

SECTION 2.0 GENERAL PROVISIONS

2.01 Drawings

The developer shall be responsible for providing all drawings, plans and specifications as needed by the City and the contractor.

Detailed construction plans shall be submitted to the City Public Works and Utility Departments for approval prior to the beginning of any construction. Any changes from the approved plans must be resubmitted to the Public Works and Utilities Departments for reapproval.

Final "as built" drawings shall be submitted by the developer or his engineer upon completion of the construction. The "as built" plans shall show the size, type and location of all sanitary sewer and water lines. In addition, these plans shall show the location of all fire hydrants, tees, valves, manholes, taps and other appurtenances to an accuracy of one-tenth of a foot. All references shall be tied to a fixed object such as a property iron, fire hydrant, power poles, etc. Final "as built" plans shall be submitted and approved before any water or sewer line can be accepted for maintenance by the City. See Section 2.63 herein.

For contracts let by the City of Gastonia, see Sections 2.18 (G), 2.19 (G), 2.21 (G).

2.02 (G) Time of Completion

The Time of Completion shall be as specified in the contract.

2.03 Permits and Regulations

The contractor and developer shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the work. If the contractor observes that the drawings and specifications are in conflict with Local, State or Federal laws and regulations, he shall promptly notify the Engineer/developer. The developer shall then promptly notify the City Engineer in writing of any conflicts. Any necessary revisions to the plans shall be made by the developer and approved by the Utilities Director and Public Works Director. See Section 2.23 (b) for City awarded contracts.

City will allow the Contractor to use city water in the approved pursuit of construction under this contract with the City with out any charge therefore. The Contractor shall notify the Utility Department and the

Engineer prior to any such usage. The Contractor shall supply all labor, equipment, and material necessary including but not limited to: city approved meter and a proper AWWA backflow prevention connection. The City will monitor this use, if in the sole opinion of the Engineer, the Contractor is abusing the use of this water usage the Engineer may cancel this approval and the Contractor shall supply his own water at no additional cost to the City.

2.05 Inspection of Work

The City Engineer or his designated representatives shall at all times have access to the work while it is in preparation or progress and the contractor and/or developer shall provide proper facilities for such access and for inspection.

The contractor shall give the City Engineer timely notice of its readiness for inspection. Inspections by the City Engineer shall be as prompt as possible.

If any work should be covered up without the approval or consent of the City Engineer, it must (if required by the City Engineer) be uncovered for examination at the contractor's or developer's expense.

See Section 2.63 for Television Inspection.

Any and all work not in conformance with these specifications and with City Standards shall be removed or corrected as directed by the City Engineer. The decision of the City Engineer shall be final.

2.06 Maintenance of Traffic

Where lines are to be installed in existing public maintained streets or highways, such streets or highways shall be kept open to public traffic at all times by contractor, unless permission to close these streets or highways is granted by the Traffic Engineer. In the event permission is granted to close certain streets or a portion thereof, the contractor shall notify the City Police Department, the City Fire Department and any other emergency protection unit as to the time and location of such street closing.

Proper and sufficient barricades, lights, signing and other protective devices shall be required to be installed by the developer or contractor. All construction signs and the installation of same shall conform to the "Manual on Uniform Traffic Control Devices" as adopted by the American Association of State Highway and Transportation Officials (AASHTO). Additional signing shall be provided by the developer as directed by the Traffic Engineer.

2.07 Restriction of Load Limits

All improvements shall be protected from excessively heavy vehicle or earth loads. Any improvements which are broken, crushed, knocked from its proper alignment or otherwise damaged due to excessive loads, shall be replaced by the developer or contractor. Any existing cracks shall be pointed out to the inspector prior to the contractor beginning construction or he will be held liable for correction.

2.08 Use of Explosives

When the use of explosives is necessary for the prosecution of the work, the contractor shall exercise the utmost care not to endanger life or property. The contractor shall be responsible for any and all damages resulting from the use of explosives.

The contractor shall notify each public utility company having structures in proximity to the site, of his intention to use explosives, and shall secure a blasting permit from the City Fire Department as may be necessary.

2.09 Used Materials, Prohibited

The use of materials which are second rate or which have been used previously is strictly prohibited. All materials shall be new, first quality materials and free from defects which would affect their strength, efficiency, appearance or structural quality.

Failure to remove or correct work which does not meet City Standards and Specifications shall be sufficient reason for the City to invalidate the contract, and to refuse to accept any or all lines included in the contract, or allow developer to connect to the City's existing water and sewer lines.

2.10 Surveys, Lines and Grades

The developer shall be responsible for establishing all lines and grades necessary for installation and inspection of this work. Cut-sheets shall be provided in accordance with Section 2.11 of these specifications for all sanitary sewer lines. For water lines, grade and alignment stakes shall be provided at a minimum interval of one hundred feet. Where water lines are within street right-of-way and where the curb and gutter section has been installed, the back of the curb may be used in place of grade stakes.

(G) The City will provide the necessary staking for all projects awarded directly by the City.

2.11 Cut-Sheet

The developer shall be responsible for the preparation of all cut-sheets and the submission of these cut-sheets to the City Engineer. All cut-sheets shall be submitted to the City Engineer for his review and approval at least twenty-four (24) hours prior to their anticipated need for construction.

Cut-sheets shall bear the full name and title of the person responsible for their preparation and shall bear sufficient data and information to locate grade stakes in field. All stations and grades shown shall conform to those shown on the approved plans, except where changes have been approved in writing by the Public Works Director and Utilities Director. All cut-sheets submitted to the City Engineer shall be checked by the City before approval, however, the approval of cut-sheets which are in error shall in no way obligate the City to make field correction.

(G) For City awarded projects, the Contractor shall give 72 hours advance notice of any staking or cut sheet needs.

2.12 Location of Water and Sanitary Sewer Lines

Where water mains and sewer mains are laid parallel or approximately parallel, the minimum horizontal clearance between all sanitary sewer mains and any water distribution mains shall be ten (10) feet. Where a sanitary sewer line and water distribution line are within ten (10) feet horizontal clearance, the sewer line shall be below the water line and the minimum vertical clearance shall be eighteen (18) inches. Where water and sewer lines are laid in the same trench, they shall have a minimum vertical clearance of eighteen (18) inches with the water line at the higher elevation, on a bench of undisturbed earth.

Where water mains and sewer mains cross, the minimum vertical clearance shall be eighteen (18) inches with the water main at the higher elevation. However, where water mains will cross over a sewer main with less than eighteen (18) inches vertical separation, both the water and sewer mains must be constructed of ferrous materials with joints equivalent to water main standards for a distance of ten (10) feet on each side of the point of crossing. See NCDEHNR's "GRAVITY SEWER MINIMUM DESIGN CRITERIA" for testing requirements.

Whenever it is necessary for a water main to cross under a sewer, both the water main and the sewer shall be constructed of ferrous materials and with joints equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing.

The location and nominal depth of all utilities within the street right-of-way shall conform to those shown on City Standard No. 71D-15, 71D-15A. Utilities located outside the street right-of-way shall be centered on the public easement and shall conform to the following nominal depths of cover, where possible:

| | | |
|----------------|---|-------------------------------|
| Water | - | 36 inches (See Section 14.13) |
| Sanitary Sewer | - | 72 inches |

All sanitary sewer lines shall be located at least 100 feet from any public water supply well and 50 feet from any private water supply well, unless the sanitary sewer is constructed of DIP materials and joints that are equivalent to water main standards, in which case the sanitary sewer shall be at least 50 feet from the public water supply well and 25 feet from any private water supply well.

In all cases, the horizontal and vertical location of all City sewer lines shall be designed and aligned in accordance to “GRAVITY SEWER MINIMUM DESIGN CRITERIA” as adopted by NCDEHNR on February 12, 1996, or latest revision.

Some of the Minimum separations at the time of this printing are as follows:

| | | |
|----|---|--|
| a) | <i>any private or public water source, including any WS-I waters of Class I or Class II impounded reservoirs used as a source of drinking water</i> | <i>100 feet</i> |
| b) | <i>waters classified WS-II, WS-III, B, SA, ORW, HQW, or SB [from normal high water (or tide elevation)]</i> | <i>50 feet</i> |
| c) | <i>any other stream, lake or impoundment</i> | <i>10 feet</i> |
| d) | <i>any building foundation</i> | <i>5 feet</i> |
| e) | <i>any basement</i> | <i>10 feet</i> |
| f) | <i>top slope of embankment or cuts of 2 feet or more vertical height</i> | <i>10 feet</i> |
| g) | <i>interceptor drains</i> | <i>5 feet</i> |
| h) | <i>groundwater lowering and surface drainage ditches</i> | <i>10 feet</i> |
| i) | <i>any swimming pool</i> | <i>10 feet</i> |
| j) | <i>storm sewers</i> | <i>horizontal 10 feet vertical 12 inches</i> |

Storm sewers and water supplies shall be protected by using the type pipe and testing methods in accordance with Section VI of the “Gravity Sewer Minimum Design Criteria” as adopted by NCDEHNR on February 12, 1996, or latest revision.

The maximum sanitary sewer grade shall be 10%. Specially designed and approved outside drop precast manholes with extra thick bases and an extended lip shall be utilized to dissipate any additional grade. The lip shall be designed to prevent the manhole from being dislocated.

2.13 Minimum Right-of-Way Widths

Where sewer or water lines are to be constructed on easements outside the street right-of-way, the minimum widths for these easements shall be:

30 feet for sanitary sewer lines and
20 feet for water distribution lines.

Additional right-of-way may be required where it is deemed necessary by the City Engineer.

2.14 Brand Names

All materials covered by these specifications shall be those manufactured under the brand names specified in the appropriate section for that type material or an alternate type which meets or exceeds the quality of the brand name. The use of an alternate type of material must be approved in writing by the City Engineer. See the Instructions to Bidders for additional information on approved equal process.

2.15 NSF Approval

All PVC water pipes shall bear the National Sanitation Foundation (NSF) seal of approval.

2.16 Surety

The corporation body which is bound with and for the contractor, who is primarily liable and which engages to be responsible for the contractor for his acceptable performance of the work for which he has contracted.

2.17 (G) Execution, Correlation and Intent of Documents

The Contract Documents shall be signed in duplicate by the City and the contractor. In case the City and the contractor fail to assign the General Conditions, Drawings or Specifications, the Engineer shall identify them.

The Contract Documents are complementary, and what is called for by any one shall be as binding as if called for by all. The intention of the documents is to include all labor, materials, equipment, and transportation necessary for the proper execution of the work. It is not intended, however, that materials or work not covered by or properly inferable from any heading, branch, class or trade of the specifications shall be supplied unless distinctly so noted on the drawings. Materials or work described in words which so applied have a well-know technical or trade meaning shall be held to refer to such recognized standards.

2.18 (G) Detail Drawings and Instructions

The City Engineer shall furnish, with reasonable promptness, additional instructions, by means of drawings or otherwise, necessary for the proper execution of the work. All such drawings and instructions shall be consistent with the Contract Documents, true developments thereof, and reasonable inferable therefrom.

2.19 (G) Copies of Drawings Furnished

Unless otherwise provided in the Contract Documents, the City Engineer will furnish to the contractor, free of charge, all copies of drawings and specifications reasonable necessary for the execution of the work.

2.20 (G) Order of Completion

The contractor shall submit, at such times as may be requested by the City Engineer, schedules which shall show the order in which the contractor proposes to carry on the work with dates at which the contractor will start the several parts of the work and estimated dates of completion of the several parts.

2.21 (G) Ownership of Drawings

All drawings, specifications and copies thereof furnished by the City Engineer are the City's property. They are not to be used on other work and, with the exception of the signed contract set, are to be returned to the City on request, at the completion of the work.

2.22 Materials, Appliances, Employees

Unless otherwise stipulated, the contractor shall provide and pay for all materials, labor, tools, equipment, light, power, transportation and other facilities necessary for the execution and completion of the work. See section 2.03 for use of City water.

Unless otherwise stipulated, all materials shall be new and both workmanship and materials shall be of a good quality. The contractor shall, if required, furnish satisfactory evidence as to the kind and quality of materials.

The contractor shall at all times enforce strict discipline and good order among his employees, and shall not employ on the work any unfit person or any one not skilled in the work assigned to him. The City reserves the right to request that the contractor remove from any and all City projects any employee of the contractor whose work is not satisfactory to the City. The contractor shall promptly remove from the project any employee so specified.

2.23 Fees, Permits, Regulations and Surveys

(a) License Fees

The contractor shall pay all license fees required in performance of this work.

(b) (G) Permits and Regulations

The contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct and performance of the work. If the contractor observes that the drawings and specifications are at variance with City, State, or Federal Laws, Ordinances or Statutes, he shall promptly notify the City Engineer in writing; and any necessary change or changes shall be adjusted as provided in the contract for changes in the work. If the contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the City Engineer, he shall bear all responsibility and all costs arising therefrom. The contractor shall secure at his expense, any and all permits required by the performance of this work.

(c) (G) Surveys

The City shall furnish all surveys, unless otherwise specified.

2.24 Protection of Work and Property

The contractor or developer shall continuously maintain adequate protection of all his work from damage and shall protect the City from injury or loss arising in connection with this contract. He shall make good any such damage, injury or loss, except such as may be directly due to errors in the contract documents or caused by agents or

employees of the City. He shall adequately protect adjacent property as provided by law and the contract documents. He shall provide and maintain all passage ways, guard fences, lights and other facilities for protection required by public authority or local conditions.

In an emergency affecting the safety of life or of the work or of adjoining property, the contractor or developer, without special instruction or authorization from the Engineer, is hereby permitted to act, at his discretion, to prevent such threatened loss or injury, and he shall so act, without appeal, if so instructed or authorized. Any compensation, claimed by the contractor on account of emergency work, shall be determined by agreement.

For further requirements, refer to Section 6.25 and Section 6.26 of these Specifications.

2.25 Inspection of Work

The Engineer and his representatives shall at all times have access to the work wherever it is in preparation or progress and the contractor shall provide proper facilities for such access and for inspection.

If any work should be covered up without approval or consent of the Engineer, it must (if required by the Engineer) be uncovered for examination at the contractor's expense.

2.26 (G) Superintendence: Supervision

The contractor shall keep on his work during its progress a competent superintendent and any necessary assistants, all satisfactory to the City Engineer. The superintendent shall not be changed except with the consent of the City Engineer, unless the superintendent proves to be unsatisfactory to the contractor and ceases to be in his employ. The superintendent shall represent the contractor in his absence and all directions given to him shall be as binding as if given to the contractor. Important directions shall be confirmed in writing to the contractor. Other directions shall be so confirmed on written request in each case. The contractor shall give efficient supervision to the work, using his best skill and attention.

Competent person, Certification by OSHA, etc. :

Prior to beginning of construction, the Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall meet all OSHA requirements, including but not limited to, certification as a Competent Person. This person shall be the Contractor's superintendent unless otherwise

designated in writing by the Contractor to the City, and he shall be present at the job site during any and all construction activity.

The City's Competent Person, construction inspector, and/or engineer's field representative shall complete a "City of Gastonia Competent Person Trenching and Excavation Checklist" (see Forms) each time he visits a trench site requiring shoring or sloping. As a minimum, each trench requiring shoring or sloping shall be inspected by the contractor's "Competent Person" in the morning and after the noon break before any employees are allowed to enter the trench. The contractor shall turn over one copy of said checklist, filled out each day, to the city inspector. The inspector shall consolidate these checklist into a weekly log and submit the log to the City's Safety Division of the Human Resources Department.

If the contractor, in the course of the work, finds any discrepancy between the drawings and the physical conditions of the locality, or any errors or omissions in drawings or in the layout as given by points and instruction, it shall be his duty to immediately inform the Engineer, in writing, and the City Engineer shall promptly verify the same. Any work done after such discovery, until authorized, will be done at the contractor's risk.

2.27 (G) Changes in the Work

The City, without invalidating the contract, may order extra work or make changes by altering, adding to or deducting from the work, the contract sum being adjusted accordingly. All such work shall be executed under the conditions of the original contract, except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

In giving instructions, the City Engineer shall have authority to make minor changes in the work, not involving extra cost, and not inconsistent with the purposes of the work, but otherwise, except in an emergency endangering life or property, no extra work or change shall be made unless in pursuance of a written order by the City Engineer, and no claim for an addition to the contract sum shall be valid, unless so ordered.

The value of any extra work or change shall be determined in one or more of the following ways:

- (a) By estimate and acceptance in a lump sum.
- (b) By unit prices named in the contract or subsequently agreed upon.

(c) By cost and percentage or by cost and a fixed fee.

If one of the above methods is agreed upon, the contractor, provided he receives an order as above, shall proceed with the work. In such case, he shall keep and present in such form as the City Engineer may direct, a correct account of the net cost of labor and materials, together with vouchers. In any case, the Engineer shall certify to the amount, including reasonable allowance for overhead and profit, due to the contractor. Pending final determination of value, payments on account of changes shall be made on the Engineer's estimate.

2.28 (G) Claims for Extra Cost

If the contractor claims that any instructions by drawings or otherwise involve extra cost under this contract, he shall give the City Engineer written notice thereof within ten (10) days after the receipt of such instructions, and in any event before proceeding to execute the work, except in emergency endangering life or property, and the procedure shall then be as provided for changes in the work. No such claim shall be valid, unless so made.

2.29 (G) Deductions for Uncorrected Work

If the City Engineer deems it inexpedient to correct work injured or done not in accordance with the contract, an equitable deduction from the contract price shall be made therefor.

Delays and Extension of Time

If the contractor is delayed at any time in the progress of the work by any act or neglect of the City or of its employees, or by changes ordered in the work, or by any cause which the Engineer shall decide to justify the delay, then the time of completion shall be extended for such reasonable time as the City Engineer may decide.

This article does not exclude the recovery of damages for delay by either party under other provisions in the contract documents.

2.30 (G) Correction of Work Before Final Payment

The contractor shall promptly remove from the premises all materials condemned by the City Engineer as failing to conform to the contract, whether incorporated in the work or not, and the contractor shall promptly replace and re-execute his own work in accordance with the contract and without expense to the City and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

If the contractor does not remove such condemned work and materials within a reasonable time, fixed by written notice, the City may remove them and may store the material at the expense of the contractor. If the contractor does not pay the expense of such removal within ten days time thereafter, the City may, upon ten days written notice, sell such materials at auction or at private sale and shall account for the net proceeds thereof, after deducting all the costs and expenses that should have been borne by the contractor.

2.31 G) The City's Right to Do Work

If the contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the City, after ten days written notice to the contractor, may without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the contractor.

2.32 (G) The City's Right to Terminate Contract

If the contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, or if he should repeatedly refuse or should fail, except in cases for which extension of time is provided to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Engineer, or otherwise be guilty of a substantial violation of any provision of the contract, then the City upon the certificate of the Engineer that sufficient cause exists to justify such action, may, without prejudice to any other right or remedy and after giving the contractor seven days written notice, terminate the employment of the contractor and take possession of the premises and of all materials, tools, and appliances thereon and finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work, including compensation for additional managerial and administrative services, such excess shall be paid to the contractor. If such expense shall exceed such unpaid balance, the contractor shall pay the difference to the City. The expenses incurred by the City as herein provided, and the damage incurred through the contractor's default, shall be certified by the Engineer.

2.33 (G) Contractor's Right to Stop Work or Terminate Contract

If the work should be stopped under an order of any court, or other public authority, for a period of three months, through no act or fault of the contractor or of anyone employed by him, or if the City Engineer should fail to issue any estimate for payment within twenty days after it is due, or if the City should fail to pay the contractor within

twenty days of its maturity and presentation, any sum certified by the City Engineer or awarded by arbitrators, then the contractor may, upon seven days written notice to the City and the City Engineer, stop work or terminate this contract and recover from the City payment for all work executed and any loss sustained upon any plant or materials and reasonable profit and damages.

2.34 Removal of Equipment

In the case of annulment of this contract before completion from any cause whatever, the contractor, if notified to do so by the City, shall promptly remove any part or all of his equipment and supplies from the property of the City, failing which the City shall have the right to remove such equipment and supplies at the expense of the contractor.

2.35 (G) Use of Completed Portions

The City shall have the right to take possession of and use any completed portions of the work, notwithstanding the time for completing the entire work or such portions may not have expired, but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the contract documents. If such prior use increases the cost of or delays the work, the contractor shall be entitled to such extra compensation, or extension of time, or both as the Engineer may determine.

2.36 (G) Payments Withheld

The City may withhold or, on account of subsequently discovered evidence, nullify the whole or a part of any certificate to such extent as may be necessary to protect itself from loss on account of:

- (a) Defective work not remedied
- (b) Claims filed or reasonable evidence indicating probable filing of claims
- (c) Failure of the contractor to make payments properly to subcontractors or for materials or labor
- (d) A reasonable doubt that the contract can be completed for the balance then unpaid
- (e) Damage to another contractor

When the above reasons are remedied, payment shall be made for amounts withheld.

2.37 (G) Indemnity

The contractor shall indemnify and save harmless the City from and against all losses and all claims, demands, payments, suits, actions, recoveries and judgments of every nature and description brought or recovered against him, by reason of any act or omission of the said contractor, his agents or employees, in the execution of the work or in the guarding of it.

The contractor shall, and is hereby authorized to, maintain and pay for such insurance, issued in the name of the City, as will protect the City from his contingent liability under this contract, and the City's right to enforce against the contractor any provision of this article shall be contingent upon the full compliance by the City with the terms of such insurance policy or policies, a copy of which shall be deposited with the City.

2.38 (G) Workmen's Compensation Insurance Required

The contractor will be required to carry "Workmen's Compensation Insurance" on the men employed by him or his subcontractors on this work according to the North Carolina State Law and to furnish the City a certificate to that effect at the time of the delivery of the signed contract to the City.

2.39 Public Liability Insurance Required

The contractor shall be required to carry "Public Liability Insurance" to protect the contractor and the City against the result of injuries caused to persons to the extent that the liability insurance company's limit of liability, including completed operations coverage, of not less than for Bodily Injury \$ 3,000,000 each occurrence; Property Damage, \$ 3,000,000 on account of any one occurrence with an aggregate limit of not less than \$ 3,000,000. The Contractor shall present to the City a CERTIFICATE OF INSURANCE or other satisfactory written evidence of the fact that he has the above required insurance coverage.

2.40 (G) Performance Bond

The successful bidder shall furnish to the City a bond written by a surety company authorized to transact business in the State of North Carolina for the amounts specified in the contract documents conditioned on the faithful performance of the terms of the contract, including any required warranty.

2.41 .(G) Cash or Certified Check (Bond)

Cash or a certified check made payable to the City of Gastonia, North Carolina, may be acceptable in lieu of a bond of a survey company, said cash or check to serve as a performance bond to guarantee that the provisions of the

proposal according to the instructions to bidders, proposal and specifications are complied with, and the contractor hereby agrees that in default of such performance, the cash or certified check, or such portion thereof, as is required to satisfactorily complete the work accompanying this proposal and contract shall be forfeited and become the property of the City of Gastonia, North Carolina. The contractor shall notify the City in writing within thirty (30) days after the contract has expired that he wishes his cash bond or certified check returned. The City shall then have thirty (30) days from the date of notification to return the deposit.

2.42 (G) Damages

Any claim for damage arising under this contract shall be made in writing to the party liable within a reasonable time of the first observance of such damage and not later than the time of final payment, except as expressly stipulated otherwise in the case of faulty work or materials, and shall be adjusted by agreement.

2.43 (G) Liens

Neither the final payment nor any part of the retained percentage shall become due until the contractor shall deliver to the City a complete release of all liens arising out of this contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he has knowledge or information the releases and receipts include all the labor and material for which a lien could be filed; but the contractor may, (if any subcontractor refuses to furnish a release/or a receipt in full,) furnish a bond satisfactory to the City Engineer, to indemnify the City against any lien. If any lien remains unsatisfied after all payments are made, the contractor shall refund to the City all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

2.44 (G) Assignment

Neither party to the contract shall assign the contract or sublet it as a whole without the written consent of the other, nor shall the contractor assign any moneys due or to become due to him hereunder, without the previous written consent of the City Engineer.

2.45 (G) Separate Contracts

The City reserves the right to let other contracts in connection with this work. The contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

If any part of the contractor's work depends for proper execution or results upon the work of any other contractor, the contractor shall inspect and promptly report to the City Engineer any defects in such work that render it unsuitable for such proper execution and results. His failure so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper for the reception of his work, except as to defects which may develop in the other contractor's work after the execution of his work.

To insure the proper execution of his subsequent work the contractor shall measure work already in place and shall at once report to the City Engineer any discrepancy between the executed work and the drawings.

2.46 (G) Subcontracts

The contractor shall, as soon as practicable (normally with the bid submittal), notify the City Engineer in writing of the names of subcontractors proposed for the work and shall not employ any that the Engineer may within a reasonable time object to as incompetent or unfit.

The contractor agrees that he is as fully responsible to the City for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them, as he is for the acts and omissions of persons directly employed by him.

Nothing contained in the contract documents shall create any contractual relation between any subcontractor and the City.

2.47 (G) Points and Instructions

The contractor shall provide reasonable and necessary opportunities for setting points and making measurements. He shall not proceed until he has made timely demand upon the Engineer for, and has received from him such points and instructions as may be necessary as the work progresses. The work shall be done in strict conformity with such points and instructions.

The contractor shall carefully preserve bench marks, reference points and stakes, and in the case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

2.48 (G) Engineer's Status

The City Engineer shall have general supervision and direction of the work. He has authority to stop the work whenever such stoppage may be necessary to insure the proper execution of the contract. He shall, also, have authority to reject all work and materials which do not conform to the contract, to direct the application of forces to any portion of the work, as in his judgment is required, and to order the force increased or diminished, and to decide questions which arise in the execution of the work.

2.49 (G) City Engineer's Decision

The City Engineer shall, within a reasonable time after their presentation to him, make decisions in writing on all claims of the City or the contractor and on all other matters relating to the execution and progress of the work or the interpretation of the contract documents.

All such decisions of the Engineer shall be final.

2.50 Omitted

2.51 Lights, Barricades and Signs

The contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient amber lights and caution signals, provide a sufficient number of watchmen, and take all necessary precautions for the protection of the work and safety of the public. It is the duty and responsibility of the contractor to furnish and mount any necessary signs on suitable and approved standards. "Street Closed" signs shall be placed immediately adjacent to the work, in a conspicuous position, at such locations where traffic demands. See Section **2.06** for further requirements.

2.52 Sanitary Provisions

The contractor shall furnish for use of his force on the work, necessary toilet conveniences, secluded from public observation. They shall be kept in a clean and sanitary condition and comply with Local and State requirements and regulations. He shall commit no public nuisance.

2.53 Public Convenience and Safety

The contractor at all times shall conduct the work in such a manner as to insure the least obstruction to traffic practicable. The convenience of the general public and of the residents along and adjacent to the street shall be provided for in a satisfactory manner, consistent with the operation and local conditions. Fire hydrants on or adjacent to the street shall be kept accessible to the fire apparatus at all times, and no material shall be placed within fifteen (15) feet of any such hydrant. All sidewalks, gutters, sewer inlets, and portions of streets adjoining the roadway under construction shall not be obstructed more than is absolutely necessary. Preliminary cleaning up shall follow closely behind the backfilling and tamping operation, normally on the same day as the original disturbance but within a maximum of seven (7) days. See section 6.26.

2.54 (G) Final Cleaning Up

Upon completion of the work, and before acceptance and final payment shall be made, the contractor shall clean and remove from the roadway, sidewalks, planting strips, lawns, and all adjacent property, all surplus and discarded materials and rubbish, restore in an acceptable manner all property, both public and private, which has been damaged during the prosecution of the work, and shall leave the whole in a neat and presentable condition. The contractor shall be required to disc-harrow the areas across cultivated fields. The final cleaning up shall include the correction of any and all drainage conditions created during the prosecution of the work, either along the right-of-way or on access roads leading thereto. Field terraces and drains shall be restored immediately after backfilling of trench. The contractor shall be held responsible for damage caused to cultivated fields due to failure to restore terraces and drains.

2.55 Termination of Contractor's Responsibility

The contract shall be considered complete when all work has been completed and accepted by the City Engineer. The contractor shall then be released from further obligation. The contractor shall be required to maintain, at his own expense, all backfilled trenches and all paving replaced by him for a period of one year from the date of the acceptance of the work. Any settlement of ditches for irregularities or failures of replaced pavement which occur during this maintenance period shall be corrected by the contractor or the City and the cost of such maintenance shall be borne by the contractor.

The contractor shall be held responsible to the City for correcting any defects which may become evident in any portions of the work constructed under the terms of this contract including the replacement if required of any fittings, valves, blowoffs, drains, air vents, castings, and any other appurtenant items, due to faulty materials and/or workmanship, for a period of one (1) year from date of acceptance of the work.

2.56 Measurement of Quantities

All work completed under the contract shall be measured by the City Engineer according to United States Standard Measures. All linear surface measurements shall be made along the actual surfaces and not horizontally.

2.57 (G) Acceptance and Final Payment

When the contractor has completed the work, in an acceptable manner, in accordance with the terms of the contract, and these specifications, the City Engineer shall make final inspection of the project, and upon completion of all necessary repairs, renewals and maintenance as herein specified shall certify in writing as to said completion and shall further certify as to the entire amount of each class of work performed, and the value thereof. All prior certificates or estimates upon which payment may have been made being partial completion estimates and are subject to correction in the final payment.

2.58 (G) Estimates

Partial payments will be made once a month, at the rate specified in the contract documents, as approximately estimated by the City Engineer, after the work is started. The City Engineer may withhold such monthly estimates when said estimate, in his opinion will amount of five thousand dollars (\$5,000.00) or less.

On completion of the work and acceptance by the City Engineer, the City Engineer shall measure up the work and present this final estimate to the City whereupon final payment due will be made within thirty (30) days. Partial or monthly payments to be made as outlined above or as specifically stated in the Contract Documents.

2.59 (G) Performance and Delivery Time

The maximum time expressed in number of days or in number of hours necessary for the contractor to deliver materials or to begin construction shall be as specified in the Instructions to Bidders (Contract Documents).

2.60 Vehicle Identification

All vehicles and equipment of the contractor and his subcontractor shall be readily identifiable as belonging to the contractor or subcontractor while working in the project area. This identification shall include the name and address of the contractor or subcontractor.

2.61 Existing Underground Utilities

It will be necessary for the contractor to explore and excavate to determine the location of existing underground structures and/or utilities. Existing utilities as shown on the construction plans are for reference only. The City will not be responsible for inaccuracies in utility locations shown on said plans.

Prior to any underground installations/construction, the contractor shall contact all utility companies which have filed documents of ownership of underground utilities with the Register of Deeds office as required by law, as indicated on the plan or as evident on the construction site. The contractor shall give notice to said utilities of not less than two days, nor more than ten days prior to commencing excavation operations.

It shall be the responsibility of the contractor to investigate all underground utility locations far enough in advance so as not to delay his construction operations.

The contractor shall promptly notify, in writing, the City Engineer of conflicts which may be contrary to the construction plans and schedule his construction to allow the City sufficient time to resolve said conflicts to a satisfactory conclusion.

The contractor shall exercise care and caution when excavating in the vicinity of known utilities (including poles). If so requested by the utility company or agency, the contractor shall have representatives of said utility company or agency present during periods of construction which in close proximity of existing utility lines.

The contractor shall be responsible for any and all associated cost of supervision, assistance supplied, relocation performed, and damages said utilities may incur which can be attributed to work pursuant to this contract.

Changes in alignment and/or grade of this construction, necessitated by utility conflicts, shall be considered incidental to this construction and no extra payment will be allowed.

2.62 Materials Manufacture and Testing

All materials used in this project shall be manufactured and tested within the United States of America.

The City Engineer may as his discretion, require evidence as necessary relating to the origin of manufacture and testing and may disapprove the use of said materials if found contrary to this specification.

2.63 Record Drawings (As-Builts)

The Contractor will maintain a set of Record Drawings for the project which will include the changes made in materials, equipment, locations, and dimensions of the work. Each month, or as otherwise agreed, the Contractor shall submit to the City of Gastonia a current listing and description of each change incorporated into the work since the preceding submittal.

In addition, the Contractor shall maintain a record of exact location of buried utilities encountered and any below grade structures. Reference items to definitive reference point locations such as found property corners, entrances to buildings, existing structure lines, fire hydrants, and related fixed structures. Include such information as location, elevation, coverage supports and additional pertinent replacement servicing or adjacent construction around any buried facility. When the work is complete, the Contractor shall submit a final Construction Record Drawing of all pipe systems in the project including both project items and pre-existing items. The drawings shall identify the complete location, elevation, and description of piping systems. The pipe systems shall be related to identified structures and appurtenances, with a minimum of two (2) dimensions to each individual item in the plan view. (See Typical Drawing).

The Final Record drawings shall be submitted by the Contractor/Developer's Engineer prior to acceptance and/or final payment. The Engineer for the project shall sign, seal, and date the as-built drawings.

Television Inspection

The Contractor shall provide color video inspection services on new sewer lines and/or existing City maintained sewer lines.

Inspection of sewer lines shall be performed by experienced personnel trained in locating breaks, obstacles, and service connections by closed circuit television. The interior of the line shall be carefully inspected to determine the location of any conditions which may indicate current or future problems or non-compliance to the contract documents. Any such conditions shall be noted and corrected at the contractor expense.

The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be to allow a clear, color picture of the entire periphery of the pipe. The camera shall be

capable of a 360⁰ viewing area. A backup camera shall be available on the project site. The camera shall be operable in 100% humidity conditions. The camera, television monitor, and other components of the video system shall be capable of producing color picture quality to the satisfaction of the Engineer, and if unsatisfactory, the equipment shall be replaced and no payment will be made for any unsatisfactory inspection.

The project name, location, date, manhole numbers, size and type pipe, and other information specific to the line segment being inspected shall be visibly displayed on the video viewing screen for a minimum of 10 seconds, prior to camera entry into the manhole.

Upon entry into the manhole, the surfaces of the manhole shall be videotaped and potential defects noted. Prior to entering the sewer line, conditions of the manhole/pipe connection shall be videotaped and potential defects noted.

When existing sewer flow depth, as measured in the first manhole upstream of the sewer segment being televised, exceeds 20% of the sewer line pipe diameter, the Contractor shall implement wastewater flow control methods, including but not limited to bypass pumping, at no additional cost to The City.

The rate of travel shall not exceed 30 feet per minute. At each line defect or service connection, the camera shall come to a complete stop and the subject panned. The footage meter count shall be clearly visible.

Printed television inspection logs shall be recorded by the Contractor clearly showing the distance from an adjacent manhole to discernable features such as broken or cracked pipe, defective joints, service laterals, and in existing lines presence of scale corrosion, grease buildup, storm sewer connections, and any other unusual conditions. A copy of the inspection logs shall be provided to the Engineer by the Contractor. A standard City video inspection log form shall be provided to the Contractor by the Engineer.

The Contractor shall provide color videotape recordings of all the subject lines, the tapes shall provide a visual and audio record of problem areas of the lines before and after any rehabilitation. The videotape recording shall include, at a minimum, a display of the footage meter and a display of the manhole segment number being televised. Where appropriate, comments should be included by concurrent audio recording on the tape or electronic display. Videotape recording playback shall be at the same speed that it was recorded. Slow motion or stop-motion playback features may be supplied at the option of the Contractor.

The Contractor shall carry out his operations in strict accordance with all OSHA and manufacturer's safety requirements. Particular attention is drawn to those safety requirements involving entering confined spaces.

The Contractor shall be paid for the actual linear footage of sewer lines inspected based on the Contractor's Bid unit price.

Cleaning shall be the responsibility of the contractor. Any hang-ups shall be the responsibility of the Contractor, the contractor shall remove the camera and repair any damage to the sewer line. No separate payment will be allowed for any necessary cleaning, and/or hang-up removal/repair the same being considered incidental to the work.

Digital As-Builts

When a project is designed by a developer and/or a consultant, digital as-builts will be required in addition to regular filmed hard copies. The digital submittals shall be as required by the City Engineer to closely match the City's GIS system. A policy generally indicating the City's needs is available and will be kept current to allow ease of addition of the systems so designed into the City's GIS system. The layering system is of importance so the importing of this information shall be as effortless as is possible, therefore early coordination during the design process is imperative.

2.64 **Abandonment, Shutdown of Existing Operations of Utilities, Tie-ins, Rodding/Blocking Verification**

Continuous operation of the City's existing utility systems are of critical importance.

Only City personnel shall operate any valves and controls on the City's existing utility systems.

All materials and equipment (including emergency equipment) necessary to expedite the tie-in shall be on hand prior to the shutdown of existing services or utilities.

The Contractor shall be responsible for notification of each property Owner (Customer) prior to disruption of service, except in the event of an emergency situation. The Contractor shall coordinate his activities with any non-City owned utility.

Refer to Section 13.25 and 14.21 for additional requirements.