



**Texas Water Development Board
Supplemental Contract Conditions and
Instructions**

(TWDB-0552)

**For Construction Services for
Projects Funded through State Programs**

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Forms and Guidance:

The Texas Water Development Board (TWDB) forms and guidance documents noted in this instruction document may be accessed through the TWDB's Financial Assistance web site at:

<http://www.twdb.texas.gov/financial/instructions/index.asp>

Search by either the document number or name.

I. INSTRUCTIONS TO APPLICANT

1. Applicability

These Supplemental Conditions contain provisions that are worded to comply with certain statutes and regulations which specifically relate to projects receiving state funds only. These supplemental conditions apply to projects funded by the following financial assistance programs:

- (a) the Texas Water Development Fund (DFund),
- (b) State Participation (SP),
- (c) Rural Water Assistance Fund (RWAFF),
- (d) Economically Distressed Areas Program (EDAP), and
- (e) State Water Implementation Fund for Texas (SWIFT).

Provisions that are applicable to the project's funding source or dollar value of the contract are so noted within these provisions.

2. Use of Conditions

The language and conditions listed under *Section II: Instructions to Bidders* are to be included in the instructions to bidders for construction services. The provisions listed under *Section III: Supplemental Contract Conditions* shall be included in their entirety with the other general and special conditions that are typically included in the construction contract documents by the design engineer.

3. Modifications to Provisions

These provisions shall be included as a stand-alone section in the contract documents. The Applicant and the consulting engineer (Engineer) should carefully study these provisions before incorporating them into the construction contract documents. In particular, Water Districts and other types of districts should be aware of statutes relating to their creation and operation which may affect the application of these conditions. The TWDB Project Engineer/Reviewer should be consulted if the Applicant thinks there is a need to modify parts of these provisions.

Supplemental Condition #13 (Archeological Discoveries and Cultural Resources) and #14 (Endangered Species) may be superseded or modified by project specific conditions established during the environmental review process.

These documents may confer certain duties and responsibilities on the Engineer that are beyond, or short of, what the Applicant intends to delegate. The Applicant should ensure that the contractual agreement with the Engineer provides for the appropriate services. Otherwise the Applicant should revise the wording in these special conditions to agree with actually delegated functions.

4. Good Business Practices

There are other contract provisions that the Applicant (Owner) and Engineer should include as a matter of good business practices. It is recommended that provisions addressing the following matters be included in the construction contract.

- (a) Specifying the time frame for accomplishing the construction of the project, and the consequences of not completing on time, including liquidation damages.
- (b) Specifying the type, dollar value, and documentation of insurance the contractor is to carry. At a minimum the contractor should carry worker's compensation, liability and builder's risk insurance.
- (c) Identifying the responsibility of the contractor – Responsibility and Warranty of Work.
- (d) Price reduction for defective pricing of negotiated costs.
- (e) Differing site conditions - notice and claims regarding site conditions differing from indicated conditions.
- (f) Covenants against contingent fees - prohibit contingent fees for securing business.
- (g) Gratuities - prohibitions against offering and accepting gratuities.
- (h) Audit and access to records.
- (i) Suspension of work - conditions under which the Owner may suspend work.
- (j) Termination - conditions under which the Owner may terminate the contract.
- (k) Remedies - procedures for resolving disputes.

5. Other Requirements

There may be other local government requirements and applicable Federal and State statutes and regulations that are not accommodated by these conditions. It is the Applicant's responsibility to ensure that the project and all contract provisions are consistent with the relevant statutes and regulations.

6. Advertisements for Bids

State procurement statutes require advertising a contract for bids for at least two (2) consecutive weeks. By not following this requirement, the project may need to be re-advertised. The official advertisement for bids that is published in newspapers shall include certain information such as, but not limited to, the following:

- (a) A clear description of what is being procured.
- (b) How to obtain plans and specifications (P&S) and necessary forms and information.
- (c) The date and time by which bids are to be submitted (deadline).
- (d) The address where bids are to be provided.
- (e) This contract is contingent upon release of funds from the Texas Water Development Board (TWDB).
- (f) This contract is subject to the U.S. Iron and Steel and Manufactured Goods requirements of Texas Water Code §17.183 (does not apply to State Participation or SWIFT projects).
- (g) Acknowledgement of any special requirements such as mandatory pre-bid conference.
- (h) Right to reject any and all bids.
- (i) General bond requirements.

7. Bid Proposal

The Bid Proposal form should account for the following:

- (a) If lump sum bid, include a list of the materials used and associated costs.
- (b) Distinguish eligible and ineligible items.
- (c) Accommodate trench safety requirements with separate per unit pay item for trench excavation safety protection, Health and Safety Code Chapter 756, Subchapter C.
- (d) Include space for the Contractor to acknowledge receipt of each Addendum issued during the bidding process.

8. Bidding Process

The Plans and Specifications (P&S) should include an explanation of how the bids will be processed. The explanation should include the following components:

- (a) Whether a pre-bid conference will be held, whether it is optional or mandatory, where and when it will be held.
- (b) Specify the criteria and process for determining responsiveness and responsibility of the bidder.
- (c) Specify the method of determining the successful bidder and award (e.g., award to the lowest responsive, responsible bidder, accounting for any multiple parts to bids) and accounting for non-resident bidder reciprocity requirements.
- (d) Allow for withdrawal of a bid due to a material mistake.
- (e) Identify the time frame that the bids may be held by the Applicant before awarding a contract (e.g., typically for 60 or 90 days).
- (f) Acknowledge right of the Applicant to reject any and all bids.

9. Release of Funds

- (a) Submittal of Bid Documents to TWDB Project Engineer/Reviewer to allow contingent award of contract:
 - (1) Advertisement and affidavit of advertisement.
 - (2) Bid tabulation.
 - (3) All addenda submitted and approved for the contract.
 - (4) Bid proposal of apparent low bidder (or chosen bidder, with explanation) with bid bond.
 - (5) Site certificate (ED-101).
 - (6) Consulting engineer's recommendation to award letter.
 - (7) A description of any bidding irregularities.
 - (8) Construction inspection proposal.
 - (9) Vendor Compliance with Reciprocity of Non-Resident Bidders Form (TWDB-0459).

(b) Following contingent award of the contract, TWDB Project Engineer/Reviewer should receive a bound copy of the executed contract documents (including specifications). This document should include:

- (1) Executed agreement.
- (2) Contractor's act of assurance (ED-103).
- (3) Contractor's act of assurance resolution (ED-104).
- (4) Payment and Performance bond (must be executed on or after the date of execution of the contract).
- (5) Contractor's Certificate of Insurance.
- (6) Sufficiency of funds letter (if the project is not 100% funded with TWDB funds).

After reviewing and approving the executed bid documents, the TWDB will issue an authorization for the Applicant to issue a notice to proceed. At this time, TWDB staff can begin releasing construction funds, in accordance with program specific requirements.

For any questions or proposed modifications to these conditions, please contact your TWDB Project Engineer/Reviewer.

II. INSTRUCTIONS TO BIDDERS

The language and conditions listed in this section shall be included in the “Instructions to Bidders” section of the construction contract document.

1. Contingent Award of Contract

This contract is contingent upon release of funds from the Texas Water Development Board. Any contract or contracts awarded under this Invitation for Bids is/are expected to be funded in part by a loan or grant from the Texas Water Development Board. Neither the state of Texas, nor any of its departments, agencies, or employees are or will be a party to this Invitation for Bids or any resulting contract.

2. U.S. Iron and Steel and Manufactured Goods (Does not apply to State Participation or SWIFT Projects)

Any contract(s) awarded under this Invitation for Bids is/are subject to the U.S. Iron and Steel and Manufactured Goods requirements (Texas Water Code §17.183). Refer to Guidance TWDB-1105 – “Requirements for U.S. Iron and Steel and Manufactured Goods”.

3. Bid Guarantee

Each bidder shall furnish a bid guarantee equivalent to five percent of the bid price (Water Code §17.183). If a bid bond is provided, the Contractor shall utilize a surety company which is authorized to do business in Texas in accordance with Surety Bonds and Related Instruments, Chapter 3503 of the Insurance Code.

4. Award of Contract to Nonresident Bidder

A governmental entity may not award a governmental contract to a nonresident bidder unless the nonresident underbids the lowest bid submitted by a responsible resident bidder by an amount that is not less than the amount by which a resident bidder would be required to underbid the nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located. A non-resident bidder is a Contractor whose corporate offices or principal place of business is outside of the state of Texas (Source: Texas Government Code, Chapter 2252, Subchapter A, Nonresident Bidders, §2252.002).

The bidder will complete form TWDB-0459, Vendor Compliance with Reciprocity on Non-Resident Bidders, **which must be submitted with the bid.**

III. SUPPLEMENTAL CONTRACT CONDITIONS

1. Supersession

The Owner and the Contractor agree that the TWDB Supplemental Conditions apply to the work eligible for Texas Water Development Board assistance to be performed under this contract and these clauses supersede any conflicting provisions of this contract.

2. Privity of Contract

Funding for this project is expected to be provided in part by a loan or grant from the Texas Water Development Board. Neither the state of Texas, nor any of its departments, agencies or employees is, or will be, a party to this contract or any lower tier contract. This contract is subject to applicable provisions in 31 TAC Chapter 363 in effect on the date of the assistance award for this project.

3. Definitions

- (a) The term "Owner" means the local entity contracting for the construction services.
- (b) The term "TWDB" means the Executive Administrator of the Texas Water Development Board, or other person who may be at the time acting in the capacity or authorized to perform the functions of such Executive Administrator, or the authorized representative thereof.
- (c) The term "Engineer" means the Owner's authorized consulting engineer for the project.

4. Laws to be Observed

In the execution of the contract, the Contractor must comply with all applicable local, state and federal laws, including but not limited to laws concerned with labor, safety, minimum wages, and the environment. The Contractor shall be familiar with and at all times shall observe and comply with all federal, state, and local laws, ordinances and regulations which in any manner affect the conduct of the work, and shall indemnify and save harmless the Owner, Texas Water Development Board, and their representatives against any claim arising from violation of any such law, ordinance or regulation by the Contractor, their Subcontractor or their employees.

5. Review by Owner and TWDB

- (a) The Owner, authorized representatives and agents of the Owner, and the TWDB shall, at all times have access to and be permitted to observe and review all work, materials, equipment, payrolls, personnel records, employment conditions, material invoices, and other relevant data and records pertaining to this contract, provided, however that all instructions and approval with respect to the work will be given to the Contractor only by the Owner through authorized representatives or agents.
- (b) Any such inspection or review by the TWDB shall not subject the state of Texas, or its representatives, to any action for damages.

6. Performance and Payment Bonds

Each Contractor awarded a construction contract must furnish performance and payment bonds:

- (a) the performance bond shall include without limitation guarantees that work done under the contract will be completed and performed according to approved plans and specifications and in accordance with sound construction principles and practices;
- (b) the performance and payment bonds shall be in a penal sum of not less than 100 percent of the contract price and remain in effect for one year beyond the date of approval by the Engineer of the political subdivision; and
- (c) the Contractor shall utilize a surety company that is authorized to do business in Texas in accordance with Surety Bonds and Related Instruments, Chapter 3503 of the Insurance Code.

7. Payments Schedule and Cost Breakdown

- (a) The Contractor shall submit for approval immediately after execution of the Agreement, a carefully prepared Progress Schedule, showing the proposed dates of starting and completing each of the various sections of the work, the anticipated monthly payments to become due to the Contractor, and the accumulated percent of progress each month.
- (b) The following paragraph applies only to contracts awarded on a lump sum contract price:

COST BREAKDOWN - The Contractor shall submit to the Owner a detailed breakdown of the estimated cost of all work to be accomplished under the contract, so arranged and itemized as to meet the approval of the Owner or funding agencies. This breakdown shall be submitted promptly after execution of the agreement and before any payment is made to the Contractor for the work performed under the contract. After approval by the Owner the unit prices established in the breakdown shall be used in estimating the amount of partial payments to be made to the Contractor.

8. Workers' Compensation Insurance Coverage (as applicable, consistent with Texas Labor Code § 406.096)

- (a) The Contractor shall certify in writing that they provide workers' compensation insurance coverage for each employee of the Contractor employed on the public project.
- (b) Each Subcontractor on the public project shall provide such a certificate relating to coverage of the Subcontractor's employees to the general Contractor, who shall provide the Subcontractor's certificate to the governmental entity.
- (c) A Contractor who has a contract that requires workers' compensation insurance coverage may provide the coverage through a group plan or other method satisfactory to the governing body of the governmental entity.
- (d) The employment of a maintenance employee by an employer who is not engaging in

building or construction as the employer's primary business does not constitute engaging in building or construction.

(e) In this section:

- (1) "Building or construction" includes:
 - i. erecting or preparing to erect a structure, including a building, bridge, roadway, public utility facility, or related appurtenance;
 - ii. remodeling, extending, repairing, or demolishing a structure; or
 - iii. otherwise improving real property or an appurtenance to real property through similar activities.
- (2) "Governmental entity" means this state or a political subdivision of this state. The term includes a municipality.

9. U.S. Iron and Steel and Manufactured Goods (Does not apply to State Participation or SWIFT Projects)

In the execution of the contract, the Contractor shall be familiar with and at all times shall observe and comply with all applicable federal, state, and local laws, ordinances and regulations concerned with the use of iron and steel and manufactured goods made in the United States which in any manner affect the conduct of the work, and shall indemnify and save harmless the Texas Water Development Board against any claim arising from violation of any such law, ordinance or regulation by the Contractor or by their Subcontractor or their employees

Consistent with Texas Water Code Section 17.183, iron and steel products and manufactured goods used in the project shall be produced in the United States, unless:

- (a) such products or goods are not:
 - (1) available in sufficient quantities;
 - (2) readily available; or
 - (3) of a satisfactory quality; or
- (b) the use of such products or goods will increase the total cost of the project by more than 20 percent.

10. Prevailing Wage Rates

This contract is subject to Government Code Chapter 2258 concerning payment of Prevailing Wage Rates. The Owner will determine what the general prevailing rates are in accordance with the statute. The applicable provisions include, but are not limited to the following:

§2258.021. Right to be Paid Prevailing Wage Rates

- (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:
 - (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and
 - (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.
- (b) Subsection (a) does not apply to maintenance work.

- (c) A worker is employed on a public work for the purposes of this section if the worker is employed by a Contractor or Subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

§2258.023. Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty

- (a) The Contractor who is awarded a contract by a public body or a Subcontractor of the Contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.
- (b) A Contractor or Subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.
- (c) A Contractor or Subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.
- (d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.
- (e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

§2258. 024. Records

- (a) A Contractor and Subcontractor shall keep a record showing:
 - (1) the name and occupation of each worker employed by the Contractor or Subcontractor in the construction of the public work; and
 - (2) the actual per diem wages paid to each worker.
- (b) The record shall be open at all reasonable hours to inspection by the officers and agents of the public body.

§2258. 025. Payment Greater Than Prevailing Rate Not Prohibited

This chapter does not prohibit the payment to a worker employed on a public work an amount greater than the general prevailing rate of per diem wages.

11. Employment of Local Labor (only applicable to projects funded by EDAP)

The Contractor shall, to the maximum feasible extent, employ local labor for construction of the project. The Contractor and every Subcontractor undertaking to do work on the project which is, or reasonably may be done as on-site work, shall employ qualified persons who regularly reside within the political subdivision boundary of the Owner and the economically distressed area where the project is located (Texas Water Code, Section 17.183).

12. Payments

(a) Progress Payments:

- (1) The Contractor shall prepare their requisition for progress payment as of the last day of the month and submit it, with the required number of copies, to the Engineer for review. Except as provided in paragraph (3) of this subsection, the amount of the payment due the Contractor shall be determined by adding to the total value of work completed to date, the value of materials properly stored on the site and deducting: (1) five percent (5%) minimum of the total amount, as a retainage and (2) the amount of all previous payments. The total value of work completed to date shall be based on the actual or estimated quantities of work completed and on the unit prices contained in the agreement (or cost breakdown approved pursuant to section 7b relating to lump sum bids) and adjusted by approved change orders. The value of materials properly stored on the site shall be based upon the estimated quantities of such materials and the invoice prices. Copies of all invoices shall be available for inspection by the Engineer.
- (2) The Contractor shall be responsible for the care and protection of all materials and work upon which payments have been made until final acceptance of such work and materials by the Owner. Such payments shall not constitute a waiver of the right of the Owner to require the fulfillment of all terms of the Contract and the delivery of all improvements embraced in this contract complete and satisfactory to the Owner in all details.
- (3) This clause applies to contracts when the Owner is a District or Authority. The retainage shall be ten percent of the amount otherwise due until at least fifty percent of the work has been completed. After the project is fifty percent completed, and if the District or Authority's Board finds that satisfactory progress is being made, then the District may authorize any of the remaining progress payments to be made in full. The District is not obligated to pay interest earned on the first 50% of work completed (Texas Water Code Sec. 49.276(d)).
- (4) The five percent (5%) retainage of the progress payments due to the Contractor may not be reduced until the building of the project is substantially complete and a reduction in the retainage has been authorized by the TWDB.

(b) Withholding Payments. The Owner may withhold from any payment otherwise due the Contractor so much as may be necessary to protect the Owner and if so elects may also withhold any amounts due from the Contractor to any Subcontractors or material dealers, for work performed or material furnished by them. The foregoing provisions shall be construed solely for the benefit of the Owner and will not require the Owner to determine or adjust any claims or disputes between the Contractor and their Subcontractors or Material dealers, or to withhold any monies for their protection unless the Owner elects to do so. The failure or refusal of the Owner to withhold any monies from the Contractor shall in no way impair the obligations of any surety or sureties under any bond or bonds furnished under this contract.

(c) Payments Subject to Submission of Certificates. Each payment to the Contractor by the

Owner shall be made subject to submission by the Contractor of all written certifications required of the Contractor, their Subcontractors and other general and special conditions elsewhere in this contract.

(d) Final Payment.

- (1) Upon satisfactory completion of the work performed under this contract, as a condition before final payment under this contract or as a termination settlement under this contract the Contractor shall execute and deliver to the Owner a release of all claims against the Owner arising under, or by virtue of, this contract, except claims which are specifically exempted by the Contractor to be set forth therein. Unless otherwise provided in this contract, by state law or otherwise expressly agreed to by the parties to this contract, final payment under this contract or settlement upon termination of this contract shall not constitute a waiver of the Owner' s claims against the Contractor or their sureties under this contract or applicable performance and payment bonds.
- (2) After final inspection and acceptance by the Owner of all work under the Contract, the Contractor shall prepare their requisition for final payment which shall be based upon the carefully measured or computed quantity of each item of work at the applicable unit prices stipulated in the Agreement or cost breakdown (if lump sum), as adjusted by approved change orders. The total amount of the final payment due to the Contractor under this contract shall be the amount computed as described above less all previous payments.
- (3) The retainage and its interest earnings, if any, shall not be paid to the Contractor until the TWDB has authorized a reduction in, or release of, retainage on the contract work.
- (4) Withholding of any amount due to the Owner, under general and/or special conditions regarding "Liquidated Damages" shall be deducted from the final payment due the Contractor.

13. Archaeological Discoveries and Cultural Resources

No activity which may affect properties listed or properties eligible for listing in the National Register of Historic Places or eligible for designation as a State Archeological Landmark is authorized until the Owner has complied with the provisions of the National Historic Preservation Act and the Antiquities Code of Texas. The Owner has previously coordinated with the appropriate agencies and impacts to known cultural or archeological deposits have been avoided or mitigated. However, the Contractor may encounter unanticipated cultural or archeological deposits during construction.

If archeological sites or historic structures which may qualify for designation as a State Archeological Landmark according to the criteria in 13 TAC Chapter 26, or that may be eligible for listing on the National Register of Historic Places in accordance with 36 CFR Part 800, are discovered after construction operations are begun, the Contractor shall immediately cease operations in that particular area and notify the Owner, the TWDB, and the Texas Historical Commission, 1511 N. Colorado St. , P. O. Box 12276, Capitol Station, Austin, Texas 78711-2276. The Contractor shall take reasonable steps to protect

and preserve the discoveries until they have been inspected by the Owner's representative and the TWDB. The Owner will promptly coordinate with the State Historic Preservation Officer and any other appropriate agencies to obtain any necessary approvals or permits to enable the work to continue. The Contractor shall not resume work in the area of the discovery until authorized to do so by the Owner.

14. Endangered Species

No activity is authorized that is likely to jeopardize the continued existence of a threatened or endangered species as listed or proposed for listing under the Federal Endangered Species Act (ESA), and/or the State of Texas Parks and Wildlife Code on Endangered Species, or to destroy or adversely modify the habitat of such species.

If a threatened or endangered species is encountered during construction, the Contractor shall immediately cease work in the area of the encounter and notify the Owner, who will immediately implement actions in accordance with the ESA and applicable State statutes. These actions shall include reporting the encounter to the TWDB, the U.S. Fish and Wildlife Service, and the Texas Parks and Wildlife Department, obtaining any necessary approvals or permits to enable the work to continue, or implement other mitigation actions. The Contractor shall not resume construction in the area of the encounter until authorized to do so by the Owner.

15. Hazardous Materials

Materials utilized in the project shall be free of any hazardous materials, except as may be specifically provided for in the specifications.

If the Contractor encounters existing material on sites owned or controlled by the Owner or in material sources that are suspected by visual observation or smell to contain hazardous materials, the Contractor shall immediately notify the Engineer and the Owner. The Owner will be responsible for the testing and removal or disposal of hazardous materials on sites owned or controlled by the Owner. The Owner may suspend the work, wholly or in part during the testing, removal or disposal of hazardous materials on sites owned or controlled by the Owner.

16. Changes

*Provisions identified with an asterisk below are consistent with Local Government Code 271.060. Counties and Municipalities may modify the identified provisions, when applicable, to conform to Local Government Code 262.031 (Counties) or 252.048 (Municipalities).

- (a) The Owner may at any time, without notice to any surety, by written order designated or indicated to be a change order, make changes in the work within the general scope of the contract, including but not limited to changes:
 - (1) In the specifications (including drawings and designs);
 - (2) In the time, method or manner of performance of the work;
 - (3) To decrease or increase the quantity of work to be performed or materials, equipment or supplies to be furnished;

- (b) *The total price of a contract may not be increased by a change order unless provision has been made for the payment of the added cost by the appropriation of current funds or bond funds for that purpose, by the authorization of the issuance of certificates, or by a combination of those procedures.
- (c) *A contract with an original contract price of \$1 million or more may not be increased by more than 25 percent. If a change order for a contract, with an original contract price of less than \$1 million, increases the contract amount to \$1 million or more, subsequent change orders may not increase the revised contract amount by more than 25 percent.
- (d) *A governing body may grant authority to an official or employee responsible for purchasing or for administering a contract to approve a change order that involves an increase or decrease of \$50,000 or less.
- (e) Changes that involve an increase in price will be supported by documentation of the cost components. For projects funded through the EDAP program, or with grant proceeds, TWDB staff may request this information to be provided in a format equivalent to the Cost and Pricing Information form (No. WRD-277).
- (f) Any change orders involving a change in the project requiring a relocation of project components, sizing, or process may require additional environmental approval. A map and description of the proposed changes should be sent to the TWDB Environmental Reviewer for coordination and approval as soon as possible to avoid any delay.

17. Operation and Maintenance Manuals and Training

- (a) The Contractor shall obtain installation, operation, and maintenance manuals from manufacturers and suppliers for equipment furnished under the contract. The Contractor shall submit three copies of each complete manual to the Engineer within 90 days after approval of shop drawings, product data, and samples, and not later than the date of shipment of each item of equipment to the project site or storage location.
- (b) The Owner shall require the Engineer to promptly review each manual submitted, noting necessary corrections and revisions. If the Engineer rejects the manual, the Contractor shall correct and resubmit the manual until it is acceptable to the Engineer as being in conformance with the design concept of the project and for compliance with information given in the contract documents. Owner may assess Contractor a charge for reviews of same items in excess of three (3) times. Such procedure shall not be considered cause for delay.
- (c) Acceptance of manuals by Engineer does not relieve Contractor of any requirements of terms of Contract.
- (d) The Contractor shall provide the services of trained, qualified technicians to check final equipment installation, to assist as required in placing same in operation, and to instruct operating personnel in the proper manner of performing routine operation and maintenance of the equipment.

- (e) Operations and maintenance manuals specified hereinafter are in addition to any operation, maintenance, or installation instructions required by the Contractor to install, test, and start-up the equipment.
- (f) Each manual is to be bound in a folder and labeled to identify the contents and project to which it applies. The manual shall contain the following applicable items:
 - (1) A listing of the manufacturer's identification, including order number, model, serial number, and location of parts and service centers.
 - (2) A list of recommended stock of parts, including part number and quantity.
 - (3) Complete replacement parts list.
 - (4) Performance data and rating tables.
 - (5) Specific instructions for installation, operation, adjustment, and maintenance.
 - (6) Exploded view drawings for major equipment items.
 - (7) Lubrication requirements.
 - (8) Complete equipment wiring diagrams and control schematics with terminal identification.

18. As-built Dimensions and Drawings

- (a) Contractor shall make appropriate daily measurements of facilities constructed and keep accurate records of location (horizontal and vertical) of all facilities.
- (b) Upon completion of each facility, the Contractor shall furnish the Owner with one set of direct prints, marked with red pencil, to show as-built dimensions and locations of all work constructed. As a minimum, the final drawings shall include the following:
 - (1) Horizontal and vertical locations of work.
 - (2) Changes in equipment and dimensions due to substitutions.
 - (3) "Nameplate" data on all installed equipment.
 - (4) Deletions, additions, and changes to scope of work.
 - (5) Any other changes made.

19. Close-Out Procedures

To close-out the contract and release final retainage, the following steps must be completed:

- (a) TWDB Staff must conduct a construction contract final inspection (CCFI).
- (b) The following submittals must be received, reviewed, and accepted by TWDB:
 - (1) The final change order, adjustment of quantities, or a statement that all change orders have previously been submitted and there will be no more change orders;
 - (2) The final pay request from the Contractor;
 - (3) An affidavit by the Contractor that all bills have been paid;
 - (4) Certification by the consulting Engineer that the work has been completed and was constructed in accordance with the approved plans and specifications and sound engineering principles and construction practices;
 - (5) Acceptance of the project by the Owner in the form of a written resolution or other formal action;

- (6) Notification of the beginning date of the warranty period for the contract; and
- (7) Confirmation that the Owner has received as-built drawings from the Contractor.

(c) TWDB will issue a Certificate of Approval allowing the release of retainage.

IV. FORMS AND GUIDANCE LIST

The following documents, mentioned throughout this guidance are available on the TWDB website at: <http://www.twdb.texas.gov/financial/instructions/index.asp>

Forms:

The following forms must be included in the bid documents:

- TWDB-0459, Vendor Compliance with Reciprocity of Non-Resident Bidders.
- Site Certificate (ED-101)
- Contractor's Act of Assurance (ED-103)
- Contractor's Act of Assurance Resolution (ED-104)

Guidance Document:

- Requirements for U.S. Iron and Steel and Manufactured Goods (TWDB-1105)