shiver, PE
Geotechnical Department Manager
SC Registration No. 27816



Attachments:

APPENDIX A – SSSE Site Specific Design Curve and Supporting Documents

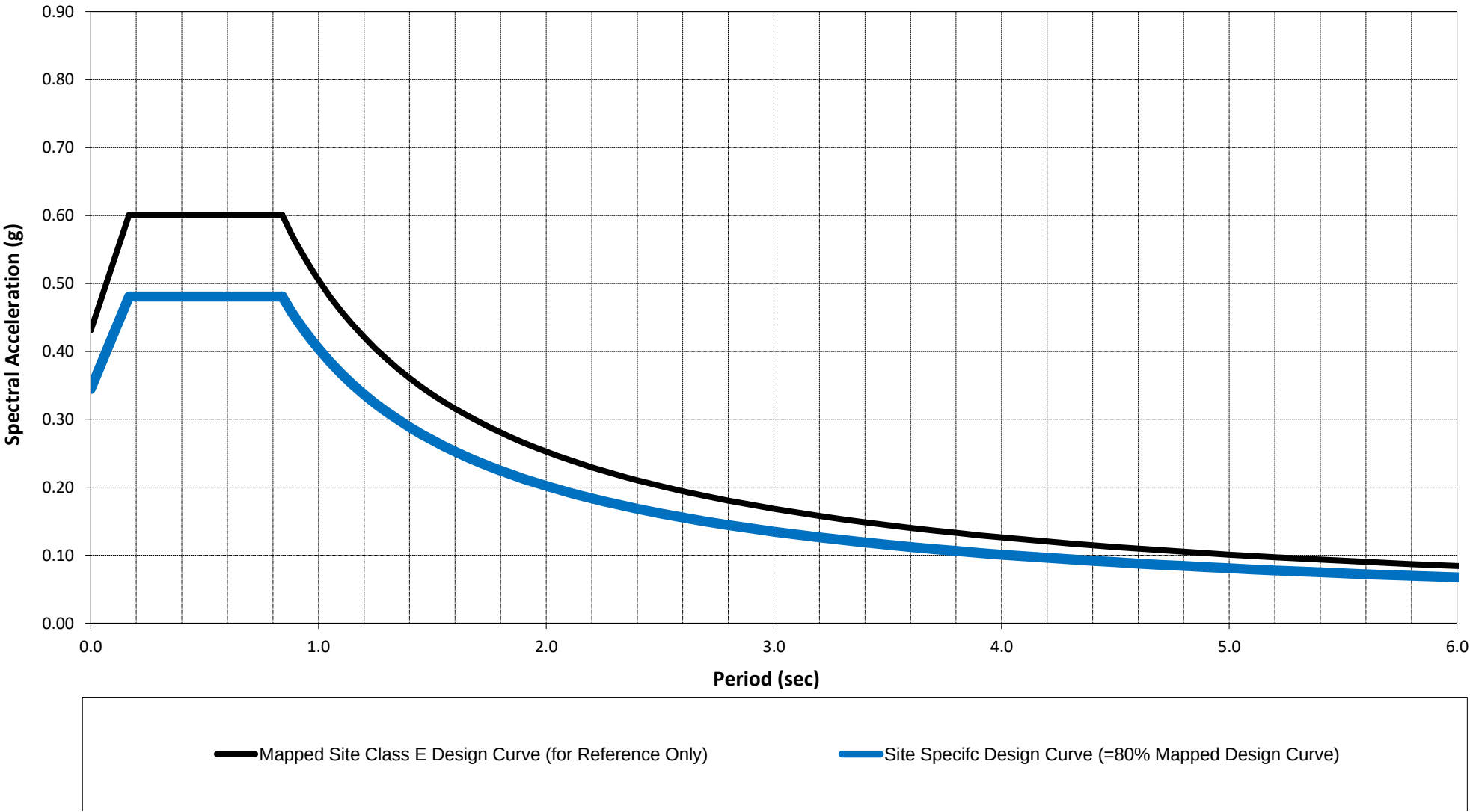
Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

APPENDIX A

SSSE Site Specific Design Curve and Supporting Documents

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

Site Specific Design Curve
Damping = 5 %



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS
Georgetown North Side Water Tank
Georgetown, SC
TERRACON PROJECT No: EN175102

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

DESIGN HORIZONTAL ACCELERATION RESPONSE SPECTRA AT GROUND SURFACE
ASCE 7-10 CHAPTER 21

Mapped Response Data for Site Class E	
T_0 (sec) =	0.17
T_s (sec) =	0.84
S_{D5} (g) =	0.60
S_{D1} (g) =	0.51
PGA (g) =	0.43
F_a =	1.20
F_v =	2.99

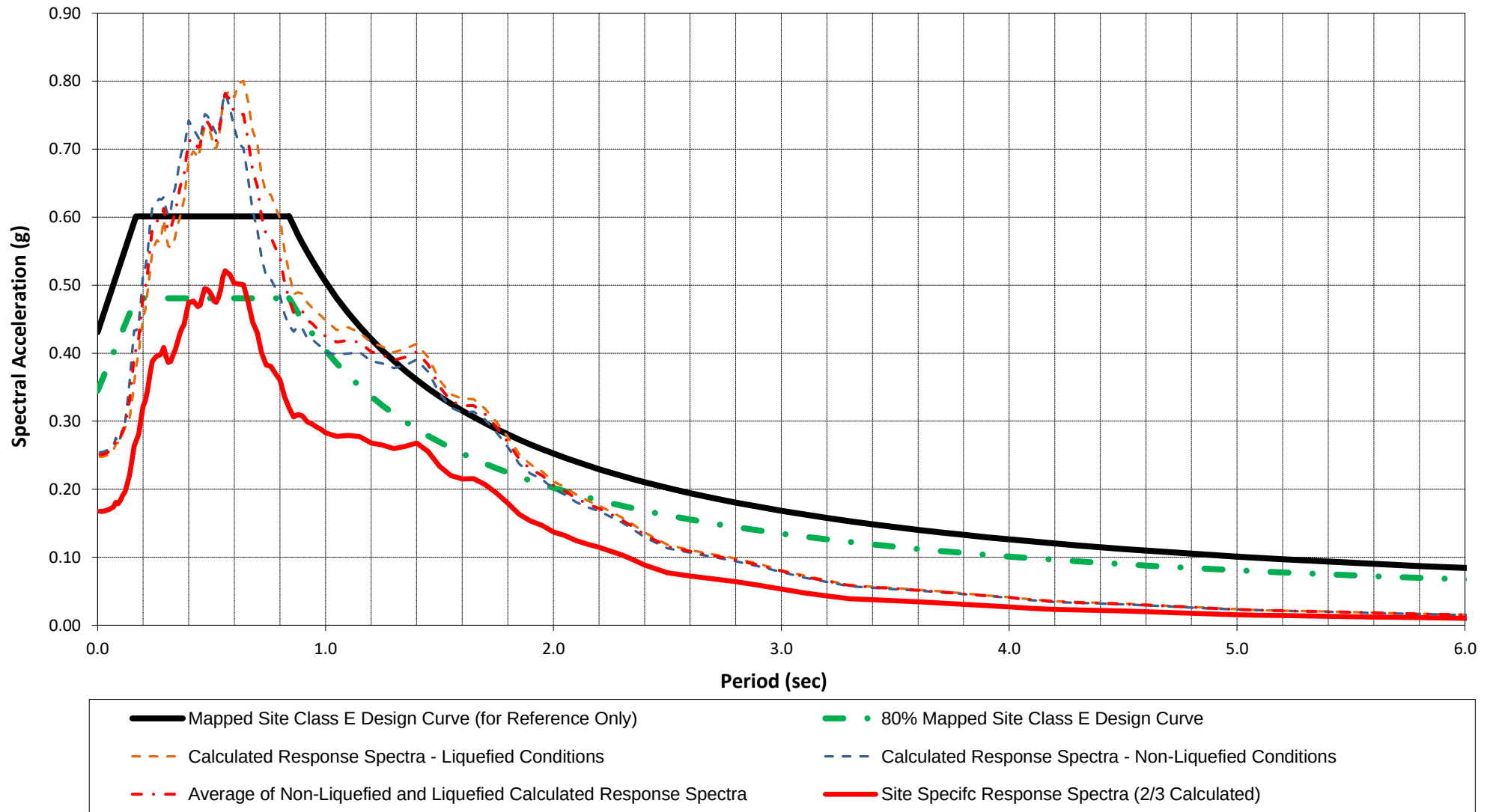
Site Specific Design Curve Parameters	
$S_{DS}(g) =$	0.48
$S_{D1}(g) =$	0.40
$T_0(sec) =$	0.17
$T_s(sec) =$	0.84
$PGA_M(g) =$	0.34

	Mapped Site Class E Design Curve	
	0.000	0.431
T ₀	0.168	0.601
T _s	0.840	0.601
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.840	0.601
	0.860	0.587
	0.880	0.574
	0.900	0.561
	0.920	0.549
	0.940	0.537
	0.960	0.526
	0.980	0.515
	1.000	0.505
	1.050	0.481
	1.100	0.459
	1.150	0.439
	1.200	0.421
	1.250	0.404
	1.300	0.388
	1.350	0.374
	1.400	0.361
	1.450	0.348
	1.500	0.337
	1.550	0.326
	1.600	0.316
	1.650	0.306
	1.700	0.297
	1.750	0.289
	1.800	0.281
	1.850	0.273
	1.900	0.266
	1.950	0.259
	2.000	0.253
	2.050	0.246
	2.100	0.240
	2.150	0.235

	Site Specific Design Curve	
	0.000	0.345
T ₀	0.168	0.481
T _s	0.840	0.481
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
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	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.000	0.000
	0.840	0.481
	0.860	0.470
	0.880	0.459
	0.900	0.449
	0.920	0.439
	0.940	0.430
	0.960	0.421
	0.980	0.412
	1.000	0.404
	1.050	0.385
	1.100	0.367
	1.150	0.351
	1.200	0.337
	1.250	0.323
	1.300	0.311
	1.350	0.299
	1.400	0.289
	1.450	0.279
	1.500	0.269
	1.550	0.261
	1.600	0.253
	1.650	0.245
	1.700	0.238
	1.750	0.231
	1.800	0.224
	1.850	0.218
	1.900	0.213
	1.950	0.207
	2.000	0.202
	2.050	0.197
	2.100	0.192
	2.150	0.188

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

Design Horizontal Acceleration Response Spectra at GROUND SURFACE **Damping = 5 %**



Terracon

SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)

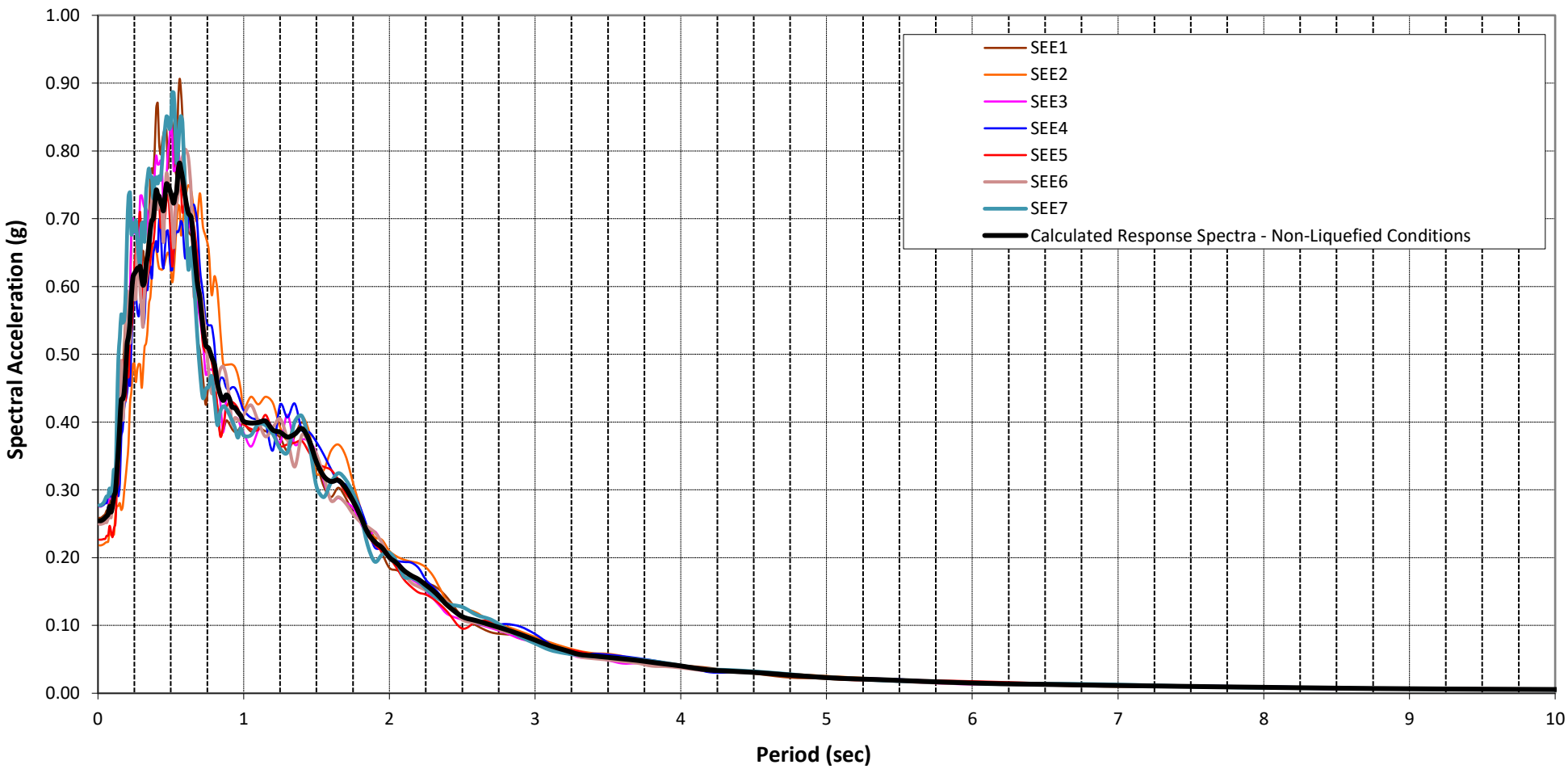
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS

Georgetown North Side Water Tank

Georgetown, SC

TERRACON PROJECT No: EN175102

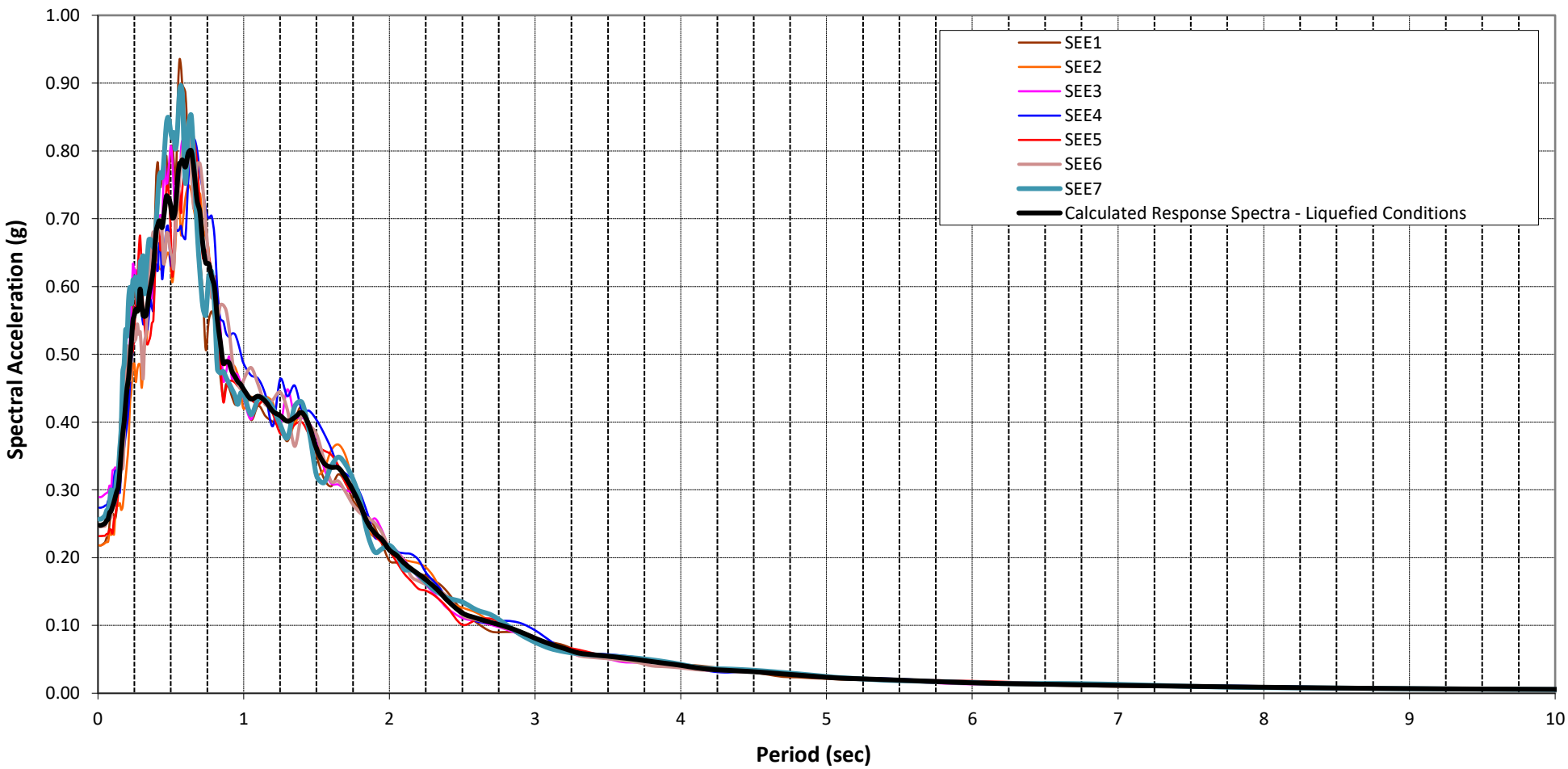
SHAKE Site Specific Horizontal Acceleration Response Spectra at GROUND SURFACE
Damping = 5 % - NON-LIQUEFIED SOIL PROFILE



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS
Georgetown North Side Water Tank
Georgetown, SC
TERRACON PROJECT No: EN175102

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

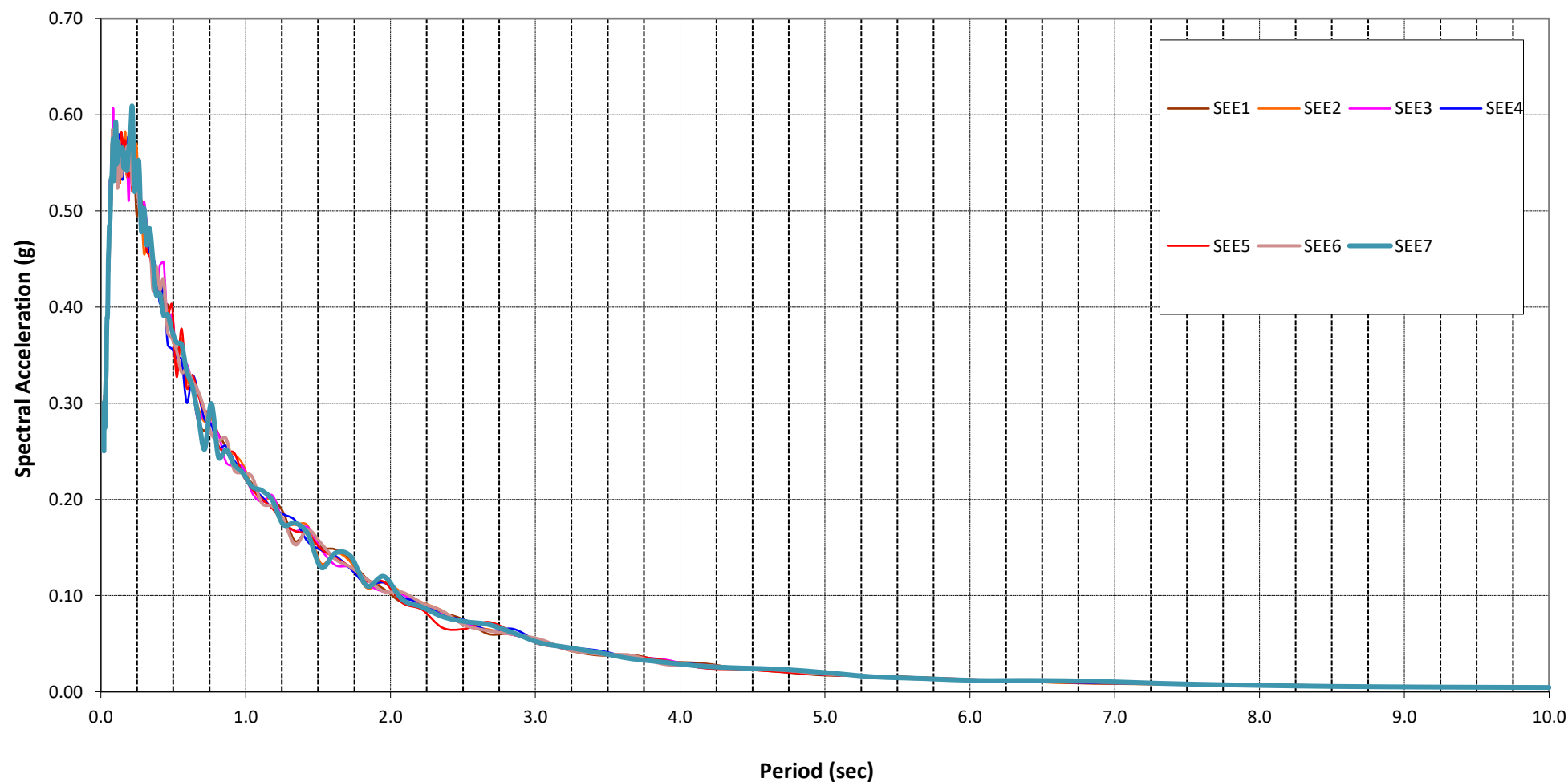
SHAKE Site Specific Horizontal Acceleration Response Spectra at GROUND SURFACE
Damping = 5 % - LIQUEFIED SOIL PROFILE



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS
Georgetown North Side Water Tank
Georgetown, SC
TERRACON PROJECT No: EN175102

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

Seismic Hazard - Input Accelerations (from SCDOT)



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)

SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS

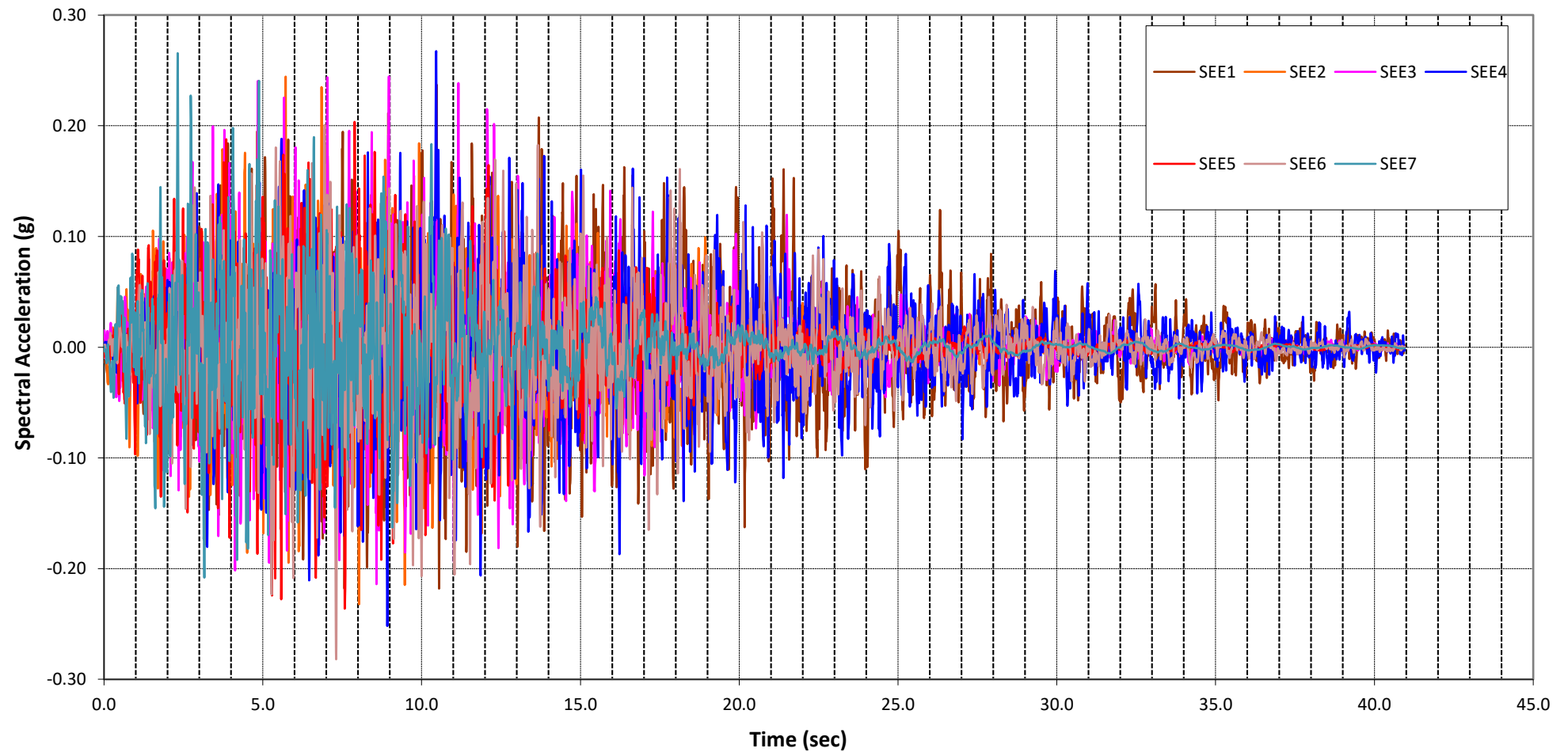
Georgetown North Side Water Tank

Georgetown, SC

TERRACON PROJECT No: EN175102

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

Seismic Hazard - Acceleration Time Histories (from SCDOT)



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)

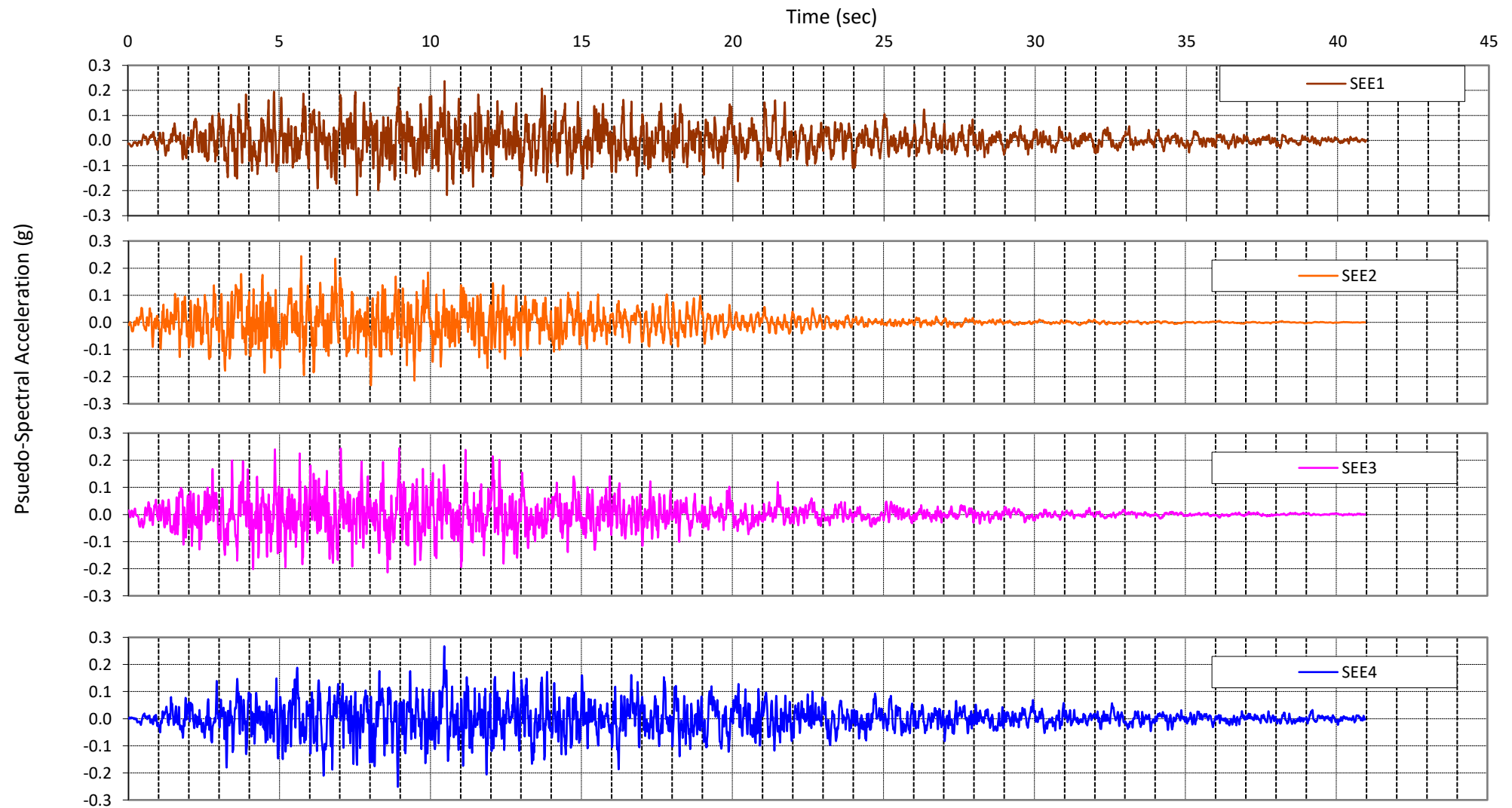
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS

Georgetown North Side Water Tank

Georgetown, SC

TERRACON PROJECT No: EN175102

Seismic Hazard - Acceleration Time Histories (from SCDOT)



SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)

SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS

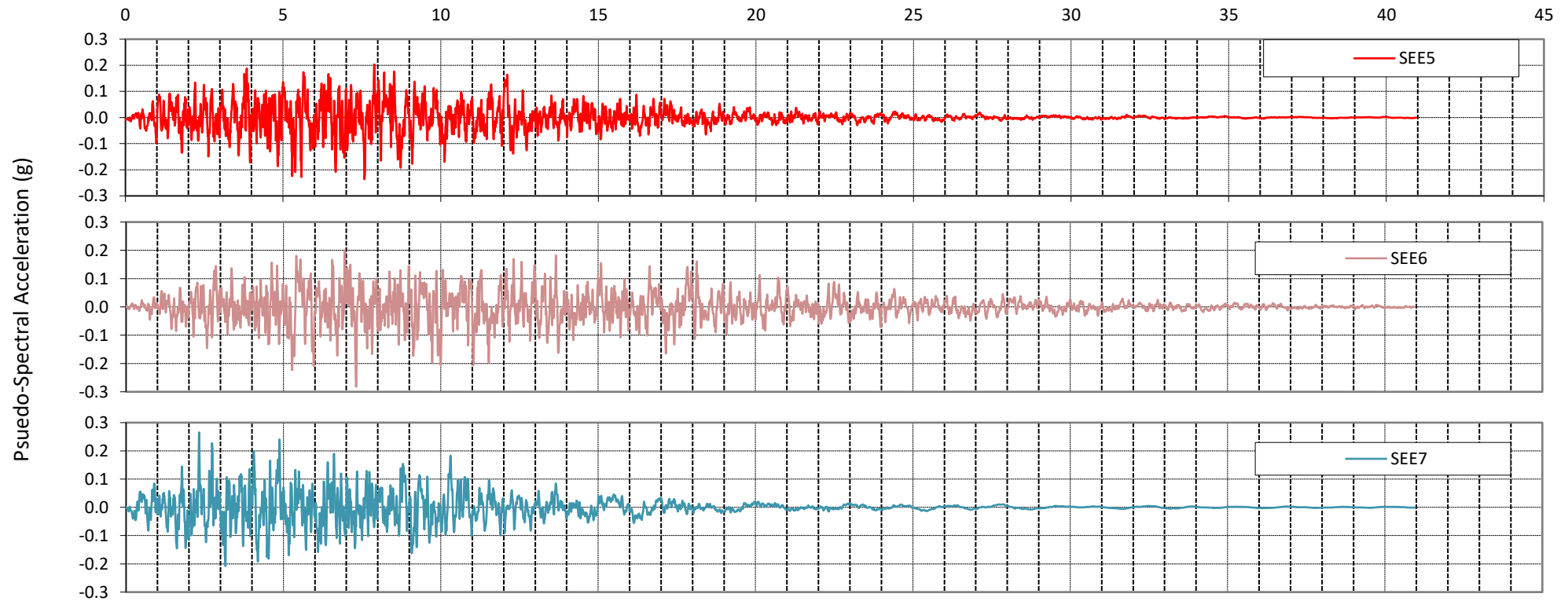
Georgetown North Side Water Tank

Georgetown, SC

TERRACON PROJECT No: EN175102

Seismic Hazard - Acceleration Time Histories (from SCDOT)

Time (sec)


Terracon
SITE SPECIFIC SEISMIC RESPONSE SPECTRA - 2% IN 50 YEARS (2475 year return period)
SITE SPECIFIC SEISMIC RESPONSE - LINEAR EQUIVALENT ANALYSIS

Georgetown North Side Water Tank

Georgetown, SC

TERRACON PROJECT No: EN175102

Georgetown Noth Side Water Tank
Site Specific Response Analysis



Terracon Project No: EN175102

ONE DIMENSIONAL SOIL COULMN MODEL INPUT FOR SHAKE2000

Depth to water table = 6 ft
Depth to B-C Boundary = 500 ft

Geologic Time	Layer No	Depth to Bottom of Layer (ft)	Layer Thickness (ft)	Soil Formation	USCS Soil Type	PI	γ_r (pcf)	V_s (ft/sec) Non Liquefied	V_s (ft/sec) Liquefied	Normalized Modulus & Damping Curve Model (Adjusted for Geol. Age, σ_m , PI)	Effective stress (psf)	Ko	Mean Confining Stress (psf)	Mean Confining Stress (kPa)
Quarternary	1	6	6	Silty Sand	SM	0	120	600	480	Zhang, Andrus, et al 2003 - Med.	547	0.4	328	16
	2	15	9	Silty Sand	SM	0	120	462	370	Zhang, Andrus, et al 2003 - Med.	979	0.4	588	28
	3	18	3	Clayey Sand/Sandy Clay	SC / CL	20	120	557	446	Zhang, Andrus, et al 2003 - Med.	1325	0.5	919	44
	4	24	6	Silty to Clayey Sand	SC to SM	8	120	642	514	Zhang, Andrus, et al 2003 - Med.	1584	0.5	1010	48
	5	30	6	Sandy Clay	CL	20	120	495	396	Zhang, Andrus, et al 2003 - Med.	1930	0.5	1338	64
Tertiary	6	38	8	Fractured Limestone	SP	0	120	744	744	Zhang, Andrus, et al 2003 - Med.	2333	0.4	1400	67
	7	45	7	Fractured Limestone	SP	0	120	1373	1373	Zhang, Andrus, et al 2003 - Med.	2765	0.4	1659	79
	8	57	12	Silty Sand	SM	10	120	1173	1173	Zhang, Andrus, et al 2003 - Med.	3312	0.5	2142	103
	9	72	15	Silty Clayey Sand	SC-SM	20	120	811	811	Zhang, Andrus, et al 2003 - Med.	4090	0.5	2835	136
	10	77	5	Fractured Limestone	SP	0	120	1385	1385	Zhang, Andrus, et al 2003 - Med.	4666	0.4	2799	134
	11	87	10	Sandy Clay	CL	20	120	1652	1652	Zhang, Andrus, et al 2003 - Med.	5098	0.5	3534	169
	12	112	25	Clayey Sand	SC	10	120	1261	1261	Zhang, Andrus, et al 2003 - Med.	6106	0.5	3948	189
	13	132	20	Sandy Clay	CL	20	120	1669	1669	Zhang, Andrus, et al 2003 - Med.	7402	0.5	5132	246
	14	140	8	Silty Clayey Sand	SC-SM	20	120	1459	1459	Zhang, Andrus, et al 2003 - Med.	8208	0.5	5691	272
	15	160	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	9014	0.5	6040	289
	16	180	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	10166	0.5	6811	326
	17	200	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	11318	0.5	7583	363
	18	220	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	12470	0.5	8355	400
	19	240	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	13622	0.5	9127	437
	20	260	20	Sandy Lean Clay	CL	15	120	1336	1336	Zhang, Andrus, et al 2003 - Med.	14774	0.5	9899	474
	21	280	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	15926	0.5	10671	511
	22	300	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	17078	0.5	11443	548
	23	320	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	18230	0.5	12214	585
	24	340	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	19382	0.5	12986	622
	25	360	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	20534	0.5	13758	659
	26	380	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	21686	0.5	14530	696
	27	400	20	Sandy Lean Clay	CL	15	120	1436	1436	Zhang, Andrus, et al 2003 - Med.	22838	0.5	15302	733
	28	420	20	Sandy Lean Clay	CL	15	120	2373	2373	Zhang, Andrus, et al 2003 - Med.	23990	0.5	16074	770
	29	440	20	Sandy Lean Clay	CL	15	120	2373	2373	Zhang, Andrus, et al 2003 - Med.	25142	0.5	16845	807
	30	460	20	Sandy Lean Clay	CL	15	120	2373	2373	Zhang, Andrus, et al 2003 - Med.	26294	0.5	17617	844
	31	480	20	Sandy Lean Clay	CL	15	120	2373	2373	Zhang, Andrus, et al 2003 - Med.	27446	0.5	18389	880
	32	500	20	Sandy Lean Clay	CL	15	120	2373	2373	Zhang, Andrus, et al 2003 - Med.	28598	0.5	19161	917
	33	B-C Boundary		Rock		0	135	2500	2500	Zhang, Andrus, et al 2003 - Med.			NA	

Attachment: Addendum #2 (2383 : Approval of construction bid for North Water Tank)

APPENDIX C

TANK LOGO



DOCUMENT 00 91 13
ADDENDUM

City of Georgetown
North Side Water Storage Tank
Project #1508
WKD Project Number: 20160218.00.CH

ADDENDUM NUMBER: 3

Date Prepared: 08/30/2017

BID DATE: September 6, 2017TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated June 2017, and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

General

Item 1: Please see attached geotechnical addendum regarding uplift capacity of deep pile foundations.

Specifications

Item 1: Specification Section 43 43 21, Pedosphere Elevated Water Storage Tank.

Replace section 2.2.A in its entirety with the following:

2.2 ENVIRONMENTAL LOADS – AWWA D100 AND ASCE 7-05

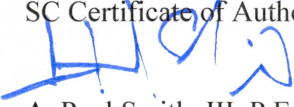
- A. Wind Load – Wind pressure shall be determined in accordance with AWWA D100, Section 3.1.4. Basic wind speed used in the Wind Pressure formula shall be determined using the mapped site location and Figure 1 of AWWA D100. Wind pressure to be calculated based upon ASCE 7-05.**

Basic Wind Speed (BWS) =129 MPH

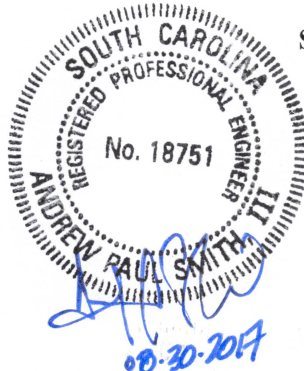
Receipt of this addendum must be acknowledged on Page 00311-2 of your Bid Form.

Sincerely,

W. K. Dickson & Co., Inc.
SC Certificate of Authorization No. C00177


A. Paul Smith, III, P.E.
Project Manager

City of Georgetown
North Side Water Storage Tank
WKD Project Number: 20160218.00.CH
July 2017



SEAL



Addendum No. 3
00 91 13 - 1
August 30, 2017

Attachment: Addendum #3 (2383 : Approval of construction bid for North Water Tank)

August 29, 2017

WK Dickson & Co., Inc.
162 Seven Farms Drive, Suite 210
Charleston, SC 29492



Attn: Mr. Bill Young, P.E.
O: 843-416-5560
M: 843-261-3811
E: byoung@wkdickson.com

Re: Uplift Capacity Letter
North Side Water Tank
Georgetown, South Carolina
Terracon Project Number: EN175102

Dear Mr. Young:

As requested, Terracon Consultants, Inc. (Terracon) has performed an uplift capacity analysis for the above referenced project.

1.1 Uplift Capacity of Deep Foundations

Uplift capacities were calculated based on CPT data correlations performed within the water tank location. A factor of safety of 2 was used to determine the allowable capacities. This factor of safety assumes that a pile load test program utilizing a Pile Dynamic Analyzer (PDA) will be conducted to verify/modify the pile design. We recommend a minimum center to center pile spacing of 3 diameters to avoid group effects.

Uplift capacities have been analyzed for the following deep foundation types:

- n Driven pre-stressed concrete (PSC) piles in 12 and 14 inch square dimensions
- n Driven steel H-piles in 12x53 and 14x75 dimensions

The deep foundation system should be embedded in the very dense sand layer located approximately 30 to 43 feet below the existing ground surface. The following table presents the allowable uplift capacities for each deep foundation option.

Attachment: Addendum #3 (2383 : Approval of construction bid for North Water Tank)



Uplift Capacity Letter

North Side Water Tank ■ Georgetown, SC

August 29, 2017 ■ Terracon Project No. EN175102

Terracon

Deep Foundation Type	Pile Tip Depth Below Existing Grade	Estimate of Allowable Uplift Capacity ^{1,2}
12 in SQ PSC	35 to 40 feet	15 tons
14 in SQ PSC		17 tons
HP 12x53		15 tons
HP 14x73		18 tons

1. Factor of safety = 2.

2. Structural engineer should verify structural capacity of the piles.

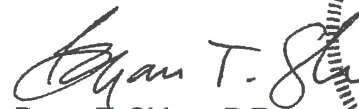
If you have any questions concerning this addendum, or if we may be of further services, please feel free to contact us at your convenience.

Sincerely,

Terracon Consultants, Inc.


Christina Lee, E.I.T.

Geotechnical Project Manager



Bryan T. Shiver, P.E.

Geotechnical Department Manager



Enclosures: 1 – Client (PDF)
1 – File

DOCUMENT 00 91 13
ADDENDUM

City of Georgetown
North Side Water Storage Tank
Project #1508
WKD Project Number: 20160218.00.CH

ADDENDUM NUMBER: 4

Date Prepared: 09/01/2017

BID DATE: September 6, 2017

TO ALL BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Bidding Documents dated June 2017, and all previous Addenda.

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

Below are changes, additions, and/or clarifications to the bid documents for this project.

Specifications

Item 1: Section 40 05 13, part 2.4.C:

Delete "Gaskets shall be natural rubber."

Item 2: Section 43 43 21 section 4.1.H "Tank Vent" Clarification:

Vent screen to be #24 stainless steel mesh.

Item 3: Section 43 43 21 section 4.1.L.3 "Overflow", add the following:

Provide a minimum 6 inch diameter pipe connection and gate valve between the tank fill line and the overflow pipe, connecting downstream of the altitude valve.

Item 4: Section 43 43 21, add new part 4.1.Q:

Q. Signage

- 1. Provide 12"X 18" sign on site fence gate indicating emergency contact telephone number.**

Receipt of this addendum must be acknowledged on Page 00311-2 of your Bid Form.

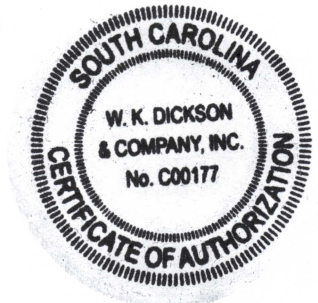
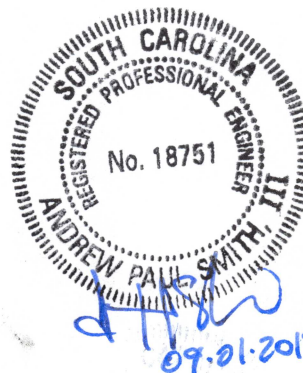
Sincerely,

W. K. Dickson & Co., Inc.
SC Certificate of Authorization No. C00177

A. Paul Smith, III, P.E.
Project Manager

City of Georgetown
North Side Water Storage Tank
WKD Project Number: 20160218.00.CH
July 2017

SEAL



Addendum No. 4
00 91 13 - 1
September 1, 2017

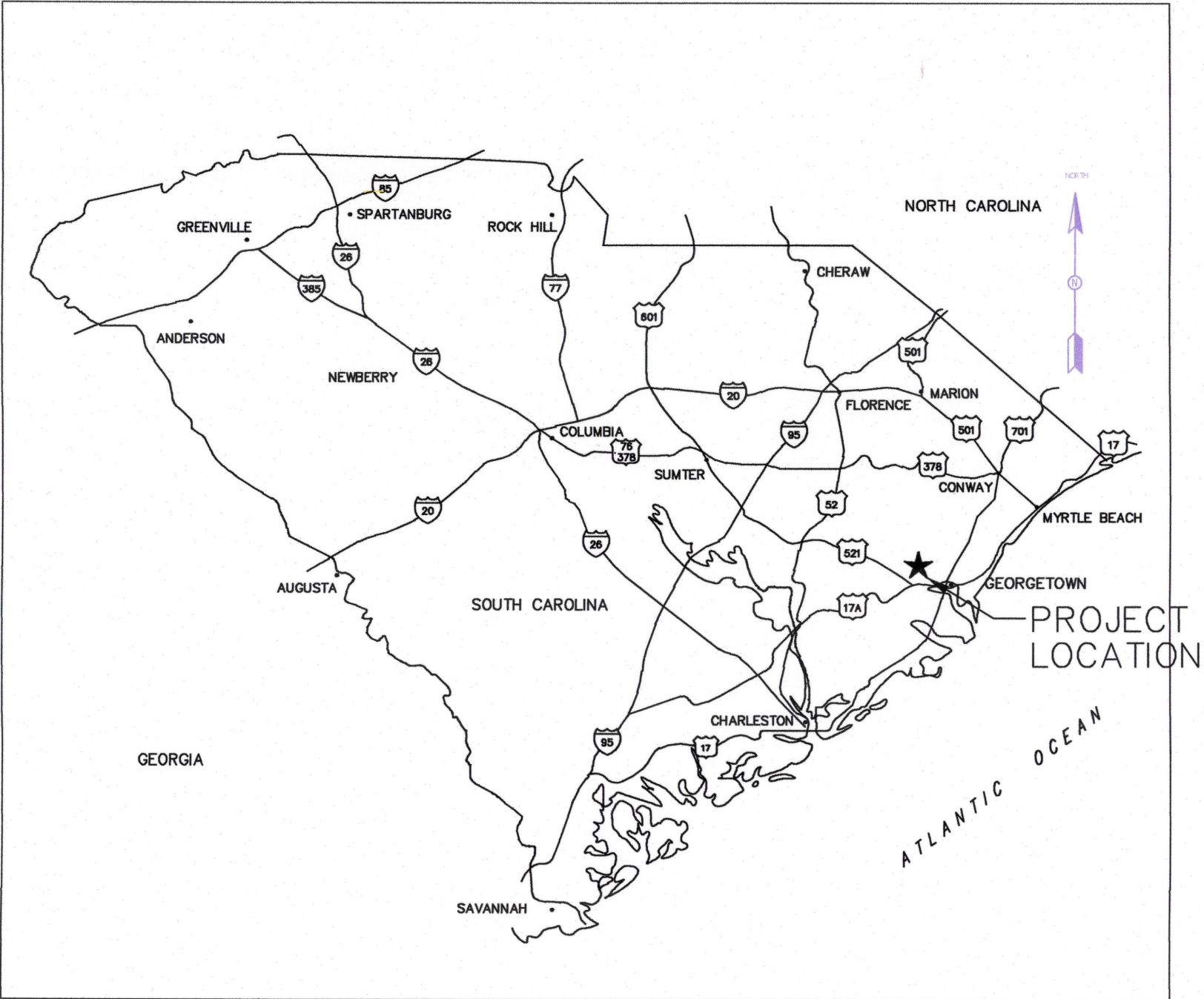
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FILE PATH: \\projects\georgetown\2017-06-29 North Side Tank Bid Set.dwg, 6/28/2017 2:13:05 PM, WHEELER, 6/28/2017 2:13:05 PM

NORTH SIDE WATER STORAGE TANK

COG PROJECT # 1508

CITY OF GEORGETOWN



VICINITY MAP
NTS



LOCATION MAP
NTS



CITY OF GEORGETOWN

2377 ANTHUAN MAYBANK DRIVE
GEORGETOWN, SC 29440
PHONE: 843.545.4500



Sheet List Table	
Sheet Number	Sheet Title
G-00	COVER
G-01	ABBREVIATION AND LEGEND
CS01	WATER STORAGE TANK SITE PLAN
C-01	WATER LINE PLAN AND PROFILE (STA. 0+00 TO 9+50)
C-02	WATER LINE PLAN AND PROFILE (STA. 9+50 TO 19+50)
C-03	WATER LINE PLAN AND PROFILE (STA. 19+50 TO 27+22)
C-501	ELEVATED TANK PLAN, SECTION, AND DETAILS
C-502	DETAILS
CE01	SEDIMENT AND EROSION CONTROL NOTES
CE02	SEDIMENT AND EROSION CONTROL DETAILS
CE03	SEDIMENT AND EROSION CONTROL DETAILS
D-01	ALTITUDE VALVE REPLACEMENT PLAN VIEW (ALT. ADDER #1)
D-02	ALTITUDE VALVE REPLACEMENT PROFILE VIEW (ALT. ADDER #1)

NOTICE TO CONTRACTOR

- 1) THE CONTRACTOR SHALL FIELD VERIFY THE ONSITE T.B.M. w/ EXISTING ELEVATIONS. THE CONTRACTOR SHALL IMMEDIATELY CONTACT W.K. DICKSON & CO., INC. IF ANY DISCREPANCIES ARE FOUND IN ELEVATIONS SHOWN.
- 2) PRIOR TO CONSTRUCTION, DIGGING, OR EXCAVATION THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES (PUBLIC OR PRIVATE) THAT MAY EXIST AND CROSS THROUGH THE AREA(S) OF CONSTRUCTION, WHETHER INDICATED ON THE PLANS OR NOT. CALL "811" A MINIMUM OF 72 HOURS PRIOR TO DIGGING OR EXCAVATING. REPAIRS TO ANY UTILITY DAMAGED RESULTING FROM CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



Know what's below.
Call before you dig

REV RECORD:			REV RECORD:		
BY	DATE	DESCRIPTION	BY	DATE	DESCRIPTION

ISSUED RECORD:		
BY	DATE	DESCRIPTION
WJW	06/28/17	BID SET (NFC)

PROFESSIONAL SEAL

BID SET - NOT FOR CONSTRUCTION

- DRAWING STATUS -

PROJECT NAME:
NORTH SIDE WATER STORAGE TANK

COVER

DRAWING NUMBER:
G-00

PRINCIPAL: AFS
PROJ. MGR: AFS
Q.C.: DKP
Q.C. DATE: 06/28/2017
CAD TECH: WJW

102 SEVEN FARMS DRIVE
CHARLESTON, SC 29402
(843) 416-5560
WWW.WKDICKSON.COM
LICENSE NO.

DRAWING TITLE:

	POWER POLE
	SEWER MANHOLE
	ELEC. TRANSFORMER
	SEWER VALVE
	GUARD RAIL
	STORM DRAINAGE LINE
	SANITARY SEWER LINE
	FORCE MAIN
	EXISTING WETLANDS
	WATER METER
	WATER VALVE
	FIRE HYDRANT
	CATCH BASIN
	TELE. PED.
	GAS VALVE
	FENCE
	TREE LINE
	LIGHT POLE
	CLEAN OUT
	OVER HEAD ELEC.
	GAS LINE
	SIGN
	FIBER OPTIC LINE
	TELEVISION LINE
	WATER LINE
	UNDER GROUND ELEC.
	IRRIGATION VALVE
	CONCRETE PAVING
	CONTOUR
	BOLLARD

	FORCE MAIN
	AIR RELEASE VALVE
	PLUG VALVE
	NEW ASPHALT PAVING
	NEW CONTOUR
	EXISTING ITEMS TO BE REMOVED
	GATE VALVE
	WATER MAIN
	DOUBLE LINE PIPING
	NEW FENCE
	TREE PROTECTION
	SILT FENCE
	SEDIMENT TUBING
	LIMITS OF DISTURBANCE

BV	BALL VALVE
CE	CONSTRUCTION ENT./EXIT
C	CENTERLINE
CV	CHECK VALVE
D / DR	DRAIN
EFF	EFFLUENT
FCA	FLANGE COUPLING ADAPTOR
FM	FORCE MAIN
GV	GATE VALVE
HDD	HORIZONTAL DIRECTIONAL DRILL
I.E.	INVERT ELEVATION
INF	INFLUENT
MJ	MECHANICAL JOINT
NPW	NON POTABLE WATER
OF	OVERFLOW
P	PUMP
PD	PROCESS DRAIN
PA	PROCESS AIR
RJ	RESTRAINED JOINT
V	VENT
W	WATER
WTP	WATER TREATMENT PLANT
WW	WASH WATER

BS	BLACK STEEL
CISP	CAST IRON SOIL PIPE
CPP	CORRUGATED PLASTIC PIPE
DIP	DUCTILE IRON PIPE
FRP	FIBERGLASS REINFORCED PLASTIC
fPVC	FUSIBLE POLYVINYL CHLORIDE
GSP	GALVANIZED STEEL
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE
SSTL OR S.S.	STAINLESS STEEL
STL	STEEL

1. THE BASE MAP, PROPERTY LINE, EXISTING CONDITIONS, AND TOPOGRAPHY WERE TAKEN FROM RECORD DRAWINGS AND CONSTRUCTION DRAWINGS PROVIDED BY OWNER. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, PIPE SIZES AND DEPTHS PRIOR TO ORDERING MATERIALS AND STARTING CONSTRUCTION. NOTIFY THE ENGINEER IF FIELD MEASUREMENTS OR SIZES DIFFER SIGNIFICANTLY FROM DRAWINGS.

2. THE ENGINEER HAS MADE ALL POSSIBLE ATTEMPTS TO LOCATE EXISTING UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD-VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO NOTE ANY CONFLICTS OR DAMAGE TO UTILITIES INCURRED DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR AND IS TO BE REPAIRED AT THE CONTRACTOR'S EXPENSE. P.U.P.S. TELEPHONE NUMBER IS 1-888-721-7877L.

- DRAWING STATUS -

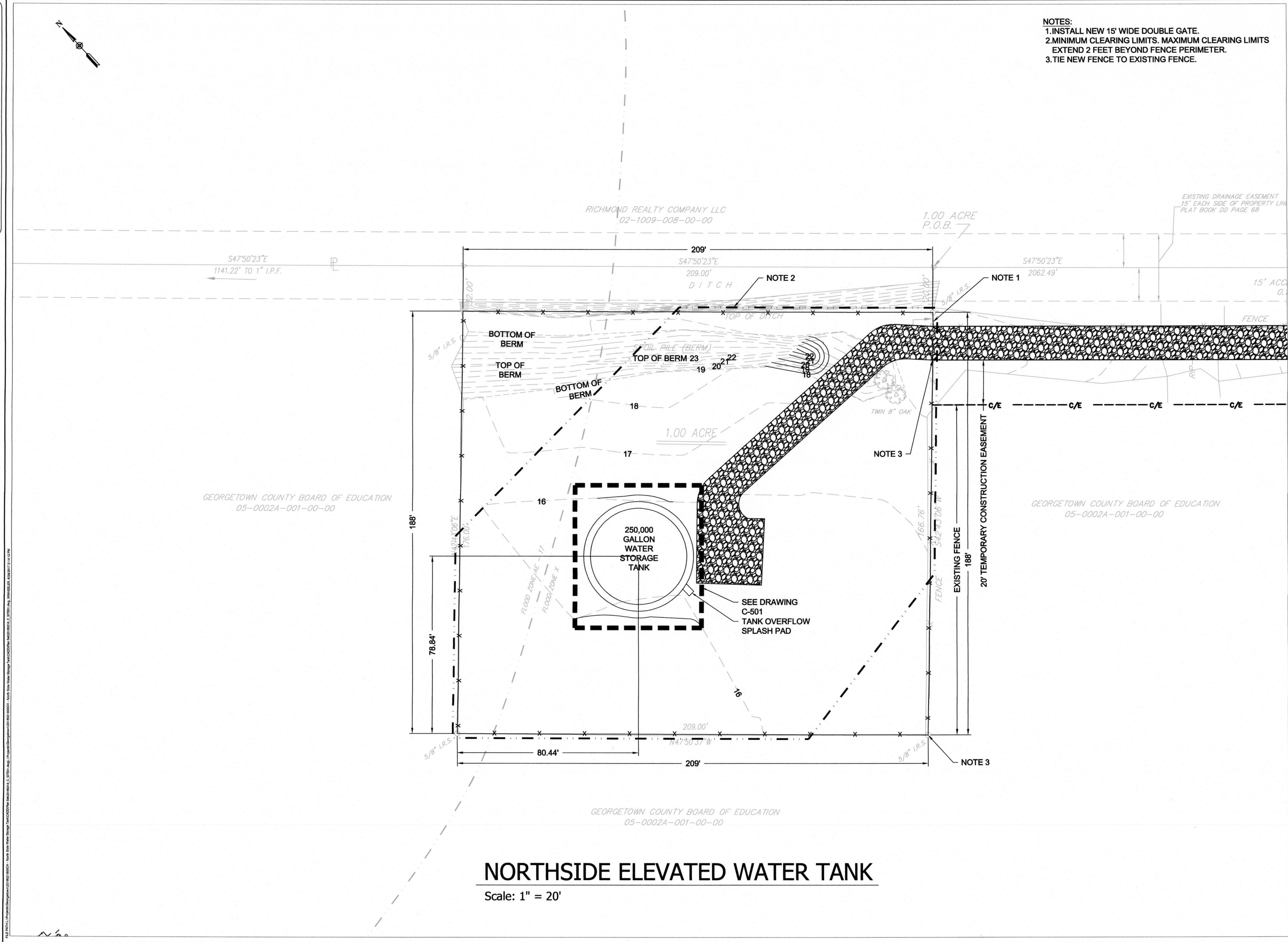
-DRAWING STATUS-



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DRAWING TITLE:	ABBREVIATION AND LEGEND

PROJ. MGR.:	WRF
DESIGN BY:	WRF
DRAWN BY:	WJW
PROJ. DATE:	04/18/2017
DRAWING NUMBER:	
G-01	
WKD PROJ. NO.:	
20160218.00.CH	

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- DRAWING STATUS -

BID SET - NOT FOR CONSTRUCTION

- DRAWING STATUS -

WK DICKSON
community infrastructure consultants

162 SEVEN FARMS DRIVE
SUITE 210
CHARLESTON, SC 29492
(843) 416-5560
(843) 416-5563
WWW.WKDICKSON.COM

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NO. 18751
PAUL J. HARRIS
06-20-2017

SOUTH CAROLINA
NOTARY PUBLIC
W. K. DICKSON & COMPANY, INC.
No. 000177
PROFESSIONAL SEAL

NO.	DATE	DESCRIPTION	WUN	BY
0	06/29/2017	BID SET - NOT FOR CONSTRUCTION		

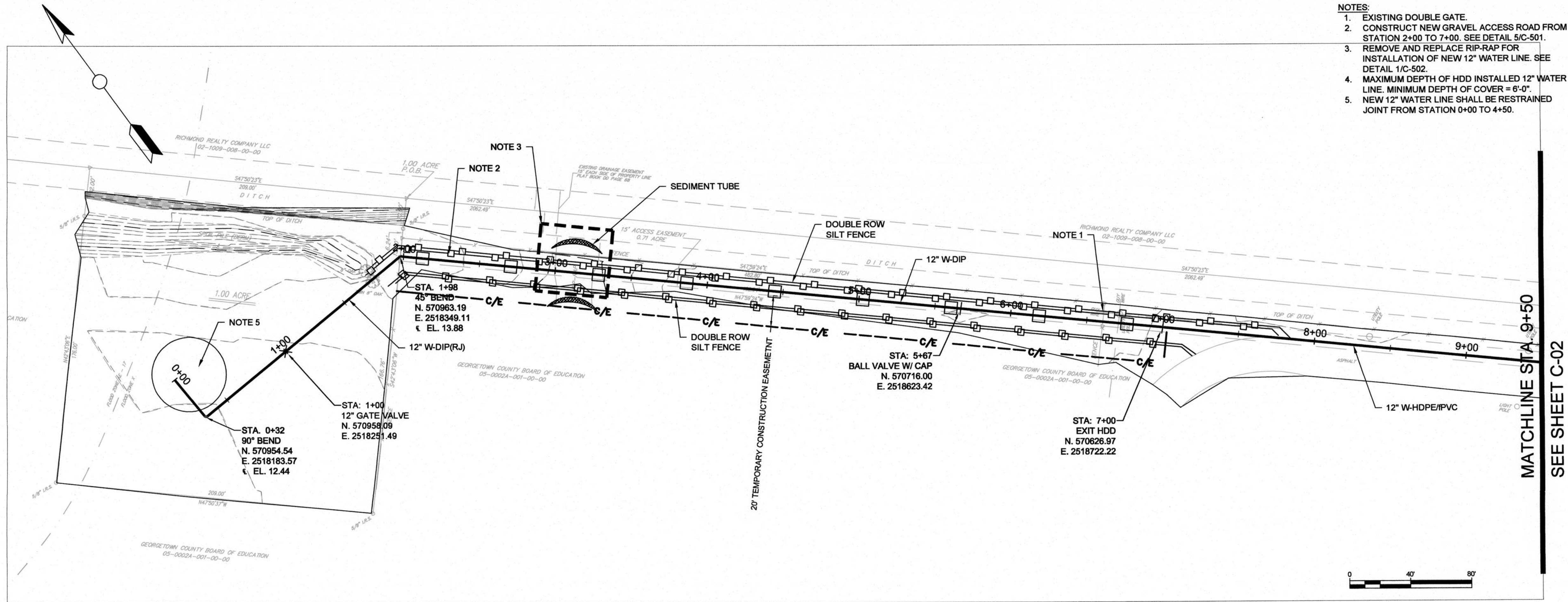
PROJECT NAME:
NORTH SIDE WATER STORAGE TANK

DRAWING TITLE:
WATER STORAGE TANK SITE PLAN

PROJ. MGR.: APS
DESIGN BY: APS
DRAWN BY: WJW
PROJ. DATE: 04/18/2017
DRAWING NUMBER:
CS01
WKD PROJ. NO.:
20160218.00.CH

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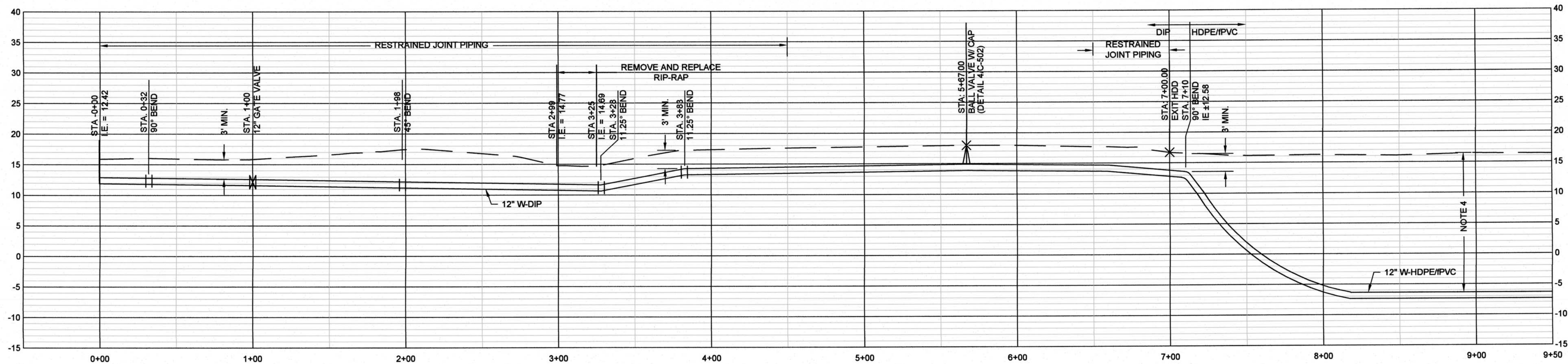
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- NOTES:
1. EXISTING DOUBLE GATE.
 2. CONSTRUCT NEW GRAVEL ACCESS ROAD FROM STATION 2+00 TO 7+00. SEE DETAIL 5/C-501.
 3. REMOVE AND REPLACE RIP-RAP FOR INSTALLATION OF NEW 12\"/>

MATCHLINE STA 9+50
SEE SHEET C-02

WATER LINE PROFILE
HORZ. SCALE: 1"=40
VERT. SCALE: 1"=10



DRAWING STATUS -

BID SET - NOT FOR CONSTRUCTION

DRAWING STATUS -

WK DICKSON
community infrastructure consultants

162 SEVEN FARMS DRIVE
SUITE 210
CHARLESTON, SC 29492
(843) 416-5560
(843) 416-5563
WWW.WKDICKSON.COM

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NO. 18751
PAUL K. DICKSON
10-28-2017

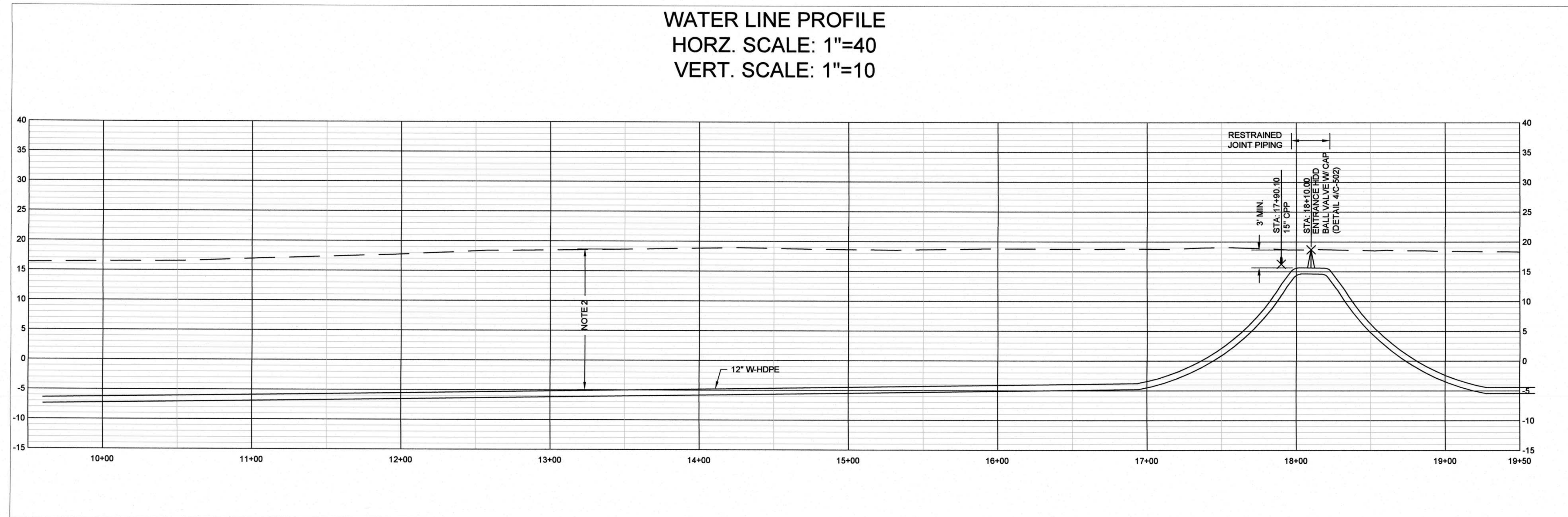
SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
NO. 000177
W. K. DICKSON & COMPANY, INC.
PROFESSIONAL SEAL

REVISION RECORD		WJW	BY
NO.	DATE	DESCRIPTION	
1	06/28/2017	BID SET - NOT FOR CONSTRUCTION	

PROJECT NAME:
NORTH SIDE WATER STORAGE TANK

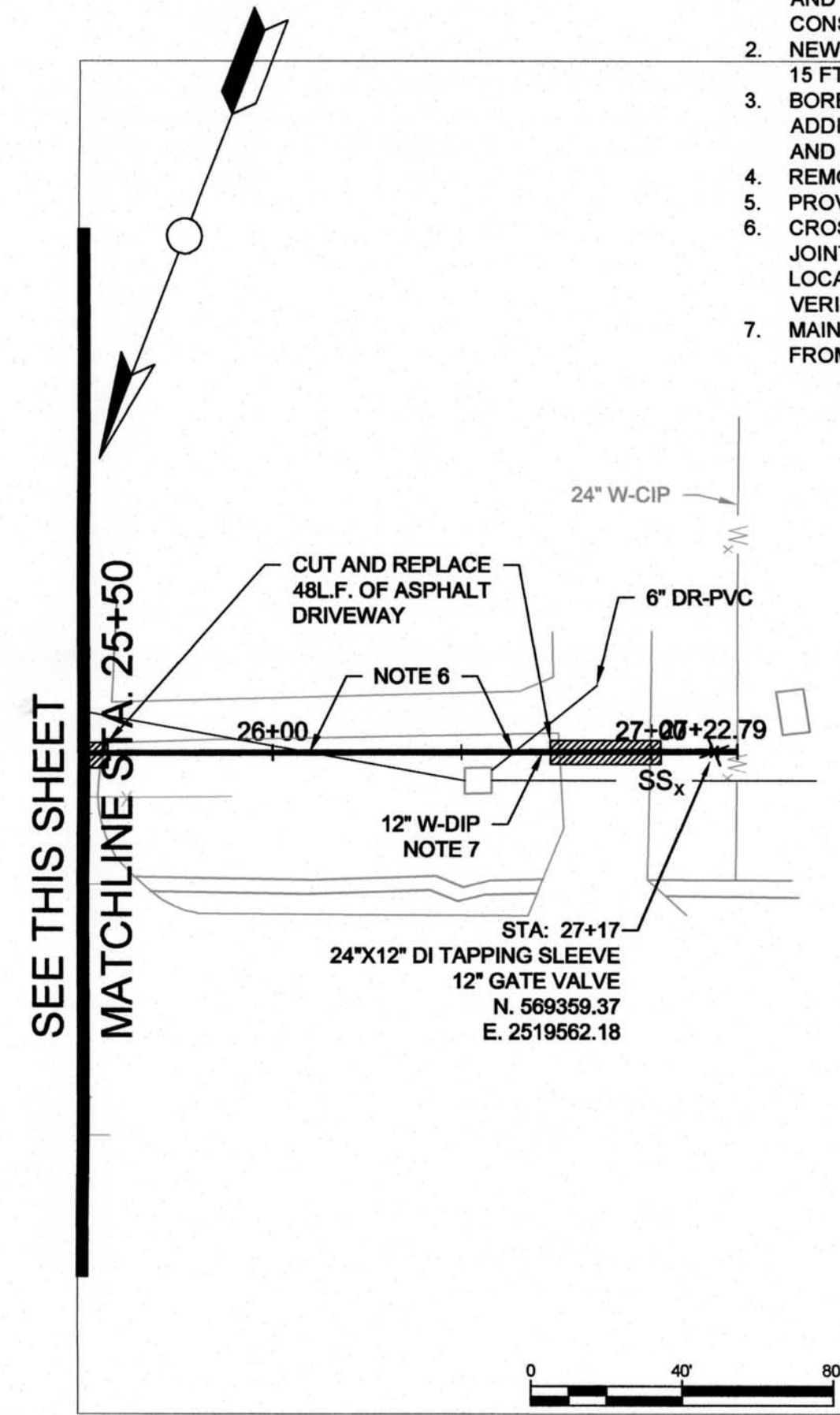
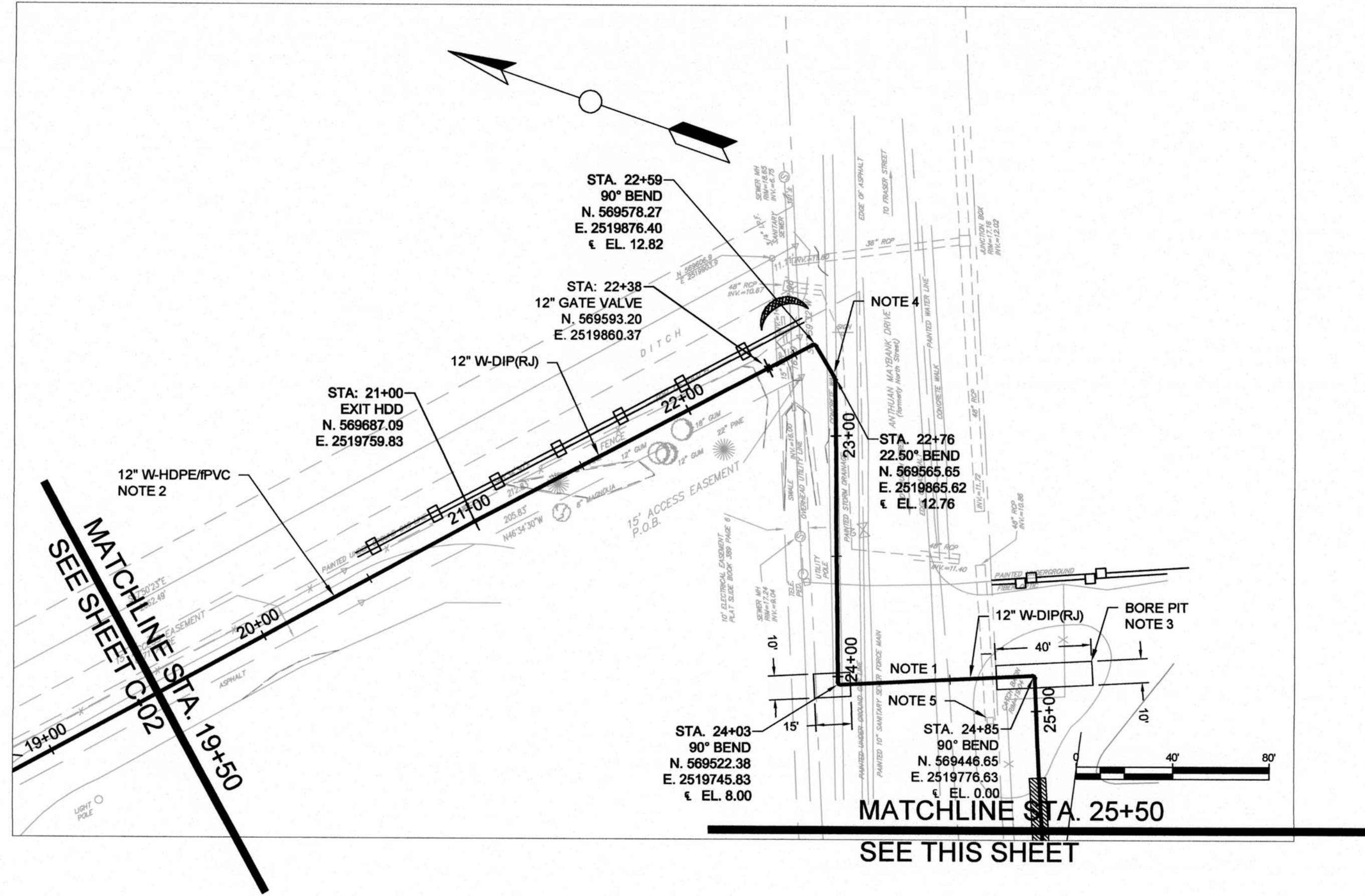
DRAWING TITLE:
WATER LINE PLAN AND PROFILE (STA. 0+00 TO 9+50)

PROJ. MGR.: APS
DESIGN BY: APS
DRAWN BY: WJW
PROJ. DATE: 04/18/2017
DRAWING NUMBER:
C-01
WKD PROJ. NO.:
20160218.00.CH

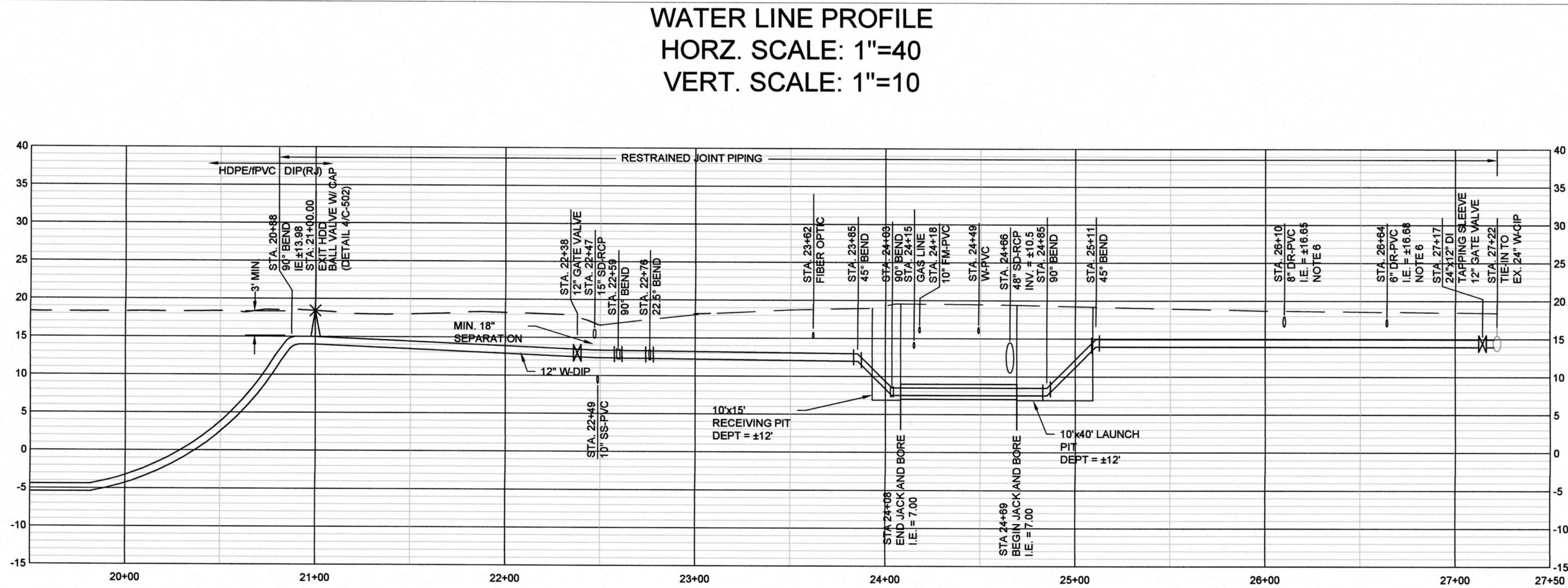


Packet Pg. 537

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- NOTES:**
1. CONTRACTOR TO FIELD VERIFY DEPTHS AND LOCATIONS OF GAS LINE, FORCEMAIN, WATERLINE, AND FIBER OPTIC CABLE PRIOR TO INITIATION OF CONSTRUCTION.
 2. NEW WATERLINE TO BE INSTALLED WITHIN CITY'S 15 FT UTILITY EASEMENT.
 3. BORE PIT SHOWN ON THE CITY'S WTP PROPERTY. ADDITIONAL AREA IS AVAILABLE FOR EQUIPMENT AND LAYDOWN.
 4. REMOVE AND REPLACE 160 L.F. OF SIDEWALK.
 5. PROVIDE INLET PROTECTION.
 6. CROSS EXISTING DRAIN LINES CENTERING FULL JOINT PIPE OVER DRAINING. DRAIN LINE LOCATIONS APPROXIMATE AND TO BE FIELD VERIFIED BY CONTRACTOR.
 7. MAINTAIN 10 FT SEPARATION OF NEW WATERLINE FROM EXISTING SEWER LINE.



- DRAWING STATUS -

BID SET - NOT FOR CONSTRUCTION

- DRAWING STATUS -

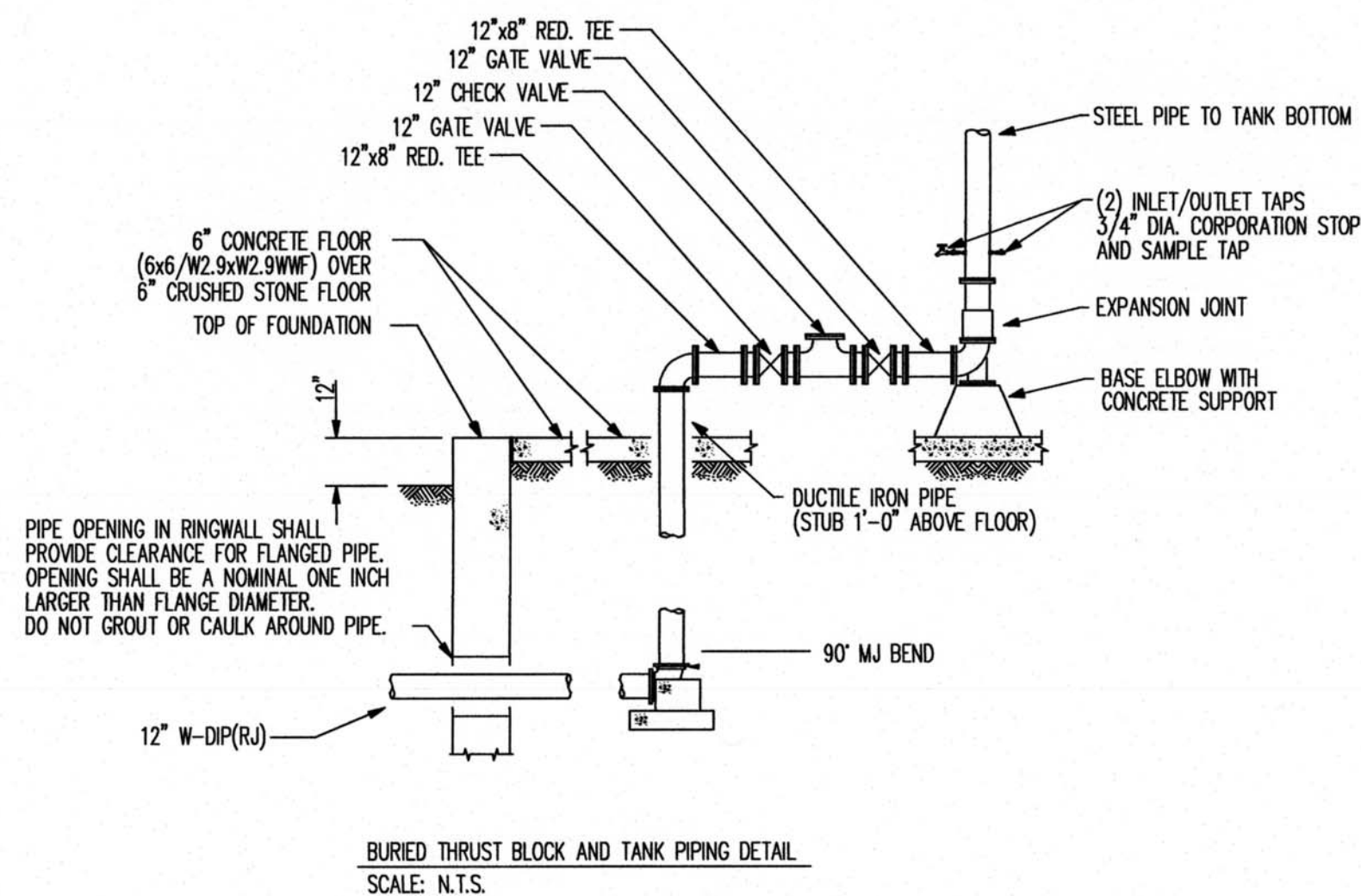
[illegible]

PROJECT NAME: NORTH SIDE WATER STORAGE TANK

DRAWING TITLE:
WATER LINE PLAN AND PROFILE (STA. 19+50 TO 27+22)

PROJ. MGR.:	APS
DESIGN BY:	APS
DRAWN BY:	WJW
PROJ. DATE:	04/18/2017
DRAWING NUMBER:	

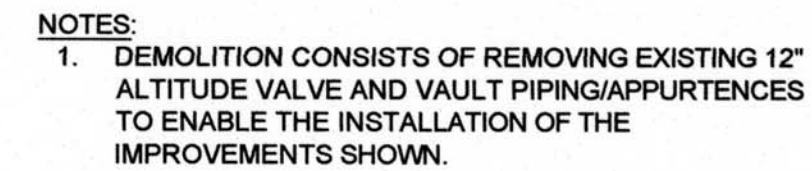
C-03
WKD PROJ. NO.:
20160218.00.CH



- DRAWING STATUS -

WKD PROJ. NO.:
20160218.00.CH





BID SET - NOT FOR CONSTRUCTION

- DRAWING STATUS -

[illegible]

PROJECT NAME:

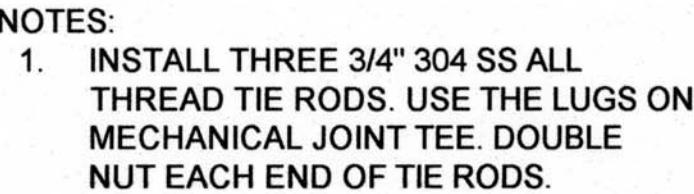
YOGI BEAR WATER STORAGE TANK

DRAWING TITLE: ALTITUDE VALVE REPLACEMENT PLAN VIEW

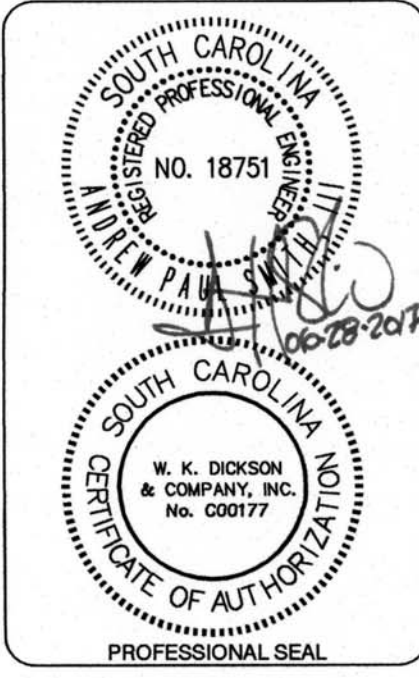
PROJ. MGR.:	APS
DESIGN BY:	APS
DRAWN BY:	WJW
PROJ. DATE:	04/18/2017
DRAWING NUMBER:	

D-01

WKD PROJ. NO.:
20160218.00.CH



- DRAWING STATUS -

[illegible]

DRAWING TITLE:

ALTITUDE VALVE REPLACEMENT PROFILE

PROJ. MGR.:	APS
DESIGN BY:	APS
DRAWN BY:	WJW
PROJ. DATE:	04/18/2017
DRAWING NUMBER:	
D-02	
WKD PROJ. NO.:	
20160218.00.CH	



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ACTION ITEM

DOC ID: 2384

Council Meeting Date:	21 September 2017
Department:	Engineering
Issue Under Consideration:	Motion to engage Weston & Sampson as the engineer of record for the Kaminski Street and Heyward Street Water Main projects and to make payment for a not to exceed amount of \$27,250.00.
Amount Requested:	\$27,250.00 (Kaminski design: \$17,500; Heyward design: \$9,750)
Is Item in Current Budget?	Yes
If no, please explain:	
Financial Impact:	None
Points to Consider:	Weston & Sampson has been selected by the evaluation committee as the top scorer based on qualifications, experience, schedule commitment, and fees.
Options:	Three other engineering firms were considered.
Staff Recommendation:	Select Weston & Sampson to provide engineering services as recommended by the evaluation committee.

Reviews:

Orlando Arteaga Completed 09/14/2017 9:30 AM
 Finance Completed 09/14/2017 10:05 AM
 City Attorney Completed 09/14/2017 10:27 AM
 Paul Gardner Completed 09/14/2017 10:41 AM
 Ann U. Mercer Completed 09/14/2017 12:39 PM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 RFP_Kaminksi St and Heyward St Water Main Replacement_8.7.17 (PDF)
2. 2 RFP Supplemental Information 8.30.2017 (PDF)
3. 3 COG Consulting Services Agreement 08.07.2017 (PDF)
4. 4 SIGN IN SHEET AND SUBMITTAL LISTING (PDF)
5. 5 Weston Sampson Proposal-Kaminski St. 9.6.2017 (PDF)
6. 6 Weston Sampson Proposal-Heyward St. 9.6.2017 (PDF)
7. 7 ANALYSIS of RFP (PDF)

Updated: 9/14/2017 9:27 AM by Orlando Arteaga (Page 1)



REQUEST FOR PROPOSAL

REQUESTOR: City of Georgetown
 1134 North Fraser Street
 Georgetown, SC 29440
 Contact: Daniella Howard, Purchasing Agent
 Email: dhoward@cogsc.com
 Phone: 843.545.4043

PROJECT: Kaminski Street Proj #1511 & Heyward Street Proj #1509 –
 Engineering Services for Water Improvements

BID ID # 2017-016-31

DATE OF ISSUE: August 7, 2017

DUE: On or before 3.00 pm EST (local time) Wednesday, September 6, 2017

Return to physical or mailing address:

Physical Address:

City of Georgetown
 Attn: Purchasing - Bid Proposal
 Engineering Services for Water Improvements
 Proj #'s 1511 & 1509
 1134 N Fraser Street
 Georgetown, SC 29440

Mailing Address:

City of Georgetown
 Attn: Purchasing - Bid Proposal
 Engineering Services for Water Improvements
 Proj #'s 1511 & 1509
 PO Drawer 939
 Georgetown, SC 29442

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- II. RFP PROCESS
- III. BACKGROUND
- IV. SCOPE OF WORK
- V. RESPONSIBILITIES OF THE CITY
- VI. PROPOSAL REQUIREMENTS
- VII. PROJECT SCHEDULE
- VIII. EVALUATION AND SELECTION CRITERIA
- IX. ATTACHMENTS

I. INVITATION TO SUBMIT REQUEST FOR PROPOSAL

RFPs must be submitted in sealed envelopes and clearly marked as follows:

“Engineering Services for Water Improvements Proj #'s 1511 & 1509”

Proposals submitted by mail must meet the same requirements as hand delivered submittals and should be addressed as follows:

Physical Address:

City of Georgetown
Attn: Purchasing - Bid Proposal
Engineering Services for Water
Improvements Proj #'s 1511 & 1509
1134 N Fraser Street
Georgetown, SC 29440

Mailing Address:

City of Georgetown
Attn: Purchasing - Bid Proposal
Engineering Services for Water
Improvements Proj #'s 1511 & 1509
PO Drawer 939
Georgetown, SC 29442

The deadline for submittal is on or before **3.00 pm EST (local time) Wednesday, September 6, 2017**. Proposals received after the deadline will not be accepted for any reason. The City will not accept faxed or emailed proposals. The official clock shall be that of the Purchasing Agent.

Five (5) copies of the written proposal of reproducible quality must be submitted. All project updates and/or Addenda, if any, will be posted on the City's website at www.cogsc.com under “Current Bids”. It is the responsibility of the proposer to obtain this information from the City's website.

All procurement procedures are subject to the City of Georgetown's procurement policies as outlined in Section 2-188 of the City's Municipal Code.

QUESTIONS:

Questions regarding this Request for Proposal (RFP) should be submitted in writing to Orlando Arteaga, P.E., City Engineer, via email to oarteaga@cogsc.com, no later than 5:00 pm EST on August 25, 2017. All submittals shall include the following:

Questions – Kaminski Street Proj #1511 & Heyward Street Proj #1509 – Engineering Services for Water Improvements

Answers to questions will be posted on the City's website at www.cogsc.com under “Current Bids” as an Addendum no later than 5:00 pm EST on Wednesday, August 30, 2017. No questions will be accepted after the aforementioned deadline.

II. RFP PROCESS

The City of Georgetown will conduct the selection of a pre-qualified engineering firm responsible to provide Design, Permitting, Bidding and Construction Management services as described on this RFP. Award for this project will be handled in the following manner:

1. In August of 2014, the City of Georgetown accepted submittal packages in response to a Request for Qualification (RFQ) for engineering services for public improvement projects. Firms interested to work for the City of Georgetown have been identified.
2. This RFP document is available to pre-qualified firms and accessible on the City's website at www.cogsc.com under "Current Bids" or by contacting the City Engineer at 843-545-4501 or oarteaga@cogsc.com.
3. The submittals will be received and evaluated as described in this RFP. At the City's discretion, a short list of the top ranked proposers may be compiled and these may be asked to interview with City staff.
4. At the conclusion of the RFP process, City staff will identify a candidate firm based on ranking score. The pre-selected firm will then be presented to the City of Georgetown Council for approval.
5. The City of Georgetown will notify the approved consultant of the intent to enter into an agreement for professional consulting services as outlined on this RFP.

III. BACKGROUND

Georgetown, South Carolina is an incorporated municipality with a population of approximately 9,163 residents. The City is located 60 miles north of Charleston and 36 miles south of Myrtle Beach and is the end point to the area commonly known as the “Grand Strand”. Tourism is a major economic driver in the area as well as local industries including International Paper and Georgetown Memorial Hospital.

The City of Georgetown is responsible for the treatment and distribution of potable water within the city limits. The water supply system consists of a water treatment plant, tanks, wells, and a network of underground distribution pipe varying in size from 2-in. to 20-in. in diameter.

The City is currently soliciting consultants to provide civil engineering services to replace the existing water main on both Kaminski Street and Heyward Street with a new 6-in. PVC water line. The water main replacement on Kaminski Street extends between the limits of Emmanuel Street and Hawkins Street (Project #1511); and Heyward Street water main is in between S. Fraser Street and Black River Road (Project #1509).

The City anticipates to conduct the design, permitting, bidding and construction phases during the 2017-2018 fiscal year.

IV. SCOPE OF WORK

Provide professional engineering services included but no limited to the design, permitting, bidding and construction management for the replacement of water mains on Kaminski Street (Project no. 1511) and Heyward Street (Project no. 1509). The selected consultant will serve as the Engineer of Record representing the City.

- 1) Provide a topographic and utility survey.
- 2) Prepare signed and sealed construction plans and specifications by a professional engineer licensed in the State of South Carolina.
- 3) Drawings will be submitted as preliminary (60%), advanced detail (90%), for agency review, and bid set (100%).
- 4) Prepare and file SCDOT and SCDHEC permits on behalf of the City.
- 5) Prepare preliminary and final construction cost estimates.
- 6) Incorporate the City's front-end documents as part of the bid documents.
- 7) Conduct pre-bid meeting, bid opening meeting, and pre-construction meeting.
- 8) Provide construction management services which will include review of submittals and shop drawings, response to RFI's, evaluation and recommendation of change order proposals, construction observations reports (assume 3 trips) , perform closeout coordination and final punch-list inspection, submit Notice of Termination (NOT) to DHEC.
- 9) Prepare record drawings based on contractor's as-builts.
- 10) On-site materials testing and construction observations will be performed by the City.

V. RESPONSIBILITIES OF THE CITY

- Provide pertinent information concerning the project including, existing engineering documentation, preliminary layout of the project, GIS information, existing Record Drawings that would assist with the development of the project.
- Review the submittals in a timely fashion in order to maintain the Consultants schedule. Provide comments and final approval of the drawings.
- Provide Front-End Documents for incorporation with the bid drawings and specifications.
- Pay for all applicable SCDOT and SCDHEC permit fees.

VI. PROPOSAL REQUIREMENTS

- A. Submit two separate proposals, one for the Kaminski Street project and the other one for the Heyward Street project outlining the following tasks:
 1. Surveying Fee
 2. Preparation of Construction Drawings and Technical Specifications Fee
 3. Permitting and Bidding Fee
 4. Construction Management Fee
 5. Close-out and Record Drawings Fee
 6. Reimbursable Fee. Cost of document reproduction only. All other expenses such as mileage, meals, etc. will not be reimbursed and are to be included as part of the hourly overhead.

- B. Attach resumes of individuals that will be directly involved in this project.
- C. Attach billing rate sheet by title.
- D. All costs incurred in preparing this proposal will be the responsibility of the Consultant.
- E. Documentation of minority/woman/veteran owned business, if applicable.

VII. PROJECT SCHEDULE

Advertisement of RFP	Monday, August 7 , 2017
Deadline for submitting questions regarding this RFP	Friday, August 25, 2017
Answers to all submitted questions will be posted on the City's website at www.cogsc.com under "Current Bids"	Wednesday, August 30, 2017
RFP Submittal Deadline	On or before 3.00 pm EST, Wednesday, September 6, 2017
City Council Approval (Tentative)	September 21, 2017
Notice to Proceed (Tentative)	September 25, 2017
Design Completion (Tentative)	90 days after Notice to Proceed
Construction Start (Tentative)	March 2018
Construction Completion (Tentative)	June 2018

VIII. EVALUATION AND SELECTION CRITERIA

Proposals will be evaluated and pre-selected for Council approval on the basis of the following criteria:

- A. Expertise of engineering firm with similar projects. (25 points)
- B. Project management skills and technical qualifications of team leaders. (25 points)
- C. Commitment to project schedule. (25 points)
Submit statement indicating you have the resources available to complete the design work within the specified schedule.
- D. Engineering services fee. (25 points)
The City reserves the right to negotiate the fee seeking the most qualified and most economical fee for the best interest of the citizens of Georgetown.

IX. ATTACHMENTS

Attachment A- Professional Consulting Services Agreement

Attachment B- Kaminski Street water map

Attachment C- Hayward Street water map



RFP

SUPPLEMENTAL INFORMATION

PROJECT NAME: Heyward & Kaminski Streets Water Main Improvements

PROJECT #: 1509 & 1511

BID #: 2017-016-31

DATE: August 30, 2017

1. Section VI (A) of the RFP states that two separate proposals must be submitted, one for Kaminski Street and one for Heyward Street. Is it the City's intent to receive two completely separate proposals with two separate fees? If so, will these projects be awarded separately?

The intent is to have two separate proposals with separate fees, one for Heyward Street Water Improvements and the other for Kaminski Street Water Improvements. However, there will be a single consultant agreement incorporating the total fee for the two projects. The construction documents will be prepared as one set for both projects.

2. Can the City provide GIS data and/or records drawings of the existing water system to be evaluated in preparation of this proposal?

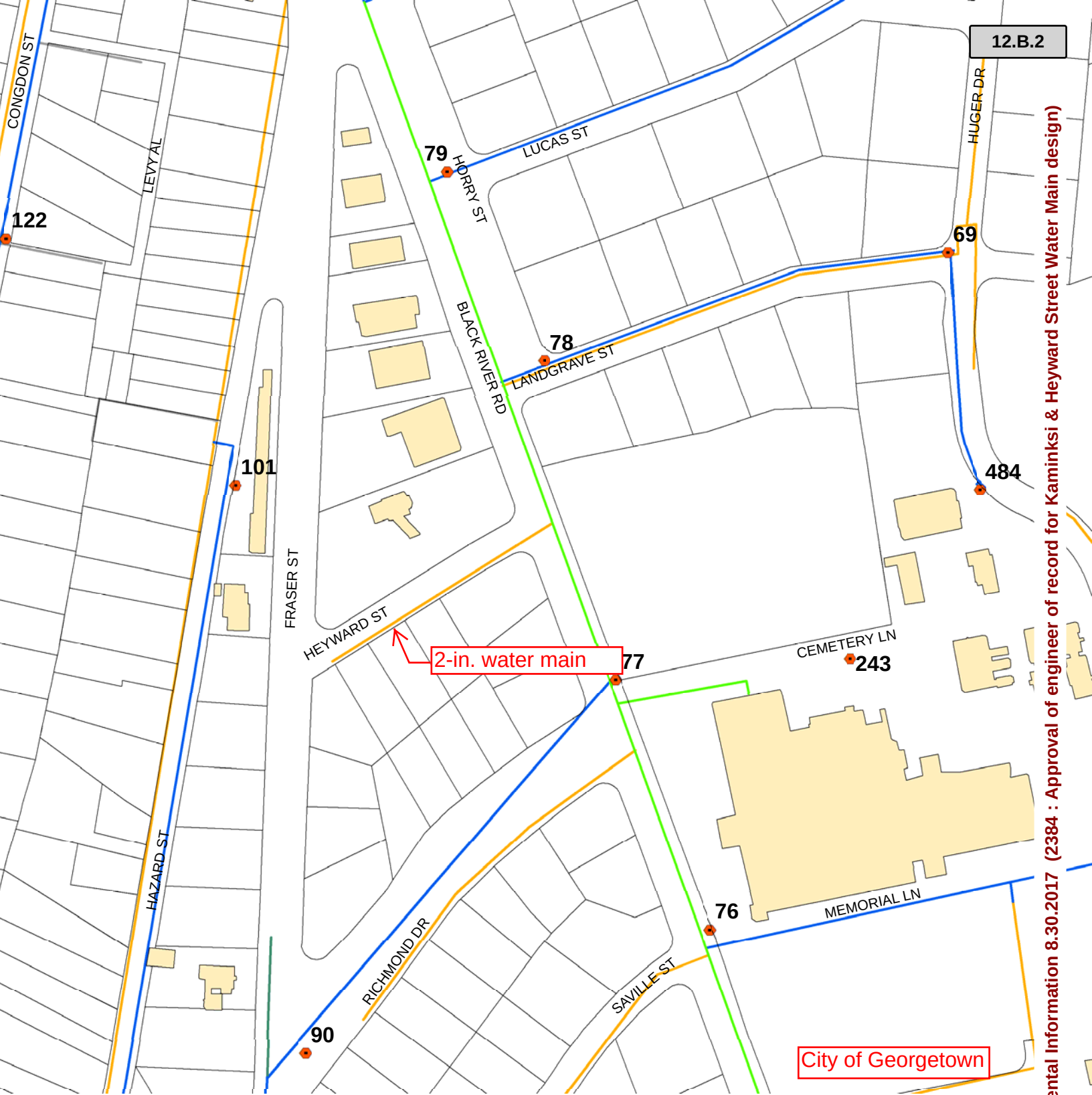
See attached water maps for both Heyward and Kaminski Streets.

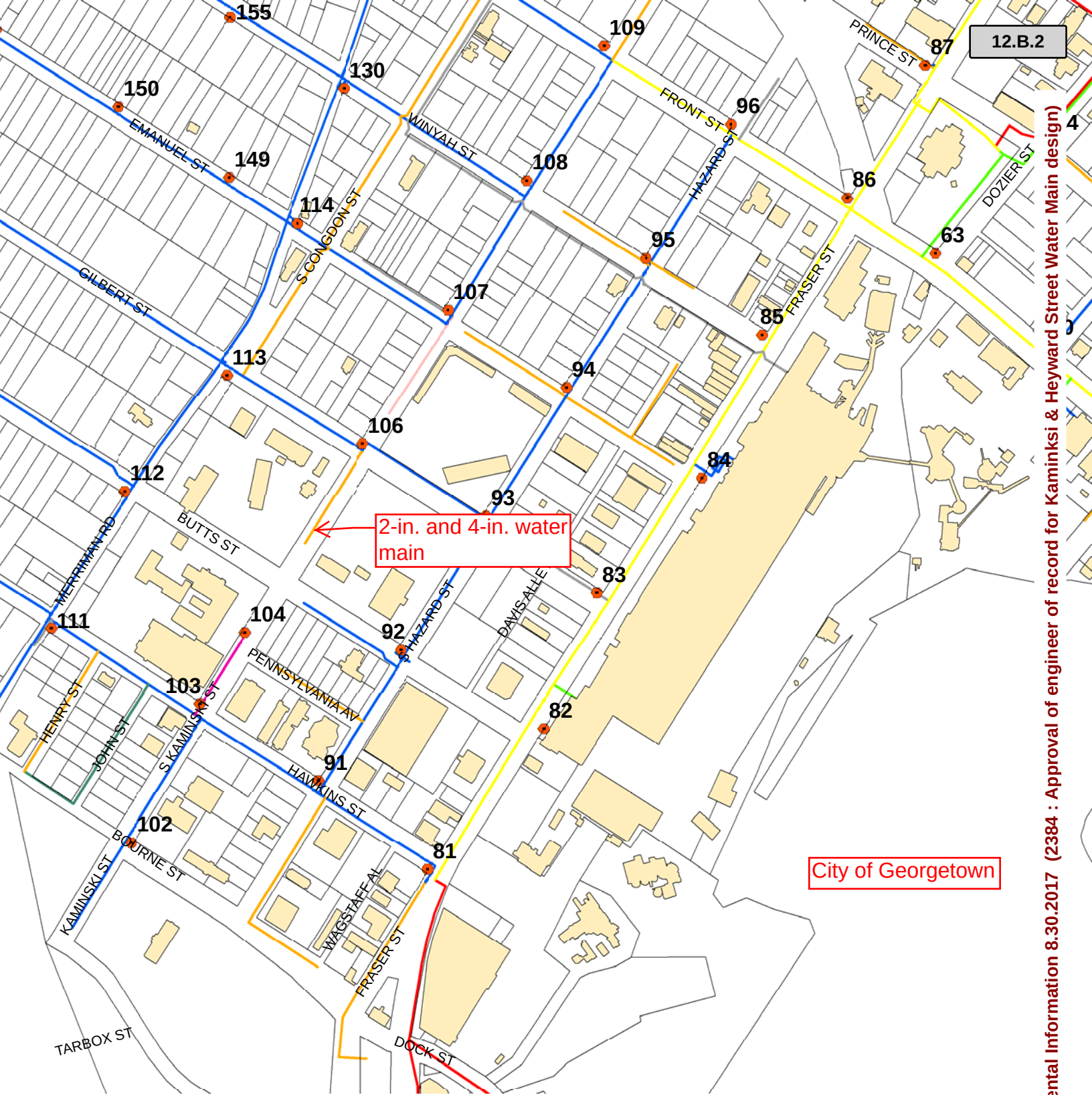
3. What is the reason that the City is replacing these water lines (i.e. poor condition of line, line is undersized, etc.)

The two lines are undersized and in poor condition.

The existing water line on Heyward Street is a 2-in main. The City wants to increase the size of the line to 6-inches to improve the water pressure in the area. The pipe material is either cast iron or galvanized steel.

The existing water line on Kaminski Street is a 2-in main and 4-in. main that present signs of aging with frequent leaks over recent years. The City wants to increase the size to a 6-in line to improve water pressure and avoid leaks. The 2-in. main is galvanized or cast iron. The 4-in would be cast iron or AC pipe.





Attachment: RFP Supplemental Information 8.30.2017 (2384 : Approval of engineer of record for Kaminski & Heyward Street Water Main design)

AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

STATE OF SOUTH CAROLINA

COUNTY OF GEORGETOWN

THIS AGREEMENT, entered into this ____ day of _____, 2017 and effective immediately by and between **Name**_____ (hereinafter called the "CONSULTANT") and the CITY of Georgetown, a duly organized and validly existing political body of the State of South Carolina (hereinafter called "CITY"),

WITNESSETH THAT

WHEREAS, The CITY desires to engage the services of a professional consultant for the purpose of _____, hereinafter referred to as "Project"; and,

WHEREAS, The CITY has solicited proposals for same by that certain Request for Proposals **RFP #** _____ for Consultant Services, hereinafter referred to as "RFP", a copy of which is attached hereto for all purposes as **EXHIBIT "1"**; and,

WHEREAS, The Consultant has represented to CITY that it has the qualifications, experience, expertise, training, and personnel to timely perform the Project for CITY; and,

WHEREAS, The Consultant has expressed its desire to do so by their proposal, dated _____, **2017**, hereinafter referred to as "Proposal", a copy of which is attached hereto for all purposes as **EXHIBIT "2"**; and,

WHEREAS, the parties desire to enter in an agreement for the Consultant to perform the Project for CITY per all the terms and conditions more particularly set out herein below;

NOW, THEREFORE, for and in consideration of the foregoing, and of other good and valuable consideration as described, the adequacy of which is acknowledged, the parties hereto agree as follows:

Attachment: COG Consulting Services Agreement 08.07.2017 (2384 : Approval of engineer of record for Kaminski & Heyward Street Water Main

(1) **SCOPE OF SERVICES:**

- a. CONSULTANT hereby agrees to perform the tasks and services as outlined in the Scope of Services, incorporated into this Agreement as **ATTACHMENT "A"**, and hereinafter referred to as "Work";
- b. CITY may, from time to time require changes in the WORK of the CONSULTANT to be performed hereunder. Such changes, which are mutually agreed upon by and between CITY and the CONSULTANT, shall be incorporated by written amendment to this Agreement.

(2) **COMPENSATION:**

- a. CITY agrees to pay CONSULTANT a sum not to exceed: **dollars and no cents (\$)** in accordance with the Schedule of Values, incorporated into this Agreement as **ATTACHMENT "B"**, and hereinafter referred to as "Compensation";
- b. CONSULTANT shall submit monthly invoices for work completed to CITY by the fifth day of the month following the month in which such work is done. Such invoices shall reference the contract number, and shall be accompanied by a monthly progress report and/or any reasonably required supporting materials and/or data.
- c. CITY shall pay the CONSULTANT for such invoice within thirty (30) days thereafter, provided same has been reviewed and approved by CITY, which review shall be without undue delay.
- d. If CITY approves payment in an amount less than that submitted by CONSULTANT in the invoice, then the unpaid portion of such invoice shall be retained until approved by CITY, as set out herein; and the parties hereto shall work in good faith to resolve such discrepancy within five (5) days thereafter.
- e. COMPENSATION shall not be made for WORK which is not part of the original Scope of Services or is not amended in writing as set forth in Article 1b.
- f. In the event funds are not appropriated or become non-appropriated for an included fiscal year by CITY, it is agreed by the parties that this Agreement will become null and void and the CITY's obligations cannot extend beyond the date of non-appropriation.

(3) **PERIOD OF SERVICES:**

- a. The WORK to be performed by the CONSULTANT shall begin upon the date in the CITY's Notice to Proceed letter to the CONSULTANT, incorporated into this Agreement as **ATTACHMENT "C"**,, and hereinafter referred to as "NTP"
- b. The WORK shall be completed in accordance with the Schedule, incorporated into this Agreement as **ATTACHMENT "D"**, and hereinafter referred to as "Schedule".
- c. Modifications to the SCHEDULE may be required. Such modifications, which are mutually agreed upon by and between CITY and the CONSULTANT shall be incorporated by written amendment to this Agreement.

(4) **PERSONNEL:**

- a. The CONSULTANT shall supply the necessary personnel required to perform the services under this Agreement. A list of key personnel supplied by the CONSULTANT under this AGREEMENT are noted on the Personnel List, incorporated into this Agreement as **ATTACHMENT "E"**,, and hereinafter referred to as "PERSONNEL";
- b. The Personnel List shall include the name, title and hourly billing rate of each entry on the list.
- c. All of the services required hereunder will be performed by the CONSULTANT or under CONSULTANT'S supervision, and all personnel engaged in the work shall be qualified to perform such services.
- d. The CITY reserves the right to request the substitution of CONSULTANT'S personnel, whether listed or not listed in PERSONNEL, assigned to this Agreement.

(5) INDEPENDENT CONTRACTOR

- a. The CONSULTANT shall at all times be considered an independent contractor hereunder, and neither CONSULTANT nor its employees, agents or representatives shall, under any circumstances, be considered employees of CITY.
- b. The CITY shall not be legally responsible for negligence or other wrong-doing, either intentional or unintentional, by CONSULTANT or CONSULTANT's employees, agents or representatives.
- c. The CITY shall not deduct from payment to CONSULTANT any federal or state unemployment taxes, federal or state income taxes, Social Security tax, or any other amounts for benefits to CONSULTANT.
- d. The CITY shall not provide to CONSULTANT any insurance coverage or other benefits, including Workers Compensation, normally provided by CITY for CITY's employees

(6) SERVICES AND MATERIALS TO BE FURNISHED BY CITY:

- a. CITY shall furnish the CONSULTANT with any available information, data, and material pertinent to the execution of this Agreement.
- b. CITY shall cooperate with the CONSULTANT in carrying out the work herein and shall provide adequate staff for liaison with the CONSULTANT.

(7) TERMINATION:

- a. CITY may terminate this Agreement upon seven (7) days written notice to CONSULTANT for CONSULTANT's failure to provide services hereunder to CITY's sole reasonable satisfaction.
- b. CITY may terminate this Agreement for any reason as CITY in its sole discretion shall decide upon fifteen (15) days written notice to CONSULTANT.
- c. Termination of this Agreement shall not relieve either party of any obligation incurred one to the other prior to said termination. Specifically, CITY agrees to pay CONSULTANT for all work performed hereunder and all reasonable costs incurred prior to said termination.

(8) FORCE MAJEURE:

- a. Force majeure includes acts of God, acts of other branches of government in either their sovereign or contractual capacities, or any similar cause beyond the reasonable control of the parties.
- b. Any delays in or failure of performance by either party that are caused by a Force Majeure shall not constitute breach of this AGREEMENT.
- c. In the event that any event of force majeure, as herein defined occurs, both parties shall be entitled to a reasonable extension of time for performance of its WORK.

(9) PERMITS, CERTIFICATES AND/OR LICENSES:

- a. CONSULTANT shall comply with all applicable federal, state, county and City laws and ordinances, in effect as of the date of this agreement in the performance of its obligations hereunder.
- b. CONSULTANT shall procuring and maintain all permits and license(s) required to perform the WORK, including any necessary business license(s).

(10) NOTICES:

- a. Any notices, bills, invoices, or reports required by this Agreement shall be sufficient if sent by the parties in the United States mail, postage paid, to the addresses noted below:

CITY
 Orlando Arteaga, P.E.
 City Engineer
 City of Georgetown
 Post Office Box 939
 Georgetown, SC 29440

CONSULTANT

(11) DOCUMENTS:

- a. The CITY shall be deemed as the owner of all work produced under this Agreement, including but not limited to drawings, specifications, reports, field data, notes, and other documents whether handwritten, typed or in electronic form.
- b. The CITY may use, reuse, copy, distribute and disseminate any and all work produced under this Agreement and rely on the accuracy of the CONSULTANT.
- c. The CITY may modify any and all work produced under this Agreement as it sees fit; however, any modification shall also relieve the CONSULTANT of responsibility as to the work product and/or any modification thereof.

(12) INFORMATION OF REPORTS:

- a. The CONSULTANT shall, at such time and in form as CITY may require, furnish such periodic reports concerning the status of the project, such statements, and copies of proposed and executed plans and other information relative to project as may be requested by CITY.
- b. The CONSULTANT shall furnish CITY, upon request, with copies of all documents and other material prepared or developed in relation with or as part of project.

(13) RECORDS AND INSPECTIONS:

- a. CONSULTANT shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of one year after the completion of the project.
- b. CITY shall have free access at all proper times to such records, and the right to examine and audit the same and to make transcripts there from, and to inspect all program data, documents, proceedings, and activities.

(14) INSURANCE:

- a. CONSULTANT shall procure and maintain insurance for the duration of this Agreement against any and all claims for injuries to persons or damages to property of third parties which may in any way arise from, or in connection with,

the negligent performance of the work hereunder by CONSULTANT, its agents, representatives or employees.

- b. Such insurance shall contain a provision stating that coverage thereunder shall not be canceled or reduced without thirty (30) days prior written notice to CITY, and shall be in the following minimum amounts:

Minimum Coverages and Limits:

a.	General Liability	\$1,000,000 per occurrence \$2,000,000 aggregate
b.	Worker's Compensation	Statutory Limits
c.	Employer's Liability	\$500,000/\$500,000/\$500,000
d.	Automobile Liability	\$1,000,000 per occurrence
e.	Professional Liability	\$1,000,000 per occurrence
- c. Certificates showing proof of such insurance shall be submitted to CITY prior to commencement of services under this Agreement.
- d. The General Liability policy is to contain or be endorsed to name CITY, its officers, officials, agents and employees as additional insured as respects the liability arising out of the activities negligently performed under this Agreement. Such coverage shall be primary as to CONSULTANT'S negligence and shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
- e. CONSULTANT shall maintain Workers Compensation Insurance for all of CONSULTANT's employees who are in any way connected with the performance under this Agreement. Such insurance shall comply with all applicable state laws and provide a waiver of subrogation against the CITY, its officers, officials, agents and employees.
- f. CONSULTANT and/or its insurers are responsible for payment of any liability arising out of Workers Compensation, unemployment or employee benefits offered to its employees.
- g. Insurance is to be placed with insurers with a current A.M. Best's rating of not less than A: VII and licensed to do business in the State of South Carolina, unless otherwise approved by CITY.
- h. CONSULTANT shall not self-insure in satisfaction of any insurance requirement set out herein without the express, written approval of CITY.

(15) **COMPLETENESS OF AGREEMENT:**

- a. This Agreement and any additional or supplementary document or documents incorporated herein by specific reference contain all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind any of the parties hereto
- b. This Agreement is entered into with full understanding and awareness of such requirement.
- c. CITY shall be allowed to rely upon the representations of CONSULTANT as set out in the Proposal.
- d. With the exception of the foregoing, this Agreement constitutes the entire agreement between the parties hereto and may not be modified or amended except in writing signed by both parties hereto.

(16) **CONFLICTS:**

- a. In the case of any conflict between the terms and conditions of this Agreement and the terms of any other agreement between the parties hereto, the terms of this Agreement shall control.
- b. If there is a conflict between the CITY's Proposal and this Agreement, then this Agreement shall control.
- c. If there is a conflict between the CITY's Request for Proposal and the CONSULTANT's Proposal, the CITY'S Proposal shall control.
- d. Both parties agree that all conflicts arising under this Agreement that cannot be settled between the parties shall be resolved in the Georgetown County Court of Common Pleas (Non-Jury)

(17) **SEVERABILITY:**

- a. If any part or provision of this Agreement is held invalid or unenforceable under applicable law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining parts and provisions of this Agreement.

(18) NONWAIVER:

- a. The waiver by CITY or CONSULTANT of a breach of this Agreement shall not operate as a waiver of any subsequent breach, and no delay in acting with regard to any breach of this Agreement shall be construed to be a waiver of the breach.
- b. In no event shall the making of any payment by CITY to the CONSULTANT constitute or be construed as a waiver by CITY of any breach of covenant, or any default which may exist on the part of the CONSULTANT
- c. The making of any such payment by CITY while any such breach or default shall exist in no way impairs or prejudices any right or remedy available to CITY in respect to such breach or default

(19) GOVERNING LAW:

- a. This Agreement and the rights, obligations and remedies of the parties hereto, shall in all respects be governed by and construed in accordance with the laws of the State of South Carolina.

(20) RESPONSIBILITY:

- a. Each party shall be responsible for its own acts as provided under the law of South Carolina and will be responsible for all damages, costs, fees and expenses which arise out of the performance of this Agreement which are due to that party's own negligence, tortious acts and other unlawful conduct and the negligence, tortious action and other unlawful conduct of its respective agents, officers and employees.
- b. The foregoing notwithstanding, and excluding CONSULTANT'S liability for bodily injury or property damage of third parties, the total aggregate liability of CONSULTANT arising out of the performance or breach of this Agreement shall not exceed the greater of the compensation paid to CONSULTANT hereunder or \$500,000.00. Notwithstanding any other provision of this Agreement, neither party shall have liability to the other for contingent, consequential, or other indirect damages including, without limitation, damages for loss of use, revenue or profit; operating costs and facility downtime, however the same may be caused. The

limitations and exclusions of liability set forth herein shall apply regardless of the fault, breach of contract, tort (including negligence), strict liability or otherwise of the parties, including their respective employees, or sub consultants.

(21) INDEMNIFICATION:

- a. Notwithstanding anything herein to the contrary, CONSULTANT shall indemnify and hold CITY, its employees, officers, officials, and/or representatives, free and harmless from and against any and all liabilities, losses, claims, demands, suits, judgments, causes of action and/or expenses, of any kind including, but not limited to the payment of reasonable attorney's fees, resulting from property damage and/or personal injury, including death, resulting from the negligence, errors, omissions, and/or willful misconduct of CONSULTANT, if any, arising out of the performance of its duties hereunder.
- b. Such losses, liabilities, expenses, damages and/or claims shall include, but not be limited to, civil or criminal fines or penalties, a taking, whether direct, indirect or inverse, or for loss of use and/or service, personal injury, death, libel, slander, and reasonable attorney's fees in the underlying action through all levels of appeals.
- c. Should CITY be named in any suit, action or claim under the terms hereof, then, to the extent of, and in proportion to, its indemnification obligation, CONSULTANT shall appear and defend CITY at CONSULTANT's cost and expense, provided that CITY shall always have the option to appear and defend such action or claim on its own behalf.
- d. The foregoing indemnity shall survive the expiration or termination of this Agreement.

(22) FREEDOM OF INFORMATION ACT (FOIA)

- a. The parties acknowledge that all documents are subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.

- b. If CONSULTANT contends a document is exempt from disclosure under the FOIA, it shall mark any such documents plainly, and seek protection from disclosure by filing an appropriate action in Circuit Court and shall bear the cost of the action and any monetary or attorney's fees awarded to the person or entity making the FOIA request.
- c. If CONSULTANT objects to release and litigation is commenced against the CITY under the FOIA, CITY agrees to promptly notify CONSULTANT, who shall move to intervene as a party.
- d. CONSULTANT agrees to hold CITY harmless from and indemnify for all costs (including plaintiff's attorney's fees if awarded by the Court) incurred by the CITY in defending the lawsuit and the funds necessary to satisfy any judgment and all costs on appeal, if any.

(23) **ASSIGNABILITY:**

- a. The parties hereby agree that CONSULTANT may not assign, convey or transfer its interest, rights and duties in this Agreement without the prior written consent of CITY.

(24) **THIRD PARTY OBLIGATIONS:**

- a. Neither party shall be obligated or liable to any party other than the second party to this Agreement.

(25) **RESTRICTIONS ON LOBBYING:**

- a. CONSULTANT shall comply with all requirements of Section 1352, Title 31 of the U.S. Code, which prohibits all recipients of federal funds from using appropriated monies for lobbying activities.

(26) **SUCCESSORS AND ASSIGNS:**

- a. The rights and obligations herein shall inure to and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, CITY and the CONSULTANT have executed this agreement as of the date first written above.

CITY OF GEORGETOWN

By: _____

Paul Gardner

Title: City Administrator

CONSULTANT

By: _____

Title: _____



CITY OF GEORGETOWN



SIGN IN SHEET

PROJECT:	Kaminski Street Proj #1511 & Heyward Street Proj #1509 – Engineering Services for Water Improvements	DUE DATE:	Wednesday, September 6, 2017 3.00 pm
FACILITATOR:	Orlando Arteaga, City Engineer Daniella Howard, Purchasing Agent	PLACE:	2377 Anthuan Maybank Drive

Bid Opening

COMPANY NAME & ADDRESS	COMPANY REPRESENTATIVE NAME & TITLE	EMAIL ADDRESS & PHONE NUMBER	SIGNATURE/ COMMENTS:
City of Georgetown	Daniella Howard, Purchasing Agent	dhoward@cogsc.com 843.545.4043	<i>Daniella Howard</i>
City of Georgetown	Orlando Arteaga, City Engineer	oarteaga@cogsc.com 843.545.4500	<i>Orlando Arteaga</i>
City of Georgetown	Justin Mooney, Assistant City Engineer	jmooney@cogsc.com 843.545.4500	<i>Justin Mooney</i>
CITY OF GEORGETOWN	WILL COOK WATER UTILITIES MANAGER	wcook@cogsc.com 843-545-4505	<i>WJ</i>

Attachment: SIGN IN SHEET AND SUBMITTAL LISTING (2384 : Approval of engineer of record for Kaminski & Heyward Street Water Main



CITY OF GEORGETOWN



SUBMITTAL LISTING

PROJECT:	Kaminski Street Proj #1511 & Heyward Street Proj #1509 – Engineering Services for Water Improvements	DATE OF BID OPENING:	Wednesday, September 6, 2017 3.00 pm
		PLACE:	2377 Anthuan Maybank Drive

SIGNED:

COMPANY NAME	MAILING ADDRESS	BID AMOUNT	COMMENTS:
DDC ENGINEERS	1298 PROFESSIONAL LANE MYRTLE BEACH SC 29577	78,973.00	CURRENTLY UNDER REVIEW
STANTEC	4969 CENTRE POINT DRIVE SUITE 200 NORTH CHARLESTON SC 29418-6952	82,200.00	CURRENTLY UNDER REVIEW
MEAD & HUNT	333 WELLNESS DRIVE MYRTLE BEACH SC 29579	80,550.00	CURRENTLY UNDER REVIEW
WESTON & SAMPSON	672 MARINA DR STE 204 CHARLESTON SC 29492-8095	27,250.00	CURRENTLY UNDER REVIEW

Attachment: SIGN IN SHEET AND SUBMITTAL LISTING (2384 : Approval of engineer of record for Kaminski & Heyward Street Water Main



672 Marina Drive Suite 204

Charleston, SC 29492

Ph: 843-881-9804

Proposal Date: September 5, 2017
Expiration Date: December 5, 2017
Project Name: Kaminski Street Water Main Project
Owner / Client: City of Georgetown
Project Manager: Kip Gearhart, PE

Project Proposal

ENGINEERING

SEP 06 2017

RECEIVED

1. Surveying

Subtotal	\$	3,500.00

2. Preparation of Plans & Specifications

Subtotal	\$	6,500.00

3. Permitting & Bidding

Subtotal	\$	2,500.00

4. Construction Management

Subtotal	\$	2,500.00

5. Closeout & Record Drawings

Subtotal	\$	1,500.00

6. Reimbursable Expenses

Subtotal	\$	1,000.00

Total	\$	17,500.00

Robert L. Horner, PE Program Manager

Date 5-Sep-17



672 Marina Drive Suite 204

Charleston, SC 29492

Ph: 843-881-9804

Project Proposal

Proposal Date: September 5, 2017
Expiration Date: December 5, 2017
Project Name: Heyward Street Water Main
Owner / Client: City of Georgetown
Project Manager: Kip Gearhart, PE

ENGINEERING

SEP 06 2017

RECEIVED

1. Surveying

Subtotal	\$	2,500.00

2. Preparation of Plans & Specifications

Subtotal	\$	4,000.00

3. Permitting & Bidding

Subtotal	\$	1,000.00

4. Construction Management

Subtotal	\$	1,000.00

5. Closeout & Record Drawings

Subtotal	\$	1,000.00

6. Reimbursable Expenses

Subtotal	\$	250.00

Total	\$	9,750.00

Robert L. Horner, PE Program Manager

Date 5-Sep-17

Attachment: Weston Sampson Proposal-Heyward St. 9.6.2017 (2384 : Approval of engineer of record for Kaminski & Heyward Street Water Main

EVALUATION COMMITTEE ANALYSIS				
PROPOSALS RECEIVED 9.06.2017				
EVALUATION COMMITTEE MEMBER #	Engineering Firm			
	DDC	STANTEC	MEAD & HUNT	WESTON & SAMPSON
1	87	87	89	98
2	91	88	89	92
3	75	66	68	91
TOTAL RATING	253	241	246	281
RANKING ORDER				
1ST	WESTON & SAMPSON	281		
2ND	DDC	253		
3RD	MEAD & HUNT	246		
4TH	STANTEC	241		



120 North Fraser Street • Georgetown, SC 29440 • (843) 545-4000

ORDINANCE

DOC ID: 2363

Council Meeting Date:	21 September 2017
Department:	Administration
Issue Under Consideration:	Motion to approve first reading of an Ordinance to Amend the Freedom of Information Act Fee Schedule contained in the City Clerk's Official Record of Utility Rates, Deposits and Miscellaneous Fees and Charges for the City of Georgetown, South Carolina.
Amount Requested:	NA
Is Item in Current Budget?	NA
If no, please explain:	
Financial Impact:	
Points to Consider:	Revise Fee Schedule to coincide with the amended Freedom of Information Act Public Request Policy
Options:	Approve amended Fee Schedule Disapprove amended Fee Schedule
Staff Recommendations:	Approve amended Fee Schedule

Reviews:

Debra Bivens Completed 08/11/2017 12:47 PM
 Elise Crosby Skipped 08/11/2017 12:04 PM
 Paul Gardner Skipped 08/09/2017 10:34 AM
 Ann U. Mercer Completed 08/11/2017 1:51 PM
 Georgetown City Council Completed 08/17/2017 5:30 PM

Attachments:

1. 1 FOIA FEE SCHEDULE (PDF)

**MOTION TO APPROVE FIRST READING OF AN ORDINANCE TO AMEND THE FREEDOM
OF INFORMATION ACT FEE SCHEDULE CONTAINED IN THE CITY CLERK'S OFFICIAL
RECORD OF UTILITY RATES, DEPOSITS AND MISCELLANEOUS FEES AND CHARGES
FOR THE CITY OF GEORGETOWN, SOUTH CAROLINA.**

**AN ORDINANCE TO AMEND THE FREEDOM OF INFORMATION ACT FEE
SCHEDULE CONTAINED IN THE CITY CLERK'S OFFICIAL RECORD OF UTILITY
RATES, DEPOSITS AND MISCELLANEOUS FEES AND CHARGES FOR THE
CITY OF GEORGETOWN, SOUTH CAROLINA**

WHEREAS, it is prudent and fiscally responsible for the City of Georgetown to periodically review various fees and charges contained in the City Clerk's Official Record of Utility Rates, Deposits and Miscellaneous Fees.

NOW THEREFORE BE IT ORDAINED by the Mayor and City Council of the City of Georgetown, South Carolina that the Freedom of Information Act Fee Schedule contained in the City Clerk's Official Record of Utility Rates, Deposits and Miscellaneous Fees and Charges be revised as follows:

Includes up to 30 minutes and up to 15 BW copies OR 10 color	\$ 3.00
Staff Search/Retrieval/Preparation Time	\$20.00 per hour
Black and White Copies Letter or Legal	\$ 0.20
Color Copies Letter or Legal	\$ 0.35
Maps/Plats Larger than 11x17	\$ 5.00
Data disks, each	\$ 0.25
Flash Drive	\$10.00
Postage	TBD

BE IT FURTHER ORDAINED, that all ordinances or parts of ordinances inconsistent with this Ordinance are hereby repealed to the extent of such inconsistency.

PASSED by City Council this ____ day _____, 2017.

ATTEST:

Ann U. Mercer, City Clerk

Jack M. Scoville, Jr., Mayor

First Reading:

APPROVED AS TO FORM

Second Reading:

Elise F. Crosby, City Attorney

Attachment: FOIA FEE SCHEDULE (2363 : Amend FOIA Fee Schedule)



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ACTION ITEM

DOC ID: 2381

Council Meeting Date:	21 September 2017
Department:	Administration
Issue Under Consideration:	Motion to Approve Purchase and Payment To Vic Bailey Ford For A 2017 Ford Interceptor SUV In The Amount Of \$29,128.00
Amount Requested:	\$29,128.00
Is Item in Current Budget?	Yes
If no, please explain:	
Financial Impact:	N/A
Points to Consider:	Needed To Enhance City Hall Vehicle Complement
Options:	1. Approve 2. Disapprove
Staff Recommendation:	Staff Recommends Approval

Reviews:

Paul Gardner Completed 09/13/2017 2:34 PM

Debra Bivens Completed 09/13/2017 4:24 PM

Ann U. Mercer Completed 09/14/2017 8:52 AM

Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 Administration Vehicle (PDF)

VIC BAILEY FORD**13.B.1****David Vetter 864.585.3600 or 800.922.1365****2017 FORD POLICE INTERCEPTOR SUV ALL WHEEL DRIVE****Truck, 4x2 Utility (SUV), Intermediate Size, 4 Door, All Wheel Drive, Pursuit Package, Flex-Fuel
Contract #: 4400011999****Standard Equipment Included:**

3.7L V-6 Engine	Power Steering
Automatic Transmission	Power Brakes
A/C	Power Windows and Door Locks
AM/ FM Radio	Cloth Front Bucket Seats w/ Cloth Rear Bench Seat
Remote Keyless Entry	Carpeted Floor Covering
Cruise Control	Driver's Side Spotlight

CONFIGURATION #1**SC STATE CONTRACT PRICE:****\$26,843.00**

Rearview Camera - Camera in Center Stack

Standard

Pre-Wiring for Grille Lamp, Siren and Speaker - 60A

\$54.00

Reverse Sensing System - 76R

\$287.00

Front Headlamp / Police Interceptor Housing Only - 86P

\$131.00

SYNC Basic - Hands Free Voice Activated Communication System - 53M**\$308.00**

Mirrors - Heated Sideview - 549

\$64.00

18" Aluminum Wheels - 64E**\$523.00**

Badge Delete (Removes Police Interceptor Badging) -16D

No Charge

Dome Lamp Red/White in Cargo Area - 17T

\$54.00

Tail Lamp / Police Interceptor Housing Only - 86T

\$64.00

Delete Spotlight

No Charge

4-Corner Flashing Strobe System (LED Lights) Clear All Around

\$595.00

Delivery

\$300.00

Sales Tax

\$500.00

TOTAL SC STATE CONTRACT PRICE:**\$29,128.00****Available Exterior Colors: Oxford White, Shadow Black, Ingot Silver, Medium Titanium and Norseal**

Attachment: Administration Vehicle (2381 : Purchase of Administration Vehicle)



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ACTION ITEM

DOC ID: 2341

Council Meeting Date:	21 September 2017
Department:	Administration
Issue Under Consideration:	Motion to Approve Memorandum of Understanding Naming Main Street Georgetown Business Association (Main Street GBA) As The City's Designated Marketing Organization and Budget for DMO for Fiscal Year 2017-2018
Amount Requested:	N/A
Is Item in Current Budget?	N/A
If no, please explain:	
Financial Impact:	N/A
Points to Consider:	City Needs To Designate DMO and Approve Budget
Options:	1. Approve 2. Disapprove
Staff Recommendation:	Staff Recommends Approval of MOU and Budget

Reviews:

Paul Gardner Completed 07/05/2017 3:10 PM

Finance Completed 07/05/2017 5:07 PM

City Attorney Completed 07/06/2017 1:34 PM

review ongoing

Ann U. Mercer Completed 09/14/2017 12:40 PM

Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. 1 DMO MOU for GBA (PDF)

2. 2 DMO Proposed Budget 2017-2018 (PDF)

Memorandum of Understanding
City of Georgetown Designated Marketing Organization

For the 2017-2018 Fiscal Year, the City of Georgetown Council agrees to allow the **Downtown Georgetown Revitalization Association D/B/A Georgetown Business Association (GBA)** to serve as its Designated Marketing Organization (DMO) pursuant to South Carolina Allocation of Accommodations Tax Revenues Code of Laws, and will fund the organization with all mandated funds pursuant to the law (S.C. Code of Laws §6-4-10(3)).

GBA will provide a detailed budget to be approved by the appropriate body that will outline expenditures, and provide an accurate reporting at the end of the year of actual expenditures.

GBA agrees to provide daily management and administration of the funds, and will abide by the public disclosure requirements of a tax-exempt nonprofit organization, as defined by Section 501(c)3 of the Internal Revenue Code of 1986.

As the DMO, GBA shall coordinate advertising and promotion of tourism to develop and increase tourist attendance through the generation of publicity on behalf of the City of Georgetown.

GBA will provide City Council quarterly reports on the implementation of the marketing efforts on behalf of the City.

Signed the ____ day of _____ 2017.

City of Georgetown Mayor

Georgetown Business Association, President

Attachment: DMO MOU for GBA (2341 : MOU For DMO)

Downtown Georgetown Revitalization Association D/B/A Georgetown Business Association Proposed DMO Budget					
Fiscal Year 2017-2018					
	Q1	Q2	Q3	Q4	TOTAL
	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Jun
Carry Over Balance*	21,000	17,900	7,900	3,200	21,000
INCOME					
Expected Disbursements		3,000	7,300	5,200	15,500
Miscellaneous					
TOTAL INCOME	\$ 21,000	\$ 20,900	\$ 15,200	\$ 8,400	\$ 36,500
EXPENSES					
Advertising Expenses	2,200	10,000	4,500	4,500	21,200
Graphic Design & Production		2,000	2,200	2,000	6,200
Visitor Guide/Collaterals			3,700		3,700
Contingency	900	1,000	1,600	1,500	5,000
TOTAL EXPENSES	3,100	13,000	12,000	8,000	\$ 36,100
ENDING BALANCE	\$ 17,900	\$ 7,900	\$ 3,200	\$ 400	\$ 400

*Q1 Carry Over Balance is an estimate and includes \$15,278.32 of 2016-2017 fourth quarter disbursements.



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ACTION ITEM

DOC ID: 2385

Council Meeting Date:	21 September 2017
Department:	Administration
Issue Under Consideration:	Motion to Approve Agreement with Carey F. Smith For Professional Consulting Services Related To Economic Development Matters For Sixty Days At An Amount Not To Exceed \$12,000.00.
Amount Requested:	\$12,000.00
Is Item in Current Budget?	Yes
If no, please explain:	
Financial Impact:	N/A
Points to Consider:	City Staff needs Consultant's expertise on economic development matters.
Options:	1. Approve 2. Disapprove
Staff Recommendation:	Staff recommends approval.

Reviews:

Paul Gardner Completed 09/14/2017 2:26 PM
 Finance Completed 09/14/2017 3:04 PM
 City Attorney Completed 09/15/2017 8:55 AM
 Ann U. Mercer Completed 09/15/2017 11:26 AM
 Georgetown City Council Pending 09/21/2017 5:30 PM

Attachments:

1. Carey F. Smith Consulting Agreement (PDF)

AGREEMENT FOR PROFESSIONAL CONSULTING SERVICES

STATE OF SOUTH CAROLINA

COUNTY OF GEORGETOWN

THIS AGREEMENT, entered into this 22nd day of September, 2017 and effective October 2, 2017 through December 1, 2017 by and between Carey F. Smith (hereinafter called the "CONSULTANT") and the CITY of Georgetown, a duly organized and validly existing body politic of the State of South Carolina (hereinafter called "CITY"),

WITNESSETH THAT

WHEREAS, The CITY desires to engage the services of a professional consultant for the purpose of advising the City on economic development matters, hereinafter referred to as "Project"; and,

WHEREAS, The Consultant has represented to CITY that it has the qualifications, experience, expertise, and training to timely perform the Project for CITY; and,

WHEREAS, the parties desire to enter in an agreement for the Consultant to perform the Project for CITY per all the terms and conditions more particularly set out herein below;

NOW, THEREFORE, for and in consideration of the foregoing, and of other good and valuable consideration, the adequacy of which is hereby acknowledged, the parties hereto agree as follows:

(1) **SCOPE OF SERVICES:**

- a. CONSULTANT hereby agrees to perform the tasks and services as outlined in the Scope of Services and hereinafter referred to as "WORK";
- b. CONSULTANT's WORK will consist of the preparation of Memoranda of Understanding, guidance with Tax Incremental Financing (TIF) Districts, analysis of incentives to be offered by the City, and assist with negotiations with development prospects;
- c. CITY may, from time to time require changes in the WORK of the CONSULTANT to be performed hereunder. Such changes, which are mutually agreed upon by and between CITY and the CONSULTANT, shall be incorporated by written amendment to this Agreement.

Attachment: Carey F. Smith Consulting Agreement (2385 : Economic Development Consultant)

(2) COMPENSATION:

- a. CITY agrees to pay CONSULTANT a sum not to exceed \$125.00 per hour for a minimum of forty hours per month, and hereinafter referred to as "Compensation";
- b. CONSULTANT shall submit bi-weekly invoices for work completed to CITY by the Monday following the two weeks prior, in which such work is done. CITY shall pay the CONSULTANT for such invoice within thirty (30) days thereafter, provided same has been reviewed and approved by CITY, which review shall be without undue delay.
- c. If the CITY approves payment in an amount less than that submitted by CONSULTANT in the invoice, then the unpaid portion of such invoice shall be retained until approved by CITY, as set out herein; and the parties hereto shall work in good faith to resolve such discrepancy within five (5) days thereafter.
- d. COMPENSATION shall not be made for WORK which is not part of the original Scope of Services or is not amended in writing as set forth in Article 1b.
- e. In the event funds are not appropriated or become non-appropriated for an included fiscal year by CITY, it is agreed by the parties that this Agreement will become null and void and the CITY's obligations cannot extend beyond the date of non-appropriation.

(3) PERIOD OF SERVICES:

- a. The WORK to be performed hereunder by the CONSULTANT shall begin on October 2, 2017 and last until on or about December 1, 2017.
- b. Modifications to the SCHEDULE may be required. Such modifications, which are mutually agreed upon by and between CITY and the CONSULTANT shall be incorporated by written amendment to this Agreement.

(4) PERSONNEL:

- a. No other Personnel besides the CONSULTANT is required for this contract.

(5) INDEPENDENT CONTRACTOR

- a. The CONSULTANT shall at all times be considered an independent contractor hereunder, and neither CONSULTANT nor its employees, agents or

representatives shall, under any circumstances, be considered employees of CITY.

- b. The CITY shall not be legally responsible for negligence or other wrong-doing, either intentional or unintentional, by CONSULTANT or CONSULTANT's employees, agents or representatives.
- c. The CITY shall not deduct from payment to CONSULTANT any federal or state unemployment taxes, federal or state income taxes, Social Security tax, or any other amounts for benefits to CONSULTANT.
- d. The CITY shall not provide to CONSULTANT any insurance coverage or other benefits, including Workers Compensation, normally provided by CITY for CITY's employees.

(6) **SERVICES AND MATERIALS TO BE FURNISHED BY CITY:**

- a. CITY shall furnish the CONSULTANT with any available information, data, and material pertinent to the execution of this Agreement.
- b. The CITY shall cooperate with the CONSULTANT in carrying out the work herein and shall provide adequate staff for liaison with the CONSULTANT.

(7) **TERMINATION:**

- a. CITY may terminate this Agreement upon seven (7) days written notice to CONSULTANT for CONSULTANT's failure to provide services hereunder to CITY's sole reasonable satisfaction.
- b. CITY may terminate this Agreement for any reason as CITY in its sole discretion shall decide upon fifteen (15) days written notice to CONSULTANT.
- c. Termination of this Agreement shall not relieve either party of any obligation incurred one to the other prior to said termination. Specifically, CITY agrees to pay CONSULTANT for all work performed hereunder and all reasonable costs incurred prior to said termination.

(8) **FORCE MAJEURE:**

- a. Force majeure includes acts of God, acts of other branches of government in either their sovereign or contractual capacities, or any similar cause beyond the reasonable control of the parties.

- b. Any delays in or failure of performance by either party that are caused by a Force Majeure shall not constitute breach of this AGREEMENT.
- c. In the event that any event of force majeure, as herein defined occurs, both parties shall be entitled to a reasonable extension of time for performance of its WORK.

(9) PERMITS, CERTIFICATES AND/OR LICENSES:

- a. CONSULTANT shall comply with all applicable federal, state, county and City laws and ordinances, in effect as of the date of this agreement, for the performance of its obligations hereunder.
- b. CONSULTANT shall procure and maintain all permits and license(s) required to perform the WORK, including any necessary business license(s).

(10) NOTICES:

- a. Any notices, bills, invoices, or reports required by this Agreement shall be sufficient if sent by the parties in the United States mail, postage paid, to the addresses noted below:

<u>CITY</u>	<u>CONSULTANT</u>
Paul Gardner	Carey F. Smith
City Administrator	756 Savannah Drive
City of Georgetown	Pawleys Island, SC 29585
1134 N. Fraser Street	
Georgetown, SC 29440	

(11) DOCUMENTS:

- a. The CITY shall be deemed as the owner of all work produced under this Agreement, including but not limited to drawings, specifications, reports, field data, notes, and other documents whether handwritten, typed or in electronic form.
- b. The CITY may use, reuse, copy, distribute and disseminate any and all work produced under this Agreement and rely on the accuracy of the CONSULTANT, so long as the documents remain unaltered, and only for the purpose for which the work product was originally intended under this Agreement. Any other use,

reuse, copy, distribution and/or dissemination of any of the work produced under this Agreement shall be at the CITY's own risk, subject to §22. , *infra*.

- c. The CITY may modify any and all work produced under this Agreement as it sees fit; however, any modification shall also relieve the CONSULTANT of responsibility as to the work product and/or any modification thereof.

(12) INFORMATION OF REPORTS:

- a. The CONSULTANT shall, at such time and in form as CITY may require, furnish such periodic reports concerning the status of the project, such statements, and copies of proposed and executed plans and other information relative to project as may be requested by CITY.
- b. The CONSULTANT shall furnish CITY, upon request, with copies of all documents and other material prepared or developed in relation with or as part of project.

(13) RECORDS AND INSPECTIONS:

- a. CONSULTANT shall maintain full and accurate records with respect to all matters covered under this Agreement for a period of one year after the completion of the project.
- b. CITY shall have free access at all proper times to such records, and the right to examine and audit the same and to make transcripts there from, and to inspect all program data, documents, proceedings, and activities.

(14) INSURANCE:

- a. CONSULTANT shall procure and maintain insurance for the duration of this Agreement against any and all claims for injuries to persons or damages to property of third parties which may in any way arise from, or in connection with, the negligent performance of the work hereunder by CONSULTANT, its agents, representatives or employees.
- b. Such insurance shall contain a provision stating that coverage thereunder shall not be canceled or reduced without thirty (30) days prior written notice to CITY, and shall be in the following minimum amounts:
 - a. Comprehensive Auto Liability on personal vehicle

- b. Workers' Compensation Liability or Ghost Policy formally excluding from coverage (as required by State of South Carolina statutes)
- c. Certificates showing proof of such insurance shall be submitted to CITY prior to commencement of services under this Agreement.
- d. CONSULTANT shall maintain Workers Compensation Insurance for all of CONSULTANT's employees who are in any way connected with the performance under this Agreement. Such insurance shall comply with all applicable state laws and provide a waiver of subrogation against the CITY, its officers, officials, agents and employees.
- e. CONSULTANT and/or its insurers are responsible for payment of any liability arising out of Workers Compensation, unemployment or employee benefits offered to its employees.
- f. Insurance is to be placed with insurers with a current A.M. Best's rating of not less than A:VII and licensed to do business in the State of South Carolina, unless otherwise approved by CITY.
- g. CONSULTANT shall not self-insure in satisfaction of any insurance requirement set out herein without the express, written approval of CITY.

(15) COMPLETENESS OF AGREEMENT:

- a. This Agreement and any additional or supplementary document or documents incorporated herein by specific reference contain all the terms and conditions agreed upon by the parties hereto, and no other agreements, oral or otherwise, regarding the subject matter of this Agreement or any part thereof shall have any validity or bind any of the parties hereto
- b. This Agreement is entered into with full understanding and awareness of such requirement.
- c. CITY shall be allowed to rely upon the representations of CONSULTANT as set out in the Proposal.
- d. With the exception of the foregoing, this Agreement constitutes the entire agreement between the parties hereto and may not be modified or amended except in writing signed by both parties hereto.

(16) CONFLICTS:

- a. In the case of any conflict between the terms and conditions of this Agreement and the terms of any other agreement between the parties hereto, the terms of this Agreement shall control.
- b. If there is a conflict between the CITY's Proposal and this Agreement, then this Agreement shall control.
- c. If there is a conflict between the CITY's Request for Proposal and the CONSULTANT's Proposal, the CITY'S Proposal shall control.
- d. Both parties agree that all conflicts arising under this Agreement that cannot be settled between the parties shall be resolved in the Georgetown County Court of Common Pleas (Non-Jury)

(17) SEVERABILITY:

- a. If any part or provision of this Agreement is held invalid or unenforceable under applicable law, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining parts and provisions of this Agreement.

(18) NONWAIVER:

- a. The waiver by CITY or CONSULTANT of a breach of this Agreement shall not operate as a waiver of any subsequent breach, and no delay in acting with regard to any breach of this Agreement shall be construed to be a waiver of the breach.
- b. In no event shall the making of any payment by CITY to the CONSULTANT constitute or be construed as a waiver by CITY of any breach of covenant, or any default which may exist on the part of the CONSULTANT
- c. The making of any such payment by CITY while any such breach or default shall exist in no way impairs or prejudices any right or remedy available to CITY in respect to such breach or default

(19) GOVERNING LAW:

- a. This Agreement and the rights, obligations and remedies of the parties hereto, shall in all respects be governed by and construed in accordance with the laws of the State of South Carolina.

(20) RESPONSIBILITY:

- a. Each party shall be responsible for its own acts as provided under the law of South Carolina and will be responsible for all damages, costs, fees and expenses which arise out of the performance of this Agreement which are due to that party's own negligence, tortious acts and other unlawful conduct and the negligence, tortious action and other unlawful conduct of its respective agents, officers and employees.
- b. The foregoing notwithstanding, and excluding CONSULTANT'S liability for bodily injury or property damage of third parties, the total aggregate liability of CONSULTANT arising out of the performance or breach of this Agreement shall not exceed the greater of the compensation paid to CONSULTANT hereunder or \$500,000.00. Notwithstanding any other provision of this Agreement, neither party shall have liability to the other for contingent, consequential, or other indirect damages including, without limitation, damages for loss of use, revenue or profit; operating costs and facility downtime, however the same may be caused. The limitations and exclusions of liability set forth herein shall apply regardless of the fault, breach of contract, tort (including negligence), strict liability or otherwise of the parties, including their respective employees, or sub consultants.

(21) INDEMNIFICATION:

- a. Notwithstanding anything herein to the contrary, CONSULTANT shall indemnify and hold CITY, its employees, officers, officials, and/or representatives, free and harmless from and against any and all liabilities, losses, claims, demands, suits, judgments, causes of action and/or expenses, of any kind including, but not limited to the payment of reasonable attorney's fees, resulting from property damage and/or personal injury, including death, resulting from the negligence, errors, omissions, and/or willful misconduct of CONSULTANT, if any, arising out of the performance of its duties hereunder.
- b. Such losses, liabilities, expenses, damages and/or claims shall include, but not be limited to, civil or criminal fines or penalties, a taking, whether direct, indirect or inverse, or for loss of use and/or service, personal injury, death, libel, slander,

and reasonable attorney's fees in the underlying action through all levels of appeals.

- c. Should CITY be named in any suit, action or claim under the terms hereof, then, to the extent of, and in proportion to, its indemnification obligation, CONSULTANT shall appear and defend CITY at CONSULTANT's cost and expense, provided that CITY shall always have the option to appear and defend such action or claim on its own behalf.
- d. The foregoing indemnity shall survive the expiration or termination of this Agreement.

(22) **FREEDOM OF INFORMATION ACT (FOIA)**

- a. The parties acknowledge that all documents are subject to release under the South Carolina Freedom of Information Act (FOIA) and will be released to the public unless exempt from disclosure under the FOIA.
- b. If CONSULTANT contends a document is exempt from disclosure under the FOIA, it shall mark any such documents plainly, and seek protection from disclosure by filing an appropriate action in Circuit Court and shall bear the cost of the action and any monetary or attorney's fees awarded to the person or entity making the FOIA request.
- c. If CONSULTANT objects to release and litigation is commenced against the CITY under the FOIA, CITY agrees to promptly notify CONSULTANT, who shall move to intervene as a party.
- d. CONSULTANT agrees to hold CITY harmless from and indemnify for all costs (including plaintiff's attorney's fees if awarded by the Court) incurred by the CITY in defending the lawsuit and the funds necessary to satisfy any judgment and all costs on appeal, if any.

(23) **ASSIGNABILITY:**

- a. The parties hereby agree that CONSULTANT may not assign, convey or transfer its interest, rights and duties in this Agreement without the prior written consent of CITY.

(24) **THIRD PARTY OBLIGATIONS:**

- a. Neither party shall be obligated or liable hereunder to any party other than the second party to this Agreement.

(25) RESTRICTIONS ON LOBBYING:

- a. CONSULTANT shall comply with all requirements of Section 1352, Title 31 of the U.S. Code, which prohibits all recipients of federal funds from using appropriated monies for lobbying activities.

(26) SUCCESSORS AND ASSIGNS:

- a. The rights and obligations herein shall inure to and be binding upon the successors and assigns of the parties hereto.

IN WITNESS WHEREOF, CITY and the CONSULTANT have executed this agreement as of the date first written above.

CITY OF GEORGETOWN

CONSULTANT

By: _____

By: _____

Attachment: Carey F. Smith Consulting Agreement (2385 : Economic Development Consultant)

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2376)**

Meeting: 09/21/17 05:30 PM
Department: Police Department
Category: Report
Prepared By: Johnnie Deas
Initiator: Kelvin Waites
Sponsors:
DOC ID: 2376

August 2017 Georgetown Police Department Report

MAYOR
JACK, M. SCOVILLE, Jr.



POLICE CHIEF
KELVIN WAITES

City of Georgetown

POLICE DEPARTMENT
OFFICE 843-545-4300
FAX 843-520-5848

September 13, 2017

Honorable Mayor Jack M. Scoville, Jr.
And the Members of City Council
City of Georgetown, South Carolina

Dear Mayor Scoville and Council Members:

The Following is a list of activities involving the Georgetown Police Department during the month of August 2017:

During the month of August the Georgetown Police department sent 20 survey letters to the citizens who had some type of contact with an employee from the department. Out of 20 letters the department received 8 positive feedback.

On August 2nd Officers Freeman and Gravelle were both promoted to the rank of Corporal.

On August 3rd the Georgetown Police Department conducted a Lieutenant's Promotional process to replace the recently retired Lt. Kyle Walton. As a result of the process Sgt. Steven Church was promoted to the rank of Lieutenant.

On August 9th Chief Waites attended a 15th Judicial Circuit Chief's meeting at Coastal Carolina University. Coastal Carolina University's video production section gave the Chiefs in the 15th Judicial Circuit a preview of public service announcement videos that they produced for local communities to address the heroin epidemic in our region.

On August 14th members of the Georgetown Police Department attended the annual School Resource Meeting at the Georgetown County School District office. This meeting is for SRO's to meet with school Administrators County wide before the school year starts to make sure that everyone is on the same page.

On August 14th Chief Waites also attended a coaches meeting at Howard gym in reference to little league football. Chief Waites and other staff will be coaching a little league football team again. (ages 9 & 10)

Honorable Mayor and City Council Members
September 13, 2017
Page Two

On August 17th Chief Waites was invited to attend the Bunelle Foundation's open house at their new facility.

On August 21st the Georgetown Police Department assisted with the Solar Eclipse activities to ensure the safety of the visitors and residents during this historical event. We had thousands of people in town in addition to our residents and we did not have any problems or issues. It was an awesome day for the City of Georgetown.

On August 22nd the South Carolina Law Enforcement Division's Fusion Center came to the Georgetown Police Department to update the department on the newest procedures as it relates to "Amber Alerts." It was an excellent training and it gave us the tools needed in the event we have to investigate a missing child case.

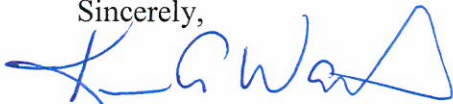
On August 24th the Georgetown Police Department had admin staff members attend a "How To Deliver Exceptional Customer Service" workshop at the Georgetown Housing Authority. It was an excellent training and it showed them the appropriate steps to take when dealing with an irate customer.

On August 29th the Georgetown Police Department hosted about 10 students from around the county that are involved in the Georgetown County School District's Career Development Program. We ate lunch and spoke with the sophomores and juniors from around the county about a potential career in law enforcement.

On August 31st Chief Waites along with staff took part in a "Coffee with a Cop" event at McDonalds. We greeted the public, talked, and had a cup of coffee with our residents. It was a great event.

On August 31st Chief Waites was the motivational speaker for the Goodwill Job Link Center boot camp. This is a program sponsored by Georgetown Works/Friendship Place that puts citizens through a boot camp to teach them soft skills that they can use to assist them in securing employment.

Sincerely,



Kelvin Waites
Chief of Police
KW: pc

Attachments

Attachment: August 2017 Monthly Report (2376 : GPD - August 2017 Monthly Report)

GEORGETOWN POLICE DEPARTMENT **2017 YEAR-TO-DATE ACTIVITY REPORT**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ARRESTS	126	94	90	85	127	91	81	80				

TOTAL ARRESTS

774

CRIMINAL INCIDENTS

DOMESTIC INCIDENTS

164	171	139	113	213	191	188	182					
13	5	6	4	3	3	9	5					
177	176	145	117	216	194	197	187	0	0	0	0	0

TOTALS

TOTAL INCIDENTS

1,409

GEORGETOWN POLICE DEPARTMENT **2017 YEAR-TO-DATE ACTIVITY REPORT**

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
SPEEDING CITATIONS	47	67	74	71	56	55	82	81				
OTHER TRAFFIC CITATIONS	107	128	111	93	115	83	88	87				
WARNING - SPEEDING	102	86	121	110	91	78	116	98				
WARNING - OTHER	195	150	134	82	114	103	83	82				
PARKING CITATIONS	19	17	14	13	5	12	12	14				
TOTALS	470	448	454	369	381	331	381	362	0	0	0	0

TOTAL CITATIONS

3,196

STATE ACCIDENTS	44	38	51	55	46	45	39	56				
PARKING LOT ACCIDENTS	13	8	11	4	7	13	7	10				
TOTALS	57	46	62	59	53	58	46	66	0	0	0	0

TOTAL ACCIDENTS

447

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2378)**

Meeting: 09/21/17 05:30 PM

Department: Municipal Court

Category: Report

Prepared By: Cindy Owens

Initiator: Cindy Owens

Sponsors:

DOC ID: 2378

August 2017 Municipal Court Report

Municipal Court Report August 2017

18.B.1

Cases Disposed

Disposition	# of Cases Disposed	Fine Amounts
Paid	78	\$9,992.36
Served Time	25	\$ 31,465.00
Scheduled Time Payment	56	\$ 32,271.86
NRVC	15	\$ 2,290.25
Bench Warrant	10	\$ 7,537.50
Parking Tickets Paid	5	\$ 50.00
Nolle Prosequi/Dismissed/ Not Guilty	67	
Transferred to General Sessions Court	35	
Voided	7	
Fine Suspended	0	\$ -
Total	298	\$83,606.97

Actual fine revenue collected in June \$27,036.16

Bond hearings held	27
Warrants Prepared	45
Bench Warrants Issued	29
Payments posted	154
Tickets entered	255
Expungements processed	67
Cases Filed & scheduled for court	321
Tickets transmitted to DMV	255
Juror notices prepared	0

Attachment: Municipal court report (2378 : August 2017 Municipal Court Report)

Municipal Court Report August 2017

18.B.1

Throughout the month of August 72 defendants were seen in bond court with a total of 147 charges.

Jury trials were held the week of August 14 - 18. Twenty defendants were scheduled for trial with thirty offenses. Dismissed - 6, Conditional Discharge - 3, Guilty Pleas - 10, Continued - 3, Not Guilty Trial - 1, Guilty Trial - 4, Referred to Solicitor - 1, Referred to General Sessions Court - 2.

Cindy Owens attended the Municipal Court Administration Association Conference in Charleston on August 30 - September 1. Training topics included Court Financials, SCDMV updates, round table discussions, Workplace Violence/Active Shooter, Customer and Employee Service, Court Administration Updates, SLED Criminal Justice Information Services and Audit Overview.

Attachment: Municipal court report (2378 : August 2017 Municipal Court Report)

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2374)**

Meeting: 09/21/17 05:30 PM

Department: Fire Department

Category: Report

Prepared By: Amy Skidmore

Initiator: Charles W. Cribb

Sponsors:

DOC ID: 2374

August 2017 Fire Report

The FIRE Report

A monthly report of Fire Department activities to City Council

SEPTEMBER
2017



Fire Prevention Bureau

2017
AUGUST

Inspections	59
Violations Found	71
Buildings without Violations	18
Buildings Cleared of Violations	25
Violations Corrected	42
Violations Not Corrected	6
3rd Party Inspection Review	3
Assemblies Inspected:	3
Business Inspected:	30
Educational Buildings Inspected:	3
Hazardous Buildings Inspected:	0
Factories Inspected:	0
Institutional Inspected:	1
Mercantile Inspected:	16
Residential Inspected:	2
Storage Buildings Inspected:	0
Construction Meetings:	1
Plans Review:	4
Test Conducted:	3
Compliance Issues:	1
Complaints Reviewed:	0
Business License:	8
Citation Issued:	0

Public Education

Programs	8
Participants	905

Suppression Division

A Brief Look at Emergency Responses

AUGUST 2017

1. Three Medical Calls; One MVA; Three Public Service Calls
2. Five Medical Calls; One MVA; Two Alarm Activations; Two Public Service Calls
3. Five Medical Calls; One MVA; One Electrical Short; One Public Service Call
4. Ten Medical Calls; One Cooking Fire; One Mutual Aid; One False Alarm
5. Four Medical Calls; Two MVA's; One Public Service Call
6. Eight Medical Calls; One MVA; Two False Alarms; One; One Alarm Activation; One Public Service Call
7. Eight Medical Calls; Two MVA's; One Public Service Calls
8. Four Medical Calls; One MVA; One Water Evacuation; Six Flooded areas; One Public Service Calls
9. Six Medical Calls; Two Detector Activations; One False Alarm
10. Six Medical Calls; One MVA
11. Three Medical Calls; One Alarm Activation; One MVA; One Jewelry Removal; Five Public Service Calls
12. Three Medical Calls; One MVA; Two Detector Activations; One Mutual Aid Call; Three Public Service Calls
13. Six Medical Calls; One Smoke Scare
14. Three Medical Calls; One MVA; Two Public Service Calls
15. Two Medical Calls; Two Detector Activations; Two Public Service Calls
16. Six Medical Calls; One Alarm Activation; One Scorch; One Flood Call
17. Nine Medical Calls; One MVA; One Detector Activation; Five Public Service Calls
18. Five Medical Calls; One Alarm Activation; One Public Service
19. Five Medical Calls; One Vehicle Fire; One Mutual Aid Call
20. Six Medical Calls; One Public Service Call; One Assist Police
21. Seven Medical Calls; Two MVA's; One Gas Spill; One Detector Activation; One Public Service Call
22. Thirteen Medical Calls; One Flood Call; One Gas Spill; Five Public Service Calls
23. Two Medical calls; One Gas Spill; Three Public Service Calls
24. Ten Medical Calls; One Mutual Aid Call; Two Public Service Calls
25. Nine Medical Calls; One Overheated Motor; One Assist Police; Two Public Service Calls
26. Two Medical Calls; One Detector Activation; One Flood Call
27. Five Medical Calls; One False Alarm; One Public Service Call
28. Nine Medical Calls; One Assist Police; Two Flood Calls; Two Public Service Calls
29. Five Medical Calls; One Detector Activation; Two Public Service Calls
30. Seven Medical Calls; One MVA; Two Public Service Calls
31. Seven Medical Calls; Three Public Service Calls

Attachment: AUGUST 2017 FIRE REPORT (2374 : August 2017 Fire Report)



Total Call Volume	AUGUST		Year to Date	
	2017	2016	2017	2016
As defined by the National Fire Incident Report System				
Fires	3	1	30	25
Rescue Calls/EMS	200	211	1538	1390
Hazardous Conditions	21	29	248	244
Service Calls	43	25	301	235
Good Intent Calls	18	11	83	75
False Alarms	21	7	120	98
Weather/Flood	10	1	11	3
Special Incident Type	9	10	64	62
Total Calls	325	295	2395	2132

Save/Loss Analysis

	Losses	Property Values
AUGUST 2017	\$ 3,501	\$ 110,500
AUGUST 2016	\$ 300	\$ 1,000
Year to Date	\$ 348,103	\$ 8,130,642

Property values are estimates based on the Georgetown County Assessor's Office 2006 Market Values.

Mutual Aid Calls

	AUGUST	YTD
To Georgetown County Fire	2	6
To Midway Fire	0	2
To other Departments	0	3
From Georgetown County Fire	0	4
From Midway	4	8
From other Departments	0	1

	AUGUST	YTD
Staff Training Hours	1443.75	8528.09

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2371)**

Meeting: 09/21/17 05:30 PM

Department: Public Works

Category: Report

Prepared By: Natrona Simmons

Initiator: Tim Chatman

Sponsors:

DOC ID: 2371

August 2017 Public Works Department Report



**AUGUST, 2017
PUBLIC WORKS DEPT.
CITY COUNCIL MONTHLY REPORT**

RESIDENTIAL SANITATION

1. Crews completed work orders requests for roll-out carts repairs, new roll out cart deliveries and/or replacements; recycle bins; and collected yard waste, brown and white goods.
2. Crews collected yard waste, brown and white goods, dead animals along city right of ways.
3. Delivered roll out carts, barricades and tents for special events and emergency assistance.

STREETS and GROUND MAINTENANCE

1. Grounds Maintenance Crews supported residential sanitation crews with garbage collections.
2. Crews completed work orders for sidewalk, curbside collections and street maintenance.
3. Grounds Maintenance completed maintenance of City Parks, Welcome Sign areas and right of ways.

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2370)**

Meeting: 09/21/17 05:30 PM

Department: Fleet Services

Category: Report

Prepared By: Glenn Dixon

Initiator: Glenn Dixon

Sponsors:

DOC ID: 2370

August 2017 Fleet Services Report



FLEET SERVICES DEPARTMENT

AUGUST 2017 MONTHLY REPORT

• Repairs	51
• PM Services	12
• Tires repaired or replaced	40
• Services past due	46

Drawer 939
Georgetown, SC 29442

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2379)**

Meeting: 09/21/17 05:30 PM

Department: Electric

Category: Report

Prepared By: Alan Loveless

Initiator: Alan Loveless

Sponsors:

DOC ID: 2379

August 2017 Electric Utility Department Report

JACK M. SCOVILLE, JR.
Mayor

PAUL GARDNER
City Administrator



ALAN J. LOVELESS, P.E.
Director of Electric Utility

ELECTRIC UTILITY DEPARTMENT

OFFICE: (843) 545-4600

FAX: (843) 527-7591

September 13, 2017

Following is a brief summary of major activities in the Electric Utility Department for August 2017:

Peak shaving operation successfully predicted the Santee Cooper system peak for the month. Ground breaking for the peak shaving plant construction was delayed because DHEC approval of the erosion control permit was not received until September 5. Coastal Structures is now making arrangements with their grading subcontractor and a pre-construction meeting should be held by mid-September.

The Electric Department's FEMA submittal for Hurricane Matthew was completed during February. My understanding is that our submittals for tree work and use of temporary generation have been approved. Some recent 'final' requests for clarification of information from FEMA would indicate that our submittal for utility repairs should be approved in September.

The contractor crew has assisted us with some storm related outages as well as some pole placements and replacements. They have also been working on the 100 block of Screven Street where several poles needed to be replaced. This work is almost complete. There is one more service pole that needs to be replaced. Also, telephone and CATV utilities have been notified to transfer their facilities from the old poles to the new poles so that the old poles can be removed. We are also making arrangements with Sumter to have an additional 3-man crew brought in to assist us with day to day work orders until we can alleviate our staffing/experience shortfall.

We were able to devote some time to straightening a few poles that have been leaning since Hurricane Matthew. Light poles along the Frontage Road, and distribution poles on N Fraser at Church St and at Antuan Maybank Drive have been straightened.

An RFQ for engineering services for the Front St UG Infrastructure Upgrade project was released in August. This budgeted CIP project will replace all UG primary and secondary conductors, replace existing transformer enclosures with standard padmounted transformers, and make accommodations for the transformer locations

that are located in areas subject to flooding. Qualifications packages are due from interested engineering in early September.

Three calls have been received in that past couple of months concerning customer-side solar generation. It appears that this is gaining customer interest and therefore we have started the process of discussing our philosophy concerning rates and connection issues. A meeting was held with Santee Cooper staff to obtain their input and information on their rates and connection protocol. This could be a time-consuming process over the next few months. Rate issues are important so that we prevent all customers from subsidizing solar installations for a few customers. Progress will be slow on this.....Santee Cooper continues to assist in providing information.

Progress has been made on our staffing situation this month. Two new employees began working on our Line Crew as Line Technician C's during August. Hunter Coker and Tyler Johanning both come to us with a few months of experience with contractor crews. We continue to recruit experienced Line Technician A candidates, for our last couple of vacancies, but this is more challenging because of salary considerations.

Cooper continues to provide us with replacement water nodes as warranty replacements to allow us to do a better job of staying ahead of failed nodes prior to billing reads. They have, however, fallen a couple of months behind on their shipments and we are facing increased re-reads. Cooper is in the process of releasing a new version of these nodes with improved software functions. Production setbacks continue to delay our receipt of new water nodes. This is resulting in a higher than desirable number of re-read orders for our Meter and Customer Service staff to deal with.

Meetings continue with representatives of Tideland's Health concerning electric service to the new surgical wing being constructed at the hospital. The hospital's contractor has placed conduit for our feed to the new transformer for this addition. The transformer was set for this service in mid-July and the service was energized in early August. We will continue to work with them as needed as they continue construction on this facility.

Work has been completed on the Broad Street revitalization project. All decorative poles and LED lights included in the project plan have been installed. We are in the process of having the project planner re-survey the residents of Broad St. between Highmarket and Front to see if they are more receptive to the decorative poles/lights than they were during the initial planning process. Fourteen responses have been received, with 11 in favor and 3 opposed. This was discussed with Council in the July workshop and Council is supportive of working the final two blocks into our scheduled work for this year.

There has been no additional information received about the development of commercial property across from Wal Mart adjacent to the new credit union.

Information has been requested from manufacturers for new LED streetlight fixtures to begin our CIP project of replacing all streetlights in the City. We will probably narrow down to a couple of choices and obtain some sample fixtures for evaluation. We are requesting a color temperature rating of 3000K to avoid complaints about the whiteness of the light and to be in line with recent AMA recommendations regarding blue light in LED fixtures. I visited the Cree Lighting facility in Durham NC during April to discuss their lighting offerings and to see installations at night. Sample lights are not in place for this project yet. Cree continues to experience production delays. Sample lights have been ordered from Cooper. What I thought would be a 2-3 week lead time was actually quoted as a 6-8 week lead time. By the time Cooper delivers their lights, Cree should be able to deliver theirs as well. It looks like late October before sample lights are in place.

We continue to work with a couple of customers in Maryville regarding electrical noise that is interfering with their hobby of amateur radio operation. These customers have been patient and understand that it is difficult for us to devote time to this with a limited workforce. The customers have obtained equipment which is designed to locate the sources of noise. We have performed maintenance work on the poles that they have pinpointed, but this work did not eliminate the noise. I've asked the telephone and cable TV companies to inspect their equipment on these poles. I obtained some assistance from Santee Cooper on this issue. Someone from their communications staff who is experienced with locating radio frequency noise (and has the equipment necessary to do so) visited us and located a couple sets of lightning arresters that were causing the bulk of the noise. These arresters were replaced and both radio operators were happy for a few days, but then some different noise began bothering one of them. Additional work has been done on a couple of poles adjacent to one of the homes and apparently the noise issue has subsided for now.

A significant amount of time has been devoted to the implementation of a new inventory system during August. We are migrating to an inventory system embedded in our existing New World financial package. Training has been held, new inventory numbers have been entered. Final updates to these numbers will be made before going live with the system in mid-September.

Safety meeting was held on August 17th.

Other statistics of interest for July:

• Cut-on – regular	183
• Cut-off – regular	91
• Cut-off – non-pay	155
• Non-pay restores	130
• Re-read orders	409
• CNP finals	37
• Accidents – lost time	0
• Accidents – first aid/property damage	0
• PUPS locates	122
• Total orders worked	1011

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2382)**

Meeting: 09/21/17 05:30 PM

Department: Engineering

Category: Report

Prepared By: Orlando Arteaga

Initiator: Orlando Arteaga

Sponsors:

DOC ID: 2382

August 2017 Engineering Report



**City of Georgetown
Engineering Monthly Report
August 2017**

Engineering - Orlando Arteaga, PE

Date: September 13, 2017

CAPITAL IMPROVEMENT PROJECTS

1. **Drainage Improvements Project for Congdon, Highmarket, Lynch/Duke Streets Phase I and Phase II-** New 60", 48", 42", 36", 24", 18" storm drain pipe, catch basins, manholes, yard inlets, headwalls, junction chambers, ditch excavation, sidewalk, curb/gutter and street restoration.
 - Contractor: Green Wave Contracting, Inc.
 - Phase I Bid Amount: \$1,967,970.48-Revised
 - Phase II Bid Amount: \$323,739.68-Revised
 - CSX permit approved on 5/12/2017.
 - SCDOT permit approved on 5/18/2017.
 - Phase I contract approved by SC Department of Commerce (CDBG) on 6/5/2017.
 - Phase II contract approved by RIA on 5/23/2017.
 - Notice of Award: 6/6/2017
 - Notice to Proceed: 7/20/2017
 - Status: Change Order no. 1- \$61,500 approved by council 8/17/17. Awaiting approval by CDBG. Note: this change order has now been revised to \$51,500 due to an accounting error.

Contractor has not mobilized and no construction work has started as of this date.
Awaiting for change order approval and material submittal approvals. Submittals are pending approval by Engineer and CSX.



**City of Georgetown
Engineering Monthly Report
August 2017**

Engineering - Orlando Arteaga, PE

Date: September 13, 2017

2. East Bay Park - Bathrooms

- Contractor: CP&G
- Bid: \$210,000
- Notice of Award: 7/31/2017
- Notice to Proceed: 9/5/2017
- Status: Contract has been executed. Pre-construction conference held on 8/23/2016. Contractor is expected to file submittals and overall construction schedule anytime now. Contractor has not mobilized as of this date.

3. East Bay Park - Boat Trailer Parking (35 spaces)

- Contractor: Gaster's Grading Company
- Bid: \$565,000
- Bid Date: 6/29/2017
- Notice of Award: 7/17/2017
- Notice to Proceed: 9/5/2017
- Status: Pre-construction meeting held on 8/16/2017. Mobilization delayed due to Hurricane Irma. Possible start week of 9/18/17.

4. East Bay Park – Recreational Walking Trail

- Engineer: Cagle Consulting Engineers, LLC
- Design Fee: \$9,750
- Design Start: 2/8/2017
- Design Finish: 5/30/2017
- Design is 100% complete
- Bid Date: 9/6/2017
- Status: Three bids were submitted on 9/6/17 and ranged from \$252K to \$274.6K which is way above the original budget. We will contact the grant agency to see what our options are.

Attachment: Engineering Monthly Report_August 2017 (2382 : August 2017 Engineering Monthly Report)



**City of Georgetown
Engineering Monthly Report
August 2017**

Engineering - Orlando Arteaga, PE

Date: September 13, 2017

5. Georgetown Fire Station #2

- Design-Builder: Coastal Structures Corporation
- Contract Amount: \$1,849,725.00
- Sitework Construction Start: 4/11/2017
- Sitework Construction Finish: 6/11/2017
- Pre-Construction Meeting: 6/20/2017
- Notice to Proceed: 6/21/2017
- Building Construction Start: 7/10/2017
- Building Construction Finish: 2/14/2018 (Planned)
- Scope of work: New 8,000 SF Fire Station Building
- Status: Construction work continues after a two-week delay in July due to weather. Foundation work complete. Masonry walls at Apparatus Bay are completed. Light-gauge steel framing and sheathing for exterior wall is near completion. Roof trusses delivered to site. Water and sewer services connections are ongoing. Detention pond walls needed redressing due to storm.
Change Order #1: \$52,190.54 approved by City Council on 7/20/2017. CO #1 is pending approval by USDA.

6. North Side Water Storage Tank

- Engineer: WK Dickson
- Design Fee: \$74,710
- Design Start: 11/17/2016
- Design Finish: 7/5/2017
- Bid Ad: 6/27/2017
- Bid Date: 9/6/2017 (Revised)
- Scope: New elevated water storage tank with a capacity of 250,000 gallons located behind Middle School. Project includes open cut, HDD and Jack & Bore trenching for a 12-in. water main. Agencies involved: DHEC and SCDOT.
- Status: Only one company: Caldwell Tanks submitted the bid. Bid amount: \$1,574,700

PRIVATE DEVELOPMENT PROJECTS: None

SCDOT ENCROACHMENT PERMITS: Two (2)

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2373)**

Meeting: 09/21/17 05:30 PM

Department: Housing and Community Development

Category: Report

Prepared By: Rick Martin

Initiator: Rick Martin

Sponsors:

DOC ID: 2373

August 2017 Housing & Community Development Report

**Housing & Community Development
Monthly Report
August 2017**

18.H.1

Building Official

Inspections and Permits

Checked areas for non-permitted as well as permitted work, site conditions, and responded to calls.

Monthly Report:

Business License	12
Stop Work	1
Re-Inspection	1
Footings	7
Rough Inspections	33
Electrical	14
Mobile Home	1
On-site	17
CO	0
CC	3
TRC	1
Plan Review & Sign	4
City Alarm System	0
Total	94

Meetings: ARB 4 Items, BZA 1 Item; KGB 1 meeting; CBA, CAB, PC no meetings

Review Meetings/On-site visits

Safety inspections

Other Meeting

Weekly Staff Meeting

Monthly Safety Meeting

Monthly Council Meeting

Council Workshops

Monthly Updates on Projects for March

Honorable Mayor & Council:

- Construction continues at the Georgetown Hospital and the new Surgical Wing Renovations.
- Dollar General Store on Church St. received their final.
- Construction is ongoing for the S. Island Assisted Living, the Maritime Museum, and the Maryville Fire Station.
- Early Learning Center on South Fraser St. received their final.
- The new residential home on John St. also received their final.
- There are 4 residential homes under construction.
- Updates continue on the Historic District Guidelines
- Janet is extremely busy with overgrown lots, helping with signage and ARB.
- Cindy is busy with Keep Georgetown Beautiful and working on our parks and entrances and areas around City Hall as well as Morgan Park. She is doing site visits on the main corridors and Front Street each Monday and Friday.
- Matt is working with all departments as well as preparing for the CRS cycle visit.
- Debra is doing an excellent job as our office manager issuing permits, scheduling and recording meetings as the Board Secretary, scheduling inspections and meetings for the office
- Debra, Janet, Cindy, and Matt have worked extremely hard to make sure that all request were handled efficiently and that our citizens' needs were met in a timely manner.

Thanks Again,
Rick Martin

Packet Pg. 618

Attachment: August 2017 Report (2373 : August 2017 H&CD Report)

Code Enforcement

Overgrown Lots/Trash Violations/Business Licenses/Streets & Sanitation

Total Letters Issued for Overgrown Lots	12
Total Letters Issued for Neglect of Structures	0
Total letters issued for Yard Debris/Solid Waste/Construction Debris/Inoperable Vehicles/Electronic Devices	2
Total Letter Issued for Vision Clearance	0
Total Work Orders Sent to Streets and Sanitation	2
Total Letters Sent for Dilapidated Structures	0
Total Letters sent for Sign Violations	0
Total Referrals for Water and Sewer	0
Total Citations Issued for Overgrown Lots	0
Total Citations Issued for Trash Violations	0
Total Citations Issued for Business Licenses	1
Total Citations Issued for Dilapidated Structures	0
Total Citations Issued for Hospitality Taxes	0
Total Violations Issued for Signage	0

Total Demolitions

Total Dilapidated Structures Removed 0	

Permits

Total Letters Issued for Encroachments	0
Total Citations Issued for Encroachments	0

Complaints

Total Complaints	14
Total referrals to Electric-Tree Crew	2

Administrative Assistant II

Board & Commissions:

ARB:

1. 729 Front Street requesting approval to do alterations (Old Business)
2. 113 St. James Street requesting approval to do alterations.
3. 116 St. James Street requesting approval to do an addition.

ARB (On-Site):

None

BZA:

None

Planning Commission:

None

CAB (Community Appearance Board):

None

CBA (Construction Board of Appeals):

None

TRC:

None

FOIA:

None

Permit Valuation Report:

Commercial Addition	0
Commercial Alteration	3
Commercial Electric	1
Commercial Gas	0
Commercial Mechanical	3
Commercial New Build	0
Commercial Plumbing	1
Commercial Roofing	1
Demolition	1
Mobile Home	1
Residential Addition	1
Residential Alteration	8
Residential Electrical	4
Residential Gas	1
Residential Mechanical	3
Residential New Build	1
Residential Plumbing	0
Residential Roofing	14

Administrative Assistant's Daily Duties:

- Daily operation of the front desk
- Transcribing minutes for the Board(s) meetings
- Daily scheduling of inspections
- Preparing timesheets
- Put the packets together for Board meetings

Community Planner/GIS Technician

- Helped set up and participated in the Police Department's National Night Out.
- Completed an update on the dilapidated house list and spatially referenced maps to see if we could find an area to get a CDBG to help take down these structures, while also doing a streetscape in the area.
- Helped Willie Singleton get information that he asked for to try and prove that Rick and I are wrong and not treating some people of the West End fairly.
- Wrote a couple zoning compliance letters for some local businesses that are starting up soon.

- Help answer all phone calls and do permits applications when Debra was out on vacation. Cross training is a big help to our department.
- Continually edit the city website, especially with the Eclipse information since we knew we would have such a big crowd of tourists.
- Help write, review, and organize ordinances so we get them through Minute Traq for our department. We need to take these Steel Mill rezoning and text amendment ordinances and Comprehensive Plan amendments to Council soon. They went to Planning Commission way back in April.
- Talks with Ernie Harrington on purchasing and developing the Phase VII portion of the Richmond Place PD, which is the residential area behind the post office. Hope to get some preliminary plans and building elevations to take to Planning Commission soon.
- Started working diligently on the Credit Rating System (CRS) program information. This is the floodplain management stuff that we have to keep up with and submit annually. This year we have a 5-year cycle audit from the ISO Specialist, so there is extra work to be done to prepare everything for her visit.
- Started classes in Charleston on Tuesday and Wednesday evenings for the graduate certificate in Urban and Regional Planning.
- Attended the meeting on Home Consortium information in Conway with Rick.
- Checked the overlay district compliance for the new Dollar General and the landscaping and building look good.
- Sign Permits: The Georgetown Agency, Dollar General, Fresenias Kidney Care, and Affordable Chiropractic Care.
- Temporary Sign Permits: Pawleys Island Arts Festival and Capitol Mobile.

Keep Georgetown Beautiful August 2017 Monthly Report

- Assisted with City Activities concerning Eclipse and worked Francis Marion Park the day of.
- Began planning Riversweep which will be held on September 16th at East Bay Boat Landing. Notified Volunteers, reserved canoes, registered Keep Georgetown Beautiful. Will continue planning and getting ready for it.
- Wrote grant for trash cans.
- Assisted with ideas for upcoming grant money disbursements concerning parks.
- Attended and helped coordinate prizes for participants at Police National Night Out.
- Worked with representative from Hobcaw Barony on the sculpture for East Bay Boat Landing they got grant money for. Hopefully will have it this month.
- Arranged for use of sound system.
- Met with County Storm Water to assist in the upcoming Household Hazard Waste and Paper Shredding event to be held on October 28, 2017
- Rode Maryville on several days and corridors to check for Code violations.
- Sent letters, made phone calls and visits concerning code violations.
- Follow up on code violations.
- Various other duties for Keep Georgetown Beautiful, Code Enforcement and Housing and Community Development.

August was an exciting month at the Kaminski House Museum. The Eclipse on the 21st brought people from all over the country to the lawn of the Kaminski House. Visitors to the museum were up 36% over last August and they came from 39 different states and eight foreign countries.



As with all of Georgetown, the museum was alive with visitors for the total eclipse on August 21st. The museum hosted a ticketed event for 400 people on the lawn of the Kaminski House, hosted a wedding on the Kossove Terrace/Stewart-Parker House, and was the site of an impromptu wedding on the lawn of the Kaminski House. People came from all over the world for the event; tickets were sold to people from Venezuela, Germany, England, Vermont, New Hampshire, Texas, Colorado, and all of the eastern seaboard states.

The effects of the eclipse were felt for both the week before and the week after, with an increase in visitors to tour the house, as well as in shop sales.

The wedding on the Kossove Terrace and the event viewing part on the museum lawn generated lots of media interest and was covered by not only all of the local TV stations, but also was featured in the [New York Times Style Section's Vows column](#). The [Huffington Post](#) online news featured a story on the eclipse in Georgetown and highlighted not only the events in town, but also the viewing party on the Kaminski House lawn.

The museum staff is hard at work planning for upcoming fall and winter events: A special evening event with a lecture by Rebecca T. Godwin will highlight the history of Sunset Lodge will be held on October 5th; Family Fun & Literacy Day will be held on October 14th; our annual Commander's Tour of the Kaminski House will be held on October 21st from 2-4 pm; October 29th is the date for our annual Jazz Under the Oaks concert; and the Kaminski House will be decorated once again for the holidays and will be open for tours and special events all through November and December.

Volunteers continue to play a vital role in the daily operation of the Kaminski House Museum. The eclipse events could not have been accomplished without the help of volunteers who put in more than 98 hours on August 21st. In August, our volunteers worked a total of 205.5 hours (the equivalent of 5.9 full-time employees).

Robin Gabriel, Executive Director

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2387)**

Meeting: 09/21/17 05:30 PM

Department: Administration

Category: Report

Prepared By: Paul Gardner

Initiator: Paul Gardner

Sponsors:

DOC ID: 2387

Economic Development Monthly Report

ECONOMIC DEVELOPMENT MONTHLY REPORT (JULY-AUGUST) TO THE MAYOR AND CITY COUNCIL

PREPARED BY: GLORIA BROMELL TINUBU, DIRECTOR
SEPTEMBER 14, 2017

Overview: Economic Development Department organizes its activities into City-wide and five economic development districts (EDDs) patterned after the five Fire Districts named after neighborhoods, namely, Maryville, West End, Historic, North Highmarket/Airport, and Willowbank. Hence, city-wide activities have implications for all EDDs.

1. City-wide

- **Small Business Lender/Borrower Matchmaking:** Developed plans in July and August with co-sponsor, CommunityWorks, a non-profit financial organization committed to building a brighter future for underserved families and communities through financial education, lending, and investing. The event will be held on Tuesday, September 26 at the Municipal Court training room (see attached flyer and letter to business owners). Information is posted on our website and advertised in the Georgetown times.
- **ULI Carolinas Selects Georgetown Waterfront for 2018 Design Competition:** At the last meeting of ULI Carolinas, I requested that they consider the City of Georgetown's Waterfront for their next design competition. I was officially informed in August that our waterfront will indeed be the subject of their next design competition which will be held in Greenville, February 12 and 13, 2018.
- **Coastal Carolina University Student Intern:** CCU Intern, Tedra Hendricks, worked as an Economic Development Intern, from June 6 through August 5. For the month of July and August, she collected data to help launch the rTown app and provided research support to the Georgetown County Chamber of Commerce. Big kudos to Tedra for a job well done!
- **rTown Mobile App:** Partially launched in August in time for the eclipse with businesses that would be in demand by visitors (shops, restaurants, etc.). All other businesses will be added by October 1.
- **Eclipse Planning Committee:** The City's coordinated planning for the eclipse paid off in spades! We had an estimated 50,000 to 60,000 visitors and roughly 150,000 to 200,000 vehicles passing through. According to the Georgetown Business Alliance and its sources, visitors came from 10 foreign countries, 5 western states, 6 midwest states, 5 southern states, 16 east coast states, and the District of Columbia.

Many thanks to all of the entities involved and to our City staff for an awesome job!

ECONOMIC DEVELOPMENT MONTHLY REPORT (JULY-AUGUST) TO THE MAYOR AND CITY COUNCIL

PREPARED BY: GLORIA BROMELL TINUBU, DIRECTOR
SEPTEMBER 14, 2017

- **GBA Planning meeting:** Conducted planning sessions with the President, Vice-President, and Economic Vitality Committee.
- **Georgetown County Schools:** Identified grants that we can apply for to establish a business internship program for students involved with the district's CATE program.
- **Horry Georgetown Technical College (HGTC):** Met with David Ferreira, the new Provost at HGTC, who expressed an interest in partnering with Economic Development on a number of projects, including entrepreneurship and business development training.
- **One Georgetown Economic Development Roundtable (One Georgetown):** Met individually with some of the persons who indicated interest in helping formulate plans for the roundtable. Met with the Georgetown Cultural Arts Council (Leslie Ayres and Wendy Belcher) who indicated their interest in participating in applying for a Cultural District designation with the South Carolina Arts Commission. In addition, they are also interested in participating and exploring the One Georgetown idea of a Fraser Street Prototyping Festival. The Festival could create a unified vision for our public spaces along the commercial corridor that touches all five of the City's diverse neighborhoods. The Festival would be launched in 2018 and go on display as a part of the City's 290 anniversary in 2019.

The Small Business Lender/Borrower Matchmaking on September 26, in the One Georgetown event for the first quarter of FY2017-2018. The next One Georgetown event will be focused on the Arts & Culture industry and will be held in October (date to be determined).

- **Vacant Commercial Property List:** Compiling a list of roughly 65 vacant commercial properties: 51% located on Fraser Street and 27% in the Historic District, accounting for roughly 78% of all vacant properties.

2. Historic Economic Development District

Overview: Main Street is defined as east of Fraser Street, south of Prince Street, and west of Meeting Street. Met with the Economic Vitality Committee and had a follow-up meeting with the chair to discuss areas of focus as well as reviewed a pending business survey.

- Produced a list of roughly 18 vacant properties that will be targeted for business development.
- Continuing to work with prospective developers for a boutique hotel.

ECONOMIC DEVELOPMENT MONTHLY REPORT (JULY-AUGUST) TO THE MAYOR AND CITY COUNCIL

PREPARED BY: GLORIA BROMELL TINUBU, DIRECTOR
SEPTEMBER 14, 2017

3. West End Economic Development District

Overview: The West End is defined as west of Fraser Street and the south side of Highmarket Street to the city limits.

West End Redevelopment Sub-Committee (West End RSC): Held its last meeting on July 24 and did not meet on August 28 due to inclement weather. A summary of activities thus far and meeting schedule can be found in its July 2017 newsletter (see attached).

4. Willowbank Economic Development District

Overview: Willowbank is defined as the area east of Fraser Street and the north side of Church Street to the city limits. It is where Tideland's Health is located and could be promoted as a veterans and/or health care cluster.

- Continuing to work with Bethel AME Church to create a public-private partnership around their commercial and/or residential development efforts.

5. Attended and/or Participated:

- Invited to and attended the July Board Meeting of the Bunnelle Foundation.
- Participated in the initial planning for the Georgetown Pathways – Endless Possibilities: Community Career and Education Expo sponsored by the SC Department of Commerce, September 26 at 5:30pm at the Winyah Auditorium.

MAYOR
JACK M. SCOVILLE, JR

ADMINISTRATOR
PAUL GARDNER

CITY CLERK
ANN U. MERCER



COUNCIL MEMBERS
BRENDON M. BARBER, SR
SHELDON A. BUTTS
CLARENCE C. SMALLS
AL JOSEPH
CAROL JAYROE
ED KIMBROUGH

Economic Development Director
(843) 545-4075

September 13, 2017

Dear Business Owner:

Please join us for a free lunch and the opportunity to pitch your business to a number of local lenders on Tuesday, September 26th! This event is sponsored by the City's Economic Development Department and Community Works, a non-profit financial organization committed to building a brighter future for underserved families and communities through financial education, lending, and investing. It is hosted by the Georgetown Innovation Center, the West End Redevelopment Sub-Committee, and the Main Street Georgetown Business Association.

During your one-on-one sessions, you will have 15 minutes to pitch your small business finance needs to representatives from local banks, non-profit lenders, and credit unions. So far, the following lenders have confirmed:

Community Works
Anderson Brothers Bank
First Citizens Bank
South Atlantic Bank
TD Bank

Bring your financial information and/or business plan if you are serious about pursuing financing soon or just come and see what's available. If you don't have financial information or a business plan, you can get help from John Kenny, Executive Director, Georgetown Innovation Center (GIC)
jkenny@gicinnoation.com.

Please see the enclosed flyer for more details and please feel free to share with friends and family members who might be thinking about starting a business. You can register for lunch and the one-on-one sessions with local lenders by going to Eventbrite.com. Be sure to register early, because space is limited. This is the City's way of saying that we appreciate you and we hope to see you there!

Sincerely,

Gloria Bromell Tinubu, Director
Economic Development

Drawer 939
Georgetown, SC 29442

Attachment: Letter and Flyer for Business Owners (2387 : Economic Development Monthly Report)

Small Business Lender/Borrower Matchmaking

Attention All City of Georgetown Small Business Owners and Residents

Are you looking for money to start, grow or operate your business?

Then join local lenders at a free business lunch with one-on-one matchmaking sessions!

Sponsored by:



CommunityWorks
Building People & Places



■ Tuesday, September 26th, 2017

Municipal Court Training Room

2222 Highmarket Street, Georgetown SC 29440

12:00 p.m. Registration

12:30 p.m. – 2:00 p.m. Lunch and Lender Presentations

2:00 p.m. – 4:00 p.m. One-on-One Sessions

Georgetown Innovation Center (GIC)

901 Front Street, Georgetown SC 29440

5:00 p.m. – 7:00 p.m. One-on-One Sessions

- **Event will kick-off with lunch and lender presentations (lenders confirmed to date):**
 - Community Works
 - Anderson Brothers Bank
 - First Citizens Bank
 - South Atlantic Bank
 - TD Bank
- **Matchmaking sessions will allow for one-on-one meetings**
If available, bring financial information and business plan or concept.
 For help with these items, contact John Kenny, Executive Director, Georgetown Innovation Center (GIC)
jkenny@gicinnovation.com
- **Register - No cost to attend, but register early because space is limited!**

Register at www.eventbrite.com

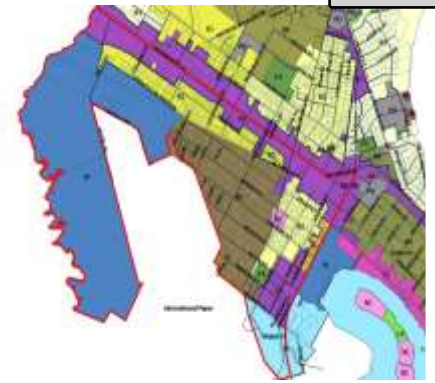
For more information, contact: Gloria Bromell Tinubu, Director of Economic Development (843) 545-4075
 or gtinubu@cogsc.com or John Kenny, GIC Executive Director at jkenny@gicinnovation.com

Hosted by:



West End Newsletter

July 18, 2017

West End RSC Members

Brendon M. Barber, City Council
Sheldon A. Butts, City Council
Talicia Dease-McCants, Citizen
Cynthia Dozier-Hazel, Citizen
Jerry Miller, Architectural Review Bd
Jocelyn Patterson, Citizen
Winfred Pieterse, Planning Comm.
Shauna Simmons, Citizen
Fred Williams, Citizen
Gerald Williams, Planning Comm.

Dear Community Members,

The West End Redevelopment Sub-Committee (West End RSC) was formed in 2016 to review and recommend changes to the West End Comprehensive Redevelopment Plan which was adopted by the City in 2003. Copies of the plan can be obtained at City Hall or downloaded from the City's website.

West End RSC held its first organizational meeting on February 11, 2017 and has held 7 meetings/workshops since that time.

Below, you will find the recommendations we have made to date. However, we value the community's feedback and would like to hear from you. Please share your concerns with Gloria Bromell Tinubu, Economic Development Director, at gtinubu@cogsc.com or at 843-545-4075.

In Your Service,

West End RSC Members

West End RSC Recommendations (to date):

- Expand study area to include all of West End
- Rehab existing housing stock and develop new housing
- Funding sources (e.g. Georgetown County/Bailey Bill)
- Historic sites, markers, and cultural designations
- Business and entrepreneurship development
- Workforce development and training
- Internships and apprenticeships for students
- Public transportation to areas of high wage jobs
- More parking spaces for Michael Johnson and Howard Center
- Additional sidewalks, lighting, and cameras needed for safety
- Reduce and monitor speed limits
- Eliminate gang graffiti on buildings
- Engage the faith-based community in redevelopment efforts

Up-coming Meetings

August 28

September 18

October 16

November 20

December 18

Meetings are usually held at 6:00 pm at the Municipal Court located at 2222 Highmarket Street.

Selected Accomplishments in the West End (2004 – 2017)

Community News

INFRASTRUCTURE

- **Streets:** Landscaped median was added to Front Street (Fraser to Merriman in 2009) and (Merriman to Alex Alford in 2011); Bourne paved (2011); Streets paved beginning Spring 2016 (with cost): Front St from West to Seaboard (\$75,544); Kaminski St from end to Bourne (\$335,218); West St from West Front St to Ridge St (\$23,068); Legion St from Merriman Rd to end of State Maintenance (\$47,288); B St from Winyah to Front (\$33,966); Streets A, D, and H were resurfaced in 2017.
- **Drainage:** Installed drainage from Merriman to end (2011); Congdon and Highmarket (2017).
- **Water and Sewer:** System maintained, replaced, and repaired on Congdon Street (2007-2008) and Merriman Road (2016).

RECREATION

- Major renovations at **Ben Cooper Park**: Phase I: Splash Pad (2014); Phase II: Parking lot (2016); Picnic Shelter; and currently Phase III: Bathhouse; adding sidewalks, landscaping, and gazebo.
- Major renovation of **Howard Recreation Center** by the County and opening of the **Mitney Center** by The Mitney Project.
- Renovations planned for **Kaminiski Street Park/Tennis Courts** in 2017-2018: Replacement of nets, new benches, and gazebo or shelter.

STREETSCAPE

- Community garden on Winyah in 2011; planted 22 crepe myrtle trees on Emanuel December 2016; trees obtained through Palmetto and planted by SAVE; planted roughly 6 crepe myrtle trees on Kaminski Street.
- Lighting on Front Street from Fraser to Alex Alford has been replaced in several phases. This involved 48 decorative poles and globe fixtures at a cost of roughly \$96,000.

ZONING

- R5 Zoning District was created (2/19/2004) to allow for the development of small lots and mix of housing types.

Summer Fun-tensive: Mitney Center hosts Tech Camp to teach skills for future

July 5, 2017 [By Clayton Stairs](#)
cstairs@southstrandnews.com



Students, from left, Ty'Ren Kinloch (13), Josiah Tucker (11), Javin Grimmage (10), Alex McCants (13), and Amari Britton (10), set up one of the robots to show what it can do.

The Mitney Project partnered with the Grand Strand Technology Council to offer its students, ages 9 to 18, a two-week Tech Camp (June 19 – 30) introducing them to skills in robotics, computer programming and virtual/augmented reality.

City Engages Engineering Firm for West End Sewer System

On **July 13, 2017**, the City engaged AECOM as the engineer of record at a cost not to exceed **\$210,500** to identify deficiencies and prepare recommendations for the rehabilitation of the **West End Sewer System**. The System consists of approximately 40,000 feet of sewer mains.

The City has already allocated \$3.5 million for construction of sewer lines and manholes for the 2018-2019 fiscal year.

**Georgetown City Council**

120 North Fraser Street
Georgetown, SC 29442

SCHEDULED**MONTHLY REPORT (ID # 2375)**

Meeting: 09/21/17 05:30 PM

Department: Finance

Category: Report

Prepared By: Debra Bivens

Initiator: Debra Bivens

Sponsors:

DOC ID: 2375

August 2017 Finance and IT Report

August 2017 Finance and IT Departments Report

Statistics:

New Business Licenses Issued: Adajy Construction, Apex Professional Care, Dry Home Roofing & Contracting LLC, East Coast Early Learning Academy, Fred Hoelscher, Jophlin Legal LLC, Reid Cleaning Services, Rice Cottage.

Projects Progress:

Grants: Please see the attached schedule for the detail on each grant award.

Year End Audit: Staff will continue the year end closing process in order to be prepared for the auditors' field work in October and complete FY2017 Financial Statements.

Revenue Bond for Electric Utilities: We have gathered and provided all of the required financial information for the Revenue Bond. The sale date for the RFP for the bond is September 21, 2017, with a closing date of October 13, 2017.

Inventory System Update: Both the Electric and Water Utilities have undergone training for new inventory tracking procedures for a newly implemented software system that is a part of our current New World System software. We are set to 'go live' with the new system on September 22, 2017.

Set Off Debt: We are in the process of submitting outstanding utility bills to the Municipal Association and the State for setoff against State Income Tax Refunds. Over the years this has proven to be an excellent source for delinquent revenue collections.

Upcoming Procurement Projects:

- Fire Station II
- Drainage Project (Phase I & Phase II)
- East Bay Park Improvements
- Peak Shaving Project
- North Side Water Storage Tank
- Constitution Park Bulkhead Project

Attached are the Budget Performance Reports for August 2017.

Ref	Grantor	Program	Award Amount	Match Amount	Expenditures	Balance	Award #	Status
<u>FEDERAL GRANTS</u>								
1	US Department of Agriculture	Rural Business Enterprise Grant	44,000.00	-	44,819.94	-	00-01	
2	SC Department of Commerce	Highmarket & Duke Drainage Improvements (CDBG)	1,000,000.00	1,138,971.00	109,770.75	2,029,200.25	CDBG #4-CI-15-012	
3	SC Department of Archives & History	FY 2016 Federal Historic Preservation Grant: COG Design Guidelines	24,225.00	24,225.00	34,523.41	13,926.59	-	
4	Federal Highway Administration	East Bay Park Recreational Trail (SCPRT)	77,758.60	19,439.65	6,325.00	90,873.25	P28051500715	
5	SC Department of Commerce	Ladder Fire Truck	500,000.00	340,000.00	12,000.00	828,000.00	CDBG #4-CE-16-003	
<u>STATE GRANTS</u>								
6	SC Rural Infrastructure Authority	N. Congdon St & CSX Drainage Ditch Improvement Project	159,365.00	133,720.00	78,867.50	214,217.50	#R-16-1094	
7	SC Muni Insurance Trust	2017 Public Works Equipment	2,000.00	2,000.00	2,702.85	1,297.15	-	
8	SC Muni Insurance Trust	2017 Soft Body Armor	2,000.00	2,000.00	3,158.20	841.80	-	
<u>OTHER GRANTS</u>								
9	Palmetto Pride	Keep South Carolina Beautiful 2017	8,000.00	-	4,634.89	3,365.11	-	
TOTAL			1,817,348.60	1,660,355.65	296,802.54	3,181,721.65		

CITY OF GEORGETOWN

SALE OF ASSETS - FY 2017/2018

Account #0010-00-391-001

G/L Date	Gov Deal #	Asset #	Dept.	Description	Amount	Sales Tax	Total Proceeds	GovDeals Fee	Notations
-	507	12191	Finance	APC Symetra LX Battery	-	-	-	-	no bids
7/27/2017	509	-	Fire	File Lateral Cabinet (5 drawer)	20.00	1.40	23.90	2.50	Charlie Lee; Rec. # 2018-00091
				Total July	20.00	1.40	23.90	2.50	
08/16/17	508	12160	Fire	Fire Boat Pump	195.00	13.65	223.27	14.62	William Newkirk; Rec. #2018-7039
				Total August	195.00	13.65	223.27	14.62	
-	-	-	-		-	-	-	-	-
				Total September	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total October	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total November	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total December	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total January	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total February	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total March	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total April	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total May	-	-	-	-	
-	-	-	-		-	-	-	-	-
				Total June	-	-	-	-	
-	-	-	-		-	-	-	-	-
				TOTAL PER G/L	215.00	15.05	247.17	17.12	

*As of Dec. 2016 the GovDeals Fee is included in the customers total. Therefore, the customer is responsible for the fee (Administrative Fee).



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
Fund 0010 - General Fund								
REVENUE								
Department 00 - Revenue								
Property Taxes								
311.001	Property Taxes - Real	3,065,142.00	5,837.40	.00	5,837.40	3,059,304.60	0	3,045,966.47
311.003	Property Taxes - Vehicles	270,000.00	21,782.79	.00	21,782.79	248,217.21	8	264,443.10
311.005	Prop Tax-Penalties & Cost	31,000.00	.00	.00	.00	31,000.00	0	.00
Property Taxes Totals		\$3,366,142.00	\$27,620.19	\$0.00	\$27,620.19	\$3,338,521.81	1%	\$3,310,409.57
Licenses and Permits								
321.001	Business Licenses	2,500,000.00	38,971.77	.00	47,834.04	2,452,165.96	2	2,410,289.37
321.002	Business Lic - Penalties	11,000.00	2,042.74	.00	2,275.02	8,724.98	21	12,425.38
322.001	Cable TV Franchise	75,000.00	1,593.36	.00	1,593.36	73,406.64	2	100,726.48
322.002	S.C. Electric & Gas Co.	42,000.00	.00	.00	.00	42,000.00	0	39,536.78
323.001	Electrical Permits	3,500.00	1,429.00	.00	1,715.00	1,785.00	49	5,976.00
323.002	Plumbing Permits	1,000.00	157.00	.00	703.00	297.00	70	6,030.00
323.003	Gas Permits	600.00	60.00	.00	138.00	462.00	23	853.00
323.004	Building Permits	85,000.00	5,488.00	.00	7,141.00	77,859.00	8	151,114.55
323.005	Yard Sale Permits	100.00	9.00	.00	15.00	85.00	15	81.00
323.006	Mobile Home Permits	100.00	75.00	.00	75.00	25.00	75	375.00
323.007	Demolition & Clearance	1,500.00	150.00	.00	150.00	1,350.00	10	36,934.00
323.008	Mechanical Permits	6,000.00	1,000.00	.00	1,660.00	4,340.00	28	6,922.00
323.010	Bus Lic Inspection Fee	1,000.00	200.00	.00	300.00	700.00	30	1,300.00
323.014	Construct Parking Permit	50.00	.00	.00	.00	50.00	0	.00
323.015	Reinspection Fee	250.00	75.00	.00	300.00	(50.00)	120	150.00
323.016	Permit Not Posted On-Site	.00	75.00	.00	75.00	(75.00)	+++	75.00
323.018	Moving Permit	.00	.00	.00	.00	.00	+++	100.00
323.019	Stop Work Order Fee	200.00	.00	.00	36.00	164.00	18	120.00
323.020	Board of Appeals Fee	500.00	.00	.00	.00	500.00	0	600.00
323.021	Zoning Fees	1,000.00	.00	.00	.00	1,000.00	0	755.00
323.022	Plan Review Fee	15,000.00	640.00	.00	852.50	14,147.50	6	61,479.50
323.023	Sign Permit Fee	4,500.00	213.00	.00	777.00	3,723.00	17	4,510.00
323.024	Planning Commission Fees	200.00	.00	.00	.00	200.00	0	300.00
323.025	ARB Fees	900.00	120.00	.00	180.00	720.00	20	1,005.00



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
323.026	Plat Approval Fees	300.00	40.00	.00	40.00	260.00	13	460.00
323.027	Special Events Permit	500.00	50.00	.00	50.00	450.00	10	659.00
323.028	Miscellaneous permits	500.00	.00	.00	.00	500.00	0	795.91
364.000	Housing Authority FILOT	36,000.00	.00	.00	.00	36,000.00	0	43,024.87
	Licenses and Permits Totals	\$2,786,700.00	\$52,388.87	\$0.00	\$65,909.92	\$2,720,790.08	2%	\$2,886,597.84
	Impact Fees							
324.008	Fire Impact Fee	60,000.00	4.00	.00	292.00	59,708.00	0	205,904.26
	Impact Fees Totals	\$60,000.00	\$4.00	\$0.00	\$292.00	\$59,708.00	0%	\$205,904.26
	Fines and Forfeitures							
351.001	Police Fines	170,000.00	9,376.30	.00	18,681.97	151,318.03	11	167,620.71
351.003	Parking Fines	2,000.00	40.00	.00	120.00	1,880.00	6	1,170.00
351.008	Victim's Asst. Fees-(%)	15,000.00	1,101.37	.00	2,226.05	12,773.95	15	18,734.99
351.009	Victim's Asst. Flat Fees	7,000.00	427.97	.00	962.53	6,037.47	14	8,806.38
351.012	Traffic Education Program Fees	1,000.00	.00	.00	140.00	860.00	14	980.00
	Fines and Forfeitures Totals	\$195,000.00	\$10,945.64	\$0.00	\$22,130.55	\$172,869.45	11%	\$197,312.08
	Charges for Services							
344.005	SRO Reimbursement	65,000.00	.00	.00	.00	65,000.00	0	70,578.00
351.010	Misc Police Revenue	2,000.00	1,329.70	.00	1,473.70	526.30	74	4,691.75
363.001	Fees for GIS/B&P Documents	25.00	.00	.00	15.50	9.50	62	22.50
363.005	FOIA Fees	100.00	27.50	.00	53.50	46.50	54	109.75
	Charges for Services Totals	\$67,125.00	\$1,357.20	\$0.00	\$1,542.70	\$65,582.30	2%	\$75,402.00
	State Shared							
311.004	Inventory Tax	132,978.00	.00	.00	.00	132,978.00	0	99,733.59
311.006	Homestead Exemption Tax	128,000.00	.00	.00	.00	128,000.00	0	131,476.18
311.007	Manufacturer's Tax Reduce	20,000.00	.00	.00	.00	20,000.00	0	30,684.98
311.008	Motor Carrier Lieu of Tax	8,000.00	57.48	.00	57.48	7,942.52	1	10,825.81
335.001	Local Government Fund	185,000.00	.00	.00	.00	185,000.00	0	158,104.97
351.007	Sunday Liquor Sales	15,000.00	.00	.00	.00	15,000.00	0	9,030.00
	State Shared Totals	\$488,978.00	\$57.48	\$0.00	\$57.48	\$488,920.52	0%	\$439,855.53
	Local Grants							
332.008	Other Local Grants	8,000.00	.00	.00	.00	8,000.00	0	11,866.52
	Local Grants Totals	\$8,000.00	\$0.00	\$0.00	\$0.00	\$8,000.00	0%	\$11,866.52
	Federal Grants							

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
335.004	Fema Recovery	75,000.00	.00	.00	.00	75,000.00	0	162,739.86
	Federal Grants Totals	\$75,000.00	\$0.00	\$0.00	\$0.00	\$75,000.00	0%	\$162,739.86
	Investment Earnings							
361.001	Investment Earnings	30,000.00	6,980.68	.00	14,253.88	15,746.12	48	29,892.73
	Investment Earnings Totals	\$30,000.00	\$6,980.68	\$0.00	\$14,253.88	\$15,746.12	48%	\$29,892.73
	Miscellaneous							
362.000	Rents and Royalties	24,000.00	.00	.00	.00	24,000.00	0	32,538.30
364.001	Steel Mill FILOT	.00	.00	.00	.00	.00	+++	22,155.07
368.000	Work Comp Reimbursement	600.00	.00	.00	.00	600.00	0	34,954.13
369.000	Cash Over & Short	.00	(120.00)	.00	(118.97)	118.97	+++	(411.30)
369.002	Miscellaneous Revenue	3,000.00	811.56	.00	1,291.53	1,708.47	43	22,062.53
369.003	Insurance Proceeds	15,000.00	.00	.00	.00	15,000.00	0	16,042.36
369.005	Set-off Debt Collection Fees	1,500.00	.00	.00	.00	1,500.00	0	1,025.00
369.013	Returned Check Fees	4,500.00	360.00	.00	720.00	3,780.00	16	3,930.00
370.000	Overpayments	.00	.00	.00	.00	.00	+++	15,558.00
	Miscellaneous Totals	\$48,600.00	\$1,051.56	\$0.00	\$1,892.56	\$46,707.44	4%	\$147,854.09
	Operating Transfers In							
392.001	From Electric Fund	1,400,000.00	.00	.00	.00	1,400,000.00	0	1,399,999.56
392.003	From Accom Tax Fund	29,000.00	.00	.00	.00	29,000.00	0	30,364.32
392.009	From Hospitality Fund	108,000.00	.00	.00	.00	108,000.00	0	108,000.00
394.002	Transfer from fund balance	86,864.00	.00	.00	.00	86,864.00	0	.00
	Operating Transfers In Totals	\$1,623,864.00	\$0.00	\$0.00	\$0.00	\$1,623,864.00	0%	\$1,538,363.88
	Financing Proceeds							
393.003	GO Bond Proceeds	2,000,000.00	.00	.00	.00	2,000,000.00	0	.00
	Financing Proceeds Totals	\$2,000,000.00	\$0.00	\$0.00	\$0.00	\$2,000,000.00	0%	\$0.00
	Sale of Assets							
391.001	Sale of Assets	5,000.00	207.12	.00	229.62	4,770.38	5	9,260.90
	Sale of Assets Totals	\$5,000.00	\$207.12	\$0.00	\$229.62	\$4,770.38	5%	\$9,260.90
	Department 00 - Revenue Totals	\$10,754,409.00	\$100,612.74	\$0.00	\$133,928.90	\$10,620,480.10	1%	\$9,015,459.26
	REVENUE TOTALS	\$10,754,409.00	\$100,612.74	\$0.00	\$133,928.90	\$10,620,480.10	1%	\$9,015,459.26
	EXPENSE							
	Department 01 - Administration							
	Personal Services							

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
400.101	Regular Pay	340,000.00	22,867.20	.00	50,244.15	289,755.85	15	348,439.49
401.103	Overtime	5,000.00	95.06	.00	451.56	4,548.44	9	2,201.41
405.114	FICA	27,539.00	1,713.63	.00	3,783.35	23,755.65	14	26,071.30
406.116	Retirement	39,970.00	3,135.32	.00	6,850.45	33,119.55	17	38,192.34
408.125	SCMIT Worker's Comp Ins.	4,500.00	.00	1,414.82	1,414.82	1,670.36	63	5,236.85
410.001	Health Claims Cost	26,000.00	1,534.72	.00	3,069.44	22,930.56	12	19,837.00
Personal Services Totals		\$443,009.00	\$29,345.93	\$1,414.82	\$65,813.77	\$375,780.41	15%	\$439,978.39
Supplies								
500.101	Supplies and Materials	5,000.00	471.05	.00	752.45	4,247.55	15	6,180.18
500.102	Equipment	2,000.00	.00	.00	.00	2,000.00	0	1,375.59
500.103	Furniture	8,500.00	.00	.00	.00	8,500.00	0	.00
500.105	Printing and Binding	100.00	.00	.00	715.89	(615.89)	716	84.53
Supplies Totals		\$15,600.00	\$471.05	\$0.00	\$1,468.34	\$14,131.66	9%	\$7,640.30
Other Services & Charges								
610.111	Communications- Landline	6,000.00	421.39	.00	1,117.36	4,882.64	19	5,112.35
610.112	Postage	1,000.00	35.75	.00	74.76	925.24	7	677.06
610.1110	Communications- Wireless	3,800.00	267.34	.00	267.34	3,532.66	7	2,917.93
620.114	Advertising	300.00	65.00	.00	65.00	235.00	22	390.00
640.124	Travel Expense	7,750.00	67.09	.00	1,130.64	6,619.36	15	2,795.51
650.127	Electricity	5,954.00	683.74	.00	1,307.94	4,646.06	22	6,306.85
650.128	Water	1,128.00	28.11	.00	56.22	1,071.78	5	632.92
650.129	Wastewater	1,487.00	39.29	.00	78.58	1,408.42	5	848.77
650.130	Sanitation	643.00	78.59	.00	157.18	485.82	24	810.08
650.133	Stormwater	400.00	56.54	.00	113.08	286.92	28	484.44
650.134	Security Lights	1,700.00	157.50	.00	315.00	1,385.00	19	1,890.00
650.1271	Electricity- Sales Tax	282.00	33.34	.00	63.09	218.91	22	292.39
660.139	Fleet Services Materials	1,200.00	.00	.00	99.13	1,100.87	8	1,059.32
660.145	Gasoline & Oil	1,500.00	86.68	.00	86.68	1,413.32	6	1,445.91
660.1391	Fleet Services Labor	1,000.00	13.75	.00	192.50	807.50	19	536.25
670.156	Equipment Rental/Lease	7,200.00	845.33	.00	1,060.70	6,139.30	15	6,979.95
685.180	Membership Dues and Fees	3,400.00	240.55	.00	510.55	2,889.45	15	3,021.95
685.182	Other Operating Expenses	3,000.00	1,413.93	.00	1,482.69	1,517.31	49	8,758.81
685.186	Training	2,250.00	11.80	.00	11.80	2,238.20	1	529.00



Budget Performance Report

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Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
685.1801	Subscriptions	300.00	51.45	.00	51.45	248.55	17	63.05
686.187	Professional Services	100.00	.00	.00	.00	100.00	0	103.28
686.189	Employee Medical	200.00	.00	.00	.00	200.00	0	.00
686.195	Repair/Maint Svc Contract	1,000.00	.00	.00	.00	1,000.00	0	42.00
686.1895	Employee wellness services	1,250.00	95.72	.00	95.72	1,154.28	8	1,573.35
	Other Services & Charges Totals	\$52,844.00	\$4,692.89	\$0.00	\$8,337.41	\$44,506.59	16%	\$47,271.17
	Other Objects							
795.001	IT Internal Allocations	16,750.00	1,267.29	.00	2,563.54	14,186.46	15	26,138.14
795.995	GF Cost Distribution	(215,000.00)	.00	.00	.00	(215,000.00)	0	(215,000.04)
	Other Objects Totals	(\$198,250.00)	\$1,267.29	\$0.00	\$2,563.54	(\$200,813.54)	-1%	(\$188,861.90)
	Sub Department 02 - Mayor and Council							
	Personal Services							
400.101	Regular Pay	110,414.00	9,445.87	.00	18,070.36	92,343.64	16	111,239.10
405.114	FICA	7,225.00	627.81	.00	1,192.81	6,032.19	17	7,254.93
406.116	Retirement	11,235.00	1,114.11	.00	2,133.26	9,101.74	19	10,765.22
410.001	Health Claims Cost	51,266.00	3,405.92	.00	6,811.84	44,454.16	13	42,072.62
	Personal Services Totals	\$180,140.00	\$14,593.71	\$0.00	\$28,208.27	\$151,931.73	16%	\$171,331.87
	Supplies							
500.101	Supplies and Materials	1,200.00	93.87	.00	(116.13)	1,316.13	-10	1,710.23
500.102	Equipment	1,500.00	.00	.00	.00	1,500.00	0	.00
500.105	Printing and Binding	1,000.00	84.53	.00	84.53	915.47	8	.00
	Supplies Totals	\$3,700.00	\$178.40	\$0.00	(\$31.60)	\$3,731.60	-1%	\$1,710.23
	Other Services & Charges							
610.111	Communications- Landline	800.00	47.63	.00	94.35	705.65	12	571.16
610.112	Postage	1,000.00	11.04	.00	27.87	972.13	3	140.88
610.1110	Communications- Wireless	3,500.00	304.56	.00	304.56	3,195.44	9	6,301.39
620.114	Advertising	500.00	32.50	.00	32.50	467.50	6	1,283.75
640.124	Travel Expense	14,500.00	.00	.00	1,572.95	12,927.05	11	8,952.07
670.156	Equipment Rental/Lease	10,000.00	810.00	8,910.00	1,620.00	(530.00)	105	9,720.00
685.180	Membership Dues and Fees	1,200.00	.00	.00	.00	1,200.00	0	.00
685.182	Other Operating Expenses	17,400.00	.00	.00	.00	17,400.00	0	1,817.77
685.186	Training	3,100.00	.00	.00	.00	3,100.00	0	5,460.30
685.1801	Subscriptions	2,600.00	.00	.00	.00	2,600.00	0	1,360.20



Budget Performance Report

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Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
686.187	Professional Services	150.00	.00	.00	294.25	(144.25)	196	309.84
686.1895	Employee wellness services	2,700.00	223.34	.00	223.34	2,476.66	8	1,430.78
	Other Services & Charges Totals	\$57,450.00	\$1,429.07	\$8,910.00	\$4,169.82	\$44,370.18	23%	\$37,348.14
	Other Objects							
795.001	IT Internal Allocations	6,700.00	253.46	.00	512.71	6,187.29	8	9,287.20
	Other Objects Totals	\$6,700.00	\$253.46	\$0.00	\$512.71	\$6,187.29	8%	\$9,287.20
	Sub Department 02 - Mayor and Council Totals	\$247,990.00	\$16,454.64	\$8,910.00	\$32,859.20	\$206,220.80	17%	\$219,677.44
	Department 01 - Administration Totals	\$561,193.00	\$52,231.80	\$10,324.82	\$111,042.26	\$439,825.92	22%	\$525,705.40
	Department 04 - Finance							
	Personal Services							
400.101	Regular Pay	429,498.00	43,012.98	.00	80,341.22	349,156.78	19	443,044.39
401.103	Overtime	3,000.00	79.74	.00	176.13	2,823.87	6	1,725.06
405.114	FICA	30,932.00	3,140.85	.00	5,849.58	25,082.42	19	32,098.62
406.116	Retirement	52,565.00	5,718.48	.00	10,737.10	41,827.90	20	50,781.69
408.125	SCMIT Worker's Comp Ins.	2,500.00	.00	775.63	775.63	948.74	62	2,870.94
410.001	Health Claims Cost	58,000.00	4,721.52	.00	9,443.04	48,556.96	16	52,429.14
	Personal Services Totals	\$576,495.00	\$56,673.57	\$775.63	\$107,322.70	\$468,396.67	19%	\$582,949.84
	Supplies							
500.101	Supplies and Materials	8,000.00	648.95	.00	1,776.63	6,223.37	22	5,812.33
500.102	Equipment	1,500.00	.00	.00	.00	1,500.00	0	160.50
500.103	Furniture	1,000.00	.00	.00	.00	1,000.00	0	.00
500.105	Printing and Binding	100.00	.00	.00	.00	100.00	0	.00
	Supplies Totals	\$10,600.00	\$648.95	\$0.00	\$1,776.63	\$8,823.37	17%	\$5,972.83
	Other Services & Charges							
610.111	Communications- Landline	3,500.00	248.09	.00	562.07	2,937.93	16	2,989.62
610.112	Postage	4,000.00	409.61	.00	700.94	3,299.06	18	5,366.69
610.1110	Communications- Wireless	2,000.00	150.55	.00	150.55	1,849.45	8	1,786.14
620.114	Advertising	200.00	.00	.00	.00	200.00	0	.00
640.124	Travel Expense	3,500.00	.00	.00	.00	3,500.00	0	2,837.19
650.127	Electricity	5,103.00	586.06	.00	1,121.09	3,981.91	22	5,405.88
650.128	Water	967.00	24.09	.00	48.18	918.82	5	542.52
650.129	Wastewater	1,274.00	33.68	.00	67.36	1,206.64	5	727.53
650.130	Sanitation	551.00	67.36	.00	134.72	416.28	24	694.32



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.133	Stormwater	320.00	48.47	.00	96.94	223.06	30	415.32
650.134	Security Lights	1,460.00	135.00	.00	270.00	1,190.00	18	1,620.00
650.1271	Electricity- Sales Tax	242.00	28.58	.00	54.08	187.92	22	250.61
670.156	Equipment Rental/Lease	7,000.00	458.74	.00	823.91	6,176.09	12	8,056.02
685.180	Membership Dues and Fees	1,150.00	170.00	.00	320.00	830.00	28	1,135.05
685.182	Other Operating Expenses	38,000.00	4,323.26	.00	7,619.83	30,380.17	20	35,024.89
685.184	Continuing Education	1,000.00	220.00	.00	695.00	305.00	70	1,589.00
685.186	Training	3,500.00	295.00	.00	295.00	3,205.00	8	1,600.22
685.1801	Subscriptions	500.00	.00	.00	.00	500.00	0	484.80
686.187	Professional Services	500.00	.00	.00	.00	500.00	0	51.64
686.189	Employee Medical	200.00	.00	.00	.00	200.00	0	45.00
686.195	Repair/Maint Svc Contract	3,000.00	77.25	.00	154.50	2,845.50	5	1,031.27
686.1895	Employee wellness services	2,500.00	255.25	.00	255.25	2,244.75	10	2,183.83
	Other Services & Charges Totals	\$80,467.00	\$7,530.99	\$0.00	\$13,369.42	\$67,097.58	17%	\$73,837.54
	Other Objects							
795.001	IT Internal Allocations	16,750.00	1,520.75	.00	3,076.25	13,673.75	18	30,277.56
795.995	GF Cost Distribution	(412,530.00)	.00	.00	.00	(412,530.00)	0	(415,855.56)
	Other Objects Totals	(\$395,780.00)	\$1,520.75	\$0.00	\$3,076.25	(\$398,856.25)	-1%	(\$385,578.00)
	Department 04 - Finance Totals	\$271,782.00	\$66,374.26	\$775.63	\$125,545.00	\$145,461.37	46%	\$277,182.21
	Department 05 - Police							
	Sub Department 05 - Police Staff Services							
	Personal Services							
400.101	Regular Pay	1,578,064.00	154,138.83	.00	283,912.80	1,294,151.20	18	1,612,937.68
401.103	Overtime	85,000.00	3,578.31	.00	7,490.61	77,509.39	9	103,226.99
401.105	On-call pay	5,200.00	400.00	.00	800.00	4,400.00	15	4,500.00
405.114	FICA	125,482.00	11,417.96	.00	21,148.44	104,333.56	17	124,551.26
406.116	Retirement	250,810.00	24,554.02	.00	45,778.90	205,031.10	18	239,049.91
408.125	SCMIT Worker's Comp Ins.	70,000.00	2,207.67	19,742.77	21,950.44	28,306.79	60	91,023.49
410.001	Health Claims Cost	233,011.00	20,320.70	.00	40,067.04	192,943.96	17	210,268.40
410.002	Health Claim Costs-Retire	40,232.00	3,148.78	.00	6,297.56	33,934.44	16	38,133.02
	Personal Services Totals	\$2,387,799.00	\$219,766.27	\$19,742.77	\$427,445.79	\$1,940,610.44	19%	\$2,423,690.75
	Supplies							
500.101	Supplies and Materials	33,000.00	1,363.12	.00	1,966.51	31,033.49	6	24,937.46



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

[illegible]

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
686.194	Other Prof/Tech Services	75,000.00	.00	75,000.00	.00	.00	100	53,000.00
686.195	Repair/Maint Svc Contract	41,100.00	.00	1,800.00	586.45	38,713.55	6	25,966.19
686.1895	Employee wellness services	15,000.00	1,212.43	.00	1,212.43	13,787.57	8	17,375.11
687.203	Contract Services	44,500.00	399.95	.00	799.90	43,700.10	2	42,303.18
Other Services & Charges Totals		\$717,546.00	\$44,119.64	\$95,013.09	\$58,561.55	\$563,971.36	21%	\$597,951.10
Other Objects								
795.001	IT Internal Allocations	33,500.00	2,534.58	.00	5,127.08	28,372.92	15	54,703.56
795.010	911 Expense Billing	(1,900.00)	(265.85)	.00	(423.15)	(1,476.85)	22	(2,863.10)
Other Objects Totals		\$31,600.00	\$2,268.73	\$0.00	\$4,703.93	\$26,896.07	15%	\$51,840.46
Sub Department 05 - Police Staff Services Totals		\$3,218,205.00	\$269,086.33	\$114,755.86	\$494,542.64	\$2,608,906.50	19%	\$3,147,389.16
Sub Department 07 - Victim's Advocate								
Personal Services								
400.101	Regular Pay	32,115.00	2,946.45	.00	5,636.71	26,478.29	18	32,741.31
401.103	Overtime	2,000.00	67.35	.00	229.00	1,771.00	11	1,580.05
405.114	FICA	2,387.00	208.08	.00	399.16	1,987.84	17	2,347.68
406.116	Retirement	4,054.00	396.02	.00	767.00	3,287.00	19	3,873.71
408.125	SCMIT Worker's Comp Ins.	550.00	.00	172.36	172.36	205.28	63	637.98
410.001	Health Claims Cost	3,453.00	574.36	.00	1,148.72	2,304.28	33	4,128.82
Personal Services Totals		\$44,559.00	\$4,192.26	\$172.36	\$8,352.95	\$36,033.69	19%	\$45,309.55
Supplies								
500.101	Supplies and Materials	975.00	.00	.00	.00	975.00	0	387.77
501.101	Uniforms and Clothing	400.00	105.71	.00	105.71	294.29	26	.00
Supplies Totals		\$1,375.00	\$105.71	\$0.00	\$105.71	\$1,269.29	8%	\$387.77
Other Services & Charges								
610.111	Communications- Landline	180.00	11.92	.00	23.60	156.40	13	142.79
610.112	Postage	500.00	.00	.00	150.00	350.00	30	.00
610.1110	Communications- Wireless	1,000.00	150.80	297.50	150.80	551.70	45	778.33
640.124	Travel Expense	1,750.00	.00	.00	.00	1,750.00	0	947.44
660.133	Repairs & Maint. Services	250.00	.00	.00	.00	250.00	0	.00
660.139	Fleet Services Materials	100.00	.00	.00	.00	100.00	0	.00
660.145	Gasoline & Oil	1,500.00	94.77	.00	94.77	1,405.23	6	.00
660.1391	Fleet Services Labor	100.00	.00	.00	.00	100.00	0	.00
670.156	Equipment Rental/Lease	450.00	.00	.00	.00	450.00	0	341.37



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
685.180	Membership Dues and Fees	75.00	.00	.00	.00	75.00	0	52.90
685.182	Other Operating Expenses	500.00	.00	.00	.00	500.00	0	.00
685.186	Training	400.00	.00	.00	.00	400.00	0	500.00
685.187	Special Projects	600.00	18.32	.00	18.32	581.68	3	.00
686.189	Employee Medical	425.00	.00	.00	.00	425.00	0	.00
686.195	Repair/Maint Svc Contract	500.00	.00	.00	.00	500.00	0	375.00
686.1895	Employee wellness services	.00	31.91	.00	31.91	(31.91)	+++	254.39
Other Services & Charges Totals		\$8,330.00	\$307.72	\$297.50	\$469.40	\$7,563.10	9%	\$3,392.22
Other Objects								
795.001	IT Internal Allocations	3,350.00	253.46	.00	512.71	2,837.29	15	3,831.62
Other Objects Totals		\$3,350.00	\$253.46	\$0.00	\$512.71	\$2,837.29	15%	\$3,831.62
Sub Department 07 - Victim's Advocate Totals		\$57,614.00	\$4,859.15	\$469.86	\$9,440.77	\$47,703.37	17%	\$52,921.16
Sub Department 26 - Grants								
Supplies								
500.101	Supplies and Materials	4,200.00	.00	.00	.00	4,200.00	0	486.53
500.102	Equipment	500.00	.00	.00	.00	500.00	0	.00
501.101	Uniforms and Clothing	800.00	.00	.00	.00	800.00	0	439.84
Supplies Totals		\$5,500.00	\$0.00	\$0.00	\$0.00	\$5,500.00	0%	\$926.37
Other Services & Charges								
610.1110	Communications- Wireless	3,000.00	453.89	594.99	453.89	1,951.12	35	1,914.89
640.124	Travel Expense	1,200.00	.00	.00	.00	1,200.00	0	1,079.47
660.133	Repairs & Maint. Services	1,000.00	.00	.00	.00	1,000.00	0	.00
660.139	Fleet Services Materials	1,200.00	.00	.00	.00	1,200.00	0	1,005.44
660.145	Gasoline & Oil	2,000.00	76.36	.00	76.36	1,923.64	4	1,273.68
660.1391	Fleet Services Labor	1,000.00	42.14	.00	90.92	909.08	9	807.10
685.182	Other Operating Expenses	2,500.00	.00	.00	.00	2,500.00	0	790.56
685.186	Training	1,300.00	.00	.00	.00	1,300.00	0	500.00
685.187	Special Projects	2,000.00	.00	.00	.00	2,000.00	0	.00
Other Services & Charges Totals		\$15,200.00	\$572.39	\$594.99	\$621.17	\$13,983.84	8%	\$7,371.14
Sub Department 26 - Grants Totals		\$20,700.00	\$572.39	\$594.99	\$621.17	\$19,483.84	6%	\$8,297.51
Sub Department 28 - Safe Streets								
Supplies								
500.101	Supplies and Materials	.00	.00	.00	.00	.00	+++	276.21

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Supplies Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$276.21
	Other Services & Charges							
685.182	Other Operating Expenses	.00	.00	.00	.00	.00	+++	819.74
685.187	Special Projects	.00	.00	.00	11.56	(11.56)	+++	.00
	Other Services & Charges Totals	\$0.00	\$0.00	\$0.00	\$11.56	(\$11.56)	+++	\$819.74
	Sub Department 28 - Safe Streets Totals	\$0.00	\$0.00	\$0.00	\$11.56	(\$11.56)	+++	\$1,095.95
	Department 05 - Police Totals	\$3,296,519.00	\$274,517.87	\$115,820.71	\$504,616.14	\$2,676,082.15	19%	\$3,209,703.78
	Department 09 - Housing and Community Dev.							
	Personal Services							
400.101	Regular Pay	219,388.00	20,095.08	.00	38,302.27	181,085.73	17	223,899.82
401.103	Overtime	3,000.00	208.54	.00	429.78	2,570.22	14	3,741.43
405.114	FICA	15,755.00	1,470.71	.00	2,796.29	12,958.71	18	16,117.64
406.116	Retirement	26,692.00	2,667.74	.00	5,113.01	21,578.99	19	25,681.29
408.125	SCMIT Worker's Comp Ins.	2,200.00	.00	682.27	682.27	835.46	62	2,525.37
410.001	Health Claims Cost	49,126.00	2,794.40	.00	5,588.80	43,537.20	11	40,437.24
	Personal Services Totals	\$316,161.00	\$27,236.47	\$682.27	\$52,912.42	\$262,566.31	17%	\$312,402.79
	Supplies							
500.101	Supplies and Materials	2,411.00	88.10	.00	310.34	2,100.66	13	3,628.00
500.102	Equipment	3,627.00	.00	.00	.00	3,627.00	0	3,810.78
500.103	Furniture	200.00	.00	.00	.00	200.00	0	90.00
500.105	Printing and Binding	2,030.00	.00	.00	.00	2,030.00	0	808.48
	Supplies Totals	\$8,268.00	\$88.10	\$0.00	\$310.34	\$7,957.66	4%	\$8,337.26
	Other Services & Charges							
610.111	Communications- Landline	1,500.00	129.19	.00	326.58	1,173.42	22	1,563.92
610.112	Postage	1,500.00	38.28	.00	153.60	1,346.40	10	716.53
610.1110	Communications- Wireless	1,500.00	162.81	.00	162.81	1,337.19	11	1,703.23
620.114	Advertising	2,041.00	39.00	.00	39.00	2,002.00	2	2,835.48
640.124	Travel Expense	574.00	18.67	.00	58.67	515.33	10	475.20
650.127	Electricity	3,403.00	390.71	.00	747.40	2,655.60	22	3,603.91
650.128	Water	645.00	16.06	.00	32.12	612.88	5	361.70
650.129	Wastewater	850.00	22.45	.00	44.90	805.10	5	485.01
650.130	Sanitation	367.00	44.91	.00	89.82	277.18	24	462.92
650.133	Stormwater	213.00	32.31	.00	64.62	148.38	30	276.84

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

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Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
500.101	Supplies and Materials	3,000.00	145.37	.00	145.37	2,854.63	5	3,588.38
500.102	Equipment	5,000.00	.00	.00	.00	5,000.00	0	1,720.63
500.103	Furniture	.00	.00	.00	.00	.00	+++	1,591.00
	Supplies Totals	\$8,000.00	\$145.37	\$0.00	\$145.37	\$7,854.63	2%	\$6,900.01
	Other Services & Charges							
610.111	Communications- Landline	550.00	35.73	.00	70.76	479.24	13	428.38
610.112	Postage	3,500.00	92.67	.00	383.73	3,116.27	11	2,140.01
610.1110	Communications- Wireless	350.00	34.21	.00	34.21	315.79	10	403.82
640.124	Travel Expense	1,555.00	.00	.00	351.37	1,203.63	23	232.95
650.127	Electricity	4,660.00	565.54	.00	1,097.57	3,562.43	24	5,192.25
650.128	Water	568.00	28.83	.00	55.92	512.08	10	477.30
650.129	Wastewater	302.00	28.39	.00	54.53	247.47	18	354.47
650.130	Sanitation	120.00	9.67	.00	19.34	100.66	16	116.04
650.133	Stormwater	188.00	17.39	.00	34.78	153.22	18	208.68
650.134	Security Lights	412.00	38.11	.00	76.22	335.78	18	457.32
650.1271	Electricity- Sales Tax	201.00	26.19	.00	50.60	150.40	25	225.65
660.133	Repairs & Maint. Services	1,500.00	.00	.00	.00	1,500.00	0	5,334.13
660.139	Fleet Services Materials	300.00	.00	.00	490.70	(190.70)	164	226.65
660.145	Gasoline & Oil	500.00	37.58	.00	37.58	462.42	8	545.88
660.1391	Fleet Services Labor	300.00	.00	.00	330.00	(30.00)	110	233.75
670.156	Equipment Rental/Lease	3,000.00	.00	.00	.00	3,000.00	0	1,946.56
685.180	Membership Dues and Fees	75.00	.00	.00	.00	75.00	0	88.91
685.182	Other Operating Expenses	3,300.00	(24.00)	.00	(24.00)	3,324.00	-1	3,564.43
685.186	Training	445.00	.00	.00	.00	445.00	0	75.00
686.187	Professional Services	.00	.00	.00	.00	.00	+++	51.64
686.195	Repair/Maint Svc Contract	1,000.00	.00	.00	108.55	891.45	11	293.28
686.1895	Employee wellness services	600.00	95.72	.00	95.72	504.28	16	926.25
	Other Services & Charges Totals	\$23,426.00	\$986.03	\$0.00	\$3,267.58	\$20,158.42	14%	\$23,523.35
	Other Objects							
795.001	IT Internal Allocations	10,050.00	1,267.29	.00	2,563.54	7,486.46	26	20,990.36
	Other Objects Totals	\$10,050.00	\$1,267.29	\$0.00	\$2,563.54	\$7,486.46	26%	\$20,990.36
	Department 10 - Municipal Court Totals	\$189,525.00	\$16,684.33	\$423.73	\$33,690.35	\$155,410.92	18%	\$201,262.52
	Department 11 - Fire							

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Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Personal Services							
400.101	Regular Pay	1,140,000.00	112,477.31	.00	216,518.44	923,481.56	19	1,196,840.44
401.103	Overtime	90,000.00	11,103.82	.00	15,373.51	74,626.49	17	93,087.74
402.111	Volunteer Employees	7,000.00	.00	.00	810.00	6,190.00	12	4,635.00
405.114	FICA	88,236.00	8,518.70	.00	16,182.40	72,053.60	18	90,648.74
406.116	Retirement	184,431.00	18,916.19	.00	36,170.07	148,260.93	20	178,178.78
408.125	SCMIT Worker's Comp Ins.	35,000.00	.00	10,779.88	10,779.88	13,440.24	62	41,819.78
410.001	Health Claims Cost	266,987.00	19,499.04	.00	38,617.84	228,369.16	14	219,896.79
410.002	Health Claim Costs-Retire	39,353.00	4,551.30	.00	9,102.60	30,250.40	23	41,170.08
	Personal Services Totals	\$1,851,007.00	\$175,066.36	\$10,779.88	\$343,554.74	\$1,496,672.38	19%	\$1,866,277.35
	Supplies							
500.101	Supplies and Materials	18,000.00	1,111.73	.00	1,971.50	16,028.50	11	29,324.20
500.102	Equipment	41,000.00	.00	.00	.00	41,000.00	0	56,298.81
500.103	Furniture	2,000.00	.00	.00	.00	2,000.00	0	2,000.02
500.105	Printing and Binding	1,000.00	.00	.00	.00	1,000.00	0	108.73
500.107	Technology Supplies	5,000.00	214.23	.00	575.95	4,424.05	12	4,041.64
501.101	Uniforms and Clothing	28,900.00	1,150.29	.00	2,348.61	26,551.39	8	33,286.44
515.121	Safety Supplies	5,000.00	426.36	.00	731.16	4,268.84	15	4,805.48
515.128	Medical Supplies	10,000.00	1,425.23	.00	1,816.87	8,183.13	18	10,088.05
531.140	Haz Mat Supplies/Equipmnt	10,000.00	.00	.00	.00	10,000.00	0	9,978.90
	Supplies Totals	\$120,900.00	\$4,327.84	\$0.00	\$7,444.09	\$113,455.91	6%	\$149,932.27
	Other Services & Charges							
610.111	Communications- Landline	6,500.00	444.83	.00	1,078.75	5,421.25	17	5,401.90
610.112	Postage	500.00	45.34	.00	46.74	453.26	9	979.86
610.1110	Communications- Wireless	28,200.00	2,916.41	.00	4,391.08	23,808.92	16	30,096.09
620.114	Advertising	750.00	117.00	.00	117.00	633.00	16	156.00
630.121	Fire Prevention Materials	9,054.00	400.87	.00	1,221.63	7,832.37	13	9,520.09
640.124	Travel Expense	4,321.00	.00	.00	1,922.96	2,398.04	45	699.30
650.127	Electricity	21,196.00	1,787.16	.00	3,449.54	17,746.46	16	23,883.97
650.128	Water	1,780.00	194.99	.00	360.10	1,419.90	20	1,865.97
650.129	Wastewater	2,430.00	220.80	.00	445.01	1,984.99	18	2,485.20
650.130	Sanitation	973.00	78.76	.00	157.52	815.48	16	945.12
650.133	Stormwater	711.00	119.50	.00	235.60	475.40	33	838.80



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.134	Security Lights	1,633.00	151.00	.00	302.00	1,331.00	18	1,812.00
650.1271	Electricity- Sales Tax	2,168.00	80.85	.00	153.90	2,014.10	7	982.95
660.103	Emergency Preparedness	5,000.00	244.25	.00	315.37	4,684.63	6	931.24
660.133	Repairs & Maint. Services	26,000.00	1,720.67	3,125.00	2,570.94	20,304.06	22	37,943.31
660.139	Fleet Services Materials	26,000.00	2,690.87	.00	2,918.12	23,081.88	11	29,566.11
660.145	Gasoline & Oil	18,000.00	1,829.19	.00	1,922.28	16,077.72	11	19,608.88
660.1391	Fleet Services Labor	15,000.00	1,114.08	.00	1,806.11	13,193.89	12	15,093.67
660.1392	Fleet Svcs- Outside Vends	20,000.00	3,310.91	.00	5,116.64	14,883.36	26	12,473.39
670.156	Equipment Rental/Lease	6,500.00	374.76	.00	622.46	5,877.54	10	9,318.38
682.169	Laundry & Linen	2,500.00	106.92	.00	113.40	2,386.60	5	1,923.40
685.180	Membership Dues and Fees	1,355.00	45.00	.00	45.00	1,310.00	3	760.78
685.182	Other Operating Expenses	5,000.00	228.78	.00	235.08	4,764.92	5	10,690.55
685.184	Continuing Education	5,000.00	594.00	.00	594.00	4,406.00	12	.00
685.186	Training	20,210.00	160.00	.00	1,017.26	19,192.74	5	18,524.30
685.1801	Subscriptions	8,718.00	109.98	.00	109.98	8,608.02	1	11,812.56
686.187	Professional Services	.00	.00	.00	.00	.00	+++	154.92
686.189	Employee Medical	13,500.00	559.00	9,275.00	559.00	3,666.00	73	16,591.45
686.195	Repair/Maint Svc Contract	59,074.00	905.00	.00	3,800.16	55,273.84	6	63,949.02
686.1895	Employee wellness services	8,000.00	925.27	.00	925.27	7,074.73	12	10,140.63
	Other Services & Charges Totals	\$320,073.00	\$21,476.19	\$12,400.00	\$36,552.90	\$271,120.10	15%	\$339,149.84
	Other Objects							
795.001	IT Internal Allocations	18,100.00	1,520.75	.00	3,076.25	15,023.75	17	30,277.56
	Other Objects Totals	\$18,100.00	\$1,520.75	\$0.00	\$3,076.25	\$15,023.75	17%	\$30,277.56
	Capital Outlay							
900.915	CIP Projects - Current Year	2,000,000.00	.00	.00	.00	.00	+++	.00
900.3000	Buildings & Improvements	.00	70,974.70	345,995.84	70,974.70	1,583,029.46	21	241,938.92
	Capital Outlay Totals	\$2,000,000.00	\$70,974.70	\$345,995.84	\$70,974.70	\$1,583,029.46	21%	\$241,938.92
	Department 11 - Fire Totals	\$4,310,080.00	\$273,365.84	\$369,175.72	\$461,602.68	\$3,479,301.60	19%	\$2,627,575.94
	Department 12 - Public Works							
	Personal Services							
400.101	Regular Pay	500,000.00	35,118.21	.00	72,242.95	427,757.05	14	441,752.89
401.103	Overtime	32,000.00	1,502.59	.00	2,450.79	29,549.21	8	30,708.04
405.114	FICA	34,164.00	2,581.24	.00	5,262.16	28,901.84	15	33,191.47



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
406.116	Retirement	55,326.00	4,495.88	.00	9,106.55	46,219.45	16	52,755.98
408.125	SCMIT Worker's Comp Ins.	17,000.00	.00	4,840.53	4,840.53	7,318.94	57	18,251.06
410.001	Health Claims Cost	108,096.00	7,282.72	.00	14,945.68	93,150.32	14	88,927.53
410.002	Health Claim Costs-Retire	23,395.00	2,219.44	.00	4,438.88	18,956.12	19	24,411.52
Personal Services Totals		\$769,981.00	\$53,200.08	\$4,840.53	\$113,287.54	\$651,852.93	15%	\$689,998.49
Supplies								
500.101	Supplies and Materials	20,000.00	702.24	.00	2,046.82	17,953.18	10	18,146.64
500.102	Equipment	14,000.00	.00	.00	.00	14,000.00	0	10,373.68
500.103	Furniture	2,500.00	.00	.00	.00	2,500.00	0	2,731.32
500.105	Printing and Binding	2,500.00	.00	.00	.00	2,500.00	0	1,836.88
501.101	Uniforms and Clothing	16,000.00	1,323.54	1,049.00	3,190.27	11,760.73	26	20,063.76
513.112	Asphalt/Concrete/Gravel	15,000.00	.00	.00	507.51	14,492.49	3	16,468.03
515.121	Safety Supplies	7,000.00	82.50	.00	82.50	6,917.50	1	4,787.92
Supplies Totals		\$77,000.00	\$2,108.28	\$1,049.00	\$5,827.10	\$70,123.90	9%	\$74,408.23
Other Services & Charges								
610.111	Communications- Landline	3,500.00	294.85	.00	836.78	2,663.22	24	3,647.73
610.112	Postage	100.00	.00	.00	.00	100.00	0	92.61
610.1110	Communications- Wireless	5,000.00	401.22	.00	401.22	4,598.78	8	5,044.67
620.114	Advertising	1,500.00	.00	.00	.00	1,500.00	0	1,217.10
640.124	Travel Expense	1,000.00	.00	.00	.00	1,000.00	0	593.81
650.127	Electricity	1,057.00	93.85	.00	178.16	878.84	17	1,079.45
650.128	Water	414.00	34.00	.00	69.76	344.24	17	398.63
650.129	Wastewater	546.00	44.96	.00	92.07	453.93	17	526.19
650.130	Sanitation	470.00	38.04	.00	76.08	393.92	16	456.48
650.133	Stormwater	121.00	34.87	.00	69.74	51.26	58	134.04
650.134	Security Lights	482.00	44.54	.00	89.08	392.92	18	534.48
650.1271	Electricity- Sales Tax	4.00	.56	.00	.73	3.27	18	3.71
660.133	Repairs & Maint. Services	10,000.00	409.13	.00	722.32	9,277.68	7	7,905.60
660.139	Fleet Services Materials	22,000.00	1,349.01	.00	1,582.63	20,417.37	7	26,915.06
660.145	Gasoline & Oil	18,120.00	1,592.84	.00	1,592.84	16,527.16	9	19,134.56
660.1391	Fleet Services Labor	38,000.00	2,335.01	.00	4,844.92	33,155.08	13	50,409.17
663.142	Street Sign Maintenance	3,500.00	98.12	.00	1,499.89	2,000.11	43	4,071.03
663.144	Sidewalk Repairs	.00	.00	.00	.00	.00	+++	15,426.92



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
663.148	Maintenance of Parks	20,000.00	819.37	.00	3,592.36	16,407.64	18	25,419.68
670.156	Equipment Rental/Lease	3,000.00	216.71	.00	446.88	2,553.12	15	3,673.62
685.180	Membership Dues and Fees	400.00	212.00	.00	212.00	188.00	53	671.41
685.182	Other Operating Expenses	3,000.00	131.42	.00	131.42	2,868.58	4	16,191.67
685.186	Training	3,000.00	.00	.00	.00	3,000.00	0	2,827.22
686.187	Professional Services	5,000.00	.00	.00	.00	5,000.00	0	3,082.71
686.189	Employee Medical	1,800.00	.00	.00	.00	1,800.00	0	894.56
686.195	Repair/Maint Svc Contract	7,500.00	574.21	.00	1,471.90	6,028.10	20	15,924.10
686.1895	Employee wellness services	3,505.00	414.78	.00	414.78	3,090.22	12	5,033.31
687.203	Contract Services	23,500.00	4,100.00	.00	4,460.00	19,040.00	19	29,260.51
	Other Services & Charges Totals	\$176,519.00	\$13,239.49	\$0.00	\$22,785.56	\$153,733.44	13%	\$240,570.03
	Other Objects							
795.001	IT Internal Allocations	6,700.00	253.46	.00	512.71	6,187.29	8	4,747.68
	Other Objects Totals	\$6,700.00	\$253.46	\$0.00	\$512.71	\$6,187.29	8%	\$4,747.68
	Department 12 - Public Works Totals	\$1,030,200.00	\$68,801.31	\$5,889.53	\$142,412.91	\$881,897.56	14%	\$1,009,724.43
	Department 13 - Information Technology							
	Personal Services							
400.101	Regular Pay	69,543.00	7,500.82	.00	13,527.65	56,015.35	19	71,050.48
405.114	FICA	5,113.00	557.31	.00	1,001.87	4,111.13	20	5,220.26
406.116	Retirement	8,469.00	997.23	.00	1,806.07	6,662.93	21	8,144.93
408.125	SCMIT Worker's Comp Ins.	650.00	.00	172.36	172.36	305.28	53	637.98
410.001	Health Claims Cost	8,359.00	578.48	.00	1,156.96	7,202.04	14	7,006.56
	Personal Services Totals	\$92,134.00	\$9,633.84	\$172.36	\$17,664.91	\$74,296.73	19%	\$92,060.21
	Supplies							
500.101	Supplies and Materials	5,000.00	.00	.00	.00	5,000.00	0	3,470.53
500.102	Equipment	10,000.00	.00	.00	.00	10,000.00	0	2,537.00
500.107	Technology Supplies	500.00	.00	.00	.00	500.00	0	.00
	Supplies Totals	\$15,500.00	\$0.00	\$0.00	\$0.00	\$15,500.00	0%	\$6,007.53
	Other Services & Charges							
610.111	Communications- Landline	700.00	35.73	.00	70.76	629.24	10	428.38
610.112	Postage	50.00	.00	.00	.00	50.00	0	11.57
610.1110	Communications- Wireless	1,000.00	64.27	.00	64.27	935.73	6	765.10
640.124	Travel Expense	1,000.00	.00	.00	.00	1,000.00	0	501.77



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.127	Electricity	1,701.00	195.34	.00	373.68	1,327.32	22	1,801.98
650.128	Water	322.00	8.03	.00	16.06	305.94	5	180.84
650.129	Wastewater	425.00	11.23	.00	22.46	402.54	5	242.53
650.130	Sanitation	184.00	22.44	.00	44.88	139.12	24	231.33
650.133	Stormwater	107.00	28.12	.00	56.24	50.76	53	138.36
650.134	Security Lights	487.00	45.00	.00	90.00	397.00	18	540.00
650.1271	Electricity- Sales Tax	81.00	9.53	.00	18.03	62.97	22	83.53
685.180	Membership Dues and Fees	100.00	.00	.00	.00	100.00	0	35.00
685.182	Other Operating Expenses	500.00	.00	.00	.00	500.00	0	156.76
685.186	Training	500.00	.00	.00	.00	500.00	0	.00
685.1801	Subscriptions	50.00	.00	.00	.00	50.00	0	.00
686.184	Technology Services	185,340.00	15,580.01	154,577.15	30,694.69	68.16	100	184,749.13
686.194	Other Prof/Tech Services	10,000.00	.00	.00	2,646.00	7,354.00	26	4,582.88
686.195	Repair/Maint Svc Contract	13,000.00	.00	.00	.00	13,000.00	0	5,664.29
686.1895	Employee wellness services	245.00	31.91	.00	31.91	213.09	13	320.48
Other Services & Charges Totals		\$215,792.00	\$16,031.61	\$154,577.15	\$34,128.98	\$27,085.87	87%	\$200,433.93
Other Objects								
795.001	IT Internal Allocations	(334,997.00)	(24,331.96)	.00	(49,219.94)	(285,777.06)	15	(277,241.39)
Other Objects Totals		(\$334,997.00)	(\$24,331.96)	\$0.00	(\$49,219.94)	(\$285,777.06)	15%	(\$277,241.39)
Capital Outlay								
900.3950	Computer Software	7,000.00	.00	.00	.00	7,000.00	0	9,618.48
900.4300	Other Equipment	5,000.00	.00	.00	.00	5,000.00	0	.00
Capital Outlay Totals		\$12,000.00	\$0.00	\$0.00	\$0.00	\$12,000.00	0%	\$9,618.48
Department 13 - Information Technology Totals		\$429.00	\$1,333.49	\$154,749.51	\$2,573.95	(\$156,894.46)	36672%	\$30,878.76
Department 14 - Fleet Services								
Personal Services								
400.101	Regular Pay	118,486.00	8,781.81	.00	16,799.99	101,686.01	14	130,591.87
401.103	Overtime	4,000.00	176.26	.00	389.26	3,610.74	10	3,593.82
405.114	FICA	8,578.00	630.48	.00	1,221.45	7,356.55	14	9,452.89
406.116	Retirement	14,858.00	1,179.29	.00	2,303.74	12,554.26	16	15,157.52
408.125	SCMIT Worker's Comp Ins.	7,000.00	.00	1,206.54	1,206.54	4,586.92	34	9,324.56
410.001	Health Claims Cost	26,167.00	1,271.22	.00	2,542.44	23,624.56	10	20,744.53
410.002	Health Claim Costs-Retire	.00	(2,119.84)	.00	(2,119.84)	2,119.84	+++	.00

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Other Objects Totals	(\$225,884.00)	(\$15,887.69)	\$0.00	(\$33,375.60)	(\$192,508.40)	15%	(\$260,244.35)
	Department 14 - Fleet Services Totals	\$922.00	(\$3,287.54)	\$1,206.54	(\$6,245.47)	\$5,960.93	-547%	(\$23,762.98)
	Department 20 - General Government							
	Personal Services							
410.001	Health Claims Cost	1,000.00	.00	.00	.00	1,000.00	0	283.46
410.002	Health Claim Costs-Retire	35,000.00	5,317.56	.00	10,401.88	24,598.12	30	31,875.24
	Personal Services Totals	\$36,000.00	\$5,317.56	\$0.00	\$10,401.88	\$25,598.12	29%	\$32,158.70
	Supplies							
500.103	Furniture	1,000.00	.00	.00	.00	1,000.00	0	.00
510.106	Cleaning & Sanitation Sup	2,200.00	346.91	.00	370.53	1,829.47	17	2,081.86
	Supplies Totals	\$3,200.00	\$346.91	\$0.00	\$370.53	\$2,829.47	12%	\$2,081.86
	Other Services & Charges							
600.110	SCMIRF Property/Liab Ins	250,000.00	14,508.00	.00	140,197.64	109,802.36	56	267,882.01
600.112	Survivors Health Ins	500.00	16.48	.00	32.96	467.04	7	83.90
600.1051	Employee Wellness & Safety	23,300.00	718.00	.00	1,043.00	22,257.00	4	19,991.41
600.1052	Unemployment Insurance	3,500.00	.00	.00	.00	3,500.00	0	.00
620.114	Advertising	200.00	.00	.00	.00	200.00	0	.00
650.133	Stormwater	715.00	65.71	.00	131.42	583.58	18	788.52
660.133	Repairs & Maint. Services	10,000.00	.00	.00	.00	10,000.00	0	59,303.35
662.140	Building Repairs	2,000.00	.00	.00	.00	2,000.00	0	.00
685.180	Membership Dues and Fees	3,800.00	.00	.00	.00	3,800.00	0	3,606.41
685.182	Other Operating Expenses	100,000.00	9,564.84	3,100.00	19,631.85	77,268.15	23	116,271.90
685.187	Special Projects	5,000.00	.00	.00	.00	5,000.00	0	2,552.97
686.186	Legal Services	100,000.00	5,210.66	22,155.55	5,210.66	72,633.79	27	133,156.39
686.187	Professional Services	2,000.00	.00	.00	950.00	1,050.00	48	950.00
686.189	Employee Medical	250.00	.00	.00	.00	250.00	0	.00
686.190	Consulting Services	1,000.00	.00	.00	.00	1,000.00	0	.00
686.192	Elections	6,500.00	.00	.00	.00	6,500.00	0	10,417.90
686.194	Other Prof/Tech Services	5,000.00	.00	.00	.00	5,000.00	0	.00
686.195	Repair/Maint Svc Contract	8,200.00	.00	.00	1,368.06	6,831.94	17	13,851.88
686.199	Internal Engineering	30,000.00	3,034.62	.00	5,799.42	24,200.58	19	31,519.64
686.1871	Audit Services	40,000.00	.00	.00	.00	40,000.00	0	41,500.00
686.1895	Employee wellness services	4,000.00	.00	.00	.00	4,000.00	0	2,047.66

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

										Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account										Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
687.203 Contract Services										18,000.00	.00	18,000.00	.00	.00	100	24,007.29
Other Services & Charges Totals										\$613,965.00	\$33,118.31	\$43,255.55	\$174,365.01	\$396,344.44	35%	\$727,931.23
Other Objects																
795.995 GF Cost Distribution										(112,788.00)	.00	.00	.00	(112,788.00)	0	(112,788.00)
Other Objects Totals										(\$112,788.00)	\$0.00	\$0.00	\$0.00	(\$112,788.00)	0%	(\$112,788.00)
Capital Outlay																
900.3000 Buildings & Improvements										5,000.00	.00	.00	.00	5,000.00	0	.00
Capital Outlay Totals										\$5,000.00	\$0.00	\$0.00	\$0.00	\$5,000.00	0%	\$0.00
Department 20 - General Government Totals										\$545,377.00	\$38,782.78	\$43,255.55	\$185,137.42	\$316,984.03	42%	\$649,383.79
EXPENSE TOTALS										\$10,689,469.00	\$825,004.14	\$701,224.02	\$1,626,118.16	\$8,362,126.82	22%	\$8,977,112.60
Fund 0010 - General Fund Totals																
REVENUE TOTALS										10,754,409.00	100,612.74	.00	133,928.90	10,620,480.10	1%	9,015,459.26
EXPENSE TOTALS										10,689,469.00	825,004.14	701,224.02	1,626,118.16	8,362,126.82	22%	8,977,112.60
Fund 0010 - General Fund Totals										\$64,940.00	(\$724,391.40)	(\$701,224.02)	(\$1,492,189.26)	\$2,258,353.28		\$38,346.66
Fund 0011 - Debt Service																
REVENUE																
Department 00 - Revenue																
Property Taxes																
311.002 Property Taxes -Debt Mill										128,000.00	1,200.82	.00	1,200.82	126,799.18	1	131,915.94
Property Taxes Totals										\$128,000.00	\$1,200.82	\$0.00	\$1,200.82	\$126,799.18	1%	\$131,915.94
Department 00 - Revenue Totals										\$128,000.00	\$1,200.82	\$0.00	\$1,200.82	\$126,799.18	1%	\$131,915.94
REVENUE TOTALS										\$128,000.00	\$1,200.82	\$0.00	\$1,200.82	\$126,799.18	1%	\$131,915.94
EXPENSE																
Department 21 - Debt Service																
Supplies																
500.102 Equipment										128,000.00	.00	.00	.00	128,000.00	0	.00
Supplies Totals										\$128,000.00	\$0.00	\$0.00	\$0.00	\$128,000.00	0%	\$0.00
Department 21 - Debt Service Totals										\$128,000.00	\$0.00	\$0.00	\$0.00	\$128,000.00	0%	\$0.00
EXPENSE TOTALS										\$128,000.00	\$0.00	\$0.00	\$0.00	\$128,000.00	0%	\$0.00
Fund 0011 - Debt Service Totals																
REVENUE TOTALS										128,000.00	1,200.82	.00	1,200.82	126,799.18	1%	131,915.94

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Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

										Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account										Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
Federal Grants																
331.000	Federal Grants									.00	.00	.00	.00	.00	+++	27,682.93
	Federal Grants Totals									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$27,682.93
	Department 00 - Revenue Totals									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$27,682.93
	REVENUE TOTALS									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$27,682.93
	EXPENSE															
	Department 69 - Federal Grants															
	Supplies															
500.101	Supplies and Materials									.00	.00	.00	.00	.00	+++	650.36
	Supplies Totals									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$650.36
	Other Services & Charges															
685.186	Training									.00	.00	.00	.00	.00	+++	50.00
686.191	Contract Services/Studies									.00	1,080.00	(1,080.01)	1,080.00	.01	+++	16,181.70
	Other Services & Charges Totals									\$0.00	\$1,080.00	(\$1,080.01)	\$1,080.00	\$0.01	+++	\$16,231.70
	Department 69 - Federal Grants Totals									\$0.00	\$1,080.00	(\$1,080.01)	\$1,080.00	\$0.01	+++	\$16,882.06
	EXPENSE TOTALS									\$0.00	\$1,080.00	(\$1,080.01)	\$1,080.00	\$0.01	+++	\$16,882.06
	Fund 0017 - Federal Grants Totals															
	REVENUE TOTALS									.00	.00	.00	.00	.00	+++	27,682.93
	EXPENSE TOTALS									.00	1,080.00	(1,080.01)	1,080.00	.01	+++	16,882.06
	Fund 0017 - Federal Grants Totals									\$0.00	(\$1,080.00)	\$1,080.01	(\$1,080.00)	(\$0.01)		\$10,800.87
	Fund 0020 - State Accommodations Tax															
	REVENUE															
	Department 00 - Revenue															
	State Shared															
318.001	Accommodations Tax									110,000.00	.00	.00	.00	110,000.00	0	132,286.54
	State Shared Totals									\$110,000.00	\$0.00	\$0.00	\$0.00	\$110,000.00	0%	\$132,286.54
	Investment Earnings															
361.001	Investment Earnings									500.00	.00	.00	.00	500.00	0	824.62
	Investment Earnings Totals									\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0%	\$824.62
	Department 00 - Revenue Totals									\$110,500.00	\$0.00	\$0.00	\$0.00	\$110,500.00	0%	\$133,111.16
	REVENUE TOTALS									\$110,500.00	\$0.00	\$0.00	\$0.00	\$110,500.00	0%	\$133,111.16
	EXPENSE															



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

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Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
367.001	Operating Contributions	.00	.00	.00	.00	.00	+++	35,000.00
	Miscellaneous Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$35,000.00
	Operating Transfers In							
394.002	Transfer from fund balance	1,007,630.00	.00	.00	.00	1,007,630.00	0	.00
	Operating Transfers In Totals	\$1,007,630.00	\$0.00	\$0.00	\$0.00	\$1,007,630.00	0%	\$0.00
	Department 00 - Revenue Totals	\$1,882,630.00	\$84,591.28	\$0.00	\$172,212.58	\$1,710,417.42	9%	\$1,079,033.27
	REVENUE TOTALS	\$1,882,630.00	\$84,591.28	\$0.00	\$172,212.58	\$1,710,417.42	9%	\$1,079,033.27
	EXPENSE							
	Department 08 - Winyah Auditorium							
	Other Services & Charges							
650.127	Electricity	7,368.00	816.39	.00	1,411.27	5,956.73	19	7,467.22
	Other Services & Charges Totals	\$7,368.00	\$816.39	\$0.00	\$1,411.27	\$5,956.73	19%	\$7,467.22
	Department 08 - Winyah Auditorium Totals	\$7,368.00	\$816.39	\$0.00	\$1,411.27	\$5,956.73	19%	\$7,467.22
	Department 23 - Old Hospitality Fees							
	Other Services & Charges							
620.1141	Advertising- Other	.00	.00	.00	.00	.00	+++	448.50
685.182	Other Operating Expenses	2,500.00	421.81	.00	421.81	2,078.19	17	1,568.02
	Other Services & Charges Totals	\$2,500.00	\$421.81	\$0.00	\$421.81	\$2,078.19	17%	\$2,016.52
	Other Objects							
750.124	Transfers to General Fund	108,000.00	.00	.00	.00	108,000.00	0	108,000.00
	Other Objects Totals	\$108,000.00	\$0.00	\$0.00	\$0.00	\$108,000.00	0%	\$108,000.00
	Capital Outlay							
900.905	Park Improvements	900,000.00	9,548.62	767,913.00	22,611.17	109,475.83	88	117,819.60
	Capital Outlay Totals	\$900,000.00	\$9,548.62	\$767,913.00	\$22,611.17	\$109,475.83	88%	\$117,819.60
	Department 23 - Old Hospitality Fees Totals	\$1,010,500.00	\$9,970.43	\$767,913.00	\$23,032.98	\$219,554.02	78%	\$227,836.12
	Department 24 - New Hospitality Fees							
	Other Services & Charges							
683.174	Tourism Advertise/Promote	115,500.00	1,490.00	.00	1,490.00	114,010.00	1	35,704.12
685.180	Membership Dues and Fees	7,500.00	.00	.00	.00	7,500.00	0	7,500.00
685.182	Other Operating Expenses	12,100.00	9,677.86	17,949.55	16,917.81	(22,767.36)	288	28,423.26
685.187	Special Projects	429,500.00	.00	.00	.00	80,000.00	0	18,812.97
685.1871	Way-finding project	35,000.00	.00	.00	.00	35,000.00	0	4,336.06
686.195	Repair/Maint Svc Contract	21,400.00	.00	9,500.00	4,674.00	7,226.00	66	20,388.00



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
302.000	Other Operating Revenues	.00	.00	.00	.00	.00	+++	4,106.09
302.001	Penalties	125,000.00	11,429.48	.00	21,804.49	103,195.51	17	119,904.77
302.002	Pole Rental	200,000.00	.00	.00	.00	200,000.00	0	186,230.00
302.003	Fiber Rental	32,000.00	1,000.00	.00	3,521.00	28,479.00	11	26,000.00
	Operating Revenues Totals	\$12,922,000.00	\$1,164,563.21	\$0.00	\$2,235,872.62	\$10,686,127.38	17%	\$11,409,158.58
	Federal Grants							
335.004	Fema Recovery	125,925.00	.00	.00	.00	125,925.00	0	126,865.64
	Federal Grants Totals	\$125,925.00	\$0.00	\$0.00	\$0.00	\$125,925.00	0%	\$126,865.64
	Investment Earnings							
306.001	Investment Earnings	35,000.00	2,699.81	.00	7,123.93	27,876.07	20	48,434.23
	Investment Earnings Totals	\$35,000.00	\$2,699.81	\$0.00	\$7,123.93	\$27,876.07	20%	\$48,434.23
	Miscellaneous							
301.001	Revenue from Energu Efficiency Program	45,000.00	5,189.75	.00	10,723.53	34,276.47	24	61,265.25
307.002	Sale Of Scrap	500.00	.00	.00	.00	500.00	0	14,784.00
369.002	Miscellaneous Revenue	2,000.00	46,008.47	.00	92,016.94	(90,016.94)	4601	3,225.93
	Miscellaneous Totals	\$47,500.00	\$51,198.22	\$0.00	\$102,740.47	(\$55,240.47)	216%	\$79,275.18
	Operating Transfers In							
394.002	Transfer from fund balance	(149,732.00)	.00	.00	.00	(149,732.00)	0	.00
	Operating Transfers In Totals	(\$149,732.00)	\$0.00	\$0.00	\$0.00	(\$149,732.00)	0%	\$0.00
	Department 00 - Revenue Totals	\$12,980,693.00	\$1,218,461.24	\$0.00	\$2,345,737.02	\$10,634,955.98	18%	\$11,663,733.63
	REVENUE TOTALS	\$12,980,693.00	\$1,218,461.24	\$0.00	\$2,345,737.02	\$10,634,955.98	18%	\$11,663,733.63
	EXPENSE							
	Department 19 - Electric							
	Personal Services							
400.101	Regular Pay	719,850.00	54,202.32	.00	102,522.42	617,327.58	14	611,261.13
401.103	Overtime	25,000.00	16.85	.00	64.19	24,935.81	0	31,600.91
401.105	On-call pay	10,400.00	800.00	.00	1,600.00	8,800.00	15	10,400.00
401.106	Contract Labor	440,000.00	.00	160,000.00	.00	280,000.00	36	.00
401.107	Labor Billed	.00	.00	.00	.00	.00	+++	(79.10)
405.114	FICA	48,878.00	3,989.64	.00	7,529.04	41,348.96	15	46,812.14
406.116	Retirement	78,300.00	7,216.50	.00	13,836.04	64,463.96	18	73,888.68
408.125	SCMIT Worker's Comp Ins.	38,000.00	.00	12,000.79	12,000.79	13,998.42	63	44,890.65
410.001	Health Claims Cost	110,000.00	7,617.80	.00	15,235.60	94,764.40	14	102,475.22



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

[illegible]

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.130	Sanitation	2,085.00	168.66	.00	337.32	1,747.68	16	2,023.92
650.133	Stormwater	469.00	123.02	.00	246.04	222.96	52	520.56
650.134	Security Lights	9,182.00	849.00	.00	1,698.00	7,484.00	18	10,188.00
650.1271	Electricity- Sales Tax	2,529.00	170.18	.00	237.21	2,291.79	9	49,607.88
660.133	Repairs & Maint. Services	25,000.00	.00	.00	84.65	24,915.35	0	1,392.51
660.139	Fleet Services Materials	16,000.00	2,794.73	.00	2,920.93	13,079.07	18	19,081.31
660.140	Hydraulic Repair	12,000.00	.00	.00	.00	12,000.00	0	4,077.17
660.145	Gasoline & Oil	18,000.00	1,364.53	.00	1,364.53	16,635.47	8	18,727.58
660.1391	Fleet Services Labor	20,000.00	1,660.58	.00	2,947.28	17,052.72	15	22,730.20
662.140	Building Repairs	2,000.00	.00	.00	.00	2,000.00	0	.00
663.145	Sub-Station Maintenance	3,000.00	.00	.00	.00	3,000.00	0	3,758.30
663.146	Transformers Repairs	6,000.00	.00	.00	.00	6,000.00	0	4,521.66
664.101	Community Education	1,500.00	.00	.00	.00	1,500.00	0	.00
670.156	Equipment Rental/Lease	3,800.00	234.76	.00	382.42	3,417.58	10	2,827.71
670.157	Equipment Lease	156,600.00	52,160.68	208,642.72	52,160.68	(104,203.40)	167	286,883.74
682.170	Infrared Test	800.00	.00	.00	.00	800.00	0	565.00
682.171	Safety Testing/Compliance	3,500.00	387.00	.00	387.00	3,113.00	11	615.67
682.172	Ground Maint. Expenses	1,000.00	.00	.00	.00	1,000.00	0	9.63
682.173	Tree Crew Maintenance	14,000.00	.00	.00	216.27	13,783.73	2	11,042.81
685.180	Membership Dues and Fees	16,915.00	.00	.00	8,070.24	8,844.76	48	17,026.85
685.182	Other Operating Expenses	22,000.00	2,071.43	.00	3,990.64	18,009.36	18	179,434.42
685.183	Depreciation	452,551.00	33,369.96	.00	66,962.61	385,588.39	15	393,173.49
685.186	Training	11,800.00	.00	.00	.00	11,800.00	0	1,876.22
685.187	Special Projects	2,500.00	.00	.00	.00	2,500.00	0	49.06
685.190	Landfill Fees	1,500.00	154.40	.00	154.40	1,345.60	10	951.80
685.1801	Subscriptions	40.00	.00	.00	.00	40.00	0	115.50
686.186	Legal Services	10,000.00	.00	.00	.00	10,000.00	0	.00
686.187	Professional Services	11,700.00	.00	.00	774.84	10,925.16	7	11,774.32
686.188	Architect/Engineer Servcs	25,000.00	1,080.00	.00	1,680.00	23,320.00	7	22,318.12
686.189	Employee Medical	700.00	45.00	.00	45.00	655.00	6	464.55
686.190	Consulting Services	20,000.00	.00	.00	.00	20,000.00	0	.00
686.191	Contract Services/Studies	3,600.00	85.34	.00	344.02	3,255.98	10	2,371.50
686.195	Repair/Maint Svc Contract	28,000.00	563.45	.00	2,025.82	25,974.18	7	28,344.50



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
686.199	Internal Engineering	15,000.00	1,517.31	.00	2,899.71	12,100.29	19	15,759.84
686.1895	Employee wellness services	9,000.00	127.62	.00	127.62	8,872.38	1	6,401.79
687.202	Utility Billing Services	40,000.00	1,018.67	.00	16,325.97	23,674.03	41	40,364.93
689.800	Equipment Charges	.00	.00	.00	.00	.00	+++	(105.63)
Other Services & Charges Totals		\$1,322,094.00	\$119,559.95	\$208,642.72	\$321,320.19	\$792,131.09	40%	\$1,535,495.78
Other Objects								
720.001	Provision for Bad Debts	40,000.00	.00	.00	.00	40,000.00	0	39,999.96
720.006	Public Assistance Program	10,000.00	.00	.00	.00	10,000.00	0	10,000.00
750.124	Transfers to General Fund	1,400,000.00	.00	.00	.00	1,400,000.00	0	1,399,999.56
795.001	IT Internal Allocations	85,000.00	6,336.44	.00	12,817.68	72,182.32	15	77,684.10
795.995	GF Cost Distribution	365,350.00	.00	.00	.00	365,350.00	0	365,349.72
Other Objects Totals		\$1,900,350.00	\$6,336.44	\$0.00	\$12,817.68	\$1,887,532.32	1%	\$1,893,033.34
Capital Outlay								
900.906	SCDOT US 17/521 Improvements	400,000.00	.00	.00	.00	400,000.00	0	5,000.00
900.952	Peak Shaving Generation	3,100,000.00	55,401.36	.00	55,401.36	3,044,598.64	2	1,320,555.63
900.3100	Electric Distribution	1,130,000.00	89,967.49	70,968.73	100,853.86	958,177.41	15	257,903.88
900.4300	Other Equipment	560,000.00	.00	.00	.00	560,000.00	0	24,956.26
9999.9999	Assets Reclassified	(5,190,000.00)	(145,368.85)	.00	(156,255.22)	(5,033,744.78)	3	(1,608,415.77)
Capital Outlay Totals		\$0.00	\$0.00	\$70,968.73	\$0.00	(\$70,968.73)	+++	\$0.00
Department 19 - Electric Totals		\$12,979,472.00	\$1,031,643.76	\$522,431.22	\$2,119,725.43	\$10,337,315.35	20%	\$12,134,694.91
Department 36 - Fiber Optics								
Other Services & Charges								
685.183	Depreciation	1,221.00	101.72	.00	203.43	1,017.57	17	1,220.52
Other Services & Charges Totals		\$1,221.00	\$101.72	\$0.00	\$203.43	\$1,017.57	17%	\$1,220.52
Department 36 - Fiber Optics Totals		\$1,221.00	\$101.72	\$0.00	\$203.43	\$1,017.57	17%	\$1,220.52
EXPENSE TOTALS		\$12,980,693.00	\$1,031,745.48	\$522,431.22	\$2,119,928.86	\$10,338,332.92	20%	\$12,135,915.43
Fund 0030 - Electric Utility Fund Totals								
REVENUE TOTALS		12,980,693.00	1,218,461.24	.00	2,345,737.02	10,634,955.98	18%	11,663,733.63
EXPENSE TOTALS		12,980,693.00	1,031,745.48	522,431.22	2,119,928.86	10,338,332.92	20%	12,135,915.43
Fund 0030 - Electric Utility Fund Totals		\$0.00	\$186,715.76	(\$522,431.22)	\$225,808.16	\$296,623.06		(\$472,181.80)
Fund 0031 - Water Utility Fund								
REVENUE								

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Department 00 - Revenue							
	Operating Revenues							
301.000	Sale Of Utilities	2,014,135.00	194,677.43	.00	367,286.28	1,646,848.72	18	2,014,467.73
301.002	New Turn Ons	3,000.00	345.00	.00	685.00	2,315.00	23	3,670.00
301.009	New Service Taps	11,000.00	(1,000.00)	.00	.00	11,000.00	0	24,588.84
301.013	Meter Installation	1,500.00	(150.00)	.00	.00	1,500.00	0	2,100.00
302.001	Penalties	28,000.00	2,366.20	.00	9,429.06	18,570.94	34	26,223.26
	Operating Revenues Totals	\$2,057,635.00	\$196,238.63	\$0.00	\$377,400.34	\$1,680,234.66	18%	\$2,071,049.83
	Impact Fees							
324.020	Water Impact Fee	6,000.00	(550.00)	.00	.00	6,000.00	0	31,720.00
	Impact Fees Totals	\$6,000.00	(\$550.00)	\$0.00	\$0.00	\$6,000.00	0%	\$31,720.00
	Charges for Services							
324.007	Fees- Services	2,000.00	.00	.00	.00	2,000.00	0	1,253.59
	Charges for Services Totals	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0%	\$1,253.59
	Federal Grants							
335.004	Fema Recovery	32,000.00	.00	.00	.00	32,000.00	0	58,507.37
	Federal Grants Totals	\$32,000.00	\$0.00	\$0.00	\$0.00	\$32,000.00	0%	\$58,507.37
	Investment Earnings							
306.001	Investment Earnings	15,000.00	2,211.44	.00	4,455.67	10,544.33	30	21,939.21
	Investment Earnings Totals	\$15,000.00	\$2,211.44	\$0.00	\$4,455.67	\$10,544.33	30%	\$21,939.21
	Miscellaneous							
369.002	Miscellaneous Revenue	5,000.00	420.00	.00	420.00	4,580.00	8	1,655.52
	Miscellaneous Totals	\$5,000.00	\$420.00	\$0.00	\$420.00	\$4,580.00	8%	\$1,655.52
	Capital Contributions							
371.003	Cap Contributions-Develop	.00	.00	.00	.00	.00	+++	350,000.00
	Capital Contributions Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$350,000.00
	Operating Transfers In							
394.002	Transfer from fund balance	391,976.00	.00	.00	.00	391,976.00	0	.00
	Operating Transfers In Totals	\$391,976.00	\$0.00	\$0.00	\$0.00	\$391,976.00	0%	\$0.00
	Sale of Assets							
391.001	Sale of Assets	500.00	.00	.00	.00	500.00	0	2,015.00
	Sale of Assets Totals	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0%	\$2,015.00
	Department 00 - Revenue Totals	\$2,510,111.00	\$198,320.07	\$0.00	\$382,276.01	\$2,127,834.99	15%	\$2,538,140.52

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Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
REVENUE TOTALS		\$2,510,111.00	\$198,320.07	\$0.00	\$382,276.01	\$2,127,834.99	15%	\$2,538,140.52
EXPENSE								
Department 15 - Water Distribution								
Personal Services								
400.101	Regular Pay	178,000.00	13,559.41	.00	25,560.24	152,439.76	14	145,178.90
401.103	Overtime	12,000.00	665.29	.00	968.13	11,031.87	8	15,439.60
401.105	On-call pay	5,200.00	400.00	.00	800.00	4,400.00	15	5,200.00
405.114	FICA	15,460.00	1,056.64	.00	1,992.09	13,467.91	13	12,112.23
406.116	Retirement	25,000.00	1,907.20	.00	3,605.63	21,394.37	14	18,843.35
408.125	SCMIT Worker's Comp Ins.	7,000.00	.00	2,384.36	2,384.36	2,231.28	68	8,825.52
410.001	Health Claims Cost	21,200.00	1,394.06	.00	2,407.88	18,792.12	11	18,827.32
410.002	Health Claim Costs-Retire	12,177.00	996.46	.00	1,992.92	10,184.08	16	8,308.08
410.003	OPEB cost	4,000.00	.00	.00	.00	4,000.00	0	.00
Personal Services Totals		\$280,037.00	\$19,979.06	\$2,384.36	\$39,711.25	\$237,941.39	15%	\$232,735.00
Supplies								
500.101	Supplies and Materials	5,060.00	.00	.00	182.75	4,877.25	4	2,871.76
500.102	Equipment	10,350.00	2,595.71	.00	2,595.71	7,754.29	25	1,286.01
501.101	Uniforms and Clothing	4,550.00	70.50	708.75	213.37	3,627.88	20	3,143.32
513.112	Asphalt/Concrete/Gravel	23,680.00	.00	27,500.00	.00	(3,820.00)	116	20,832.64
514.110	Water Dist System Supply	32,750.00	.00	.00	1,429.52	31,320.48	4	34,109.83
515.121	Safety Supplies	300.00	87.00	.00	87.00	213.00	29	.00
523.136	Hydrant Replacement	8,000.00	.00	.00	.00	8,000.00	0	5,751.92
532.148	Small Hand Tools	550.00	.00	.00	.00	550.00	0	671.41
Supplies Totals		\$85,240.00	\$2,753.21	\$28,208.75	\$4,508.35	\$52,522.90	38%	\$68,666.89
Other Services & Charges								
515.129	Permit Fees Due To Others	870.00	.00	.00	.00	870.00	0	599.08
600.110	SCMIRF Property/Liab Ins	20,000.00	.00	.00	9,037.57	10,962.43	45	17,645.72
610.112	Postage	750.00	61.02	.00	134.88	615.12	18	947.26
610.1110	Communications- Wireless	660.00	54.27	.00	54.27	605.73	8	636.17
620.114	Advertising	750.00	.00	.00	.00	750.00	0	871.59
640.124	Travel Expense	948.00	.00	.00	.00	948.00	0	402.23
650.127	Electricity	6,293.00	554.77	.00	1,090.04	5,202.96	17	6,369.93
650.128	Water	22,857.00	1,364.45	.00	2,865.66	19,991.34	13	17,510.20



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.129	Wastewater	17,832.00	635.78	.00	1,458.56	16,373.44	8	13,347.69
650.130	Sanitation	692.00	55.96	.00	111.92	580.08	16	671.52
650.133	Stormwater	2,660.00	393.88	.00	787.76	1,872.24	30	3,050.76
650.1271	Electricity- Sales Tax	283.00	29.03	.00	55.72	227.28	20	294.32
660.133	Repairs & Maint. Services	22,500.00	109.92	.00	262.45	22,237.55	1	19,180.30
660.139	Fleet Services Materials	9,000.00	3,181.31	.00	3,181.31	5,818.69	35	8,428.60
660.145	Gasoline & Oil	7,000.00	705.21	.00	705.21	6,294.79	10	6,764.67
660.1391	Fleet Services Labor	8,000.00	560.73	.00	971.05	7,028.95	12	8,767.09
670.156	Equipment Rental/Lease	560.00	.00	.00	.00	560.00	0	.00
685.180	Membership Dues and Fees	360.00	.00	.00	230.00	130.00	64	60.00
685.182	Other Operating Expenses	10,240.00	769.10	.00	1,516.20	8,723.80	15	9,119.97
685.183	Depreciation	334,873.00	28,652.39	.00	57,304.81	277,568.19	17	307,511.19
685.186	Training	2,210.00	197.00	.00	197.00	2,013.00	9	1,924.00
685.187	Special Projects	.00	.00	.00	.00	60,000.00	0	.00
686.187	Professional Services	2,080.00	.00	.00	.00	2,080.00	0	750.54
686.189	Employee Medical	360.00	.00	.00	.00	360.00	0	150.00
686.191	Contract Services/Studies	2,400.00	85.34	.00	344.03	2,055.97	14	1,956.37
686.195	Repair/Maint Svc Contract	1,440.00	.00	.00	204.19	1,235.81	14	2,450.22
686.199	Internal Engineering	15,000.00	1,517.31	.00	2,899.71	12,100.29	19	15,759.84
686.1895	Employee wellness services	1,860.00	95.72	.00	95.72	1,764.28	5	1,839.83
687.202	Utility Billing Services	7,000.00	154.08	.00	2,469.45	4,530.55	35	6,072.43
Other Services & Charges Totals		\$499,478.00	\$39,177.27	\$0.00	\$85,977.51	\$473,500.49	15%	\$453,081.52
Other Objects								
702.106	Interest- Bonds	120,095.00	9,626.59	.00	19,278.62	100,816.38	16	120,093.55
702.110	Bond Principal	300,000.00	5,378.85	.00	10,732.26	289,267.74	4	297,918.36
703.109	Agents Fee	3,000.00	1,612.50	.00	1,612.50	1,387.50	54	4,475.00
720.001	Provision for Bad Debts	8,000.00	.00	.00	.00	8,000.00	0	8,000.04
795.995	GF Cost Distribution	75,415.00	.00	.00	.00	75,415.00	0	75,414.96
7999.9999	Principal Reclassified	(300,000.00)	.00	.00	.00	(300,000.00)	0	(297,918.36)
Other Objects Totals		\$206,510.00	\$16,617.94	\$0.00	\$31,623.38	\$174,886.62	15%	\$207,983.55
Inter-Dept. Allocations								
795.999	Allocation G&A Services	85,000.00	4,326.33	.00	11,477.13	73,522.87	14	59,394.24
Inter-Dept. Allocations Totals		\$85,000.00	\$4,326.33	\$0.00	\$11,477.13	\$73,522.87	14%	\$59,394.24



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Capital Outlay							
900.907	High Service Pumps & Drives	.00	.00	.00	.00	.00	+++	135,641.20
900.915	CIP Projects - Current Year	2,684,000.00	.00	.00	.00	.00	+++	.00
900.3000	Buildings & Improvements	.00	7,949.00	.00	7,949.00	6,051.00	57	.00
900.3500	Water Distribution	.00	.00	.00	.00	2,480,000.00	0	275,720.30
900.4200	Heavy Equipment	.00	.00	103,672.00	.00	1,328.00	99	.00
900.4300	Other Equipment	.00	.00	.00	.00	25,000.00	0	23,251.49
9999.9999	Assets Reclassified	(2,684,000.00)	(7,949.00)	.00	(7,949.00)	(2,676,051.00)	0	(434,612.99)
	Capital Outlay Totals	\$0.00	\$0.00	\$103,672.00	\$0.00	(\$163,672.00)	-173%	\$0.00
	Department 15 - Water Distribution Totals	\$1,156,265.00	\$82,853.81	\$134,265.11	\$173,297.62	\$848,702.27	27%	\$1,021,861.20
	Department 16 - Filtration							
	Personal Services							
400.101	Regular Pay	235,000.00	17,925.79	.00	33,819.98	201,180.02	14	170,506.28
401.103	Overtime	6,000.00	98.69	.00	496.36	5,503.64	8	11,227.14
401.105	On-call pay	7,020.00	533.36	.00	1,066.72	5,953.28	15	6,933.68
405.114	FICA	15,950.00	1,319.93	.00	2,508.14	13,441.86	16	13,500.85
406.116	Retirement	25,000.00	2,334.27	.00	4,476.02	20,523.98	18	20,628.55
408.125	SCMIT Worker's Comp Ins.	7,500.00	.00	2,147.36	2,147.36	3,205.28	57	7,948.29
410.001	Health Claims Cost	33,337.00	2,447.39	.00	4,894.78	28,442.22	15	28,930.34
410.002	Health Claim Costs-Retire	10,525.00	862.58	.00	1,725.16	8,799.84	16	6,269.37
410.003	OPEB cost	5,000.00	.00	.00	.00	5,000.00	0	.00
	Personal Services Totals	\$345,332.00	\$25,522.01	\$2,147.36	\$51,134.52	\$292,050.12	15%	\$265,944.50
	Supplies							
500.101	Supplies and Materials	3,000.00	322.99	.00	322.99	2,677.01	11	3,781.14
500.102	Equipment	3,200.00	.00	.00	1,579.84	1,620.16	49	1,497.64
501.101	Uniforms and Clothing	3,300.00	.00	708.75	.00	2,591.25	21	1,986.82
512.108	Chemicals	219,920.00	19,378.54	89,567.46	19,378.54	110,974.00	50	170,111.80
512.109	Laboratory Supplies	13,252.00	.00	.00	3,350.65	9,901.35	25	14,161.50
515.121	Safety Supplies	600.00	342.00	.00	342.00	258.00	57	615.40
532.148	Small Hand Tools	490.00	.00	.00	.00	490.00	0	130.80
540.151	IP Raw Water Contract-Cty	19,364.00	1,541.67	.00	1,541.67	17,822.33	8	17,732.66
540.152	Raw Water Pump Maint.	47,000.00	4,466.68	.00	8,801.54	38,198.46	19	52,835.43
540.157	Treated Water Purchase	500.00	.00	.00	6.50	493.50	1	71.50

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Supplies Totals	\$310,626.00	\$26,051.88	\$90,276.21	\$35,323.73	\$185,026.06	40%	\$262,924.69
	Other Services & Charges							
515.129	Permit Fees Due To Others	22,000.00	1,000.00	19,275.00	1,290.00	1,435.00	93	20,503.00
600.110	SCMIRF Property/Liab Ins	15,000.00	.00	.00	7,042.66	7,957.34	47	13,750.68
610.111	Communications- Landline	1,200.00	91.53	.00	183.06	1,016.94	15	1,095.10
610.112	Postage	2,000.00	.00	.00	.00	2,000.00	0	1,083.07
610.1110	Communications- Wireless	420.00	34.21	.00	34.21	385.79	8	396.57
620.114	Advertising	1,000.00	.00	.00	.00	1,000.00	0	435.50
640.124	Travel Expense	861.00	.00	.00	.00	861.00	0	21.34
650.127	Electricity	82,142.00	7,099.28	.00	13,814.40	68,327.60	17	83,672.39
650.130	Sanitation	929.00	75.20	.00	150.40	778.60	16	902.40
650.133	Stormwater	.00	179.55	.00	359.10	(359.10)	+++	100.80
650.134	Security Lights	1,428.00	132.00	.00	264.00	1,164.00	18	1,584.00
650.1271	Electricity- Sales Tax	106.00	9.91	.00	19.23	86.77	18	110.83
660.133	Repairs & Maint. Services	28,000.00	7,329.29	.00	8,214.05	19,785.95	29	31,700.25
660.139	Fleet Services Materials	3,000.00	.00	.00	73.50	2,926.50	2	2,269.38
660.145	Gasoline & Oil	1,000.00	138.07	.00	138.07	861.93	14	1,009.25
660.1391	Fleet Services Labor	2,500.00	80.11	.00	227.84	2,272.16	9	2,922.78
664.101	Community Education	500.00	.00	.00	.00	500.00	0	.00
670.156	Equipment Rental/Lease	.00	.00	.00	.00	.00	+++	613.37
685.180	Membership Dues and Fees	350.00	.00	.00	105.00	245.00	30	540.00
685.182	Other Operating Expenses	1,000.00	144.00	.00	144.00	856.00	14	1,641.76
685.183	Depreciation	325,304.00	26,411.77	.00	52,823.63	272,480.37	16	317,918.83
685.186	Training	5,335.00	301.00	.00	301.00	5,034.00	6	2,810.00
686.187	Professional Services	34,740.00	.00	.00	45.00	34,695.00	0	12,396.58
686.189	Employee Medical	220.00	.00	.00	.00	220.00	0	165.00
686.195	Repair/Maint Svc Contract	3,240.00	.00	.00	394.21	2,845.79	12	4,039.69
686.199	Internal Engineering	12,000.00	1,517.31	.00	2,899.71	9,100.29	24	15,759.84
686.1895	Employee wellness services	1,680.00	159.53	.00	159.53	1,520.47	9	2,052.27
	Other Services & Charges Totals	\$545,955.00	\$44,702.76	\$19,275.00	\$88,682.60	\$437,997.40	20%	\$519,494.68
	Other Objects							
795.995	GF Cost Distribution	67,180.00	.00	.00	.00	67,180.00	0	67,179.00
	Other Objects Totals	\$67,180.00	\$0.00	\$0.00	\$0.00	\$67,180.00	0%	\$67,179.00



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

Account		Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd
Inter-Dept. Allocations								
795.999		Allocation G&A Services	85,000.00	4,326.33	.00	11,477.13	73,522.87	14
Inter-Dept. Allocations Totals			\$85,000.00	\$4,326.33	\$0.00	\$11,477.13	\$73,522.87	14%
Capital Outlay								
900.915		CIP Projects - Current Year	450,000.00	.00	.00	.00	.00	+++
900.3300		Water Filtration Plant	.00	.00	.00	.00	450,000.00	0
900.4300		Other Equipment	.00	.00	.00	.00	.00	+++
9999.9999		Assets Reclassified	(450,000.00)	.00	.00	.00	(450,000.00)	0
Capital Outlay Totals			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++
Department 16 - Filtration Totals			\$1,354,093.00	\$100,602.98	\$111,698.57	\$186,617.98	\$1,055,776.45	22%
Department 41 - General & Administrative								
Personal Services								
400.101		Regular Pay	103,290.00	9,544.66	.00	18,259.36	85,030.64	18
401.103		Overtime	500.00	.00	.00	.00	500.00	0
405.114		FICA	7,660.00	709.83	.00	1,356.16	6,303.84	18
406.116		Retirement	12,541.00	1,262.36	.00	2,428.77	10,112.23	19
408.125		SCMIT Worker's Comp Ins.	2,000.00	.00	653.54	653.54	692.92	65
410.001		Health Claims Cost	17,225.00	954.60	.00	1,909.20	15,315.80	11
410.003		OPEB cost	5,000.00	.00	.00	.00	5,000.00	0
Personal Services Totals			\$148,216.00	\$12,471.45	\$653.54	\$24,607.03	\$122,955.43	17%
Supplies								
500.101		Supplies and Materials	4,700.00	557.04	.00	557.04	4,142.96	12
500.102		Equipment	900.00	.00	.00	.00	900.00	0
500.103		Furniture	1,400.00	128.40	.00	128.40	1,271.60	9
501.101		Uniforms and Clothing	675.00	293.68	.00	293.68	381.32	44
Supplies Totals			\$7,675.00	\$979.12	\$0.00	\$979.12	\$6,695.88	13%
Other Services & Charges								
600.110		SCMIRF Property/Liab Ins	31,000.00	.00	.00	14,508.48	16,491.52	47
610.111		Communications- Landline	4,200.00	344.43	.00	754.21	3,445.79	18
610.112		Postage	500.00	.00	.00	.00	500.00	0
610.1110		Communications- Wireless	2,820.00	213.26	.00	213.26	2,606.74	8
620.114		Advertising	500.00	.00	.00	.00	500.00	0
640.124		Travel Expense	435.00	.00	.00	.00	435.00	0

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
650.127	Electricity	2,352.00	272.11	.00	542.04	1,809.96	23	2,574.61
650.128	Water	844.00	41.18	.00	74.47	769.53	9	437.41
650.129	Wastewater	528.00	30.60	.00	51.00	477.00	10	252.44
650.130	Sanitation	486.00	39.33	.00	78.66	407.34	16	471.96
650.133	Stormwater	977.00	165.94	.00	331.88	645.12	34	1,184.88
650.134	Security Lights	573.00	53.00	.00	106.00	467.00	18	636.00
650.1271	Electricity- Sales Tax	105.00	13.14	.00	26.04	78.96	25	115.30
660.133	Repairs & Maint. Services	5,800.00	85.00	4,075.00	85.00	1,640.00	72	352.13
660.139	Fleet Services Materials	4,000.00	.00	.00	477.10	3,522.90	12	3,819.55
660.145	Gasoline & Oil	1,200.00	146.03	.00	146.03	1,053.97	12	1,518.32
660.1391	Fleet Services Labor	1,800.00	98.29	.00	528.33	1,271.67	29	1,974.23
670.156	Equipment Rental/Lease	2,960.00	185.24	.00	320.94	2,639.06	11	3,300.03
685.180	Membership Dues and Fees	1,235.00	.00	.00	360.00	875.00	29	1,230.00
685.182	Other Operating Expenses	500.00	14.63	.00	14.63	485.37	3	155.64
685.183	Depreciation	190.00	15.81	.00	31.64	158.36	17	189.84
685.186	Training	660.00	.00	.00	.00	660.00	0	710.00
686.187	Professional Services	1,425.00	.00	.00	.00	1,425.00	0	51.67
686.189	Employee Medical	60.00	.00	.00	.00	60.00	0	45.00
686.195	Repair/Maint Svc Contract	3,160.00	.00	.00	496.81	2,663.19	16	3,593.12
686.1895	Employee wellness services	480.00	223.34	.00	223.34	256.66	47	1,781.72
	Other Services & Charges Totals	\$68,790.00	\$1,941.33	\$4,075.00	\$19,369.86	\$45,345.14	34%	\$59,348.75
	Other Objects							
795.001	IT Internal Allocations	80,000.00	7,350.27	.00	14,868.51	65,131.49	19	96,664.69
	Other Objects Totals	\$80,000.00	\$7,350.27	\$0.00	\$14,868.51	\$65,131.49	19%	\$96,664.69
	Inter-Dept. Allocations							
795.999	Allocation G&A Services	(305,128.00)	(21,631.65)	.00	(57,385.67)	(247,742.33)	19	(296,971.13)
	Inter-Dept. Allocations Totals	(\$305,128.00)	(\$21,631.65)	\$0.00	(\$57,385.67)	(\$247,742.33)	19%	(\$296,971.13)
	Capital Outlay							
900.4100	Vehicles	27,500.00	.00	27,059.00	.00	441.00	98	.00
9999.9999	Assets Reclassified	(27,500.00)	.00	.00	.00	(27,500.00)	0	.00
	Capital Outlay Totals	\$0.00	\$0.00	\$27,059.00	\$0.00	(\$27,059.00)	+++	\$0.00
	Department 41 - General & Administrative Totals	(\$447.00)	\$1,110.52	\$31,787.54	\$2,438.85	(\$34,673.39)	-7657%	\$5,113.54
	Department 42 - Engineering Services							

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

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Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
Fund 0031 - Water Utility Fund Totals								
	REVENUE TOTALS	2,510,111.00	198,320.07	.00	382,276.01	2,127,834.99	15%	2,538,140.52
	EXPENSE TOTALS	2,510,111.00	184,567.31	278,081.97	362,314.95	1,869,714.08	26%	2,203,653.48
Fund 0031 - Water Utility Fund Totals		\$0.00	\$13,752.76	(\$278,081.97)	\$19,961.06	\$258,120.91		\$334,487.04
Fund 0032 - Wastewater Fund								
	REVENUE							
	Department 00 - Revenue							
	Operating Revenues							
301.000	Sale Of Utilities	2,379,256.00	215,769.20	.00	417,458.66	1,961,797.34	18	2,338,410.58
301.002	New Turn Ons	3,300.00	325.00	.00	650.00	2,650.00	20	3,455.00
301.009	New Service Taps	10,000.00	1,750.00	.00	1,750.00	8,250.00	18	1,000.00
301.014	Fixed Charges - Andrews	120,000.00	10,119.80	.00	20,239.60	99,760.40	17	121,437.60
301.015	Fixed Charges - GCWSD	225,000.00	19,241.87	.00	38,483.74	186,516.26	17	230,902.44
301.016	Fixed Charges - COG	300,000.00	27,651.27	.00	55,302.54	244,697.46	18	331,815.24
301.017	Volume Charges - Andrews	280,000.00	16,789.55	.00	36,085.22	243,914.78	13	215,490.23
301.018	Volume Charges - GCWSD	350,000.00	25,368.86	.00	54,106.62	295,893.38	15	255,859.20
301.019	Volume Charges - COG	1,025,000.00	81,727.97	.00	181,216.23	843,783.77	18	932,990.08
301.026	Fixed- Elim Georgetown	(300,000.00)	(27,651.27)	.00	(55,302.54)	(244,697.46)	18	(331,815.24)
301.029	Volume-Elim-Georgetown	(1,025,000.00)	(81,727.97)	.00	(181,216.23)	(843,783.77)	18	(932,990.08)
302.001	Penalties	35,000.00	2,780.50	.00	11,890.13	23,109.87	34	32,442.93
303.006	Septic Tank Dumping	15,000.00	2,850.00	.00	4,550.00	10,450.00	30	12,585.00
	Operating Revenues Totals	\$3,417,556.00	\$294,994.78	\$0.00	\$585,213.97	\$2,832,342.03	17%	\$3,211,582.98
	Impact Fees							
324.017	Wastewater Impact Fee	7,000.00	.00	.00	.00	7,000.00	0	6,900.00
	Impact Fees Totals	\$7,000.00	\$0.00	\$0.00	\$0.00	\$7,000.00	0%	\$6,900.00
	Investment Earnings							
306.001	Investment Earnings	3,300.00	.00	.00	.00	3,300.00	0	7,233.44
	Investment Earnings Totals	\$3,300.00	\$0.00	\$0.00	\$0.00	\$3,300.00	0%	\$7,233.44
	Miscellaneous							
369.002	Miscellaneous Revenue	3,000.00	.00	.00	.00	3,000.00	0	1,388.00
	Miscellaneous Totals	\$3,000.00	\$0.00	\$0.00	\$0.00	\$3,000.00	0%	\$1,388.00
	Operating Transfers In							
394.002	Transfer from fund balance	3,673.00	.00	.00	.00	3,673.00	0	.00

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Operating Transfers In Totals	\$3,673.00	\$0.00	\$0.00	\$0.00	\$3,673.00	0%	\$0.00
	Sale of Assets							
391.001	Sale of Assets	.00	.00	.00	.00	.00	+++	7,025.00
	Sale of Assets Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$7,025.00
	Department 00 - Revenue Totals	\$3,434,529.00	\$294,994.78	\$0.00	\$585,213.97	\$2,849,315.03	17%	\$3,234,129.42
	REVENUE TOTALS	\$3,434,529.00	\$294,994.78	\$0.00	\$585,213.97	\$2,849,315.03	17%	\$3,234,129.42
	EXPENSE							
	Department 18 - Wastewater Collections							
	Personal Services							
400.101	Regular Pay	240,083.00	15,994.09	.00	30,482.57	209,600.43	13	190,089.22
401.103	Overtime	12,000.00	24.34	.00	137.33	11,862.67	1	13,411.68
401.105	On-call pay	4,420.00	333.32	.00	666.64	3,753.36	15	4,733.16
405.114	FICA	15,411.00	1,127.34	.00	2,142.48	13,268.52	14	14,256.84
406.116	Retirement	24,758.00	1,816.85	.00	3,405.98	21,352.02	14	22,461.31
408.125	SCMIT Worker's Comp Ins.	10,000.00	.00	3,978.72	3,978.72	2,042.56	80	19,726.94
410.001	Health Claims Cost	67,921.00	4,166.43	.00	8,332.86	59,588.14	12	52,588.90
410.003	OPEB cost	3,000.00	.00	.00	.00	3,000.00	0	.00
	Personal Services Totals	\$377,593.00	\$23,462.37	\$3,978.72	\$49,146.58	\$324,467.70	14%	\$317,268.05
	Supplies							
500.101	Supplies and Materials	7,600.00	226.54	.00	363.90	7,236.10	5	6,139.99
500.102	Equipment	13,350.00	1,312.39	.00	1,312.39	12,037.61	10	12,443.84
501.101	Uniforms and Clothing	9,920.00	80.28	1,228.50	408.17	8,283.33	16	4,924.34
512.108	Chemicals	4,700.00	.00	.00	.00	4,700.00	0	200.88
513.112	Asphalt/Concrete/Gravel	26,000.00	.00	27,500.00	.00	(1,500.00)	106	37,337.12
514.111	WW Collection Syst Supply	6,400.00	.00	.00	654.02	5,745.98	10	5,838.51
515.121	Safety Supplies	900.00	87.00	.00	87.00	813.00	10	.00
532.148	Small Hand Tools	510.00	.00	.00	.00	510.00	0	592.09
532.1481	Small Hand Tools - Maintenance	700.00	.00	.00	84.51	615.49	12	558.18
	Supplies Totals	\$70,080.00	\$1,706.21	\$28,728.50	\$2,909.99	\$38,441.51	45%	\$68,034.95
	Other Services & Charges							
600.110	SCMIRF Property/Liab Ins	31,000.00	.00	.00	15,510.36	15,489.64	50	30,216.09
610.112	Postage	1,340.00	55.25	.00	122.12	1,217.88	9	717.21
610.1110	Communications- Wireless	2,160.00	181.62	.00	181.62	1,978.38	8	1,931.54

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
620.114	Advertising	1,000.00	.00	.00	.00	1,000.00	0	14.93
640.124	Travel Expense	750.00	.00	.00	.00	750.00	0	42.68
650.127	Electricity	68,021.00	7,535.48	.00	13,325.32	54,695.68	20	70,009.48
650.133	Stormwater	628.00	800.95	.00	1,601.90	(973.90)	255	1,659.24
650.134	Security Lights	1,309.00	121.00	.00	242.00	1,067.00	18	1,452.00
650.1271	Electricity- Sales Tax	2,709.00	288.35	.00	527.04	2,181.96	19	2,718.04
660.133	Repairs & Maint. Services	60,000.00	3,492.36	.00	4,269.84	55,730.16	7	47,086.32
660.139	Fleet Services Materials	16,000.00	835.52	.00	2,083.32	13,916.68	13	34,594.59
660.145	Gasoline & Oil	20,000.00	937.16	.00	937.16	19,062.84	5	15,917.08
660.1391	Fleet Services Labor	24,000.00	1,541.32	.00	3,890.80	20,109.20	16	26,170.16
670.156	Equipment Rental/Lease	6,000.00	.00	.00	.00	6,000.00	0	.00
685.180	Membership Dues and Fees	585.00	.00	.00	70.00	515.00	12	175.00
685.182	Other Operating Expenses	8,500.00	1,120.57	.00	1,743.15	6,756.85	21	9,832.67
685.183	Depreciation	318,991.00	22,882.11	.00	45,965.19	273,025.81	14	262,590.91
685.186	Training	1,400.00	.00	.00	.00	1,400.00	0	990.50
685.187	Special Projects	.00	.00	.00	.00	.00	+++	(817.90)
686.187	Professional Services	5,080.00	.00	.00	.00	5,080.00	0	2,050.86
686.189	Employee Medical	480.00	.00	.00	.00	480.00	0	432.55
686.191	Contract Services/Studies	2,460.00	85.37	.00	344.14	2,115.86	14	1,956.95
686.195	Repair/Maint Svc Contract	16,440.00	.00	.00	204.21	16,235.79	1	2,450.44
686.199	Internal Engineering	13,000.00	1,517.31	.00	2,899.71	10,100.29	22	15,759.84
686.1895	Employee wellness services	3,000.00	63.81	.00	63.81	2,936.19	2	2,269.63
687.202	Utility Billing Services	6,000.00	139.51	.00	2,235.84	3,764.16	37	5,509.67
	Other Services & Charges Totals	\$610,853.00	\$41,597.69	\$0.00	\$96,217.53	\$514,635.47	16%	\$535,730.48
	Other Objects							
702.106	Interest- Bonds	75,008.00	597.08	.00	1,194.17	73,813.83	2	7,360.62
702.110	Bond Principal	18,980.00	1,597.84	.00	3,195.67	15,784.33	17	18,978.42
720.001	Provision for Bad Debts	7,500.00	.00	.00	.00	7,500.00	0	7,500.00
795.995	GF Cost Distribution	70,000.00	.00	.00	.00	70,000.00	0	69,999.96
7999.9999	Principal Reclassified	(18,980.00)	.00	.00	.00	(18,980.00)	0	(18,978.42)
	Other Objects Totals	\$152,508.00	\$2,194.92	\$0.00	\$4,389.84	\$148,118.16	3%	\$84,860.58
	Inter-Dept. Allocations							
795.999	Allocation G&A Services	70,000.00	5,407.91	.00	14,346.42	55,653.58	20	74,242.81



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Inter-Dept. Allocations Totals	\$70,000.00	\$5,407.91	\$0.00	\$14,346.42	\$55,653.58	20%	\$74,242.81
	Capital Outlay							
900.911	Sewer Improvement Projects	.00	.00	.00	.00	435,000.00	0	66,870.57
900.915	CIP Projects - Current Year	667,000.00	.00	.00	.00	.00	+++	.00
900.3700	Wastewater Collection Sys	.00	.00	.00	.00	120,000.00	0	1,316.53
900.4200	Heavy Equipment	.00	.00	.00	.00	.00	+++	103,472.00
900.4300	Other Equipment	.00	.00	10,304.50	.00	101,695.50	9	13,745.65
9999.9999	Assets Reclassified	(667,000.00)	.00	.00	.00	(667,000.00)	0	(185,404.75)
	Capital Outlay Totals	\$0.00	\$0.00	\$10,304.50	\$0.00	(\$10,304.50)	+++	\$0.00
	Department 18 - Wastewater Collections Totals	\$1,281,034.00	\$74,369.10	\$43,011.72	\$167,010.36	\$1,071,011.92	16%	\$1,080,136.87
	Department 34 - Regional Wastewater Plant							
	Personal Services							
400.101	Regular Pay	274,172.00	24,335.68	.00	46,961.83	227,210.17	17	278,087.98
401.103	Overtime	10,000.00	1,226.95	.00	1,998.22	8,001.78	20	14,986.84
401.105	On-call pay	7,020.00	533.32	.00	1,066.64	5,953.36	15	6,933.16
405.114	FICA	20,814.00	1,813.57	.00	3,479.58	17,334.42	17	20,968.82
406.116	Retirement	34,710.00	3,300.34	.00	6,382.90	28,327.10	18	33,304.03
408.125	SCMIT Worker's Comp Ins.	2,700.00	.00	861.82	861.82	976.36	64	3,189.96
410.001	Health Claims Cost	66,924.00	4,626.78	.00	9,253.56	57,670.44	14	56,832.15
	Personal Services Totals	\$416,340.00	\$35,836.64	\$861.82	\$70,004.55	\$345,473.63	17%	\$414,302.94
	Supplies							
500.101	Supplies and Materials	5,500.00	399.52	.00	624.12	4,875.88	11	7,466.29
500.102	Equipment	6,550.00	.00	.00	.00	6,550.00	0	6,584.42
501.101	Uniforms and Clothing	4,250.00	113.46	897.75	400.09	2,952.16	31	4,088.78
512.108	Chemicals	94,900.00	13,964.22	19,222.00	13,964.22	61,713.78	35	75,613.60
512.109	Laboratory Supplies	19,760.00	1,039.21	.00	3,071.55	16,688.45	16	18,040.25
515.121	Safety Supplies	1,200.00	432.00	.00	432.00	768.00	36	879.50
532.148	Small Hand Tools	510.00	.00	.00	.00	510.00	0	563.30
	Supplies Totals	\$132,670.00	\$15,948.41	\$20,119.75	\$18,491.98	\$94,058.27	29%	\$113,236.14
	Other Services & Charges							
515.129	Permit Fees Due To Others	7,900.00	4,955.07	.00	5,170.07	2,729.93	65	7,527.37
600.110	SCMIRF Property/Liab Ins	14,000.00	.00	.00	6,498.59	7,501.41	46	12,688.40
610.111	Communications- Landline	2,520.00	183.37	.00	549.55	1,970.45	22	2,312.53



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
610.112	Postage	500.00	.00	.00	.00	500.00	0	42.92
610.1110	Communications- Wireless	420.00	34.77	.00	34.77	385.23	8	424.77
620.114	Advertising	500.00	.00	.00	.00	500.00	0	.00
640.124	Travel Expense	1,950.00	146.53	.00	146.53	1,803.47	8	273.17
650.127	Electricity	294,709.00	31,442.86	.00	62,097.76	232,611.24	21	342,019.66
650.128	Water	1,344.00	80.54	.00	239.98	1,104.02	18	985.04
650.130	Sanitation	3,240.00	262.13	.00	524.26	2,715.74	16	3,145.56
650.133	Stormwater	825.00	210.53	.00	421.06	403.94	51	1,065.72
650.134	Security Lights	3,750.00	347.00	.00	694.00	3,056.00	19	4,164.00
650.1271	Electricity- Sales Tax	12,855.00	1,544.32	.00	2,997.13	9,857.87	23	15,389.48
660.133	Repairs & Maint. Services	86,000.00	8,569.86	9,798.79	9,246.24	66,954.97	22	203,265.98
660.139	Fleet Services Materials	4,000.00	108.03	.00	108.03	3,891.97	3	4,148.35
660.145	Gasoline & Oil	2,000.00	273.13	.00	273.13	1,726.87	14	1,728.34
660.1391	Fleet Services Labor	2,200.00	106.77	.00	166.69	2,033.31	8	2,390.00
670.156	Equipment Rental/Lease	3,820.00	205.10	.00	585.70	3,234.30	15	3,873.53
685.180	Membership Dues and Fees	385.00	.00	.00	70.00	315.00	18	370.00
685.182	Other Operating Expenses	2,000.00	.00	.00	.00	2,000.00	0	17,138.79
685.186	Training	5,355.00	450.00	.00	535.00	4,820.00	10	1,455.00
685.190	Landfill Fees	52,650.00	6,995.71	.00	6,995.71	45,654.29	13	22,207.91
686.186	Legal Services	1,000.00	.00	.00	.00	1,000.00	0	.00
686.187	Professional Services	168,860.00	.00	35,000.00	.00	133,860.00	21	68,127.09
686.189	Employee Medical	400.00	.00	.00	.00	400.00	0	124.00
686.195	Repair/Maint Svc Contract	3,660.00	.00	.00	739.89	2,920.11	20	4,685.29
686.199	Internal Engineering	25,000.00	3,034.62	.00	5,799.42	19,200.58	23	31,519.64
686.1895	Employee wellness services	820.00	287.15	.00	287.15	532.85	35	2,510.49
	Other Services & Charges Totals	\$702,663.00	\$59,237.49	\$44,798.79	\$104,180.66	\$553,683.55	21%	\$753,583.03
	Other Objects							
702.106	Interest- Bonds	231,240.00	17,961.70	.00	35,923.40	195,316.60	16	223,878.16
702.110	Bond Principal	544,746.00	.00	.00	.00	544,746.00	0	525,768.00
703.109	Agents Fee	4,500.00	1,612.50	.00	1,612.50	2,887.50	36	4,475.00
795.995	GF Cost Distribution	46,500.00	.00	.00	.00	46,500.00	0	46,500.00
7999.9999	Principal Reclassified	(544,746.00)	.00	.00	.00	(544,746.00)	0	(525,768.00)
	Other Objects Totals	\$282,240.00	\$19,574.20	\$0.00	\$37,535.90	\$244,704.10	13%	\$274,853.16



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

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Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Investment Earnings Totals	\$9,000.00	\$0.00	\$0.00	\$0.00	\$9,000.00	0%	\$11,516.23
	Capital Contributions							
371.002	Capital Contrib-Grants	.00	.00	.00	.00	.00	+++	13,000.00
	Capital Contributions Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$13,000.00
	Operating Transfers In							
394.002	Transfer from fund balance	287,698.00	.00	.00	.00	287,698.00	0	.00
	Operating Transfers In Totals	\$287,698.00	\$0.00	\$0.00	\$0.00	\$287,698.00	0%	\$0.00
	Department 00 - Revenue Totals	\$992,698.00	\$74,663.58	\$0.00	\$141,106.44	\$851,591.56	14%	\$531,868.45
	REVENUE TOTALS	\$992,698.00	\$74,663.58	\$0.00	\$141,106.44	\$851,591.56	14%	\$531,868.45
	EXPENSE							
	Department 40 - Storm Water Utility Exp.							
	Personal Services							
400.101	Regular Pay	180,000.00	15,707.47	.00	30,121.17	149,878.83	17	200,819.20
401.103	Overtime	6,000.00	215.49	.00	268.32	5,731.68	4	8,704.28
401.105	On-call pay	2,600.00	200.00	.00	400.00	2,200.00	15	2,200.00
405.114	FICA	13,500.00	1,112.08	.00	2,118.22	11,381.78	16	14,639.60
406.116	Retirement	25,300.00	2,105.45	.00	4,051.90	21,248.10	16	23,811.31
408.125	SCMIT Worker's Comp Ins.	8,500.00	.00	2,721.90	2,721.90	3,056.20	64	10,554.27
410.001	Health Claims Cost	59,312.00	3,706.92	.00	7,413.84	51,898.16	12	48,084.52
410.002	Health Claim Costs-Retire	17,596.00	1,442.22	.00	2,884.44	14,711.56	16	14,549.69
410.003	OPEB cost	4,000.00	.00	.00	.00	4,000.00	0	.00
	Personal Services Totals	\$316,808.00	\$24,489.63	\$2,721.90	\$49,979.79	\$264,106.31	17%	\$323,362.87
	Supplies							
500.101	Supplies and Materials	2,660.00	.00	.00	142.29	2,517.71	5	1,883.09
500.102	Equipment	7,200.00	1,312.39	.00	1,312.39	5,887.61	18	2,304.22
501.101	Uniforms and Clothing	5,100.00	103.02	850.50	240.38	4,009.12	21	4,125.34
513.112	Asphalt/Concrete/Gravel	5,460.00	.00	.00	.00	5,460.00	0	3,507.05
514.112	SW Collection Syst Supply	4,400.00	.00	.00	374.98	4,025.02	9	1,916.55
515.121	Safety Supplies	600.00	305.28	.00	305.28	294.72	51	.00
532.148	Small Hand Tools	180.00	.00	.00	.00	180.00	0	28.91
	Supplies Totals	\$25,600.00	\$1,720.69	\$850.50	\$2,375.32	\$22,374.18	13%	\$13,765.16
	Other Services & Charges							
600.110	SCMIRF Property/Liab Ins	5,000.00	.00	.00	2,508.76	2,491.24	50	4,898.31

Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17

Exclude Rollup Account

18.J.4

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Attachment: BudgetPerformanceReport-08312017 (2375 : August 2017 Finance and IT Report)



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
	Inter-Dept. Allocations Totals	\$25,000.00	\$2,163.17	\$0.00	\$5,738.57	\$19,261.43	23%	\$29,697.03
	Capital Outlay							
900.915	CIP Projects - Current Year	2,342,000.00	.00	.00	.00	.00	+++	.00
900.1000	Infrastructure Improvemts	.00	900.75	.00	900.75	2,017,099.25	0	46,807.78
900.4200	Heavy Equipment	.00	.00	.00	.00	.00	+++	185,211.49
950.962	Drainage Improvements	.00	.00	.00	.00	324,000.00	0	18,187.50
9999.9999	Assets Reclassified	(2,342,000.00)	(900.75)	.00	(900.75)	(2,341,099.25)	0	(250,206.77)
	Capital Outlay Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$0.00
	Department 40 - Storm Water Utility Exp. Totals	\$992,698.00	\$71,465.85	\$23,396.40	\$148,213.00	\$821,088.60	17%	\$954,754.42
	EXPENSE TOTALS	\$992,698.00	\$71,465.85	\$23,396.40	\$148,213.00	\$821,088.60	17%	\$954,754.42
	Fund 0033 - Stormwater Utility Fund Totals							
	REVENUE TOTALS	992,698.00	74,663.58	.00	141,106.44	851,591.56	14%	531,868.45
	EXPENSE TOTALS	992,698.00	71,465.85	23,396.40	148,213.00	821,088.60	17%	954,754.42
	Fund 0033 - Stormwater Utility Fund Totals	\$0.00	\$3,197.73	(\$23,396.40)	(\$7,106.56)	\$30,502.96		(\$422,885.97)
	Fund 0035 - Waste Management Fund							
	REVENUE							
	Department 00 - Revenue							
	Charges for Services							
344.001	Refuse Col Chge-Resident	775,000.00	65,698.55	.00	130,936.84	644,063.16	17	779,521.77
344.002	Refuse Col Chge-Comm	128,000.00	11,033.16	.00	22,266.99	105,733.01	17	131,880.54
344.003	Sanitation Fee Penalties	15,000.00	1,321.81	.00	2,677.72	12,322.28	18	16,499.39
	Charges for Services Totals	\$918,000.00	\$78,053.52	\$0.00	\$155,881.55	\$762,118.45	17%	\$927,901.70
	Miscellaneous							
369.002	Miscellaneous Revenue	100.00	.00	.00	.00	100.00	0	664.20
	Miscellaneous Totals	\$100.00	\$0.00	\$0.00	\$0.00	\$100.00	0%	\$664.20
	Operating Transfers In							
394.002	Transfer from fund balance	36,881.00	.00	.00	.00	36,881.00	0	.00
	Operating Transfers In Totals	\$36,881.00	\$0.00	\$0.00	\$0.00	\$36,881.00	0%	\$0.00
	Sale of Assets							
391.001	Sale of Assets	.00	.00	.00	.00	.00	+++	6,585.79
	Sale of Assets Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$6,585.79
	Department 00 - Revenue Totals	\$954,981.00	\$78,053.52	\$0.00	\$155,881.55	\$799,099.45	16%	\$935,151.69

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Budget Performance Report

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		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
REVENUE TOTALS		\$954,981.00	\$78,053.52	\$0.00	\$155,881.55	\$799,099.45	16%	\$935,151.69
EXPENSE								
Department 31 - Residential Sanitation								
Personal Services								
400.101	Regular Pay	212,857.00	19,319.15	.00	37,032.17	175,824.83	17	226,010.67
401.103	Overtime	20,000.00	1,200.58	.00	2,575.70	17,424.30	13	21,629.21
401.109	Seasonal City employee labor	58,000.00	.00	.00	.00	58,000.00	0	.00
405.114	FICA	16,816.00	1,441.96	.00	2,786.67	14,029.33	17	17,308.39
406.116	Retirement	28,719.00	2,676.82	.00	5,274.07	23,444.93	18	27,810.41
408.125	SCMIT Worker's Comp Ins.	24,000.00	.00	6,858.62	6,858.62	10,282.76	57	29,918.58
410.001	Health Claims Cost	57,339.00	3,405.92	.00	7,192.08	50,146.92	13	46,608.25
410.002	Health Claim Costs-Retire	12,996.00	1,062.92	.00	2,125.84	10,870.16	16	8,478.96
410.003	OPEB cost	5,000.00	.00	.00	.00	5,000.00	0	.00
Personal Services Totals		\$435,727.00	\$29,107.35	\$6,858.62	\$63,845.15	\$365,023.23	16%	\$377,764.47
Supplies								
500.101	Supplies and Materials	5,000.00	527.55	.00	1,008.89	3,991.11	20	5,580.37
500.102	Equipment	.00	.00	.00	.00	.00	+++	(224.70)
501.101	Uniforms and Clothing	19,000.00	1,305.16	861.43	4,070.31	14,068.26	26	22,809.28
515.121	Safety Supplies	2,000.00	82.50	.00	82.50	1,917.50	4	784.77
Supplies Totals		\$26,000.00	\$1,915.21	\$861.43	\$5,161.70	\$19,976.87	23%	\$28,949.72
Other Services & Charges								
600.110	SCMIRF Property/Liab Ins	25,000.00	.00	.00	12,090.40	12,909.60	48	23,606.32
610.111	Communications- Landline	300.00	11.79	.00	23.35	276.65	8	141.66
610.112	Postage	150.00	38.56	.00	85.24	64.76	57	500.63
610.1110	Communications- Wireless	500.00	.00	.00	.00	500.00	0	.00
620.114	Advertising	500.00	.00	.00	.00	500.00	0	1,545.46
650.127	Electricity	1,057.00	93.85	.00	178.16	878.84	17	1,079.70
650.128	Water	414.00	34.00	.00	69.76	344.24	17	398.63
650.129	Wastewater	640.00	52.71	.00	107.93	532.07	17	616.78
650.130	Sanitation	456.00	36.92	.00	73.84	382.16	16	443.04
650.133	Stormwater	326.00	4.28	.00	8.56	317.44	3	361.80
650.134	Security Lights	475.00	43.89	.00	87.78	387.22	18	526.68
650.1271	Electricity- Sales Tax	4.00	.57	.00	.74	3.26	18	3.46



Budget Performance Report

Fiscal Year to Date 08/31/17
Exclude Rollup Account

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		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
660.136	Container Repairs	5,000.00	2,600.91	.00	3,737.75	1,262.25	75	4,915.30
660.139	Fleet Services Materials	35,000.00	3,411.35	.00	4,622.01	30,377.99	13	35,363.84
660.145	Gasoline & Oil	32,000.00	2,997.60	.00	2,997.60	29,002.40	9	33,466.73
660.1362	Roll-Out Purchases	25,000.00	8,374.36	.00	8,374.36	16,625.64	33	21,064.55
660.1391	Fleet Services Labor	64,000.00	4,532.32	.00	8,635.43	55,364.57	13	64,834.70
660.1392	Fleet Svcs- Outside Vends	2,000.00	13.75	.00	55.00	1,945.00	3	1,966.25
685.182	Other Operating Expenses	1,500.00	256.37	.00	505.40	994.60	34	3,106.47
685.183	Depreciation	87,132.00	4,614.94	.00	9,229.87	77,902.13	11	127,859.28
685.190	Landfill Fees	5,000.00	547.27	.00	451.72	4,548.28	9	1,537.87
686.189	Employee Medical	1,800.00	.00	.00	.00	1,800.00	0	45.00
686.195	Repair/Maint Svc Contract	2,800.00	.00	.00	192.50	2,607.50	7	2,310.00
686.1895	Employee wellness services	3,000.00	63.81	.00	63.81	2,936.19	2	3,095.57
687.202	Utility Billing Services	4,000.00	97.39	.00	1,560.65	2,439.35	39	3,845.87
687.203	Contract Services	65,000.00	5,033.81	20,759.24	10,067.62	34,173.14	47	61,639.01
Other Services & Charges Totals		\$363,054.00	\$32,860.45	\$20,759.24	\$63,219.48	\$279,075.28	23%	\$394,274.60
Other Objects								
720.001	Provision for Bad Debts	1,500.00	.00	.00	.00	1,500.00	0	1,500.00
730.120	Recycling Labor	37,000.00	2,973.30	15,526.70	2,973.30	18,500.00	50	32,089.21
730.122	Recycling Operating	7,500.00	(351.82)	.00	(337.78)	7,837.78	-5	10,007.44
795.001	IT Internal Allocations	7,000.00	506.92	.00	1,025.42	5,974.58	15	5,851.56
795.995	GF Cost Distribution	77,200.00	.00	.00	.00	77,200.00	0	77,199.96
Other Objects Totals		\$130,200.00	\$3,128.40	\$15,526.70	\$3,660.94	\$111,012.36	15%	\$126,648.17
Capital Outlay								
900.4100	Vehicles	.00	.00	.00	.00	.00	+++	50,652.88
900.4200	Heavy Equipment	145,185.00	.00	.00	.00	145,185.00	0	140,756.00
900.4300	Other Equipment	38,500.00	.00	.00	.00	38,500.00	0	17,954.60
9999.9999	Assets Reclassified	(183,685.00)	.00	.00	.00	(183,685.00)	0	(154,363.48)
Capital Outlay Totals		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$55,000.00
Department 31 - Residential Sanitation Totals		\$954,981.00	\$67,011.41	\$44,005.99	\$135,887.27	\$775,087.74	19%	\$982,636.96
EXPENSE TOTALS		\$954,981.00	\$67,011.41	\$44,005.99	\$135,887.27	\$775,087.74	19%	\$982,636.96
Fund 0035 - Waste Management Fund Totals								
REVENUE TOTALS		954,981.00	78,053.52	.00	155,881.55	799,099.45	16%	935,151.69

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Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
EXPENSE TOTALS		954,981.00	67,011.41	44,005.99	135,887.27	775,087.74	19%	982,636.96
Fund 0035 - Waste Management Fund Totals		\$0.00	\$11,042.11	(\$44,005.99)	\$19,994.28	\$24,011.71		(\$47,485.27)
Fund 0086 - Seized and Forfeited								
REVENUE								
Department 00 - Revenue								
Fines and Forfeitures								
367.000	Drug Enforcement Revenue	2,000.00	.00	.00	.00	2,000.00	0	.00
	Fines and Forfeitures Totals	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0%	\$0.00
	Local Grants							
332.008	Other Local Grants	.00	.00	.00	.00	.00	+++	4,000.00
	Local Grants Totals	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	+++	\$4,000.00
	Operating Transfers In							
394.002	Transfer from fund balance	65,480.00	.00	.00	.00	65,480.00	0	.00
	Operating Transfers In Totals	\$65,480.00	\$0.00	\$0.00	\$0.00	\$65,480.00	0%	\$0.00
	Department 00 - Revenue Totals	\$67,480.00	\$0.00	\$0.00	\$0.00	\$67,480.00	0%	\$4,000.00
REVENUE TOTALS		\$67,480.00	\$0.00	\$0.00	\$0.00	\$67,480.00	0%	\$4,000.00
EXPENSE								
Department 05 - Police								
Supplies								
500.101	Supplies and Materials	250.00	.00	.00	.00	250.00	0	318.43
500.103	Furniture	500.00	.00	.00	.00	500.00	0	.00
501.101	Uniforms and Clothing	800.00	284.38	.00	284.38	515.62	36	6.44
	Supplies Totals	\$1,550.00	\$284.38	\$0.00	\$284.38	\$1,265.62	18%	\$324.87
	Other Services & Charges							
610.1110	Communications- Wireless	2,880.00	299.31	.00	299.31	2,580.69	10	134.78
640.124	Travel Expense	2,000.00	200.00	.00	487.24	1,512.76	24	380.34
660.133	Repairs & Maint. Services	5,000.00	.00	.00	.00	5,000.00	0	.00
660.134	Radio Repairs	2,000.00	.00	.00	.00	2,000.00	0	.00
660.145	Gasoline & Oil	200.00	200.00	.00	200.00	.00	100	63.97
685.180	Membership Dues and Fees	1,250.00	.00	.00	890.00	360.00	71	150.00
685.182	Other Operating Expenses	6,000.00	.00	.00	.00	6,000.00	0	.00
685.186	Training	1,000.00	.00	.00	.00	1,000.00	0	149.00
685.191	Canine Unit Operations	10,000.00	100.56	.00	100.56	9,899.44	1	5,582.01



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18.J.4

		Adopted	Current Month	YTD	YTD	Budget - YTD	% Used/	
Account	Account Description	Budget	Transactions	Encumbrances	Transactions	Transactions	Rec'd	Prior Year Total
686.194	Other Prof/Tech Services	10,000.00	.00	.00	.00	10,000.00	0	1,000.00
	Other Services & Charges Totals	\$40,330.00	\$799.87	\$0.00	\$1,977.11	\$38,352.89	5%	\$7,460.10
	Capital Outlay							
900.4100	Vehicles	25,600.00	.00	.00	.00	25,600.00	0	.00
900.4300	Other Equipment	.00	.00	.00	.00	.00	+++	9,865.40
	Capital Outlay Totals	\$25,600.00	\$0.00	\$0.00	\$0.00	\$25,600.00	0%	\$9,865.40
	Department 05 - Police Totals	\$67,480.00	\$1,084.25	\$0.00	\$2,261.49	\$65,218.51	3%	\$17,650.37
	EXPENSE TOTALS	\$67,480.00	\$1,084.25	\$0.00	\$2,261.49	\$65,218.51	3%	\$17,650.37
	Fund 0086 - Seized and Forfeited Totals							
	REVENUE TOTALS	67,480.00	.00	.00	.00	67,480.00	0%	4,000.00
	EXPENSE TOTALS	67,480.00	1,084.25	.00	2,261.49	65,218.51	3%	17,650.37
	Fund 0086 - Seized and Forfeited Totals	\$0.00	(\$1,084.25)	\$0.00	(\$2,261.49)	\$2,261.49		(\$13,650.37)
	Grand Totals							
	REVENUE TOTALS	34,266,031.00	2,050,898.03	.00	3,917,557.29	30,348,473.71	11%	29,294,226.27
	EXPENSE TOTALS	34,893,899.00	2,490,041.12	2,295,026.41	5,037,084.74	27,561,787.85	21%	30,521,293.87
	Grand Totals	(\$627,868.00)	(\$439,143.09)	(\$2,295,026.41)	(\$1,119,527.45)	\$2,786,685.86		(\$1,227,067.60)

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