

## **SPECIAL PROVISIONS**

### **1.0 GENERAL**

- 1.1 These Special Provisions are provided to supplement the City of Columbia's Specifications as follows: Part 14: Instructions to Bidder, Part 15: General Specifications, Part 16: Specification for Water Distribution System, Materials, and Construction, and Part 20: Specification for Sodding, Fertilizing and Seeding
- 1.2 In case of conflicts between Special Provisions, Plans and any other Specifications, the Special Provisions shall govern followed by the Plans, Technical Specifications, and City of Columbia Specifications, respectively.
- 1.3 Attendance at the pre-bid conference for this project is not mandatory; however, the Contractor is responsible for ascertaining the work, conditions, and information outlined during this meeting.
- 1.4 The Contractor shall confine workers to the areas of construction.
- 1.5 Flood insurance is not required for this project.
- 1.6 Builder's risk insurance is not required for this project.

### **2.0 PROJECT SCOPE**

- 2.1 The proposed project scope generally consists of, but is not limited to, the following:

The proposed work includes construction of approximately 20,420 linear feet of 42-Inch Water Main along Rimer Pond Road from the existing City of Columbia Water Tank Site along Rimer Pond Road to the intersection of Rimer Pond Road and Hard Scrabble Road (CIP Project #WM3872). The work also includes construction of approximately 8,650 linear feet of 24-Inch Water Main along Hard Scrabble Road from the intersection of Rimer Pond Road and Hard Scrabble Road to Lake Carolina (CIP Project #WM3635).

### **3.0 PROJECT INFORMATION**

- 3.1 Project Identification: Water System Improvements Along CIP Project Rimer Pond Road #WM3872 and Hardscrabble Road CIP Project #WM3635, respectively.
- 3.2 Owner: City of Columbia, South Carolina.

#### 4.0 LIQUIDATED DAMAGES

4.1 Liquidated Damages shall be assessed at a rate of \$1,200 per day. Liquidated damages will begin if the Contractor fails to meet the Substantial Completion of the project within 420 calendar days from the date agreed upon between the Owner and the Contractor in the Notice to Proceed. Once the Substantial Completion has been met, liquidated damages will cease for a period of thirty days (30). The Contractor will be expected to meet final completion within 30 calendar days of the issuance of Substantial Completion. Liquidated Damages shall begin after 450 calendar days if substantial completion is reached on time. If the Contractor does not reach Substantial Completion within 420 calendar days and Liquidated Damages are assessed until Substantial Completion is reached, the Contractor will have 30 calendar days to reach final completion. If final Completion is not reached within the allotted 30 calendar days, Liquidated Damages will begin again and continue until Final Completion is reached.

#### 5.0 COMPLIANCE STATEMENT

5.1 A compliance statement is not required for this bid proposal.

#### 6.0 UNCLASSIFIED EXCAVATION/GEOTECHNICAL INVESTIGATION

6.1 All excavation is unclassified. The Contractor shall assume all risks of unforeseen ground conditions encountered and shall be responsible for completing the project as specified regardless of these conditions. No direct payment will be made for rock excavation, if encountered, or varying ground conditions that may affect the Contractor's ability to complete the work. No direct payment will be made for this bid item, the cost of these items will be included within other bid items. A geotechnical report entitled, "Report of Geotechnical Exploration Water System Improvements along Rimer Pond & Hard Scrabble Roads," completed by S & ME, dated January 21, 2020 is included in Appendix A of this document. The report has been included for the purposes of providing the Owner, Engineer and Contractors with a general idea of the soil profiles along the Rimer Pond Road and Hard Scrabble Road Water Main Alignments. This report is not meant to guarantee the underground conditions along the alignment. The geotechnical report should be used for informational purposes only. Bidders may request permission from the Owner and Engineer to conduct additional drilling or underground investigation to give each contractor a higher degree of confidence. It is recommended that the Contractor conduct investigations as they deem necessary. Permission from the Owner will be procedural to notify property owners of each easement to anticipate work within the City of Columbia's Exclusive or Non-Exclusive Easements. The Owner will issue the Contractor written permission to access the requested areas.

7.0 "OR EQUAL"

7.1 Any item which the bidder desires to substitute as an "or-equal" shall be in accordance with the Section 15.28 of the General Specifications with the following exception:

"Or Equal" substitutions shall not be taken into consideration prior to or within the bid. If the Contractor does so, it shall be at their own risk. "Or Equal" substitutions shall be considered only after the issuance of the Notice of Award. Any modification required due to the proposed "or equal" and not in the plans shall be the responsibility of the Contractor.

8.0 WEATHER CONDITIONS

8.1 The Owner has reviewed weather data available from the National Oceanic and Atmospheric Administration (NOAA) station at the Columbia Metropolitan Airport and determined a Standard Baseline of average climatic range for the project site.

- a. Standard Baseline shall be regarded as the normal and anticipatory number of calendar days for each month during which construction activity shall be expected to be prevented and suspended by cause of precipitation in excess of one-tenth inch (0.10") liquid measure. Suspension of construction activity for the number of days each month as listed in the Standard Baseline is included in the Work and is not eligible for extension of Contract Time.
- b. Standard Baseline (based upon precipitation in excess of one-tenth inch (0.10") liquid measure) established for this contract is as follows:

<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
8	6	7	5	6	7	8	7	5	4	4	6

- c. Partial months at the beginning and ending of a contract period will be prorated proportionally. Inclement weather occurring on holidays and weekends are included in the chart above. The Contractor shall take into consideration these monthly anticipated inclement weather days when submitting his Bid, and therefore these calendar days are included in the contract time.

- 8.2 Adverse Weather is defined as the occurrence of one or more of the following conditions which prevents exterior construction activity or access to the site within twenty-four (24) hours:
- a. Precipitation (rain, snow, or ice) in excess of one-tenth inch (0.10") liquid measure.
  - b. Temperatures which do not rise above 32°F by 10:00 AM.
  - c. Temperatures which do not rise above that specified for the day's construction activity by 10:00 AM, if any are specified.
  - d. Sustained wind in excess of twenty-five (25) m.p.h.
  - e. Standing snow in excess of one inch (1.00").
  - f. Any day that the Owner has requested no work to be performed.
- 8.3 A Weather Delay Day may be counted if adverse weather prevents work on the project for fifty percent (50%) or more of the Contractor's scheduled workday, including a weekend day or holiday if Contractor has scheduled construction activity that day.
- 8.4 The selected Contractor shall install and monitor on a daily basis a rain gauge along the route of the water main alignments. All weather data used to determine adverse weather for this project site during the course of work shall be from the Contractor's rain gauge. It is anticipated that the City and the Engineer's Inspectors will take measurements from the Contractor's installed rain gauge. Both the Engineer's Inspector, as well as the Contractor will keep data from this rain gauge. This will be a requirement of the land disturbance permit. Forms can be in the Storm Water Pollution Prevention Plan (located in Appendix B of this document). If a disagreement between the Contractor and the Engineer occurs, the rain gauge is vandalized or data for a certain day is made unusable due to foul weather, the City, Engineer and Contractor shall agree that rainfall shall be data from the NOAA station at the Columbia Metropolitan Airport. The Contractor shall on a monthly basis submit to the Engineer a summary showing the Adverse Weather incurred for the month and the supporting documentation from gauge readings. The Contractor shall coordinate on a weekly basis with the City and Engineer's Observation Personnel and City's Inspector to ensure all entities are recording the same daily rainfall measurements. Weather data will be reviewed, and the schedule adjusted accordingly on a monthly basis.

When actual number of abnormal weather days the Contractor could not work due to abnormal weather conditions exceeds the monthly average as determined above, the Contract shall be extended the number of days in excess of the monthly average for each month during the Contract Time. If the actual number days the contractor could not work is due to abnormal weather conditions is less than the monthly average, then the number of days the Contract was extended shall be reduced for the Contract period. At the end of the Contract period the total Contract Time will be total adjusted. Should the total days the Contractor cannot work due to abnormal weather conditions be less than the mean for the Contract period, no time will be deducted from the Contract.

- 8.5 Abnormal weather days shall be reported within 30 days of the final day of the month requested. Any abnormal weather days reported after this 30-day period will not be considered.
- 8.6 The Contractor shall be responsible for documenting and demonstrating that all abnormal weather days, including but not limited to those cause by precipitation, caused delays specific to the planned work activities or that such activities thus delayed were on the Contractor's then-current Project's critical path.
- 8.7 The Contractor's change request shall be for time only. No increase in the Contract Price will be considered.

## 9.0 COORDINATION WITH ADJACANT PROPERTY OWNERS

- 9.1 Contractors must coordinate all work that is within close proximity to or anticipated to disrupt adjacent property owners with the City of Columbia and the property owners. Contractor shall be familiar with the recorded easements included in Appendix C of this document prior to starting construction across that property. Project update meetings shall include reports from the Contractor to the City and Engineer of any contacts (positive or negative) that are had between project update meeting with the surrounding property owners. Contractor to be familiar with all conditions of the South Carolina Department of Transportation's (SCDOT) conditions included on the SCCDOT Encroachment Permit.

## 10.0 CONTRACTOR STAGING AREA

- 10.1 Do not use private property for storage purposes without written permission of the property owner or lessee and furnish copies of such documented written permission to the Engineer. Restore all sites to their original condition without additional compensation. In addition to areas identified, located, and meeting all conditions for storage, the City of Columbia will allow use of their tank property located on Rimer Pond Road adjacent to Sta: 0+00 on the Rimer Pond Road Alignment for storage of materials as need. The driveway to the tank must remain unobstructed and the property must remain accessible to City personnel at all times. Contractor shall coordinate with the City for the exact location of usable areas.
- 10.2 Enclose the Contractor staging area with an 8-foot-high chain link fence and gates and plastic fabric mesh netting. Remove the fence upon completion and acceptance of the work. All staging areas shall be restored to their pre-construction conditions. This includes grassing of the area after completion of the project or storing of the materials, whichever occurs first.

## 11.0 QUALITY ASSURANCE

- 11.1 Bids will be accepted only from general Contractors having the license classification of "General Contractor - Public Utility", the sub-classification of "Water and Sewer Lines" (WL), and "Group Limitation #5" in accordance with the South Carolina Code of Laws, Chapter 40 Title 11. All subcontractors shall be properly licensed for the scope and complexity of their work.
- 11.2 The Contractor shall log daily field reports. Field reports shall be submitted weekly to the Construction Inspector and Engineer. Field reports shall contain the following: project name and number, date and report number, weather conditions, rainfall amounts from the previous 24-hours, a list of daily activities, subcontractors on site, inspections performed, tests performed, deliveries received, photograph documentation (as needed), safety concerns or issues, and signature and date of Contractor Representative. The Contractor shall submit to the Owner and Engineer a draft daily field report for review and approval prior to beginning construction activities.

## 12.0 WORK RESTRICTIONS

- 12.1 Construction hours shall be Monday through Friday, 7:00 AM to 6:00 PM except where otherwise approved by the City and the agency having jurisdiction over the roadways. The working hours shown are subject to any requirements/provisions which may be imposed by the City of Columbia, the South Carolina Department of Transportation, the South Carolina Department of Health and Environmental Control, and/or the United States Army Corps of Engineers (USACE).

- 12.2 Confine construction operations to the limits of rights-of-way, easements, temporary easements, or right lesser than a fee interest.
- 12.3 Trenches and asphalt paving operations shall not prevent vehicular access to residential driveways for more than three (3) continuous hours. The Contractor shall have a plan to provide emergency access to each property if it becomes necessary.
- 12.4 At all times, emergency vehicles and the public shall have vehicular access to businesses and commercial properties. Access may be partly restricted, but never totally closed. The Contractor shall provide appropriate signage and flag men as necessary to meet all local, state, and federal regulations, as well as any conditions included in the SCDOT encroachment permit (Included in Appendix B).
- 12.5 Refer to the General Specifications for written notice requirements.
- 12.6 Access for emergency vehicles shall be maintained at all times.
- 12.7 Construction in areas where there is inadequate clearance between the equipment and the electrical lines will require construction coordinated with Dominion Energy. The Contractor shall be responsible for all cost associated with utility coordination and construction services.

### 13.0 VIDEO TAPING OF PROJECT

- 13.1 The Contractor shall video tape the entire route prior to the start of construction. Audio shall be included on the video with the property being videoed identified by tax map number and street address. Two (2) copies of this video shall be provided to the Engineer on a flash drive immediately following production. It is recommended that the selected Contractor consult with a certified Arborist prior to the production of the preconstruction video. Section 27.6 requires the Contractor to utilize the services of a certified Arborist, meaning the videoing will not be the only reason for having the Arborist under Contract.
- 13.2 At the completion of the project, the Contractor shall repeat the above requirement. There will be no direct payment for this item, the cost of which shall be included in other bid items.

13.3 Pre-Construction video will be required by the City of Columbia Real Estate Department on certain properties. A list of these properties will be provided to the selected Contractor. In general, the videoed properties will be in areas that include permanent structures in the City's permanent easement, fencing, gates, large diameter trees, and ornamental plants that must be protected. This requirement is to provide insurance to the City, Engineer, and Contractor if conflicts arise between any of the involved parties including the City, the Contractor and the specific property owner.

#### 14.0 LOCATION OF PUBLIC RIGHT-OF-WAY IS APPROXIMATE

14.1 The location of the public rights-of-way as shown on the drawings is approximate only and should not be accepted as final or all-inclusive. It shall be the Contractor's responsibility to determine the exact location of the right-of-way, where required. The Contractor shall be responsible for all pre-construction staking. Staking of the ROW and of the easement boundaries will be necessary to ensure proper placement of the water main.

#### 15.0 MAINTENANCE OF TRAFFIC

15.1 The Contractor is responsible for furnishing and installing all detour signs and pavement markings as required. The Contractor will be required to maintain or replace all Traffic Control Devices, (signs, pavement markings, etc.) for the duration of the project as directed by the Engineer in order to maintain the detour in accordance with the South Carolina Manual on Uniform Traffic Control Devices (SCMUTCD), the Standard Specifications for Highway Construction and Special Provisions. A copy of the SCDOT Encroachment Permit has been included in Appendix B of this document. General traffic Control details have been included on the Construction Plans. The details on the plans do not relieve the Contractor of the responsibility of having additional traffic control measures, flag men or other measures that SCDOT inspectors or Resident Engineer might require during the construction of this project. Additional details for flagging can be obtained through contact with the SCDOT. The Contractor is responsible for meeting all conditions included in the Encroachment Permit issued by the SCDOT for this project.

15.2 The Contractor shall be required to provide individuals who are properly trained in traffic control practices. The job duties of these individuals shall be restricted to providing quality assurance of the traffic control installation. The Contractor shall be required to have a person in charge of the traffic control on the job site at all times when construction activities are in progress.

- 15.3 In the event the Owner, Engineer or SCDOT finds the Traffic Control is not being provided as outlined, then the Contractor will be notified. If the condition is not promptly corrected, then all work shall be suspended until such conditions are corrected. During such suspension, the charging of work time shall be continued. The Owner/Engineer shall have the authority to withhold partial payment for any work on this contract if Traffic Control is not being provided in accordance with the Special Provisions.

## 16.0 PERMITTING

### 16.1 South Carolina Department of Transportation

- a. An encroachment permit has been issued and is included in Appendix B of this document. This permit is specific to this project and contains special conditions that must be followed by the Contractor. The encroachment permit includes permissions for several bore and jacks along the water main route and serves as notification that work will be taking place close to or out of the SCDOT ROW.

Construction is permitted within the rights-of-way of the South Carolina Department of Transportation (SCDOT) in accordance with the awarded encroachment permit and *A Policy for Accommodating Utilities on Highway Rights-of-Way* (latest edition) and the specific . All bidders are required to become familiar with the document and any amendments which are available from the SC Department of Transportation.

- b. The encroachment permit for any work within SCDOT rights-of-way under this project is included as a special provision in this contract. A copy of the approved encroachment permit has been included in Appendix B of this document and will be supplied to the selected Contractor prior to construction. A copy of the encroachment permit must be kept at the construction site at all times. It is recommended that the Contractor install a standard Job Box for a permits, associated permit drawings, and the Storm Water Pollution Prevention Plan (SWPPP).
- c. Certain notices are required in writing before any work can proceed within the SCDOT's rights-of-way. Upon ample notice by the Contractor, the SCDOT will make this notification.
- d. Installation of proper signage before, during, and after construction in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways will be required in certain specified locations. In addition, warning signs as related to soft and/or low shoulders and broken pavement may be required by the SCDOT.

- e. The Contractor shall be required to provide individuals who are properly trained in traffic control practices. The job duties of these individuals shall be restricted to providing quality assurance of the traffic control installation. The Contractor shall be required to have a person in charge of the traffic control on the job site at all times when construction activities are in progress.

#### 16.2 South Carolina Department of Health and Environmental Control (SCDHEC)

- a. A copy of the approved Land Disturbance has been included in Appendix B of this document and will be supplied to the selected Contractor at the pre-construction conference. A copy of the land disturbance permit and the SWPPP must be kept at the construction site at all times.
- b. A copy of the approved Water Construction Permit has been included in Appendix B of this document and will be supplied to the selected Contractor at the pre-construction conference. A copy of the water construction permit must be kept at the construction site at all times.

#### 16.3 Dominion Energy

- a. During the acquisition of all City of Columbia easements for this project. The City's Real Estate department has communicated with Dominion energy (previously South Carolina Electric and Gas). In areas where Dominion had easements across the City's easement, the executed easement document will have reference to a Dominion energy easement. The proposed alignment of the water mains to be installed as a part of this project do not cross any Dominion High Voltage Power Rights-of-Way. Encroachment permits from Dominion Energy are not anticipated for this project. If an encroachment permit is required from Dominion energy, the City of Columbia's Real Estate Division will prepare and request a permit from the power utility with or without the assistance of the Engineer. If the Contractor is stopped by any Dominion employee, the Contractor shall notify the City and Engineer prior to proceeding with the current activity at that specific location. Any Dominion permanent easements will be included on the executed easement package for each of the individual properties. The Contractor shall be responsible for thoroughly reviewing all legal documents associated with this project. These easement documents are included in Appendix C of this document.

#### 16.4 United States Army Corps of Engineers

- a. A copy of the approved Wetlands Permit has been include in Appendix B of this document and will be supplied to the selected Contract at the pre-construction conference. A copy of the wetland permit must be kept at the construction site at all times.

## 16.5 Other Applicable Permits

- a. All other applicable permits required for construction activities shall be the responsibility of the Contractor, not the City as identified within Part 15, General Specifications. Building Permits, Electrical Permits or other local permits will be the sole responsibility of the selected Contractor.

## 17.0 TEMPORARY GRAVEL SURFACE

- 17.1 Provide temporary gravel surface for properly assigned accessible routes of travel and driveway turnouts.

## 18.0 CONSTRUCTION STAKING

- 18.1 The Contractor shall be responsible for all construction staking. If additional information is needed to stake elements of the project, the Contractor shall submit a request for the needed additional information to the Engineer for consideration.

## 19.0 UTILITIES USAGE

- 19.1 The Contractor shall make his own arrangements for all utilities (e.g., water service connection, temporary electrical services, etc.) required for the work.
- 19.2 In order to use water from a fire hydrant, the Contractor shall apply for a temporary hydrant meter. The City of Columbia shall waive all fees for such application, for this project. The City will waive water usage fee; however the Contractor shall record all water usage for this project. Water from that hydrant meter may only be used for the project described in this document. The Contractor should note that the water main and fire hydrants adjacent to the intersection of Rimer Pond Road and E. Longstown Road is not owned or operated by the City. If the Contractor needs to get water at that location, it will be the sole responsibility of the Contractor to negotiate all fees and usage costs from the owner of the fire hydrants at that location.

After the installation of the Water Main, the Contractor shall coordinate with the City for water to be used for disinfection and flushing of the new water system improvements. In the case of flushing, the Contractor will need to coordinate with the City and Engineer for assistance to ensure the flushing is conducted during an appropriate time and when the existing tank located near the intersection of Rimer Pond Road and Wilson Blvd. is filled. The Contractor will not be charged for water to be utilized for disinfection or flushing of the new lines except in the case of the water main failing bacteriological testing, requiring multiple attempts at disinfection and flushing. The Contractor will be charged for water usage if the mains fail the initial or subsequent required second bacteriological test and require multiple rounds of disinfection and flushing.

## 20.0 EXCAVATION AT OR NEAR OVERHEAD UTILITY POLES

- 20.1 Contractor is to notify the utility company owning the overhead utility pole prior to excavating at or near existing overhead utility poles. Utility companies may charge the Contractor a fee for coordination and construction services. The Contractor shall be responsible for all cost associated with utility coordination and construction services. Utility pole relocation or physical support during construction within the City's recorded easements will not require additional encroachment permits; however, it shall be the responsibility of the selected Contractor to coordinate with all utilities. The Contractor shall notify the City and Engineer of their plan for any relocations or pole supports and provide the City and Engineer with documentation of communications and coordination with the said utility.
- 20.2 Contractor is not to cut wires or other devices used to ground equipment on the pole.
- 20.3 All poles to be relocated shall be relocated prior to construction on that portion of the project.

## 21.0 INTERRUPTION IN SERVICE

21.1 The Contractor shall notify the City of Columbia, and all affected water and/or sewer users of any proposed interruption in service at least three (3) business days prior to the planned interruption. The serving of notice shall be either in person or by notice attached to the door front. Placing a written notice in a mailbox is not acceptable. Most water or sewer services along Rimer Pond Road will not be owned by the City of Columbia. The Contractor shall be responsible for coordinating with the City of Columbia or any other water and sewer providers whose infrastructure will be affected. It will be the responsibility of the Owner of the Water or Sewer Utility to notify their customers. The City of Columbia has water connections along Hard Scrabble Road. The same above requirements apply to all portions of the projects whether the infrastructure is owned by the City of Columbia or other Water and Sewer providers in the area.

21.2 The notice shall achieve the following:

- a. Explain the purpose of the interruption.
- b. Provide the start and stop times of the interruption.

21.3 A single interruption shall not exceed four (4) hours in duration.

21.4 The Contractor shall be responsible for acquiring the names and affected residents and businesses as well as correct mailing addresses and provide those to the affected utility owners. The Contractor shall not cut services without written permission from the water or sewer infrastructure owners, whether the owner be the City of Columbia or others.

## 22.0 OBSTRUCTIONS

22.1 In the course of excavating trenches for the proposed improvement, the existence of a subsurface structure may pose as an obstacle to the construction of the proposed improvement as shown on the drawing. When such an obstacle is encountered, the Contractor shall cease his activities at the conflict location, immediately notify the Owner by telephone and in writing of his discovery and await the disposition of the matter by the Owner.

The Contractor may, with the Owner's consent, remove obstructions to his operations, but they shall be removed and replaced at the Contractor's expense. Trees that are an obstruction to the construction may be removed upon permission of the Owner/Engineer.

The City's Inspector, as well as the Engineer's Construction Observation personnel shall be notified at once so appropriate documentation can be gathered while the obstruction is visible. It is anticipated that either the Owner or Engineer's Inspector will be on site during all times work is taking place through the Contract Time.

- 22.2 Suspension in work due to the obstacle does not prevent other project activities from progressing in an uninterrupted manner. It is expected that the Contractor will continue work on other portions of the project and the obstacle will not stop work at other locations along the water main alignments.

### 23.0 SALVAGE

- 23.1 The City reserves the right to retain all existing reusable materials and equipment to be demolished or removed. All other such materials (i.e., removed concrete and asphalt) and/or equipment shall become the property of the Contractor and shall be removed from the site. No material or equipment shall be removed from the site without confirmation by the City. Material and equipment to be retained by the City shall be delivered by the Contractor to a storage area on the site designated by the City.

### 24.0 SEDIMENT AND EROSION CONTROL

- 24.1 Refer to Section 15.61 of the General Specifications. In addition, the Contractor shall fully comply with SCDHEC, SCDOT, USACE, Richland County, City of Columbia, etc... regulations and/or special provisions. The referenced permits are included within Appendix B of this document and shall be provided to the selected contractor at the pre-construction conference.

### 25.0 DISTRIBUTION OF MATERIALS

- 25.1 If the Contractor chooses to utilize nearby property for material storage, the Contractor shall acquire written permission from the property owner(s) and submit to the City of Columbia and Engineer prior to storage of any materials. The Contractor shall also acquire written permission with any property belonging to the City of Columbia.

25.2 The Contractor shall be responsible for the removal of all unsuitable soils to an appropriate and permitted off site location. The soil removed from the trench shall be loaded into a construction vehicle. Suitable backfill material taken from the trench or transported from another site shall remain in the construction vehicle until the backfill can be placed directly into the trench. In distributing materials at the work site, each item shall be unloaded opposite its installation site. At locations along the trench where this is not possible, the item(s) shall remain at the storage site or on the construction vehicle until time of installation. The Contractor shall be responsible for and include in their bid proposal all cost for placement, storage, transportation, compaction of all backfill material necessary for the completion of this project. Backfill will not be included as bid item but shall be included in the Contractors total price for the completion of the described work in the Contract Documents to include the Construction Plans.

## 26.0 CLEARING AND GRUBBING

26.1 The Contractor shall do all clearing and grubbing along the line of work; however, the Contractor shall not be allowed to remove or otherwise damage any trees or shrubberies other than those which, in the opinion of the Engineer in conjunction with the Owner, are necessary for the protection of the work. All work shall be in accordance with easement agreements between the City and individual property owners. Contractor shall be responsible for meeting all conditions set forth in the legal easement documents. Costs for meeting conditions of the easement conditions shall be included in the Contractor's Bid Form included within Division 00 41 43 entitled Bid Form – Unit Prices. Easements associated with the work included in this project are included in Appendix C of this document and shall be provided to the selected Contractor. Easement documents may be reviewed in the office of the City Engineer with appropriate permissions. In addition, all easements associated with this project have been recorded with Richland County Registrar of Deeds and are available through the County.

- 26.2 Clearing and grubbing shall be defined as the work required for the removal and disposal of all vegetation, weeds, trees (living and dead), stumps, roots, logs, brush, shrubs, rubbish, foundations, framework, utility connections not in service, fences, signs, posts, portions of structures not otherwise provided for, and all objectionable material designated for removal and deemed necessary by the Engineer to satisfactorily complete the work. The Contractor shall backfill all voids caused by the removal of stumps and obstructions. The backfill shall be suitable material thoroughly compacted to the satisfaction of the Engineer. A third-party testing agency will be employed by the Engineer and will test compaction in any area of work as directed by the City or the Engineer. All discarded materials produced by the clearing and grubbing operation shall be removed from the easement and project site to the satisfaction of the Engineer. The Contractor shall transport all discarded materials to a City and Engineered approved disposal site as part of the unit cost for clearing and grubbing. The selected Contractor shall provide notice to the City and Engineer of the disposal location during the pre-construction conference.
- 26.3 The Contractor shall carefully and conservatively trim nearby trees only of those limbs that obstruct the work area. The Contractor shall not cut, damage, or destroy any trees beyond the easement. No additional trees outside the easement shall be removed without the approval of the Engineer. Prior to removing any tree, the tree shall be completely topped in a manner approved by the Engineer. The Contractor shall protect all utilities on public and private properties. All timber shall be sectioned into commercial lengths and stacked adjacent to the right(s)-of-way and/or easement as requested by the property owner. The Contractor shall remove and dispose of branches, foliage, stumps, brush, and all other debris produced from clearing the easement and/or construction site. Any structures and/or utilities damaged during clearing shall be replaced or repaired by the Contractor at no cost to the City. The Contractor shall review the easement documents and be responsible for the protection of all trees identified to be protected in those documents. Additionally, the Contractor shall be responsible for protection of all trees identified or noted on the Construction Plans to be protected.

- 26.4 The Contractor shall complete clearing and grubbing work before beginning any construction activities. All-natural terrain, vegetation, and designated objects shall be preserved from injury or defacement. Trees, plant specimens, and selected objects considered valuable by adjacent property owners, aesthetically desirable, and are designated by the Engineer shall not be removed or damaged. Any of the above that are damaged by the Contractor's operations shall be repaired or replaced by the Contractor as directed by the Engineer at no cost to the City or the Contractor shall provide compensation in the amount determined by the Engineer. In general, replacement of trees, shrubs, ornamentals or bushes identified to be replaced shall be of like species and size.
- 26.5 Any tree, building, structure, etc. partially encroaching on the easement shall not be removed unless specifically indicated on the plans or directed by the Owner / Engineer.
- 26.6 The Contractor shall be responsible for confining all work to the easement. The work shall be performed in strict accordance with easement agreements and/or permits between the City and property owners. Pre-cautions shall be taken using approved methods to prevent collapses or disturbances beyond the limits of the easement. Those areas disturbed beyond the easement by the Contractor's operations shall be repaired or replaced at the Contractor's cost as directed by the City and the Engineer. Contractor is responsible for reviewing the SCDOT encroachment permit to identify areas, if any, were it is permissible to work within the SCDOT Rights-of Way. The SCDOT encroachment permit associated with this project is included within Appendix B of this document.
- 26.7 Preventative measures shall be implemented to avoid damage to improvements within the easement. Those improvements damaged by the Contractor's operations shall be repaired or replaced by the Contractor as directed by the Engineer at no cost to the City. Any structures or items damaged shall be replaced by the Contractor at no cost to the City. The Contractor shall be responsible for reviewing all final easement documents, included in Appendix C of this document for identification of specific structures that are to remain. Additionally, the Contractor shall review the Construction Plans and ensure that structures called out to remain are left in place are not damaged and remain in place throughout the Contract Time.
- 26.8 The Contractor shall remove the existing fencing to permit construction as indicated on the plans or as directed by the Owner/Engineer. When possible, the existing fencing shall be reset in its original location and to pre-existing condition. Temporary fencing or other precautions shall be utilized to prevent animals from straying onto properties or prevent trespassing by individuals not associated with this project.

- 26.9 The Contractor shall re-cut any brush, weeds, and other designated vegetation immediately before final inspection as instructed by the Engineer.
- 26.10 The clearing and grubbing and adjacent areas must be re-established to matching grade and cross-section and properly stabilized. Erosion and sediment control measures must remain in position until stabilization is achieved to the satisfaction of the Engineer. Contractor shall note that temporary grassing may be necessary immediately after the installation of water main in areas of particular concern or areas that exhibit significant erosion.
- 26.11 The Contractor shall maintain proper barricades and personnel to keep the public and utilities safe during construction operations. Contractor shall secure all excavations to include but not limited to filling before leaving the site, installing temporary fencing or establishing human security during hours when the Contractor is not actively working in the area. Ideally, no excavations will be left open once the Contractor ceases operations for the day.
- 26.12 Clearing and Grubbing shall be completed as necessary but shall conform with any applicable Ordinances, which include, but are not limited to, County Tree Ordinances, special conditions included in the Land Disturbance Permit, or conditions included in the executed legal easements for individual properties. The Contractor shall review all easement documents to identify limitations or conditions concerning specific trees or general clearing conditions agreed to by the City and Individual property Owners.
- 26.13 There shall be no direct payment for this work other than items specifically included as a line item in the bid form. All costs associated with this work including, but not limited to, labor, materials, equipment, machinery, etc. incidental to complete all work shall be included in the specific line item of the bid form.

27.0 TREES, SHRUBBERIES, AND LAWNS

- 27.1 The Contractor shall not be allowed to remove or otherwise damage any trees or shrubberies other than those which, in the opinion of the Engineer in conjunction with the City Inspector are necessary for the protection of the work. All work shall be in accordance with easement agreements between the City and property owners. Easement documents have been included in Appendix C of this documents and publicly available through the Richland County Registrar of Deeds. Copies of the easement documents will be supplied to the selected Contractor at the Pre-Construction Conference.

- 27.2 The Contractor shall be advised to review the existing landscape, become familiar with the existing conditions, and make preparations to adequately safeguard himself and the Owner from liability. The City permits property owners to extend their terraces, lawns, shrubbery, and various plantings into the right-of-way. All shrubberies and tree limbs where appropriate shall be temporarily tied back to minimize damage. Ornamental shrubberies and tree limbs along the trench shall not be disturbed. Of those ornamental shrubberies and trees requiring temporary removal, the Contractor shall preserve the health through the completion of the work of the Contract. The Contractor shall maintain, remove, and replace any trees and ornamental shrubberies affected by construction activities and shall perform all work at a frequency that guarantees their survival. This applies to all flora included in the conditions on the individual easement documents. A copy of each easement document has been included in Appendix C of this document. Copies of each of the Easement Documents shall be provided to the Contractor at the pre-construction conference. All work under this section 27.2 shall be performed to the satisfaction of the Engineer at no cost to the City.
- 27.3 Damaged limbs shall be carefully and conservatively trimmed to preserve the appearance of the tree and safeguard the overall health of the tree. Damaged tree trunks shall be treated with a tree dressing. Any deciduous trees or ornamental shrubberies damaged beyond restoration shall be removed and replaced with the same variety and similar size at no cost to the City.
- 27.4 Where trenches cross private property, right-of-ways, and easements through established lawns, sod shall be neatly cut, removed, carefully stored, regularly watered, and maintained in good condition until restored by the Contractor. All topsoil shall be removed to full depth and stockpiled separately from excavated materials. All disturbed grass areas must be replaced with same type of sod. Seeding these areas shall not be permitted unless temporary seeding is required for immediate stabilization. If temporary seeding is performed, the Contractor shall remove all established seeded grass prior to the installation of the new / saved sod. The Contractor shall be responsible for the chemical removal of all temporary grass that has taken root in the surrounding established grass. The Contractor shall be required to perform all maintenance necessary to preserve sodded areas and plants in satisfactory condition. This shall include, but not be limited to, trimming, mowing, repairing erosion, and replacing plants. This shall also include, but not be limited to, all work essential to stabilize sod areas such as applying topsoil, fertilizer, sod, and mulch. If the Contractor deems it is more cost effective to replace the sod this may be requested through the Engineer and City. The Contractor shall be responsible for the re-establishment of all sod removed during the construction of the project.

- 27.5 The Contractor shall locate and protect private underground irrigation systems. The Contractor shall be responsible for damages caused by construction activities, repairs, and/or replacement of the damaged sections. The Contractor shall review all conditions in the easement documents prior to commencing work. In general, irrigation system components are illustrated on the construction plans where they were visible during construction. Omission of irrigation on the Construction Plans does not relieve the Contractor of all responsibility for each individual irrigation system.
- 27.6 No trees other than those specified on the plans shall be removed. The Contractor shall make advanced preparations to work around all other trees without damaging or destroying any part of the trees including, but not limited to, roots, trunks, limbs, etc. The Contractor shall become familiar with the each tree's characteristics including, but not limited to, root systems, etc. via contacting a certified arborist knowledgeable of the specific tree species on or near the construction site and its perimeter. The Contractor shall ensure the viability of the remaining trees during construction and after construction. Prior to construction across each property, the Contractor shall be responsible for reviewing the conditions included in each of the easement exhibits. Where conditions on the legal documents address tree removal, those conditions supersede clause 27.6.
- 27.7 There shall be no direct payment for this work unless otherwise specified in the bid items. All costs associated with this work including, but not limited to, labor, materials, equipment, machinery, etc. incidental to complete all work shall be included in the specific line item associated with this work, or if a line item for this work is not included in the bid form, cost for this work shall be included in other bid items. The Contractor at no cost to the City shall replace any structures or items damaged.

## 28.0 MATERIAL TESTING

The City of Columbia and Engineer will contract with a geotechnical firm for material testing as required in the Contract Documents and in accordance with South Carolina Department of Transportation Standard Specifications for Highway Construction, latest edition, with supplemental specifications. This geotechnical firm will serve as a third-party testing firm responsible for materials testing, as well as, compaction testing along the length of the alignment.

- 28.1 The City will hire a Soils Testing Company and pay for testing and analysis needed to meet requirements compaction requirements of these specifications, as well as the compaction requirements included in the SCDOT. Since the most construction will take place in private easements, SCDOT compaction requirements will be limited.

## 29.0 UNSUITABLE BACKFILL MATERIAL

- 29.1 In addition to Section 16.3.3 of Part 16: Specification for Water Distribution System, Materials, and Construction and Part 15, General Specifications, add the following:
- 29.2 Unsuitable Backfill Material includes, but is not limited to, the following materials:
- a. Soils not classified as suitable backfill material, as defined in Regulations Part 15, General Specifications or in Section 31 23 17 -Trenching
  - b. Individual stones or concrete chunks larger than 6 inches and averaging more than one per each cubic foot of soil.
  - c. Frozen materials.
  - d. Foreign materials.
  - e. Stumps, logs, branches, and brush.
  - f. Trash, metal, or construction waste.
  - g. Soil in clumps or clods larger than 6 inches, and without sufficient fine materials to fill voids during placement.
  - h. Environmentally contaminated soils.
  - i. Organic Soils / Materials.
- 29.3 The removal of unsuitable backfill material and replacement with acceptable soil material and proper compaction shall be in accordance with the Specifications and shall be the sole responsibility of the selected Contractor.
- 29.4 If unsuitable backfill material is encountered during trench excavation, the Contractor shall notify the Engineer and City.
- 29.5 Special bedding and backfilling conditions may apply depending upon actual conditions encountered at time of construction as recommended by the City's geotechnical consultant. Contractor shall notify the Engineer prior to beginning any excavation. General bedding requirements are included on the Detail Sheets within the Construction Plans.
- 29.6 The Contractor shall the Engineers Construction Observation Personnel and the Owner's Construction Inspector where there are observed changes in soil conditions including, but not limited to, color and texture. The frequency of density testing shall be increased to closely monitor compaction in areas where there are noted changes in the soil's condition. Each time a change in soil condition is noted, a density test shall be required, and samples shall be taken to a depth equal to the minimum cover over the pipe unless otherwise specified by the Engineer. When the soil remains uniform during placement and compaction, samples shall be taken to a depth equal to the minimum cover over the pipe at 50-foot intervals unless otherwise specified by the Engineer. These samples shall be

submitted promptly so that poor material can be removed and replaced during backfilling. The Construction Plan station number and depth shall be recorded by the Contractor and provided to the Engineer.

- 29.7 The soil must maintain uniformly distributed moisture at the optimum moisture content for the specific location during compaction. Control of proper placement in the trench, compaction efforts, and moisture content is required to achieve the target density. Meeting this condition shall be the sole responsibility of the Contractor.
- 29.8 All construction shall be performed by methods that promote drainage without erosion. The Contractor shall properly maintain shoulders and slopes throughout construction operations.

### 30.0 TRENCH STABILIZATION

- 30.1 In addition to Part 15, General Specifications, add the following:
- 30.2 The trench shall be so braced and drained that the worker may work in it safely and efficiently.
- 30.3 The width of the trench shall be ample to permit the pipe to be laid and joined properly, and the backfill placed and compacted as specified.
- 30.4 Any cost associated with trench stabilization including, but not limited to, use of sheeting, shoring, bracing, and trench boxes shall be borne by the Contractor. There will be no direct payment for this item, the cost of which shall be included in the unit bid prices indicated on the Proposal.
- 30.5 The Contractor, at all times, shall be responsible for meeting or exceeding all OSHA guidelines that apply at all times and during all phases of this project.

### 31.0 PROTECTION OF WORK

- 31.1 The Contractor shall furnish and install all necessary temporary works for the protection of the work, including, but not limited to, barricades, warning signs, and lights at night.

## CONNECTIONS TO WATER TRANSMISSION MAINS

- 31.2 It shall be the responsibility of the Contractor to coordinate with the City Inspector, Engineer's Construction Observation Personnel, Water Distribution Division and Lake Murray Water Treatment Plant when connecting the proposed water main to the water transmission mains at locations shown on the plans or as directed by the City Engineer. The Contractor shall provide all materials for excavation and repairs for these connections. The Contractor shall provide the City Inspector, Water Distribution Division, (803) 545- 3900 and Lake Murray Water Treatment Plant, (803) 781-2181 with 72 hours notice prior to requiring each connection. The Contractor shall notify the Engineer 72 hours prior to making connections to any water mains that are in operation when the connections are being made. The Contractor shall be responsible for ensuring the City and Engineer's Construction Observation and Inspection Staff are notified of the time and location of the connection.
- 31.3 No pressurization of lines will be permitted without the approval of the Owner's Construction Inspector and the Engineer's Construction Observation Staff and the Owners Water Engineer managing this project.

## 32.0 SAFETY REGULATIONS

- 32.1 All methods of construction including, but not limited to, trenching, sheeting and bracing, boring and jacking, micro-tunneling, and pipeline construction shall be done in accordance with OSHA regulations. In accordance with OSHA's requirements, excavations twenty (20) feet deep or greater shall be designed and certified by a Professional Engineer, registered in the State of South Carolina. Certified copies of all such excavation bracing design shall be submitted to the Engineer for review and approval. All cost for this work shall be included within other bid items. Design must be submitted to the City Engineer before any pay requests will be approved.
- 32.2 The Contractor shall conform to OSHA's requirements and regulations while operating in a confined space that requires a permit.

## 33.0 RELOCATION OF PROPERTY IRONS

- 33.1 Any property iron disturbed during construction shall be re-established by a registered land surveyor licensed in the State of South Carolina, there shall be no additional cost to the City for this item.

#### 34.0 RELOCATION OF EXISTING UTILITIES

- 34.1 The Contractor is responsible for contacting and coordinating utility relocations with the appropriate utility company prior to starting construction including, but not limited to, Dominion Energy, Spectrum Cable, AT&T, and any other utility company affected by the construction.
- 34.2 All utility relocation and repair cost, if applicable, shall be the responsibility of the Contractor. The Contractor is specifically advised to familiarize himself with the proposed route and location of utilities before the submittal of the bid.
- 34.3 No direct payment will be made for utility relocation/repair unless otherwise specified in the bid items. All costs associated with this work including, but not limited to, labor, materials, equipment, machinery, etc. incidental to complete all work shall be included in other bid items.

#### 35.0 RECORD DRAWING

- 35.1 Prior to the Contractor's written request of walk-through and/or inspection and submission of final payment request, the Contractor shall furnish to the Engineer two (2) sets of marked-up bold red-lined drawings for Record Drawings showing all modifications from the construction drawings. The Contractor shall include on the drawings the type, size and depth of all utility installations. In addition, the Contractor's submitted Red-Line drawings, the Contractor shall provide an, "AS-BUILT" survey completed by a Professional Land Surveyor licensed in the state of South Carolina. The survey shall include all new installations, the locations of connections to existing water mains, the end of casings (bore and jack), The start, finish, and alignment of any Horizontal Directional Drills and all other appurtenances. The survey should include all items included on the City's Record Drawings checklist. The survey shall be provided to the Engineer in a printed format that is stamped and sealed. Additionally, the Contractor shall provide the Engineer with an electronic AutoCADD file produced in Civil 3d, 2018 or newer version. Contractor shall ensure that survey can collect shots on the tops of installed pipes in an effort to allow the Engineer to provide the City with accurate profiles of the water main. The Contractor may have the surveyor on site collected vertical locations or the Contractor may provide stub-outs in order that the surveyor can measure down to the crown of the pipe and establish the depth of bury. Depth measurement shall be taken at intervals that will ensure an accurate profile of the newly installed water main.

- 35.2 The survey shall show distances to permanent points previously surveyed such as property irons, property corners, power poles, center of: fire hydrants, large meter pits, manholes, storm structures (inlets, catch basins, junction boxes, headwalls, etc.), and other unmovable items for every new installation below grade - building corners are not acceptable unless they coincide with the property corner. The Contractor shall include a sealed and signed paper copy of the "As-Built" survey with a dated certification form certifying that all locations, dimensions and facilities are accurately shown or indicated on the "As-Built" Survey.
- 35.3 The Contractor shall be responsible for providing a list of the "actual quantities" installed during construction. Prior to the submittal of any pay applications, the Contractor's supervisor shall meet on site with the City's Inspector and the Engineer's Construction Observation personnel and agree on all quantities that have been installed during that period. These values shall match the surveyed lengths and quantities at the completion of the project.
- 35.4 The Contractor's survey and red-line drawings shall provide a detailed intersection sketch with at least three (3) dimensions from permanent objects to all valves, hydrants, tees, bends, etc. That are replaced, relocated or added. These sketches are to be completed and submitted to the City of Columbia as the project proceeds. The City of Columbia reserves the right to keep all of the retainage if this activity is not performed satisfactorily. The Contractor shall note on the sketches a certification that all dimensions are accurately shown. The format of the drawing shall be coordinated with City staff. The intersection sketches shall be considered incidental to the construction and will not be paid for separately. The red line drawings produced by the Contractor shall very closely resemble the, "As-Built" survey measurements and Quantities.
- 35.5 Coordinates for the Record Drawings (As-Built) shall be survey grade and based on South Carolina State Plane Coordinate System: NAVD 88 Vertical Control and NAD 83 Horizontal Control. The Contractor shall provide the Engineer with an electronic copy of the, "As-Built" Survey including elevations on a CD. In addition to the AutoCADD survey drawing, the digital file has a PNEZD comma delimited text file.
- 35.6 Record Drawings shall be considered incidental to the construction and will not be paid for separately.
- 35.7 Final payment may not be made to the Contractor until the "As-Built" survey and the red-line drawings fully comply with the Contract Documents and have been delivered to and accepted by the Engineer.

35.8 The City of Columbia Record Drawings Checklist is included in Appendix D of this Document and shall be utilized by the Contractor to ensure all information has been surveyed, certifications have been executed, and all other requirements have been met.

### 36.0 REQUEST FOR INFORMATION

36.1 Request for Information (RFI) associated with the Bid Opening must be submitted in writing a minimum of fifteen (15) days prior to the prior to the Bid opening to W.K. Dickson & Co., Inc. RFIs shall be emailed to the following four (4) email addresses: [Shill@wkdickson.com](mailto:Shill@wkdickson.com), [Cdavidson@wkdickson.com](mailto:Cdavidson@wkdickson.com), [DMasi@wkdickson.com](mailto:DMasi@wkdickson.com) and [Jwright@wkdickson.com](mailto:Jwright@wkdickson.com). If additional information is needed, the Contractor may contact the Engineer at (803)-786-4261.

### 37.0 SUBMITTALS

37.1 The Contractor shall be limited to a total of three (3) re-submittals. The Owner reserves the right to have the Contractor bear the cost associated with the review of each additional submittal by the Owner and/or the Engineer.

### 38.0 SCHEDULES

38.1 The selected Contractor shall prepare an initial construction schedule and submit to the City and Engineer at the Pre-Construction meeting. Contractor's schedules shall be updated monthly, and copies of the revised schedules shall be provided to the Owner and Engineer at the monthly project meetings. Major changes in schedules should be verbally provided to the City's Inspector and the Engineer's Construction Observation personnel immediately upon realization of the change.

38.2 It is requested that calendars be created utilizing Microsoft Project, P6, or pre-approved software.

38.3 The project schedule shall be updated on a monthly basis if major changes are needed to said schedule. A list of work to be completed in the next 30-days shall be prepared by the Contractor and presented at each of the monthly progress meetings. The submittal of project schedules is required prior to the commencement of work and shall be provided at the pre-construction conference by the selected Contractor. The overall project schedule shall be approved prior to the commencement of construction. Project schedule updates shall be submitted with the applications for payment and presented at the monthly progress meetings.

39.0 MEASUREMENT AND PAYMENT

- 39.1 Measurement and payment shall be a stipulated lump sum based on unit priced items as stated within the Bid Form and Section 01 20 00 – Price and Payment Procedures.
- 39.2 Written Approval/Authorization from the Owner/Engineer **MUST BE OBTAINED PRIOR** to the Contractor requesting payment from the Owner Controlled Contingency. It is anticipated that all parties will be made aware of any issues / situations / additional work well in advance of paper work requesting approval is submitted to the City and the Engineer for Approval.

END OF SECTION