

## SECTION 5

### CONTROL OF WORK

#### **5.01 AUTHORITY OF THE ENGINEER**

To prevent misunderstandings, disputes, and litigation, the Engineer shall decide any and all questions which arise concerning the quality and acceptability of materials furnished and work performed, the rate of progress of the Work, interpretation of the Plans and Specifications, and the acceptable fulfillment of the Contract on the part of the Contractor. The Engineer will determine the amount, quantity, classification, and quality of the several kinds of work performed and materials furnished which are to be paid for under the Contract and his decision and estimate shall be conclusive and binding on both parties thereto and such decision and estimate of the Engineer, in case any questions arise, shall be a condition precedent to the right of the Contractor to receive any money due him under the Contract. Explanations concerning the meaning of the Plans and Specifications and Contract, all directions necessary to complete or make definite the Plans, Special Provisions, Specifications or Contract and to give them due effect, will be given by the Engineer and his findings shall be final and binding on both parties hereto. The Engineer shall have authority to enforce and make effective decisions and orders as apply to conformance with the Contract. He shall decide disputes and mutual rights between Contractors.

Notwithstanding any general clauses, wording, paragraphs, or other references contained in the Plans, Specifications, General Conditions, or elsewhere in the Special Provisions, the Engineer and his Resident Project Representative are not charged with the responsibility of directing the actual procedures and detail methods of construction to be used by the Contractor in accomplishing the Work contained in the Contract between the Owner and the Contractor; nor is the Engineer responsible to act as superintendent, foreman, or safety engineer for the Contractor, nor for the safety of the Contractor's personnel.

#### **5.02 PLANS AND SHOP DRAWINGS:**

General drawings, showing such details as are necessary to give a comprehensive idea of the construction contemplated will be included in the approved Plans. The approved Plans will be supplemented by such working drawings as are

necessary to adequately define the Work. It is mutually agreed that all authorized alterations affecting the requirements and information given on the approved Plans shall be in writing.

After checking and verifying all field measurements, Contractor shall submit to Engineer for review, five copies of all Shop Drawings, plus the number of copies Contractor wishes to have returned to him after Engineer's review, collated according to the organization of the accepted schedule of Shop Drawings, which will bear a stamp or specific written indication that Contractor has satisfied Contractor's responsibilities under the Contract with respect to Contractor's review of the submission. All submissions will be identified as "Shop Drawings" on the outermost enclosure and show Project name and Engineer's Project number. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, descriptive data, diagrams specified performance, design criteria, materials, and similar data to enable Engineer to review the information as required.

Contractor shall also submit to Engineer for review and approval, with such promptness as to cause no delay in Work, all samples required by the Contract. All samples will have been checked by and accompanied by a specific written indication that Contractor has satisfied Contractor's responsibilities under the Contract with respect to the review of the submission and will be identified clearly as to material, supplier, pertinent data such as catalog numbers, and the use for which intended.

Before submission of each Shop Drawing or sample, Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract.

At the time of each submission, Contractor shall give Engineer specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract, and, in addition, shall cause a specific notation to be made on each Shop Drawing submittal to Engineer for review and approval of each such variation. When the

Contractor does call such deviation to the attention of the Engineer, the Contractor shall state in his letter whether or not such deviations involve deductions or extra cost adjustment.

Engineer will review with reasonable promptness Shop Drawings and samples, but Engineer's review will be only for conformance with the design concept of the Project and for compliance with the methods, techniques, sequences, or procedures of construction (except where a specific means, method, technique, sequence, or procedure of construction is indicated in or required by the Contract Documents). The review of a separate item will not indicate approval of the assembly in which the item functions. Contractor shall make corrections required by Engineer, and shall return the required number of corrected copies of Shop Drawings and submit, as required, new samples for review. Contractor shall direct specific attention in writing to revisions other than the corrections called for by the Engineer on previous submittals.

Engineer's review of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract unless Contractor has, in writing, called Engineer's attention to each such variation at the time of submission, and Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the Shop Drawings or sample; nor will any review by Engineer relieve Contractor from responsibility for errors or omissions in the Shop Drawings.

The Contractor shall furnish five complete sets of the corrected copies of Shop Drawings including parts list, operation and maintenance manuals, lubrication charts and descriptive literature for all equipment. No payment shall be made to the Contractor for any specialties or equipment unless Shop Drawings have been approved by the Engineer. Final payment under the Contract will not be made until all specified documents have been submitted for equipment.

Compensation for furnishing all Shop Drawings and samples shall be included in the Contract Unit Prices for the pay items of the Work and such Drawings and samples shall be furnished by the Contractor without additional compensation.

#### **5.03 MANUFACTURER'S DRAWINGS:**

The manufacturer's drawings of any special materials required for the job shall be submitted to the Engineer for review prior to installation.

#### **5.04 CONFORMITY WITH PLANS AND ALLOWABLE DEVIATIONS:**

Finished work in all cases shall conform with lines, grades, sections, details and dimensions of the Work contemplated as shown on the approved Plans except as modified in writing by the Engineer. Any deviation from the approved Plans and working drawings that may be required by the exigencies of the construction, will be determined by the Engineer and authorized in writing.

In cases where minor deviations within the limits shown on the Plans or contained in the Specifications will be in the best interest of the Owner or present a more finished or aesthetic appearance, then the Contractor shall notify the Engineer or his representative before the Work progresses to a point where the change cannot be effected without incurring additional expense to the Owner.

#### **5.05 COORDINATION OF PLANS, SPECIFICATIONS, AND SPECIAL PROVISIONS:**

The Specifications, Supplemental Specifications, General Conditions, Plans, Special Provisions, and all supplementary documents are essential parts of the Contract, and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Work. In case of discrepancy, figured dimensions, unless obviously incorrect, shall govern over the scaled dimensions. Supplemental Specifications shall govern over the Standard Specifications. Plans shall govern over Specifications; Special Provisions shall govern over both Specifications, Supplemental Specifications and Plans.

The Contractor shall take no advantage of, and shall promptly notify the Engineer if he discovers, any error or omission of dimensions in the Plans, or of any discrepancy between the Plans and Specifications. The Engineer will make such corrections and supply such omitted dimensions as may be necessary and his interpretation shall be final.

When supplementary specifications such as Federal, ASTM, ANSI, AASHTO, AWWA, etc., are referenced in these Specifications, such references shall be the latest edition of such supplementary specifications.

**5.06 COOPERATION OF THE CONTRACTOR:**

The Contractor will be supplied with no more than four copies of the Plans, Specifications, Supplemental Specifications, and Special Provisions. If additional copies of documents are required, the Contractor shall reimburse the Engineer for the actual cost of reproduction of documents as requested.

The Contractor shall have available on the Work, at all times, one copy of each of said Plans, Specifications, Supplemental Specifications, and Special Provisions. He shall give the Work the constant attention necessary to facilitate the progress thereof and shall cooperate with the Engineer, Engineer's Resident Project Representative, and with other Contractors in every way possible.

The Contractor shall at all times have a competent Superintendent on the Work, capable of reading and thoroughly understanding the Plans and Specifications, as his agent on the Work, with full authority to execute the Work without delay and to supply promptly such materials, tools, plant equipment, and labor as may be required. Such Superintendent shall be furnished irrespective of the amount of work subcontracted and shall have authority over all subcontract work.

The Contractor shall schedule and conduct his work and dispose of his material so as to avoid causing unnecessary inconvenience and delay to other Contractors engaged on adjacent work and so as to join his work to that of other Contractors in a proper manner, and in accordance with the spirit of the Plans and Specifications, and so as to perform his work in the proper sequence in relation to that of other adjacent work. Each Contractor shall so conduct his operation and maintain the Work in such condition that adequate drainage shall be effected at all times.

It is mutually agreed that in case of a dispute arising between two or more Contractors engaged on the same work as to the respective rights of each under these Specifications, the Engineer shall determine the matters at issue and shall define the respective rights of the various interests involved in order to secure completion of all parts of the Work in general harmony and with satisfactory results, and his decision shall be final and binding on all parties concerned and shall not in any way be a cause for claims for extra compensation by any of the parties.

**5.07 CONSTRUCTION SURVEYS:**

The Engineer will establish bench marks and horizontal control points. From these points, Contractor shall lay out the Work by establishing all lines and grades at the site necessary to control the Work, and shall be responsible for all measurements that may be required for the execution of the Work. Second order leveling shall be used by the Contractor in establishing elevations, and all levels shall be looped in or closed. All survey data shall be recorded in accordance with standard and approved methods. All field notes, sketches, and computations made by the Contractor in establishing control points for his work shall be available to the Engineer at all times.

The Contractor shall furnish, at his expense, all stakes, pins, platforms, equipment and labor as may be required in laying out any part of the Work from the control points established by the Engineer. It shall be the responsibility of the Contractor to maintain and preserve all stakes and other markers established by him until authorized to remove them. If any of the control points established by the Engineer are destroyed by or through negligence of the Contractor, they may be replaced by the Engineer, and the expense of replacement will be deducted from any amount due or which may become due the Contractor.

**5.08 RESIDENT PROJECT REPRESENTATIVES:**

The Engineer may appoint such Representatives as he desires, and they shall be granted full access to the Work and to mills and factories in which material is being prepared for use under the Contract. They shall have authority to request compliance with terms of the Contract, to approve or reject materials, to make measurements of quantities, to keep records of costs, and otherwise represent the Engineer. The Contractor may appeal from their decisions to the Engineer, pending settlement but no work shall be done in any manner contrary to the Contract on items affected by such appeal. If the Contractor refuses to comply with instruction of the Representative to fulfill the requirements of the Contract, the Representative shall, if possible, immediately notify his immediate superior and obtain instructions. Failing in this, if the Contractor refuses to suspend operations on verbal order, he shall issue a written order suspending the Work on items affected, giving in detail the reasons for suspension. Immediately after placing the order in the hands of the person in charge for the Contractor, he shall report to his

immediate superior, or in his absence to the Engineer, for further instructions.

Representatives shall not be authorized to revoke, alter, enlarge, relax or release any requirements of the Special Provisions, Specifications, or Contract; to approve or accept any portion of the Work; nor to issue instruction contrary to the Plans and Specifications; nor shall they act as superintendent, foreman, or safety engineer for the Contractor nor for the safety of the Contractor's personnel; or interfere with the management of the Work. Any advice which they may give the Contractor shall not be construed as binding the Owner in any way, nor releasing the Contractor from fulfilling all the terms of the Contract.

**5.09 INSPECTION:**

All materials and workmanship shall be subject to inspection, examination, and test by the Representatives of the Owner, or the Engineer, at any and all times. The Owner, or the Engineer, shall have the right to reject defective materials and workmanship or require correction thereof. Rejected materials shall be promptly and satisfactorily replaced with proper materials and rejected workmanship shall be promptly and satisfactorily corrected. If the Contractor fails to proceed at once with the replacement of rejected materials or the correction of rejected workmanship, the Owner may, by contract or otherwise, replace such materials or correct such workmanship and charge the cost thereof to the Contractor. Failure of Representative to find defects or to request removals shall in no way relieve the Contractor of responsibility.

The Contractor shall furnish the Engineer with every reasonable facility for ascertaining whether or not the Work performed and materials used are in accordance with the requirements and intent of the Specifications and Contract. At any time before final acceptance of the Work, the Contractor shall, if the Engineer requests, remove and uncover such portions of the finished work as the Engineer may direct. After the examination, the Contractor shall restore said portions of the Work to the standard required by the Contract. If the work thus exposed or examined proves acceptable, the uncovering or removing and replacing of the covering or making good of the parts removed, shall be paid for as Extra Work, but, if the work so exposed or examined proves unacceptable, no compensation will be allowed the Contractor for the uncovering or removing and the replacing of the covering or making good of the parts removed. No

work shall be done nor material used without suitable inspection by the Engineer, or his representative.

Failure to find or reject any defective work or material shall not prevent later rejection when such defect be discovered, or obligate the Owner to Final Acceptance.

**5.10 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK:**

All work which has been rejected shall be remedied, or else removed and replaced in an acceptable manner by the Contractor at his own expense, and no compensation shall be allowed him for such removal or replacement. Any work done without the lines and grades shown on the Plans or as given, except as herein provided, or any Extra Work done without written authority will be considered as unauthorized and at the expense of the Contractor and will not be measured or paid for. Unauthorized work shall be removed and replaced at the Contractor's expense. Upon failure on the part of the Contractor to immediately comply with any order of the Engineer made under the provisions of this Section, the Owner shall have authority to cause defective work to be remedied, or removed and replaced, and unauthorized work to be removed and to deduct the cost from any monies due or to become due the Contractor. In case no such monies are available, the amount shall be charged against the Contractor's Surety.

**5.11 DISPUTED CLAIMS:**

In any case where the Contractor wishes to make claim to the Owner for extra compensation for work or materials he deems not clearly covered in the Contract or not ordered by the Engineer as Extra Work, the Contractor shall notify the Engineer or the Owner in writing, of his intention to make claim for such extra compensation, before he begins the work on which he bases his claim. If such notice is not given, or if the notice is given and the Engineer is not afforded proper facilities for keeping strict account of the actual cost to the Contractor, then the contractor hereby agrees to waive claim for such extra compensation. Such notice by the Contractor, and the fact that the Engineer has kept account of the cost shall in no way be construed as establishing the validity of the claim. When the work has been completed, the Contractor shall immediately file his claim with the Engineer.

**5.12 CONTRACTOR INITIATED CHANGES:**

The Contractor and his subcontractor must submit in writing any requests for modifications to the Plans and Specifications. Shop Drawings that are submitted to the Engineer for his review do not constitute "in writing" unless it is brought to the attention of the Engineer that specific changes are being suggested.

**5.13 PROJECT COMPLETION:**

The Work shall be complete when all pay items and any Extra Work to be performed under this Contract is performed in its entirety and in accordance with contractual requirements.

**5.14 FINAL CONSTRUCTION INSPECTION:**

Whenever the Engineer considers the Work provided and contemplated by the Contract is nearing completion, or within 10 days after being notified by the Contractor that the Work is completed, the Engineer will inspect all the Work included in the Contract. If the Engineer finds that the Work has not been satisfactorily completed at the time of such inspection, he shall advise the Contractor in writing as to the Work to be done or the particular defects to be remedied. When these defects have been remedied and the Work has been satisfactorily completed the Engineer shall make the Final Inspection, and shall notify the Contractor in writing that the Final Inspection has been made and that time charges end on the day of Final Inspection. Maintenance Period shall start on the day after this Final Inspection.

**5.15 FINAL ACCEPTANCE:**

After the Final Inspection is made as outlined above, the Contractor shall maintain the Work for 30 days in the same manner as set forth under "Maintenance of the Work During Construction." The Work will be finally accepted at the end of the 30 day maintenance period provided all work has been satisfactorily maintained.

The Contractor, immediately after receiving the letter of Final Inspection, shall give notice of said completion of Work by an advertisement in some newspaper of general circulation published within the city or county wherein the Work has been done for a period of four successive weeks. Proof of publication of said notice shall be made by the Contractor to the

Owner, by affidavit of the publisher and a printed copy of the notice published. If no newspaper is published in the county where the Work is done, the notice may be given by posting at the Court House for 30 days and proof of same shall be made by the probate judge or sheriff and the Contractor.

In no instance shall a final settlement be made upon the Contractor until the expiration of the Maintenance Period and until the Contract is completed and Project accepted by the Owner.

**5.16 MAINTENANCE GUARANTEE AFTER ACCEPTANCE:**

Neither the final certificate of payment nor any provisions in the Contract, nor partial or entire use or occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the Work and pay for any damage to other work resulting therefrom which shall appear within a period of two years from the date of final acceptance of the Work unless specified otherwise by the Owner. The Owner will give notice of observed defects with reasonable promptness and the Contractor shall repair the defects immediately. The Contractor's Performance or Contract Bond shall remain in effect and cover this guarantee. After completion of the Project and prior to final acceptance, the Contractor shall provide a statement addressed to the Owner from his/her Surety acknowledging that the Contract Bonds will remain in effect during the two year warranty period or as otherwise required by the Owner. Final payment under the contract will not be made until this statement is received.

For projects involving the lining of sewer mains and laterals, a five year warranty shall be provided in lieu of a two year warranty. The requirements stated above for a two year warranty shall also hold true for the five year warranty.

**5.17 CONTRACT CLOSEOUT DOCUMENTS:**

The Contractor shall complete and submit to the Engineer the following contract closeout requirements:

- A. The Contractor's advertisement of Notice of Completion.

- B. The Contractor's Affidavit of Payment of Claims and Debts.
- C. The Contractor's Consent of Surety Company to Final Payment.
- D. The Contractor's letter acknowledging that acceptance of final payment constitutes a waiver of all claims, present or future, in connection with the referenced project.
- E. The Contractor's letter of guarantee that all defects in materials and workmanship for a period of two years, or as otherwise specified by the Owner, commencing on the date of final acceptance and acknowledgment that the Contractor's Material and Performance Bond shall remain in effect to cover this guarantee period.
- F. One set of Record Drawings and video, where required, neatly marked with all changes for quantity computation for all changes.

END OF SECTION