

LAW OFFICES OF

# ANDERSON & BYRD

*A Limited Liability Partnership*

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ROBERT A. ANDERSON  
(1920-1994)  
RICHARD C. BYRD  
(1920-2008)

September 28, 2012

Ms. Patrice Petersen-Klein  
Executive Director  
Kansas Corporation Commission  
1500 S. W. Arrowhead Road  
Topeka, Kansas 66604-4027

Received  
on

SEP 28 2012

by  
State Corporation Commission  
of Kansas

Re: Suburban Water, Inc., d/b/a Suburban Water Company  
Docket No. 13-SUBW-175-CPL

Dear Ms. Petersen-Klein:

Please file the enclosed the following late-filed exhibits on behalf of Suburban Water, Inc., d/b/a Suburban Water Company, in the above captioned matter:

- (1) Board of Directors Minutes;
- (2) Analysis of Bids Received Relating to Maintenance Work;
- (3) Contract with Successful Bidder on Maintenance Work; and
- (4) Layne Christensen Contract on Groundwater Supply Development Study.

Suburban Water Company designates the board minutes and the bid analysis as **CONFIDENTIAL**. They each include non-public information containing private, technical, financial and business information.

I would appreciate receiving a file stamped copy of this cover letter as well as a file stamped copy of each late-filed exhibits for my files. An envelope is included for your convenience.

Thank you for your assistance. If you have any questions, please call.

Sincerely,



James G. Flaherty  
[jflaherty@andersonbyrd.com](mailto:jflaherty@andersonbyrd.com)

JGF:rr  
Enclosure  
ec: Service List

Received  
on

SEP 28 2012

by  
State Corporation Commission  
of Kansas

(3)

**CONFORMED COPY**

# **Suburban Water, Inc.**

**CONTRACT DOCUMENTS**

**FOR**

**PROJECT MT-2012  
MAINTENANCE WORK AND  
EMERGENCY REPAIRS**

**August 16, 2012**

**Prepared by:**

**Suburban Water, Inc.  
Engineering Division  
1216 N. 155<sup>th</sup> Street  
Basehor, KS 66007**

**SUBURBAN WATER, INC.  
BASEHOR, KS**

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PROJECT NO. MT-2012  
MAINTENANCE WORK AND  
EMERGENCY REPAIRS

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ADDENDUM NO. 1  
August 22, 2012

This Addendum No. 1 consists of page AD-1 and the revised attached pages. The following modifications shall be made to the Contract Documents for this project.

ADVERTISEMENT FOR BID, Page AB-1, Revise the sixth paragraph as follows:

If the Contract is to be awarded, the Owner will award the Contract to the Bidder who, in the Owner's judgment, is the lowest, qualified, responsible, and responsive Bidder.

INSTRUCTIONS TO BIDDERS, Page IB-5, Item 12, Revise the fourth and fifth paragraphs as follows:

If the Contract is to be awarded, it will be awarded to the lowest, qualified, responsible, and responsive Bidder utilizing the foregoing considerations to determine the Bidder whose evaluation by the Owner indicates to the Owner that the award will be in the best interests of the Owner.

If the Contract is to be awarded, the Owner will give the Successful Bidders Notices of Award within the number of days set forth in the BID FORM.

BID FORM, replace with the attached revised pages BF-1 thru BF-5.

01025 – MEASUREMENT & PAYMENT, replace with the attached revised pages 01025-1 and 01025-2.

PERFORMANCE BOND, replace with the attached revised page PB-1

ACKNOWLEDGEMENT BY BIDDER. Bidder is required to acknowledge receipt of Addendum No. 1 in the space provided in the attached BID FORM.

SUBURBAN WATER, INC.

# SUBURBAN WATER, INC.

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## PROJECT MT-2012 MAINTENANCE WORK AND EMERGENCY REPAIRS

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Standard Residential Service  
Fire Hydrant Assembly Detail  
Buried Valve Detail

ADVERTISEMENT FOR BID

Date August 16, 2012

Sealed Bids will be received by Suburban Water, Inc. (Owner) at 1216 N. 155<sup>th</sup> Street, Basehor, Kansas 66007, Attention: Bruce B. Hall, PE, Director of Engineering, until 4:00 PM, local time on August 30, 2012, for the following Work.

PROJECT MT-2012  
MAINTENANCE WORK AND  
EMERGENCY REPAIRS

The proposed Work is generally described as follows: Furnishing and installing certain materials to maintain the integrity of the drinking water distribution system. In addition, the installation of materials furnished by the Owner, and all of the appurtenant work, as set forth in the Bidding Documents. Some of the projects will be: scheduled Maintenance Work, i. e. meter service connections, new fire hydrant assembly, new valves, replacement of defective piping/valves; and some will be Emergencies Repairs due to failures of existing materials and/or damages by third parties.

The site for the Work is within Suburban Water's Service Area in and adjoining Basehor, Kansas. The Bidder's project office shall be located within Suburban Water's Service Area or a maximum arrival time of one hour with the necessary equipment and personnel after notification of the need for some Work.

Copies of the Bidding Documents may be obtained from Suburban Water Inc., 1216 N. 155<sup>th</sup> Street, Basehor, KS between the hours of 9:00 AM and 4:00 PM Monday through Friday. The non-refundable charge for the Bidding Documents is \$25.00. All inquiries about the Bidding Documents may be made by contacting Bruce B. Hall, PE at [Bruce@suburbanwaterinc.com](mailto:Bruce@suburbanwaterinc.com) or 913.724.1800.

A Bid Bond in the amount of \$5,000.00 shall accompany each Bid and be executed on the form which is bound into these Bidding Documents.

If the Contract is to be awarded, the Owner will award the Contract to the Bidder who, in the Owner's judgment, is the lowest, qualified, responsible, and responsive Bidder.

The Owner reserves the right to reject any or all Bids, including without limitation the right to reject any or all erroneous, nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if the Owner believes that it would not be in the best interest of the Owner to make an award to that Bidder. Owner also reserves the right to waive informalities.

If the Contract is to be awarded, the Owner will give the Successful Bidder the Notice of Award within 30 days of the Bid opening date.

SUBURBAN WATER, INC.

## INSTRUCTIONS TO BIDDERS

1. COPIES OF BIDDING DOCUMENTS. Complete sets of Bidding Documents shall be used in preparing Bids. The Owner assumes no responsibility for errors or misrepresentations resulting from the use of incomplete sets of Bidding Documents.

The Owner in making copies of Bidding Documents available on the above terms, does so only for the purpose of obtaining Bids for the Work and does not confer a license or grant for any other use.

2. QUALIFICATIONS OF BIDDERS. The minimum required experience qualifications shall be for Bidders acting as a General Contractor. The Bidder shall have practical knowledge and experience in satisfactorily installing: meter service connections; fire hydrant assemblies; valves; and 2-12 PVC & 16-24-inch DI drinking water mains for the past five years. Each Bidder may be required to show that the Bidder has handled former work so that no just claims are pending against such work.

In determining the Bidder's qualifications, the following factors will be considered by the Owner with regard to previous work and other matters:

- Whether the Bidder's project office is located within Suburban Water's Service Area or a maximum arrival time of one hour with the necessary equipment and personnel after notification of the need for some Work.
- Whether the Bidder has adequate resources to perform the Work properly and expeditiously;
- Whether the Bidder has sufficient financial abilities to complete all of its existing projects and, in addition, the Owner's projects now being bid;
- In general, whether the Bidder has a record of good or poor workmanship;
- Whether the Bidder consistently follows the Contract Documents;
- Whether the Bidder's past projects were completed in a timely manner;
- Whether the Bidder provided and maintained qualified superintendents on the projects at all times;
- Whether the Bidder maintained a good safety record and consistently followed all of the OSHA requirements;
- Whether the Bidder scheduled the work, including material delivery, equipment, and labor, in an efficient manner;
- Whether customer and/or property concerns were handled in a timely and equitable manner;
- Whether the Bidder was interested in solving problems when they developed rather than shifting the blame to others;
- Whether additional time and expenses were incurred by owners due to the Bidder's action; and
- Whether the Bidder has any unpaid bills with the Owner.



The Owner may request the Bidder to furnish the contact name and telephone number of past projects to compile information on the above and any other relevant additional information to determine the qualification and responsibility of the Bidders.

3. EXAMINATION OF BIDDING DOCUMENTS AND THE SITES. It is the responsibility of each Bidder, before submitting a Bid, to (a) thoroughly examine the Bidding Documents, (b) visit the sites of the Work, (c) become familiar with local conditions that may affect the cost, progress, or performance of the Work, (d) consider Federal, state, and local Laws and Regulations that may affect cost, progress, or performance of the Work, (e) study and carefully correlate Bidder's observations with the Bidding Documents, and (f) notify the Owner in writing of all conflicts, errors, or discrepancies discovered by the Bidder in the Bidding Documents.

3.1 Underground Facilities. Information and data, if any, reflected in the Bidding Documents with respect to underground facilities at or contiguous to the sites are based upon information and data furnished by the owners of such underground facilities or others. The Owner disclaims responsibility for the accuracy or completeness thereof.

3.2 Additional Information. Before submitting a Bid, each Bidder shall, at Bidder's own expense, make or obtain any additional examinations, investigations, explorations, tests, and studies and obtain any additional information and data which pertain to the physical conditions (surface, subsurface, and underground facilities) at or contiguous to the sites or otherwise which may affect cost, progress, or performance of the Work and which Bidder deems necessary to determine its bids for performing the Work in accordance with time, price, and other terms and conditions of Bidding Documents.

3.3 Access to the Project Sites. Where the Work is located within or visible from public rights-of-way and/or easements, the Bidders may visit the site to make observations from the public rights-of-way and/or the easements without prior permission from the Owner. Permission from the Owner, property owner, and tenant is required to move equipment and personnel onto public rights-of-way and the easements at the site for surveying, drilling test holes, excavating test pits, or similar operations. Bidder shall back fill all holes and excavations, clean up and restore the site to its former condition upon completion of such explorations.

3.4 Public Rights-of-Way and Easements. All of the Work to be performed under this Contract is located within public rights-of-way and/or easements. All additional lands and access thereto required for temporary construction facilities or storage of materials and construction equipment shall be provided by the Contractor at the Contractor's expense.

3.5 Bidder's Representation. The submission of a Bid constitutes an incontrovertible representation by the Bidder that the Bidder has complied with every requirement concerning examination of the Bidding Documents and the sites, that without exception, the Bid is premised upon performing the Work required by the Contract Documents, and

that the Bidding Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.

4. INTERPRETATIONS AND ADDENDA. All questions about the meaning or intent of the Bidding Documents shall be submitted to the Owner in writing. Interpretations or clarifications considered necessary by the Owner in response to such questions will be issued by Addenda which will be transmitted to all Bidders of record. Questions received less than five days prior to the date for opening of Bids may not be answered by Addenda due to time limitations. Only answers issued by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

5. CONTRACT TIMES. The time frames by which each class of Work is to be completed are set forth in the BID FORM.

6. SUBSTITUTE OR "OR-EQUAL" ITEMS. The procedure for submissions for review of substitute or "or-equal" items by the Contractor and consideration by the Owner is set forth in paragraph 6.3.4 of the GENERAL CONDITIONS. The Contract, if awarded, will be on the basis of the materials indicated on the Drawings and specified in the Specifications. Submittals for review of substitute or "or-equal" items will not be considered by the Owner until after the Effective Date of the Agreement.

7. BID FORM. The Bid shall be submitted on the BID FORM issued by addendum. The BID FORM shall be completed in black ink.

Bids by corporations shall be executed in the corporate name by the president or the vice-president (or by another corporate officer, accompanied by evidence of authority to sign for the corporation). The names of all persons signing shall be legibly printed below their signatures.

All blank spaces in the Bid Form shall be filled. A bid price shall be indicated for each bid item and unit price item listed therein, or the words "No Bid", "No Charge", or other appropriate phrase shall be entered in the blank spaces. Bids received without all such items completed will be considered non-responsive.

The Bid shall contain an acknowledgment of receipt of all Addenda, if any, the numbers and dates of which shall be filled in on the BID FORM.

No alterations in the Bids, or in the printed forms, by erasures, interpolations, or otherwise will be acceptable unless each such alteration is signed or initialed by the Bidder. If initialed, the Owner may require Bidder to identify any alteration so initialed.

8. BID PRICING. The Bidder shall complete the unit prices schedule as set forth in the BID FORM and shall accept all fixed unit prices listed therein.

The final Contract Price will be based upon the measured quantities as provided in Section 01025 – Measurement and Payment in DIVISION 1, and the unit prices in the

Bid will apply to such final quantities except that unit prices will be subject to reevaluation and adjustment by Change Order.

9. SUBMISSION OF BIDS. Bids shall be submitted at the time and place indicated in the Advertisement for Bid, or the modified time and place indicated by Addendum. Bids shall be enclosed and sealed in an opaque envelope furnished with the following label:

BID FOR PROJECT MT-2012  
MAINTENANCE WORK AND  
EMERGENCY REPAIRS

The submitted Bid envelope shall be marked on the outside with the name and address of the Bidder.

The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids. Timely delivery shall mean submission of Bids on or before the advertised time as registered only by the Owner's clock. Bids received after the advertised time will not be accepted and the Bid will not receive consideration.

One copy of the bound Bidding Documents containing the BID FORM shall be submitted with the Bid. Any BID FORMS submitted separately, not bound in the Bidding Documents, will not be accepted and the Bid will not receive consideration.

Oral, telephone, electronic, or facsimile Bids are invalid and will not receive consideration.

10. MODIFICATION AND WITHDRAWAL OF BIDS. Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid is executed) and delivered to the place where Bids are to be submitted at any time prior to the date and time for opening of Bids.

If any Bidder notifies the Owner within two business days after Bids have been opened that the submitted Bid is materially and substantially erroneous due to a nonjudgmental mistake, which is either evident on the face of the Bid or established to the Owner by clear and convincing evidence, the Bidder will be allowed to withdraw its Bid, and the Bidder precluded from performing any work on the project through subcontract agreements or by any other means including re-bids.

11. BIDS TO REMAIN SUBJECT TO ACCEPTANCE. All Bids shall remain subject to acceptance for the number of days set forth in the BID FORM, however, the Owner may, at its sole discretion, release any Bid prior to that time.

12. AWARD OF CONTRACTS. The Owner reserves the right to reject any or all Bids, including without limitation the right to reject any or all erroneous, nonconforming, non-responsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder or all

Bids if Owner believes that it would not be in the best interest of the Owner to make an award to that Bidder. The Owner also reserves the right to waive informalities.

In evaluating Bids, the Owner will consider the qualifications of the Bidder (as set forth in Item 2 of this section), unit prices, and other information.

Each Bidder agrees to waive any claim it has or may have against the Owner, and its employees, arising out of or in connection with the administration, evaluation, or recommendations of any Bid.

If the Contract is to be awarded, it will be awarded to the lowest, qualified, responsible, and responsive Bidder utilizing the foregoing considerations to determine the Bidder whose evaluation by the Owner indicates to the Owner that the award will be in the best interests of the Owner.

If the Contract is to be awarded, the Owner will give the Successful Bidder the Notice of Award within the number of days set forth in the BID FORM.

13. SIGNING OF AGREEMENT. When the Owner gives the Notices of Award to the Successful Bidders, they will be accompanied by three unsigned counterparts of the Agreement with all other written Contract Documents and Insurance Certificates attached. Within the number of days set forth in the BID FORMS, the Successful Bidders shall sign, leaving the dates blank, and deliver the counterparts of the bound Contract Documents including the Agreement to the Owner. Within no more than seven days thereafter, the Owner will execute all copies of the Agreement and other Contract Documents submitted by the Successful Bidders (Contractors); shall insert the date of contract on the Agreement; and shall distribute all signed copies as stipulated in the Agreement.

End of Section

BID FORM

PROJECT IDENTIFICATION:

Project MT-2012 – MAINTENANCE WORK AND  
EMERGENCY REPAIRS

THIS BID IS SUBMITTED TO:

Suburban Water, Inc.  
1216 N. 155<sup>th</sup> Street  
Basehor, Kansas 66007

1. The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with the Owner on the form included in the Contract Documents to perform and furnish all Work as specified or indicated in the Contract Documents; within the specified time periods; for the dollar amounts indicated in this Bid Form; and in accordance with the other terms and conditions of the Contract Documents.
  
2. The Bidder accepts all of the terms and conditions of the Advertisement for Bid and the Instructions to Bidders. This Bid will remain subject to acceptance for 30 days after the day of the bid opening.
  
3. The Bidder shall sign and submit the Agreement with the other documents required by the Bidding Documents within 5 days after the date of Owner's Notice of Award.
  
4. In submitting this Bid, the Bidder represents that:
  - a. Bidder has examined copies of all the Bidding Documents and the following Addenda (receipt of all which is hereby acknowledged):  

No. <u>ONE</u>	Dated <u>August 22, 2012</u>
No. _____	Dated _____
  
  - b. Bidder has visited the site and become familiar with and satisfied it as to the general, local, and site conditions that may affect cost, progress, performance, and furnishing of the Work.

- c. Bidder is familiar with and has satisfied itself as to all Federal, state, and local Laws and Regulations that may affect cost, progress, performance, and furnishing of the Work.
- d. Bidder has obtained and carefully studied (or assumes responsibility for having done so) all such investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the site or otherwise which may affect cost, progress, performance, or furnishing of the Work or which relate to any aspect of the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder and safety precautions and programs incident thereto. Bidder does not consider that any additional examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance and furnishing of the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- e. Bidder is aware of the general nature of Work to be performed by Owner and/or others at sites that relate to Work for which this Bid is submitted.
- f. Bidder has correlated the information known to Bidder, information and observations obtained from visits to the site, drawings identified in the Bidding Documents, and all additional examinations, investigations, explorations, tests, studies, and data with the Bidding Documents.
- g. Bidder has given the Owner written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents and the written resolution thereof by the Owner is acceptable to the Bidder, and the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performing and furnishing the Work for which this Bid is submitted.
- h. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm, or corporations and is not submitted in conformity with any agreement or rules of any group, association, organization, or corporation; Bidder has not directly or indirectly induced or solicited any other Bidder to submit false or sham Bid; Bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and Bidder has not sought by collusion to obtain for itself any advantage over any other Bidder or over the Owner.

5. Bidder shall complete the Work for the following unit prices. The quantities for each item are unknown at this time. Progress payments will be based on actual quantities furnished and installed, pursuant to the Measurement and Payment Section 01025 of Division 1 of the Specifications.

UNIT PRICE SCHEDULE

MI 2012  
082212 1001

BF-3

**CONFIDENTIAL**

Maintenance Work and  
Emergency Repairs

MI-2012  
082212 B101

BF-4

**CONFIDENTIAL**



8. The terms used in this Bid are defined in the General Conditions section of these Bidding Documents.

SIGNATURE OF BIDDER

Westland Construction, Inc.

(Print company name)

By



(Signature of authorized person)

Charles L. Breuer

(Print name and title)

Business street address 20510 163<sup>rd</sup> Street

City, State & Zip Code Basehor, KS 66007

Email address chuck@westlandKS.com

Office Telephone No. 913.724.31

Mobile Telephone No. 913.915.4365

Date August 30, 2012

End of Form

 **ATA** Document A310™ – 2010

**Bid Bond**

**CONTRACTOR:**

Westland Construction, Inc.  
20510 163rd St.  
Basehor KS 66007

**SURETY:**

West Bend Mutual Insurance Company  
1900 South 18th Ave.  
West Bend, WI 53095

**OWNER:**

Suburban Water Inc. Engineering Div.  
116 N. 155th St. Basehor, KS 66007

**BOND AMOUNT:** Five percent (5%) of amount bid

**PROJECT:**

Project MT-2012 Maintenance work and emergency repairs

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

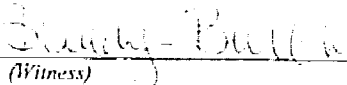
The Contractor and Surety are bound to the Owner in the amount set forth above, for the payment of which the Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, as provided herein. The conditions of this Bond are such that if the Owner accepts the bid of the Contractor within the time specified in the bid documents, or within such time period as may be agreed to by the Owner and Contractor, and the Contractor either (1) enters into a contract with the Owner in accordance with the terms of such bid, and gives such bond or bonds as may be specified in the bidding or Contract Documents, with a surety admitted in the jurisdiction of the Project and otherwise acceptable to the Owner, for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof; or (2) pays to the Owner the difference, not to exceed the amount of this Bond, between the amount specified in said bid and such larger amount for which the Owner may in good faith contract with another party to perform the work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect. The Surety hereby waives any notice of an agreement between the Owner and Contractor to extend the time in which the Owner may accept the bid. Waiver of notice by the Surety shall not apply to any extension exceeding sixty (60) days in the aggregate beyond the time for acceptance of bids specified in the bid documents, and the Owner and Contractor shall obtain the Surety's consent for an extension beyond sixty (60) days.

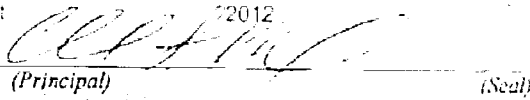
If this Bond is issued in connection with a subcontractor's bid to a Contractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.

When this Bond has been furnished to comply with a statutory or other legal requirement in the location of the Project, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.


Signed and sealed this 30th day of August

2012

  
(Witness)

  
(Principal) (Seal)

  
(Witness)

  
(Surety) (Seal)  
Attorney in fact, David S. Sawvitch  
(Title)



Power of Attorney

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Dave Salavitch

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: \$5,000,000

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999

Appointment of Attorney-In-Fact The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-in-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating thereto and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached Any such appointment may be revoked, for cause, or without cause, by any said officer at any time

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of March, 2009.

Attest

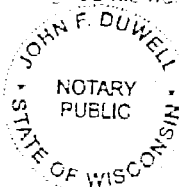
James J. Pauly Secretary



Kevin A. Steiner Chief Executive Officer / President

State of Wisconsin County of Washington

On the 1st day of March, 2009 before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation, that the seal affixed to said instrument is such corporate seal, that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order



John F. Duwell Executive Vice President - Chief Legal Officer Notary Public, Washington Co, WI My Commission is Permanent

The undersigned, who is related to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a corporation, is hereby authorized to make this certificate. Do hereby certify that the foregoing attached Power of Attorney is in full force and effect and has not been revoked and that the Resolution of the Board of Directors, set forth in this Power of Attorney, is in full force.

Subscribed and sworn to before me at West Bend, Wisconsin, this \_\_\_\_\_ day of \_\_\_\_\_, 2009.



Dale J. Kent Executive Vice President - Chief Financial Officer

Notice: All notices to be made to the company, and all communications concerning this Power of Attorney, may be directed to the Bond Manager at U.S. a division of West Bend Mutual Insurance Company

## AGREEMENT

This AGREEMENT is by and between WESTLAND CONSTRUCTION, INC. (herein called Contractor) and SUBURBAN WATER, INC. (herein called Owner).

The Contractor and the Owner, in consideration of the mutual covenants herein set forth, agree as follows:

### Article 1. WORK.

Contractor shall complete all Work as specified or indicated in the Contract Documents based on the acceptance by the Owner of the Contractor's Bid.

The Work is generally described as follows:

Furnishing and installing certain materials to maintain the integrity of the drinking water distribution system. In addition, the installation of materials furnished by the Owner, and all of the appurtenant work, as set forth in the Contract Documents. Some of the projects will be: scheduled Maintenance Work, i. e. new meter service connections, new fire hydrant assembly, replacement of defective piping/valves; and some will be Emergencies Repairs due to failures of existing materials and/or damages by third parties.

The site for the Work is within Suburban Water's Service Area in and adjoining Basehor, Kansas.

### Article 2. CONTRACT TIMES AND DELAYS DAMAGES.

2.1 Contract Times. The Contract Time Periods are specified in the BID FORM.

2.2 Delays and Damages. The Contractor shall accept the risk of any delays caused by the Owner or the weather. In the event that the Contractor is delayed in the prosecution and completion of the Work because of such conditions, the Contractor shall have no claim against the Owner for damages or contract adjustment other than an extension of Contract Times.

### Article 3. CONTRACT PRICE AND PAYMENTS

The Owner will pay the Contractor for completion of the Work for each project in accordance with the Contract Documents based upon the unit prices indicated in the BID FORM. The Owner will make periodic Payments to the Contractor in accordance with Article 14 of the General Conditions.

#### Article 4. CONTRACT DOCUMENTS

The Contract Documents which comprises the entire Agreement between the Contractor and the Owner concerning the Work consist of the following:

- a. Advertisement for Bid
- b. Instructions to Bidders
- c. Bid Form
- d. This Agreement
- e. Performance Bond
- f. Notice of Award
- g. Notice to Proceed
- h. General Conditions
- i. Specifications
- j. The following Drawings:
  - Service Area Boundary
  - Standard Residential Service
  - Fire Hydrant Assembly Detail
  - Buried Valve Detail
- k. Addendum Number No. 1 dated August 22, 2012
- l. Contractor's Bid
- m. All Written Amendments, Change Orders, and other documents amending, modifying, or supplementing the Contract Documents pursuant to Paragraph 3.4 of the General Conditions, which may be delivered or issued and are not attached hereto.

#### Article 5. MISCELLANEOUS

- a. Terms used in this Agreement will have the meanings indicated in the General Conditions.
- b. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of that party sought to be bound; and specifically but without limitation moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law); and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under these Contract Documents.
- c. The Owner and the Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements, and obligations contained in these Contract Documents.

- d. The business address of the Contractor given hereto is hereby designated as the place to which all notices, letters, and other communication to the Contractor will be mailed or delivered. The address of the Owner appearing herein is hereby designated as the place to which all notices, letters, and other communication to the Owner shall be mailed or delivered. Either party may change its address at any time by an instrument in writing delivered to the other party.

IN WITNESS WHEREOF, the Owner and the Contractor have signed this Agreement. One counterpart has been delivered to the Contractor; one counterpart has been delivered to the Bonding Company; and one counterpart has been retained by the Owner.

This Agreement will be effective on September 25, 2012.

Westland Construction, Inc.

(Contractor)

By 

(SEAL)

Charles L. Breuer

(Print Name)

Title President

Address for giving notices:

Westland Construction, Inc.

20510 163 rd Street

Basehor, KS 66007

SUBURBAN WATER, INC.

(Owner)

By Raphael D. Breuer Pres

\_\_\_\_\_  
Raphael D. Breuer

Title \_\_\_\_\_ President \_\_\_\_\_

Address for giving notice:

Suburban Water, Inc.  
1216 N. 155<sup>th</sup> Street  
P. O. Box 588  
Basehor, KS 66007

Maintenance Work and  
Emergency Repairs

MT-2012  
091212 BBH

A-4





3. If there is no Owner Default, the Surety's obligation under this Bond shall arise after:
  - 3.1 The Owner has notified the Contractor and Surety at their respective addresses described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and Surety to be held not later than 15 days after receipt of such notice to discuss methods of performing the Work pursuant to the Contract Documents. If the Contractor, Surety, and Owner agree, the Contractor shall be allowed a reasonable time to perform the Work, however, such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the Work pursuant to the Contract Documents. Such Contractor Default shall not be declared earlier than 20 days after the Contractor and Surety have received notice as provided in Subparagraph 3.1; and
  - 3.3 The Owner agrees to pay the Balance of the Contract Price to the Surety in accordance with the terms and conditions of the Contract Documents or to a contractor selected by the Surety to complete the Work pursuant to the Contract Documents in accordance with the terms of the Agreement with the Owner.
- 4 When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense, take one of the following actions:
  - 4.1 Arrange for the Contractor, with the consent of the Owner, to perform and complete the Work pursuant to the Contract Documents; or
  - 4.2 Undertake to perform and complete the Work itself, through its agent or through independent contractors; or
  - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Work pursuant to the Contract Documents, arrange for a contract to be prepared for execution by the Owner and the contractor selected by the Surety with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bond pursuant to the Contract Documents, and pay the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's Default; or
  - 4.4 Waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable under the circumstances:
    - 4.4.1 After investigation, determine the amount for which it is liable to the Owner, and within 10 days of the determination, tender payment therefore to the Owner; or
    - 4.4.2 Deny liability in whole or in part and notify the Owner citing reasons therefore.

11 When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction is to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted here from and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not a common law bond.

12 Definitions:

12.1 Agreement: The written contract between the Contractor and the Owner covering the Work to be performed. Other Contract Documents are attached to the Agreement and made a part thereof as provided therein.

12.2 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Contract Documents after all proper adjustments have been made, including allowance to the Contractor for any amounts received or to be received or to be received by the Owner in settlement of insurance or other claims for damages in which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract Documents.

12.3 Contract Documents: As set forth in the Agreement.

12.4 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract Documents.

12.5 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Contract Documents or to perform or comply with any other terms thereof.

13 The Surety's obligations under this Bond are entirely separate and distinct from any obligations that it may have under any public works bond relating to the above mentioned contract.

- 5 If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond. 15 days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Subparagraph 4.4 and the Owner refuses tender payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
- 6 After the Owner has terminated the Contractor's right to complete the Work, and if the Surety elects to act under Subparagraphs 4.1, 4.2, or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Contract Documents, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Contract Documents. To the limit of the amount of this Bond, but subject to commitments by the Owner of the Balance of the Contract Price to mitigation of costs and damages on the Contract Documents, the Surety is obligated without duplication for:
- 6.1 The responsibilities of the Contractor for correction of defective work and completion of the Work pursuant to the Contract Documents;
- 6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 4; and
- 6.3 Liquidated damages, or if no liquidated damages are specified in the Contract Documents, the actual damages caused by the delayed performance or non-performance of the Contractor.
- 7 The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Contract Documents, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, or successor.
- 8 The Surety hereby waives notice of any change, including changes of time, to the Contract Documents or to related subcontracts, purchase orders, and other obligations.
- 9 Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the Work or part of the Work is located and shall be instituted within the applicable period of limitation after the Contractor Default or after the Surety refuses or fails to perform its obligations under this Bond.
- 10 Notice to the Surety, Contractor, and Owner shall be mailed or delivered to the respective addresses shown on the signature page of this Bond and the Bid Form.

IN TESTIMONY WHEREOF, the Contractor, as Principal, has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed by its duly authorized officers and the Surety has caused these presents to be executed in its name and its corporate seal to be hereunto fixed by its attorney-in-fact, duly authorized thereunto so to do on this 24<sup>th</sup> day of September, 2012.

PRINCIPAL:

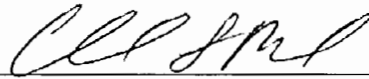
WESTLAND CONSTRUCTION, INC.

(Contractor)

Address for giving Notice:

20510 163<sup>rd</sup> Street

Baschor, KS 66007



(Signature)

Charles L. Breuer

(Print Name)

President

(Title)

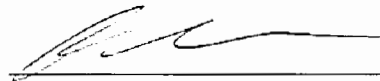
SURETY:

West Bond Mutual Insurance Co  
(Surety)

Address for giving Notice:

24901 Woodland Ct

Lee's Summit MO 64086



(Signature)

Paul S. Seltzer

(Print Name)

Attorney in fact

(Title)

**This Bond must be accompanied with an attorney-in-fact's authority from the Surety certified to include the date of this Bond.**

This Bond is based upon the EJCDC Construction Performance Bond, Form No. 1910-28A (1984 edition)



Power of Attorney

Know all men by these Presents, That West Bend Mutual Insurance Company, a corporation having its principal office in the City of West Bend, Wisconsin does make, constitute and appoint:

Dave Salavitch

lawful Attorney(s)-in-fact, to make, execute, seal and deliver for and on its behalf as surety and as its act and deed any and all bonds, undertakings and contracts of suretyship, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed in amount the sum of: \$5,000,000

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following Resolution adopted by the Board of Directors of West Bend Mutual Insurance Company at a meeting duly called and held on the 21st day of December, 1999.

Appointment of Attorney-In-Fact. The president or any vice president, or any other officer of West Bend Mutual Insurance Company may appoint by written certificate Attorneys-in-Fact to act on behalf of the company in the execution of and attesting of bonds and undertakings and other written obligatory instruments of like nature. The signature of any officer authorized hereby and the corporate seal may be affixed by facsimile to any such power of attorney or to any certificate relating therefore and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the company, and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the company in the future with respect to any bond or undertaking or other writing obligatory in nature to which it is attached. Any such appointment may be revoked, for cause, or without cause, by any said officer at any time.

In witness whereof, the West Bend Mutual Insurance Company has caused these presents to be signed by its president undersigned and its corporate seal to be hereto duly attested by its secretary this 1st day of March, 2009.

Attest

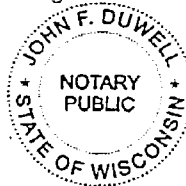
James J. Pauly
Secretary



Kevin A. Steiner
Chief Executive Officer / President

State of Wisconsin
County of Washington

On the 1st day of March, 2009 before me personally came Kevin A. Steiner, to me known being by duly sworn, did depose and say that he resides in the County of Washington, State of Wisconsin; that he is the President of West Bend Mutual Insurance Company, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed by order of the board of directors of said corporation and that he signed his name thereto by like order.



John F. Duwell
Executive Vice President - Chief Legal Officer
Notary Public, Washington Co. WI
My Commission is Permanent

The undersigned, duly elected to the office stated below, now the incumbent in West Bend Mutual Insurance Company, a Wisconsin corporation authorized to make this certificate, Do Hereby Certify that the foregoing attached Power of Attorney remains in full force effect and has not been revoked and that the Resolution of the Board of Directors, set forth in the Power of Attorney is now in force.

Signed and sealed at West Bend, Wisconsin this \_\_\_ day of \_\_\_, 20\_\_



Dale J. Kent
Executive Vice President -
Chief Financial Officer

Notice: Reproductions are not binding on the company. Any questions concerning this Power of Attorney may be directed to the Bond Manager at NSI, a division of West Bend Mutual Insurance Company.

## GENERAL CONDITIONS

### ARTICLE 1 – DEFENTIONS

Wherever used in these Contract Documents the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

- 1.1 Addenda – Written or graphic instruments issued prior to the opening of Bids which clarify, correct or change the Bidding Requirements or the Contract Documents.
- 1.2 Agreement – The written Contract between the Contractor and the Owner covering the Work to be performed. Other Contract Documents are attached to the Agreement and made a part thereof as provided therein.
- 1.3 Bid- The offer or proposal of the bidder submitted on the Bid Form setting forth the unit prices and other information for the Work to be performed.
- 1.4 Bidder – The one who submits a Bid directly to the Owner, as distinct from a sub-bidder who submits a bid directly to a Bidder.
- 1.5 Bidding Documents – The Contract Documents (including all Addenda ) prior to execution of the contract.
- 1.6 Bidding Requirements – The Advertisement for Bid, Instructions to Bidders, Bid Form, and Bid Bond.
- 1.7 Change Order – A document which is signed by the Contractor and the Owner and authorizes additions, deletions or revisions in the Work, or adjustment in the Contract Price or the Contract Time, issued on or after the Effective Date of the Agreement.
- 1.8 Construction Inspector – The authorized representative of the Owner who may make periodic visits to the site of the Work to observe the construction.
- 1.9 Contract Documents – The definition of the Contract Documents shall be as set forth in the Agreement.
- 1.10 Contract Price – The moneys payable by the Owner to the Contractor for the completion of the Work in accordance with the Contract Documents as stated in the Agreement.
- 1.11 Contract Times – The dates stated in the Agreement and the Bid Form to achieve completion of each unit of the Work.

- 1.12 Contractor - The person, firm or corporation with whom the Owner has entered into this Contract.
- 1.13 Defective -- An adjective which when modifying the word Work refers to Work that is unsatisfactory, faulty or deficient, in that it does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or approval referred to in the Contract Documents, or has been damaged prior to final payment.
- 1.14 Drawings – The drawings which show the scope, extent and character of the Work to be furnished and performed by the Contractor, which have been prepared by the Owner, and are referenced in the Contract Documents.
- 1.15 Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
- 1.16 Completion of the Work –Completion shall be when all Work at a project site has been completed in accordance with the Contract Documents as determined by the Owner. When applicable, Completion of the Work shall also include any required city, county, and State inspections and approvals.
- 1.17 Laws and/or Regulations: Any and all applicable laws, rules, regulations, ordinances, codes and orders of any and all governmental bodies, agencies, authorities and courts having jurisdiction.
- 1.18 Liens – Charges, security interests or encumbrances upon real property or personal property.
- 1.19 Notice of Award – The written notice by the Owner to the Successful Bidder stating that upon compliance by the Successful Bidder with the conditions precedent enumerated therein, within the time specified, the Owner will execute and deliver the Agreement.
- 1.20 Notice to Proceed – Notice to Proceed shall be the written notice given by the Owner to the Contractor fixing the date on which the Contract Times begin and on which the Contractor shall begin to perform the Contractor's obligations under the Contract Documents.
- 1.21 Owner – Suburban Water, Incorporated, 1216 N. 155<sup>th</sup> Street, Basehor, KS 66007.
- 1.22 Partial Utilization – Use by the Owner or others of a substantially completed portion of the Work for the purpose for which it is intended (or a related purpose) prior to completion of all of the Work.

- 1.23 Payments – The dollar amount paid by the Owner to the Contractor based on the quantities of work items completed under the Unit Prices and adjustments for approved Change Orders.
- 1.24 Project – The total construction of the Work at each project site to be provided under the Contract Documents.
- 1.25 Settlement – Sinking of the final grade of the backfill to an elevation below the adjacent area elevations.
- 1.26 Specifications – Those portions of the Contract Documents consisting of written technical descriptions of materials, construction systems, standards, and workmanship as applied to the Work and certain administrative details applicable thereto.
- 1.27 Subcontractor – An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at a project site.
- 1.28 Successful Bidder - The lowest, qualified, responsible and responsive Bidder to whom the Owner (as determined by the Owner's evaluation) makes an award.
- 1.29 Supplier – A manufacturer, fabricator, distributor, or vendor having a direct contract with the Contractor or with any subcontractor to furnish materials to be incorporated in the Work by the Contractor or subcontractor.
- 1.30 Underground Facilities – All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities which have been installed underground to furnish any of the following services or material: electricity, gases, drinking water, liquid petroleum products, telephone or other communications, cable television, sanitary sewage, rainfall runoff or other control systems.
- 1.31 Unit Price Work – Work to be paid for on the basis of the unit prices as set forth in the Bid Form.
- 1.32 Work – The entire completed construction to be furnished under the Contract Documents. Work includes and is the result of performing and furnishing the labor, incorporating the materials furnished by the Owner, supplying and incorporating the materials into the construction, performing and furnishing services, and furnishing documents, all as required by the Contract Documents.



## ARTICLE 2 – PRELIMINARY MATTERS

- 2.1 Copies of Documents – The Owner will furnish to the Contractor two copies of the Contract Documents for the execution of the Work. Additional copies will be furnished by the Owner upon the request of the Contractor at the cost for printing same.
- 2.2 Commencement of Contract Times - The Contract Times will commence on the day the Owner notifies the Contractor of the Work to be performed at a project site..
- 2.3 Before Beginning Construction at each Project Site:
  - 2.3.1 Before undertaking each part of the Work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures shown therein and all applicable field measurements. The Contractor shall promptly report in writing to the Owner any conflict, error, ambiguity or discrepancy which the Contractor discovers and shall obtain a written interpretation or clarification from the Owner before proceeding with any Work affected thereby, however, the Contractor shall not be liable to the Owner for failure to report any conflict, error, ambiguity or discrepancy in the Contract Documents, unless the Contractor knew or reasonably should have known thereof.
  - 2.3.2 Before any Work at the site commences, the Contractor shall deliver to the Owner copies of the certificates of insurance which are required to be purchased and maintained by the Contractor.
- 2.4 Preconstruction Conference – Prior to the date the Notice to Proceed, a conference attended by the Contractor, subcontractors, Owner, and others as appropriate will be held to establish a working understanding among the parties as to the Work.

## ARTICLE 3 – CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

- 3.1 Intent
  - 3.1.1 The Contract Documents comprise the entire agreement between the Contractor and the Owner concerning the Work. The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the laws of the place of the project.
  - 3.1.2 It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work or materials that may reasonably be inferred from the Contract Documents or from prevailing custom or trade

usage as being required to produce the intended result shall be furnished and performed whether or not specifically called for. When words or phrases which have well-known technical or construction industry or trade meaning are used to describe the Work or materials, such words or phrases shall be interpreted in accordance with that meaning. Clarifications and interpretations of the Contract Documents will be issued by the Owner as applicable.

3.2 Reference to and Specifications of Technical Societies, Reporting, and Resolving Discrepancies.

3.2.1 Reference to standards, specifications, manuals or codes of any technical society, organization or association, or to the Laws or Regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard, specification, manual, code or Laws or Regulations in effect at the time of opening of Bids, except as may be otherwise specifically stated. However, no provision of any referenced standard, specification, manual, or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the Owner, the Contractor, or any agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign the Owner, or any of the Owner's agents, or employees, any duty or authority to supervise or direct the furnishing or performance of the Work.

3.2.2 If, during the performance of the Work, the Contractor discovers any conflict, error, ambiguity or discrepancy within the Contract Documents or between the Contract Documents and any provision of any such Law or Regulation applicable to the performance of the Work or of any such standard, specification, manual or code or of any instruction of any supplier, the Contractor shall immediately report it to the Owner in writing, and the Contractor shall not proceed with the Work affected thereby (except in an emergency) until a Change Order to the Contract Documents has been issued, however, the Contractor shall not be liable to the Owner for failure to report any such conflict, error, ambiguity or discrepancy unless the Contractor knew or reasonably should have known thereof.

3.2.3 Except as otherwise specifically stated in the Contract Documents or may be provided by Change Orders, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity or discrepancy between the provisions of the Contract Documents and:

3.2.3.1 the provisions of any such standard, specification, manual, code or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

3.2.3.2 the provisions of any such Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

No provision of any such standard, specification, manual, code or instruction shall be effective to change the duties and responsibilities of the Owner, the Contractor, or any of their subcontractors, agents, or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the Owner or any of the Owner's employees any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.3 Whenever in the Contract Documents the terms "as ordered," "as directed," "as allowed," "as approved" or terms of like effect or import are used, or the adjectives "reasonable," "suitable," "acceptable," "proper" or "satisfactory" or adjectives of like effect or import are used to describe a requirement, direction, review or judgment of the Owner as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate, in general the completed Work for compliance with the requirements of and information in the Contract Documents and conformance with the design of the completed Project as a functioning whole as shown or indicated in the Contract Documents. The use of any such term or adjective shall not be effective to assign to the Owner any duty or authority to supervise or direct the furnishing or performance of the Work or any duty to undertake responsibility contrary to the provisions the Contract Documents.

3.4 Amending and Supplementing the Contract Documents.

3.4.1 The Contract Documents may be amended to provide for additions, deletions and revisions in the Work or to modify the terms and conditions thereof by a Change Order.

3.4.2 In addition, the requirements of the Contract Document may be supplemented and minor variations and deviations in the Work may be authorized, by the Owner's approval of a Submittal or by the Owner's written interpretation or clarification.

3.5 Reuse of Documents – The Contractor, Subcontractor, Supplier or other person or organization performing or furnishing any of the Work under a direct or indirect contract with the Owner (i) shall not have or acquire any title to or ownership rights in any of the Drawings, Specifications or other documents (or copies of any thereof) prepared by the Owner, and (ii) shall not reuse any of such Drawings, Specifications, other documents or copies on extensions of the Project or any other project without

the written consent of the Owner, and specific written verification or adoption by the Owner.

#### ARTICLE 4 – AVAILABILITY OF LANDS; UNDERGROUND FACILITIES; REFERENCE POINTS

4.1 Availability of Lands – All Work shall be performed within easements that are existing and/or being acquired by the Owner, and/or public rights-of-way. The Contractor shall identify any encumbrances or restrictions not of general application for public rights-of-way and easements, but specifically related to use of lands with which the Contractor shall have to comply during its performance of the Work. The Contractor shall provide for all additional lands and access thereto, if any, that may be required for temporary construction facilities or storage of materials and equipment as determined by the Contractor.

#### 4.2 Physical Conditions – Underground Facilities

4.2.1 Shown or indicated – The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at or contiguous to the Project site, is based on information and data furnished to the Owner by the owners of such Underground Facilities or by others. The Owner will not be responsible for the accuracy or completeness of any such information or data; and

4.2.2 The cost of all of the following shall be included in the Contract Unit Prices and the Contractor shall have full responsibility for (i) reviewing and checking such information and data, (ii) locating all Underground Facilities, whether indicated or not, in the Contract Documents, (iii) coordination of the Work with the owners of such Underground Facilities during construction, and (iv) the safety and protection of all such Underground Facilities as provided herein and repairing any damage thereto resulting from the Work.

4.3 Reference Points – The Contractor shall locate the appropriate rights-of-ways and easement boundaries and assure that the Work is completed within the easement and public rights-of-way limits. The Contractor shall protect and preserve markings and easements staking.

## ARTICLE 5 - INSURANCE

5.1 Certificate of Insurance. All insurance required by the Contract Documents shall be obtained from insurance companies that are duly licensed or authorized to issue insurance policies for the limits and coverages required in the jurisdiction in which the Project is located.

The Contractor shall deliver to the Owner with the execution of the Agreement and the other Contract Documents, properly completed certificates of insurance as evidence that the required insurance is in full force and effect.

5.2 Contractor's Liability Insurance. The Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and furnished. The insurance shall provide protection from claims set forth herein which may arise out of or result from the Contractor's performance and furnishing of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed or furnished by the Contractor's Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform or furnish any of the Work, or by anyone for whose acts any of them may be liable:

- (1) claims under workers' compensation, disability benefits, and other similar employee benefits acts;
- (2) claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
- (3) claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;
- (4) claims for damages insured by personal injury liability coverage which are sustained: (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor, or (2) by any other person for any other reason;
- (5) claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there-from; and
- (6) claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle.

5.2.1 General Requirements. The insurance required to be purchased and maintained by the Contractor shall:

- (1) include at least the specific coverages and be written for not less than the limits of liability specified herein or required by Laws or Regulations, whichever is greater;
- (2) include completed operations insurance;
- (3) include contractual liability insurance covering Contractor's indemnity obligations under this Contract;
- (4) contain a provision or endorsement that the coverage afforded will not be canceled, materially changed, or renewal refused until at least 30 days prior written has been given to the Owner;
- (5) remain in effect at least until final payment and at all times thereafter when the Contractor is correcting, removing, or replacing defective Work;
- (6) with respect to completed operations insurance, and any other insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and the Contractor shall furnish the Owner evidence satisfactory to the Owner of continuation of such insurance at final payment and for at least two years thereafter);
- (7) contain a cross liability or severability of interest clause or endorsement. Insurance covering the specified additional insured's shall be primary insurance; and
- (8) with respect to workers compensation and employer's liability, comprehensive automobile liability, commercial general liability, and umbrella liability insurance, the Contractor shall require its insurance carriers to waive all rights of subrogation against the Owner and its officers, employees, and agents.

#### 5.2.2 Workers' Compensation and Employers' Liability Insurance.

This insurance shall protect the Contractor against all claims under applicable state workers' compensation laws, including coverage as necessary for the benefits provided under the United States Longshoremen's and Harbor Workers' Act and the Jones Act. The Contractor shall also be protected against claims for injury, disease, or death of employees which, for any reason, may not fall within the provisions of a workers' compensation law. This policy shall include an "all states" or "other states" endorsement.

The liability limits shall be not less than:

Workers' compensation	Statutory
Employers' liability	\$100,000 each accident
	\$500,000 disease-policy limit
	\$100,000 disease-each employee

5.2.3 Comprehensive Automobile Liability Insurance. This insurance shall be written in comprehensive per occurrence form and shall protect the Contractor, and the Owner against all claims for injuries to members of the public and damage to property of others arising from the use of motor vehicles, either on or off the Project site whether they are owned, non-owned, or hired.

The liability limits shall be not less than:

Bodily injury and Property damage	\$1,000,000 combined single limit for each occurrence
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5.2.4 Commercial General Liability Insurance. This insurance shall be the occurrence type written in comprehensive form and shall protect the Contractor and the Owner, against claims arising from injuries, sickness, disease, or death of any person or damage to property arising out of performance of the Work. The policy shall also include personal injury liability coverage, contractual liability coverage, completed operations and products liability coverage, and coverage for blasting, explosion, collapses of buildings, and damage to underground property. The General Liability Policy shall include a Per Project Aggregate Limit Endorsement CG 25031185 or equivalent.

The liability limits shall be not less than:

Bodily injury and Property damage	\$1,000,000 combined single limit for each occurrence \$2,000,000 general aggregate
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5.2.5 Umbrella Liability Insurance. This insurance shall protect the Contractor and the Owner against claims in excess of the limits provided under workers' compensation and employers' liability, comprehensive automobile liability, and commercial general liability policies. The Owner's Protective Liability policy shall not be considered primary

insurance for the purpose of the Umbrella Policy.

The liability limits shall be not less than:

Bodily injury and Property damage	\$2,000,000 combined single limit for each occurrence \$2,000,000 general aggregate
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- 5.2.6 Owner's Protective Liability Insurance. This insurance shall be issued in the name of the Owner and shall protect and defend the Owner against claims arising as a result of the operations of the Contractor or Contractor's Subcontractors.

The liability limits shall be not less than:

Bodily injury and Property damage	\$1,000,000 combined single limit for each occurrence \$1,000,000 general aggregate
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- 5.3 Builders Risk/Installation Floater Insurance. The Contractor shall purchase and maintain builder's risk/ installation floater insurance coverage for the Work at the site in the amount not less than the amount of this Contract, subject to a deductible of \$500.00. This insurance shall:

- (1) include the interests of the Owner, Contractor and Subcontractors each of whom is deemed to have an insurable interest and shall be listed as a named insured;
- (2) be written on a Builder's Risk/Installation Floater "all-risk" or open peril or special causes of loss policy form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, false-work, Work in transit including ocean transit, and Work in storage at the Project site or at another location acceptable to the Owner and shall insure against at least the following perils: fire, lightning, extended coverage, theft, vandalism and malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage, and damage caused by frost and freezing;
- (3) include expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of engineers and architects); and



- (4) be maintained in effect until final payment is made unless otherwise agreed to in writing by the Owner and Contractor with 30 days' advanced written notice to each other insured.

The Owner will not be responsible for purchasing and maintaining any builder's risk/installation floater insurance to protect the interests of the Contractor, Subcontractors, or others in the Work to the extent of any deductible amount that is identified herein. The risk of loss within such deductible amount shall be borne by the Contractor, Subcontractor, or others suffering any such loss, and if any of them wishes builders risk/installation floater insurance coverage within the limits of such amounts, each may purchase and maintain it at the purchaser's own expense.

5.4 Indemnification. The Contractor shall defined, indemnify, save, and also hold harmless the Owner and its officers, employees and agents against and from any and all causes of action, suite, demands, costs, claims, damages, losses, liabilities, obligations, fines and expenses (including but not limited to attorneys fees), directly or indirectly arising out of or resulting from injury, illness, death, property damage or government order relating to the services of this Contract by the Contractor, it's Subcontractors, agents or employees. This indemnification shall not apply if caused by the willful misconduct or sole negligence of the Owner.

5.5 Waiver of Rights. The Owner and the Contractor intend that all property insurance required by the Contract Documents will protect the Owner, Contractor and Subcontractors, and will provide primary coverage for all losses and damages caused by the perils covered thereby. All such policies shall contain provisions to the effect that in the event of payment of any loss or damage the insurers will have no rights against each other and their respective officers, directors, partners, employees, and agents for all losses and damages caused, by arising out of, or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Subcontractors for losses and damages so caused. None of the above waivers shall extend to the rights that any party making such waiver may have to the proceeds of insurance held by the Owner as trustee or otherwise payable under any policy so issued.

In addition, the Owner waives all rights against the Contractor, Subcontractors, and the officers, directors, partners, employees, and agents of any of them for:

- (1) loss due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to the Owner's property or the Work caused by, arising out of, or resulting from fire or other peril whether or not insured by the Owner, and
- (2) loss or damage to the completed Project or part thereof caused by, arising out of, or resulting from fire or other insured peril covered by any property insurance maintained on the completed Project or part thereof by the

Owner during partial utilization, after Substantial Completion, or after Final Payment.

Any insurance policy maintained by the Owner covering any loss, damage, or consequential loss referred to in this paragraph shall contain provisions to the effect that in the event of payment of any such loss, damage, or consequential loss the insurers will have no rights of recovery against the Contractor, Subcontractors and the officers, directors, partners, employees, and agents of any of them.

5.6 Receipt and Application of Insurance Proceeds. Any issued loss under the property insurance will be adjusted with the Owner and made payable to the Owner as fiduciary for the insured, as their interests may appear, subject to the requirements of any applicable mortgage clause and the requirements of this paragraph. The Owner shall deposit in a separate account any money so received, and shall distribute it in accordance with such agreement as the parties interest may reach. If no other special agreement is reached, the damaged Work shall be repaired or replaced, the moneys so received applied on account thereof, and the Work and the cost thereof covered by an appropriate Change Order.

The Owner as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object, in writing, to the Owner's exercise of this power within 10 days after the occurrence of loss. If such objection is made, the Owner as fiduciary shall make settlement with the insurers in accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, the Owner as fiduciary shall adjust and settle the loss with the insurers.

5.7 Partial Utilization – Property Insurance. If the Owner finds it necessary to use a portion or portions of the Work prior to Substantial Completion of all the Work, such use or occupancy will be accomplished, provided that no such use will commence before the insurers providing the property insurance have acknowledged notice thereof and in writing effected any changes in coverage necessitated thereby. The insurers providing the property insurance shall consent by endorsement on the policy or policies, but the property insurance shall not be canceled or permitted to lapse on account of any such partial use.

## ARTICLE 6 – CONTRACTOR'S RESPONSIBILITIES

6.1. Supervision – The Contractor shall supervise, inspect and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise necessary to perform the Work in accordance with the Contract Documents. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction. The Contractor shall be responsible to see that the completed Work complies accurately with the Contract Documents.

6.2 Superintendence – The Contractor shall at all times maintain a competent resident superintendent, acceptable to the Owner, who shall be readily available at the Project site of the Work. The superintendent shall be the Contractor’s representative at the Project site and shall have authority to act on behalf of the Contractor. All communications to the superintendent shall be as binding as if given to the Contractor.

6.3 Labor, Materials and Construction Equipment.

6.3.1 The Contractor shall provide competent, suitably qualified personnel to construct the Work as required by the Contract Documents. The Contractor shall at all times maintain good discipline and order at the Project site. Except as otherwise required for the safety or protection of persons, the Work, or property at the Project site or adjacent thereto, and except as otherwise indicated in the Contract Documents, all Work at the Project site shall be performed during normal working hours (as provided in the General Requirements) and the Contractor shall not permit overtime work of the performance or Work on Saturday, Sunday or any legal holiday without prior consent of the Owner, except for the emergency work.

6.3.2 The Contractor shall furnish and assume full responsibility for all materials supplied by the Contractor, labor, transportation, construction equipment and machinery, tools, appliances, fuel, temporary facilities and all other facilities and incidentals necessary for the furnishing, performing, testing, and completing the Work.

The Contractor shall protect all materials supplied by the Owner and shall be responsible for all breakage, damages, and losses that may occur in transit or while in its possession.

6.3.3 All materials to be installed shall be of good quality and new, except as otherwise provided in the Contract Documents. All warranties and guarantees specifically called for by the Specifications shall expressly run to the benefit of the Owner. If required by the Owner, the Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials. All materials shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise provided in the Contract Documents.

6.3.4 “Or-Equal” Items – Whenever an item of material is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent or “or-equal”

item or no substitution is permitted, other items of materials of other Suppliers may be accepted by the Owner. If in the Owner's sole discretion, an item of material proposed by the Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it will be considered by the Owner as an "or-equal" item.

#### 6.4 Concerning Subcontractors, Suppliers and Others.

6.4.1 The Contractor shall not employ any Subcontractor, Supplier or other person or organization, whether initially or as a substitute, against whom the Owner may have reasonable objection. The Contractor shall not be required to employ any Subcontractor, Supplier or other person or organization to furnish or perform any of the Work against whom the Contractor has reasonable objection.

6.4.2 The Contractor shall be fully responsible to the Owner for all acts and omissions of the Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with the Contractor just as the Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents shall create for the benefit of any such Subcontractor, Supplier or other person or organization any contractual relationship between the Owner and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any money due any such Subcontractor, Supplier or other person or organization except as may otherwise be required by Laws and Regulations.

6.4.3 The Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect contract with the Contractor. The Contractor shall require all Subcontractors, Suppliers and such other persons and organization performing or furnishing any of the Work to communicate with the Owner through the Contractor.

6.4.4 The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.

6.4.5 All Work performed for the Contractor by a Subcontractor or Supplier shall be pursuant to an appropriate agreement between the Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of the Owner. Whenever any such agreement is with a Subcontractor or Supplier who is listed as an additional insured on the property insurance, the agreement between the Contractor and the Subcontractor or Supplier shall contain provisions

whereby the Subcontractor or Supplier waives all rights against the Owner, the Contractor, and all other additional insured for all losses and damages caused by, arising out of or resulting from any of the perils covered by such policies and any other property insurance applicable to the Work. If the insurers on any such policies require separate waiver forms to be signed by any Subcontractor or Supplier, the Contractor shall obtain the same.

6.4.6 The Contractor agrees to hold the Owner harmless from any and all loss or damage arising out of jurisdictional labor troubles of any kind that may occur during the construction or performance of this Contract.

6.5 Patent Fees and Royalties – The Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of the Owner its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed by the Owner in the Contract Documents. To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner and its officers, employees, agents and others of each and any of them from and against all claims, costs, losses and damages arising out of or resulting from any infringement of patent fights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product or device not specified in the Contract Documents.

6.6 Permits – The Contractor shall be responsible to obtain and pay for all permits necessary to complete the Work.

#### 6.7 Laws and Regulations

6.7.1 The Contractor shall give all notices and comply with all Laws and Regulations applicable to furnishing and performance of the Work. Except where otherwise expressly required by applicable Laws and Regulations, the Owner will not be responsible for monitoring the Contractor's compliance with any Laws and Regulations.

6.7.2 If the Contractor performs any Work knowing or having reason to know that it is contrary to Laws or Regulations, the Contractor shall bear all claims, costs, losses and damages caused by, arising out of or resulting therefrom, however, it shall not be the Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve the Contractor from its obligations.

6.7.3 Kansas Equal Opportunity Employment – The provisions of K.S.A 44-1030 and amendments thereto require mandatory contract provisions in the engagement of workers and the performance of work relating to this Contract are also incorporated herein as fully set out in the following provisions as additional terms:

- (1) The Contractor shall observe the provisions of the Kansas Act Against Discrimination and shall not discriminate against any person in the performance of work under the present contract or because of race, religion, color, sex, disability, national origin or ancestry;
- (2) In all solicitations or advertisements for employees, the Contractor shall include the phrase “Equal Opportunity Employer,” or similar phrase approved by the Kansas Human Rights Commission;
- (3) If the Contractor fails to comply with the manner in which the Contractor is required to report to the Commission in accordance with the provisions of K.S.A 44-1031 and amendments thereto, the Contractor shall be deemed to have breached the present Contract and it may be canceled, terminated or suspended, in whole or in part, by the Owner;
- (4) If the Contractor is found guilty of a violation of the Kansas Act Against Discrimination under a decision or order of the Commission which has become final, the Contractor shall be deemed to have breached this Contract and it may be canceled, terminated or suspended, in whole or in part, by the Owner, and;
- (5) The Contractor shall include the provisions of section (1) through (4) in every Subcontractor’s purchase order so that such provisions shall be binding upon each Subcontractor, Supplier, or Vendor.

6.8 Taxes – The Contractor shall pay all sales, consumer, use and other similar taxes required to be paid the Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

#### 6.9 Use of Premises

6.9.1 The Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to public rights-of-way and the easements, and shall not unreasonably encumber the premises with construction equipment or materials. The Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any adjacent land or areas, resulting from the performance of the Work. Should any claim be made by any such owner or occupant because

of the performance of the Work, the Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim. The Contractor shall, to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless the Owner and anyone directly or indirectly employed by the Owner from and against all claims, costs, losses and damages arising out of or resulting from any claim or action, legal or equitable; brought by any such owner or occupant against the Owner or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

6.9.2 During the progress of the Work, the Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the Work. At the completion of the Work, the Contractor shall remove all waste materials, rubbish and debris from and about the premises as well as all tools, construction equipment, machinery, and surplus materials. The Contractor shall leave the site clean and shall restore to original condition all property not designated for alteration by the Contract Documents.

6.9.3 The Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.10 Safety and Protection – The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.10.1. All persons on the Work site or who may be affected by the Work;

6.10.2 All the Work and materials to be incorporated therein, whether in storage on or off site; and

6.10.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities and underground facilities not designated for removal, relocation or replacement in the course of construction.

The Contractor shall comply with all applicable Laws and Regulations of any public body having jurisdiction for safety of persons or to protect them from damage, injury or loss; and shall erect and maintain all necessary safeguards for such safety and protection. The Contractor shall notify owners of adjacent property and of underground facilities owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, Subcontractor, Supplier or any other person or organization directly or

indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the Contractor (except damage or loss attributable to the fault of the Specifications, Drawings, or to the acts or omissions of the Owner or anyone employed by any of them or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor or any Subcontractor, Supplier or other person or organization directly or indirectly employed by any or them). Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed.

6.11 Safety Representative – The Contractor shall designate a qualified and experienced safety representative at the site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.12 Security – The Contractor shall be responsible for protection of the site, and all Work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

6.13 Emergencies – In emergencies affecting the safety or protection of persons or the Work or property at the Project site or adjacent thereto, the Contractor, without special instruction or authorization from the Owner is obligated to act to prevent threatened damage, injury or loss. The Contractor shall give the Owner written notice within 24 hours of the emergency, if the Contractor believes that any significant changes in the Work or variations from the Contract Documents is required because of the action taken by the Contractor in response to such an emergency. If the Owner agrees, a Change Order will be issued to document the consequences of such action.

6.14 Submittals – Prior to starting Work at the site, the Contractor shall submit to the Owner for review, documentation certifying that materials to be supplied by the Contractor are in compliance with the requirements of these Specifications.

6.15 Continuing the Work – The Contractor shall carry on the Work during all disputes or disagreements with the Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except the Contractor and Owner may otherwise agree to in writing.

#### 6.16 Contractors General Warranty and Guarantee

6.16.1 The Contractor warrants and guarantees to the Owner that all Work shall be in accordance with the Contract Documents and shall not be defective. The Contractor's warranty and guarantee hereunder excludes defects or damages caused by abuse, modifications or improper maintenance or operation by persons other than the Contractor, Subcontractors or Suppliers; or normal wear and tear under normal usage.



6.16.2 The Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of the Work that is not in accordance with the Contract Documents or release of the Contractor's obligation to perform the Work in accordance with the Contract Documents:

- 6.16.2.1. Observations by the Owner;
- 6.16.2.2. Recommendation of any progress or final payment by the Owner;
- 6.16.2.3. Any payment by the Owner to the Contractor under the Contract Documents;
- 6.16.2.4 Use or occupancy of the Work or any part thereof by the Owner;
- 6.16.2.5 Any acceptance by the Owner or any failure to do so;
- 6.16.2.6 Any review of a Submittal by the Owner;
- 6.16.2.7 Any inspection, test or approval by others; or
- 6.16.2.8 Any correction of defective Work by the Owner.

## 6.17 Indemnification

6.17.1 To the fullest extent permitted by Laws and Regulations. The Contractor shall indemnify and hold harmless the Owner from and against all claims, costs, losses and damages (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or other dispute resolution costs) caused by, arising out of or resulting from the performance of the Work, provided that any such claim, cost, loss or damage: (i) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, and (ii) is caused in whole or in part by any negligent act or omission of the Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, regardless of whether or not caused in part by any negligence or omission of a person or entity indemnified hereunder or whether liability is imposed upon such indemnified party by Laws and Regulations regardless of the negligence of any such person or entity.

6.17.2 In any and all claims against the Owner, or employees by any employee (or the survivor personal representative of such employee) of the Contractor, any Subcontractor, any Supplier, any person or organization directly or indirectly

employed by any of them to perform or furnish any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under paragraph 6.17.1 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor, Supplier or other person or organization under workers' compensation acts, disability benefit acts or other employee benefit acts.

6.17.3 The indemnification obligations of the Contractor under paragraph 6.17.1 shall not extend to the liability of the Owner caused by the professional negligence, errors or omission.

6.18 Survival of Obligations – All representatives, indemnifications, warranties and guarantees made in, required by or give in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, shall survive the Final Payment, completion and acceptance of the Work and termination or completion of the Agreement.

#### ARTICLE 7 – OTHER WORK AT THE SITE

7.1 The Owner may perform other work related to the Project at the site by other direct contracts which will contain General Conditions similar to these. In addition, other work may be performed by other utility companies at the Project site.

7.2 The Contractor shall afford each of the other utility companies, their contractors, and the Owner, if the Owner is having additional work performed, proper and safe access to the Project site and a reasonable opportunity for the introduction and storage of materials and construction equipment and the execution of such other work, and shall properly connect and coordinate the Work with their work. The Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other work. The Contractor shall not endanger any work of others by cutting, excavating or other wise altering their work and shall only cut or alter their work with the written consent of the Owner and the others whose work will be affected. The duties and responsibilities of the Contractor under this paragraph are for the benefit of such utility companies and other contractors to the extent that there are comparable provisions for the benefit of the Contractor in said direct contracts between such utility companies and other contractors.

7.3 If the proper execution or results of any part of Contractor's Work depends upon work performed by others, the Contractor shall inspect such other work and promptly report to the Owner in writing any delays, defects or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of the Contractor's Work. The Contractor's failure so to report will constitute an acceptance of such other work as fit and proper for integration with the Contractor's Work except for latent or non-apparent defects and deficiencies in such other work.

## ARTICLE 8 – OWNER’S RESPONSIBILITIES

- 8.1 The Owner will make payments to the Contractor promptly when they are due.
- 8.2 The Owner will execute Change Orders at the appropriate times.
- 8.3 The Owner has the right to stop the Work, suspend the Work, or terminate the services of the Contractor under certain circumstances.
- 8.4 The Owner will not supervise, direct or have control or authority over nor be responsible for, the Contractor’s means, methods, techniques, sequences or procedures of the construction or the safety precautions and programs incident thereto, or for any failure of the Contractor to comply with Laws and Regulations applicable to the performing of the Work. The Owner will not be responsible for the Contractor’s failure to perform the Work in accordance with the Contract Documents.

## ARTICLE 9 – OWNER’S STATUS DURING CONSTRUCTION

9.1 The Owner will furnish a Construction Inspector to periodically observe the Work of the Contractor at the Project site.

9.1.1 Duties and responsibilities of the Construction Inspector will:

- (1) Make visits to the Project site at intervals appropriate to the various stages of construction as the Owner deems necessary in order to observe the progress that has been made and the quality of the various aspects of the Contractor’s executed Work. Based on information obtained during such visits and observations, the Construction Inspector will endeavor for the benefit of Owner to determine, in general, if the Work is proceeding in accordance with the Contract Documents. The Construction Inspector will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.
- (2) Verify that the proper and specified materials are used in the prosecution of the Work
- (3) Determine and maintain records regarding locations of main and appurtenances.

9.1.2 Limitations of Authority – The Construction Inspector will not:

- (1) Undertake any of the responsibilities of the Contractor, Subcontractors, Contractor's superintendent or foreman, or expedite the Work
- (2) Advise on or issue directions relative to any aspect of the means, methods, techniques, sequences or procedures on construction.
- (3) Advise on or issue direction as to safety precautions and programs in connection with the Work.

9.2 Clarifications and Interpretations - The Owner will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as the Owner may determine necessary, which shall be consistent with the intent of and reasonably inferable from the Contract Documents. Such written clarifications and interpretations shall be binding on the Contractor.

9.3 Authorized Variations in Work – The Owner may authorize minor variations in the Work from the requirements of the Contract Documents which are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Any changes in Contract Price as a result of authorized variations in the Work will be based on the Unit Prices indicated on the Bid Form or, if outside the scope of the Unit Prices in the Bid Form, the Cost of Work as provided in Article 11.

9.4 Rejecting Defective Work – The Owner will disapprove or reject Work which the Owner believes to be defective, that the Owner believes will not produce a completed Project that conforms to the Contract Documents, or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. The Owner will also have authority to require special inspection or testing of the Work, whether or not the Work is fabricated, installed or completed.

9.5 Change Orders and Payments:

9.5.1 In connection with Owner's authority as to Change Orders, see Articles 10, 11 and 12.

9.5.2 In connection with Owner's authority as to progress payments, see Article 14.

9.6 Determinations for Unit Prices – The Owner will determine the actual quantities and classifications of Unit Price Work performed by the Contractor.

## 9.7 Decisions on Disputes:

9.7.1 Claims, disputes and other matters relating to the acceptability of the Work or the interpretation of the requirements of the Contract Documents pertaining to the performance and furnishing of the Work shall be referred to the Owner in writing with a request for a decision in accordance with this paragraph. Written notice of each such dispute or other matter shall be delivered to the Owner promptly (but in no event later than two days) after the start of the occurrence or event giving rise thereto, and written supporting data shall be submitted to the Owner within seven days after the start of such occurrence or event unless the Owner allows an additional period of time for the submission of additional or more accurate data in support of such dispute or other matter. The Owner will render a formal decision in writing within ten days after receipt of the complete information in accordance with this paragraph.

9.7.2 The rendering of a decision by the Owner pursuant to paragraphs 9.6 and 9.7 with respect to any such claim, dispute or other matter (except any which have been waived by the making or acceptance of the Final Payment) shall be a condition precedent to any exercise by the Contractor of such rights or remedies as either may otherwise have under the Contract Documents or by Laws and Regulations in respect of any such dispute.

## 9.8 Limitations on Owner's Authority and Responsibility:

9.8.1 Neither Owner's authority nor responsibility under any provision of the Contract Documents nor any decision made by the Owner in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise or performance of any authority or responsibility by the Owner shall create, impose or give rise to any duty owed by the Owner to the Contractor, any Subcontractor, any Supplier, any other person or organization, or employee or agent of any of them.

9.8.2 The Owner will not supervise, direct, control or have authority over or be responsible for the Contractor's means, methods, techniques, sequences or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the furnishing or performance of the Work. The Owner will not be responsible for the Contractor's failure to perform or furnish the Work in accordance with the Contract Documents.

9.8.3 The Owner will not be responsible for the acts or omissions of the Contractor or of any Subcontractor, any Supplier, or of any other person or organization performing or furnishing any of the Work.

9.8.4 The limitations upon authority and responsibility set forth in paragraph 9.8 shall also apply to the Construction Inspector.

#### ARTICLE 10 – CHANGES IN THE WORK

10.1 Without invalidating the Agreement, the Owner may from time to time, order additions, deletions or revisions in the Work. Any such additions, deletions, or revisions beyond the scope of the unit prices indicated in the Bid Form will be authorized by a Change Order.

10.2 Changes to the Contract Price for any additions, deletions or revisions in the Work will be as provided in Article 11.

10.3 The Contractor shall, in advance of completing any Work beyond the scope of the unit price provisions of the Contract Documents, submit to the Owner for approval, an estimate of anticipated costs that will be incurred by the Contractor for said Work. The anticipated costs shall include all labor, construction equipment, materials and all other costs. Upon receiving the Owner's approval, the Contractor shall promptly proceed with the involved Work.

10.4 The Contractor shall not be entitled to an increase in the Contract Price with respect to any Work performed that is not required by the Contract Documents except in the case of any emergency as provided in paragraph 6.13 or in the case uncovering Work as provided in paragraph 13.8.

10.5 The Owner and the Contractor shall execute the appropriate Change Orders covering:

10.5.1 Changes in the Work which are (i) ordered by the Owner pursuant to Article 10, (ii) required because of acceptance of defective Work under paragraph 13.12 or correcting defective Work under paragraph 13.13, or (iii) agreed to by the parties; and

10.5.2 Changes in the Contract Price or Contract Time which are agreed to by the parties.

#### ARTICLE 11 – CHANGE IN THE CONTRACT PRICE

11.1 The Contract Price constitutes the total compensation (subject to authorized adjustments) payable to the Contractor for performing the Work. All duties, responsibilities, and obligations assigned to or undertaken by the Contractor shall be at Contractor's expense without change in the Contract Price.

11.2 The Contract Price shall be based on the actual quantities of work installed and the unit prices listed in the Bid Form. Changes in Contract Price beyond the scope of the unit price provisions of the Contract Documents will only be made by a Change Order.

11.3 The value of any Work covered by a Change Order will be determined as follows:

11.3.1 Where the Work involved is covered by unit prices listed in the Bid Form, by applications of such unit prices to the quantities of the items involved.

11.3.2 Where the Work involved is not covered by unit prices listed in the Bid Form, by a mutually agreed lump sum.

11.3.3 Where the Work involved is not covered by unit prices listed in the Bid Form, by mutual agreement to proceed on the basis of the Cost of the Work plus the Contractor's fee for overhead and profit.

11.4 Cost of the Work – The term Cost of the Work means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work. Except as otherwise agreed to in writing by the Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 11.4.5:

11.4.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the Owner and other personnel employed full-time at the site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include social security contributions, unemployment, excise and payroll taxes, workers compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work after regular working hours, on Saturday, Sunday or legal holidays shall be included in the above to the extent authorized by the Owner.

11.4.2 Cost of all materials furnished and incorporated in the Work, including costs of transportation and storage thereof.

11.4.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from the Contractor or others and the costs of fuel, transportation, loading, unloading, installation, dismantling and removal thereof – all in accordance with the terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

11.4.4 Payments made by the Contractor to the Subcontractors for Work performed or furnished by the Subcontractors. If required by the Owner, the Contractor shall obtain at least three competitive bids from subcontractors acceptable to the Owner and the Contractor and shall deliver such bids to the Owner who will then determine which bids, if any, will be accepted. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work Plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided herein. All subcontracts shall be subject to the other provisions of these Contract Documents insofar as applicable.

11.4.5 The term Cost of the Work shall not include any of the following:

11.4.5.1 Payroll costs and other compensation of the Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks and other personnel employed by Contractor in the Contractor's office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 11.4.1, all of which shall covered by the Contractor's fee.

11.4.5.2 Expenses of the Contractor's office.

11.4.5.3 Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor's for delinquent payments.

11.4.5.4 Costs due to the negligence of the Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials wrongly supplied and making good any damage to property.

11.4.5.5 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraphs 11.4.1 through 11.4.4.

11.4.6 The Contractor's fee allowed to the Contractor for general administration shall be fifteen percent.

11.4.7 Whenever the cost of any Work is to be determined pursuant to paragraph 11.3, the Contractor shall establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to the Owner an itemized cost breakdown together with supporting data.



The Contractor shall, upon receipt of the Notice of Award, be prepared to submit to the Owner for review, a complete list of job classification labor rates, with overheads, and a complete list of equipment rental rates as set forth in this paragraph 11.4.

#### 11.5. Unit Price Work.

11.5.1 Each Unit Price shall be deemed to include an amount considered by the Contractor to be adequate to cover the Contractor's general administration for each separately identified item.

### ARTICLE 12 – CHANGES IN THE CONTRACT TIMES

12.1 The Contract Times will only be changed by a Change Order. Any claim for an adjustment of the Contract Times shall be based on written notice delivered by the Contractor to the Owner promptly (but in no event later than seven days) after the occurrence of the event giving rise to the claim and stating the general nature of the claim. Notice of the extent of the claim with supporting data shall be delivered to the Owner within fifteen days after such occurrence and shall be accompanied by the claimant's written statement that the adjustment claimed is the entire adjustment to which the claimant has reason to believe it is entitled as a result of the occurrence of said event. No claim of an adjustment will be valid if not submitted in accordance with the requirements of this paragraph.

12.2 All time limits stated in the Contract Documents are of the essence of the Agreement.

12.3 Where the Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of the Contractor, the Contract Times will be extended in an amount equal to time lost due to such delay if a claim is made therefore as provided in paragraph 12.1. Delays beyond the control of the Contractor shall include, but not limited to acts or neglect by the Owner, acts or neglect of utility owners or other contractors performing other work, or to fires, floods, epidemics, abnormal weather conditions or acts of God. Delays attributable to and within the control of a Subcontractor or supplier shall be deemed to be delays within the control of the Contractor.

12.4 Where the Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control both the Owner and the Contractor, an extension of the Contract Times in an amount equal to the time lost due to such delay shall be the Contractor's sole and exclusive remedy for such delay. In no event shall the Owner be liable to the Contractor, any Subcontractor, any Supplier, any person or organization, or employee or agent of any of them, for damages arising out of or resulting from (i) delays caused by or within the control of Contractor, or (ii) delays beyond the

control of both parties including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God or acts or neglect by utility owners or other contractor performing other work.

#### ARTICLE 13 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 Notice of Defects: Prompt notice of all defective Work of which the Owner has actual knowledge will be give to the Contractor. All defective Work will be rejected, corrected, or accepted as provided in this Article 13.

13.2 Access to Work – The Owner, independent testing laboratories and governmental agencies with jurisdictional interests will have access to the Work at reasonable times for their observation, inspecting and testing. The Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's site safety procedures and programs so that they may comply therewith as applicable.

13.3 Tests and Inspections – The Contractor shall give the Owner timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with the inspection and testing personnel to facilitate required inspections or tests.

13.4 The Owner may employ and pay for the services of an independent testing laboratory to perform inspections, tests, or approvals that may be required to ensure the Work is being performed in accordance with the Contract Documents except:

13.4.1 For inspections, tests or approvals covered by paragraph 13.5 below;

13.4.2 That costs incurred in connection with tests or inspections conducted pursuant to paragraph 13.8.2 below shall be paid as provided in said paragraph 13.8.2 and

13.4.3 As otherwise specifically provided in the Contract Documents.

13.5 If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested or approved by an employee or other representative of such public body, the Contractor shall assume full responsibility for coordination and obtaining such inspections, tests or approvals, and furnish the Owner the required certificates of inspection, or approval. The Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests or approvals required for the Owner's acceptance of materials to be incorporated in the Work, or of materials, mix and designs submitted for approval prior to the Contractor's purchase thereof for incorporation in the Work.

13.6 If any Work (or the work of others) that is to be inspected, tested or approval is covered by the Contractor without written concurrence of the Owner, it must, if requested by the Owner, be uncovered for observation.

13.7 Uncovering Work as provided in paragraph 13.6 shall be at the Contractor's expense unless the Contractor has given the Owner, timely notice of the Contractor's intention to cover the same and the Owner has not acted with reasonable promptness in response to such notice.

### 13.8 Uncovering Work

13.8.1 If any Work is covered contrary to the written request of the Owner, it shall, if requested by the Owner, be uncovered for observation and replaced at the Contractor's expense.

13.8.2 If the Owner considers it necessary or advisable that covered Work be observed by the Owner or others, the Contractor, shall uncover, expose or otherwise make available for observation, inspection or testing as the Owner require, that portion of the Work in question, furnishing all necessary labor, material and equipment. If it is found that such Work is defective, the Contractor shall pay all costs, losses and damages caused by, arising out of or resulting from such uncovering, exposure, observation, inspection and testing and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others). If, however, such Work is not found to be defective, the Contractor shall be allowed a change in the Contract Price directly attributable to such uncovering, exposure, observation, inspection, testing, replacement and construction.

13.9 The Owner May Stop the Work – If the Work is defective, or the Contractor fails to supply sufficient skilled workers, suitable materials or construction equipment, or fails to furnish or perform the Work in such a way that the completed Work will confirm to the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated. However, the right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or other party.

13.10 Correction or Removal of Defective Work – If required by the Owner, the Contractor shall promptly either correct all defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Owner, remove it from the site and replace it with Work that is not defective. The Contractor shall pay all claims, costs, losses and damages caused by or resulting from such correction or removal (including but not limited to all costs of repair or replacement of work to others).

13.11 Correction Period – The Contractor's first right to correct the defective work originally submitted as completed shall be for a twenty-four month period starting from

the date of Substantial Completion. The correction period for ground surface elevation settlement shall be extended to a twenty-four month period starting from the date of the Final Completion date.

13.11.1 If any other defective Work is found within the correction period, the Contractor shall promptly, without cost to the Owner: (i) correct such defective Work, or, if it has been rejected by the Owner, remove it from the site and replace it with Work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other Work or the work of others resulting there-from. In the event the Contractor fails to comply within a reasonable time from notification by the Owner, the Owner may have the defective Work corrected or the rejected Work removed and replaced by other contractors or by the Owner notwithstanding that the correction period has not expired, and all claims, costs, losses and damage caused by or resulting from the expense of such correction, or resulting from such removal and replacement, shall be paid by the Contractor.

13.11.2 Where defective Work (and damage to other Work resulting there-from) has been apparently corrected, removed or replaced under paragraph 13.11, the correction period hereunder with respect to such Work shall be extended for a period of two years from the Owner's acceptance of the apparent correction to provide the Contractor with the first right to again correct such corrective Work that is subsequently determined within that two years period to be ineffective or in itself defective.

13.12 Acceptance of Defective Work – If, instead of requiring correction or removal and replacement of defective Work, the Owner (and prior to final payment) may prefer to accept it with no change in the Contract Price and/or times. The Contractor shall pay all claims, costs, losses and damages attributable to the Owner's evaluation of and determination to accept such defective Work.

13.13 Owner May Correct Defective Work – If the Contractor fails within a reasonable time after written notice from the Owner to correct defective Work or to remove and replace rejected Work as required by the Owner in accordance with paragraph 13.10, or if the Contractor fails to perform the Work in accordance with the Contract Documents, the Owner may, after three days' written notice to the Contractor, correct and remedy any such deficiency. In exercising the right and remedies under this paragraph the Owner will proceed expeditiously. All claims, costs, losses and damages incurred or sustained by the Owner in exercising such rights and remedies will be charged against the Contractor.

## ARTICLE 14 – PAYMENTS TO CONTRACTOR

14.1 Pay Estimate – The Contractor shall be responsible for preparing and submitting Pay Estimates covering all Work completed, under the unit price provisions and in accordance with the Contract Documents. The Contractor shall be responsible for submitting all appropriate documentation to substantiate all costs incurred by the Contractor for the Work completed. The Owner will issue payment to the Contractor for the Work completed,

14.4 Final Payment – If, on the basis of the Owner’s observations during the final inspection of the Work for each project, the Owner is satisfied that the Work has been properly completed and the Contractor’s other obligations under the Contract Documents have been fulfilled; payments, based upon the Bid Unit Prices, will be made to the Contractor.

14.5 Partial Utilization – The Owner has the right to take possession of and use any portion of the Work after completion, however, this will not constitute acceptance of any Work not in compliance with the Contract Documents.

## ARTICLE 15 – SUSPENSION OF WORK AND TERMINATION OF THE CONTRACT

15.1 Owner May Suspend Work – At any time and without cause, the Owner may suspend the Work or any portion thereof for a period of not more than ninety days by notice in writing to the Contractor which will fix the date on which Work will be resumed. The Contractor shall resume the Work on the date so fixed.

Should weather conditions become extreme to the point that any portion of the Work cannot be completed without loss of integrity of durability, or in the manner as specified, the Owner may order such parts of the Work to be suspended until weather conditions are acceptable.

15.2 Owner May Terminate the Contract – Upon the occurrence of any one or more of the following events:

15.2.1 If the Contractor persistently fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers, suitable materials, adequate construction equipment or failure to proceed with the Work in a timely manner);

15.2.2 If the Contractor disregards Laws and Regulations of any public body having jurisdiction;

15.2.3 If the Contractor disregards the authority of the Owner's inspection; or

15.2.4 If the Contractor otherwise violates in any substantial way any provisions of the Contract Documents;

The Owner may, after giving the Contractor two days' written notice and to the extent permitted by Laws and Regulations, terminate the services of the Contractor, exclude the Contractor from the site, and take possession of the Work. If the unpaid balance of the Contract Price exceeds all claims, costs, losses and damages sustained by the Owner arising out of or resulting from completing the Work such excess will be paid to the Contractor. If such claims, costs, losses and damages exceed such unpaid balance, the Contractor shall pay the difference to the Owner. Such claims, costs, losses and damages incurred by the Owner will be reasonable and when so approved by a Change Order, provided that when exercising any rights or remedies under this paragraph the Owner will not be required to obtain the lowest price for the Work performed.

15.3 When the Contractor's services have been so terminated by the Owner, the termination will not affect any rights or remedies of the Owner against the Contractor that exist or which may thereafter accrue. Any retention or payment of moneys due to the Contractor by the Owner will not release the Contractor from liability.

15.4 Upon two days written notice to the Contractor, the Owner may, without cause and without prejudice to any other right or remedy of the Owner, elect to terminate the Agreement. In such case, the Contractor shall be paid:

15.4.1 For completion of acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

15.4.2 For expenses sustained prior to the effective date of termination in performing services and furnishing materials or as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses.

15.4.3 For reasonable expenses directly attributable to termination.

The Contractor will not be paid on account of loss of anticipated profits or revenue, or other economic loss arising out of or resulting from such termination.

15.5 The Contractor May Stop Work or Terminate of the Contract – If, through no act or fault of the Contractor, the Work is suspended for a period of more than ninety days by the Owner or under an order of a court or other public authority, or the Owner fails to pay the Contractor any sum determined to be due, then may, upon two days written notice to the Owner, and provided the Owner does not remedy such suspension or failure within

that time, terminate the Agreement and recover from the Owner payment on the same terms as provided in paragraph 15.4

15.6 The provisions of this paragraph are not intended to preclude the Contractor from making claims under Articles 11 and 12 for any changes in Contract Price, Contract Time, or expenses or damage directly attributable to Contractor's stopping Work as permitted by paragraph 15.5.

## ARTICLE 16 – MISCELLANEOUS

16.1 Giving Notice – Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if delivered in person to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

### 16.2 Computation of Times.

16.2.1 When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

16.2.2 A calendar day will be twenty-four hours measured from midnight to the next midnight.

16.3 Notice of Claim – Should the Owner or the Contractor suffer injury or damage to person or property because of any error, omission or act of the other party or of any of the other party's employees, agents, or others for whose acts the other party is legally liable, claim shall be made in writing to the other party within two days of the first observance of such injury or damage. The provisions of this paragraph shall not be construed as a substitute for a waiver of the provisions of any applicable statute of limitations or repose.

16.4 Cumulative Remedies – The duties and obligation imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto and, in particular but without limitation, the warranties, guarantees and obligations imposed upon the Contractor and all of the rights and remedies available to the Owner, there under, are in addition to and are not to construed in any way as a limitation of any rights and remedies available to any or all of them which are otherwise imposed or available by Laws and Regulations, by special warranty or guarantee or by other provisions of the Contract Documents and the provisions of this paragraph will be as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

End of Section

## SPECIFICATIONS

### DIVISION 1 – GENERAL REQUIREMENTS

#### 01010 – PROJECT REQUIREMENTS

1. GENERAL DESCRIPTION OF WORK. The Work to be performed under these Contract Documents is generally described as follows:

Furnishing and installing certain materials to maintain the integrity of the drinking water distribution system. In addition, the installation of materials furnished by the Owner, and all of the appurtenant work, as set forth in the Contract Documents. Some of the projects will be: scheduled Maintenance Work, i. e. meter service connections, new fire hydrant assembly, new valves, replacement of defective piping/valves; and some will be Emergencies Repairs due to failures of existing materials and/or damages by third parties.

2. PROJECT SCHEDULE. The anticipated schedule for Work is as follows:

Award Contract	September 13, 2012
Notice to Proceed	September 21, 2012
Final Completion for all the Work	September 20, 2014

The above date for the issuance of the Notice to Proceed is approximate and will be established at the time the Agreement is executed by both parties and acceptable Certificates of Insurance are on file with the Owner.

Should the Owner not issue the Notice to Proceed by the date indicated above, for reasons not caused by the Contractor's failure to comply with the Contract Documents, the Contractor will not be entitled to an increase in Contract Price for any such delays.

Should the Owner issue the Notice to Proceed prior to the date indicated above, the Contractor shall be prepared to begin to perform his obligations under the Contract Documents at the earlier date. The Contractor will not be entitled to an increase in Contract Price for his failure to be prepared to start the Work at the earlier date.



Additional information about this project may be obtained from Bruce B. Hall, PE, Director of Engineering, Suburban Water Company, Bruce@suburbanwaterinc.com, 913.724.1800.

3. COORDINATION. Under each Section of the Contract Documents, the Contractor shall plan, schedule, and coordinate its operations as specified and indicated on the drawings, if any, and in a manner which shall facilitate the simultaneous progress of the Work under other Sections of the Contract Documents and work included under other contracts outside the scope of these Contract Documents.

4. WORK BY OTHERS AND THE OWNER. The Owner and/or its contractor may be performing other projects during the same general time frame as the Work under these Contract Documents. The Contractor shall coordinate its activities and cooperate with the Owner and its contractors.

5. OVERTIME WORK. All of the scheduled Work shall be performed between the hours of 8:30 AM and 4:30 PM, Monday through Friday. No work shall be performed on Saturday, Sundays or holidays without permission of the Owner. However, emergency Work shall be performed immediately after notification by the Owner.

6. ONSITE STORAGE. The Contractor shall store materials and construction equipment at the site of the Work to minimize disruptions and inconvenience to the property owners, residences, vehicle/pedestrian traffic, and other contractors.

7. SALVAGE OF MATERIALS. Existing materials removed, and not reused, as a part of the Work shall become the Contractor's property and shall be immediately removed from the Project site.

Contractor may at his option furnish and install new items in lieu of those specified or indicated to be salvaged and reused, in which case such removed items shall become Contractor's property.

Existing materials removed by the Contractor shall not be reused in the Work except where so specified or indicated.

8. EASEMENTS & RIGHTS-OF-WAY. The Contractor shall confine his construction operations within existing easements and public rights-of-way, and shall use due care in placing construction tools, equipment, excavated materials, materials, and supplies, so as to cause the least possible damage to property, and interference with vehicle and pedestrian traffic.

8.1 On Private Property. The Contractor shall not enter for delivery, occupy, or any other purpose with personnel, tools, equipment, construction materials, or with materials excavated from the pipe trench, any private property without written permission from the owner and tenant of the property. Copies of all

written agreements and memoranda concerning any oral agreements shall be submitted in advance to the Owner.

8.2 Work within Public Rights-Of-Way. All Work performed and all operations of the Contractor, its employees, or subcontractors, within the limits of public rights-of-way, shall be in conformity with the requirements of the authority having jurisdiction over the public rights-or-way. The Contractor shall obtain the excavation and pavement cut permits required for work to be performed within public rights-of-way. Any additional permit requirements, fees, or charges including inspection and flagman fees shall also be the responsibility of the Contractor.

9. OPERATIONS OF EXISTING FACILITIES. Unless authorized by the Owner, the existing water distribution facilities shall be kept in continuous operation throughout the construction period for the scheduled Maintenance Work. No interruptions will be permitted which adversely affects the degree of water service to all customers within the work area.

Provided permission is obtained in advance from the Owner, portions of the existing water distribution facilities may be taken out of service for short periods, when necessary to make Emergency Repairs. The Contractor shall provide temporary facilities and make temporary modifications as necessary to keep the existing facilities in operation and water service to all the customers, if the outage exceeds eight hours in duration.

10. NOTICES TO UTILITY AND AUTHORITIES. The Contractor shall notify all local utilities and pipeline companies when prosecution of any Work pursuant to this Contract that may affect them.

The Contractor shall notify property owners and tenants, in person and through a flyer left at each house and/or building, at least 2 days in advance when prosecution of the scheduled Maintenance Work may affect them. The Contractor shall advise the property owners and tenants of the construction schedule and operations, interruptions that are anticipated, available temporary parking for their use, and to determine if there are special health and welfare requirements that should be relayed in writing to the Owner.

Prior to beginning any Emergency Repairs, The Contractor shall notify all affected property owners and tenants, in person and through a flyer left at each house and/or building.

When it is necessary to temporarily deny access by owners or tenants to their property, or when any utility service connection must be interrupted, the Contractor shall give notice sufficiently in advance to enable the affected persons to provide for their needs. Notices shall conform to any applicable local ordinance and, whether delivered orally or in writing, shall include appropriate information concerning the interruption and instructions on how to limit their inconvenience.

Unless otherwise specified, utility companies shall be notified at least 48 hours prior to excavating near their underground and above ground facilities for scheduled Maintenance Work.

11. CONNECTIONS TO EXISTING WATER MAINS. The Contractor shall make all necessary connections to existing water mains. The Contractor shall protect existing facilities against deleterious substances and damage.

All connections shall be thoroughly planned in advance, and all required construction equipment, materials, and labor shall be on hand at the site prior to beginning the work. Work shall proceed continuously (around the clock), if necessary, or requested by the Owner to complete connections in the minimum time possible. Operation of valves or other appurtenances on existing water mains, when required, shall be coordinated with the Owner.

In the event that a water service interruption affects a customer who for legitimate reasons cannot be without service for the time in question, the Contractor shall reschedule the work to a time the customer can be temporarily without service or provide the customer with a temporary water supply acceptable to the customer.

12. UNFAVORABLE CONSTRUCTION CONDITIONS. During unfavorable weather, wet ground, or other unsuitable construction conditions, the Contractor shall confine his operations for the scheduled Maintenance Work that will not be affected adversely by such conditions. No portion of the Work shall be constructed under conditions that would affect adversely the quality or efficiency thereof, unless special means or precautions are taken by the Contractor to perform the work in a proper and satisfactory manner.

13. CUTTING AND PATCHING. As provided in Contract Documents, the Contractor shall perform all cutting and patching of paved surfaces required for the Work, and as necessary in connection with uncovering Work for inspection or for the correction of defective Work. The Contractor shall perform the removal and replacement of graveled driving surfaces required for the Work.

The Contractor shall not undertake any cutting or demolition which may affect the structural stability of the Work or existing facilities without the Owner's concurrence.

The Contractor shall provide all shoring, bracing, supports, and protective devices necessary to safeguard all Work and existing facilities during cutting and patching operations.

Materials shall be cut and removed to the extent required to complete the Work. Materials shall be removed in a careful manner with no damage to adjacent facilities

or materials. Materials that are not salvable shall be removed from the site and properly disposed of by the Contractor.

All Work on existing facilities affected by cutting operations shall be restored with new materials, or with salvaged materials acceptable to the Owner, to obtain a finished installation with the strength, appearance, and functional capacity required. If necessary, entire surfaces shall be patched and refinished.

14. CLEANING UP. The Contractor shall keep the premises, easements, and public rights-of-way free at all times from accumulations of waste materials and rubbish. The Contractor shall provide adequate trash receptacles about the project site, and shall promptly empty the containers when they are full.

Volatile wastes shall be properly stored in covered metal containers and removed daily. Wastes shall not be buried or burned on the site or disposed on into storm drains, sanitary sewers, streams, or waterways. All wastes shall be removed from the site and disposed of in a manner complying with local ordinances and antipollution laws.

Within 24 hours time after completion of the maintenance work and/or emergency repairs at any location, the Contractor shall remove and dispose of all debris, surplus and waste materials and shall complete the cleanup operation including completion of backfill, permanent street and driveway surfacing, replacing topsoil and finish grading of trenches to conform to existing contours and to provide for the proper drainage. If weather conditions do not permit replacement of permanent pavement surfacing, where required, within a 3 day period, a temporary cold mix asphalt concrete surfacing shall be provided. Permanent pavement replacement shall be performed as soon as practical when weather conditions permit.

The Contractor shall collect and properly dispose of off-site all trash such as paper, plastic cups, cans, and bottles at the end of each working day.

The Contractor shall keep all streets, roads, driveways, public rights-of-way and sidewalks clear and clean of all dirt and mud by the end of each working day or as requested by the Owner.

If the Contractor fails to adequately clean up the premises and the public rights-of-way, the Owner may, at its option, perform the necessary cleanup work in accordance with the General Conditions paragraph covering neglected work by the Contractor.

Adequate cleanup will be a condition for payments of the Work.

15. LOUD NOISE. The Contractor shall take reasonable measures to avoid loud noises. Such measures shall be appropriate for the normal ambient sound levels in the area during working hours. All construction machinery and vehicles shall be equipped with

practical sound-muffling devices, and operated in a manner to cause the least noise with efficient performance of the Work.

16. DUST CONTROL. The Contractor shall take the necessary measures to prevent unnecessary dust. Earth surfaces subject to dusting shall be kept moist with water or by application of a chemical dust suppressant. Dusty materials in piles or in transit shall be covered to prevent blowing.

Paved streets and roads shall be broom cleaned as necessary or when requested by the Owner.

The Contractor shall take appropriate steps to minimize dust from its vehicles and equipment while transversing unpaved surfaces.

17. PRECONSTRUCTION CONFERENCE. Prior to issuance of the Notice to Proceed, a preconstruction conference will be held at a mutually agreed upon time and place. The conference shall be attended by:

Contractor, owner and superintendent

All Subcontractors

Representatives of the Owner

Representatives of gas, telephone, and power companies, and other utilities as appropriate.

Governmental representatives as appropriate

Others as requested by the Contractor or the Owner

The purpose of the conference is to designate responsible personnel and establish a working relationship. Matters requiring coordination will be discussed and procedures for handling such matters established. The agenda will include:

Introduction of each attendee

Procedures

Contractor's contacts with mobile telephone numbers

Contractor's assignments for safety and first aid

The Owner will preside at the conference, will arrange for keeping the notes, and distributing the typed notes following the conference to all persons in attendance.

18. **SITE ADMINISTRATION.** The Contractor shall be responsible for all areas of the project site used by its employees and all Subcontractors in the performance of the Work. The Contractor shall exert full control over the actions of all employees and other persons with respect to the use and preservation of property and existing facilities, except such controls as may be specifically reserved to the Owner or others. The Contractor has the right to exclude from the site all persons who have no purpose to the Work, and shall require all persons on the site (except Owner's employees) to observe the same regulations as he requires of his employees.

19. **SAFETY.** In addition to the safety and protection requirements set forth in the General Conditions, the Contractor shall comply with all local, State, and Federal regulations. These will include, but not limited to:

- \* Hazard Communications
- \* Trenching and Boring
- \* Confined Spaces (Including lockout tags)
- \* Personal Protective Equipment
- \* Blood born Pathogens
- \* Respiratory Protection

20. **QUALITY CONTROL.** The Owner may, at its discretion, retain the services of an independent testing laboratory to perform tests to ensure compliance with the Contract Documents.

Any field sampling and testing will be performed by the Owner or testing laboratory personnel with minimum interference with construction operations. The Owner will determine the exact time and location of field sampling and testing, and may require such additional sampling and testing, as necessary, to determine that materials conform with data previously furnished by the Contractor and to the Contract Documents.

The Contractor shall furnish all sample materials and cooperate in the sampling and field testing activities, interrupting the Work when necessary. When sampling or testing activities are performed in the field by the Owner or testing laboratory personnel, the Contractor shall furnish personnel and facilities to assist in the activities.

The Owner will pay for initial testing services. If the results of such tests indicate noncompliance with data previously furnished by the Contractor or with Contract Documents, cost of all additional testing as may be required to ensure compliance shall be paid by the Contractor.

End of Section

## 01025 – MEASUREMENT & PAYMENT

1. **SCOPE.** This section covers methods of measurements and payment for items of Work under this Contract.

2. **GENERAL.** The Unit Prices shall cover all Work required by the Contract Documents. All costs in connection with the proper and successful completion of the Work, including furnishing the required materials, supplies, and appurtenances; furnishing all insurance, and permits; providing all mobilization, construction equipment, and tools; and performing all necessary labor and supervision to fully complete the Work, shall be included in the Unit Prices bid. All Work not specifically set forth as a pay item in the Bid Form shall be considered a subsidiary obligation of the Contractor and all costs in connection therewith shall be included in the prices bid.

Unless otherwise authorized by the Owner, all public or private property, utilities, structures, or other features regardless of location or character, removed or damaged by the construction activities, whether by the Contractor or its Subcontractors, and whether within or outside the construction limits, utility easements and public rights-of-way, shall be restored as a subsidiary obligation of the Contractor, and no direct payment will be made therefore.

3. **ESTIMATED QUANTITIES.** Because of the nature of the Work under this Contract, estimated quantities are unknown at the time bids are being received. The basis of payment for the Work, the Contract, will be the actual amount of work performed and materials furnished with measurements made as specified hereinafter.

4. **NEW FIRE HYDRANT ASSEMBLY.** Payment for fire hydrant assembly shall be on the basis of the Unit Price bid for each fire hydrant and 6-inch valve installed. The Unit Price shall include all costs in connection with excavation and trenching; backfilling; dewatering; blocking; crushed rock; polyethylene tube materials and installation; branch piping and valve installation; where applicable, fire hydrant extensions; and all other materials and work required to complete the fire hydrant installation which are not included under another bid item.

5. **NEW VALVE.** Payment for the installation of the buried valves shall be on the basis of the Unit Price bid for each size of valve. The Unit Price bid for each size of valve shall include all costs incurred in completing the valve installation work including jointing, over and above the price paid for pipe installation. The Unit Price shall include all costs in connection with blocking, jointing materials including gaskets and bolts, joint restraint, polyethylene tube materials and installation, appurtenances, furnishing and installing valve boxes, and all other work required to complete the valve installation work which is not included under another bid item.

6. **BORES.** Payment for bores will be made on the basis for the Unit Price bid for each size. Measurement for payment will be made horizontally along the longitudinal center line of the bore from end to end. The Unit Price bid for each bore shall include all costs



in connection with excavation and backfilling, including access pit(s), and all other work for and in connection with the bore which is not included in another bid item.

7. EMERGENCY REPAIRS. Payment for the repair and/or replacement of an existing meter service connection shall be on the basis of the hourly rates for each classification of the equipment and labor required to perform the work.

Payment for the installation of replacement sections of ductile- iron (DI) and polyvinyl chloride (PVC) distribution mains shall be on the basis of the hourly rates for the equipment and labor required to perform the work. The number of hours for each laborer and type of equipment will be verified by the Owner at the time of the Work. The Hourly Unit Prices bid shall include all costs in connection with connections to existing mains; fittings; jointing; installation in the trench; joint restraints; polyethylene tube installation for DIP; pressure testing; disinfection and flushing; cleaning; handling and all other work required to complete the main installation and ready the facilities for service that are not covered under another bid item.

8. EXCAVATING, TRENCHING, AND BACKFILLING. The Hourly Unit Price bid for the equipment and labor that involves excavating, trenching, dewatering, and/or backfilling shall include all costs for such Work. No direct payment will be made for excavation, trenching, dewatering, or backfilling. All trenching shall be unclassified as to materials which may be encountered.

9. SURFACE RESTORATION. The Hourly Unit Price bid for the equipment and labor that involves surface restoration shall include all costs for such Work. No direct payment will be made for surface restoration. Surface restoration includes the following:

- \* Cutting, removal, and disposal of concrete and asphalt-concrete pavement/driveways/sidewalks as required to complete the Work; and all other work not included in another bid item.
- \* Furnishing, placement and construction of gravel driveways; concrete base, asphalt base and asphalt surface; including all finishing, curing, compacting; and all other work which is not included under another bid item.
- \* Furnishing, placement, and maintenance of temporary asphalt surfacing as required to properly maintain traffic until permanent pavement repairs can be completed; removal and disposal of temporary surfacing; and all other work which is not included under another bid item.
- \* And all other work required to complete the surface restoration work which is not included under another bid item.

Other pavement removal and replacement outside the limits required for construction, regardless of location or character, removed or damaged by construction operations, including transporting equipment, materials, or workers to or from the Work or any part or site thereof, whether by the Contractor or Subcontractors, and whether within or outside the construction limits, easements, and public rights-of-way, shall be restored as a subsidiary obligation of the Contractor, and no direct payment will be made therefore.

End of Section

## 01500 – TEMPORARY FACILITIES

1. **SANITARY FACILITIES.** The Contractor shall furnish temporary sanitary facilities at the site, as provided herein, for the needs of all construction workers and others performing work or furnishing services at each Project site.

Sanitary facilities shall be of reasonable capacity, properly maintained throughout the construction period, and obscured from public view to the greatest practical extent. If toilets of the chemically treated type are used, at least one toilet shall be furnished for each 20 workers. The Contractor shall enforce the use of such sanitary facilities by all personnel at the site.

The location of the Contractor's sanitary facilities at the site of the Work shall be acceptable to the Owner, the owner and tenant of the private property, and to the authority having jurisdiction over public property upon which the sanitary facilities will be located.

2. **WATER.** Reasonable quantities of water required for water main filling for flushing, pressure testing and disinfecting will be furnished by the Owner, at not cost to the Contractor. The Contractor shall provide all of the necessary facilities to convey water from Owner's facilities to the point of the Contractor's use.

3. **ELECTRICAL POWER.** Contractor shall provide any and all electrical power that may be needed for any use by the Contractor and/or subcontractors.

4. **GAS AND FUEL.** Contractor shall provide any and all gas and fuel needed for operation of the Contractor's equipment or for any other use by the Contractor.

5. **MAINTENANCE OF TRAFFIC.** The Contractor shall conduct his work to interfere as little as possible with public travel, whether vehicular or pedestrian. Whenever it is necessary to cross, obstruct, or close roads, driveways and walks, whether public or private, the Contractor shall provide and maintain suitable and safe bridges, detours, or other temporary expedients for the accommodation of public and private travel and shall give reasonable notice to owners and tenants of the private drives before interfering with them. Contractor shall obtain approval from the appropriate regulatory agencies before any public roads or streets are closed or restricted.

The convenience of the general public and the residents near each project site and the protection of persons and property are of prime importance and shall be provided for by the Contractor in adequate and satisfactory manners. When it is necessary for residents living near the project site to use a portion of road in the Work area, the Contractor shall maintain, within the limits of the Work, that portion of road in a suitable condition for pedestrian and vehicular travel. Such maintenance of traffic shall not be required when the Contractor has obtained written permission from the owner and tenant of the private property, or from the authority having jurisdiction over public property involved, to limit traffic at the designated point.

In making open cut street crossings, the Contractor shall not block more than one-half of the street at a time. Whenever possible, the Contractor shall widen the shoulder on the opposite side of facilitate traffic flow. Temporary surfacing shall be provided as necessary on shoulders. The Contractor shall obtain written approval from the authority having jurisdiction prior to cutting any street.

The Contractor shall provide flagmen as required by the appropriate traffic regulation department of the governing body or agency having jurisdiction there over.

The Contractor shall not close any street or restrict traffic without prior written approval of the appropriate traffic regulation department of the governing body or agency having jurisdiction there over. The Contractor shall notify the appropriate traffic regulation department of the governing body or agency having jurisdiction there over as soon as possible prior to any street closure or traffic restriction as there may be several other public agencies that require notification depending upon location of the Work. The Contractor shall also be responsible for notification of the appropriate police and fire departments, and Med Act Emergency Medical Service in emergency traffic restriction situations.

5.1 Temporary Bridges. Contractor shall construct substantial bridges at all points where it is necessary to maintain traffic across water main construction. Bridges in public streets and roads shall be acceptable to the authority having jurisdiction there over. Bridges erected in private roads and driveways shall be adequate for the service to which they will be subjected. Bridges shall be provided with substantial guardrails and with suitable protected approaches. Foot bridges shall be not less than 4 feet wide, provided with handrails on both sides and uprights of dressed lumber. In addition, snow fencing or similar fencing shall be securely fastened to the handrails of the foot bridges. Bridges shall be maintained in place as long as the conditions of the Work require their use for safety of the public, except that when necessary for the proper prosecution of the Work in the immediate vicinity of the bridge, the bridge may be relocated or temporarily removed for such period as the Owner may permit.

5.2 DETOURS. Where required by the authority having jurisdiction there over that traffic is maintained over any construction work in a public street or road, and the traffic cannot be maintained on the alignment of the original roadbed or pavement, the Contractor shall, at his own expense, construct and maintain a detour around the construction work. Each detour shall include a bridge across the pipe trench and all necessary barricades, guardrails, approaches, lights, signals, signs, and other devices and precautions necessary for protection of the Work and safety of the public. The appropriate traffic regulation department of the governing body or agency having jurisdiction there over shall approve all detours of traffic.

6. BARRICADES AND LIGHTS. All streets, roads, and other public thoroughfares which are closed or restricted to traffic shall be protected by effective barricades on

which shall be placed acceptable warning signs. Barricades shall be located at the nearest intersecting public street on each side of the blocked section.

The Contractor shall be responsible for all traffic control devices and procedures necessary at the project site including installation, maintenance, and removal of such devices. All traffic control devices and procedures shall be as specified and shall comply with the standards of the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and with the appropriate traffic regulation department of the governing body or agency having jurisdiction there over for approval prior to the commencement of the Work.

All open trenches and others excavations shall be enclosed by suitable temporary fencing, barricades, signs, and lights to provide adequate protection to the public. Obstructions such as stored materials and construction equipment shall be provided with similar warning signs and lights.

All barricades and obstructions shall be illuminated with warning lights from sunset to sunrise. Materials storage and performance of the Work on or alongside public streets shall cause the minimum obstruction and inconvenience to the traveling public.

All barricades, signs, lights, and other protective devices shall be installed and maintained in conformity with applicable statutory requirements and, where within street rights-of-way, as required by the authority having jurisdiction there over.

7. TRAFFIC CONTROL. In addition to the requirements of the maintenance of traffic and barricades and lights paragraphs in this section, traffic control shall be as set forth herein.

During periods of inclement weather, rush-hour traffic, or during periods of unusually heavy traffic, the Owner may require the Contractor to cease operations in order to adequately handle the traffic. The Owner reserves the right to require the suspension or delay of certain operations, or the expediting of other operations, at no additional cost to the Owner, to provide a proper sequence of operations which will promote the satisfactory movement of traffic. The Owner may require additional barricades, lights, or flagmen at any time or at any place necessary for proper protection of traffic, but approval by the Owner of the Contractor's method of operation shall not relieve the Contractor of his responsibility to protect traffic.

The use and duration of using heavy steel plates to convey traffic across water main trenches shall be kept to a minimum. The purpose of this requirement is to minimize the sound to the residents, institutions, commercial establishments, etc. The Owner reserves the right, at no additional cost to the Owner, to require the Contractor to complete certain operations of the water main trenches installation and street repaving so steel plates are not required.

The Contractor shall take extra precautions to provide and maintain emergency access on all streets and roads and to all residential, commercial, and other properties for police and fire departments and Med Act Emergency Medical Service throughout the construction period.

The Contractor shall maintain the use of existing walks for pedestrians at all times.

8. FENCES. All existing fences affected by the Work shall be maintained by the Contractor until completion of the Work. Fences which interfere with construction operations shall not be relocated or dismantled until permission is obtained in writing from the owner of the fence and tenant, and the period the fence may be left relocated or dismantled has been agreed upon. The Owner shall be kept informed of all arrangements between property owners, tenant and the Contractor. Where fences must be maintained across construction areas, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.

Upon completion of the Work across any tract of land, the Contractor shall restore all fences to their original or to a better condition and to their original location.

9. PROTECTION OF LIVESTOCK. Where the alignment of the water main will be within fenced areas along certain portions of the project, the Contractor shall be responsible for contacting the owner and/or tenant of the property to verify the existence of livestock on the land. The Contractor shall be responsible for coordination with the owner and/or tenant of the property to assure the protection of livestock.

In areas where existing fences are removed by the Contractor, Contractor shall provide temporary fencing to keep livestock contained until such time as the construction is complete and the vegetation has been re-established. Then the Contractor shall remove the temporary fencing.

10. PROTECTION OF PUBLIC AND PRIVATE PROPERTY. The Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, wires, cables, drains, water wells and other underground construction uncovered or otherwise affected by its construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy wires, fences, mailboxes, and other surface structures affected by construction operations shall be restored by the Contractor to their original or better condition, whether within or outside the easement. Unless otherwise specified, all replacements shall be made with new materials.

Sodded and landscaped areas on improved property (yards) shall be disturbed only to the extent required to permit construction. Such areas shall not be used as storage sites for construction supplies and, insofar as practicable, shall be kept free of stockpiles or excavated materials.

The Contractor shall be responsible for all damage to streets, roads, driveways, sidewalks, shoulders, ditches, embankments, culverts, bridges, and other public or

private property, regardless of location or character, which may be caused by transporting equipment, materials, or workers to or from the Work or any part of site thereof. The Contractor's construction and the Contractor shall make immediate, satisfactory and acceptable arrangements with the owner of, or the agency or authority having jurisdiction over, the damaged property concerning its repair or replacement or payment of costs incurred in connection with the damage property concerning its repair replacement or payment of costs incurred in connection with the damage.

Should the Contractor's operations damage any existing underground or aboveground utilities, structures, or other construction, the Contractor shall immediately notify the authority owning or having jurisdiction over and control of the utility, structure, or other construction, and make a written report of such damage. A copy of the report shall be submitted to the Owner. The damaged item shall be repaired immediately by and at the expense of the Contractor unless otherwise specified or acceptable to the authority or owner having jurisdiction over, or to the Owner.

All utilities, structures, irrigation systems, or other construction damaged by the Contractor's operations shall be replaced, or otherwise restored in accordance with the local ordinances, standards, and requirements of the applicable authority or owner having jurisdiction there over and shall be subject to acceptance by the Owner.

All new and existing fire hydrants and water valves shall be kept free from obstruction and available for access and use at all times.

11. TREE AND PLANT PROTECTION. Tree and plant protection is of prime importance. Except where otherwise authorized, indicated, or specified, no trees or plants shall be removed. Tree protection shall also include trimming, when necessary, to prevent damage by construction equipment.

Trees and plants to be removed shall be removed in such a manner as to avoid injury to surrounding trees and plants. The Contractor shall be responsible for disposal off-site of all trees and plants removed or damaged.

12. ACCESS ROADS. Contractor shall establish and maintain temporary access roads to various parts of the site as required to complete the Work. Such roads shall be available for the use of all others performing work or furnishing services in connection with the Project.

13. PARKING. The Contractor shall provide and maintain suitable parking areas for the use of all construction workers and others performing work or furnishing services in connection with the Project, as required to avoid any interfere with public and/or private traffic, Owner's operations; or construction activities. The Contractor shall clean up all parking areas used and return the area to its original condition.

The location of the Contractor's parking areas shall be acceptable to the Owner and the owner and tenant of private property or to the authority having jurisdiction over public property upon which the parking area will be located.

14. RESIDENTIAL PARKING. The Contractor shall provide appropriate areas for residents to park their vehicles during the construction operations on and adjacent to their properties, if required. This shall include making appropriate areas available to the residents by not storing construction materials or equipment in these areas and providing signs and other notification methods acceptable to the Owner for instructing the residents on the location of the temporary parking and its intended use.

15. TEMPORARY DRAINAGE PROVISIONS. The Contractor shall provide for the drainage of storm water and such water as may be applied or discharged on the site in performance of the Work. Drainage facilities shall be adequate to prevent damage to the Work, the site, and adjacent property.

Existing drainage channels and conduits shall be cleaned, enlarged, or supplemented as necessary to carry all increased runoff attributable to Contractor's operations. Dikes shall be constructed as necessary to divert increased rainfall runoff from entering adjacent property (except in natural channels), to protect Owner's facilities and the Work, and to direct water to drainage channels or conduits. Adequate on-site retention shall be provided as necessary to prevent downstream flooding.

16. EROSION CONTROL. The Contractor shall prevent erosion of soil on the site and adjacent property resulting from its construction activities. Effective measures shall be initiated prior to the commencement of clearing, grading, excavation, or other operation that will disturb the natural protection.

Work shall be scheduled to expose areas subject to erosion for the shortest possible time and natural vegetation persevered to the greatest extent practicable. Temporary storage of excavated soil shall be located, and construction traffic routed, to minimize erosion.

17. POLLUTION CONTROL. The Contractor shall prevent the pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities. No sanitary wastes will be permitted to enter any drain or watercourse other than adequate sanitary sewers. No sediment, debris, or other substance shall be permitted to enter sanitary sewers and reasonable measures will be taken to prevent such materials from entering any drain or watercourse.

End of Section

## DIVISION 2 – SITEWORK

### 02220 – EXCAVATION AND TRENCHING

1. **SCOPE.** This section covers excavation, trenching, and boring work and shall include the necessary clearing, grubbing, and preparation of the site; removal and disposal of all debris; the handling, storage, transportation, and disposal of all excavated material; all necessary or required sheeting, shoring, and protection work; preparation of sub-grades; pumping and dewatering as necessary; protection of adjacent properties; backfilling; surface restoration; sodding, seeding, and other appurtenant work.

2. **GENERAL REQUIREMENTS.** With reference to the terms and conditions of the construction standards for excavations set forth in the OSHA “Safety and Health Regulations for Construction”, Chapter XVII of Title 29, CFR, Part 1926, the Contractor shall employ a competent person to act upon all pertinent matters of the Work of this section.

Excavations shall provide adequate working space and clearances for the work to be performed therein. In no case shall excavation faces be undercut.

Sub-grade surfaces and walls of trenches shall be clean and free of loose material of any kind when concrete is placed thereon.

Backfilling during freezing weather shall not be done except with permission of the Owner. No backfill materials shall be placed on frozen surfaces, nor shall frozen materials, snow, or ice be placed in any backfill.

3. **CLEARING.** All clearing shall be performed as necessary for access and construction of the water main and appurtenances. Tree and plant protection shall be in accordance with TEMPORARY FACILITIES section. Cleaning up shall be in accordance with the PROJECT REQUIREMENTS section.

4. **CLASSIFICATION OF EXCAVATED MATERIALS.** No classification of excavated materials will be made. The excavation, trenching, and boring work shall include the removal and subsequent handling of all materials excavated or otherwise removed in performance of the Work, regardless of the type, character, composition, or condition thereof.

5. **TRENCH EXCAVATION.** No more trenches shall be excavated than necessary to expedite the pipe laying work in a safe manner. Prior to the end of each working day, the Contractor shall have all trenches backfilled and shall leave not more than 10 feet length of trench open only if properly barricaded, and flared with adequate warning signs.

All trench excavation shall be open cut from the surface.



Extra precautions are required for excavation of the water main and appurtenances in close proximity to existing utilities, structures, trees, shrubs, and other features.

If the trench is excavated too deep, it shall be backfilled with an acceptable soil to the proper grade for pipe installation and properly compacted at no additional cost to the Owner.

5.1 Alignment, Grade, and Minimum Cover. The alignment and grade or elevation of each new water main shall match the alignment and grades of adjoining existing mains. Vertical and horizontal alignment of the pipe, and the maximum joint deflection used in connection therewith, shall be in conformity with requirements of the pipe manufacturer.

Unless otherwise acceptable to the Owner, trenches shall be excavated to a depth sufficient to provide a minimum depth of backfill cover over the top of the pipe of forty-two inches of backfill cover below the established top of the final grade. Measurement of pipe cover depth shall be made vertically from the outside top of pipe to finished ground or pavement surface elevations.

5.2 Limiting Trench Widths. Trenches shall be excavated to a width that will provide adequate working space and sidewall clearances for proper pipe installation, and jointing.

Cutting trench banks on slopes to reduce earth loads, to prevent sliding and caving shall be done only in areas where the increased trench width will not interfere with surface features or encroach on public rights-of-way and/or easement limits.

5.3 Mechanical Excavation. The use of mechanical equipment will not be permitted in locations where its operation would cause damage to utilities, trees, wells, culverts, other existing property, or structures above or below ground. In all such locations, hand-excavating methods shall be utilized.

Mechanical equipment used for trench excavation shall be of the proper type, size, design, and construction, and shall be operated so that the trench excavation bottom elevation is controlled, and that trench alignment is such that pipe when accurately installed to specified alignment is centered in the trench with adequate clearance between the pipe and sidewalls of the trench. Undercutting the trench sidewall to obtain clearance will not be permitted.

Wherever Work is along existing pavement that is outside the trench excavation and pavement restoration limits and is to be retained, traction equipment with lugs will not be permitted.

5.4 Cutting Portland Cement Concrete and Asphalt Concrete Surface Construction. Where cutting Portland Cement concrete pavement and asphalt concrete pavement above the trenches excavated for the water main shall be not larger than necessary to provide adequate working space for proper installation of pipe and appurtenances. Trench width at the bottom shall not be greater than at the top and no undercutting will be permitted.

Cutting shall be started with a concrete saw in a manner which provides a clean groove at least 2 inches deep along each side of the trench and along the perimeter of cuts for structures. Existing pavement removal shall be performed in a manner to prevent disturbing or damaging the remaining adjacent pavement.

Immediately prior to construction of the new pavement, a second cutting of the concrete pavement and asphalt concrete pavement above the trenches excavated for the water main shall be removed so that a shoulder not less than 12 inches in width at all points is left between the cut edge of the pavement and the top edge of the trench.

Pavement removed for connections to existing water mains or structures shall not be of greater extent than necessary for the installation of the new water facilities.

Where the trench crosses driveways or other surface construction, the surface construction shall be removed and replaced between existing joints or between saw cuts as specified for pavement.

Any additional width of pavement replacement required due to trenching operations beyond that which is specified shall be an obligation of the Contractor and no additional payment will be made by the Owner for such work.

5.5 Excavation Below Pipe Sub-grade. Pipe trenches in rock excavations shall be excavated below the underside of the pipe to provide for the installation of a proper soil embedment. A minimum of 12" depth of soil embedment materials shall be placed and compacted above the rock in the trench bottom prior to installation of the pipe.

5.6 Artificial Foundations in Trenches. Whenever unsuitable or unstable soil conditions are encountered, trenches shall be excavated below grade and the trench bottom shall be brought to grade with suitable material prior to installation of the pipe.

5.7 Bell Holes. Bell holes shall provide adequate clearance for tools and methods used in installing pipe and making the joints. No part of any bell or coupling shall be in contact with the trench bottom or the trench walls.

6. ROCK EXCAVATION. The Contractor shall make such exploration as he desires to determine for himself the amount of rock excavation in trenches that may be encountered.

All excavated material that is unacceptable for trench backfill shall be kept separate from Project excavated materials to be used for trench backfill. Topsoil shall be kept separate from other Project excavated materials. All material that is unacceptable for trench backfill shall be removed from the site and disposed of off-site by the Contractor at no additional cost to the Owner.

7. BORING. If required, bores shall be made with augers with minimal damage to the surface.

8. **BLASTING.** Blasting will not be permitted.

9. **UNAUTHORIZED EXCAVATION.** Except where otherwise authorized, or specified, all materials excavated below the trench bottom, shall be replaced, by and at the expense of the Contractor, with properly compacted backfill.

10. **DEWATERING.** The Contractor shall provide and maintain adequate dewatering equipment to remove and dispose of all water within the excavations and/or trenches.

Each excavation shall be kept dry during sub-grade preparation and continually thereafter until the pipe to be installed therein, is completed to the extent that no damage from hydrostatic pressure, flotation, or other causes will result.

All excavations which extend down to or below groundwater shall be dewatered by lowering and keeping the groundwater level beneath such excavations 12 inches or more below the bottom of the excavation.

Surface water shall be diverted or otherwise prevented from entering excavated areas or trenches to the greatest extent practicable without causing damage to adjacent properties.

The Contractor shall be responsible for the condition of any pipe or conduit which he may use for drainage purposes, and all such pipes or conduits shall be left clean and free of sediment.

11. **SHEETING AND SHORING.** Except where banks are cut back on a stable slope, excavation for trenches shall be sheeted, braced, and shored as necessary to prevent caving or sliding and to protect the construction workers and the existing construction adjacent to excavations.

Trench sheeting shall not be pulled before backfilling unless the pipe strength is sufficient to carry trench loads based on trench width to the back of sheeting. If the pipe strength is sufficient to carry the trench loads, the sheeting shall be removed gradually as the backfilling operation proceeds in a manner that will not cause the instability of the trench walls and overloading the pipe.

Where trench sheeting is left in place, such sheeting shall not be braced against the pipe, but shall be supported in a manner which will preclude concentrated loads or horizontal thrusts on the pipe. Cross braces installed above the pipe to support sheeting shall be removed after the installation of the pipe completed.

12. **STABILIZATION.** Sub-grades for trench bottoms shall be firm, dense, and thoroughly compacted and consolidated; free from mud and muck; and sufficiently stable to remain firm and intact under the feet of the workers.

Sub-grades for trench bottoms, which are otherwise solid but which become mucky on top due to construction operations, shall be reinforced with one or more layers of crushed rock or gravel. The stabilizing material shall be spread and compacted to a depth of not more than 4 inches; if the required depth exceeds 4 inches, the unsuitable shall be removed and replaced with acceptable material. Not more than ½ inch depth of mud or muck shall be allowed to remain on stabilized trench bottoms when the pipe is placed thereon. The finished elevation of stabilized sub-grades for concrete structures shall not be above sub-grade elevations indicated on the Drawings.

13. TRENCH BACKFILL. All trench backfill shall be compacted to ninety-five percent of the maximum density as determined by ASTM D698 in public rights-of-way, under paved surfaces, and driveways. Compaction shall be ninety percent in all other areas.

13.1 Project Excavated Material. After installation of the pipe, the trench shall be backfilled to a depth of one foot (1') above the top of the pipe. Project excavated material shall be used for compacted backfill when the project excavated material is finely divided and free from debris, organic material, cinders or other corrosive material, and stones larger than 2 inches in greatest dimension. Acceptable excavated material shall be used for compacted backfill to within 6" below final grade. In all disturbed areas, topsoil removed during trench excavation shall be placed at the top of the trench backfill and compacted to a depth to match the topsoil depth removed.

Project excavated materials shall be placed in uniform layers not exceeding 8 inches in un-compacted thickness. Each layer of material shall have moisture content within the specified ranges.

Backfill consisting of clays shall have the moisture content within the specified ranges.

Backfill consisting of clays shall have the moisture conditioned to between 0 to +4 percent of the optimum moisture content as determined by ASTM D698. The moisture content in backfill consisting of sands shall be adjusted as required to provide the specified density. The material in each layer shall be wetted or dried as required and thoroughly mixed to ensure uniform moisture content and adequate compaction.

Un-compacted backfill layer thickness may be increased to 12 inches for non-cohesive material if the Contractor demonstrates to the satisfaction of the Owner that the specified compacted density will be obtained. The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging loads to the pipe.

13.2 Trench Backfill Under Surfaced Roadways. All trench backfill within the public rights-of-way shall conform to the requirements of the governing body having authority over work within the public rights-of-way.

Roadway surfaces, in connection with trench backfill, shall include gravel, asphalt or concrete surfaces in highways, streets, and driveways.

14. **GRADE RESTORATION.** The Contractor shall restore all areas disturbed by construction activities to original grade, and in equal or better condition. Ruts, deep tracks, and ridges shall be eliminated. All areas shall drain properly.

15. **SODDING AND SEEDING.** The Contractor shall sod all yard areas disturbed by construction activities with fescue-sod. The Contractor shall seed all pasture areas and public rights-of-way disturbed by construction activities with fescue-seed. Topsoil shall be returned to all disturbed areas prior to sodding and/or seeding. The Contractor shall initially water all sodded and seeded areas, thereafter, watering will be the responsibility of the property owner.

16. **PAVEMENT SUBGRADE PREPARATION.** Prior to placing any roadway surfacing materials, the trench sub-grade shall be properly rolled with a fully loaded water truck or equivalent. The Owner will observe the rolling and identify any soft areas in the trench sub-grade. All soft materials identified by the Owner shall be removed and replaced by the Contractor with suitable material and compacted as specified herein.

17. **DRAINAGE MAINTENANCE.** Trenches across roadways, driveways, and other traffic ways adjacent to drainage ditches or watercourses shall not be backfilled prior to completion of backfilling the trench on the upstream side of the traffic way, to prevent impounding water after the pipe has been installed. Bridges and other temporary structures required to maintain traffic across such unfilled trenches shall be constructed and maintained by the Contractor. Backfilling shall be performed so that surface and ground water will not accumulate in unfilled or partially filled trenches. All material deposited in roadway ditches or other watercourses crossed by the alignment of the trench shall be removed immediately after backfilling is completed and the original section, grades, and contours of ditches or watercourses shall be restored. Surface drainage shall not be obstructed any longer than necessary.

18. **DISPOSAL OF EXCESS EXCAVATED MATERIALS.** Except as otherwise provided herein or permitted by the Owner, all excess excavated materials shall be disposed of by the Contractor away from the site of the work as a subsidiary obligation of the Contractor and no separate payment will be made therefore.

Broken concrete and other debris resulting from pavements or driveways removal, excavated rock in excess of the amount permitted to be placed in the trench backfill, debris encountered in excavation work, and other similar waste materials shall be disposed of away from the site of the work as a subsidiary obligation of the Contractor and no separate payment will be made therefore.

If acceptable to the Owner and the property owner, excess soil from excavations located in unimproved and undeveloped areas may be distributed directly over the pipe trench to a maximum depth of 6 inches above the original surface elevation at and across the trench and sloping uniformly each way. Material thus wasted shall be carefully finished to a smooth and uniform surface without obstructing drainage at any point. Wasting of

excess material in the above manner will not be permitted were the line of trench crosses or is within a public road right-of-way or is within an existing utility easement. The disposal of waste and excess excavated materials, including hauling, handling, grading, and surfacing, shall be a subsidiary obligation of the Contractor and no separate payment will be made therefore.

19. SETTLEMENT. The Contractor shall be responsible for responsible for all settlement of backfill, fills, embankments, and any auger overburden surface or overlying structural features which may occur.

The Contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 3 days after notice from the Owner, or sooner if requested by Owner depending on the critical nature of the settlement.

End of Section

## 02620 –PIPE AND FITTINGS

1. SCOPE. This section covers the installation of 2-inch thru 12-inch polyvinyl chloride (PVC) pipe and 16-inch thru 24-inch ductile iron pipe (DIP) and fittings for conveying potable water. The pipe and fittings furnished by the Owner will be complete with all jointing materials, caps or plugs, and polyethylene tube material and tape. The Contractor shall receive/load the materials at the Owner's shop and deliver/unload it at each Project site.

All connections to existing water mains shall be made with all new joint gaskets, bolts, and nuts required to complete the connection.

## 2. MATERIALS AND INSTALLATION

2.1 PIPE. The existing and PVC pipe to be furnished by the Owner conforms to the latest revisions of American Water Works Association (AWWA) Standard C900, Pressure Class 200.

The existing and DIP to be furnished by the Owner conforms to the latest revisions of AWWA Standard C151, Pressure Class 200.

2.2 FITTINGS. The existing and PVC to be furnished by the Owner conforms to the latest revisions of AWWA Standard C900.

The existing and DI fittings furnished by the Owner conforms to the latest revisions of AWWA Standard C110, 350psi pressure rating.

2.3 JOINTS. The PVC and DIP joints are and will be predominately of the push-on type, with gaskets of synthetic rubber certified as suitable for chlorinated potable water. Restrained joints for DIP are and will be of the Flex-Ring type.

2.4 SOLID SLEEVE COUPLINGS. The mechanical joint (MJ) solid sleeve couplings will be as manufactured by one of the following manufacturer's standard: Dresser, Smith-Blair or Romac, without pipe stops. The gaskets are MJ for DIP or transition for PVC with glands, and oil-resistant synthetic rubber suitable for chlorinated potable water.

All of the piping and fittings shall be installed in accordance with the manufacturer's recommendations and the latest revisions of AWWA Standard C600 & C605.

3. INSPECTION. Pipe, fittings and appurtenances furnished by the Owner shall be carefully examined by the Contractor for cracks and other defects at the Owner's shop prior to loading for transport to each Project site. The Owner shall be immediately notified of all defectives. The Owner will be responsible for replacing all of the defective materials prior to the Contractor loading the materials for transport at the Owner's shop

The Contractor shall be responsible for replacing, at its expense, all of the materials damaged during transporting and while at each Project site.

4. **HANDLING.** Pipe, fittings, and appurtenances shall be handled in a manner that shall ensure installation in sound, undamaged condition and conforming to AWWA Manual M23. Equipment, tools, and methods used in handling and installing pipe and fittings shall not damage the pipe and fittings.

5. **LAYING PIPE AND FITTINGS.** Pipe and fittings shall be protected from lateral displacement by careful placement of the backfill material. No pipe or fittings shall be installed under unsuitable weather or trench conditions.

Pipe shall be installed with the bell ends facing the direction of the existing pipe except when reverse laying is required and specifically authorized by the Owner.

Pipe and fittings installed in rock trenches shall be over excavated twelve inches deeper than the outside bottom of the pipe and fitting to provide for the placement of suitable soil embedment material. The soil embedment material shall be placed in the trench prior to the installation of the pipe and fitting.

6. **CUTTING PIPE.** When required, pipe cutting shall be done in a neat manner, without damage to the pipe. Cuts shall be smooth, straight, and at right angles to the pipe axis. After cutting, the end of the pipe shall be dressed to remove all roughness and sharp edges. The cut ends of push-on joint pipe shall be suitably beveled as necessary to provide proper installation.

7. **CLEANING.** The interior of all pipe and fittings shall be thoroughly cleaned of all foreign material prior to installation and shall be kept clean until the work has been accepted. Before jointing, all joint contact surfaces shall be wiped clean, and kept clean until jointing is completed.

Precautions shall be taken to prevent foreign material from entering the pipe during installation. Debris, tools, clothing, or other materials shall not be placed in or allowed to enter the pipe. Whenever the pipe installation is stopped, the open end of the pipe shall be sealed to prevent trench water and foreign objects from entering the pipe.

8. **ALIGNMENT.** Piping shall be installed to the lines and grades to match the existing adjoining pipe.

Water mains intended to be straight shall be installed straight line. Deflections at a joint from a straight line or grade shall not exceed the allowable angles recommended by the pipe manufacturer.

Either shorter pipe sections or fittings shall be installed where required to conform to the required alignment or grade.



9. **PUSH-ON AND RESTRAINED JOINTS.** The pipe manufacturer's instructions and recommendations for proper jointing operations shall be followed. All joint surfaces shall be lubricated with non-toxic water-soluble materials immediately before the joint is completed. Lubricant shall be suitable for use in portable water, shall impart neither taste nor odor to the conveyed water, shall be stored in closed containers, and shall be kept clean. Each spigot end shall be suitably beveled to facilitate assembly.

10. **VALVES AND HYDRANTS.** All valves and fire hydrants shall be operated prior to installation in the trench from completely close to open. The Owner shall be immediately notified of any defective valves or hydrants so the Owner can replace same.

Replacement valves and hydrants shall in general be placed where the existing valve or hydrant was located. Specific locations may be adjusted in the field for just cause with concurrence of the Owner.

All new valve and hydrant installations shall be plumb and according to the detail on the drawings, and shall include all Work to make the installation complete. When applicable, hydrant installation shall include the installation of a hydrant extension at no additional cost to the Owner. Hydrant extensions shall be installed according to the manufactures recommendations.

Unless acceptable to the Owner, all fire hydrants shall be installed with the 5 ¼-inch pumper-nozzle facing the nearest street.

All valve installations shall be in accordance with the detail on the drawings, and shall include all compaction necessary to prevent lateral movement of the valve box or settlement around the valve box. The top of the valve boxes shall be installed flush with existing or proposed final grade.

All new valves shall be in the open position when installed and closed only when requested by the Owner. All fire hydrants shall be left in the closed position when installed and tagged as "out of service."

11. **FITTINGS.** Mains shall be installed with the least number of fittings practicable. Unless otherwise directed by Owner, the Contractor shall not backfill the excavations until the Owner has completed inspecting and obtaining field location ties.

12. **CONNECTIONS WITH EXISTING WATER MAINS.** This item shall consist of connecting new water mains to existing water mains. Connections between new work and existing piping shall be made using fittings and valves suitable for the conditions encountered. Each connection with an existing water main shall be made at a time and under conditions that will least interfere with water service to customers, and as authorized by the Owner. Facilities shall be provided for the proper dewatering, de-chlorinating, and disposal of all water removed from the dewatered mains and excavations without damage to adjacent properties.

Special care shall be taken to prevent contamination the existing and new piping when dewatering, cutting into, and making connections. Trench water, mud, or other contaminating substances shall not be permitted to enter the new or existing piping. All materials used to complete the connections shall be sprayed or swabbed with a chlorine solution prior to completing the connection.

The connection shall include all labor, tools, and equipment necessary to complete the work. The Contractor shall prospect in advance, as necessary, to locate the connection point, make all preparations necessary to complete the connection to existing main, and complete all work necessary to place the existing main back into service as soon as possible. Customers shall be notified in advance by the Contractor of the temporary interruption in their water service, and the labor necessary for notification shall be included in the Unit Price for the installation of the pipe.

13. SEPERATION FROM SANITARY SEWERS. New water mains shall be separated from existing sanitary sewers, septic laterals, and other pollution sources in accordance with the requirements of the Kansas Department of Health and Environment.

Where the new water main and a sanitary sewer cross each other, the water main shall be installed at an elevation at which the bottom of the water main is at least 24 inches above the top of the sanitary sewer if minimum cover for the water main can be maintained. At locations where the water main cannot be installed at least 24 inches above the sanitary sewer for a distance of 10 feet horizontally on either side of the sanitary sewer, the sanitary sewer shall be encased in concrete with a minimum of six inches thickness or be replaced with ductile iron pipe or approved plastic sewer pipe with bonded joints until the normal distance in each direction from the crossing is at least 10 feet. A full length of water main pipe and a full length of sanitary sewer pipe shall be centered on the crossing so that the joints are as far away from the crossing as practicable.

Where the new water main crosses under the sanitary sewer, the water mains shall be installed at an elevation at which the top of the water main is at least 24 inches below the bottom of the sanitary sewer and provisions shall be made to prevent the settlement of the sanitary sewer. Existing sewer pipe shall be carefully exposed and supported while concrete encasement is placed.

Should existing sanitary sewer pipe or pipe joints be cracked or damaged by the Contractor's operations, the sewer pipe shall be removed and replaced with new pipe of like material at no additional cost to Owner. Facilities shall be provided to prevent disruption of sanitary sewer service or settlement during repair.

Should an unknown sanitary sewer or other pollution source be discovered in the course of the Work within the specified separation distances, the Contractor shall leave the sanitary sewer or other pollution source undisturbed and shall immediately report the finding to the Owner so that a proper realignment can be determined.

14. THRUST RESTRAINT. All tees, fittings deflecting 1 1/4 degrees and more, and dead end plugs shall be provided with suitable restrained joints to prevent movement of the pipe or fittings caused by internal pressure.

If concrete is utilized for the restraint, the entire excavated void between the fitting and solid undisturbed earth shall be backfilled with one-placement of concrete. The concrete shall be installed so that all joints are readily accessible for future repairs.

15. CUSTOMER NOTIFICATION. When water service must be temporarily interrupted, all customers affected shall be notified by the Contractor a minimum of IN ADVANCE of any shut-down as to the time water service will be discontinued and the estimated time service will be restored. In the event that personal contact of the customers cannot be made for the notification, the Contractor shall leave a door tag indicating the notification information on all customers that will be affected.

End of Section

## 02675 – CLEANING AND DISINFECTION OF THE WATER MAINS

1. SCOPE. This section covers the flushing and disinfection of the water mains and appurtenances.

2. GENERAL.

2.1 Governing Standard. All disinfection work shall conform to the requirements of AWWA C651 and the Kansas Department of Health and Environment (KDHE). If any KDHE requirements conflict with the provisions of this section and/or AWWA, the KDHE requirements shall govern.

2.2 Water. Reasonable quantities of the water required for flushing and disinfection work will be provided as stipulated in the TEMPORAY FACILITIES section.

2.3 Interruption of Water Service. In all cases where it is necessary to temporarily interrupt water service to customers, permission of the Owner shall be obtained and each customer affected thereby shall be notified in advance of the proposed temporary interruption and its estimated duration.

3. DISINFECTION PROCEDURE. After the installation, a chlorine solution shall be injected into the piping and appurtenances. The Contractor shall provide all of the necessary materials, equipment and labor for applying the chlorination agent. The initial concentration of chlorine shall be 50 mg/L and allowed to stand in the main for a minimum of one hour period of time, unless a different period of time is acceptable to the Owner.

Admission of the chlorine solution into or the flushing thereof through existing mains that are in service will not be allowed.

During disinfection, all valves and hydrants shall be fully operated to ensure that the appurtenances are disinfected. Valves shall be manipulated in such a manner that the heavily chlorine water in the mains being chlorinated will not flow back into the supply main.

All connection piping, fittings, closure pieces, and valves used in connecting new piping to existing piping after the initial disinfections shall be sprayed or swabbed with a 5% chlorine solution prior to completing the connection. Upon completion of the tie-in, the piping shall be properly flushed.

Existing mains which could be contaminated during work completing connections to the new water main, involving either tapping or cutting into operations, shall be flushed and disinfected in accordance with Section 9 of AWWA C651.

4. **FINAL FLUSHING.** Upon completion of the disinfection, but before sampling and bacteriological testing, the Contractor shall remove all heavily chlorinated water from the piping by flushing with potable water at the maximum velocity which can be developed.

5. **DISPOSAL OF HEAVILY CHLORINATED WATER.** The Contractor shall apply a de-chlorinating agent to the water being flushed to properly neutralize the chlorine residual remaining in the water.

The chlorine residual of the water being disposed into surface waterways shall be de-chlorinating by treating with one of the chemicals listed in the following table:

**Pounds of Chemicals to De-chlorinate Various Residual Chlorine Concentrations in 100,000 Gallons of Water**

Residual Chlorine Concentration (mg/L)	Sulfur Dioxide (SO <sub>2</sub> ) (pounds)	Sodium Bisulfate (NaHSO <sub>4</sub> ) (pounds)	Sodium Sulfate (Na <sub>2</sub> SO <sub>4</sub> ) (pounds)	Sodium Thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>4</sub> · 5H <sub>2</sub> O) (pounds)
1	0.8	1.2	1.4	1.2
2	1.7	2.5	2.9	2.4
10	8.3	12.5	14.6	12
50	41.7	62.6	73	60

The Contractor shall provide all necessary materials, equipment and labor for applying the de-chlorinating chemical in a manner such that proper mixing and contact time of the chemical and the heavily chlorinated water is obtained for complete removal of chlorine being flushed. The Contractor shall periodically test the flushed water to verify that the chlorine residual is zero.

6. **CHLORINE RESIDUAL TESTS.** Upon completion of final flushing, the Contractor shall perform chlorine residual tests to ensure that the chlorine residual in the piping is not higher than that generally prevailing in the remainder of the water distribution system and is acceptable to the Owner.

7. **BACTERIOLOGICAL TESTS.** After the final flushing, the Contractor shall have samples of the water in the piping collected and tested in accordance with Section 7 of the governing standard.

8. **RE-DISINFECTION.** Should the bacteriological tests indicate the presence of coliform organisms at any sampling point, the piping shall be flushed, re-sampled, and re-tested. If re-checked samples show the presence of coliform organisms again, the piping shall be re-chlorinated at not additional cost to the Owner until acceptable results to the Owner are obtained.

Re-disinfection shall be completed by the continuous feed or by the slug method. Unless otherwise permitted, the chlorination agent shall be injected into the main at the supply end through a corporation cock installed in the top of the pipe. All materials, equipment and labor necessary for re-disinfection shall be supplied by the Contractor at no additional cost to the Owner.

End of Section

## 02750 – PRESSURE AND LEAKAGE TESTING

1. SCOPE. This section covers the field hydrostatic pressure and leakage testing of the water mains and associated appurtenances.
2. GENERAL. The hydrostatic testing of the water mains shall be completed after initial cleaning and disinfection.

The Owner shall be present during the performance of all testing work and shall be notified of the time and place of testing prior to the commencement of the work. The Owner shall witness the opening and closing of all valves and shall be notified prior to the changing of the position of any valves during the test of the water main. All work shall be performed to the satisfaction of the Owner.

2.1 Testing Requirements. Unless otherwise permitted by the Owner, pressure tests shall comply with the following requirements:

- (1) During testing of the mains, all valves located within the limits of test shall be in the open position.
- (2) A calibrated pressure gauge shall be temporarily installed at each end of the limits of the water mains being tested.
- (3) Upon completion of testing, connections made to existing water mains or to any portion of new water mains installed under this Contract that have been placed in service shall be visually inspected for leakage after placing the water main in service and before backfilling the connection.

2.2 Water. Water for testing will be furnished by the Owner as stipulated in the Temporary Facilities section. Water shall be conserved through collection and reuse in subsequent tests. Following completion of the testing work, the water shall be wasted or disposed of in a manner acceptable to the Owner. The water shall not be allowed to enter other portions of the existing distribution system.

2.3 Filling and Venting. When filling the mains with water, care shall be taken to ensure that all air within the pipe is released to the atmosphere. Care shall be taken to ensure that the rate at which the main is filled with water does not exceed the venting capacity of the system.

2.4 Restraining and Backfilling. Piping shall be adequately restrained, anchored, and supported before the test pressure is applied.

2.5 Test Equipment. All necessary piping connections between the mains to be tested and the water source, together with pumping equipment, water meter, pressure gauges, and other equipment, materials, and facilities required to perform the specified tests, shall

be provided by the contractor at no additional cost to the Owner. All valves, bulkheads, restraints, bracing, and other sectionalizing devices required shall also be provided.

All temporary sectionalizing devices shall be removed upon completion of testing.

Test pressures shall be applied by means of a pump sized to provide and maintain the required pressure without interruption during the test.

Water meters and pressure gauges shall be accurately calibrated and shall be subjected to review and acceptance by the Owner.

3. PRESSURE TESTING. After the water main to be tested has been filled with water, the test pressure shall be applied and maintained without interruption for two hours plus the additional time required by the Owner to examine all piping undergoing the test and for the Contractor to locate all defective joints and pipe materials.

3.1 Test Pressure. The hydrostatic test pressure shall be 200 psi.

3.2 Defective Materials. Defective materials found as a result of pressure testing shall be removed and replaced by the Contractor at no additional cost to Owner. Similarly, any materials damaged by the Contractor or improperly installed by the Contractor shall be removed and replaced by the Contractor at no additional cost to the Owner.

4. LEAKAGE TESTING. The water main shall be subject to leakage testing simultaneously with the pressure testing. The duration of the leakage test shall be two hours plus the additional time required by the Owner for an accurate determination of the amount of leakage.

4.1 Leakage Test Pressure. The hydrostatic pressure maintained during the leakage test shall be the same pressure as specified for the pressure testing and shall be maintained within 5+/- psi during the entire time that the leakage measurement are being performed.

4.2 Leakage Measurements. Measurements of leakage shall not be attempted until all of the trapped air has been removed and a constant test pressure has been established. After the pressure has stabilized, the leakage shall be measured by means of a suitable water meter in the pressure supply piping on discharge side of the supply pump or another acceptable means of accurate measurement.

4.3 Allowable Leakage. The term "leakage", as used herein, shall be the total quantity of water which must be re-introduced into the main during the leakage test to maintain the specified test pressure. At the end of the test duration, if the pressure is below the test pressure, the pressure in the main shall be increased to the test pressure to determine the total actual leakage.



The main will not be accepted if and while the main exhibits a leakage rate in excess of that determined by the following formula:

$$Q = 0.0075 \text{ DLN}$$

where

Q = Allowable leakage rate in gallons per hour

D = Nominal diameter of the pipe in inches

L = Length of the section of main tested in thousands of feet

N = Square root of the weighted average test pressure in pounds per square inch (psi). The weighted average test pressure shall be equivalent to the arithmetic difference between the specified test pressure plane elevation in feet and the average elevation of the main in feet, converted to psi.

Whenever the main to be tested contains pipe of different diameters, the allowable leakage rate shall be calculated separately for each diameter and the corresponding length of main. The resulting allowable leakage rates shall be added to obtain the total allowable leakage rate for the entire section of mains being tested.

All joints in the piping shall be watertight and free from visible leaks during the leakage test. Each leak which is discovered within the correction period stipulated in the General Conditions of this Document shall be repaired by and the expense of the Contractor regardless of any quantity that the total leakage may have been below the specified allowable leakage rate during the leakage test.

If the leakage test indicates a higher than allowable leakage rate, the Contractor shall locate and repair the leaks and other defective work to the extent required to reduce the leakage to the acceptable value.

5. TEST RESULTS. The Contractor shall record the location, date, times, test and leakage pressure calculations and results, and other pertinent information associated with the main pressure and leakage testing work. The written record shall be transmitted to the Owner immediately after the performance of the tests.

End of Section

## 02940 – SURFACE RESTORATION

1. SCOPE. This section covers the restoration of yards, grassy areas, concrete/asphaltic pavement of streets and driveways, aggregate surfaces and other surfaces removed, altered, or damaged during the progress of the Work.

2. GENERAL. All yards, grassy areas, pavement and aggregate surfaces which are removed, altered, or damaged during the progress of the Work shall be restored to its original or better condition by the Contractor. All restoration work shall be subject to acceptance by the property owner, agency having jurisdiction thereof, and the Owner. All materials used for restoration work shall be new and furnished by the Contractor.

All surface restoration shall be completed within two working days of removal unless permitted by the Owner due to weather conditions.

The Contractor shall notify the Owner and the authority having jurisdiction thereof of the proposed work in advance of pavement replacement. All street work shall be subject to acceptance by the authority having jurisdiction thereof.

Sub-grades for pavement shall be thoroughly compacted to at least 95 percent of maximum density at optimum moisture content as determined by ASTM D698. In addition, the stability of sub-grades shall be such that when materials for construction are deposited on the sub-grade no rutting or displacement of the sub-grade by the material hauling vehicles shall occur.

2.1 Governing Standards. The materials, construction equipment, details, and construction methods shall comply with the applicable provisions of the “Standard Specifications for State Road and Bridge Construction” of the Kansas Department of Transportation. Requirements for surface restoration and materials specified herein are the minimum requirements for compliance with the Contract Documents. If requirements of the authority having jurisdiction over surface restoration within public rights-of-ways are greater than those presented herein, the Contractor shall comply with those requirements at no additional cost to the Owner.

2.2 Weather Limitations. Minimum temperature under which concrete and asphalt pavements may be placed shall be as stipulated in the governing standards.

If weather conditions do not permit replacement of permanent surfacing, a temporary cold mix asphalt surfacing shall be provided and maintained in a smooth and drive-able condition. Cold mix material shall be replaced with the specified hot mix asphalt or concrete when weather conditions permit. No materials shall be placed when the underlying surface is muddy, frozen, or has frost or water thereon.

2.3 Equipment. Equipment and facilities for measuring, mixing, heating, transporting, spreading, compacting, and other operations shall be in accordance with the applicable requirements of the governing standards. Improved or modernized equipment that will

produce results equal in quality to those which would result from the specified equipment may be utilized, if desired by the Contractor.

3. MATERIALS. The sources of materials shall be submitted for review by the Owner prior to delivery to the project site. Materials shall conform to the requirements of the governing Kansas Department of Transportation standards.

Materials shall conform to the following:

Concrete	In accordance with the CONCRETE section of these Specifications.
Aggregate for Asphaltic Concrete Base Course	Section 1103, Mix Designation BM-2B.
Aggregate for Asphaltic Concrete Surface Course	Section 1103, Mix Designation BM-2.
Aggregate for Aggregate Surfacing	Section 1112, Types SA-6 or SA-7.
Aggregate for Aggregate Base	Section 1105, AB-3.
Bituminous Materials	Section 1201 and 1202.
For Asphaltic Concrete Base and Surface Courses	Type AC-10 or AC-20
For Tack Coat	Type SS-1H.
Expansion Joint Filler	ASTM D1751, Bituminous Type, 3/4 inch thick.
Hot Poured Joint Sealing Compound	ASTM D1190.

The Contractor shall submit in advance to the Owner for review, the documentation certifying that the materials to be used for surface restoration are in compliance with the requirements herein.

4. ASPHALT PAVEMENT. Existing asphalt driveway pavement which is removed, altered, or damaged during the progress of the Work shall be replaced with new pavement to match, as closely as possible, the adjacent existing pavement.

5. CONCRETE PAVEMENT. Existing concrete pavement which is removed, altered, or damaged during the progress of the Work shall be replaced to match, as closely as possible, the adjacent existing concrete pavement. Concrete, materials, and workmanship shall conform to the applicable requirements of the CONCRETE section of these Specifications.

The requirements for the cutting of existing concrete pavement that will be joined to new pavement, is specified in the EXCAVATION AND TRENCHING section of these Specifications. If concrete is removed to within two feet or less of an existing construction joint, the additional pavement to that joint shall be removed and replaced with new concrete.

6. AGGREGATE BASE COURSE. Aggregate base course shall be used as a base to match, as closely as possible, the adjacent existing aggregate base course. The base course shall be constructed in accordance with the governing standards. Mixing of the base course shall be by the central plant method or the road mix method.

7. AGGREGATE SURFACING. Existing gravel roads, drives, parking areas, and other aggregate surfacing which are removed, altered, or damaged during the progress of the work shall be surfaced with compacted aggregate surfacing. Minimum thickness of the new surfacing shall be 3 inches mixed with sub-grade material and compacted to form a stable base approximately 6 inches in thickness. Material for aggregate surfacing shall be pit run, locally available crushed rock conforming to the gradation to the existing aggregate surfacing.

Immediately before final inspection of the Work for the entire project, all aggregate surfaced areas shall be reshaped, re-graded, and additional material added and compacted as necessary to provide a surface complying with the specified requirements.

8. PROTECTION. In addition to the requirements for protection set forth in Section 107.12 of the Kansas Department of Transportation governing standards, the Contractor shall protect all adjacent concrete and masonry so that no damage will occur as the result of subsequent construction operations. All damage or discoloration shall be repaired to the satisfaction of the Owner.

Special care shall be taken to prevent bituminous materials from spraying or splashing. Adjacent construction shall be protected by covering with suitable materials.

9. MISCELLANEOUS REPAIR WORK. All existing items and construction whether or not indicated by the drawings but which are removed, altered, or damaged as a result of construction operations under this contract, whether within or outside of the public rights-of-way, shall be repaired or replaced.

Repair or replacement shall be with materials similar to those of the existing and shall, in each case, restore the item to its original or better condition as acceptable to the owner thereof and the Owner.

End of Section

## DIVISION 3 - CONCRETE

### 03300 – CONCRETE

1. SCOPE. This section covers all cast-in-place concrete, including reinforcing steel, forms, finishing, curing, and other appurtenant work. If there is a conflict between the following specifications and the requirements of the jurisdiction having authority over work within the public rights-of-way, the authorities' requirements shall govern.

All concrete shall be air-entrained. An accelerator shall be added to concrete to speed up setting time and increase the rate of early strength development.

#### 2. GENERAL.

2.1 General Requirements. All cast-in-place concrete shall be accurately formed and properly placed and finished as specified herein. The Contractor shall inform the Owner at least 8-hours in advance of the times and places at which he intends to place concrete.

#### 3. MATERIALS

Cement	ASTM C150, Type I.
Fine Aggregate	Clean natural sand, ASTM C33, Artificial or manufactured sand is not acceptable.
Coarse Aggregate	Crushed rock, washed gravel, or other inert granular material conforming to ASTM C33, except that clay and shale particles shall not exceed one percent.
Water	Clean and free from deleterious substances.
Admixtures:	
Air-Entraining Agent	ASTM C260; Grace "Daravair," Master Builders "MB-VR", Protex "AES," or Sika Chemical "AER".
Accelerator	ASTM C494, Type C, non-chloride.

Reinforcing Steel:

Bars	ASTM A615, deformed, Grade 60.
Welded Wire Fabric	ASTM A185 or A497
Bar Supports	CRSI Class 1, plastic protected, or Class 2, stainless steel protected.

Forms:

Plywood	Product Standard PSI, waterproof, resin-bonded, exterior type, Douglas fir, face adjacent to concrete Grade B or better.
Lumber	Straight, uniform width and thickness, and free from knots, offsets, holes, dents, and other surface defects.
Form Oil	Light-colored paraffin oil or other acceptable non-staining materials.

Polyethylene Film

Product Standard PS17; 6-mils.

Membrane Curing Compound

Fed Spec TT-C-800, Type I, Class I; min 18 percent solids; non-yellowing; unit moisture loss 0.039 gm per sq cm max; Cormix "Sealco 800", ProSoCo "Kure and Seal", Prokrete "Cure-N-Seal 30", or Sonneborn "Kure-N-Seal 800".

4. LIMITING REQUIREMENTS. The Concrete mix shall be designated and controlled within the following limits:

4.1 Minimum Cement Factors. The quantity of Portland cement, expressed in pounds per cubic yard, shall be not less than indicated in the following table:

<u>Concrete Slump</u>	<u>Coarse Aggregate Size</u> <u>From No. 4 Sieve to</u>		
	<u>1/2"</u>	<u>3/4"</u>	<u>1"</u>
2 inches	639	602	573
3 inches	658	620	592
4 inches	677	639	611

4.2 Aggregates. The maximum total combined aggregate weight and the maximum fine aggregate weight in pounds per hundred pounds of cement shall be as follows:

<u>Concrete Slump</u>	<u>Max Total Aggregate Course Aggregate Size</u>			<u>Maximum Fine Aggregate</u>
	<u>1/2"</u>	<u>3/4"</u>	<u>1"</u>	
2 inches	457	500	537	229
3 inches	436	479	511	218
4 inches	415	457	489	207

Note: The weights stipulated above are maximum values and not authorized weights. Actual weights used shall be those necessary to produce concrete of the proper consistency.

4.3 Total Water Content. Total water content of concrete shall not exceed 5.5 gallons of water per hundred pounds of cement in the mix.

4.4 Slump. Concrete slump shall be kept as low as possible consistent with proper handling and thorough compaction. Unless authorized by the Owner, slump shall not exceed 4 inches.

4.5 Total Air Content. The total volumetric air content of concrete after placement shall be six percent plus or minus one percent.

4.6 Admixtures. The admixture content, batching method, and time of introduction to the mix shall be in accordance with the manufacture's recommendations for minimum shrinkage and for compliance with these Specifications.

No calcium chloride or admixture containing chloride will be acceptable.

4.7 Strength. The minimum acceptable compressive strengths as determined by ASTM C39 shall be 4000 psi at 28 days.

5. BATCHING AND MIXING. The concrete shall be furnished by an acceptable ready-mix concrete supplier and shall conform to ASTM C94. The consistency of concrete shall be suitable for the placement conditions. Aggregates shall be suspended uniformly throughout the mass and the concrete shall flow sluggishly when vibrated or spaded. The slump shall be uniform.

6. PLACEMENT. The limits of each concrete placement shall be predetermined by the Contractor and shall be acceptable to the Owner. All concrete within such limits shall be placed in one continuous operation.

Before the concrete is placed; the forms and reinforcement shall be rigidly secured in its proper position; all dirt, mud, water, and debris shall be removed from the space to be occupied by the concrete; all surfaces encrusted with dried concrete from previous

placement operations shall be cleaned; and the entire installation shall be acceptable to the Owner.

6.1 Placing and Compaction of Concrete. Concrete shall be conveyed to the point of final deposit by methods which prevent the separation or loss of ingredients. During and immediately after placement, the concrete shall be thoroughly compacted, worked around all reinforcement and into the corners of the forms. Concrete shall be compacted by immersion type vibrators, vibrating screeds, or other suitable compaction equipment.

6.2 Cold Weather Concreting. Cold weather concreting shall comply with ACI 306 when the air temperature is below 40 F or is expected to fall below 40 F during the 24-hour period after placing the concrete.

6.3 Hot Weather Concreting. Hot weather concreting shall comply with ACI 305 when the air temperature is above 90 F or is expected to rise above 90 F during the 24-hour period after placing the concrete.

7. REINFORCEMENT. The reinforcement shall be accurately formed, positioned, and maintained in proper position while the concrete is being placed and compacted. The details of fabrication shall conform to ACI 315 and 318. In case of conflict between the standards, ACI 318 shall govern.

8. FORMS. Forms shall be designed to produce hardened concrete having the shape, lines, and dimensions indicated on the drawings. The forms shall be substantial and sufficiently tight to prevent leakage of mortar and shall be maintained in proper position and accurate alignment.

The forms for pavement, curbs, or gutters shall be supported on thoroughly compacted soil. The top face of pavement forms shall not vary from a true plane more than a 1/4 inch in 10 feet.

Forms shall be thoroughly cleaned and oiled before the concrete is placed.

Where concrete is placed against gravel or crushed rock which does not contain at least 25 percent material passing a No. 4 sieve, such surfaces shall be covered with polyethylene film to protect the concrete from losing its water. Joints in the film shall be lapped at least 6 inches.

The forms shall not be removed or disturbed until the concrete has attained sufficient strength to safely support all dead and live loads. Care shall be taken in the form removal process to avoid surface gouging, corner or edge breakage, and other damage to the concrete.

9. FINISHING. Slabs, pavement, and other unformed surfaces shall be screeded and given an initial float finish followed by additional floating or belting. Unformed surfaces shall be given an initial float finish as soon as the concrete has stiffened sufficiently for



proper working. Any piece of coarse aggregate which is disturbed by the float or which causes a surface irregularity shall be removed and replaced with mortar. Initial floating shall produce a surface of uniform texture and appearance with no unnecessary working of the surface.

Initial floating shall be followed by belting or a second floating at the time of initial set. The belting or second floating shall produce a finish of uniform texture and color. The completed finish for unformed surfaces shall be the finish produced by the belting or second floating.

10. CURING. The concrete shall be protected from loss of moisture by water saturation or membrane curing for at least 7 days after placement. Water saturation of concrete surfaces shall begin as quickly as possible after the initial set of the concrete. Unformed surfaces shall be covered with polyethylene film, tarpaulins, or sand to retain the water. Water shall be applied as often as necessary to keep the concrete saturated for the entire curing period.

Membrane curing compounds may be used in lieu of water curing on concrete that will not be covered later with mortar or additional concrete. Membrane curing compounds shall be spray applied at coverage of not more than 300 square feet per gallon. Unformed surfaces shall be covered with curing compound within 30 minutes after final finishing. If forms are removed before the end of the specified curing period, curing compounds shall be immediately applied to the formed surfaces before they dry out. Curing compounds shall be suitably protected against abrasion during the curing period.

11. REPAIRING DEFECTIVE CONCRETE. Defects in concrete surfaces shall be properly repaired to the satisfaction of the Owner. All concrete that is honeycombed or otherwise defective shall be cut out and replaced with sound concrete, with edges square cut to avoid feathering.

Concrete repair work shall conform to Chapter 9 of ACI 301 and shall be performed in a manner that will not interfere with thorough curing of surrounding concrete. Repair work shall be properly cured.

12. CONCRETE FOR THRUST RESTRAINTS. Concrete for buried thrust blocks and for concrete encasement of sanitary sewer crossings shall conform to the requirements specified herein, except that the air entraining agent shall be omitted and the cement factor and total content shall be adjusted to provide a minimum compressive strength of 3000 psi at 28 days. The concrete shall have a slump of not greater than 2 inches when placed.

13. DELIVERY TICKETS. Delivery tickets shall be prepared by the concrete supplier for each load of ready-mix concrete used on this project. Each delivery ticket shall show the quantity, date, and time of delivery. A copy of each ticket will be required for consideration for payments by the Owner to the Contractor.

End of Section

DIVISIONS 4 THROUGH 14 – NOT USED

## DIVISION 15 – MECHANICAL

### 15100 – METER SERVICE CONNECTION

1. SCOPE. This section covers the repairs and/or replacement of components at an existing water service meter connection. Prior to the commencing of this Work, the affected customer shall be notified in advance that their water service will be temporarily interruption and its estimated duration.

#### 2. MATERIALS AND INSTALLATION

2.1 MATERIALS FURNISHED BY OWNER: The Owner will furnish the required materials for the repairs and/or replacement by the Contractor. These materials shall be received by the Contractor at the Owner's shop, loaded and transported to the project site, and installed by the Contractor.

2.2 MATERIALS FURNISHED BY CONTRACTOR: The Contractor shall furnish all of the labor and materials not furnished by the Owner to complete the repairs and/or replacements. No substitutions are permitted.

2.3 INSTALLATION: The repairs and/or replacement of components shall be made in accordance with these specifications; the Standard Residential Service drawing; and the manufacturer's recommendations.

The Contractor shall obtain and pay for any permits and/or fees required by the authority having jurisdiction of the public right-of-way and/or utility easements.

All repaired and/or replaced service piping and meter vault shall be installed at least:

1. 10-feet horizontally from the outside edge of any existing or proposed sanitary sewer, storm sewer, and/or drainage ditch,
2. 25-feet horizontally from the edge of any existing or proposed septic system,
3. The service piping between the corporation-stop in the distribution main and the meter-setter shall be one continuous piece with no couplings and/or fittings except at the end connection points and be installed in a dictated trench with at least three feet of separation from any gas piping, underground power lines, communication lines, or any other underground conduits,
  - The trench for the service piping and the excavation for the meter vault shall be backfilled with crushed rock (CA-5) and be properly compacted to prevent future settlement, except for the top 12-inches in yard areas which shall be backfill with soil,
  - The meter vault shall not be located in an area subject to vehicular or pedestrian traffic, paved/graveled areas, or flood-prone areas.
4. Where service piping must cross over sanitary and/or storm sewers, the service piping shall be installed with at least 24-inches vertical separation between the bottom of the water service piping and top of the sewer.

This vertical separation shall be maintained for that portion of the service piping located within 10-feet horizontally on both sides of the sewer. The service piping shall not cross beneath any sanitary or storm sewers.

5. No portion of the service piping shall have less than 42-inches of cover from final grade. Immediately after making the repairs and/or replacements, all of the service piping and meter vault shall be left exposed for a preliminary inspection by Suburban Water (contact Josh VanTuyl @ 913.775.2418).
6. The Contractor shall provide suitable and safe excavations in compliance with OSHA Regulation 29 CFR XVII Part 1926 to perform the required work and be responsible for the proper backfilling and compacting with crushed rock (CA-5) of the excavations after the preliminary inspection by Suburban Water.
7. Suburban Water (contact Josh VanTuyl @ 913.775.2418) will conduct a final inspection of the repaired and/or replaced meter service connection only after the backfilling, final site grading, resurfacing, and clean up have been completed.

End of Section

## 15101 – BUTTERFLY VALVES

1. SCOPE. This section covers the installation of the butterfly valves with actuators in existing potable water mains at new locations and/or to replace defective existing valves. The butterfly valves with actuators will be furnished by the Owner complete with jointing materials and valve boxes. These materials will be available to the Contractor at the Owner's yard.

### 2. MATERIALS AND INSTALLATION

2.1 MANUFACTURER: The 16-inch thru 24-inch butterfly valves will be manufactured by the DeZurik Company or Henry Pratt Company, Class 150, and meet the requirements of AWWA C504. No substitutions are permitted.

2.2 COATINGS: The exterior surfaces of the valve and actuator will be coated with a 6-mils thickness medium consistency coal tar coating of Carboline "Bitumastic 50" or Tnemec "46-465 H.B. Tnemecol." The interior surfaces of the valve will be coated with a 10-mils thickness epoxy enamel coating of Ameron "Amerlock 400 High Solids Epoxy Coating," Carboline "Carbogard 891," or Tnemec "Series N140 Pota-Pox Plus" immersion service.

2.3 OPENING DIRECTION: The valves will open left (counter clockwise). In each case, after the installation the Owner will inform the Contractor if the valve is to be left in the open or closed position.

2.4 OPERATING NUT: All valves will be furnished with an AWWA 2-inch square operating nut.

2.5 JOINTS: All joints will be of the mechanical type conforming to ANSI/AWWA C111//A21.11.

2.6 INSTALLATION: Unless otherwise necessary for the proper operation or as acceptable to the Owner, all butterfly valves shall be installed with the shafts horizontal.

The factory-installed actuator shall not be removed from the valve prior to, during, or after the installation of the valve.

The valves shall be handled and installed in accordance with the recommendations set forth in the Appendix to ANSI/AWWA C509 and the recommendations of the manufacturer.

3. VALVE BOXES. The valve boxes will be furnished by the Owner, and consist of a 6-inch PVC pipe section and cast iron mushroom type cap. The valve boxes shall be installed plumb and directly over the operating nut on each buried valve. After being placed in proper position, earth fill shall be placed around each valve box and thoroughly tamped around all sides of the box. The top of the box shall be flush with the finished grade.

End of Section

## 15104 –GATE VALVES

1. SCOPE. This section covers the installation of resilient wedge type gate valves in existing potable water mains at new locations and/or to replace defective existing valves. The valves will be furnished by the Owner complete with jointing materials and valve boxes. These materials will be available to the Contractor at the Owner's yard.

### 2. MATERIALS AND INSTALLATION

2.1 MANUFACTURER: The valves will be Model KS-FW as manufactured by the Kennedy Valve Company or Model A-2360 as manufactured by the Mueller Company. No substitutions are permitted.

2.2 COATINGS: The outside surface of the valve will be coated with an asphalt-varnish coating conforming to the requirements of Federal Specification TT-V-51, or an epoxy coating conforming to the requirements of AWWA C55 and ASTM D2794.

The interior surfaces of the valve will be coated with a fusion bonded thermosetting plastic which meets the requirements of AWWA C550 and ASTM D2794.

2.3 OPENING DIRECTION: The valves will open by turning left (counter clockwise). In each case, after the installation the Owner will inform the Contractor if the valve is to be left in the open or closed position.

2.4 NON-RISING STEM AND OPERATING NUT: All valves will be the non-rising stem type and be furnished with an AWWA 2-inch square operating nut.

2.5 JOINTS: All joints will be of the mechanical type conforming to ANSI/AWWA C111//A21.11.

2.6 INSTALLATION: The valves shall be handled and installed in accordance with the recommendations set forth in the Appendix to ANSI/AWWA C509 and the recommendations of the manufacturer.

3. VALVE BOXES. Valve boxes shall be installed on each buried valve. The valve boxes will be furnished by the Owner and consist of a 6-inch PVC pipe section and cast iron mushroom type cap.

Valves and valve boxes shall be set plumb. Each valve box shall be placed directly over the valve it serves, with the top of the box brought flush with the finished grade. After being placed in proper position, earth fill shall be placed around each valve box and thoroughly tamped around all sides of the box.

End of Section

## 15110 – FIRE HYDRANT ASSEMBLY

1. SCOPE. This section covers the installation of new fire hydrant assemblies. The fire hydrants will be furnished by the Owner complete with jointing materials, 6-inch branch piping, 6-inch gate valve, and polyethylene tube materials. The blocking, restraints, and other necessary appurtenances to make the installation complete shall be furnished and installed by the Contractor. The installations shall be at the locations indicated by the Owner.

### 2. MATERIALS AND INSTALLATION

2.1 MANUFACTURER AND MODEL. The manufacturer will be the Kennedy Valve Company, model Guardian K81D, with a 200 psi working pressure, and open by turning left (counter clockwise). No substitutions are permitted.

2.2 INSTALLATION: The hydrants shall be installed in accordance with the manufacturer's recommendations and the attached Fire Hydrant Assembly Detail. The hydrants shall be installed with the shoe in position "C", i.e., inlet connection and pumper-nozzle outlet 180 degree opposed.

2.3 CONNECTION SHOE. The hydrant shoe will be cast iron and have epoxy coating inside, with a 6-inch mechanical joint inlet, complete with accessories and two lugs for restraining.

End of Section



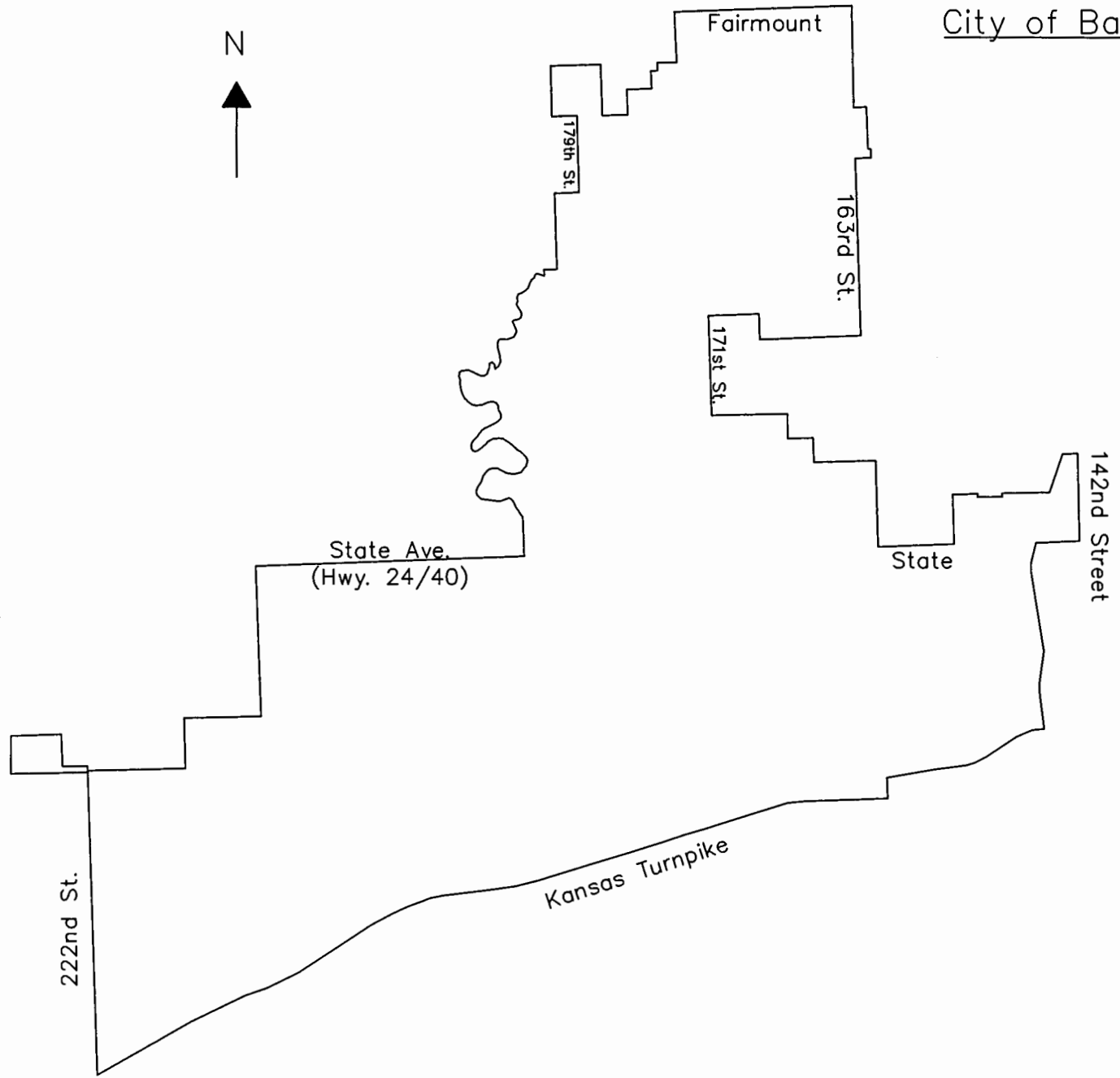
DIVISION 16 – NOT USED

Maintenance Work and  
Emergency Repairs  
MT-2012  
080812 BBH

## DRAWINGS

Maintenance Work and  
Emergency Repairs  
MT -2012  
062712 BBH

City of Basehor

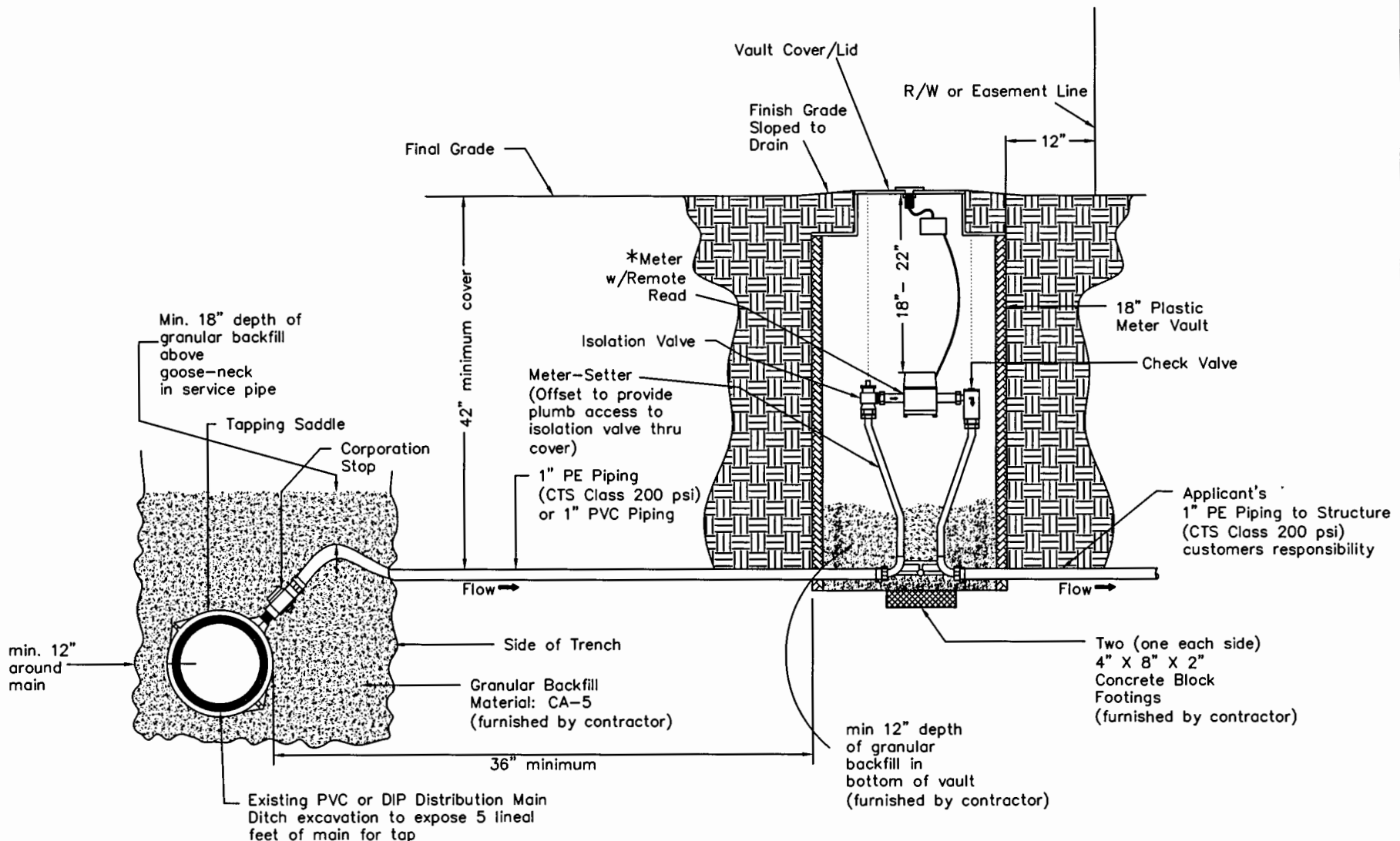


Leavenworth County, Kansas

DATE:	080812
PROJ. ENG:	BBH
DRAWN BY:	TJM
APPROVED BY:	JMB

**SUBURBAN WATER, INC**  
1216 N. 155th Street, Basehor, KS 66007

Project MT-2012  
SERVICE AREA BOUNDARY



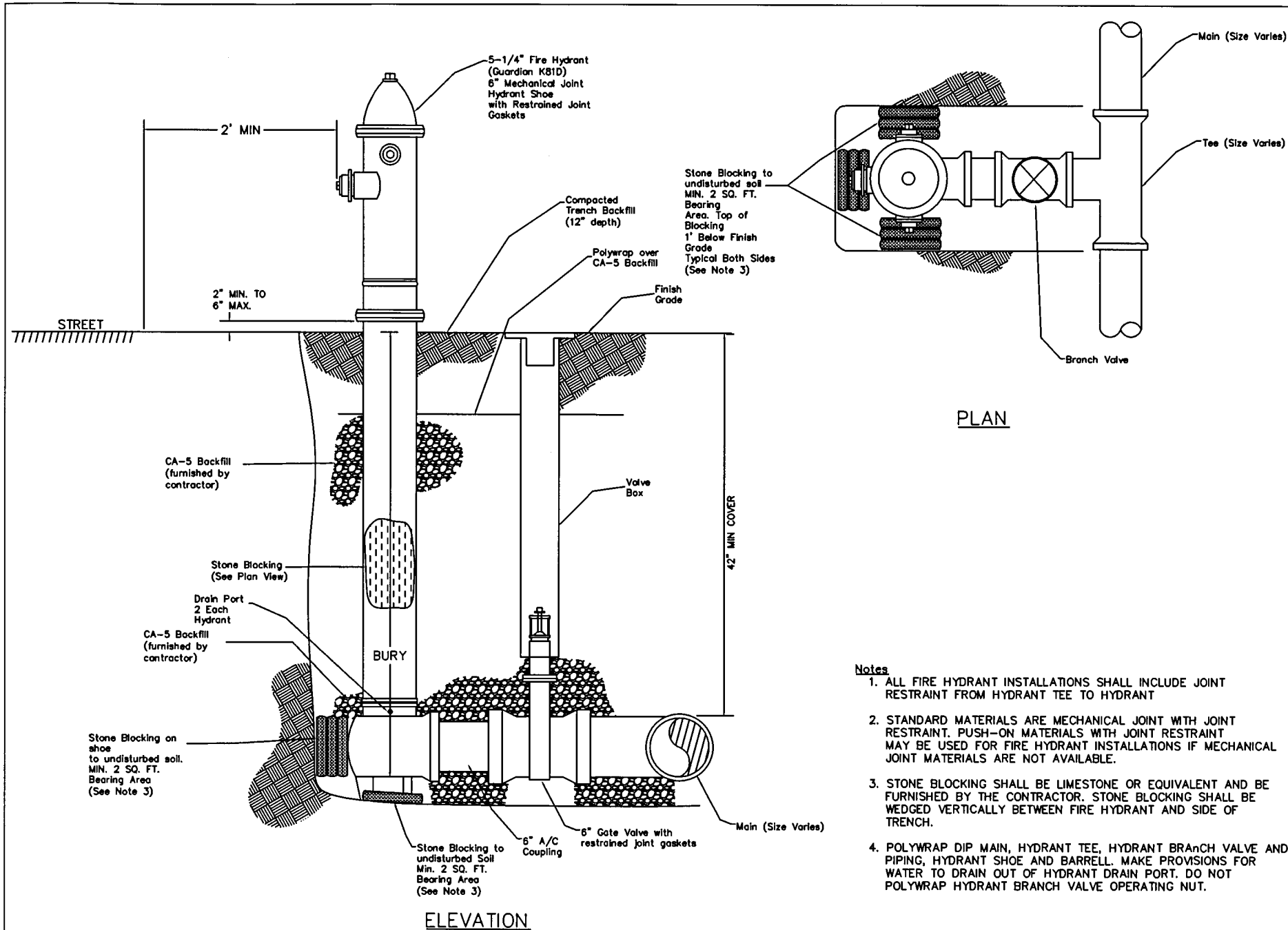
**Notes**

- 1. See RULES AND REGULATIONS pertaining to NEW WATER SERVICE (PLUMBER)
- \* Materials furnished & installed by Suburban Water

DATE:	080812
PROJ. ENG:	BBH
DRAWN BY:	TJM
APPROVED BY:	JMB

**SUBURBAN WATER, INC**  
 1216 N. 155th Street, Basehor, KS 66007

PROJECT MT-2012  
 STANDARD RESIDENTIAL SERVICE



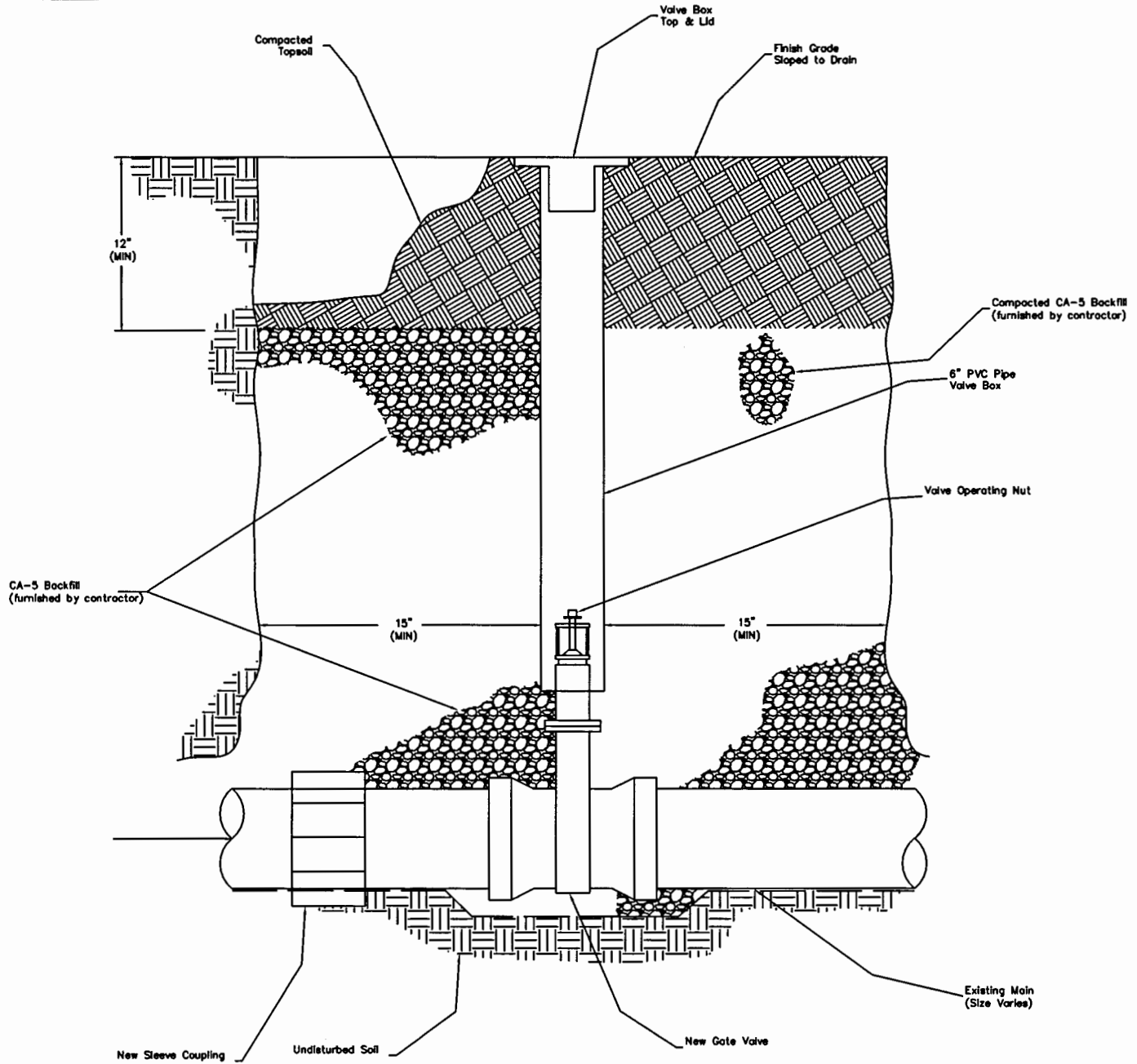
**Notes**

1. ALL FIRE HYDRANT INSTALLATIONS SHALL INCLUDE JOINT RESTRAINT FROM HYDRANT TEE TO HYDRANT
2. STANDARD MATERIALS ARE MECHANICAL JOINT WITH JOINT RESTRAINT. PUSH-ON MATERIALS WITH JOINT RESTRAINT MAY BE USED FOR FIRE HYDRANT INSTALLATIONS IF MECHANICAL JOINT MATERIALS ARE NOT AVAILABLE.
3. STONE BLOCKING SHALL BE LIMESTONE OR EQUIVALENT AND BE FURNISHED BY THE CONTRACTOR. STONE BLOCKING SHALL BE WEDGED VERTICALLY BETWEEN FIRE HYDRANT AND SIDE OF TRENCH.
4. POLYWRAP DIP MAIN, HYDRANT TEE, HYDRANT BRANCH VALVE AND PIPING, HYDRANT SHOE AND BARRELL. MAKE PROVISIONS FOR WATER TO DRAIN OUT OF HYDRANT DRAIN PORT. DO NOT POLYWRAP HYDRANT BRANCH VALVE OPERATING NUT.

DATE:	080812
PROJ. ENG:	BBH
DRAWN BY:	TJM
APPROVED BY:	JMB

**SUBURBAN WATER, INC**  
1216 N. 155th Street, Basehor, KS 66007

PROJECT MT-2012  
FIRE HYDRANT ASSEMBLY DETAIL



**Notes**

1. CONNECTIONS SHALL BE MECHANICAL JOINT OR PUSH-ON JOINT
2. VALVE STEM EXTENSIONS SHALL BE INSTALLED ON VALVE INSTALLATIONS AS REQUIRED TO MAINTAIN A MAXIMUM OF 5' FROM FINISH GRADE TO VALVE NUT.

DATE:	080812
PROJ. ENG:	BBH
DRAWN BY:	TJM
APPROVED BY:	JMB

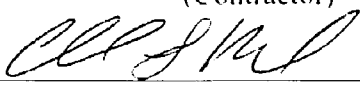
**SUBURBAN WATER, INC**  
 1216 N. 155th Street, Basehor, KS 66007

PROJECT MT-2012  
 BURIED VALVE DETAIL

- d. The business address of the Contractor given hereto is hereby designated as the place to which all notices, letters, and other communication to the Contractor will be mailed or delivered. The address of the Owner appearing herein is hereby designated as the place to which all notices, letters, and other communication to the Owner shall be mailed or delivered. Either party may change its address at any time by an instrument in writing delivered to the other party.

IN WITNESS WHEREOF, the Owner and the Contractor have signed this Agreement. One counterpart has been delivered to the Contractor; one counterpart has been delivered to the Bonding Company; and one counterpart has been retained by the Owner.

This Agreement will be effective on September 25, 2012.

Westland Construction, Inc.  
(Contractor)  
By  (SEAL)  
Charles L. Breuer  
(Print Name)  
Title President

Address for giving notices:

Westland Construction, Inc.  
20510 163 rd Street  
Baschor, KS 66007





IN TESTIMONY WHEREOF, the Contractor, as Principal, has caused these presents to be executed in its name, and its corporate seal to be hereunto affixed by its duly authorized officers and the Surety has caused these presents to be executed in its name and its corporate seal to be hereunto fixed by its attorney-in-fact, duly authorized thereunto so to do on this 24<sup>th</sup> day of September, 2012.

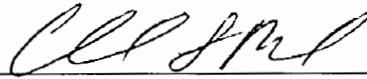
PRINCIPAL:

WESTLAND CONSTRUCTION, INC.  
(Contractor)

Address for giving Notice:

20510 163<sup>rd</sup> Street

Basehor, KS 66007



(Signature)

Charles L. Breuer

(Print Name)

President

(Title)

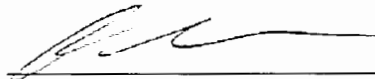
SURETY:

West Bond Mutual Insurance Co  
(Surety)

Address for giving Notice:

24901 Woodland Ct

Lee's Summit MO 64086



(Signature)

Paul S. Seltzer

(Print Name)

Att'y in fact

(Title)

**This Bond must be accompanied with an attorney-in-fact's authority from the Surety certified to include the date of this Bond.**

This Bond is based upon the EJCDC Construction Performance Bond, Form No. 1910-28A (1984 edition)

(4)

ORIGINAL

LAYNE CHRISTENSEN COMPANY  
LAYNE HYDRO DIVISION

PROPOSAL ACCEPTANCE AGREEMENT

Project Name: Groundwater Supply Development Study  
Description of Services: Layne will develop a report to include the following:

- Summary of the local hydrogeology, with emphasis on potential well yields and trends in productivity and groundwater levels.
- Maps, well construction logs, pumping test results and water quality (where available) of existing wells in the area.
- Summary of local groundwater capacity and quality issues.
- Identification of areas and depth intervals which appear more promising for groundwater supply development,
- A recommended approach for a focused exploration program

Date: September 6, 2012

For Approval and Payment of Charges:  
Invoices will be charged and mailed to the account of:

Client: Suburban Water, Inc.  
Attention: Mike Breuer  
Address: 1216 N. 155<sup>th</sup> Street  
P.O. Box 147  
Basehor, KS 66007  
Telephone: 913-724-1800

PROPOSAL ACCEPTED BY: Michael A. Brewer PRES  
NAME & TITLE: Michael A Brewer PRES  
DATE ACCEPTED: 9-10-2012

PAYMENT TERMS: Payable in accordance with the attached Terms and Conditions. Invoices for the completed work will be issued monthly for continuous or extended projects unless otherwise agreed.

SPECIAL PROVISIONS:  
Maximum contract amount not to exceed \$14,850.00 without prior written approval of Suburban Water, Inc.

This agreement, together with the LAYNE proposal for a Groundwater Supply Development Study dated August 26, 2011, and the following Terms and Conditions, constitutes the entire agreement between the client and LAYNE and supersedes all prior written or oral understandings.

x Jack Wittman  
Jack Wittman, Ph.D.  
District Manager, Layne Hydro

**LAYNE CHRISTENSEN COMPANY,**  
**LAYNE HYDRO DIVISION**  
**GENERAL TERMS AND CONDITIONS**

**1. SCOPE OF WORK**

LAYNE shall only be required to perform the services specified in this contract and Client shall compensate LAYNE at the rates shown on the attached fee schedule. Any estimate of time and materials shall not be considered as a fixed price, but only an estimate (unless otherwise specifically stated in this contract). LAYNE will provide additional services beyond those identified in the scope of work at listed standard contract rates. LAYNE reserves the right to bill for time in transit. Unless otherwise stated, LAYNE must receive acceptance of the proposal within ninety (90) days or the proposal is no longer valid.

**2. RIGHT OF ENTRY**

Client grants to LAYNE the right of entry to the project site by its employees, agents and subcontractors, to perform the service and represents that it has obtained the needed permits and licenses for the proposed work. If Client does not own the site, Client warrants and represents to LAYNE that it has the authority and permission of the owner and occupant of the site to grant right of entry to LAYNE.

**3. PAYMENT TERMS**

LAYNE will submit monthly invoices based on percent of work complete to Client and a final bill upon completion of services. There shall be no retainage, unless otherwise agreed upon in the contract. Payment is due within thirty (30) days from invoice date, regardless of whether client has been reimbursed by any other party. LAYNE will institute a late payment charge at a rate of 18% per annum (unless a lower rate is required under applicable law, in which the lower rate shall apply) for all payments not made on or before the due date. Any attorney's fees, collection fees or other costs incurred in collecting any delinquent amount shall be paid by Client.

**4. OWNERSHIP OF DOCUMENTS**

All materials and documents produced, created or obtained by LAYNE under this contract are instruments of LAYNE's service, but shall be property of Client. LAYNE shall have the right to retain copies of all such materials. Unless otherwise specified, LAYNE shall have no obligation to retain any documents for more than one (1) year or as required by applicable law, whichever is longer governing.

**5. STANDARD OF CARE**

The services shall be performed in accordance with generally accepted industry principles and practices, consistent with a level of care and skill ordinarily practiced by reputable members of the profession currently providing similar services under similar circumstances. EXCEPT AS SET FORTH HEREIN, LAYNE MAKES NO OTHER REPRESENTATION, GUARANTEE, OR WARRANTY, EXPRESS OR IMPLIED, IN FACT OR BY LAW, WHETHER OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE OR OTHERWISE, CONCERNING ANY OF THE SERVICES WHICH MAY BE FURNISHED BY LAYNE TO CLIENT. Client agrees to give LAYNE written notice of any breach or default under this section and to give LAYNE a reasonable opportunity to cure such breach or default,

without the payment or additional fees to LAYNE, as a condition precedent to any claim for damages.

**6. RISK ALLOCATION**

Due to the very limited benefit LAYNE will derive from this project compared to that of other parties involved, including Client, Client agrees to limit LAYNE's liability to Client, or any other party using or relying on LAYNE's work with respect to any acts or omissions including, but not limited to, breach of this contract, breach of warranty, negligence or other legal theory, such that the total aggregate liability of LAYNE to all those named shall not exceed \$50,000 or LAYNE's total fee for the services rendered on this project, whichever is greater. LAYNE will waive this limitation up to \$1,000,000 upon client's request and agreement in writing to pay an additional consideration of 10% of LAYNE's total fee or \$500, whichever is greater. This sum shall be a Waiver of Limitation of Liability Charge and will not be construed as being a charge for insurance of any type, but will be increased consideration for the greater risk involved. If the result of LAYNE's services will be used to aid in the development of drawings and specifications for construction, Client agrees to require other design professionals, the contractor and its subcontractors selected for such construction to agree to an identical limitation of LAYNE's liability for damages suffered by other design professionals, the contractor or subcontractor arising from LAYNE's professional acts, errors or omissions.

**7. INSURANCE & GENERAL LIABILITY**

LAYNE has insurance coverage under public liability and property damage which LAYNE deems to be adequate. Certificates for such policies of insurance shall be provided to Client upon request.

**8. TERMINATION**

Either party may suspend the performance immediately upon becoming aware of a breach of the terms of this contract by the other party and provide notice of its intention to terminate. In the event LAYNE determines there may be a significant risk that LAYNE's invoices may not be paid on a timely basis, LAYNE may suspend performance and/or retain any reports or other information until Client provides LAYNE with adequate assurances of payment. The filing of a voluntary or involuntary bankruptcy petition, appointment of a receiver, assignment for the benefit of creditors or other similar act of insolvency shall constitute a breach. Termination will become effective fourteen (14) days after receipt of notice by the breaching party unless the event(s) giving rise to the breach are remedied within that time frame, or the party seeking termination revokes its notice. Either party may, without cause, terminate this contract upon providing thirty (30) days written notice to the other party.

**9. ASSIGNS**

This contract may be amended only by written instrument and signed by both parties. Client shall not assign this proposal or any other reports or information generated pursuant to this proposal without the written consent of LAYNE.

**10. CONFLICTS**

Should any element of the Terms and Conditions be deemed in conflict with any element of the proposal/contract, unless the proposal/contract clearly voids the conflicting element in the Terms and Conditions, wording of the Terms and Conditions shall govern. Any element of this agreement later held to violate a law or regulation shall be deemed void, but all remaining provisions shall continue in force. The Terms and Conditions set forth herein shall survive the termination of this contract. No action may be brought against LAYNE arising from its performance of services under this contract, whether for breach of contract, tort or otherwise, unless LAYNE shall have received within two (2) years after completion of services under this contract written notice specifying the alleged defects in LAYNE's performance or other breach.

#### 11. SAFETY

LAYNE's responsibility for the safety on site shall be limited to its own personnel and its subcontractor and any other persons who are directly involved with LAYNE's work on site.

This shall not be construed to relieve Client or any of its contractors from their responsibilities for maintaining a safe job site. Neither the professional activities of LAYNE, nor the presence of LAYNE's employees and its subcontractors shall be construed to imply LAYNE has any responsibility for any activities on site performed by personnel other than LAYNE's employees or subcontractors. Additionally, LAYNE shall, if so requested, reasonably comply with the requirements of any applicable health and safety plan provided to it by Client.

#### 12. ARBITRATION

If a claim is made against LAYNE for inadequate, negligent or improper performance of services by LAYNE pursuant to this contract, any party to this contract may demand that any such disputes be determined by arbitration. In that event, the party alleging such deficient performance will select an arbitrator and LAYNE will select an arbitrator. If those two arbitrators cannot agree on the third arbitrator within thirty (30) days, the judge of a court having jurisdiction will appoint the third arbitrator. Each party will pay the arbitrator selected by that party and the expense of the third arbitrator and all other expenses of arbitration will be shared equally. Arbitration will take place in the County of Monroe, State of Indiana. Federal court rules governing discovery procedures will apply. The arbitration shall be governed by the Federal Arbitration Act and shall be conducted consistent with the arbitration rules as then promulgated by the American Arbitration Association. The decision in writing of any two arbitrators will be binding subject to the terms of this contract.

#### 13. CONSEQUENTIAL DAMAGES

In no event shall either party be liable to the other party for any consequential, incidental, or indirect damages including, though not limited to, loss of income, loss of profits, loss or restriction of use of property, or any other business losses regardless as to whether such damages are caused by breach of contract or warranty, negligent act or omission or other wrongful act.

#### 14. DELAYS IN WORK

LAYNE will charge Client at standard rates for stand-by or non-productive time for delays in LAYNE's work

caused by Client or Client's contractors unless otherwise specifically provided for in the contract.

#### 15. FAILURE TO FOLLOW RECOMMENDATIONS

Client will not hold LAYNE liable for problems that may occur if LAYNE's recommendations are not followed and waives any claim against LAYNE, and agrees to defend, indemnify and hold LAYNE harmless from any claim or liability for injury or loss that results from failure to implement LAYNE's recommendations.

#### 16. FORCE MAJEURE

Neither Client nor LAYNE shall hold the other responsible for damages or delays in performance caused by events beyond the control of the other party and which could not be reasonably have been anticipated or prevented, including but not limited to, acts of governmental authorities, acts of God, materially different site conditions, wars, riots, rebellions, sabotage, fires, explosions, accidents, floods, strikes or other conceded acts of workers, lockouts, or changes in laws, regulations, or ordinances. The party intending to invoke force majeure shall provide prompt notice to the other party.

#### 17. SAMPLING OR TEST LOCATION

Unless otherwise stated, the fees in this proposal do not include the cost associated with surveying of the site for accurate horizontal and vertical locations of tests or samples which, when referenced in LAYNE's report, are based on information furnished by others and/or estimates made by LAYNE's personnel and are only considered approximations, unless otherwise stated. LAYNE may deviate a reasonable distance from any test or sampling location specified by Client. If, in order to complete a given boring to its designated depth, a re-drilling is necessitated by encountering impenetrable subsurface objects, all work, including the original boring and all re-drilling, will be charged for at the appropriate rates in the fee schedule.