

CHICKASHA MUNICIPAL AUTHORITY

AGENDA
LOCATION OF MEETING
CITY HALL COUNCIL CHAMBERS
117 NORTH FOURTH STREET
CHICKASHA, OKLAHOMA 73018

TIME OF MEETING
6:30 PM

DATE OF MEETING
MAY 1, 2023

All items on this agenda, including but not limited to any agenda item concerning the adoption of any ordinance, resolution, contract, agreement, or any other item of business, are subject to amendment, including additions and/or deletions. This rule will apply to every individual agenda item without exception, and without providing this same amendment language with respect to each individual agenda item. Such amendments should be rationally related to the topic of the agenda item, or the governing body will be advised to continue the item.

The governing body may adopt, approve, ratify, deny, defer, recommend, amend, strike, or continue any agenda item. When more information is needed to act on an item, the governing body may refer the matter to its City/Trust Manager, staff, attorney or to the recommending board, commission or committee.

1. **Call to Order / Roll Call.**
2. **Consent Docket:**
 - a. Acceptance of the Minutes of the April 17, 2023 regular meeting.
 - b. Acceptance of Claims List.
3. **Discussion/Approval of Items Removed from Consent Docket:**
4. **Consideration and Discussion Items:**
 - a. Discussion, consideration, and possible action to authorize Staff to solicit bids for CMA-2302 - Water Distribution Improvements.

5. Motion for Adjournment.



City of
CHICKASHA

Meeting Type: CMA Agenda 5-1-2023

Meeting Date: 5/1/2023

Department: City Clerk

Agenda Item No. 2.a.

AGENDA ITEM: Acceptance of the Minutes of the April 17, 2023 regular meeting.

I. BACKGROUND/DESCRIPTION:

II. RECOMMENDED ACTION:

III. FISCAL INFORMATION -

IV. FUND INFORMATION:

Dept. Director: Susan M. McDaniel, City Clerk	Fund	Account	Amount
	(To)		
	FUND	ACCOUNT	AMOUNT
Meeting Date: May 1, 2023	(From)		

V. ATTACHMENTS:

1. CMA 4-17-2023

April 17, 2023

The **REGULAR** meeting of the **CHICKASHA MUNICIPAL AUTHORITY** was held in the council chambers in city hall on the 17th day of April 2023 as specified by advance public notice with a properly prepared agenda stating the subject matter or matters to be discussed at said meeting. Chairman Mosley called the meeting to order at 7:08 p.m.

ITEM 1.

Call to Order / Roll Call:

CHAIRMAN AND TRUSTEES

PRESENT:

Chris Mosley, Chairman
Zachary Grayson, Vice Chairman
Kelly Boyd
Kea Ginn
Georgianne Hebblethwaite
R. P. Ashanti-Alexander
Brian Gerdes

ABSENT:

Oscar Nelson

STAFF

PRESENT:

Keith Johnson, City Manager
Amanda Mullins, City Attorney
Susan M. McDaniel, City Clerk
G. G. Music, Interim Police Chief
Lille Huckaby, Library Director
Spencer Winzenried, Parks & Rec Director
Jim Crosby, Public Works Director
Robert Brooks, Treasurer
Rachel Bernish, Community Development Director
Shae Mortimer, Marketing and Civic Engagement Manager

ITEM 2.

Consent Docket: ITEM 2a thru ITEM 2f

ITEM 2a.

Acceptance of the Minutes of April 3, 2023, regular meeting.

ITEM 2b.

Acceptance of the Claims List.

ITEM 2c.

Acceptance of the Financials for March 2023.

ITEM 2d.

Accept and ratify Letter of Engagement with Crawford and Associates.

ITEM 2f.

Acceptance of Resolution 2023-05R amending the FY 22-23 Budget.

*Motion by Trustee Ashanti-Alexander, second by Trustee Hebblethwaite to approve Item 2a thru Item 2f.

Roll call vote:

Ayes:” Hebblethwaite, Ginn, Grayson, Ashanti-Alexander, Boyd, Gerdes, and Mosley.

“Nays:” None

“Abstain:” None

Motion carried. 7-0

ITEM 3. **Discussion / Approval of Items Removed from Consent Docket:**

No action taken on Item 3.

ITEM 4. **Discussion and Consideration Items:**

ITEM4a. **Discussion, consideration, and possible action to approve payment for the Economic Incentive Agreement for Moonlight Tea Company in the amount of \$37,415.30.**

*Motion by Council Member Ginn and second by Council Member Gerdes to approve payment for the Economic Incentive Agreement for Moonlight Tea Company in the amount of \$37,415.30.

Roll call vote:

“Ayes:” Grayson, Nelson, Hebblethwaite, Gerdes, McCalla, Ashanti-Alexander and Mosley.

“Nays:” None.

“Abstain:” None.

Motion passed. 7-0

ITEM4b. **Discussion, consideration, and possible action to approve termination of the lease agreement for the Chickasha Antique Auto Club which allowed the use of the Depot Building and Authorize the City Manager to provide 60 Days to Vacate.**

*Motion by Council Member Gerdes and second by Council Member Grayson to approve termination of the lease agreement for the Chickasha Antique Auto Club which allowed the use of the Depot Building and Authorize the City Manager to provide 60 Days to Vacate.

TIME 7:21 P.M.

Roll call vote:

“Ayes:” Grayson, Nelson, Hebblethwaite, Gerdes, McCalla, Ashanti-Alexander and Mosley.

“Nays:” None.

“Abstain:” None.

Motion passed. 7-0

ITEM4c. Discussion, consideration, and possible action to approve Resolution No. 2023-04R authorizing publication of a public sale and auction pursuant to 64 O.S. Section 1081 and 1082 for oil and gas mining lease(s) for oil and gas development covering certain properties in Caddo and Grady Counties as set forth herein.

*Motion by Council Member Boyd and second by Council Member Hebblethwaite to approve Resolution No. 2023-04R authorizing publication of a public sale and auction pursuant to 64 O.S. Section 1081 and 1082 for oil and gas mining lease(s) for oil and gas development covering certain properties in Caddo and Grady Counties as set forth herein.

Roll call vote:

“Ayes:” Grayson, Nelson, Hebblethwaite, Gerdes, McCalla, Ashanti-Alexander and Mosley.

“Nays:” None.

“Abstain:” None.

Motion passed. 7-0

ITEM 5. Motion to Adjourn.

*Motion by Trustee Boyd, second by Trustee Hebblethwaite to adjourn.

Meeting adjourned.

TIME: 7:25 PM

Approved this 1st day of May 2023.

Chris Mosley, Chairman

(ATTEST)

Susan M. McDaniel, CMC
City Clerk



City of
CHICKASHA

Meeting Type: CMA Agenda 5-1-2023

Meeting Date: 5/1/2023

Department: Finance

Agenda Item No. 2.b.

AGENDA ITEM: Acceptance of Claims List.

I. BACKGROUND/DESCRIPTION:

II. RECOMMENDED ACTION:

Accept Claims List.

III. FISCAL INFORMATION -

IV. FUND INFORMATION:

Dept. Director:	Fund	Account	Amount
	(To)		
	FUND	ACCOUNT	AMOUNT
Meeting Date: May 1, 2023	(From)		

V. ATTACHMENTS:



City of
CHICKASHA

Meeting Type: CMA Agenda 5-1-2023

Meeting Date: 5/1/2023

Department: City Clerk

Agenda Item No. 4.a.

AGENDA ITEM: Discussion, consideration, and possible action to authorize Staff to solicit bids for CMA-2302 - Water Distribution Improvements.

I. BACKGROUND/DESCRIPTION:

II. RECOMMENDED ACTION:

III. FISCAL INFORMATION -

IV. FUND INFORMATION:

Dept. Director: JimCrosby, Public Works Director	Fund	Account	Amount
	(To)		
	FUND	ACCOUNT	AMOUNT
Meeting Date: May 1, 2023	(From)		

V. ATTACHMENTS:

1. CHICKSHA CMA-2302 18608CDBG22 FINAL 23.04.26
2. CHICKASHA CMA-2302 DWGS FINAL 23.04.26



**18608 CDBG 22
WATER DISTRIBUTION IMPROVEMENTS
RFP CMA-2302
CHICKASHA MUNICIPAL AUTHORITY
CHICKASHA, OKLAHOMA**

SPECIFICATIONS & CONTRACT DOCUMENTS

This project was financed in whole or in part by funds from the U.S. Department of Housing and Urban Development as administered by the Oklahoma Department of Commerce.

Prepared by:



CA 7771
2124 Scott Lane
Duncan, Ok 73533
580-467-8130
rscottv11@gmail.com



R. Scott Vaughn, P.E., 15194

4/26/2023

Date

**18608 CDBG 22
WATER DISTRIBUTION IMPROVEMENTS
CHICKASHA, OKLAHOMA
RFP CMA-2302**

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ADVERTISEMENT FOR BIDS

Notice is hereby given that the Chickasha Municipal Authority,
hereinafter called the "Owner" will receive sealed bids at the Office of the
City Clerk located at 117 N. 4th Street, Chickasha, Ok 73018
until 1:30 p.m., on the 1st day of June 2023 for:

WATER DISTRIBUTION IMPROVEMENTS, RFP CMA-2302

CDBG Project Number: 18608 CDBG 22

All bids must include assurances that the following provisions will be complied with:

1. Federal Labor Standards Provisions, US Department of Labor, 29 CFR 5; Subpart A - Davis-Bacon Act; Subpart B - Fringe Benefit Provision.
2. Section 109 of the Housing and Community Development Act of 1974, which assures that no person shall, on the grounds of race, color, natural origin, or sex, be excluded from participation in, be denied the benefits of or be subjected to discrimination.
3. Non-Segregated Facilities, Certification that assures the bidder does not maintain or provide any segregated facilities.
4. Executive Order 11246, EEO provisions require affirmative action and prohibits federal contractors from discriminating on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin.
5. Minority Business Enterprise and Women Business Enterprise provisions which encourage minority-owned business and women-owned businesses to bid on the project.
6. Circular 570 - Assurances that surety companies executing bonds appear on the Treasury Department's list and are authorized to transact business in the State where the project is located.
7. SAM.gov Registration - Entities must be Active in SAM.gov with no exclusions in order to receive a federally assisted contract.

The Owner reserves the right to reject any or all bids, waive any irregularities or technicalities without assigning reason therefore, and to make the award in the best interest of the owner. Bid must be awarded to the lowest, responsive, and responsible bidder pursuant to the Oklahoma State Competitive Bidding Act of 1974 as amended.

A mandatory Pre-Bid meeting regarding the project will be held on May 16, 2023 at 1:30 p.m. at the Chickasha Public Works Administration Building, 502 North Genevieve, Chickasha, Oklahoma, 73018. Bids will not be accepted from firms who do not have a representative attending the Pre-Bid Conference.

Specifications and Bid documents are on file with the Owner and may be examined at the following locations:
Chickasha City Clerk

Plans and Specifications MUST be obtained from QUESTCDN.com

Paper copies of the contract documents may be obtained at the office of Chisholm Trail Consulting, LLC, located at 2124 Scott Lane, Duncan, Ok 73533, upon payment of \$100.00 for each set. Any bidder or non-bidder, upon returning the contract documents promptly and in good condition, will be refunded \$0.00.

City Clerk

Date

INFORMATION FOR BIDDERS

Bids will be received by Chickasha Municipal Authority (hereinafter called the "Owner") at 117 North 4th Street, Chickasha, Oklahoma 73018 until 1:30 p.m. local time, on the 1st day of June 2023, and then at said office publicly opened and read aloud.

Each bid must be submitted in a sealed envelope addressed to Chickasha City Clerk at 117 North 4th Street, Chickasha, Oklahoma 73018. Each sealed envelope containing a bid must be plainly marked on the outside as a "Bid for 18608 CDBG 22, WATER DISTRIBUTION IMPROVEMENTS RFP CMA-2302" and the envelope should bear on the outside the bidder's name, address and license number, if applicable, and the name of the project for which the bid is submitted. If forwarded by mail, the sealed envelope containing the bid must be enclosed in another envelope addressed to the Owner at 117 North 4th Street, Chickasha, Oklahoma 73018.

All bids must be made on the required bid form. All blank spaces for bid prices must be filled in, in ink or typewritten, and the bid form must be fully completed and executed when submitted. Only one copy of the bid form is required.

The Owner may waive any informalities or minor defects or reject any and all bids. Any bid may be withdrawn prior to the above-scheduled time for the opening of bids or authorized postponement thereof. Any bid received after the time and date specified shall not be considered. No bidder may withdraw a bid within 60 days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the Owner and the bidders.

Bidders must satisfy themselves on the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the drawings and specifications, including addenda. After bids have been submitted, no bidder shall assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

Prior to bidding, the Owner shall provide bidders with all information that is pertinent to and delineates and describes the land owned and rights-of-way acquired or to be acquired.

The contract documents contain the provisions required for the construction of the project. Information obtained from an officer, agent or employee of the Owner or any other person shall not affect the risks or obligations assumed by the contractor or relieve the contractor from fulfilling any of the conditions of this contract.

Each bid must be accompanied by a bid bond payable to the Owner for five percent of the total amount of the bid. As soon as the bid prices have been compared, the Owner will return the bonds of all except the three lowest responsible bidders. When the agreement is executed, the bonds of the two remaining unsuccessful bidders will be returned. The

bid bond of the successful bidder will be retained until the payment the payment bond and performance bond and/or statutory bond have been executed and approved, after which it will be returned. A certified check may be used in lieu of the bid bond.

A performance bond and a payment/statutory bond, each in the amount of 100 percent of the contract price and each with a corporate surety approved by the Owner, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign bid bonds, payment bonds and/or performance bonds must file with each bond a certified copy of their Power of Attorney bearing the effective date.

The party to whom the contract is awarded will be required to execute the agreement and obtain the performance bond and statutory bond within ten (10) calendar days from the date when Notice of Award is delivered to the bidder. The Notice of Award shall be accompanied by the necessary agreement and bond forms. In case of failure of the bidder to execute the agreement, the Owner may consider the bidder in default, in which case the bid bond accompanying the proposal shall become the property of the Owner.

The Owner, within ten (10) days of receipt of acceptable performance bond, statutory bond and agreement signed by the party to whom the agreement was awarded, shall sign the agreement and return to such party an executed duplicate of the agreement. Should the Owner not execute the agreement within such period, the bidder may, by written notice, withdraw the signed agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

The Notice to Proceed shall be issued within ten (10) days of the execution of the agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the Owner and contractor. If the Notice to Proceed has not been issued within the ten-day period or within the period mutually agreed upon, the contractor may terminate the agreement without further liability on the part of either party.

The Owner may make such investigations as deemed necessary to determine the ability of the bidder to perform the work and the bidder shall furnish to the Owner all such information and data for this purpose as the Owner may request. The Owner reserves the right to reject any bid if the evidence submitted by or investigation of such bidder fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the agreement and to complete the work contemplated therein.

A conditional or qualified bid will not be accepted.

Award will be made to the lowest responsible bidder.

All applicable laws, ordinances and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout.

Each bidder is responsible for inspecting the site and for reading and being thoroughly familiar with the contract documents. The failure or omission of any bidder to do any of the foregoing shall in no way relieve any bidder from any obligation with respect to its bid.

Further, the bidder agrees to abide by the requirements under Executive Order No. 11246, as amended, including, specifically, the provisions of the Equal Opportunity Clause set forth in the Supplemental General Conditions.

When alternate bids are taken, they will be listed in numerical order with the highest priority being number one, second priority being number two, etc.

When alternates are used, the low bidders will be selected by the lowest and best bid, considering all bids, which include the selected alternate bids.

The alternates will be listed in consecutive priority order to remain within the funds available for the project.

The low bidder shall supply the names and addresses of major material suppliers and subcontractors when required to do so by the Owner.

Inspection trips for prospective bidders will leave from the office of the Public Works Director at 502 North Genevieve, Chickasha, Oklahoma 73018.

SPECIAL NOTES TO BIDDERS:

As a part of the bid on this project, the successful bidder will be required to meet all requirements of the Underground Facilities Damage Prevention Act when engaged in work within the public right-of-way in the same manner as in private right-of-way.

There will be a mandatory Pre-Bid meeting on May 16, 2023, at 1:30 p.m. at the Chickasha Public Works Administration Building, 502 North Genevieve Street, Chickasha, Oklahoma, 73018.

Attendance at the Pre-Bid Conference is **MANDATORY**. Bids will not be accepted from firms who do not have a representative attending the Pre-Bid Conference. No plans, specifications or bid documents will be issued after the Pre-Bid Conference. All bidders must visit and inspect the construction sites and shall be familiar with the physical characteristics and conditions at the construction sites prior to submitting a bid.

The Owner reserves the right to consider alternative proposals submitted in writing by Bidders or by the Contractor.

BID PROPOSAL

Proposal of _____
(hereinafter called "Bidder"), organized and existing under the laws of
the State of _____, doing business as _____
_____, to Chickasha Municipal Authority (hereinafter
called "Owner").

In compliance with your Advertisement for Bids, Bidder hereby
proposes to perform all work for the construction of 18608 CDBG 22, WATER
DISTRIBUTION IMPROVEMENTS, RFP CMA-2302 in strict accordance with the
contract documents within the time set forth therein and at the prices
stated below.

By submission of this bid, each Bidder certifies, and in the case of
a joint bid each party certifies as to its own organization, that this
bid has been arrived at independently, without consultation, commun-
ication or agreement as to any matter relating to this bid, with any
other Bidder or with any competitor.

Bidder hereby agrees to commence work under this contract within ten
(10) days of the date to be specified in the Notice to Proceed and to
fully complete the project within 150 consecutive calendar days
thereafter. Bidder further agrees to pay as liquidated damages the sum
of \$500.00 for each consecutive calendar day thereafter as provided in
Section 15 of the General Conditions.

No Bidder may withdraw a bid within 60 days after the actual opening
thereof. Each bid must be accompanied by a bid bond payable to Owner for
5% of the amount bid.

Bidder acknowledges receipt of the following addenda: _____
_____.

Bidder agrees to perform all the work described in the contract
documents for the following unit prices or lump sum.

NOTE: Bids shall not include sales tax.

*Insert "a corporation", "a partnership" or "an individual", as
applicable.

BID SCHEDULE					
WATERLINE 1					
LOCATION: MISSOURI AVENUE FROM 4TH STREET TO 3RD STREET					
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	6" PVC WL, TRENCHED	LF	420	\$	\$
2	6" X 6" MJ TEE, INSTALLED	EA	2	\$	\$
3	6" X 45° MJ BEND, INSTALLED	EA	2	\$	\$
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	5	\$	\$
5	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	1	\$	\$
6	PAVEMENT REPAIR	SY	18	\$	\$
7	REPLACE CURB AND GUTTER	LF	30	\$	\$
8	DISINFECTION	LSUM	1	\$	\$
9	HYDROSTATIC PRESSURE TESTING	LSUM	1	\$	\$
10	CONSTRUCTION TRAFFIC CONTROL	LSUM	1	\$	\$
SUBTOTAL WATERLINE 1				\$	
WATERLINE 2					
LOCATION: VIRGINIA AVENUE FROM SHEPHERD TO HENDERSON AND HENDERSON FROM VIRGINIA TO ALLEY					
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	6" PVC WL, TRENCHED	LF	620	\$	\$
2	6" X 6" MJ TEE, INSTALLED	EA	2	\$	\$
3	6" X 45° MJ BEND, INSTALLED	EA	2	\$	\$
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	5	\$	\$
5	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	1	\$	\$
6	PAVEMENT REPAIR	SY	11	\$	\$
7	REPLACE CURB AND GUTTER	LF	15	\$	\$
8	DISINFECTION	LSUM	1	\$	\$
9	HYDROSTATIC PRESSURE TESTING	LSUM	1	\$	\$
10	CONSTRUCTION TRAFFIC CONTROL	LSUM	1	\$	\$
SUBTOTAL WATERLINE 2				\$	
FIRE HYDRANTS AND VALVES					
LOCATION: SEE SCHEDULE					
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	10	\$	\$
2	6-INCH FIRE HYDRANT EXTENSION	EA	8	\$	\$
3	12-INCH FIRE HYDRANT EXTENSION	EA	3	\$	\$
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	30	\$	\$
5	PAVEMENT REPAIR	SY	211	\$	\$
6	REPLACE CURB AND GUTTER	LF	120	\$	\$
7	PAINT EXISTING FIRE HYDRANT	EA	5	\$	\$
SUBTOTAL FIRE HYDRANTS AND VALVES				\$	

BID SCHEDULE CONTINUED					
PROVISIONAL WATERLINE					
LOCATION: HENDERSON FROM ALLEY TO TENNESSEE					
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY	UNIT PRICE	TOTAL PRICE
1	6" PVC WL, TRENCHED	LF	220	\$	\$
2	PAVEMENT REPAIR	SY	22	\$	\$
3	REPLACE CURB AND GUTTER	LF	25	\$	\$
4	DISINFECTION	LSUM	1	\$	\$
5	HYDROSTATIC PRESSURE TESTING	LSUM	1	\$	\$
6	CONSTRUCTION TRAFFIC CONTROL	LSUM	1	\$	\$
SUBTOTAL PROVISIONAL WATERLINE				\$	
TOTAL BID (NUMBERS)				\$	

TOTAL BID (WORDS)

Respectfully submitted,

Signature

Firm Name

Title

Address

Employer I.D. No.

Address

[(SEAL) if bid is by a corporation]

Telephone No.

ATTEST:

Secretary/Witness

Date

[illegible]

Affiant

Notary Public

NOTE: This form is to be submitted with the bid.

NON-COLLUSION AFFIDAVIT

STATE OF OKLAHOMA)
) ss.
COUNTY OF _____)

_____, of lawful age, being first duly sworn upon oath, states that (s)he is the agent authorized by the Bidder to submit the attached bid. Affiant further states that the Bidder has not been a party to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding or with any State official or employee as to quantity, quality or price in the prospective contract or any other terms of said prospective contract or in any discussions between bidders and any State official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

Affiant

Subscribed and sworn to before me this _____ day of _____,
_____.

Notary Public

My Commission Expires:

NOTE: This form is to be submitted with the bid.

PAYROLL AFFIDAVIT

STATE OF OKLAHOMA)
)
COUNTY OF _____) ss.

_____, of lawful age, being first duly sworn upon oath, states that (s)he is the agent authorized by the Bidder to submit the attached bid. Affiant further states that (s)he has submitted the required payroll information to the Wage and Hour Division of the Employment Standards Administration of the United States Department of Labor.

Affiant

Subscribed and sworn to before me this _____ day of _____,
_____.

Notary Public

My Commission Expires:

NOTE: This form is to be submitted with the bid.

BID BOND

We, the undersigned, _____,
as Principal, and _____, as
Surety, are hereby held and firmly bound unto the Chickasha Municipal
Authority, as Owner, in the penal sum of _____
_____ for the payment of which, well and truly to be made,
hereby jointly and severally bind ourselves, our successors and our
assigns.

Signed this _____ day of _____, _____.

The condition of the above obligation is such that, whereas the
Principal has submitted to the Chickasha Municipal Authority a certain
bid, attached hereto and hereby made a part hereof, to enter into a
contract, in writing, for the 18608 CDBG 22, WATER DISTRIBUTION
IMPROVEMENTS, RFP CMA-2302;

NOW, THEREFORE, if said bid shall be rejected or if said bid shall
be accepted and the Principal shall execute and deliver a contract in the
form of the contract attached hereto (properly completed in accordance
with said bid) and shall furnish a bond for faithful performance of said
contract and for the payment of all persons performing labor or
furnishing materials in connection therewith and shall in all other
respects perform the agreement created by the acceptance of said bid,
then this obligation shall be void; otherwise, the same shall remain in
force and effect, it being expressly understood and agreed that the
liability of the Surety for any and all claims hereunder shall, in no
event, exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its bonds shall in no way be impaired or affected by any extension of the time within which the Owner may accept such bid and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers the day and year first set forth above.

Principal

Surety

By:_____

ATTEST: (if by corporation)

Types Name & Title

Corporate Seal

NOTE: This form is to be submitted with the bid.

Oklahoma Department of Commerce CDBG Programs

CONTRACTOR DEBARMENT REVIEW CERTIFICATION

(Must be submitted with bid proposal)

CMA-2302, Water Distribution Improvements

18608 CDBG 22

**CDBG Grantee Name (Owner) and Project Type
Number**

CDBG Project

ATTENTION ALL BIDDERS:

All CDBG sub-recipients (Cities, Towns, or Counties) are required to conduct debarment reviews on all services procured with CDBG funds by checking the **System for Award Management (SAM) website**, www.sam.gov, to determine if a potential contractor is excluded from receiving Federal contracts.

A contractor must be registered and updated in the SAM.gov system as this review is conducted by the Owner before any contract award is executed.

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension; 7 CFR Part 3017.510, Participants' responsibilities. The regulations were published as Part IV of the January 30, 1989 Federal Register (pages 4722-4733).

- 1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- 2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective shall attach an explanation to this proposal.

Certified by:

Name & Title (Please Print)

Date

Signature

Date

SAM Unique Entity ID

Oklahoma Department of Commerce CDBG Programs Grantee Debarment Review and Certification

All CDBG sub-recipients are required, by the regulations implementing 24 CFR Part 85.35, to conduct debarment reviews on all services procured with CDBG funds **before any contract award is executed**. These reviews shall be conducted by using the **System for Award Management (SAM) website, www.sam.gov**, to determine if the potential contractor is excluded from receiving Federal contracts by using the **QUICK SEARCH** tool with the DUNS number for that entity; **Save/Print the results**. Complete this form and attach the SAM results along with the Notice of Award and Contractor's Certification form from the Bid/Proposal documents.

CDBG Grantee Name and Project Type	Chickasha Municipal Authority Water Distribution Improvements			CDBG Contract Number	18608 CDBG 22
*Contractor					
Address				Phone	
City		State		Zip Code	
Contractor's DUNS Number					
Debarment Review Completed By			Lee Anne Huntoon		
Title of Reviewer			Grants Administrator		
Reviewer's Organization			Parkhill		
Chief Elected Official			Chris Mosley		
Title of Chief Elected Official			Mayor		

By signing this certification, both the Reviewer and the Chief Elected Official certify all necessary actions were taken to complete the debarment check and that the contractor listed above is not suspended or debarred from conducting business with, or receiving funding from, the United States government under E.O. 12549.

Signature of Reviewer

Date

Signature of Chief Elected Official

Date

Please upload this document along with other required documentation into OK-Grants "Release of Funds" and submit using the Notice of Award status. Keep the originals in the CDBG project file.

*Contractor is any entity or individual directly procured for contract services by the sub-recipient (grantee), (City, Town, or County), under this CDBG contract award and **must be registered** in the SAM.gov system.

C O N T R A C T

This contract, made and entered into by and between _____, as Party of the First Part, hereinafter designated as Contractor, and the Chickasha Municipal Authority, as Party of the Second Part, hereinafter designated as the Owner, to-wit:

WHEREAS, the Contractor is the lowest and best bidder for:

18608 CDBG 22, WATER DISTRIBUTION IMPROVEMENTS, RFP CMA-2302

for the total bid price, as accepted, of _____ Dollars, (\$_____);

NOW, THEREFORE, the Contractor, for the consideration herein named, hereby agrees to do and complete the work above mentioned in accordance with the plans adopted and approved by the Owner and on file in the office of the Chickasha City Clerk, which plans and specifications are made a part of this contract by reference as if attached hereto or written in detail herein.

It is further agreed that the Contractor will commence said work within 10 days from the date of the Work Order and perform same vigorously and continuously and complete the same on or before 150 Calendar Days after issuance of Notice to Proceed.

It is further agreed that payment for the aforesaid work or material will be made under the terms of the Contractor's bid, as accepted, as provided in the specifications and that, upon final completion of this contract work, the Contractor will receive the full compensation payment according to the schedule of prices as contained in his bid, as accepted, and that, upon receipt by the Contractor of final claim, the same shall be paid in full for all claims of every kind and description the Contractor may have arising out of this contract.

The Notice to Bidders, the Information for Bidders, the Supplemental Information for Bidders, the Special and General Provisions of specifications and the Contractor's Bid Proposal, each of said instruments on file in the office of the Chickasha City Clerk, are hereby referred to and, by reference thereto, are made a part of this contract as if fully written in detail or attached hereto.

IN WITNESS WHEREOF, the Parties of the First and Second Parts have hereunto set their hands and seals the _____ day of _____, ____.

SEAL

Contractor

ATTEST:

By:_____

By:_____

Typed Name & Title

Typed Name & Title

SEAL

Chickasha Municipal Authority
Owner

ATTEST:

By:_____

By:_____

Susan McDaniel, Clerk
Typed Name & Title

Chris Mosley, Mayor
Typed Name & Title

PERFORMANCE BOND

_____, as Principal,
and _____, a
corporation organized under the laws of the State of _____, as
surety, are held and firmly bound unto **the Chickasha Municipal Authority,
Chickasha, Oklahoma**, in the penal sum of _____
_____ Dollars (\$_____), in lawful money of the
United States of America, for the payment of which, well and truly to be
made, we bind ourselves and each of us, our heirs, executors,
administrators, trustees, successors and assigns, jointly and severally,
firmly by these presents.

The condition of this obligation is such that, whereas said
Principal entered into a written contract with **the Chickasha Municipal
Authority, Chickasha, Oklahoma**, dated_____,_____, for the **18608
CDBG 22, WATER DISTRIBUTION IMPROVEMENTS, RFP CMA-2302**, all in compliance
with the plans and specifications therefor, made a part of said contract
and on file in the office of the

Chickasha City Clerk 117 N. 4th Street Chickasha, OK 73018

(Name and Address of Agency)

NOW, THEREFORE, if said Principal shall, in all particulars, well, truly
and faithfully perform and abide by said contract and each and every
covenant, condition and part thereof and shall fulfill all obligations
resting upon said Principal by the terms of said contract and said
specifications and if said Principal shall protect and save harmless said
Chickasha Municipal Authority from any pecuniary loss resulting from the
breach of any of the items, covenants and conditions of said contract
resting upon said Principal, then this obligation shall be null and void,
otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties hereto
that no changes or alterations in said contract and no deviations from
the plan or mode of procedures herein fixed shall have the effect of
releasing the sureties, or any of them, from the obligations of this
Bond.

IN WITNESS WHEREOF, the said 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 said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its Attorney-In-Fact, duly authorized to do so, the day and year set forth below.

Dated this _____ day of _____, _____.

PRINCIPAL:

By: _____

ATTEST:

SURETY:

By: _____

Attorney-In-Fact

STATUTORY BOND

No. _____

We, _____, as Principal, and
_____, a corporation
organized under the laws of the State of _____, as
Surety, are held and firmly bound unto the State of Oklahoma in the
amount of _____ Dollars
(\$_____) for the payment of which we hereby bind ourselves, our
heirs, executors, administrators and assigns, jointly and severally,
firmly by these presents.

Dated this ____ day of _____, _____.

WHEREAS, the said _____
did on _____ enter into a certain contract with the

Chickasha Municipal Authority

AND WHEREAS, this bond is given in compliance with Oklahoma Statutes
Annotated, 194, Title 61, Sections 1 and 2, as amended;

NOW, THEREFORE, the condition of the above obligation is such that,
if the Principal shall pay all indebtedness incurred for labor, materials
or rental of machinery or equipment furnished in the construction of said
public building or in making said public improvements, then this
obligation shall be void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF we have hereunto set our hands and seals the day
and year first above written.

By: _____
Bonding Company

ATTEST (If by corporation)

By: _____
Attorney

MAINTENANCE BOND
(Defect Bond)

_____, as Principal, and _____, a corporation organized under the laws of the State of _____ and authorized to transact business in the State of Oklahoma, as Surety, are held and firmly bound unto the Chickasha Municipal Authority, (City, Town or Trust Authority) in the penal sum of _____ Dollars (\$_____) in lawful money of the United States of America, said sum being equal to one hundred percent (100%) of the contract price, for payment of which, well and truly to be made, we bind ourselves and each of us, our heirs, executors, administrators, trustees, successors and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that, whereas said Principal entered into a written contract with the Chickasha Municipal Authority (City, Town or Trust Authority) dated _____, _____, for

18608 CDBG 22, WATER DISTRIBUTION IMPROVEMENTS, RFP CMA-2302, all in compliance with the plans and specifications therefor, made a part of said contract and on file in the office of the Chickasha City Clerk at 117 N. 4th Street Chickasha, OK 73018;

NOW, THEREFORE, if said Principal shall pay or cause to be paid to the Chickasha Municipal Authority all damage, loss and expense which may result by reason of defective materials and/or workmanship in connection with said work occurring within a period of one (1) year from and after the acceptance of said project by the Chickasha Municipal Authority. (City, Town or Trust Authority) then this obligation shall be null and void, otherwise to be and remain in full force and effect.

It is further expressly agreed and understood by the parties that no changes or alterations in said contract and no deviations from the plan or mode of procedures herein fixed shall have the effect of releasing the sureties, or any of them, from the obligations of this Bond.

IN WITNESS WHEREOF, the said 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 said Surety has caused these presents to be executed in its name and its corporate seal to be hereunto affixed by its Attorney-In-Fact, duly authorized so to do, the day and year set forth below.

DATED this _____ day of _____, _____.

PRINCIPAL :

By: _____

ATTEST:

SURETY:

By: _____

Attorney-In-Fact

INSURANCE REQUIREMENTS

Name of Insured: _____

Description of Work: 18608 CDBG 22, WATER DISTRIBUTION IMPROVEMENTS, RFP CMA-2302

Location of Work: Various Locations in Chickasha, OK

<u>Kind of Insurance</u>	<u>Minimum Coverage</u>	<u>Expected Dates Coverage Needed</u>	
		<u>From</u>	<u>To</u>
Workers' Compensation	Legal Amount	_____	_____
General Public Liability and Property Damage, Including Vehicle Coverage:			
Bodily Injury - Each Person	\$500,000	_____	_____
Bodily Injury - Each Accident	\$500,000	_____	_____
Property Damage - Each Person	\$200,000	_____	_____
Property Damage - Aggregate Limit	\$200,000	_____	_____
Builder's Risk (If Required)	Full Coverage	_____	_____

Note: This covers all motor-driven vehicles such as cars, trucks, graders, etc.

In the event of any material change or cancellation of said policies, the company will give fifteen (15) days' written notice to the Chickasha Municipal Authority, Owner.

Statements such as "will endeavor" and "but failure to notify Owner shall impose no obligation or liability of any kind upon the company" shall not be allowed.

Coverage shall be indicated by checking all boxes applicable. Insurance shall cover any hazards involved with the planned construction. Special coverage for blasting operations shall be listed separately on the certificates.

The Owner shall be listed as the certificate holder.

ATTORNEY'S CERTIFICATE OF APPROVAL OF CONTRACT AND BONDS

I, the undersigned _____, the fully authorized and acting legal representative of the Chickasha Municipal Authority, Chickasha, Oklahoma, do hereby certify as follows:

I have examined the construction contract between the construction contractor, _____, and the above-named entity and the surety bonds given by the construction contractor in connection with the performance of said contract and the manner of execution of the contract and surety bonds and I am of the opinion that each of the aforesaid agreement has been duly executed by the proper parties thereto, acting through their duly authorized representatives, that said representatives have full power and authority to execute said agreements on behalf of the respective parties named therein and that the foregoing contract and surety bonds constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

Dated the _____ day of _____, 20_____.

Attorney

_____, Oklahoma

[illegible]

Affiant (Supervisory Official)

Notary Public



Chickasha Municipal Authority
Chickasha, Oklahoma

RFP CMA-2302

GENERAL

CONDITIONS

GENERAL CONDITIONS

1. Definitions	17.Subsurface Conditions
2. Additional Instructions	18.Suspension, Termination, Delay
3. Schedules, Reports, and Records	19.Payments to Contractor
4. Drawings and Specifications	20.Acceptance of Final Pay/Release
5. Shop Drawings	21.Insurance
6. Materials, Services, and Facilities	22.Contract Security
7. Inspection and Testing	23.Assignments
8. Substitutions	24.Indemnification
9. Patents	25.Separate Contracts
10.Surveys, Permits, Regulations	26.Subcontracting
11.Protection of Work, Property, Persons	27.Engineer's Authority
12.Supervision by Contractor	28.Land and Rights-of-Way
13.Changes in the Work	29.Guaranty
14.Changes in Contract Price	30.Arbitration
15.Time and Liquidated Damages	31.Taxes
16.Correction Work	

1. **DEFINITIONS:** Wherever used in the contract documents, the following terms shall have the meanings indicated and shall be applicable to both the singular and plural thereof:
 - a. Addenda: Written or graphic instruments issued prior to the execution of the agreement which modify or interpret the contract documents, drawings and specifications by additions, deletions, clarifications, or corrections.
 - b. Bid: The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the work to be performed.
 - c. Bidder: Any person, firm or corporation submitting a bid for the work.
 - d. Bonds: Bid, performance, payment (statutory) and maintenance bonds and other instruments of security furnished by the Contractor and the Contractor's surety in accordance with the contract documents.
 - e. Change Order: A written order to the Contractor authorizing an addition, deletion, or revision in the work within the general scope of the contract documents or authorizing an adjustment in the contract price or contract time.
 - f. Contract Documents: The contract, including Advertisement for Bids, Information for Bidders, Bid, Bid Bond, Agreement, Payment (Statutory) Bond, Performance Bond, Notice of Award, Notice to Proceed, Change Order, Drawings, Specifications and Addenda.

- g. Contract Price: The total monies payable to the Contractor under the terms and conditions of the contract documents.
- h. Contract Time: The number of calendar days stated in the contract documents for the completion of the work.
- i. Contractor: The person, firm, or corporation with whom the Owner has executed the agreement.
- j. Drawings: The parts of the contract documents which show the characteristics and scope of the work to be performed and which have been prepared or approved by the engineer.
- k. Engineer: The person, firm or corporation named as such in the contract documents.
- l. Field Order: A written order effecting a change in the work not involving an adjustment in the contract price or an extension of the contract time, issued by the engineer to the Contractor during construction.
- m. Notice to Proceed: Written communication issued by the Owner to the Contractor authorizing him/her to proceed with the work and establishing the date for commencement of the work.
- n. Notice of Award: The written notice by Owner to the apparent successful bidder stating that, upon compliance by the apparent successful bidder with the conditions enumerated therein within the time specified, Owner will sign and deliver the agreement.
- o. Owner: A public or quasi-public body or authority, corporation, association, partnership or individual for whom the work is to be performed.
- p. Project: The undertaking to be performed as provided in the contract documents.
- q. Resident Project Representative: The authorized representative of the Owner who is assigned to the project site or any part thereof.
- r. Shop Drawings: All drawings, diagrams, illustrations, brochures, schedules, and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier, or distributor which illustrate how specific portions of the work shall be fabricated or installed.
- s. Specifications: A part of the contract documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards, and workmanship.

- t. Subcontractor: An individual, firm or corporation having a direct contract with Contractor or with any other subcontractor for the performance of a part of the work at the site.
- u. Substantial Completion: That date certified by the engineer when the construction of the project or a specified part thereof is sufficiently completed, in accordance with the contract documents, to allow the project or specified part to be utilized for the purposes for which it is intended.
- v. Supplemental General Conditions: Modifications to General Conditions required by a federal agency for participation in the project and approved by the agency in writing prior to being included in the contract documents or such requirements that may be imposed by applicable State laws.
- w. Supplier: Any person or organization who supplies materials or equipment for the work, including that fabricated to a special design, but who does not perform labor at the site.
- x. Work: All labor necessary to produce the construction required by the contract documents and all materials and equipment incorporated or to be incorporated in the project.
- y. Written Notice: Any notice in writing to any party to the agreement regarding any part of this agreement. Said written notice shall be considered delivered and the service thereof completed when posted by certified or registered mail to said party at their last given address or delivered in person to said party or their authorized representative at the project site.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS:

- a. The Contractor may be furnished additional instructions and detail drawings by the engineer as necessary to carry out the work required by the contract documents.
- b. The additional drawings and instructions thus supplied will become a part of the contract documents. The Contractor shall carry out the work in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS:

- a. The Contractor shall submit to the Owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records, and other data, where applicable, as are required by the contract documents for the work to be performed.

- b. Prior to the first partial payment estimate, the Contractor shall submit construction progress schedules showing the order in which the Contractor proposes to carry on the work, including dates at which the various parts of the work will be started, estimated date of completion of each part and, as applicable:
 - (1) The dates at which special detail drawings will be required; and
 - (2) Respective dates for submission of shop drawings, the beginning of manufacture, the testing, and the installation of materials, supplies and equipment.
- c. The Contractor shall also submit a schedule of payments the Contractor anticipates will be earned during the course of the work.

4. DRAWINGS AND SPECIFICATIONS:

- a. The drawings and specifications are tools to be used by the Contractor to enable the Contractor to furnish all labor, materials, tools, equipment, and transportation necessary for the proper performance of the work in accordance with the contract documents and all incidental work necessary to complete the project in an acceptable manner, ready for use, occupancy, or operation by the Owner.
- b. In case of conflict between the drawings and the specifications, the specifications shall govern. Figure dimensions and drawings shall govern over scale dimensions and detail drawings shall govern over general drawings.
- c. Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in the drawings or specifications shall be immediately reported, in writing, to the engineer, who shall promptly correct such inconsistencies or ambiguities in writing. Work done by the Contractor after discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

5. SHOP DRAWINGS:

- a. The Contractor shall provide shop drawings as may be necessary for the performance of the work as required by the contract documents. The engineer shall promptly review all shop drawings. The engineer's approval of any shop drawing shall not release the Contractor from responsibility for deviations from the contract documents. The approval of any shop drawing that substantially deviates from the requirement of the contract documents shall be evidenced by a change order.

- b. When submitted for the engineer's review, shop drawings shall bear the Contractor's certification that he has reviewed checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

6. MATERIALS, SERVICES AND FACILITIES:

- a. It is understood that, except as otherwise specifically stated in the contract documents, the Contractor shall provide and pay for all materials, labor, tools, equipment, water, light, power, transportation, supervision, temporary construction of any nature and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.
- b. Materials and equipment shall be so stored as to preserve their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located to facilitate prompt inspection.
- c. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned as directed by the manufacturer.
- d. Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the engineer.
- e. Materials, supplies or equipment to be incorporated into the work shall be purchased by the Contractor or the subcontractor free and clear of chattel mortgages, conditional sales contracts, or other agreements by which an interest is retained by the seller.

7. INSPECTION AND TESTING:

- a. All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards as required and defined in the contract documents.
- b. The Owner shall provide all inspection and testing services not required by the contract documents.
- c. The Contractor shall provide, at the Contractor's expense, the testing and inspection services required by the contract documents.
- d. If the contract documents, laws, ordinance, rules, regulations, or orders of any public authority having jurisdiction require any specific work to be inspected, tested, or approved by someone other than the Contractor, the Contractor will give

the engineer timely notice of readiness. The Contractor will then furnish the engineer the required certificates of inspection, testing, or approval.

- e. Inspections, tests or approvals by the engineer or others shall not relieve the Contractor from the obligation to perform the work in accordance with the requirements of the contract documents.
 - f. The engineer and the engineer's representatives will at all times have access to the work. In addition, authorized representatives, and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, pay-rolls, records of personnel, invoices of materials and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the work and for any inspection or testing thereof.
 - g. If any work is covered contrary to the written instructions of the engineer, it must, if requested by the engineer, be uncovered for the engineer's observation and the covering replaced at the Contractor's expense.
 - h. If the engineer considers it necessary or advisable that covered work be inspected or tested by others, the Contractor, at the engineer's request, will uncover, expose, or otherwise make available for observation, inspection, or testing, as the engineer may require, that portion of the work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such work is defective, the Contractor will bear all expenses of such uncovering, exposing, observing, inspecting, and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the Contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposing, observing, inspecting, testing and reconstruction and an appropriate change order shall be issued.
8. SUBSTITUTIONS: Whenever a material, article or piece of equipment is identified on the drawings or specifications by referenced to brand name or catalog number, it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, quality and function shall be considered. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal substance and function for those referred to in the contract documents by reference to brand name or catalog number and if, in the opinion of the engineer, such material, article or piece of equipment is of equal substances and function to that specified, the engineer may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the contract price and the contract documents shall be appropriately

modified by change order. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the contract price or contract time.

9. PATENTS:

The Contractor shall pay all applicable royalties and license fees and shall defend all suits or claims for infringement of any patent rights and save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for any such loss when a particular process, design or product of a particular manufacturer or manufacturers is specified; however, if the Contractor has reason to believe that the design, process or product specified is an infringement of a patent, the Contractor shall be responsible for such loss unless the Contractor promptly gives such information to the engineer.

10. SURVEYS, PERMITS, REGULATIONS:

- a. The Owner shall furnish all boundary surveys and establish all base lines for locating the principal component parts of the work, together with a suitable number of benchmarks adjacent to the work as shown in the contract documents. From the information provided by the Owner, unless otherwise specified in the contract documents, the Contractor shall develop and make all detail surveys needed for construction, such as slope stakes, batter boards, stakes for pipe locations and other working points, lines, elevations and cut sheets.
- b. The Contractor shall carefully preserve benchmarks, reference points and stakes and, in case of willful or careless destruction, shall be charged with the resulting expense and shall be responsible for any mistake that may be caused by their unnecessary loss or disturbance.
- c. Permits and licenses of a temporary nature necessary for the performance of the work shall be secured and paid for by the Contractor unless otherwise stated in the Supplemental General Conditions. Permits, licenses and easements for permanent structures or permanent changes in existing facilities shall be secured and paid for by the Owner unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules, and regulations bearing on the conduct of the work as drawn and specified. If the Contractor observes that the contract documents are at variance therewith, the Contractor shall promptly notify the engineer in writing and any necessary changes shall be adjusted as provided in Section 13, CHANGES IN THE WORK.

11. PROTECTION OF WORK, PROPERTY AND PERSONS:

- a. The Contractor will be responsible for initiating, maintaining, and supervising all safety precautions and program in connection with the work. The Contractor will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury or loss to all employees on the work and other persons who may be affected thereby and for the protection of all the work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.
- b. The Contractor will comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction. The Contractor will erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety and protection. The Contractor will notify owners of adjacent utilities when performance of the work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor or any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, except damage or loss attributable to the fault of the contract documents or to the acts or omissions of the Owner or the engineer or anyone employed by either them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.
- c. In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto, the Contractor, without special instructions or authorization from the engineer or Owner, shall act to prevent the threatened damage, injury, or loss. The Contractor will give the engineer prompt written notice of any significant changes in the work or deviations from the contract documents caused thereby and a change order shall thereupon be issued covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR:

The Contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences, and procedures of construction. The Contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the Contractor as the Contractor's representative at the site. The supervisor shall have full authority to act on behalf of the Contractor and all communications given to the

supervisor shall be as binding as if given to the Contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

13. CHANGES IN THE WORK:

- a. The Owner may, at any time, as the need arises, order changes within the scope of the work without invalidating the agreement. If such changes increase or decrease the amount due under the contract documents or in the time required for performance of the work, an equitable adjustment shall be authorized by change order.
- b. The engineer may also, at any time, by issuing a field order, make changes in the details of the work. The Contractor shall proceed with the performance of any changes in the work so ordered by the engineer unless the Contractor believes that such field order entitles the Contractor to a change in contract price or time, or both, in which event, the Contractor shall give the engineer written notice thereof within seven (7) days after the receipt of the ordered change. Thereafter, the Contractor shall document the basis for the change in contract price or time within thirty (30) days. The Contractor shall not execute such changes pending the receipt of an executed change order or further instruction from the Owner.

14. CHANGES IN CONTRACT PRICE: The contract price may be changed only by a change order. The value of any work covered by a change order or of any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below:

- a. Unit prices previously approved;
- b. An agreed lump sum.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

- a. The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on a date specified in the Notice to Proceed.
- b. The Contractor will proceed with the work at such rate of progress as to ensure full completion within the contract time. It is expressly understood and agreed by and between the Contractor and the Owner that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

- c. If the Contractor shall fail to complete the work within the contract time or extension of time granted by the Owner, then the Contractor will pay to the Owner the amount for liquidated damages as specified in the bid for each calendar day the Contractor shall be in default after the time stipulated in the contract documents.
- d. The Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the Contractor has promptly given written notice of such delay to the Owner or engineer:
 - (1) Any preference, priority or allocation order duly issued by the Owner;
 - (2) Unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to acts of God, acts of the public enemy, acts, or the Owner, acts of another contractor in the performance of a contract with the Owner, fires, flood, epidemics, quarantine, restrictions, strikes, freight embargoes and abnormal and unforeseeable weather; and
 - (3) Any delays of subcontractors occasioned by any of the causes specified in paragraphs 15d (1) and 15d (2) of this article.

16. CORRECTION WORK:

- a. The Contractor shall promptly remove from the premises all work rejected by the engineer for failure to comply with the contract documents, whether incorporated in the construction or not, and the Contractor shall promptly replace and re-execute the work in accordance with the contract documents without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damages by such removal or replacement.
- b. All removal and replacement work shall be done at the Contractor's expense. If the Contractor does not take action to remove such rejected work within ten (10) days after receipt of written notice, the Owner may remove such work and store the materials at the expense of the Contractor.

17. SUBSURFACE CONDITIONS:

- a. The Contractor shall promptly, before such conditions are disturbed except in the event of an emergency, notify the Owner by written notice of:
 - (1) Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents; or

- (2) Unknown physical conditions at the site of an unusual nature which differ materially from those ordinarily encountered and generally recognized as inherent in the work the character provided for in the contract documents.
- b. The Owner shall promptly investigate the conditions and, if it is found that such conditions do so materially differ and cause an increase or decrease, an adjustment shall be made, and the contract documents shall be modified by a change order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless the required written notice has been given and provided that the Owner may, if the Owner determines the facts so justify, consider, and adjust any claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION AND DELAY:

- a. The Owner may suspend the work or any portion thereof for a period of not more than ninety (90) days or until such further time as agreed upon by the Contractor in a written notice to the Contractor and the engineer fixing the date on which work shall be resumed. The Contractor will resume that work on the date so fixed. The Contractor will be allowed an increase in the contract price or an extension of the contract time, or both, for any costs and/or delays incurred which are directly attributable to any suspension.
- b. If any of the following conditions occur:
 - (1) The Contractor is adjudged bankrupt or insolvent or makes a general assignment for the benefit of its creditors;
 - (2) A trustee or receiver is appointed for the Contractor or for any of its property;
 - (3) Contractor files a petition to take advantage of any debtor's act or to reorganize under bankruptcy of applicable laws;
 - (4) The Contractor repeatedly fails to supply sufficiently skilled workmen or suitable materials or equipment;
 - (5) The Contractor repeatedly fails to make prompt payments to subcontractors or for labor, materials, or equipment;
 - (6) The Contractor disregards laws, ordinance, rules, regulations, or orders of any public body having jurisdiction over the work;

(7) The Contractor disregards the authority of the engineer or otherwise violates any provision of the contract documents;

then the Owner may, without prejudice to any other right or remedy and after giving the Contractor and its surety a minimum of ten (10) days from delivery of a written notice, terminate the services of the Contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the Contractor and finish the work by whatever method the Owner may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor will pay the difference to the Owner. Such costs incurred by the Owner will be determined by the engineer and incorporated in a change order.

- c. Where the Contractor's services have been so terminated by the Owner, said termination shall not affect any right of the Owner against the Contractor then existing or which may thereafter occur. Any retention or payment of monies by the Owner due the Contractor will not release the Contractor from compliance with the contract documents.
- d. After ten (10) days from the delivery of a written notice to the Contractor and the engineer, the Owner may, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the contract. In such case, the Contractor shall be paid for all work executed and any expense sustained plus a reasonable profit.
- e. If, through no act or fault of the Contractor, the work is suspended for a period of more than ninety (90) days by the Owner or under an order of court or other public authority or the engineer fails to act on any request for payment within thirty (30) days after it is submitted or the Owner fails to pay the Contractor substantially the sum approved by the engineer or awarded by arbitrators within thirty (30) days of its approval and presentation, then the Contractor may, after ten (10) days from delivery of a written notice to the Owner and the engineer, terminate the contract and recover from the Owner payment for all work executed and all expenses sustained. In addition to and in lieu of terminating the contract, if the engineer has failed to act on a request for payment or if the Owner has failed to make payment as aforesaid, the Contractor may, upon ten (10) days written notice to the Owner and engineer, stop the work until paid all

amounts then due, in which event and upon resumption of the work, change orders shall be issued to adjust the contract price or extend the contract time, or both, to compensate for the costs and delays attributable to the stoppage of the work.

- f. If the performance of all or any portion of the work is suspended, delayed or interrupted as a result of a failure by the Owner or engineer to act within the time specified in the contract documents or if no time is specified, within a reasonable time, an adjustment in the contract price or an extension of the contract time, or both, shall be made by change order to compensate the Contractor for the costs and delays unnecessarily caused by the failure of the Owner or engineer.

19. PAYMENT TO CONTRACTOR:

- a. At least ten (10) days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the engineer a partial payment estimate filled out and signed by the Contractor, covering the work performed during the period covered by the partial payment estimate and supported by such data as the engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by supporting data, satisfactory to the Owner, which will establish the Owner's title to the material and equipment and protect the Owner's interest therein, including applicable insurance. The engineer will, within ten (10) days after the receipt of each partial payment estimate, either indicate approval of payment in writing and present the partial payment estimate to the Owner or return the partial payment estimate to the Contractor indicating in writing the reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The Owner will, within ten (10) days of presentation of an approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimates less the retainage. The retainage shall be an amount equal to 10% of said estimate until 50% of the work has been completed. At 50% completion, further partial payments shall be made in full to the Contractor and no additional amounts may be retained unless the engineer certifies that the job is not proceeding satisfactorily and amounts previously retained shall not be paid to the Contractor. At 50% completion or any time thereafter when the progress of the work is not satisfactory, additional amounts may be retained; however, in no event shall the total retainage be more than 10% of the value of the work completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the work has been

substantially completed except for work which cannot be completed because of weather conditions, lack of materials or other reasons which, in the judgment of the Owner, are valid reasons for non-completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the work still to be completed.

- b. The request for payment may also include an allowance for the cost of major materials and equipment suitably stored either at or near the site.
- c. Prior to substantial completion, the Owner, with the approval of the engineer and with the concurrence of the Contractor, may use any completed or substantially completed portions of the work. Such use shall not constitute an acceptance of such portions of the work.
- d. The Owner shall have the right to enter the premises for the purpose of doing work not covered by the contract documents. This provision shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work or the restoration of any damaged work except such as may be caused by agents or employees of the Owner.
- e. Upon completion and acceptance of the work, the engineer shall issue a certificate attached to the final payment request that the work has been accepted under the conditions of the contract documents. The entire balance found to be due to the Contractor, including the retained percentages, except such sums as may be lawfully retained by the Owner, shall be paid to the Contractor within thirty (30) days of completion and acceptance of the work.
- f. The Contractor will indemnify and save the Owner or the Owner's agents harmless from all claims growing out of the lawful demand of subcontractors, laborers, workmen, mechanics, material men and furnishers of machinery and parts therefore, equipment, tools and supplies incurred in the furtherance of the performance of the work. The Contractor shall, at the Owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged, or waived. If the Contractor fails to do so, the Owner may, after having notified the Contractor, either pay the unpaid bills or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged, whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents. In no event shall these provisions be construed to impose any obligations upon the Owner to the Contractor, the Contractor's surety or any third party. In paying any unpaid

bills of the Contractor, any payment so made by the Owner shall be considered as a payment made under the contract documents by the Owner to the Contractor and the Owner shall not be liable to the Contractor for any such payments made in good faith.

- g. If the Owner failed to make payment within thirty (30) days after approval by the engineer, in addition to other remedies available to the Contractor, there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the Contractor.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE: Acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this work and for every act and neglect of the Owner and others, relating or arising out of this work. Any payment, however, final, or otherwise, shall not release the Contractor or its sureties from any obligations under the contract documents or the performance of the payment bonds.

21. INSURANCE:

- a. The Contractor shall purchase and maintain such insurance as will protect it from claims set forth below which may arise out of or result from the Contractor's execution of the work, whether such execution be by the Contractor, any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable.

- (1) Claims under Workers' Compensation, disability benefit and other similar employee benefit acts;
- (2) Claims for damages because of bodily injury, occupational sickness or disease or death of employees;
- (3) Claims for damages because of bodily injury, sickness or disease or death of any person other than employees;
- (4) Claims for damages covered by the usual personal injury liability coverage which is sustained by:
 - (a) Any person as a result of an offense directly or indirectly related to the employment of such person by the Contractor; or
 - (b) Any other person;

- (5) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting there from.
- b. Certificates of insurance acceptable to Owner shall be filed with the Owner prior to commencement of work. These certificates shall contain a provision that coverages afforded under the policies will not be cancelled unless at least fifteen-(15) days' prior written notice has been given to the Owner.
- c. The Contractor shall procure and maintain, at the Contractor's own expense, during the contract time, liability insurance as hereinafter specified:
 - (1) Contractor's general public liability and property damage insurance, including vehicle coverage, issued to the Contractor, and protecting the Contractor from all claims for personal injury, including death, and all claims for destruction of or damage to property arising out of or in connection with any operations under the contract documents, whether such operations be by the Contractor or by any subcontractor employed by the Contractor. Insurance shall be written with a limit of liability of not less than \$500,000 for all damages arising out of bodily injury, including death, at any time resulting there from, sustained by any one person in any one accident, and a limit of liability of not less than \$500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$200,000 for all property damage sustained by any one person in any one accident and a limit of liability not less than \$200,000 aggregate for any such damage sustained by two or more persons in any one accident.
 - (2) The Contractor shall acquire and maintain, if applicable, fire and extended coverage insurance upon the project to the full insurable value thereof for the benefit of the Owner, the Contractor, and the subcontractors, as their interest may appear. This provision shall in no way release the Contractor or the Contractor's surety from obligations under the contract documents to fully complete the project.
- d. The Contractor shall procure and maintain, at the Contractor's own expense, during the contract time, in accordance with the provisions of the laws of the State in which the work is performed, Workers' Compensation insurance, including occupational disease provisions, for all of the Contractor's employees at the site of the project and, in case any work is sublet, the Contractor shall require such subcontractor similarly to provide Workers' Compensation insurance,

including occupational disease provisions, for all of the latter's employees unless such employees are covered by the protection afforded by the Contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under the Workers' Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate and suitable insurance for the protection of its employees not otherwise protected.

- e. The contractor shall secure, if applicable, "all risk" type Builder's risk insurance for work to be performed. Unless specifically authorized by the Owner, the amount of such insurance shall not be less than the contract price totaled in the bid. The policy shall cover not less than the losses due to fire, explosion, hail, lightning, vandalism, malicious mischief, wind, collapse, riot, aircraft, and smoke during the contract time and until the work is accepted by the Owner. The policy shall name as the insured the Contractor and the Owner.

22. CONTRACT SECURITY:

- a. The Contractor shall, within ten (10) days after the receipt of the Notice of Award, furnish the Owner with a performance bond and a payment (statutory) bond in penal sums equal to the amount of the contract price, conditioned upon the performance by the Contractor of all undertakings, covenants, terms, conditions and agreements of the contract documents and upon the prompt payment by the Contractor to all persons supplying labor and materials in the performance of the work required by the contract documents. Such bonds shall be executed by the Contractor and a corporate bonding company licensed to transact such business in the State in which the work is to be performed and named on the current list of "Surety Companies Acceptable on Federal Bonds", as published in Treasury Department Circular Number 570. The expense of these bonds shall be borne by the Contractor. If, at any time, a surety on any such bond is declared bankrupt or loses its right to do business in the State in which the work is to be performed or is removed from the list of Surety Companies Acceptable on Federal Bonds, Contractor shall, within ten (10) days after notice from the Owner, substitute another bond and surety, both of which must be acceptable to Owner. The premiums on such bond shall be paid by the Contractor. No further payment shall be deemed due nor made until the new surety or sureties shall have furnished an acceptable bond to the Owner.

- 23. ASSIGNMENTS: Neither the Contractor nor the Owner shall sell, transfer, assign or otherwise dispose of the contract or any portion thereof or of any right, title, or interest therein or any obligations thereunder without written consent of the other party.

24. INDEMNIFICATION:

- a. The Contractor will indemnify and hold harmless the Owner and the engineer and their agents and employees from and against all claims, damages, losses and expenses, including attorney's fees, arising out of or resulting from the performance of the work, provided that any such claims, damages, loss or expense is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property, including the loss of use resulting therefrom, which is caused in whole or in part by any negligent or willful act or omission of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.
- b. In any and all claims against the Owner or the engineer or any of their agents or employees by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation 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 under the Workers' Compensation Act, disability benefits acts or other employee benefits acts.
- c. The obligation of the Contractor under this paragraph shall not extend to the liability of the engineer, its agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs, or specifications.

25. SEPARATE CONTRACTS:

- a. The Owner reserves the right to let other contracts in connection with this project. The Contractor shall afford other contractors' reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate the work with theirs. If the proper execution or results of any part of the Contractor's work depends upon the work of any other contractor, the Contractor shall inspect and promptly report to the engineer any defects in such work that render it unsuitable for such proper execution and results.
- b. The Owner may perform additional work related to the project or the Owner may let other contracts containing provisions similar to these. The Contractor will afford the other contractors who are parties to such contracts (or the Owner if the Owner is performing the additional work) reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate the work with theirs.

- c. If the performance of additional work by other contractors or the Owner is not noted in the contract documents prior to the execution of the contract, written notice thereof shall be given to the Contractor prior to starting any such additional work. If the Contractor believes the performance of such additional work by the Owner or other involves it in additional expense or entitles it to an extension of the contract time, the Contractor may make a claim therefore as provided in Sections 14 and 15.

26. SUBCONTRACTING:

- a. The Contractor may utilize the services of specialty subcontracts on those parts of the work which, under normal contracting practices, are performed by specialty subcontractors.
- b. The Contractor shall not award work to subcontractor(s) in excess of fifty (50) percent of the contract price or in excess of fifty (50) percent of the labor and equipment required to install the project without prior written approval of the Owner.
- c. The Contractor shall be as fully responsible to the Owner for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by them as the Contractor is for the acts and omissions of persons directly employed by the Contractor.
- d. the Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the Contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the Contractor the same power regarding termination of any subcontract that the Owner may exercise over the Contractor under any provision of the contract documents.
- e. Nothing contained in this contract shall create any contractual relationship between any subcontractor and the Owner.

27. ENGINEER'S AUTHORITY:

- a. The engineer shall act as the Owner's representative during the construction period, shall decide questions which may arise as to quality and acceptability of materials furnished and work performed and shall interpret the intent of the contract documents in a fair and unbiased manner. The engineer will make visits to the site and determine if the work is proceeding in accordance with the contract documents.

- b. The Contractor will be held strictly to the intent of the contract documents in regard to the quality of materials, workmanship, and execution of the work. Inspections may be made at the factory or fabrication plant of the source of material supply.
- c. The engineer will not be responsible for the construction means, controls, techniques, sequences, procedures, or construction safety.
- d. The engineer shall promptly make decisions relative to interpretation of the contract documents.

28. LAND AND RIGHTS-OF-WAY:

- a. Prior to issuance of the Notice to proceed, the Owner shall obtain all land and right-of-way necessary for the carrying out and completion of the work to be performed pursuant to the contract documents, unless otherwise mutually agreed.
- b. The Owner shall provide the Contractor with information that delineates and describes the lands owned and right-of-way acquired.
- c. The Contractor shall provide, at its own expense and without liability to the Owner, any additional land and access thereto that the Contractor may desire for temporary construction facilities or for storage of materials.

29. GUARANTEE: The Contractor shall guarantee all materials and equipment furnished and work performed for a period of one (1) year from the date of substantial completion. The Contractor warrants and guarantees for a period of one (1) year from the date of substantial completion of the system that the completed system is free from all defects due to faulty materials or workmanship and the Contractor shall promptly make such corrections as may be necessary by reason of such defects, including the repairs of any damage to other parts of the system resulting from such defects. The Owner will give notice of observed defects with reasonable promptness. In the event the Contractor should fail to make such corrections, the Owner may do so and charge the Contractor the costs thereby incurred. The performance bond shall remain in full force and effect throughout the guarantee period.

30. ARBITRATION BY MUTUAL AGREEMENT:

- a. All claims' disputes and other matters in question arising out of or relating to the contract documents or the breach thereof, except for claims which have been waived by making an acceptance of final payment as provided in Section 20, may be decided by arbitration if the parties mutually agree. Any agreement to arbitrate shall be specifically enforceable under

the prevailing arbitration laws. The award rendered by the arbitrators shall be final and judgment may be rendered upon it in any court having jurisdiction thereof.

- b. Notice of the request for arbitration shall be filed in writing with the other party to the contract documents and a copy shall be filed with the engineer. Request for arbitration shall in no event be made on any claim, dispute or other matter in question that would be barred by the applicable statute of limitations.
 - c. The Contractor will carry on the work and maintain the progress schedule during any arbitration proceedings unless otherwise mutually agreed in writing.
31. TAXES: The Contractor will pay all sales, consumer, use and other similar taxes required by the laws of the place where the work is performed.



Chickasha Municipal Authority
Chickasha, Oklahoma

RFP CMA-2302 SUPPLEMENTAL GENERAL CONDITIONS

SUPPLEMENTAL GENERAL CONDITIONS

The provisions of the Supplemental General Conditions as described herein change, amend or supplement the General Conditions and shall supersede any conflicting provisions of this contract. All provisions of the General Conditions which are not changed, amended or supplemented remain in force.

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| 1. Contract Approval | 12. State Energy Policy |
| 2. Contract Change Orders | 13. Equal Opportunity |
| 3. Partial Payment Estimates | 14. Non-Resident Contractor
Registration |
| 4. Conflict of Interest | 15. Payment for Materials
Stored on Site |
| 5. Protection of Lives & Property | 16. Change order Approval |
| 6. Remedies | 17. Final Inspection |
| 7. Gratuities | 18. Partial Occupancy & Use |
| 8. Audit & Access to Records | 19. Permits Requiring Time
Schedule |
| 9. Small Minority & Women's Businesses | 20. Clean Up Release |
| 10. Anti-Kickback | |
| 11. Violating Facilities | |

1. CONTRACT APPROVAL:

- a. The Owner and the Contractor will furnish the Owner's attorney such evidence as is required to enable the Owner's attorney to complete and execute "Certificate of Owner's Attorney" (Section 14).
- b. When a performance bond and payment bond are provided, the United States, acting through HUD, will be named as co-oblige in these bonds unless prohibited by State law. Surety companies executing bonds must appear on the Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State where the project is located.
- c. This contract is expected to be funded in part with funds from HUD. Neither the United States nor any of its departments, agencies or employees is or will be a party to this contract or any subcontract.

2. CONTRACT CHANGE ORDERS:

- a. All changes affecting the project's construction cost or modifications of the terms or conditions of the contract must be authorized by means of a written contract change order that is mutually agreed to by the Owner and the Contractor. The contract change order will include extra work, work for which quantities have been altered from those shown on the bidding schedule and decreases or increases in the quantities of installed units which are different than those shown in the bidding schedule because of final measurements. All changes must be recorded on a contract change order before they can be included in a partial payment estimate.
- b. A "Contract Change Order" shall be used to record contract

changes.

- c. When the contract sum is in whole or in part based on unit prices, the Owner reserves the right to increase or decrease a unit price quantity as may be deemed reasonable or necessary in order to complete the work.

3. PARTIAL PAYMENT ESTIMATES:

- a. "Partial Payment Estimates" shall be used when estimating periodic payments due the Contractor.
- b. The Owner may, after consultation with the architect/engineer, withhold or, on account of subsequently discovered evidence, nullify, in whole or in part, any approved partial payment estimate to such extent as may be necessary to protect the Owner from loss on account of:
 - (1) Defective work not remedied;
 - (2) Claims filed;
 - (3) Failure of Contractor to make payments properly to subcontractors or suppliers;
 - (4) A reasonable doubt that the work can be completed for the balance then unpaid;
 - (5) Damage to another contractor;
 - (6) Performance of work in violation of the terms of the contract documents.
- c. Where work on unit price items is substantially complete but lacks testing, clean-up and/or corrections, amounts shall be deducted from unit prices in partial payment estimates to amply cover such testing, cleanup and/or corrections.
- d. When the items in 3.b. and 3.c. are cured, payment shall be made for amounts withheld because of them.
- e. Payments will not be made that would deplete the retainage or place in escrow any funds required for retainage or invest the retainage for the benefit of the contract.

4. CONFLICT OF INTEREST:

a. Unacceptable Bidders:

(1) No engineer or architect (individual or firm, including persons they employ) who has prepared plans and specifications will be considered an acceptable bidder. Any firm or corporation in which such engineer or architect (including persons they employ) is an officer or an employee or holds or controls a substantial interest will not be considered an acceptable bidder.

(2) Contracts or purchases by the Contractor shall not be awarded or made to a supplier or manufacturer if the engineer or architect (firm or individual) who prepared the plans and specifications has a corporate or financial affiliation with the supplier or manufacturer. Bids will not be awarded to firms or corporations owned or controlled wholly or in part by a member of the governing body of the Owner or to an individual who is such a member.

b. None of the Owner's officers, employees or agents shall engage in the award or administration of this contract if a conflict of interest, real or apparent would be involved. Such a conflict would arise when the employee, officer or agent, any member of his immediate family, his partner or an organization which employs him or is about to employ him, or any of the above, has a financial or other interest in the Contractor. None of the Owner's officers, employees or agents shall solicit or accept gratuities, favors or anything of monetary value from the Contractor or subcontractor.

5. PROTECTION OF LIVES AND PROPERTY:

a. In order to protect the lives and health of its employees under the contract, the Contractor shall comply with all pertinent provisions of the Occupational Safety and Health Administration (OSHA) and any State safety and health agency requirements.

b. The Contractor alone shall be responsible for the safety, efficiency and adequacy of its plant, appurtenances, and methods and for any damage which may result from their failure or their improper construction, maintenance, or operation.

6. REMEDIES: Unless otherwise provided in this contract, all claims, counterclaims, disputes, and other matters in question between the Owner and the Contractor arising out of or relating to this contract or the breach thereof will be decided by arbitration, if the parties mutually agree, or in a court of competent jurisdiction with the State in which the Owner is located.

a. The arbitration provisions of this section may be initiated by either party to this contract by filing with the other party and the engineer/architect a written request for arbitration.

- b. Each party to this contract will appoint one arbitrator and the two arbitrators will select the third arbitrator.
- c. The arbitrators will select a hearing location as close to the Owner's locale as possible.
- d. The procedure for conducting the hearing will follow the Construction Industry Arbitration Rules of the American Arbitration Association.

7. GRATUITIES:

- a. If the Owner finds, after a notice and hearing, that the Contractor or any of the Contractor's agents or representatives offered or gave gratuities (in the form of entertainment, gifts or otherwise) to any official, employee or agent of the Owner in an attempt to secure this contract or favorable treatment in awarding, amending or making any determinations related to the performance of this contract, the Owner may, by written notice to the Contractor, terminate this contract. The Owner may also pursue other rights and remedies that the Law or this contract provides. However, the existence of the facts on which the Owner bases such findings shall be an issue and may be reviewed in proceedings under the remedies clause of this contract.
- b. In the event this contract is terminated as provided in paragraph 7.a., the Owner may pursue the same remedies against the Contractor as it could pursue in the event of a breach of the contract by the Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, the Owner may pursue exemplary damages in an amount determined by the Owner, which shall be not less than three or more than ten times the cost the Contractor incurs in providing any gratuities to any such officer or employee.

8. AUDIT AND ACCESS TO RECORDS: For all negotiated contracts except those of \$10,000 or less, HUD, the Comptroller General, the Owner or any of their duly authorized representatives shall have access to any books, documents, papers, and records of the Contractor which are pertinent to the contract for the purpose of making audits, examination, excerpts, and transcriptions. The Contractor shall maintain all required records for three years after final payment is made and all other pending matters are closed.

9. SMALL, MINORITY AND WOMEN'S BUSINESSES: If the Contractor intends to let any subcontracts for a portion of the work, the Contractor shall take affirmative steps to assure that small, minority and women's businesses are used when possible as sources of supplies, equipment, construction, and services. Affirmative steps shall consist of:

- a. Including qualified small, minority and women's businesses on solicitation lists;
- b. Assuring that small, minority and women's

businesses solicited whenever they are potential sources;

- c. Dividing total requirements when economically feasible;
 - d. Establishing delivery schedules where the requirements of the work permit, which will encourage participation by small, minority and women's businesses.
 - e. Using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce;
 - f. Requiring each party to a subcontract to take the affirmative steps of this section; and
 - g. Contractors are encouraged to procure goods and services from labor surplus area firms.
10. ANTI-KICKBACK: The Contractor shall comply with the Copeland Anti-Kickback Act (18 USC §874) as supplemented in Department of Labor regulations 929 CFR 3). This Act provides that each Contractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities to give up any part of the compensation to which they are otherwise entitled. The Owner shall report all suspected or reported violations to FmHA.
11. VIOLATING FACILITIES: Where this contract exceeds \$100,000, the Contractor shall comply with all applicable standards, orders or requirements issued under the Clean Water Act (33 USC §1368), Executive Order 11738 and Environmental Protection Agency regulations (40 CFR 15), which prohibit the awarding of non-exempt Federal contracts, grants or loans to facilities included on the EPS's list of violating facilities. The Contractor will report violations to the EPA.
12. STATE ENERGY POLICY: The Contractor shall comply with the Energy Policy and Conservation Act (P.L. 94-163). Mandatory standards and policies relating to energy efficiency contained in the State Energy Conservation Plan shall be utilized.
13. EQUAL OPPORTUNITY REQUIREMENTS: For all contracts in excess of \$10,000, the Contractor shall comply with Executive Order 11246 entitled "Equal Employment Opportunity", as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR 60).
- a. The Contractor's compliance with Executive Order 11246 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the Standard Federal Equal Employment Opportunity Construction Contract Specifications as set forth in 41 CFR 60-4, and its efforts to meet the goals established for the geographical area where the contract is to be performed. The hours of minority and female employment and training must be substantially uniform throughout

the length of the contract and throughout each trade. The Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order, and the regulations in 41 CFR 60-

4. Compliance with the goals will be measured against the total work hour performed.

- b. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Program within 10 working days of the award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the contract is to be performed.

14. NON-RESIDENT CONTRACTOR REGISTRATION: Any non-resident Contractor doing business in the State of Oklahoma shall register with the Oklahoma Tax Commission, the Oklahoma Employment Security Commission, the State Industrial Court, and the County Assessor of each county in which contract work will be performed. This must be done prior to commencing work under the contract.

15. PAYMENT FOR MATERIAL STORED ON SITE: The following items will be required if the Contractor requests payment for material stored on the site (see Paragraph 19.b. of the General Conditions):

- a. Invoices, approved and initialed by the consulting engineer and the Owner, showing the quantity, size, cost, etc., of the material;
- b. Payment will be made only for material stored in a location approved by the Owner. The storage area must provide adequate protection from the elements and the material must be stored so it can be promptly inspected. Material strung throughout the job site will not be considered properly stored.
- c. The ten percent retainer that applies to material installed will also apply to materials stored on the site;
- d. When payment for material stored on the site is received,

a paid invoice for that payment from the supplier must be submitted to the Owner prior to the payment of the next partial pay estimate.

16. CHANGE ORDER APPROVAL: All change orders must be approved by the Owner.
17. FINAL INSPECTION: A final inspection will be made by the Owner before final payment is made. Final payment will not be made until the Owner certifies in writing that the construction has been completed as planned. If the Oklahoma State Department of Health has issued a permit and approved the plans and specifications on this project, they must concur in the final inspection.
18. PARTIAL OCCUPANCY AND USE: The Owner, upon advance written notification to the Contractor, shall have the right to occupy and use any completed or partially completed portions of the project, regardless of the percentage of completion of the entire project, when such occupancy and use is to the Owner's best interest. Such partial occupancy and use shall be upon the following terms:
 - a. The engineer shall inspect the portion or portions of the project concerned and report to the Owner his findings as to the acceptability and completeness of the work. The engineer's report shall include a list of items to be completed or corrected before final payment.
 - b. The Owner, upon acceptance of the engineer's report, shall give written notice to the Contractor of the Owner's intent to occupy and use said portions of the project. The Owner's notice shall include a copy of the engineer's report, shall clearly identify the portions of the project to be occupied and used and shall establish the date of said occupancy and use.
 - c. From the date thus established, the Owner shall assume all responsibilities for operation, maintenance and the furnishing of water, gas, and electrical power for the portions of the project thus occupied and used. The Owner shall have the right to exclude the Contractor from those portions of the project but shall provide the Contractor with reasonable access to complete or correct necessary items of work.
 - d. The guarantee required by the General Conditions shall not begin until completion and final acceptance of the entire project except as to items of equipment specified, such as instrumentation, electrical and mechanical equipment, which are thus used by the Owner.

For said equipment, the warranty shall start from the date established in the written notice from the Owner.

- e. Occupancy or use of any space in the project shall not constitute acceptance of work not performed in accordance with the contract or relieve the Contractor of liability to perform any work required by the contract but not completed at the time of said occupancy and use.
 - f. The Contractor shall not be held responsible for fair wear and tear or damage resulting from said occupancy except to the extent such damage is covered by the warranty.
 - g. The partial occupancy and use of any portion or portions of the project by the Owner shall not constitute grounds for claims by the Contractor for release of any amounts retained from payments under the provisions of the contract. The retained amounts will not be due until completion of the entire project for final acceptance and final payment as set forth in the General Conditions.
19. PERMITS REQUIRING TIME SHHEDULE: The Contractor shall be responsible for contacting all Federal, State, County or railroad personnel required to be contacted and as set forth in any permits with respect to time schedule before commencing any work for which a permit is required.
20. CLEAN-UP RELEASE: The Contractor shall secure a cleanup release satisfactory to the Owner from any Federal, State, county, or railroad agency after the work for which a permit has been obtained has been completed.

"General Decision Number: OK20230029 01/06/2023

Superseded General Decision Number: OK20220029

State: Oklahoma

Construction Type: Heavy

Counties: Canadian, Cleveland, Grady, Lincoln and McClain

Counties in Oklahoma.

HEAVY CONSTRUCTION PROJECTS (including sewer/water line construction; heavy construction projects on treatment plants and industrial sites) (excludes heavy dredging and water well drilling)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least \$16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least \$12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number Publication Date

0 01/06/2023
 ENGI0627-015 06/01/2022

	Rates	Fringes
POWER EQUIPMENT OPERATOR:		
Group 1.....	\$ 34.15	15.70
Group 2.....	\$ 32.45	15.70
Group 3.....	\$ 31.90	15.70
Group 4.....	\$ 31.10	15.70
Group 5.....	\$ 29.80	15.70
Group 6.....	\$ 28.05	15.70
Group10.....	\$ 24.60	15.70

POWER EQUIPMENT OPERATOR

GROUP 1: All Crane Type Equipment 200 ton and larger and including 400 ton capacity cranes. All Tower Cranes.

GROUP 2: All Crane Type Equipment 100 ton capacity and larger cranes, and less than 200 ton capacity.

GROUP 3: All Crane Type Equipment 50 ton capacity and larger cranes, and less than 100 ton capacity. Crane Equipment (as rated by mfg.) 3 cu. yd. and over Guy derrick Whirley Power Driven Hole Digger (with 30' and longer mast).

GROUP 4: CRANES with Boom Incl. Jib less than 100 ft and less than 3 cu. Yd.; Overhead Monorail Crane

GROUP 5: BULLDOZER

GROUP 6: ROLLER (ASPHALT AND DIRT)

GROUP 10:OILER

 IRON0048-005 06/01/2019

	Rates	Fringes
IRONWORKER (Structural, Reinforcing, and Ornamental).....	\$ 26.00	15.35

 SUOK2012-007 05/18/2012

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER... **	\$ 12.49	1.23
ELECTRICIAN.....	\$ 22.00	4.76
FORM WORKER..... **	\$ 11.77	0.00
LABORER: Common or General..... **	\$ 11.81	1.09
LABORER: Pipelayer..... **	\$ 11.13	0.00
OPERATOR: Backhoe/Excavator.....	\$ 18.17	6.28
OPERATOR: Drill.....	\$ 17.15	0.78
OPERATOR: Grader/Blade.....	\$ 17.76	3.87
OPERATOR: Loader (Front End).... **	\$ 13.51	0.00
OPERATOR: Mechanic.....	\$ 19.61	9.39

OPERATOR: Scraper.....	\$ 16.00 **	1.55
OPERATOR: Trackhoe.....	\$ 17.50	2.78
TRUCK DRIVER: Dump Truck.....	\$ 16.50	0.74

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$16.20) or 13658 (\$12.15). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

<https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number

where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier. Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier. A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

Date _____

I, _____ (Name of Signatory Party) _____ (Title)

do hereby state:

(1) That I pay or supervise the payment of the persons employed by

_____ on the _____

(Contractor or Subcontractor)

_____ ; that during the payroll period commencing on the

(Building or Work)

_____ day of _____, _____, and ending the _____ day of _____,

all persons employed on said project have been paid the full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

_____ from the full _____

(Contractor or Subcontractor)

weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as defined in Regulations, Part 3 (29 C.F.R., Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967, 76 Stat. 357; 40 U.S.C. § 3145), and described below:

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each laborer or mechanic conform with the work he performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a State, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

(4) That:

(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS, OR PROGRAMS

☐ — in addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ — Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in section 4(c) below.

(c) EXCEPTIONS

EXCEPTION (CRAFT) EXPLANATION

REMARKS:

NAME AND TITLE

SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 3729 OF TITLE 31 OF THE UNITED STATES CODE.

Instructions For Completing Payroll Form

WH-347

General: Form WH-347 has been made available for the convenience of contractors and subcontractors required by their Federal or Federally-aided construction-type contracts and subcontracts to submit weekly payrolls. Properly filled out, this form will satisfy the requirements of Regulations, Parts 3 and 5 (29 C.F.R., Subtitle A), as to payrolls submitted in connection with contracts subject to the Davis-Bacon and related Acts.

While completion of Form WH-347 is optional, it is mandatory for covered contractors and subcontractors performing work on Federally financed or assisted construction contracts to respond to the information collection contained in 29 C.F.R. §§ 3.3, 5.5(a). The Copeland Act (40 U.S.C. § 3145) requires contractors and subcontractors performing work on Federally financed or assisted construction contracts to "furnish weekly a statement with respect to the wages paid each employee during the preceding week." U.S. Department of Labor (DOL) Regulations at 29 C.F.R. § 5.5(a)(3)(ii) require contractors to submit weekly a copy of all payrolls to the Federal agency contracting for or financing the construction project, accompanied by a signed "Statement of Compliance" indicating that the payrolls are correct and complete and that each laborer or mechanic has been paid not less than the proper Davis-Bacon prevailing wage rate for the work performed. DOL and federal contracting agencies receiving this information review the information to determine that employees have received legally required wages and fringe benefits.

Under the Davis-Bacon and related Acts, the contractor is required to pay not less than prevailing wage, including fringe benefits, as predetermined by the Department of Labor. The contractor's obligation to pay fringe benefits may be met either by payment of the fringe benefits to bona fide benefit plans, funds or programs or by making payments to the covered workers (laborers and mechanics) as cash in lieu of fringe benefits.

This payroll provides for the contractor to show on the face of the payroll all monies to each worker, whether as basic rates or as cash in lieu of fringe benefits, and provides for the contractor's representation in the statement of compliance on the payroll (as shown on page 2) that he/she is paying for fringe benefits required by the contract and not paid as cash in lieu of fringe benefits. Detailed instructions concerning the preparation of the payroll follow:

Contractor or Subcontractor: Fill in your firm's name and check appropriate box.

Address: Fill in your firm's address.

Payroll No.: Beginning with the number "1", list the payroll number for the submission.

For Week Ending: List the workweek ending date.

Project and Location: Self-explanatory.

Project or Contract No.: Self-explanatory.

Column 1 - Name and Individual Identifying Number of Worker: Enter each worker's full name and an individual identifying number (e.g., last four digits of worker's social security number) on each weekly payroll submitted.

Column 2 - No. of Withholding Exemptions: This column is merely inserted for the employer's convenience and is not a requirement of Regulations, Part 3 and 5.

Column 3 - Work Classifications: List classification descriptive of work actually performed by each laborer or mechanic. Consult classification and minimum wage schedule set forth in contract specifications. If additional classifications are deemed necessary, see Contracting Officer or Agency representative. An individual may be shown as having worked in more than one classification provided an accurate breakdown or hours worked in each classification is maintained and shown on the submitted payroll by use of separate entries.

Column 4 - Hours worked: List the day and date and straight time and overtime hours worked in the applicable boxes. On all contracts subject to the Contract Work Hours Standard Act, enter hours worked in excess of 40 hours a week as "overtime".

Column 5 - Total: Self-explanatory

Column 6 - Rate of Pay (Including Fringe Benefits): In the "straight time" box for each worker, list the actual hourly rate paid for straight time worked, plus cash paid in lieu of fringe benefits paid. When recording the straight time hourly rate, any cash paid in lieu of fringe benefits may be shown separately from the basic rate. For example, "\$12.25/.40" would reflect a \$12.25 base hourly rate plus \$0.40 for fringe benefits. This is of assistance in correctly computing overtime. See "Fringe Benefits" below. When overtime is worked, show the overtime hourly rate paid plus any cash in lieu of fringe benefits paid in the "overtime" box for each worker; otherwise, you may skip this box. See "Fringe Benefits" below. Payment of not less than time and one-half the basic or regular rate paid is required for overtime under the Contract Work Hours Standard Act of 1962 if the prime contract exceeds \$100,000. In addition to paying no less than the predetermined rate for the classification which an individual works, the contractor must pay amounts predetermined as fringe benefits in the wage decision made part of the contract to approved fringe benefit plans, funds or programs or shall pay as cash in lieu of fringe benefits. See "FRINGE BENEFITS" below.

Column 7 - Gross Amount Earned: Enter gross amount earned on this project. If part of a worker's weekly wage was earned on projects other than the project described on this payroll, enter in column 7 first the amount earned on the Federal or Federally assisted project and then the gross amount earned during the week on all projects, thus "\$163.00/\$420.00" would reflect the earnings of a worker who earned \$163.00 on a

Federally assisted construction project during a week in which \$420.00 was earned on all work.

Column 8 - Deductions: Five columns are provided for showing deductions made. If more than five deduction are involved, use the first four columns and show the balance deductions under "Other" column; show actual total under "Total Deductions" column; and in the attachment to the payroll describe the deduction(s) contained in the "Other" column. All deductions must be in accordance with the provisions of the Copeland Act Regulations, 29 C.F.R., Part 3. If an individual worked on other jobs in addition to this project, show actual deductions from his/her weekly gross wage, and indicate that deductions are based on his gross wages.

Column 9 - Net Wages Paid for Week: Self-explanatory.

Totals - Space has been left at the bottom of the columns so that totals may be shown if the contractor so desires.

Statement Required by Regulations, Parts 3 and 5: While the "statement of compliance" need not be notarized, the statement (on page 2 of the payroll form) is subject to the penalties provided by 18 U.S.C. § 1001, namely, a fine, possible imprisonment of not more than 5 years, or both. Accordingly, the party signing this statement should have knowledge of the facts represented as true.

Items 1 and 2: Space has been provided between items (1) and (2) of the statement for describing any deductions made. If all deductions made are adequately described in the "Deductions" column above, state "See Deductions column in this payroll." See "FRINGE BENEFITS" below for instructions concerning filling out paragraph 4 of the statement.

Item 4 FRINGE BENEFITS - Contractors who pay all required fringe benefits: If paying all fringe benefits to approved plans, funds, or programs in amounts not less than were determined in the applicable wage decision of the Secretary of Labor, show the basic cash hourly rate and overtime rate paid to each worker on the face of the payroll and check paragraph 4(a) of the statement on page 2 of the WH-347 payroll form to indicate the payment. Note any exceptions in section 4(c).

Contractors who pay no fringe benefits: If not paying all fringe benefits to approved plans, funds, or programs in amounts of at least those that were determined in the applicable wage decision of the Secretary of Labor, pay any remaining fringe benefit amount to each laborer and mechanic and insert in the "straight time" of the "Rate of Pay" column of the payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the application wage decision. Inasmuch as it is not necessary to pay time and a half on cash paid in lieu of fringe benefits, the overtime rate shall be not less than the sum of the basic predetermined rate, plus the half time premium on basic or regular rate, plus the required cash in lieu of fringe benefits at the straight time rate. In addition, check paragraph 4(b) of the statement on page 2 the payroll form to indicate the payment of fringe benefits in cash directly to the workers. Note any exceptions in section 4(c).

Use of Section 4(c), Exceptions

Any contractor who is making payment to approved plans, funds, or programs in amounts less than the wage determination requires is obliged to pay the deficiency directly to the covered worker as cash in lieu of fringe benefits. Enter any exceptions to section 4(a) or 4(b) in section 4(c). Enter in the Exception column the craft, and enter in the Explanation column the hourly amount paid each worker as cash in lieu of fringe benefits and the hourly amount paid to plans, funds, or programs as fringe benefits. The contractor must pay an amount not less than the predetermined rate plus cash in lieu of fringe benefits as shown in section 4(c) to each such individual for all hours worked (unless otherwise provided by applicable wage determination) on the Federal or Federally assisted project. Enter the rate paid and amount of cash paid in lieu of fringe benefits per hour in column 6 on the payroll. See paragraph on "Contractors who pay no fringe benefits" for computation of overtime rate.

Public Burden Statement: We estimate that it will take an average of 55 minutes to complete this collection of information, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. If you have any comments regarding these estimates or any other aspect of this collection of information, including suggestions for reducing this burden, send them to the Administrator, Wage and Hour Division, U.S. Department of Labor, Room S3502, 200 Constitution Avenue, N.W., Washington, D.C. 20210.

Note: In order to view, fill out, and print PDF forms, you need Adobe® Acrobat® Reader® version 5 or later, which you may download for free at www.adobe.com/products/acrobat/readstep2.html.

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(1) MINIMUM WAGES

- (i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination of the Secretary of Labor (which is attached hereto and made a part hereof), regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place, where it can be easily seen by the workers.

(ii) Additional Classifications.

- (A) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:
- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination;
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.
- (B) If the contractor, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)
- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(D) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (1)(ii)(B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(2) **Withholding.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The U.S. Department of Labor shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(3) Payrolls and basic records.

(i) **Maintaining Payroll Records.** Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification(s), hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid.

Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215-0018)

(ii) Certified Payroll Reports.

(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <https://www.dol.gov/agencies/whd/forms> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;
 - (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract; and
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (a)(3)(ii)(b).
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph (a)(3)(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and Trainees.

- (i) **Apprentices.** Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate), to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (ii) **Trainees.** Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed, unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

- (iii) **Equal employment opportunity.** The utilization of apprentices, trainees, and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

- (5) **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.
- (6) **Subcontracts.** The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.
- (7) **Contract termination; debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
- (8) **Compliance with Davis-Bacon and Related Act Requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.
- (9) **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.
- (10) **Certification of Eligibility.**
- (i) By entering into this Contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

- (ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.
- (iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802).

(11) Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic, to whom the wage, salary, or other labor standards provisions of this Contract are applicable, shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds **\$100,000**. As used in this paragraph, the terms “laborers” and “mechanics” include watchmen and guards.

- (1) Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek, unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.
- (2) Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, the contractor, and any subcontractor responsible therefor, shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph B(1) of this paragraph, **in the sum set by the U.S. Department of Labor at 29 CFR 5.5(b)(2)** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the DOL adjusts this civil monetary penalty for inflation no later than January 15 each year.
- (3) Withholding for unpaid wages and liquidated damages.** HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract, or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages, as provided in the clause set forth in subparagraph B(2) of this paragraph.
- (4) Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph B(1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs B(1) through (4) of this paragraph.

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds **\$100,000**.

- (1)** No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.
- (2)** The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.
- (3)** The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

EQUAL OPPORTUNITY PROVISIONS

I. ACTIVITIES AND CONTRACTS NOT SUBJECT TO EXECUTIVE ORDER 11246, AS AMENDED (APPLICABLE TO FEDERALLY-ASSISTED CONSTRUCTION CONTRACTS AND RELATED SUBCONTRACTS \$10,000 AND UNDER):

During the performance of this contract, the Contractor agrees as follows:

- A. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor shall take affirmative action to ensure that applicants for employment are employed and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include but not be limited to the following: Employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- B. The Contractor shall post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Contracting Officer setting forth the provisions of this non-discrimination clause. The Contractor shall state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex or national origin.

II. EXECUTIVE ORDER 11246 (CONTRACTS/SUBCONTRACTS ABOVE \$10,000):

- A. Section 202 - Equal Opportunity (EEO) Clause: During the performance of this contract, the Contractor agrees as follows:
 - 1. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, national origin, disability or covered veteran status. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex, national origin, disability or covered veteran status. Such action shall include but not be limited to the following: Employment, upgrading, demotion, transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this non-discrimination clause.
 - 2. The Contractor will, in all solicitations or advertisements for employment placed by or on behalf of the Contractor, state that all qualified applicants will receive

consideration without regard to race, color, religion, sex, national origin, disability or covered veteran status.

3. The Contractor will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding a notice to be provided by the Contract Compliance Officer advising the said labor union or workers' representatives of the Contractor's commitment under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
4. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
5. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules and regulations and orders of the Secretary of Labor, or pursuant thereto, and will permit access to its books, records and accounts by ODOC and the Secretary of Labor for purposes of investigation and to ascertain compliance with such rules, regulations and orders.
6. In the event of the Contractor's non-compliance with the non-discrimination clauses of this contract or with any of the said rules, regulations or orders, this contract may be cancelled, terminated or suspended, in whole or in part, and the Contractor may be declared ineligible for further government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor or as otherwise provided by law.
7. The Contractor will include the provisions of the sentence immediately preceding paragraph II.A.1. and the provisions of paragraphs II.A.1.-7. In every subcontract or purchase order unless exempted by rules, regulations or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as ODOC may direct as a means of enforcing such provisions, including sanctions for non-compliance, provided, however, that in the event a Contractor becomes involved in or is threatened with litigation with a subcontractor or vendor as a result of such direction by ODOC, the Contractor may request the United States to enter into such litigation to protect the interest of the United States.

B. Notice of Requirement For Affirmative Action to Ensure EEO (Executive Order 11246) (Applicable to Contracts/Subcontracts Exceeding \$10,000):

1. The offeror's or bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.
2. Goals and Timetables: Contractor must make good faith efforts to meet their AA goals for employment of minorities and women in the construction industry.
 - a. The goals and timetables for minority and female participation, expressed in percentage terms, for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Goals for Minority Participation For Each Trade	Goals for Female Participation For Each Trade
6.9%	6.9%

- b. These goals are applicable to all the Contractor's construction work (whether or not it is Federal or Federally assisted) performed in the covered area. If the Contractor performs construction work in a geographic area located outside the covered area, it shall apply the goals established for such geographic area where the work is actually performed. With regard to this second area, the Contractor is also subject to the goals for both its Federally involved and non-Federally-involved construction.
 - c. The Contractor's compliance with the Executive Order and the regulations in 41 CFR 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a) and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer

of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor, estimated dollar amount of the subcontract, estimated starting and completion dates of the subcontract and the geographical area in which the contract is to be performed.
4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is **(insert description of the geographical areas where the contract is to be performed, giving the State, County and City, if any).**

C. Standard Federal EEO Construction Contract Specifications (Executive Order 11246):

1. As used in these specifications:
 - a. "Covered area" means the geographical area described in the solicitation from which this contract resulted;
 - b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor or any person to whom the Director delegates authority;
 - c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Forms 941;
 - d. "Minority" includes:
 - (1) Black: All persons having origins in any of the black racial groups of Africa;
 - (2) Asians: All persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent including Cambodia, China, India, Japan, Korea,

Malaysia, Pakistan, the Philippine Islands, Thailand and Vietnam;

- (3) American Indian or Alaskan Natives: All persons having origins in any of the original peoples of North and South America (including Central America) and maintaining identifiable tribal affiliations through membership and participation or community identification;
- (4) Native Hawaiian or Other Pacific Islanders: All persons having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands;
- (5) Whites: All persons having origins in any of the original peoples of Europe, the Middle East or North Africa;
- (6) American Indian/Alaskan Native & White: All persons having origins in any of the original peoples of North and South America (including Central America) and maintaining identifiable tribal affiliations through membership and participation or community identification, and, having origins in any of the original peoples of Europe, the Middle East, or North Africa;
- (7) Asian White: All persons having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent including Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam, and, having origins in any of the original peoples of Europe, the Middle East, or North Africa;
- (8) Black/African American & White: All persons having origins in any of the black racial groups of Africa, and having origins in any of the original peoples of Europe, the Middle East, or North Africa;
- (9) American Indian/Alaskan Native & Black: All persons having origins in any of the original peoples of North and South America (including Central America) and maintaining identifiable tribal affiliations through membership and participation or community identification, and, having origins in any of the black racial groups of Africa;

- (10) Other Multi-Racial: Any other multi-racial groups not mentioned;
 - (11) Hispanics or Latinos: All persons of Cuba, Mexican, Puerto Rican, South or Central American, or other Spanish cultures or origins, regardless of race.
 - (12) Not Hispanics or Latinos: All persons not of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish cultures or origins, regardless of race.
- 2. Whenever the Contractor or any subcontractor at any tier subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
 - 3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area, either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO Clause and under the Plan in each trade in which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to make good faith efforts to achieve the Plan goals and timetables.
 - 4. The Contractor shall implement the specific affirmative action standards provided in paragraphs II.C.7.a.-p. of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction Contractors performing contracts in geographical areas where they do not have a Federal or Federally assisted construction contract shall apply the minority and the female goals established for the geographic area where the contract is being performed. Goals are published periodically in the Federal Register in notice form and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The

Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246 or the regulations promulgated pursuant thereto.
6. In order for the non-working training hours of the apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period and the Contractor must have made the commitment to employ the apprentices and the trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.
7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation or coercion at all sites and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such working environment, with specific attention to minority or female individuals working at such sites or in such facilities;
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available and maintain a record of the organization's responses;
 - c. Maintain a current file of the names, addresses and telephone number of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or a community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and

was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

- d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor or when the Contractor has other information that the Union referral process has impeded the Contractor's efforts to meet its obligation.
- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the U.S. Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under II.C.7.b. above;
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations by including it in any policy manual and collective bargaining agreement, by publicizing it in the company newspaper, annual report, etc., by specific review of the policy with all management personnel and with all minority and female employees at least once a year and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Conduct at least an annual review of the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions, including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors

and subcontractors with whom the Contractor does or anticipates doing business;

- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. No later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures and tests to be used in the selection process;
- j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth on the site and in other areas of a Contractor's work force;
- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR 60-3;
- l. Conduct at least an annual inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for such opportunities through appropriate training, etc.
- m. Ensure that seniority practices, job classifications, work assignment and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment-related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out;
- n. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilets and necessary changing facilities shall be provided to assure privacy between the sexes;
- o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations;
- p. Conduct an annual review of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (II.C.7.a.-p.). The efforts of a contractor association, joint contractor-union, contractor-community or other similar group of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under II.C.7.a.-p. of these specifications, provided the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation shall not be a defense for the Contractor's non-compliance.
9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minorities groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women, generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).
10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion or national origin.
11. The Contractor shall not enter into any subcontract with any person or firm debarred from government contract pursuant to Executive Order 11246.
12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontractors, as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph II.C.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to

comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment-related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government and to keep records. Records for each employee shall include at least the name; address; telephone number; construction trade; union affiliation, if any; employee identification number, where assigned; social security number; race; sex; status, e.g., mechanic, apprentice trainee, helper or laborer; dates of changes in status; hours worked per week in the indicated trade; rate of pay and location at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, Contractors shall not be required to maintain separate records.
15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents, e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program.

III. CERTIFICATION OF NON-SEGREGATED FACILITIES (OVER \$10,000):

By submission of this bid, the bidder, offeror, applicant or subcontractor certifies that (s)he does not maintain or provide for his/her employees any segregated facility at any of his/her establishments and that (s)he does not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. (S)he certifies further that (s)he will not maintain or provide for employees any segregated facilities at any of his/her establishments and (s)he will not permit employees to perform their services at any location under his/her control where segregated facilities are maintained. The bidder, offeror, applicant or subcontractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause of this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants or other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated on the basis of race, color or religion or are, in fact, segregated on the basis of race, color, religion or otherwise. (S)he further agrees that, except where (s)he has obtained identifiable certifications from proposed subcontractors for specific time periods, (s)he will obtain identical certification from proposed subcontractors prior to the award of subcontracts exceeding \$10,000, which are not exempt from the provisions of the Equal Opportunity Clause; that (she) will retain such certifications in his/her files; and that (s)he will forward the following notice to

such proposed subcontractors, except where proposed subcontractors have submitted identical certifications for specific time periods.

IV. CIVIL RIGHTS ACTION OF 1964:

Under Title VI of the Civil Rights Act of 1967, no person shall, on the grounds of race, color or national origin, be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity receiving Federal financial assistance.

V. SECTION 109 OF THE HOUSING AND COMMUNITY DEVELOPMENT ACT OF 1974:

No person in the United States shall, on the grounds of race, color, national origin or sex, be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity funded in whole or in part with funds made available under this Title.

VI. SECTION 504 DISABLED (IF \$2,500 OR OVER) - AFFIRMATIVE ACTION FOR DISABLED WORKERS

- A. The Contractor will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled individuals without discrimination based upon their physical or mental disability in all demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- B. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
- C. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
- D. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notice in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled employees and applicants for employment and protect the rights of those applicants and employees.
- E. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding that the Contractor is bound by the terms of Section 503 of the Rehabilitation Act of 1973 and is committed to taking affirmative action to employ and

advance in employment physically and mentally disabled individuals.

- F. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$2,500 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to Section 503 of the Act so such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provision, including action for non-compliance.

VII. AGE DISCRIMINATION ACT OF 1975

No person in the United States shall be excluded from participation in, be denied the benefits of or be subjected to discrimination under any program or activity receiving Federal financial assistance because of age.

VIII. SECTION 402, VETERANS OF THE VIETNAM ERA (IF \$10,000 OR OVER) - AFFIRMATIVE ACTION FOR DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA

- A. The Contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam Era in regard to any position for which the employee or applicant for employment is qualified. The Contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam Era without discrimination based upon their disability or veteran status in all employment practices such as employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation and selection for training, including apprenticeship.
- B. The Contractor agrees that all suitable employment openings of the Contractor which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the Contractor other than the one wherein the contract is being performed but excluding those of independently-operated corporate affiliates, shall be listed at an appropriate local office of the State employment service system wherein the opening occurs. The Contractor further agrees to provide such reports to such local office regarding employment opportunities as may be required.
- C. Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and non-veterans. The listing of employment openings does not require the hiring of any particular job applicant or any job applicant from any particular

group of applicants and nothing herein is intended to relieve the Contractor from any requirements of Executive Orders or regulations regarding non-discrimination in employment.

- D. The reports required by paragraph B. of this clause shall include but not be limited to periodic reports which shall be filed at least quarterly with the appropriate local officer or, where the Contractor has more than one hiring location in a State, with the central office of that State employment service. For each hiring location, such reports shall indicate:
1. The number of individuals hired during the reporting period;
 2. The number of non-disabled veterans of the Vietnam Era hired;
 3. The number of disabled veterans of the Vietnam Era hired; and
 4. The total number of disabled veterans hired.

The reports should include covered veterans hired for on-the-job training under 38 USC §1787. The Contractor shall submit a report within thirty (30) days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The Contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruit and placement.

- E. Whenever the Contractor becomes contractually bound to the listing provision of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the Contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The Contractor may advise the State system when it is no longer bound by this contract clause.
- F. This clause does not apply to the listing of employment openings that occur and are filled outside the 50 States, the District of Columbia, Puerto Rico, Guam and the Virgin Islands.
- G. The Contractor agrees to comply with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.
- H. In the event of the Contractor's non-compliance with the requirements of this clause, actions for non-compliance may be

taken in accordance with the rules, regulations and relevant orders of the Secretary of Labor issued pursuant to the Act.

- I. The Contractor agrees to post in conspicuous places available to employees and applicants for employment notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notices shall state the Contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era for employment and to protect the rights of those applicants and employees.
- J. The Contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other understanding that the Contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act and is committed to taking affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam Era.
- K. The Contractor will include the provisions of this clause in every subcontract or purchase order of \$10,000 or more unless exempted by rules, regulations or orders of the Secretary issued pursuant to the Act so such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for non-compliance.

**STATE OF OKLAHOMA
HOLD HARMLESS CLAUSE**

Contractor shall, within limitations placed on such entities by State law, save harmless the State of Oklahoma, its agents, officers and employees from all claims and actions and all expenses defining same that are brought as a result of any injury or damage sustained by any person or property in consequence of any act or omission by the Contractor. Contractor shall, within limitations placed on such entities by State law, save harmless the State of Oklahoma, its agents, officer and employees from any claim or amount recovered as a result of infringement of patent, trademark or copyright or from any claim or amounts arising or recovered under Workers' Compensation law or any other law. In any agreement with any subcontractor or any agent for Contractor, Contractor will specify that such subcontractors or agents shall hold harmless the State of Oklahoma, its agents, officers and employees for all the hereinbefore-described expenses, claims action or amounts recovered.

CERTIFICATION OF COMPLIANCE WITH AIR AND WATER ACTS

(Applicable to Federally-assisted construction contracts and related subcontracts exceeding \$100,000.)

Compliance with Air and Water Acts

During the performance of this contract, the Contractor and all subcontractors shall comply with the requirements of the Clean Air Act, as amended (42 USC §§1857, et seq.), the Federal Water Pollution Control Act, as amended (33 USC §§1251, et seq.) and the regulations of the Environmental Protection Agency (EPA) with respect thereto at 40 CFR 15, as amended.

In addition to the foregoing requirements, all non-exempt contractors and subcontractors shall furnish to the Owner, the following:

1. A stipulation by the Contractor or subcontractors that any facility to be utilized in the performance of any non-exempt contract or subcontract is not listed on the List of Violating Facilities issued by the EPA pursuant to 40 CFR 15.20.
2. Agreement by the Contractor comply with all the requirements of Section 114 of the Clean Air Act, as amended (42 USC §1857c-8) and Section 308 of the Federal Water Pollution Control Act, as amended (33 USC §1318) relating to inspection, monitoring, entry, reports and information, as well as all other requirements specified in Section 114 and Section 308 and all regulations and guidelines issued thereunder.
3. A stipulation that as a condition for the award of the contract, prompt notice will be given of any notification received from the Director, Office of Federal Activities, EPA, indicating that a facility utilized or to be utilized for the contract is under consideration to be listed on the EPA list of Violating Facilities.
4. Agreement by the Contractor that he will include or cause to be included by the criteria and requirements in paragraphs 1-4 of this section in every non-exempt subcontract and will take such action as the government may direct as a means of enforcing such provisions.

**SPECIAL CONDITIONS PERTAINING TO
HAZARDS, SAFETY STANDARDS AND ACCIDENT PREVENTION**

1. Lead-Based Paint Hazards (Applicable to Contract for Construction or Rehabilitation of Residential Structures: The construction or rehabilitation of residential structures is subject to the U.S. Department of Housing and Urban Development Lead-Based Paint regulations, 24 CFR 35. The Contractor and subcontractors shall comply with the provisions for the elimination of lead-based paint hazards under Subpart B of said regulations. The owner will be responsible for the inspections and certifications required under Section 35.14(f) thereof.
2. Use of Explosives (Modify as Required):
 - a. When the use of explosives is necessary for the performance of the work, the Contractor shall observe all local, State and Federal laws in purchasing and handling explosives. The Contractor shall take all necessary precautions to protect completed work, neighboring property, waterlines or other underground structures. Where there is danger to structures or property from blasting, the charges shall be reduced and the material shall be covered with suitable timber, steel or rope mats.
 - b. At least eight (8) hours before blasting is done, the Contractor shall notify all owners of public utility property of the intent to use explosives close to such property. Any supervision or direction of use of explosives by the engineer does not in any reduce the responsibility of the Contractor or his surety for damages that may be caused by such use.

ATTORNEY'S CERTIFICATE OF APPROVAL OF CONTRACT AND BONDS

I, the undersigned _____, the fully authorized and acting legal representative of _____, _____ County, Oklahoma, do hereby certify as follows:

I have examined the construction contract between the construction contractor, _____, and the above-named entity and the surety bonds given by the construction contractor in connection with the performance of said contract and the manner of execution of the contract and surety bonds and I am of the opinion that each of the aforesaid agreement has been duly executed by the proper parties thereto, acting through their duly authorized representatives, that said representatives have full power and authority to execute said agreements on behalf of the respective parties named therein and that the foregoing contract and surety bonds constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

Dated the _____ day of _____, 20 _____.

Attorney

County, Oklahoma

RELEASE OF CLAIMANTS

Date: _____

CDBG Project: _____

Owner: _____

Dear Sir:

I hereby acknowledge receipt of \$_____ for full payment of my contract dated _____ for work performed as described in the contract for services.

I certify that I have paid in full for all materials purchased and all labor employed in the performance of this contract and that there are no claims against me as an employer under this contract on account of injuries sustained by workmen employed by me thereunder. I hereby release you from any claims arising by virtue of this contract.

WARNING

The making of any false statement or mis-representation herein may be a crime punishable under Title 18 USC §1001, which provides in part: "Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and willfully...makes any false, fictitious or fraudulent statement or representation, or makes or uses any false writing or document knowing the same to contain any false, fictitious or fraudulent statement or entry, shall be fined no more than \$10,000 or imprisoned not more than five years, or both."

Contractor:

Print Name and Title

Company

Signature

Date

18608 CDBG 22 SGC-45

Oklahoma Department of Commerce
Community Development Block Grant

Contractor Payroll Certification

(This form shall be executed with contract documents)

Project Information:

CDBG _____ Grantee _____ Name: _____

CDBG Contract _____ Number: _____

Project Activity: _____

Contractor Certification:

I acknowledge that this construction project has Federal funds attached, thereby requiring this project to comply with the Davis-Bacon Act and all labor related acts including Section 3. Therefore, I agree to pay the designated wage rates, provide the certified payrolls, and provide section 3 documentation, as applicable and required for the above referenced contract activity.

Name of Company

Name of Authorized Company Official

Signature of Authorized Company Official

Date

Form 408.1
Rev. 11/2022

PRE-CONSTRUCTION CHECKLIST

Project Name:	CDBG Contract No.:
Location:	
Description of Work to be Performed:	
Construction Contractor:	Contract Amount: \$
Conference Date:	Location:
Participants: Names: Titles:	

Items Covered:		Labor Standards
		Grantee's Role and Responsibilities
		Section 3 Responsibilities (Refer to Policy 404 for required forms)
		Construction Contractor's Role and Responsibilities Equal
		Opportunity
		Reporting Requirements and Sanctions
		Other

(Instructions on following pages.)

CHECKLIST FOR CONSTRUCTION CONTRACTORS

(MEETING LABOR STANDARDS COMPLIANCE REQUIREMENTS)

I. INTRODUCTION:

The following checklist has been prepared to assist construction contractors and subcontractors in meeting labor compliance responsibilities. All major administrative and procedural activities have been covered in the sequence in which they will occur as the construction project proceeds. Careful attention to and use of the checklist should result in a minimum number of problems with respect to labor compliance.

II. EXPLANATORY NOTES:

The word "employer", as used below, refers to the prime construction contractor, each subcontractor or each lower-tier subcontractor. Payrolls and other documentary evidence of compliance (marked "***") *must be sent to the Grant Recipient for review (all to be submitted through the prime construction contractor)*. The submission procedure is as follows:

- A. Each *lower-tier subcontractor*, after careful review, submits required documents to the respective subcontractor.
- B. Each *subcontractor*, after checking his/her own and those of each lower-tier subcontractor he/she may have, submits required documents to the prime construction contractor.
- C. The *prime construction contractor*, after reviewing all payrolls and other documentation, including his/her own, and correcting violations where necessary, submits all to the Grant Recipient.

All employers should check each of the following statements as being true. If any statement is not true, the construction contractor should contact the Grant Recipient for special guidance.

III. BEFORE CONSTRUCTION BEGINS, each employer has:

- ☐ A. Been found eligible to participate in any Federal or Federally-assisted project, i.e. has not been debarred or otherwise made ineligible. (Registered and eligible to contract in SAM.gov).
- ☐ B. Received appropriate contract provisions covering labor standards requirements.
- ☐ C. Reviewed and understands all labor standards contract provisions.
- ☐ D. Received the appropriate wage decision(s) as part of the contract.
- ☐ E. Requested through the Grant Recipient and received the minimum wage for each classification to be worked on the project which was not included on the wage decision by the additional classification process and before allowing any such trade(s) to work on the project.
- ☐ F. Requested and received certification of his/her apprentice program from the State's Bureau of Apprenticeship and Training (State BAT), (recognized by the U.S. Bureau of Apprenticeship and Training [USBAT]) and submitted a copy thereof to the Grant Recipient prior to employment on the project. Likewise, "trainee" program certification from USBAT, if applicable, must be submitted.
- ☐ G. Received & Reviewed the Section 3 Requirements & Reporting of worker hours & benchmarks

☐☐☐

IV. AT CONSTRUCTION START, the construction contractor has:

- A. Received a Notice to Proceed from the Grant Recipient.
- B. Notified Contractor of construction start date in writing.
- C. Placed each of the following on a bulletin board prominently located on the project site which can be seen easily by the workers (and replaced if lost or unreadable anytime during construction):

☐
☐
☐
☐
☐

- Wage Decision
- Notice to Employees
- Safety and Health Protection on the Job (USDOL)
- Section 3 Poster(s)
- Monthly Pay Estimates to include weekly payroll reports and Section 3 Worker Report

☐

D. Before assigning each project worker to work, obtained the worker's name, best mailing address and Social Security Number (for payroll purposes).

☐

E. Obtained a copy of each apprentice's certificate with the apprentice's registration number and his/her year of apprenticeship from the State BAT.

☐

F. Informed each worker of:

☐

- His/her work classification (journeyman or job title) as it will appear on the payroll;

☐

- His/her work duties;

☐

- The requirement on this project that he/she is either a journeyman, apprentice or laborer:

If journeyman, he/she is to be paid journeyman's minimum wage rate or more;

If apprentice, he/she is to be paid not less than the apprentice's rate for the trade based on his/her year of apprenticeship; or

If laborer, he/she is to do laborer's work only - not use any tool or tools of the trade - and not perform any part of a journeyman's work - and is to be paid the laborer's minimum wage rate or more.

☐

G. Been informed of the requirements that each laborer or mechanic who performs work on the project in more than one classification within the same workweek shall be classified and paid at the highest wage rate applicable to any of the work which he/she performs unless the following requirements are met:

1. Accurate daily time records are maintained. These records must show the time worked in each classification and must be signed by the workman.
2. The payroll shows the hours worked in each classification and the wage rate paid for each classification.
3. The payroll is signed by the workman or a signed copy of the daily time record is attached.

☐

H. Has informed each worker of his/her hourly wages (not less than the minimum wage rate for this work as stated in the Wage Decision).

1. Time and a half for all work over 40 hours any workweek (see Contract Work Hours Safety Standards Act).
2. Fringe benefits, if any (see wage Decision for any required).
3. Deductions from his/her pay.

☐

I. Has informed each worker that he/she is subject to being interviewed on the job by the Grant Recipient, ODOC, USDOL or other inspector to confirm that the employer is complying with all labor requirements.

☐

J. Has informed each journeyman and each apprentice that a journeyman must be on the job at all times when an apprentice is working.

V. DURING CONSTRUCTION

A. Each Employer:

- ☐ 1. Has not selected, assigned, paid different pay rates to, transferred, upgraded, demoted, laid off or dismissed any project worker because of race, color, religion, sex or national origin.
- ☐ 2. Has employed all registered apprentices referred to him through normal channels up to the applicable ratio of apprentices to journeymen in each trade used by the employer.
- ☐ 3. Will maintain basic employment records accessible to inspection by the Grant Recipient or ODOC representatives.
- ☐ 4. Is complying with all health and safety standards.
- ☐ 5. Has paid all workers weekly.
- ☐ 6. Has submitted weekly payrolls on Form WH-347

Construction contractors who wish to purchase the forms are urged to enter their orders promptly. The Superintendent of Documents (Government Printing Office, Washington, D.C. 20402) takes six weeks to fill orders. *It is permissible for contractors to reproduce the forms if they wish.* Any alternative payroll form should be cleared with the grantee before the employer starts work on the project. A project printout by computer, for example, is acceptable, *provided* all data on the front and back of Payroll Form WH-347 is on or included with the payroll submitted to the grantee.

Some employers place all project workers on Payroll Form WH-347. The Contractor (owner) does not review any project workers on the payroll who perform work in any of the following job titles (which are exempt from labor requirements):

- Project superintendent
- Project engineer
- Owner-operator
- Supervisory foreman (less than 20% of time as a working foreman)
- Messenger
- Clerical workers (timekeepers, payroll clerks, bookkeepers, etc.)

B. Instructions for completing/reviewing the Front Page of Payroll Form WH-347

- ☐ Name of Employer. The construction contractor or subcontractor.
- ☐ Address. Street address/P.O. Box, City, State and Zip Code of employer.
- ☐ Payroll Number. Each weekly payroll is numbered in sequential order (starting with Payroll No. 1)
- ☐ If employer's workers perform no physical work on the project during workweek, he/she has submitted a "no work" letter for that workweek.
- ☐ Payroll of employer's final workweek on the project (completion of his/her work) is marked "Final".
- ☐ For Week Ending. The last date of the workweek.
- ☐ Project and Location. Name of project and city in which located.
- ☐ Columns 1 thru 9: Data entered on each line of this section of Form WH-347 represents information about a single worker in a separate job classification. When one worker performs more than one class of work during a workweek (*split classification*), the worker will have data reported on multiple lines (as many lines as he/she worked separate classifications). Accurate daily time records signed by the employee must show the exact hours worked in each classification.

☐ **Column 1:** Worker's Name as it appears on his/her paycheck.

Column 1: Worker's Name as it appears on his/her paycheck.

- ✓ Worker's best mailing address and social security number is entered only on the first payroll on which his/her name appears;
- ✓ If the worker changes his/her residential address while working on the project, the new address is entered on the next applicable payroll;
- ✓ If any two or more workers have the same name, their social security numbers are included on the payroll

☐ **Column 2:** Withholding- This is for employer's convenience;

☐ **Column 3:**

☐ The Work Classification (job title) for the worker is included in the Wage Decision and denotes the work that worker actually performed.

*If the worker is an **apprentice**, enter the State BAT registration number and year of apprenticeship in this column the *first* time the apprentice's name appears on the payroll.*

☐ If the worker has performed *more than one class of work* during the workweek, such as carpenter and laborer, the division of work must be shown on separate lines of the payroll. Each class of work performed is noted in Column 3 on a separate line and the employee's name is repeated on that line in Column 1.

NOTE

If the applicable classification is not included in the Wage Decision, construction contractor should call the Contractor immediately and request the appropriate classification through the Additional Classification Process

☐ The payroll is signed by the workman in the related "blocks" or a signed copy of the daily time records is attached to the payroll

☐ If the above is not done, the worker is paid at least the highest minimum wage rate of all of the classes of work performed for all hours worked.

The employer may not pay a "semi-journeyman" or semi-skilled laborer the average of journeyman's and laborer's rates. The actual hours each worker uses tools of the trade (journeyman) and each hour he/she does not use tools of the trade (laborers) must be recorded on separate lines in Column 3 of the payroll. *The employer may **not** pay the average of the two classes of work.*

The work classification of helper is not accepted unless included in the Wage Decision issued by the Secretary of Labor. Any employee listed as "helper" in the absence of such a classification in the Wage Decision must be paid the journeyman's rate for hours he/she uses the tools of the trade.

☐ **Column 4:** Hours Worked, Each Day and Date, for the workweek.

Regular hours (**S** for "Straight" time) are entered for each classification for each employee. Overtime hours (**O**), if any, are reported separately from straight hours. Overtime is any time over 40 hours in any workweek.

☐ **Column 5:** Total Hours worked during the workweek are reported (the sum of subcolumns in Column 4). Straight and overtime hours are recorded separately.

- ☐ **Column 6:** Rate of Pay, not less than the minimum wage rate for the work classification (see Wage Decision).
The Overtime Rate of Pay is not less than 1½ times the worker's basic (straight) hourly rate of pay.
- ☐
- ☐ **Apprentices.** If a copy of the apprentice's registration certificate from the State BAT has not been submitted to Grant Recipient by employer (through construction contractor), apprentice must be paid journeyman's rate.
- ☐ **Piece Worker.** Piece work must be reported in Column 6 at an hourly rate, the gross pay for the workweek (work on the project) divided by the total number of hours worked on the project during the workweek.
- ☐ **Column 7:** Gross Amount Earned equals straight hours (Column 5) times straight rate of pay (Column 6) plus overtime hours, if any, (Column 5) times overtime rate of pay (Col 6).
- ☐ **Column 8:** Each deduction is:
- ☐ √ Required by law;
- ☐ √ Voluntarily authorized by the worker in writing before the work week began; or
- ☐ √ Provided in a bargaining agreement.
- ☐ **Column 9:** Net Wages stated are Column 7 minus total deductions shown in Column 8.

C. Instruction for completing/reviewing the Back of Payroll (Form WH-347)

☐ Each Employer has:

- ☐ √ completed all blank spaces and understands the penalties for falsification;
- ☐ √ Checked Item 4 if fringe benefits are included in the Wage Decision for all workers:
- ☐ 4(a) If fringe benefits are paid to approved fund(s); or,
- ☐ 4(b) Paid directly to each affected worker each week, his/her paycheck representing the pay of the applicable minimum wage rate plus the amount of required fringe benefits.
- ☐ √ Manually signed the payroll in the "block" marked signature and stated his/her title;
- ☐ ☐ The person who signed the payroll is the employer or an official of the employer who is legally authorized to act for the employer.

D. Weekly Payroll Review. Each employer has promptly:

- ☐ Reviewed the weekly payroll for compliance with all labor requirements (using this checklist) and made necessary corrections.
- ☐ Each lower-tier subcontractor has submitted his/her weekly payroll or "no work" letter to the respective subcontractor within 3 calendar days from the last date of the workweek.

☐

Each subcontractor has received a payroll or "no work" letter from each of his/her lower-tier subcontractors, reviewed each and his/her own payroll, required necessary corrections and submitted all such payrolls to the construction contractor within 5 calendar days from the last date of the workweek.

☐

Construction contractor has received a payroll or "no work" letter from each subcontractor and each lower-tier subcontractor, monitored each including his/her own payroll, required necessary corrections and collectively submitted them to the grantee within 7 work days of the last date of the respective workweek.

VI. AFTER PROJECT COMPLETION

☐

Each employer will keep all weekly payrolls on the project for 3 years after the construction contractor's project completion date.

2. THE PRE-CONSTRUCTION CONFERENCE

- 2.1. ODOC requires that every contractual relationship between the Grant Recipient and the construction contractor be initiated by a meeting to define the terms, conditions, deliverables, and performance schedules that will govern the contract. This approach represents good management practice and reduces the likelihood of later conflicts caused by assumptions and misunderstandings between the construction contractor and the Grant Recipient.
- 2.2. After contract award, but before any work is performed, the Grant Recipient, the architect or engineer and any technical advisors to the Grant Recipient must hold a pre-construction conference with the construction contractor to explain contract requirements.
- 2.3. The construction contractor should be notified in writing of the time and place for the conference. The contractor must require the attendance of subcontractors expected to undertake major portions of the work. Documentation required from the construction contractor at the time of the meeting should be identified. Satisfaction of all bonding provisions will be required at this time especially the Davis Bacon wage rate requirements.
- 2.4. Prepare an agenda. Plan to utilize and distribute a Pre-construction Checklist as a guide to assure that all areas are properly addressed. (Especially Davis/Bacon Requirements.) A recording may be used to document the meeting and/or a stenographer may be asked to prepare notes. It is the Grant Recipient's responsibility to clearly present the Federal Statutory Compliance requirements as well as performance expectations. A copy of the minutes should be signed by the parties to the contract and placed in the files.
- 2.5. ODOC recommends the following procedures as the minimum coverage of topics at the pre-construction conference:
 - 2.5.1. Review the technical aspects of the project.
 - 2.5.2. Identify the laws applicable to the contract and establish the documentation, reporting and performance that will constitute compliance.
 - 2.5.3. Establish the Grant Recipient's obligations to monitor labor standards and the procedures that will be employed.
 - 2.5.4. Establish specific requirements for reporting between the construction contractor and the Grant Recipient.
 - 2.5.5. Accept bonds and securities for performance and payment of labor and materials.
 - 2.5.6. Review the contract provisions, including all attachments regarding labor standards, civil rights, job safety standards and environmental protection as well as the Davis Bacon wage rate requirements.
 - 2.5.7. Explain the objectives of Executive Order 11246 and require a copy of the construction contractor's Affirmative Action Plan and the specific affirmative action strategy to be employed on this contract.
 - 2.5.8. Review the Section 3 Reporting Requirements for Reporting Worker Hours and Qualitative & Quantitative Benchmarks.
 - 2.5.9. Return the construction contractor's bid bonds.
 - 2.5.10. Provide for a record of the pre-construction conference to be prepared and subsequently signed by the parties to the agreement.
 - 2.5.11. Issue a notice to proceed to the construction contractor.



Chickasha Municipal Authority
Chickasha, Oklahoma

RFP CMA-2302

SPECIAL

PROVISIONS

SPECIAL PROVISIONS
RFP CMA-2302
WATER DISTRIBUTION IMPROVEMENTS PROJECT

1. GENERAL

- 1.1.** These Special Provisions are supplemental to the General Provisions and shall be considered as a part of the specifications and contract. In case of conflict between the stipulations of the Special Provisions and the specifications, plans, or general provisions, the Special Provisions shall take precedence and govern. The Owner's Representative shall make interpretation of the plans and specifications.
- 1.2.** The Contractor's work consists of furnishing all tools, labor, plant, equipment, materials, and performing all work necessary for the complete construction of all improvements shown on the plans in strict accordance with the plans and specifications.
- 1.3.** It is the intent of these plans and specifications to prescribe a complete work and improvement. Where items of work are necessary for the satisfactory completion of the improvement, for which specific contract prices are not provided in the proposal and contract, then such work shall be considered incidental to the main construction and any costs involved shall be reflected in such other prices as are provided.
- 1.4.** The successful bidder shall furnish Performance Bond, Statutory Bond, and Maintenance Bond each in the amount of 100 percent of the contract, in accordance with Oklahoma Statutes.
- 1.5.** Waiver of Legal Rights. Inspection by the Owner's Representative or by any the duly authorized representative(s) of the Owner's Representative or any order, measurement or certificate by the Owner's Representative of any work or any extension of time or any possession taken by the Owner shall not operate as a waiver of any provisions of the contract or any power therein provided. Any waiver of any breach of contract shall not be held to be a waiver of any other or subsequent breach. The Owner reserves the right to correct any error that may be discovered in any estimate that may have been paid and to adjust the same to meet the requirements of the contract and specifications. The Owner reserves the right to claim and recover by process of law sums as may be sufficient to correct any error or errors or make good any deficiency in the work resulting from such error or deficiency, dishonesty, or collusion discovered in the work after the final payment has been made.
- 1.6.** Subletting of Contract. The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the Contract or Contracts or any portion thereof, or any of his rights, title, or any interests therein, without written consent of the Owner.
- 1.6.1. Requests for permission to sublet, or otherwise dispose of any portion of the Contract work shall be in writing and accompanied by a statement showing that the organization which will perform the work is particularly experienced and

equipped for such work. No Subcontracts, or transfer of Contract, shall in any case release the Contractor of his liability under the Contract and bonds.

1.6.2. Should the Contractor assign any of his right title or interest in the Contract said assignment shall be made only with the full knowledge and written consent of the Surety. It is specifically understood that a violation of this Subsection will constitute an act of default on the part of the Contractor.

1.7. The General Provisions contained herein and these Special Provisions shall govern the work. Oklahoma Department of Environmental Quality rules and regulations, Oklahoma Department of Transportation Utility Permit Regulations and City of Chickasha/Chickasha Municipal Authority standards and specifications shall govern Water Main Construction.

2. TECHNICAL PROVISIONS

- 2.1. All construction shall comply with City of Chickasha standards and specifications.
- 2.2. Refer to the Drawings for additional information.
- 2.3. Contractor shall be responsible for Quality Control of all products and the work.
- 2.4. The work shall proceed continuously from Notice to Proceed until Final Completion.
- 2.5. Contractor shall perform all work consistent with MUTCD and OSHA regulations and requirements.
- 2.6. Dimensions and distances provided are approximate. Contractor shall verify dimensions in the field before ordering materials.
- 2.7. Contractor shall participate in a pre-construction conference with the Owner before beginning work.
- 2.8. All materials shall be new and shall be of standard production as offered by the manufacturer, unless otherwise approved by the Owner.
- 2.9. Contractor shall submit two hard copies of materials submittals for review and acceptance by the Owner prior to ordering materials.
- 2.10. All work shall comply with the applicable Rules, Codes and Standards listed in these Special Provisions, and all Federal, State and Local codes and ordinances, as well as any other authorities that may have lawful jurisdiction pertaining to the work specified. None of the terms or provisions of this specification shall be construed as waiving any of the rules, regulations or requirements of these authorities. The contractor shall procure all necessary permits or licenses to carry out his work.
- 2.11. In any instance where these specifications call for materials for construction of a better quality or larger capacity than required by the codes, the provisions of these

specifications shall take precedence. The codes shall govern in other cases of direct conflict between the codes and the specifications.

2.12. EXISTING STRUCTURES NOT SHOWN ON PLANS. The plans show the location of certain existing surface and subsurface structures. The Owner assumes no responsibility for failure to show any or all structures on the plans or to show them in their exact location. It is mutually agreed such failure will not be considered sufficient basis for claims for extra work or for increasing the pay quantities in any manner whatsoever, unless the obstruction encountered is such as to necessitate substantial changes in the lines or grades or requires the building of a special structure, provision for which is not made in the plans, in which case the provisions in these specifications for "Extra Work" will apply.

2.13. CONSTRUCTION STAKING. The Contractor shall furnish, place and maintain construction layout stakes necessary for the proper prosecution and inspection of the work under the contract in accordance with these Specifications.

The Contractor shall exercise care in the preservation of stakes and benchmarks and shall have them reset at his expense when any are damaged, lost, displaced or removed. The Contractor shall use competent personnel and suitable equipment for the layout of the work required. The Contractor shall not engage the services of any person or persons in the employment of the Owner or its equipment for the performance of any of this work.

The Contractor shall provide field forces and shall set all additional stakes needed, such as offset stakes, reference point stakes, slope stakes, pavement and curb line and grade stakes, stakes for bridges, sewers, roadway drainage, pipe underdrains, paved gutter, fence, culverts or other structures, and any other horizontal or vertical controls necessary to secure a correct layout of the work. Stakes for line and grade shall be adequate to maintain the specified tolerances for the operation being performed. The station number and the distance from the centerline of construction shall be marked on all grade stakes.

Contractor construction staking will not be paid as a separate item, but all associated costs shall be included in the price bid for other items of work.

2.14. PRIVILEGES OF CONTRACTOR IN STREETS, ALLEYS, OR RIGHTS-OF-WAY. For the performance of the contract, the Contractor will be permitted to occupy such portions of streets or alleys, other public places or other rights-of-way as provided for in the ordinances of the City, as shown on the plans or as permitted by the Owner's Representative. A reasonable amount of tools, materials and equipment for construction may be stored in such space but not more than is necessary to avoid delay in the construction. Excavated and waste materials shall be piled or stacked in such a way as not to interfere with spaces that may be designated to be left free and unobstructed, nor inconvenience occupants of adjoining property.

2.15. PROJECT SCHEDULES. Within ten days after the effective date of the agreement, the Contractor shall submit to the Owner's Representative for review a progress

schedule indicating the times (number of days or dates) for starting and completing the various stages of the Work, including any milestones specified in the contract documents.

2.16. No progress payment shall be made to the Contractor until the schedules are submitted to and acceptable to the Owner's Representative as provided below. The progress schedule will be acceptable to the Owner's Representative as providing an orderly progression of the work to completion within any specified milestones and the contract times, but such acceptance will neither impose on the Owner's Representative responsibility for the sequencing, scheduling or progress of the work nor interfere with or relive the Contractor from the Contractor's full responsibility therefor.

2.17. LIMITATION OF OPERATIONS. The Contractor shall conduct his work so as to create a minimum amount of inconvenience to the public. At any time when in the judgment of the Owner's Representative the Contractor has obstructed or closed or is carrying on operations on a greater portion of the site or public way than is necessary for the proper execution of the work, the Owner's Representative may require the Contractor to finish sections on which work is in progress before work is started on any additional section.

3. SALES AND USE TAXES. Purchases made for this project will not be exempt from sales taxes and use taxes.

4. SEQUENCE OF CONSTRUCTION

4.1. Contractor shall provide written notice to the City of Chickasha two weeks in advance of starting work.

4.2. All work shall be complete within **150** Calendar Days after issuance of the Notice to Proceed.

4.3. OWNER and CONTRACTOR recognize that time is of the essence of this agreement and that OWNER will suffer financial loss if the work is not substantially complete within the time specified in 4.2 above, plus any extensions thereof allowed. They also recognize the delays, expense and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by OWNER if the work is not substantially completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER Five Hundred Dollars (\$500.00) for each day that expires after the time specified in paragraph 4.2 above for substantial completion until the work is substantially complete.

4.4. Contractor shall give written notice to all residents/occupants/businesses that may be affected by the work. Said written notice shall be delivered no less than 48 hours, nor more than 2 weeks prior to the start time of the disruption.

The written form may be "door hangars", but in any event shall be submitted to and approved by the Owner's Representative prior to use. At a minimum the form shall contain:

- Project Identification
- Contractor Name, Address, Telephone Number
- Type of Construction
- Reason for affecting or disrupting service and duration of such

4.5. DAYS WORK AND WORKING HOURS. Work shall be performed only during regular and commonly accepted and prescribed working hours. No work shall be performed nights, Sundays or during City holidays unless authorized in writing.

5. MATERIALS SUBMITTAL

The Contractor shall submit two (2) copies of detailed descriptive (and completely legible) information, concrete mix designs, asphalt mix designs, aggregate gradations, reinforcing steel bar lists and mill test reports, catalog cuts, certifications, etc., of all material items he proposes to use on this project. Submittals are due when the Notice to Proceed is issued. Revised submittals are due two weeks prior to use of the material. Submittals shall be presented in the order in which they are specified, i.e., by section number, followed by items described on the drawings. Identifying marks shall be used on descriptive sheets, certifications and catalog cuts to indicate exactly which item is being presented for approval.

6. SUBSTANTIAL COMPLETION AND FINAL COMPLETION

6.1. SUBSTANTIAL COMPLETION. The intent of this term is to imply complete use of the facility by the Owner during the construction period.

6.2. FINAL COMPLETION. The project shall be completed in accordance with the number of Calendar Days as stated in the proposal and contract.

7. DISPOSAL OF WASTE MATERIALS AND CLEAN-UP

7.1. All waste materials shall become Contractor property to be disposed of in a manner approved by the Owner's Representative. The Owner reserves the right to claim selected items that are determined to have potential value to the City and will instruct the Contractor as to their disposition. The Contractor shall provide transportation for disposition of all waste materials regardless of their destination.

7.2. Before the project is accepted by the Owner, the area must be cleaned of all foreign materials such as rock, wood, etc. that could be picked up by mowers. The Owner's Representative and the Contractor shall make a thorough inspection of the area before final inspection of the project is made. Failure of the Contractor to clean up the jobsite could delay final inspection and thereby delay final payment on his contract. The cleaning up of the project work area is incidental to all other work involved, and no separate payment for this work will be made.

8. The Owner reserves the right to consider alternative proposals submitted in writing by responsive bidders.

9. Only 11" x 17" size plans shall be issued for this project.

10. AS-BUILT DRAWINGS

As-built drawings are the marked-up drawings, maintained by the Contractor on-site, that depict actual conditions and deviations from the Contract Documents. Maintain the as-builts throughout construction as red-lined hard copies on site. Submit As-built drawings prior to issuance of final payment.

Show on the as-built drawings the following information:

- 10.1.** The actual locations of valves and fire hydrants by dimensioning along the utility run from a reference point.
- 10.2.** Unusual or uncharted obstructions that are encountered in the contract work area during construction.
- 10.3.** Any other deviations from the contract drawings.



Chickasha Municipal Authority
Chickasha, Oklahoma

RFP CMA-2302

WATER MAIN

CONSTRUCTION

SPECIFICATIONS

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SECTION 500 – WATER MAINS

SECTION 500 – CONSTRUCTION REQUIREMENTS

500.01 – DESCRIPTION

This section covers general requirements for construction of water lines and appurtenances as described herein. The intent of these specifications is to provide for complete installation including materials, labor and equipment necessary to complete the work. These specifications shall apply to water mains with nominal diameter of 6" through 12" only.

All design, materials, construction, sampling and testing shall comply with ODEQ rules and regulations and AWWA Standards. ODEQ rules and regulations found at OAC 252:626, latest addition, shall govern. Construction compliance shall specifically include, but not will not be limited to, compliance with paragraphs 252:626-19-2 (h) (1) and (2) regarding horizontal and vertical separation between water mains and contamination sources. That is, maintain 1) at least 10 feet horizontally between the water main and any existing or proposed sanitary sewer mains and 2) at least two (2) feet vertically between the water main and any existing or proposed sanitary sewer mains. In the event these separation distances cannot be maintained, refer to the plans for details regarding installation.

The work to be done under this contract consists in general of the installation of pipe, fittings, specials, valves, and other pipe line appurtenances, shall include unloading such material at the point of delivery, hauling, distribution and installation thereof; the furnishing and installation of all jointing materials, gate valves, air valves and appurtenances, structures, concrete and all other materials required by the plans and specifications; making all specified and necessary connections with existing mains; making all required tests; restoration of all roadways, streets, driveways, sidewalks, crosswalks, and street crossing surfaces, and replacement or repair of all drains, sewers, conduits, water, oil and gas lines, fences, culverts, bridges and other structures which may be damaged in the prosecution of the work; maintenance of traffic across sites of the work where required, with all necessary barricades, lights and other safety provisions; making of all repairs to coatings and linings of pipe under the supervision of a representative of the pipe manufacturer; and the performance of all other work required by the plans and as specified herein.

500-02 - EXCAVATION AND BACKFILLING

- A.) DEFINITION – The terms “excavation” and “trenching”, as used herein or in any other reference to the work under contract shall refer to and mean any and all material excavated, for whatever purpose, in accordance with the terms of the specifications, plans, proposal and contract, and shall include all subsequent handling, backfilling, compacting, disposal of excess excavation materials, and the preparation of all sub-grades, etc., necessary for a first-class job.
- B.) EXCAVATION WORK – Excavation work shall include clearing and preparation of the trench or excavation size, including the removal of all surface vegetation, stumps and debris; all sheeting, shoring, bracing, protection of adjacent property, preparation of all sub-grades, storage of excavated materials off of the excavation site where necessary, backfilling, tamping and otherwise compacting of backfill and specified embankments, grading and surfacing; moving, hauling or otherwise transporting excavated materials from whatever source, where materials are to be returned to the excavation site for backfill purposes, as directed by the Engineer; and all other excavation stipulated in this specification.

C.) CLASSIFICATION OF EXCAVATION – There shall be no classification of excavated materials (except as otherwise provided for in the proposal) and the term “excavation” shall include all materials excavated or removed on the several sites of the work regardless of the type, character, composition or condition of the materials so excavated; and shall further include all debris, junk, broken concrete and all other materials within the excavation limits.

D.) PIPE TRENCH EXCAVATION – Pipe lines shall be installed to the alignment, grades and elevations shown on the drawings. Grade and alignment of pipe and pipe sub-grades will ordinarily be obtained from offset (hub) stakes. Trenches shall be dug by means of a backhoe, trackhoe or trenching machine wherever practicable. The use of any other type of power excavating equipment such as drag line or power shovel will not be permitted except with special authorization by the Engineer and under such requirements relative to uniformity of trench width and vertical trench banks as they may require. Hand digging will be required where the operation of trench digging machinery will damage trees, buildings, surface or subsurface structures.

The minimum width of trench cut for each size of pipe shall be as follows:

<u>SIZE OF PIPE</u>	<u>WIDTH OF TRENCH</u>
6"	20"
8"	22"
10"	24"
12"	28"

The trenching machine shall be maintained on a sufficiently level roadbed to provide substantially vertical trench walls. The maximum horizontal offset of the trench bottom from the trench top (undercutting) shall be two inches.

E.) Where soft foundation is encountered in the trench bottom, the Contractor shall excavate below grade and provide either a gravel cushion or a concrete cradle for the purpose of supporting the pipe, as directed by the Engineer.

F.) All bell holes shall be of ample size

G.) All excavated materials shall be deposited on the sides of trenches at such a distance that no additional load due to surcharge is placed on the bank, and shall also be deposited or moved after original deposit in such a manner that the pipe laying crew and the public, when the trench is in highway or city streets, will be inconvenienced as little as possible.

H.) It will be the Contractor's responsibility to maintain the trench banks in a stable and vertical position by use of all necessary bracing or sheeting required for safety.

I.) The Contractor will be required to keep the pipe trenches free from water and shall keep the natural ground water table or surface not less than four (4) inches below the elevation of the finished sub-grade, from the time the sub-grade preparation is started until the pipe has been backfilled. No work shall be done in trenches after rough excavation is completed if the sub-grade is submerged or within four (4) inches of ground water. All water removed in the dewatering of trenches and other excavations shall be disposed of in a satisfactory manner.

The Contractor shall be liable for all damages to private property caused by such disposal of water.

- J.) **Rock Excavation** – In rock excavation, the Contractor shall over-excavate six (6) inches and place 6 inches of screenings in the trench upon which the pipe is laid. The Contractor shall further backfill over pipe with same or earth free from stone or rocks, to a depth of 6 inches.
- K.) **BACKFILLING TRENCHES.** Except where water mains lie under drives, streets, or alleys, backfill shall be brought up around the pipe in six inches (6") loose measurement layers from materials selected from the trench excavation, compacted by means of mechanical or hand tampers to twelve inches (12") above the top of the pipe, compaction shall be to ninety percent (90%) standard proctor density. Where water main crosses under drives, streets or alleys, the backfill shall be brought up from the point twelve inches (12") above the pipe as outlined above in six inch (6") layers compacted by mechanical or hand tampers to a minimum of ninety (90%) standard proctor density with the exception that the top twelve inches (12") the backfill under the drive shall be compacted to ninety-five percent (95%).

Where the main crosses or lies within the paved portion of a street or alley, special construction details as shown on the plans shall govern. In open areas the back fill from the point twelve inches above the top of the pipe shall be placed within the trench by either hand or machine method and the top of the trench shall be left slightly mounded to allow for future settlement. All tamping and backfill shall be to the approval of the Engineer. In compacted backfill driveways, streets, or alleys, the backfill shall extend three feet (3') on each side of the driveway, street or alley.

- L.) **DISPOSAL OF EXCESS EXCAVATION MATERIALS.** In general, excess excavated materials from trenches located in open fields and unimproved property will be distributed directly back over the pipe line and within the pipe line right-of-way, to a maximum depth above the original ground elevation at any point of six (6) inches, at and across the trench, and sloping uniformly each way therefrom. Materials so wasted shall be carefully finished with a drag or blade machine to have a neat and uniform appearance without obstructing drainage at any point.

Except as stated in the above paragraph, all excess excavated material remaining after final settlement of the trenches has occurred shall be removed and disposed of by and at the expense of the Contractor, and to the satisfaction of the Engineer.

- M.) **REPLACEMENT OF SOD.** Where shown on the plans, the Contractor shall replace sod removed or destroyed in the excavation of pipe trenches with new sod of a quality and condition and from a source approved by the Engineer. All such sod furnished shall be equal to or better than the original sod removed. Sod replaced shall be kept watered for a period of one month after installation.
- N.) **TREES AND SHRUBBERY.** The Contractor shall use every possible precaution to prevent injury to trees and shrubbery on and adjacent to the site of work. He shall replace, at his own expense, any such trees or shrubbery damaged or destroyed by him, unless the removal thereof is required by the plans or is authorized by the Engineer. When tree roots one and one-half inches (1 ½") or larger are encountered in making the excavation the roots are not to be cut. Hand excavation shall be used, and any damaged root or roots 1 ½" or larger shall be treated with a creosote paint as directed by the Engineer.

O.) LENGTH OF DITCH TO BE OPENED. In no case shall more than three hundred (300) feet of ditch be opened at one time in advance of the pipe laid, without consent of the Engineer.

P.) DRIVEWAYS. When the water main passes underneath any private driveway, tunneling shall not be used, unless special permission is given by the Engineer. Driveway pavement shall be saw cut to the pipe trench width to allow the main to be laid and for the proper backfilling of the ditch. After the main is laid and ditch is properly backfilled, the driveway shall be restored to as good a condition as found. See standard detail drawings.

Where driveways are cut to private residences, they shall be cut, the pipe installed, and trench properly backfilled all in the same day.

Where the water main passes underneath any private or public driveway, where the driveway is used for parking cars such as at shopping centers, large business buildings, stores, etc., the Contractor shall confer with the Engineer for an approved method of procedure in doing work in order to minimize the interference of traffic to and from the parking area.

Q.) PUBLIC STREETS AND ROADS. All public streets and roads which are closed to traffic, under authority of proper permit, shall be protected in accordance with the requirements of the authority having jurisdiction over the street or road by means of effective barricades on which shall be placed acceptable warning signs.

Materials stored upon or alongside public streets and highways shall be so placed and the work at all times shall be conducted so as to cause the minimum obstruction and inconvenience to the traveling public.

All barricades, signs, warning lights and other protective devices shall be installed and maintained in conformity with applicable statutory requirements.

500.03 – MATERIALS CERTIFICATIONS

The Contractor, in all cases, shall furnish required samples without charge. A laboratory approved by the City shall perform all tests. When the Standard Specifications require testing of prefabricated products or any other materials, the City Engineer may waive local testing requirements in lieu of a certification from the manufacturer that the material or product furnished conforms to the appropriate Specifications as called for in the Standard Specifications.

GENERAL REQUIREMENTS

The Contractor shall be responsible for obtaining all certifications and arranging for their delivery to the proper destinations as required by this specification. A responsible representative of the company that issues the certification shall sign materials certifications. The official company title of the signer must be clearly shown immediately beneath the Contractor's signature.

All certifications shall be furnished in duplicate and each copy shall show the following information:

- A) City's Project Name or Number
- B) Name of Contractor
- C) Identification Markings on Shipment
- D) Quantity of Material Represented by the Certification

When certified mill tests are submitted as a Type A certification the quantity information need not be

furnished provided that the identifying heat number is permanently rolled, stamped or otherwise permanently affixed to each individual piece of material in the shipment covered by the certification.

TYPES OF CERTIFICATIONS

Unless otherwise specified, a certification shall be one of the following types:

A) Type A certification shall be prepared by the manufacturer and shall consist of a certified copy of a report covering tests conducted by an approved laboratory. Such tests shall have been conducted on samples obtained from the lot or lots of material in the shipment.

B) Type B certification shall consist of a certification prepared by the manufacturer and shall show the limits of test values as determined by an approved manufacturer's laboratory, a qualified commercial laboratory or other approved laboratory.

C) Type C certification shall be prepared by the manufacturer and shall certify that the material in the shipment conforms to the same formula and/or is essentially the same as the material previously approved by the City Engineer.

D) Type D certification shall be prepared by the manufacturer and shall state that the materials meet the applicable Specifications. These Specifications shall be listed by number, section reference or other appropriate identification acceptable to the City Engineer.

DISTRIBUTION OF CERTIFICATIONS

Certifications shall be mailed in triplicate to the Public Works Director and the Engineer designated by the Public Works Director.

These certifications will be checked for conformance with the applicable Specifications.

BASIS OF ACCEPTANCE

Whenever a certification as defined above is required or requested by the City Engineer, such material may be accepted on the basis of certification provided that all applicable requirements are met. Visual inspection at delivery and installation will also be used to verify the Workmanship and condition of the material to be satisfactory.

All material furnished under certification shall be tagged, stenciled, stamped or otherwise marked with a lot number, heat number, order number, or other appropriate identification which can be readily recognized and checked against the certification. Material accepted on certification shall not be incorporated in the Work until the City Engineer has approved the certificates.

STORED MATERIALS

Stored materials shall be located and protected to preserve their quality and fitness for the Work. Materials shall be placed on wooden platforms or other hard, clean surfaces and not on the ground and shall be placed under cover as required. Stored materials shall be located to facilitate prompt inspection. The City assumes no responsibility for materials located on the site or off-site. The Contractor assumes full responsibility for any damage or loss to any stored materials. No stored material shall be located off-site unless approved by the City Engineer. Material shall be insured prior to payment for stored materials.

All aggregates shall be handled in such a manner as to preserve their quality, gradation and fitness for the work. The provisions for transporting aggregates shall be such to assure a continuous and adequate supply of material to the work. Aggregate stockpiles shall be built up in such a manner that acceptable materials will be delivered to the plant or the Project. Aggregates from different sources and different gradations shall not be stockpiled together. The gradation requirements for the individual

stockpiles and proportioning from the stockpiles, shall be the responsibility of the Contractor. Aggregates that have become segregated, or mixed with earth or other foreign material, shall be considered unacceptable, and will not be utilized in the work until Contractor causes aggregate piles to be integrated, and all foreign materials to be removed.

500.04 – MISCELLANEOUS REQUIREMENTS

- A) All salvageable water pipe and fittings removed from the existing water mains and not re-used during construction of the new water mains shall remain the property of the City of Chickasha.
- B) Contractor shall remove and reset existing mailboxes as necessary during construction to avoid damaging them during the work. Contractor shall relocate the mailboxes to maintain access by the mail carrier and residents at all times. Contractor shall relocate mailboxes to original location after water main construction is complete. Cost to be included in the price bid for other items of work.

Any excavation within street right-of-way shall be backfilled with soil, temporary construction entrance materials and/or permanent pavement within 72 hours of starting such excavation. The applicant shall ensure that any water that accumulates within any excavation within street right-of-way that has not been backfilled shall be removed by pumping or other approved means within 24 hours of the beginning of such accumulation.

- C) All concrete used in making pavement repairs shall be Class A (HES), meeting the requirements of 2009 ODOT Standard Specifications. All concrete used in making sidewalk repairs shall be Class C, meeting the requirements of 2009 ODOT Standard Specifications. All asphalt used in making pavement repairs shall be Type B Asphalt meeting the requirements of ODOT Standard Specifications. TBSC Type E meeting 2009 ODOT Standard Specifications shall be used to repair gravel driveways. All repairs shall be made in accordance with City of Chickasha standard detail drawings.
- D) When water main shut down is required, CONTRACTOR shall coordinate the shut-down with OWNER'S water department staff and shall give a minimum 72-hour notice to said staff and the Public Works Director. OWNER'S water department staff will be responsible for operation of all valves which require closing.

500.05 – PROGRESS OF CONSTRUCTION

The Contractor shall work at enough different locations to complete the entire contract within the time limit specified. Water Line appurtenances shall be constructed as soon as the Water Line that they serve is constructed. Postponing the construction of appurtenances until the Water Line has been completed, or the building of appurtenances in advance of the construction of the Water Line, will not be permitted.

- A) The construction of Water Lines for more than six hundred feet (600') in advance of appurtenances which are incomplete or the construction of which has not been started, will not be permitted.
- B) All water lines that are to be abandoned in place shall be cut to the nearest connections and either capped or plugged as required to provide a tight connection. The Contractor shall be responsible for providing the appropriate plug or cap for the job. The cost of this work is considered incidental.

500.06 – DELIVERY OF MATERIALS

Construction materials shall not be delivered to the site of the work more than three (3) days in advance of their anticipated use nor shall the quantity of pipe or other materials on hand at the site of the work at any time be in excess of the amount required to complete six hundred feet (600') of Water Line unless with special permission of the Engineer.

500.07 – SURFACE DRAINAGE STRUCTURES

Unless otherwise specified or called for on the plans, all surface drainage structures and appurtenances shall not be disturbed.

500.08 – CONCRETE

Unless otherwise approved by the Engineer, all concrete used in construction of waterlines and their appurtenances shall be High Early Strength Concrete and shall have a minimum three (3) day compressive strength of three thousand five hundred pounds per square inch (3,500 psi). It is recognized that some situations may occur in which different requirements may be more suitable for completion of the work. The contractor shall receive approval from the Engineer prior to proceeding with the work in such situations.

500.09 – DEPTH OF COVER

Where not otherwise indicated on plans, the pipe shall be laid at an elevation that will provide after completion, a minimum depth of cover over the top of pipe of forty-eight (48) inches below the surface.

500.10 – STANDARD DESIGN CONDITIONS

A) **Standard Design Pressures** - Unless otherwise specified, all pipes and fittings shall be designed for the following minimum pressure conditions:

Minimum Internal Pressure (psi)		
Working	Surge	Design
150	100	250

B) **Live Loading** -Unless otherwise specified or called for on the plans, minimum pipe design corresponding to the specified design pressure shall be for highway live loading condition and where waterline is crossing or running parallel to the railroad, corresponding minimum pipe design for railroad live loading condition shall govern (with or without casing).

C) Water main pipe materials shall be ductile iron pipe (DIP) or polyvinyl chloride (PVC) pipe. All water main pipe shall be new.

500.11 – CLEAN-UP

Clean-up operations shall follow excavation and construction a distance not to exceed six hundred feet.

SECTION 505 – PIPE AND FITTINGS INSTALLATION

505.01 – DESCRIPTION

This section covers installation of pipes in open cuts, in conformity with the lines, grades, and dimensions and as provided in applicable sections of these specifications.

505.02 – MATERIALS

505.02.01 – PIPE AND FITTINGS

Acceptable pipe materials and fittings shall meet the requirements of the appropriate sections listed below:

Pipe Material	Section
Ductile Iron Pipe (DIP)	524

Polyvinyl Chloride (PVC) Pipe	525
High Density Polyethylene (HDPE) Pipe	529

All pipe and fittings shall be new.

505.02.02 – EMBEDMENT

- A) **General** -Embedment material shall be 3/8" screenings. Prior to delivery, the Contractor shall submit laboratory sieve analysis test reports for materials to be used for embedment. Materials shall be approved by the Engineer prior to placement.
- B) **Delivery Tickets** - The Contractor shall submit delivery tickets for the purpose of verifying use of minimum quantities necessary to complete installation pursuant to the appropriate standard details and the minimum dimensions specified.

505.04 – CONSTRUCTION METHODS

- A) **Polyvinyl Chloride (PVC) Pipe** – All PVC pipe shall be embedded in accordance with ASTM D-2274, "Standard Recommended Practice for Underground installation of Thermoplastic Pressure Piping", and ASTM D-2321, "Standard Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe", and as shown on Detail "Typical Bedding and Trench Detail for PVC Pipe" and meeting the requirements of Section 525.
- B) **Ductile Iron Pipe (DIP)** – All ductile iron pipe shall be embedded as shown on Detail "Typical Bedding and Trench Detail for Ductile Iron Pipe.
- C) **High Density Polyethylene (HDPE)** pipe if laid by direct burial shall be embedded as directed by the Engineer; if place by the directional drilling method, no embedment is required.

505.04.01 – Place blue polyethylene Underground Warning Tape over all water mains. Warning tape shall have black lettering stating "Caution Buried Water Line Below" imprinted on it. Use 6-inch wide tape. See standard drawings for placement location.

505.04.02 – INSTALLATION REQUIREMENTS

- A) **Shipping, Handling and Storage** -Pipe shall be transported from the plant, where it is manufactured, to the job site employing special methods of packaging to prevent damage to the pipe. After the pipe is received at the job site, it shall be carefully inspected for any damage that may have occurred in transit. The pipe shall be handled at all times with care using padded slings or hooks. The pipe shall not be dropped, skidded or rolled against pipe already on the ground. If any damage occurs to pipe, the pipe shall be rejected. All pipe and accessories shall be stored on flat, level ground with no rocks or other objects under the pipe. Gaskets for push-on joints and pipe shall be stored in cool location out of direct sunlight in accordance with the manufacturer's recommendations.
 1. Pipe, fittings, specials, and other accessories shall be unloaded at the point of delivery, hauled to and distributed at the site of the project by the Contractor, and shall at all times be handled with extreme care to avoid damage thereto. Equipment, tools and methods used in unloading, reloading, hauling, and laying pipe and accessories shall be such that no damage is done to the pipe or any lining therein.

2. Cement lining in pipes or fittings which is broken or loosened in unloading or subsequent handling shall be repaired by and at the expense of the Contractor, under the direct supervision of the representative of the pipe manufacturer. All outside pipe coating which is damaged by the contractor shall be repaired, prior to laying the pipe or placing the backfill, by removing all damaged coating, wire brushing the exposed metal, and applying two coats of a permanently elastic coal tar paint of a type and quality equal to that used in originally coating the outside of the pipe and preferably of the same brand and formula. This paint shall be sufficiently hard before backfilling so that it will not be damaged thereby.
3. Pipe lines shall be accurately installed to the alignment and profile indicated on the approved pipe installation drawings furnished for the purpose. Grades and elevations shall be determined by the pipe sub-grade prepared as specified.
4. The maximum deflection of any pipe joint, made necessary by vertical and horizontal curves or offsets, shall not exceed the amount as recommended by the manufacturer of the pipe.
5. PLACING PIPE IN TRENCH. Proper equipment, implements, tools, and facilities satisfactory to the Engineer shall be provided and used by the Contractor for the safe and convenient prosecution of the work. All pipe, fittings, hydrants and valves shall be carefully lowered into the trench, piece by piece, by means of cranes, derricks, tongs, slings, ropes or other suitable tools and equipment, in such a manner that no damage occurs to the pipe, pipe coating, pipe lining or to the trench sub-grade. Under no circumstances shall pipe or accessories be dropped or dumped into the trench.
6. PIPE TO BE KEPT CLEAN. All earth, rubbish, dirt and other foreign matter shall be removed from the inside of all pipe and other appurtenances (and from the outside of the spigots), before lowering into the trench, and shall be kept clean by approved means during and after laying. At times when pipe laying is not in progress, all open ends of pipe and fittings shall be closed by approved means, and no trench water shall be permitted to enter the pipe.
7. INSPECTION OF PIPE. Before lowering, and while still suspended, the pipe shall be inspected for defects. Any defective, damaged or unsound pipe shall be rejected.
8. CUTTING PIPE. Cutting of pipe for closure pieces or for other reasons shall be done in a neat and workmanlike manner by a method which will not damage either the pipe or the pipe lining.

B) **Pipe Foundation** - No waterline shall be laid unless the foundation is in a condition satisfactory to the Engineer. Where trenches are excavated in soft, unsuitable, or rock material, trench bottom shall be stabilized as directed by the Engineer.

C) **Laying Requirements** -All pipes, specials, fittings and other appurtenances shall be examined carefully for damage and other defects before installation. The City retains the right to reject damaged and defective materials.

The pipe ends shall be free of all lumps, blisters and they shall be wiped clean of foreign materials such as dirt and sand before installation.

Pipe shall be laid with the bell ends facing in the direction of laying unless directed otherwise by the Engineer. Where pipe is laid on a slope of ten (10%) percent or greater laying shall start at the bottom and proceed up the slope.

When laying pipe is not in progress during the noon hour or overnight, the open ends of the pipe shall

be closed by watertight plugs. If water is in the trench the plugs shall be left in place until the trench is pumped dry.

Bell holes for bell-and-spigot pipe shall be excavated at proper intervals so that the barrel of the pipe will rest for its entire length upon the bottom of the trench. Bell holes shall be large enough to permit proper installation of pipe. Bell holes shall not be excavated more than ten (10) joints ahead of pipe laying. Filling and ramming earth or other material beneath the pipe to raise it to grade shall not be permitted.

The Contractor shall use every precaution at all times during construction of the pipeline. All pipe, specials, fittings, and other appurtenances shall be lowered carefully into the trench with suitable equipment, to prevent damage to the waterline materials. In rock trenches, plywood shields or other approved means shall be used to prevent the cradled pipe from swinging against the sides of the trench.

All joint preparation and joining operations shall comply with the instructions and recommendations of the pipe manufacturer and meet the joint requirements in the appropriate material section. Rubber gaskets shall be positioned on the joint in accordance with the manufacturer's recommendations. Immediately before joints are pushed together, all joint surfaces shall be coated with the lubricant furnished with the pipe.

Any damage to the pipe, from any cause during installation of the pipeline shall be cause for replacement, as directed by the Engineer, and at the expense of the Contractor.

After a section of pipe is properly installed and approved for backfill, the trench shall be backfilled and compacted.

505.06 – METHOD OF MEASUREMENT

Payment for "Water Line" shall be made at the unit price bid per lineal foot of pipe installed for each size. The price established shall be full compensation for all materials including pipe, short pieces and specials, trench excavation, embedment material, backfilling, labor, tools, equipment and incidentals necessary to complete this item of work. "Water Line" shall be measured along the pipe.

Payment for fitting shall be paid for by the pound. The price established shall be full compensation for all materials including fittings, trench excavation, backfilling, embedment material, concrete thrust blocks, labor, tools, equipment and incidentals necessary to complete this item of work.

505.07 – BASIS OF PAYMENT

(SIZE) (TYPE) WATERLINE	L.F.
FITTINGS	LB.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 510 – WATER SERVICE LINE CONNECTIONS

510.01 – DESCRIPTION

510.01.01 – GENERAL

This section covers water service line connections in sizes five-eighths inch (5/8") through two inches (2") for use in buried service lines from the main to the meter valve or meter setting appurtenance in accordance with ANSI/AWWA C-800 Standard for Underground Service Line

Valves and Fittings or as modified herein. All water service lines and connections shall be installed as per city ordinances and standards.

510.01.02 – DEFINITIONS

The following definitions shall apply:

- A) **Adapter** -A fitting used to connect pipe, tubing, or other fittings with differing characteristics such as sizes, diameters, or material type.
- B) **Chamfer** - A bevel made on the end of a thread to facilitate thread engagement.
- C) **Corporation valve (stop)** - A valve attached to the water main to start a service connection, which is used to interrupt flow during installation or maintenance of the service line.
- D) **Coupling** - A fitting for connecting two pipes or tubing sections together.
- E) **Curb valve** -A valve installed in the water service line and accessible for operation from the surface of surface of the ground for routinely interrupting flow through the service line.
- F) **Driving thread** - A thread installed on the outlet end of corporation valves and used to hold the valve during installation.
- G) **Dry seal** -A type of pipe thread covered by ANSI/ASME B1.20.3. Dryseal pipe threads are based on the USA (American) pipe thread. They differ from the USA (American) pipe thread in that they are designed to seal pressure-tight joints without the need for sealing compounds.
- H) **Fitting** - A part used to connect piping or tubing.
- I) **Inlet** - The opening in a valve or fitting through which flow from the water main enters the valve or fitting.
- J) **N.P.T.** - National Pipe Thread as specified in ANSI/ASME B1.20.1.
- K) **Outlet** -The opening in a valve or fitting through which flow from the water main leaves the valve or fitting.
- L) **Tapping Clamp** - A fitting that attaches circumferentially to a pipe to provide for attachment of a corporation valve.

510.02 – MATERIALS

Fitting and valve materials in contact with potable water shall be copper or brass. No more than a weighted average of 0.25% of the wetted surface of pipes, pipe fittings, plumbing fittings and fixtures shall contain lead.

All service lines shall be seamless CTS pressure pipe meeting ANSI/AWWA C-901 and ASTM D2737. All corporation stops, curb stops and inlets and adapters shall be Mueller brand or approved equivalent Brass Fittings, unless noted otherwise. All service line installations, taps and connections shall comply with the City of Chickasha standards.

Component Parts - Component parts such as fasteners, seals, and packing may be of other materials selected for adequate endurance, corrosion resistance, and strength.

510.02.01 – DESIGN OF VALVES AND FITTINGS

General - Valves, fittings, and parts thereof shall be machined to the sizes and tolerances defined in

AWWA C-800. End connections shall be designed for the type of service line.

Pressure Rating - Service line valves and fittings shall be suitable for use with water at one hundred (100) degree F and one hundred fifty pounds per square inch pressure. (150 psi)

510.02.02 – DETAILED DESIGN OF VALVES AND FITTINGS

Dimensions of Corporation Valves:

A) **General** -Corporation valves shall be installed with drilling or tapping machines. Unless otherwise specified, the minimum inside diameter of the waterway through a corporation valve shall be large enough to accommodate the maximum drill sizes herein. Maximum drill sizes for installation of corporation valves and service clamps or saddles with a driving machine shall be as shown below.

Corporation Valve Size (inches)	Maximum Drill Size	
	Corporation Valve with AWWA Thread inlet	Corporation Valve with N.P.T Thread Inlet
¾	1 1/16	1 1/16
1	1 5/16	1 5/16
1 ½	1 7/16	1 7/16
2	1 15/16	1 3/4

B) **Overall Body Dimensions** -For corporation valves to be installed by a tapping machine, overall body dimensions shall conform with the dimensions listed below.

Corporation Valve Size (inches)	Maximum Radius (inches)	Maximum Length (less nut) (inches)
¾	1.50	4
1	1.50	4
1 ½	2.50	9 1/16
2	2.50	9 1/16

C) **Tapping Clamps** -Tapping Clamps shall conform to the requirements of Section 533.

D) Service Line Fittings

a. **General** -The fittings used in service lines shall be designed for connection to the service line. Small waterways and abrupt corners causing water turbulence and pressure drop shall be minimized.

510.02.03 – END CONNECTIONS

End connections shall be in conformance with AWWA C-800.

510.04 – CONSTRUCTION METHODS

510.04.01 – GENERAL

The following are general connection requirements only. Additional plumbing code and other requirements may be applicable, which are not included herein.

- A) Single taps shall be made at forty-five degree angles (45°) from crown of distribution main.
When two (2) or more taps are to be made, they shall be a minimum of thirty-six (36") inches

apart and alternate from forty-five degrees (45°) to thirty degrees (30°) from crown of distribution main.

- B) Back/reverse tap may be allowed only under adverse conditions and only when approved by the Engineer.
- C) No tap shall be allowed on fire hydrant leads except under adverse conditions and only when approved by the Engineer.
- D) Direct taps shall be allowed into cast iron or ductile iron mains only.
- E) Tapping clamps shall be Mueller Single Section Servi-Seal All Stainless Steel Pipe Repair Clamps with integral CC Threaded service outlet, minimum 15" length or approved equal for three quarter inch (¾") to two inch (2") service line connections. Tapping clamp shall also conform with the requirement of Section 533. All other taps shall be accomplished using tapping sleeves in accordance with Section 532.
- F) When tapping clamps are installed a pressure test shall be performed. Tapping clamps shall hold a minimum of one hundred pounds per square inch (100 psi) of pressure for thirty (30) minutes.
- G) Service connections two (2") inches and smaller shall be by corporation valve (stop) of the same size as the service line and meter to be installed. Corporation valves shall be as specified in Section 510.02. Service connections to the main for service lines larger than two (2") inches shall be a branch connection.
- H) When tapping mains where it is necessary to remove part of the polyethylene wrapping, the polyethylene wrap shall be repaired or replaced in such a manner as to protect both the pipe and corporation valve. Any bedding material removed during excavation shall be replaced in kind and compacted.
- I) No tees shall be connected to existing water service lines three inches (3") and smaller in diameter providing water to a single meter of the same size.

510.04.02 – MATERIAL CERTIFICATION

Contractor shall provide a Type D certification for all materials used in service lines and service line connections.

510.05 – TESTING

Any valves or fittings found to be defective shall be replaced with new valves or fittings at the Contractor's expense.

510.07 – BASIS OF PAYMENT

All cost of service line connections shall be included in the price bid for water services.

SECTION 511 – WATER SERVICE LINES

511.01 – DESCRIPTION

511.01.01 – GENERAL

This section covers water service lines intended to be used from the connection to the meter valve for meter setting appurtenance in accordance with AWWA C-800 Standard for Underground Service Line Valve and Fitting or as modified herein. All water service lines shall be connected as per city ordinances.

511.01.02 – TYPES

Long Service (EA) is for one service line from the new water meter to a meter or meters on the opposite side of the street, irrespective of the number of meters served by one line. Short Service (EA) is for one service line from the new water main to a meter or meters on the same side of the street, irrespective of the number of meters served by one line.

511.02 – MATERIALS

All service lines shall be seamless CTS pressure pipe meeting ANSI/AWWA C-901 and ASTM D2737. All corporation stops, angle ball valves, curb stops and inlets and adapters shall be Mueller brand or approved equivalent Brass Fittings. All service line installations, taps and connections shall comply with the City of Chickasha Standards.

511.04 – CONSTRUCTION METHODS

The following are general construction requirements only. Additional plumbing code and other requirements may be applicable, which are not included herein.

A) Boring

1. Lines for all long services will be bored or punched under the existing road.
2. Service lines under street pavement shall not be spliced.
3. Street bores shall be a minimum of thirty (30") inches below the bottom of the street.
4. Service line bores shall be level.

B) Warning tape

Place blue polyethylene Underground Warning Tape over all service lines. Warning tape shall have black lettering stating "Caution Buried Water Line Below" imprinted on it. Use 6-inch wide tape.

511.06 – METHOD OF MEASUREMENT

The price established shall be full compensation for all materials including copper service lines, boring, fittings, connections to meter, labor, tools, equipment, and incidentals necessary to complete this item of work.

511.07 – BASIS OF PAYMENT

The items measured as provided above will be paid for at the contract unit price bid:

SHORT SERVICE (SIZE)	EA.
LONG SERVICE (SIZE)	EA.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 513 - WET CONNECTIONS

513.01 – DESCRIPTION

This section covers wet connections for tie-in to existing mains. The connections shall be either a cross or tee as called for on the plans where tapping is not allowed.

513.04 – CONSTRUCTION METHODS

The wet connection shall begin with isolating the point of tie-in by closing of valves. The existing main shall then be cut where wet connection is to be made and the line drained. Contractor shall prevent all non-potable water and foreign materials from entering the water main by use of adequate pumps

and other necessary means.

513.06 – METHOD OF MEASUREMENT

"Wet Connection" will not be measured separately.

513.07 – BASIS OF PAYMENT

All cost of making wet connections shall be included in the price bid for fittings.

SECTION 514 – TAPPING CONNECTIONS

514.01 – DESCRIPTION

This section covers water main tapping for connections to existing water mains.

514.02 – MATERIALS

The following materials shall be used and meet the requirements of the appropriate Sections listed below.

Tapping Mechanism	Section
Tapping Sleeve	532
Tapping Valves	520.02.02

514.04 – CONSTRUCTION METHODS

A) Description - A tap is the cutting of a coupon, utilizing a tapping sleeve or saddle with tapping valve for a connection.

B) Methods

1. Direct taps -Direct taps shall be made when the main to be tapped is on the same horizontal plane as the branch. The cutting operation is to be done with a sharp shell-cutter tool, which shall be lubricated with the manufacturer's recommended cutting tool lubricant.

2. Swing Ties - Swing ties shall be made when the main to be tapped is either above or below the branch when called for on the plans or specified. A swing tie may consist of

- i. Waterline pipe
- ii. Tapping sleeve as necessary;
- iii. Tapping valve and Box;
- iv. Tap;
- v. Solid sleeve;
- vi. Forty-five degree (45°) bends.

514.06 – METHOD OF MEASUREMENT

Tapping Connection will not be measured separately.

514.07 – BASIS OF PAYMENT

All cost of making tap connections shall be included in the price bid for tapping valve with sleeve.

SECTION 516 – FIRE HYDRANTS

516.01 – DESCRIPTION

This section covers fire hydrants intended to be used for fire protection when specified or called for on the plans. The hydrant shall be located and positioned in such a way as to be accessible and protected from traffic.

516.02 – MATERIALS

516.02.01 – GENERAL

All fire hydrants furnished shall conform to AWWA C-502, as amended, or as modified herein. Fire hydrants shall be Mueller Super Centurion A-423, 3-way fire hydrant, 5 ¼" valve opening, 2-2 ½" hose nozzles, 1-4 1/2" pumper nozzle, 6" M.J. Shoe, red color, City of Chickasha threads or approved equal.

516.02.02 – SUBMITTALS

The Contractor shall provide three (3) copies of all submittals for fire hydrants. The submittal shall clearly identify the make, model, design, and metal characteristics for approval by the Engineer prior to installation.

Drawings shall show principal dimensions, metal thickness, construction details, materials used in all parts of the fire hydrant with ASTM designation and structural properties. Net assembled weight of hydrants shall be shown.

Specifications shall include comprehensive parts list with sufficient drawings or details to clearly identify parts.

516.02.03 – AFFIDAVIT OF COMPLIANCE

The Contractor shall provide an Affidavit of Compliance that fire hydrants furnished comply with all provisions of these specifications.

516.02.04 – TYPE OF SHUT-OFF

Type of shut-off shall be of the compression type with the flow.

516.02.05 – DELIVERY CLASSIFICATION

All hydrants shall be equipped with two (2) hose nozzles and one (1) steamer nozzle. Leaded in nozzles shall not be acceptable.

516.02.06 – INLET CONNECTION

Unless otherwise specified, the inlet connection shall be a mechanical joint hub complete with all joint accessories. All mechanical joint gland bolts shall be high strength, low alloy, corrosion resistant material, such as Cor-Ten or equal, as specified in ASTM A-252. The inlet valve opening shall be five and one-quarter (5¼") inches net.

516.02.07 – OUTLET CONNECTIONS

The outlet connections shall be two (2) hose nozzles, two and one-half inches (2½") in nominal I.D. 8-274 I.P. thread and one (1) pumper nozzle four and one-half inches (4 1/2") in nominal I.D. with NST threads.

516.02.08 – RESTRAINED JOINTS

Restrained Joints shall be furnished when specified or called for on the plans.

516.02.09 – NOZZLE CAP GASKET

Gaskets shall be furnished on all nozzle caps. Gaskets shall be neoprene.

516.02.10 – DRAIN VALVE AND OUTLET

A positive operating drain valve or valves shall be provided.

516.02.11 – PAINT

Fire hydrants shall be painted with two (2) coats of red enamel paint manufactured by Pittsburgh Paint or approved equal. Each coat of paint shall have a minimum dry thickness of two (2) mils.

516.02.12 – SHAPE AND SIZE OF OPERATING AND CAP NUTS

The operating and cap nuts shall be 1-1/2" Pentagonal nuts.

516.02.13 – BREAKABLE TYPE

Breakable type (traffic models) shall be furnished. A breakable type hydrant is one that requires no excavation and shall break at the design point.

516.02.14 – STAND PIPE, FLANGES, AND EXTENSIONS

Breakable parts of standpipe shall be located approximately three inches (3") but not more than five inches (5") above the ground line. These parts shall be of the breakable flange type, breakable coupling or integral flange with sawed bolts. Breakable flanges screwed to the standpipe shall not be accepted. The flange on each end shall have at least eight (8) bolts, or other acceptable method to permit proper orientation of nozzles in forty-five degree (45°) increments and shall be designed so that a wrench can be used on nuts and bolts. Extension of hydrant shall be made by adding at the ground line flange a new coupling and stem section equal to the length of the extension. Stem extensions made by adding new section of stem to the threaded section of the stem at the top of the hydrant shall not be acceptable.

516.02.15 – STEM

Provisions shall be made in the design of the stem to disconnect the stem from the hydrant parts above the standpipe break point in the event of traffic accidents.

516.02.16 – COUPLINGS

If breakable or sleeve type couplings are used, they shall have sufficient torsional strength such that a torsional failure of the stem shall occur at some point other than coupling. Design of the coupling shall be such that when the coupling is broken, no parts shall come loose and fall into hydrant, and the break shall not occur through the pins or bolts holding the coupling to the stem.

516.02.17 – GROUND LINE GASKETS

Gaskets furnished for ground line flanges shall be full face, or flange shall be recessed.

516.02.18 – MAIN AND VALVE SEATS

Main valve seats on the hydrant shall be of such design that incorrect positioning is impossible and

that the threads shall be adequately guided into position. Arrangements shall also be made to hold the main valve gasket in place during assembly. The main valve seat shall be made of bronze and threaded into a bronze retainer ring or it may be threaded into a heavy bronze bushing in the hydrant base. All bronze parts in constant contact with the water shall be of type "A", "D", or "E" bronze in accordance with Table 1, AWWA C-212.

516.02.19 – NOZZLE CAP CHAINS

All fire hydrants shall be equipped with nozzle cap chains.

516.02.20 – FLANGES

All flanges shall have a minimum thickness of seven-eighths inch (7/8"). Bolt hole edge distance shall be sufficient to provide full support for the bolt heads and nuts.

516.02.21 – OPERATING STEMS

Operating stems shall be high grade bronze, wrought iron or steel. Stem nuts shall be bronze. Where passing through O-rings, iron or steel stems shall have a bronze, stainless steel, or other non-corrodible metal sleeve. Operating threads shall be sealed against contact with water regardless of open or closed position of the main valve. An internal lubricant chamber shall be provided as a part of the dry top construction. An external access for adding lubricant shall be provided.

516.02.26 – O-RINGS

Fire hydrants shall be equipped with O-rings in lieu of stem packing.

516.02.27 – CAP NUTS

The hydrants shall have a cap nut to seal the bottom end of the stem threads against contact with water.

516.04 – CONSTRUCTION METHODS

516.04.01 – BURY LENGTH

Unless otherwise specified, hydrants shall be furnished with a depth of bury to match the water main depth.

516.04.02 – TAPPING OF DRAIN OPENING

Tapping of drain opening shall not be required.

516.04.03 – DIRECTION OF OPENING

The direction of opening shall be to the left or Counter-Clockwise. An arrow and the word "OPEN" shall be cast in relief to be clearly visible on the top of the hydrant, to designate the direction of opening. A minimum number of turns to open shall be ten (10).

516.04.04 – INSTALLATION

The hydrant shall be inspected and cleaned prior to installation. It shall be placed on a concrete mat not less than four inches (4") thick and sixteen inches (16") square. The rear side of the hydrant, opposite the pipe, shall be blocked with concrete between the hydrant and a vertical face of undisturbed earth. A minimum of seven (7) cubic feet of crushed rock shall be placed around and below the hydrant to allow the hydrant to properly drain. The hydrant shall be firmly supported prior to backfill.

516.05 – TESTING

Hydrostatic tests outlined in AWWA C-502 shall be complied with.

516.06 – METHOD OF MEASUREMENT

Payment for "Fire Hydrant Assembly" shall be made at the unit price bid per each. Price bid for "Fire Hydrant Assembly" shall be full compensation for equipment, labor and materials for complete and acceptable installation of a fire hydrant per City of Chickasha standards, including fire hydrant, TEE, Gate valve, extension pipe, riser pipe and up to five (5) linear feet of 6" diameter ductile iron pipe connection between fire hydrant and water main.

516.07 – BASIS OF PAYMENT

The items measured as provided above will be paid for at the contract unit price bid:

FIRE HYDRANT ASSEMBLY	EA.
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Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 518 – THRUST BLOCKS

518.01 – DESCRIPTION

This section covers thrust blocks intended to be used to transmit unbalanced thrust forces into undisturbed soil.

518.02 – MATERIALS

High Early Strength Concrete shall be used for thrust blocks. Compressive strength of concrete shall be minimum 3500 psi at three (3) days.

518.04 – CONSTRUCTION METHODS

All construction shall be in accordance with the Standard Details for Thrust Blocks.

518.06 – METHOD OF MEASUREMENT

"Thrust Blocks" will not be measured separately.

518.07 – BASIS OF PAYMENT

All cost of installing thrust blocks shall be included in the price bid for water line.

SECTION 519 – BLOW-OFF CONNECTIONS

519.01 – DESCRIPTION

This section covers blow-off connections intended to be used to provide outlets for draining waterlines at dead ends.

519.04 – CONSTRUCTION METHODS

Blow-off connections shall be constructed of the size, detail and location shown on the plans. Blow-offs shall be provided with a shut-off valve. Blow off connections shall be constructed in accordance with standard details in contract.

519.06 – METHOD OF MEASUREMENT

Blow-off Connections will not be measured separately.

519.07 – BASIS OF PAYMENT

All costs of providing and installing blow-off connections shall be included in the price bid for waterline.

SECTION 520 – WATER VALVES

520.01 – DESCRIPTION

This section covers water valves of size and type specified or called for on the plans. Unless otherwise specified, all valves shall be gate valves. Valves specified shall be of the types shown in the following table:

Valve Type	Reference Standard
Gate (Resilient Seated)	AWWA C-509, C-550 and C111
Tapping	AWWA C-509, C-550 and C111
Check	AWWA C-508

520.02 – MATERIALS

The Contractor shall submit the following for approval prior to installation:

- A) Valve make and model
- B) Valve detail drawings
- C) Type "A" and "D" Certifications.

520.02.01 – GATE VALVES

- A) General - Gate valves shall conform to the requirements of AWWA C-509, C-550 and C-111 and shall be, bronze mounted, outside screw and yolk, non-rising stem, open counter-clockwise, close clockwise, mechanical joint both ends, resilient seated, "O-ring" for non-rising stem, and shall have 2" square operating nut.
- B) Pressure Rating - Valves produced conforming to AWWA C-509, C-550, and C-111 shall have a design working pressure of two hundred pounds per square inch (200 psi).
- C) Acceptable Manufacturers – Gate valves shall be Mueller or approved equal.

520.02.02 – TAPPING VALVES

- A) General - Valves to be used with tapping sleeves shall have connecting flanges (Standard Class 125) with centering lip on the valve flange to fit recess or counterbore on the outlet tapping sleeve flange. The outlet end of the valve shall have a combination mechanical joint end and tapping machine flange.
- B) Tapping valves shall conform to AWWA C-509 and C-550, except as modified for passage and clearance of tapping machine cutters. The opening through the valve shall be at least one-quarter inch ($\frac{1}{4}$ ") larger than nominal valve diameter. The outlet end of the valve shall have the desired joint connection for the intended pipe. Tapping Valves shall be Mueller Tapping Valve, or approved equivalent.

Tapping valves shall allow full size cutters to be used. Seating of the disc gate shall not require any sliding or wedging to achieve a zero leakage. A maximum of three (3) internal moving parts shall be required for operation of the valve. The stem collar shall be protected from outside grit, sand, etc., by dual O-rings above stem collar. There shall be an O-ring below stem collar sealing off lubrication chamber from line fluid. Pressure energized O-rings may be used in place of flat gaskets on flanged joints in valve body/bonnet.

All interior and exterior ferrous surfaces shall be protected against corrosion by factory-coated fusion-bonded epoxy coating. Coating shall be applied prior to assembly to insure coverage of all exposed areas, including bolt holes.

c) Acceptable Manufacturers - Tapping valves shall be Mueller or an approved equal:

520.02.04 – CHECK VALVES

A) General - Check valves shall conform to the requirements of AWWA C-508 Standard for Swing-Check Valves for Waterworks Service, two (2") inches through twenty-four (24") inches NPS. Check Valves shall be Mueller A2600-06BB Gravity operated Swing Check Valve or approved equal.

B) Pressure Ratings – Check valves conforming to AWWA C-550 shall have a working pressure rating of one hundred seventy-five pounds per square inch (175 psi).

C) Acceptable Manufacturers - Check valves shall be Mueller or approved equal.

D) Pressure Rating- Tapping valves manufactured conforming to AWWA C-509 and C-550 shall have 200 psi working pressure rating

520.04 – CONSTRUCTION METHODS

Gate valves shall be set with the stems plumb.

Check valves shall be set horizontally.

Tapping valves shall be installed in accordance with the recommendations of the pipe manufacturer being tapped.

Other types of valves shall be set in position shown on the plans or as directed by the Engineer.

At the site of the work and just prior to placing the valve in the trench, the valve shall be fully opened and closed and a record of the number of turns required for full operation shall be furnished to the Engineer. The inside of the valve shall be thoroughly cleaned before installation.

The valve shall be set on a firm base. Valves in PVC pipelines shall be supported by concrete independently of the pipe. The valve and the valve box shall be firmly supported and centered prior to backfill. Installation of valves shall also comply with the appropriate standard detail.

520.06 – METHOD OF MEASUREMENT

Payment for valves, valve boxes and valve vaults shall be made at the unit price bid per each for each type and size of valve. The price established shall be full compensation for all material including valve, valve boxes, valve vaults, installation, labor, tools, equipment and incidentals necessary to complete this item of work.

520.07 – BASIS OF PAYMENT

Unless otherwise called out on plans, the item measured as provided above will be paid for at the contract unit price bid:

(SIZE) (GATE) VALVE WITH BOX EA.
(SIZE) TAPPING VALVE AND SLEEVE EA.
(SIZE) CHECK VALVE AND VAULT EA.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and

incidentals, and for performing the work in accordance with these specifications.

SECTION 521 – VALVE BOXES

521.01 – DESCRIPTION

This section covers valve boxes intended to provide means to operate the valve.

521.02 – MATERIALS

- A) Valve Boxes - All valve boxes shall be Chickasha Standard three (3) piece cast iron of the extension type suitable for a depth of cover over the pipeline as required by the backfill requirements at each valve. Each valve box shall be provided with a suitable cast iron base and cover. All parts of valve boxes, bases, and covers shall be coated by dipping in hot bituminous base material. Covers shall have cast thereon an appropriate name designating the service for which the valve is to be used.

521.07 – BASIS OF PAYMENT

Payment for valve boxes shall be paid for as per Section 520.07.

SECTION 522 – HYDROSTATIC PRESSURE TESTING

522. 01 – DESCRIPTION

This section covers hydrostatic pressure testing of installed water mains in accordance with the requirements specified herein.

All pipelines shall be tested by means of hydrostatic pressure of not less than 150 pounds per square inch. If test plugs are used, they shall be furnished and installed by the Contractor at his own expense, together with all necessary anchors, braces and other devices necessary to withstand the hydrostatic pressure on such plug or plugs without placing any hydraulic thrust on the pipe line or any part thereof. The Contractor shall be solely responsible for any and all damage to the pipeline and public and private property, which might be caused by the failure of such test plugs or supports therefore. The allowable leakage shall not exceed 10 gallons per inch diameter per mile of pipe per 24 hours at 150 psi testing pressure.

After the section of line to be tested has been filled with water, the specified test pressure shall be applied by means of a force pump of such design and capacity that such pressure can be applied and maintained for the duration of the test period, which shall be not less than two (2) hours.

All water supplied to the line, after the initial filling thereof shall be metered by means of a tested water meter approved by the Engineer.

If any section of pipeline including specials, fitting and appurtenances are discovered to be damaged after the hydrostatic test, they shall be repaired or replaced with sound material and the test shall be repeated to the satisfaction of the Engineer. If any test of pipe installed indicates leakage greater than the allowable leakage, the contractor shall, at his own expense, locate and repair the source of leak in the pipeline until the leakage is within the specified allowance. All visible leaks are to be repaired regardless of the amount of leakage.

All pipelines shall meet the requirements of this section before any service taps are made, unless otherwise approved by the Engineer.

522.06 – METHOD OF MEASUREMENT

All costs for Hydrostatic Pressure Testing shall be included in the price bid for water line.

SECTION 523 – DISINFECTION

523.01 – DESCRIPTION

This section covers disinfection of water mains.

523.04 – CONSTRUCTION METHODS

523.04.01 – GENERAL

- A) Water Mains -All new water mains shall be disinfected before they are placed in service. All water mains taken out of service for inspecting, repairing, or other activity that might lead to contamination of water shall be disinfected before they are returned to service. All work shall comply with ODEQ regulations AWWA C-651 Standard for Disinfecting Water Mains and as described herein.
- B) Continuous-feed method disinfection per AWWA 651, Sec. 4.4.3 shall be used only. Contractor shall be responsible for collecting all water drained from the existing water main and from the new water main and disposing of it in accordance with all appropriate State and Federal regulations.
- D) All water mains shall meet the requirements of this section before any service taps are made.
- E) The City Engineer may require the water line be disinfected and tested for acceptance in sections less than 1,000 long.

523.04.02 – FLUSHING

Prior to chlorination, the line shall be completely flushed through all available hydrants and blow-offs with potable water at a velocity sufficient to adequately clean the pipe, hydrants and blow-offs. Valves shall be operated through their extreme open and closed positions during disinfection. During operations to collect samples for bacteriological testing, the Contractor shall completely flush the main through all available hydrants and blow-offs with potable water at a velocity sufficient to adequately clean the pipe, hydrants and blow-offs.

All water necessary for flushing shall be provided by the City.

523.04.03 – DISINFECTION

The disinfection of the pipeline and the bacteriologic and chemical tests shall be provided by the Contractor. The Contractor shall furnish the necessary equipment and materials for disinfection and testing. The Contractor shall furnish labor to make the necessary connections and shall provide any temporary drainage measures for disposal of the flushed water. Contractor shall obtain safe bacteriological samples on two consecutive days before placing the waterline into service.

All water mains shall meet the requirements of this section before any service taps are made.

523.06 – METHOD OF MEASUREMENT

Unless provide for otherwise, all costs of Disinfection shall be included in the price bid for water line. Contractor shall provide all material including disinfectants, flushing, de-chlorination, disinfection, hydrostatic pressure testing, labor, tools, equipment and incidentals necessary to complete this item of work.

SECTION 524 – DUCTILE IRON PIPE (DIP)

524.01 – DESCRIPTION

This section covers ductile iron pipe and fittings, for pressure applications, intended to be used for conveyance of potable water, in sizes six inches (6") through twelve inches (12").

524.02 – MATERIALS

524.02.01 – GENERAL

All ductile iron pipe and fittings and installation of same shall conform to the requirements of the following standards listed below or as modified herein.

- A) ANSI/AWWA C-150/A 21.50, Thickness design of Ductile Iron Pipe
- B) ANSI/AWWA C-151/A 21.51, Ductile Iron Pipe, Centrifugally Cast
- C) ANSI/AWWA C-111/A 21.11, Rubber Gasket Joints for Ductile Iron and Gray Iron Pressure Pipe and Fittings.
- D) ANSI/AWWA C-104/A 21.4, Cement Mortar Lining for Ductile Iron Pipe for Water.
- E) ANSI/AWWA C-600, Installation of Ductile Iron Water Mains and Their Appurtenances.
- F) ANSI/AWWA C-115/A 21.15, Flanged Ductile Iron Pipe with Threaded Flanges.
- G) ANSI/AWWA C-116/A 21.16, Protective Fusion-Bonded Epoxy Coatings for Interior and Exterior surface of Ductile Iron and Gray Iron Fitting
- H) ANSI/AWWA C-153/A 21.53, Ductile Iron Compact Fittings
- I) NSF/ANSI 61, Drinking Water System Components –Health Effects

524.02.02 – SUBMITTALS

The Contractor shall submit the following and shall receive approval of same from the Engineer prior to incorporating any materials into the work.

Review and approval of the Contractor submittals, by the Engineer, shall not be construed in any way as relieving the Contractor and the manufacturers of their responsibilities for manufacturing ductile iron pipe and fittings as described herein.

- A) General - Detail drawings of pipes, specials, fittings, and joints.
- B) Certification - Type "A" and "D" certification for pipe, specials, fittings, gaskets, and lining material pursuant to, but not limited to, applicable standards in Section 524. The affidavits of compliance and test reports shall be certified by a registered professional engineer.
- C) Copies - The Contractor shall provide three (3) copies of all submittals.

524.02.03 – DESIGN BASIS

- A) General - All ductile iron pipes are designed in accordance with AWWA C-150/ANSI 21.50. The designs are based on prism load of ordinary clay backfill with a unit weight of one hundred twenty pound per cubic feet (120 pcf), maximum horizontal ring deflection of three (3%) percent, design factor safety of two (2), and for AASHTO HS-20 truck highway (HWY) or Cooper axle E-80 railroad (RR) live loading conditions.

- B) Depth of Cover - The minimum design depth of cover shall be five (5') feet. Pipe to be installed inside a casing shall be designed for full cover including live load (a single H-20 or Railroad E-80) neglecting the casing.
- C) Deflection – The allowable deflection for the specified mortar lining system is three (3%) percent. Deflection calculation is in accordance with AWWA C-150.
- D) Bending and Hoop Stresses -The bending and hoop stress requirements are met in accordance with AWWA C-150.

E) Buckling

1. Buried Installations - The controlling load for buried pipes is determined from the greater of hydrostatic and earth loads plus vacuum or hydrostatic and earth load plus live load with a factor of safety of two (2.0) as determined in accordance with Section 6.3 of AWWA M-11. It is assumed that the groundwater level is equal to natural ground surface and the ground is fully saturated.
2. Unburied Installations - For unburied pipes, the internal collapsing vacuum pressure is used in determining the minimum wall thickness(es) in accordance with equation 4-2 of AWWA M11 for a factor of safety of 1.5 against buckling. The Poisson's ratio is 0.28 and modulus of elasticity is 52×10^6 psi.
3. Vacuum Pressure - For both buried and unburied installations, the internal collapsing vacuum pressure is taken as 14.7 psi.

524.02.04 – MINIMUM PIPE DESIGN FOR DUCTILE IRON PIPE

Unless otherwise specified, ductile iron pipe and fittings for buried installations, including boring, shall have the following minimum nominal thickness(es), shown below.

For boring, installations, the minimum pipe design shall be equal to or greater than the minimum pipe design on either side of the installation.

Minimum Pipe Design for Ductile Iron Pipe		
Pipe Size (inches)	Nominal Push on Joint Wall Thickness Class 50 (Inches)	Flange Joints Class 53 (inches)
6"	0.25"	0.34"
8"	0.27"	0.36"
10"	0.29"	0.38"
12"	0.31"	0.40"

524.02.06 – PIPE JOINTS AND FITTINGS

- A) General - All specials and fittings may be used with push-on, mechanical, or flanged joints conforming to the requirements of AWWA/ANSI C-110/A 21.16. Fittings with push-on joints shall be installed with thrust blocks. Mechanical joints shall be adequately protected against unbalanced forces. All joints shall have the same pressure rating as the pipe of which they are a part and shall meet the requirements of AWWA/ANSI C-111/A 21.11. All pipe shall be marked in accordance with Sec. 4.7 of AWWA C-151.
- B) Push-on Joints - Push-on joints are a rubber gasket compression type joint meeting the requirements of AWWA C-111. Push-on joints shall have a deflection capability of three degrees

(3°).

C) Mechanical Joints - A mechanical joint is a bolted joint of the stuffing-box type. Each joint shall consist of a bell that is cast integrally with the pipe or fitting and provided with an exterior flange having bolt holes or slots, and a socket with annular recesses for the sealing gasket and the plain end of the pipe or fitting, a pipe or fitting plain end, a sealing gasket, a follower gland with bolt holes, and T-head and hexagonal nuts.

D) Flanged Joints - The flanged joints for ductile iron pipe shall be in accordance with AWWA C-111. Bolts, gaskets, and installation shall meet the requirements of AWWA C-115, Appendix A. The flanged joints for specials and fittings shall meet the requirements of AWWA C-110.

The flanges shall be rated for two hundred fifty (250 psi) pounds per square inch working pressure with bolt-hole drillings as for Class 125 flanges for service at temperatures ranging from twenty degrees (20°) to one hundred fifty degrees F (150°F) are pressure temperature rated for one hundred fifty (150) to two hundred pounds per square inch (200 psi) as shown in ANSI B 16.1. All flanged joints shall be made with single piece, red rubber gaskets one-eighth (1/8") inch thick. Gaskets shall be full face for exposed installations and ring type or full faced for buried service meeting AWWA C-110, Appendix A requirements. As directed by the Engineer or shown on plans, flange joints meeting the requirements of ASME/ANSI B-16.1 may be used.

E) Mechanical Joint Restraints

Mechanical Joint Restraints may be used only at locations approved by the Engineer. Typical examples where the Engineer may permit use of Mechanical Joint Restraints are: creek crossings, locations where excavation depth exceeds five feet and bends greater than 22 1/2° are required to match new pipe to existing pipes and locations where required connections or other laying conditions do not permit sufficient time to complete thrust blocks prior to returning water mains to service.

Mechanical Joint Restraints will not be used in lieu of thrust blocks.

Mechanical Joint Restraints, if permitted, shall be as follows or approved equal. Mechanical Joint Restraints such as Ford Meter Box Company Uni-Flange Retainer Glands, EBAA Iron Sales Mega-Lug Series 1100 and other models that require set screws or bolts in direct contact with the pipe will not be permitted for use on PVC pipe.

Restrained Joints		
Company	Size	Type
American Cast Iron Pipe Co.	6" to 12"	Flex-Ring
EBAA Iron Sales Co.	6" to 12"	Mega-Lug Series 1100
Ford Meter Box Co.	6" to 12"	Uni-Flange
US Pipe and Foundry Co.	6" to 12"	TR-Flex
N/A	6" to 12"	¾" all thread with Duc Lug

F) Sleeve Couplings - All sleeve couplings, except as noted on the plans or otherwise specified, shall be restrained with tie rods and shall be designed for the pipe design pressure and maximum allowable stress not to exceed sixty-five percent (65%) of minimum yield strength of steel used. Sleeve couplings shall be:

Dresser Style 38
Rockwell Steel Coupling 511
Smith Blair
Approved Equal

Sleeve Couplings shall be compact fittings meeting the requirements of AWWA C-153 and AWWA C-110

524.02.07 – COATING AND LINING

- A) Exterior Coating - The exterior of ductile-iron pipe, specials and fittings shall be coated with the asphalt coating in accordance with AWWA C-151, Section 516. The coating shall have a minimum thickness of one (1) mil. The finished coating shall be smooth, continuous and strongly adherent to the pipe. Any damage to the outside coating during shipping, storage, handling and installation shall be field repaired with a fresh coating in accordance with the manufacturer's recommendations.
- B) Interior Lining - Unless otherwise called for on the plans or specified, the interior of ductile-iron pipe, specials and fittings shall be cement mortar lined in the shop, with centrifugally spun lining in accordance with AWWA C-104. The Portland cement for cement mortar lining shall be in accordance with the requirements of ASTM C-150, Type I cement. Field repair of lining shall be made in accordance with AWWA C-104, Section 4-7.2.

524.02.08 – CORROSION PROTECTION

When specified or called for on the plans, all ductile-iron pipe, specials, fittings and other appurtenances shall be polyethylene encased in accordance with AWWA C-105/ANSI A 21.5. Exposure to sunlight of polyethylene wrapped pipe shall be kept to a minimum to prevent deterioration of polyethylene. Damage to polyethylene wrapping shall be prevented during backfilling operations. The minimum thickness for polyethylene is eight (8) mils.

524.05 – SOURCE QUALITY CONTROL TESTING

- A) Ductile Iron Pipe shall be tested at the manufacturer's plant by the manufacturer in accordance with Sec. 5.2 of AWWA C-151.
- B) Ductile Iron fittings shall be tested at the manufacturer's plant by the manufacturer in accordance with Sec. 5.2 of AWWA C-153.
- C) Joint Testing – Joints shall be tested and meet the performance requirements established in AWWA C-111/ANSI A 21.11, Section 11-9 and as modified herein. The working pressure rating of the joint shall be established by subjecting the joints to three (3%) percent of the pipe produced to hydrostatic pressure of twice the rated working pressure, but in no event less than twice the minimum working pressure rating shown below. At least two (2) joints shall be hydrostatically tested at a deflected angle of the degrees (3°) at the above specified pressure rating.

The minimum working pressure ratings for joints shall be 350 psi.

- D) Contractor shall provide certifications stating the pipe and fittings meet these requirements.
- E) Welding - All welding shall be done by qualified welders. The ductile-iron pipe manufacturer shall be responsible for quality control and testing of all welding done in the plant during fabrication of special fittings.

Inspection - The City retains the right to inspect the pipe, specials and fittings, all work performed and materials furnished, at the manufacturer's plant and at the project site and to independently monitor the fabrication of the pipe, specials and fittings. Such inspection shall not relieve the Contractor or the manufacturer of their responsibilities to furnish material and perform work in accordance with these

specifications.

524.06 – METHOD OF MEASUREMENT

Payment shall be made pursuant to Section 505 for water line.

524.07 – BASIS OF PAYMENT

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 525 – POLYVINYL CHLORIDE (PVC) PIPE

525.01 – DESCRIPTION

This section covers polyvinyl chloride (PVC) pipe for pressure applications, intended to be used for conveyance of potable water, in sizes six inch (6") through twelve inch (12") diameter.

525.02 – MATERIALS

PVC pipe shall be produced by extrusion from Class 12454-A or 12454-B PVC compound providing a hydrostatic design basis (HDB) of four thousand pounds per square inch (4,000 psi).

525.02.01 – GENERAL

All PVC pipe and installation of same shall conform to the requirements of the following standards listed below or as modified herein.

AWWA C605 – Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for water

AWWA C-900-PVC pressure pipe, 4 inch through 12 inch for water distribution.

AWWA M-23 – PVC pipe Design and Installation.

ASTM D-2774-Recommended Practice for Underground Installation of Thermoplastic Pressure Piping.

ASTM D-2827-Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials.

ASTM D-3139-Specifications for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals.

ASTM F-477-Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

NSF 14-Plastic Piping System Components and Related Materials. PPI TR3-Policies and Procedures for Developing Recommended Hydrostatic Design Stresses for Thermoplastic Pipe Materials.

NSF/ANSI 61 Drinking Water System Components – Health Effects.

525.02.02 – SUBMITTALS

The Contractor shall submit the following and shall receive approval of same from the Engineer prior to incorporating any materials into the work.

Review and approval of the Contractor submittals, by the Engineer, shall not be construed in any way as relieving the Contractor and the manufacturers of their responsibilities for manufacturing PVC pipe and fittings as described herein.

A) General -Detail drawings of pipes

B) Certification - Type "A" and "D" certification for pipe, specials, fittings, gaskets, and lining material. The affidavits of compliance and test reports shall be certified by a registered professional engineer.

C) Guides - The manufacturer's pipe installation guide, standard pipe material repair guide, and

written quality control manual shall be provided by all suppliers who have not previously provided same to the City of Chickasha, or if same has been revised since last provided to the City of Chickasha.

D) Mill Test Reports - Mill test reports of materials used in the fabrication of pipe.

E) Copies - The Contractor shall provide three (3) copies of all submittals.

525.02.03 – DESIGN BASIS

A) General - The PVC pipe is designed in accordance with AWWA M23, or as modified herein, and shall conform to DR 14.

B) Depth of Cover - The minimum design depth of cover shall be five feet (5'). The pipe to be installed inside a casing shall be designed for full cover including live load (a single H-20 or Railroad E-80) neglecting the casing.

C) Allowable Stresses – For pipes six (6") inches through twelve 12" inches, the allowable design stress is sixteen hundred pounds per square inch (1,600 psi), as established per AWWA C-900.

D) Dimension Ratio (DR) - Pipe DR shall be DR 14.

E) Deflection - The allowable deflection is five (5%) percent of the nominal diameter. Deflections are determined based on the following:

a. Deflection lag factor = 1.0

b. Bedding Constant = 0.10

c. Modulus of soil reaction, $E' = 1000$ psi

d. Earth load considered is the prism load of ordinary clay backfill with a unit weight of one hundred and twenty (120 pcf) pounds per cubic foot, compacted to 90% density (ASTM D-698).

e. A highway live loading of AASHTO HS-20 truck, or railroad live loading of Cooper Axle E-80.

525.02.04 – DIMENSION RATIO (DR)

PVC pipe for buried installations including boring, shall have dimension ratio (DR 14).

For boring installations, the minimum dimension ratio shall be equal to or greater than the minimum dimension ratio on either side of the installation.

525.02.05 – DIMENSIONS

All PVC pipe shall have Cast-Iron-Pipe equivalent (C.I.) outside diameter (O.D.) dimensions.

525.02.06 – PIPE JOINTS AND FITTINGS

A) Fittings for use with PVC pipe shall conform to provisions of AWWA C110/A21.10 and shall be short-bodied style. Fittings shall be mechanical joint type. Pressure rating shall conform to the requirements of Section 524.02.06 for ductile iron pipes and fittings. The outside coating for fittings shall conform to the requirements of Section 524.02.07.

B) Mechanical Joint Restraints -

Mechanical Joint Restraints may be used only at locations approved by the Engineer. Typical examples where the Engineer may permit use of Mechanical Joint Restraints are: creek crossings, locations where excavation depth exceeds five feet and bends greater than $22\frac{1}{2}^\circ$ are required to match new pipe to existing pipes and locations where required connections or other laying conditions do not permit sufficient time to complete thrust blocks prior to returning water mains to service.

Mechanical Joint Restraints will not be used in lieu of thrust blocks.

Mechanical Joint Restraints, if permitted, shall be as follows or approved equal. Mechanical Joint Restraints such as Ford Meter Box Company Uni-Flange Retainer Glands, EBAA Iron Sales Mega-Lug Series 1100 and other models that require set screws or bolts in direct contact with the pipe will not be permitted for use on PVC pipe.

Restrained Joints		
Company	Size	Type
American Cast Iron Pipe Co.	6" to 12"	Flex-Ring
Ford Meter Box Co.	6" to 12"	Uni-Flange
US Pipe and Foundry Co.	6" to 12"	TR-Flex
N/A	6" to 12"	¾" all thread with Duc Lug

525.03 – SOURCE QUALITY CONTROL TESTING

- A) Polyvinyl chloride Pipe shall be tested at the manufacturer's plant by the manufacturer in accordance with Sec. 5.1 of AWWA C-900.
- B) Ductile Iron Fittings shall be tested in accordance with Section 524.05 B)
- C) Contactor shall provide certifications stating the pipe meets the requirements of these specifications.

525.04 – CONSTRUCTION METHODS

The owner retains the right to inspect the pipe, specials and fittings, all work performed and materials furnished at the manufacturer's plant and at the project site and to independently monitor the fabrication of the pipe, specials and fittings. Such inspection shall not relieve the Contractor or the manufacturer of their responsibilities to furnish material and perform the work in accordance with these specifications.

During installation of PVC pipe, the contractor shall place a locator wire along with the pipe in accordance with the standard drawings. The wire is to be placed continuously throughout the extent of the pipeline. Wire shall be copper 14 AWG single conductor type THHN or THWN. All field splices shall be in waterproof couplings for underground installations. Wire shall extend up into access points as directed by the Engineer. Cost of locator wire shall be included with the price bid for water line.

525.05 – DISINFECTION AND HYDROSTATIC PRESSURE TESTING

Disinfection and Hydrostatic Pressure Testing shall be accomplished in accordance with Section 522 and Section 523.

525.07 – BASIS OF PAYMENT

Payment shall be made pursuant to Section 505.

SECTION 526 – TRACE WIRE INSTALLATION

526.01 - GENERAL

This Section governs trace wire installation on PVC water mains. Contractor shall provide and install a trace wire and trace wire access boxes. A 14 gauge or larger trace wire shall be installed on all PVC water mains.

Typical hydrant branches, that are perpendicular to the water main, do not require trace wire. Trace wire shall be installed on non-typical hydrant branches (i.e. dog-legged hydrant branch).

Take care to protect the wire insulation and repair it with electrical tape if the insulation is damaged.

Refer to the standard drawings for additional details.

526.02 - APPROVED TRACE WIRE MATERIAL

A.) Trace Wire

1. Trace wire for direct bury installations shall be #14 AWG Copper Clad Steel wire as manufactured by Copperhead Industries, LLC #14 AWG solid Copper wire with 30 mil high molecular weight polyethylene insulation as manufactured by Agave Wire LTD, or approved equal.

2. Direct Bury Splice Kits DBR/Y-6 as manufactured by 3M or approved equal.

A.) Trace Wire Access Box shall be Snake Pit Roadway Box as manufactured by Copperhead Industries, LLC or approved equal.

526.03 - TRACE WIRE CONNECTIONS

Joining Ends of Trace Wire: Connections into existing trace wire, connections between one spool of trace wire to another, and other similar connections shall be made using a direct bury splice kit.

Joining Trace Wire - Branch to Main: Connections of trace wire at tees, crosses, and at locations where the trace wire will be brought to the surface shall be conducted using a direct bury splice kit.

526.04 - INSTALLATION

Trace wire shall be installed in a continuous fashion. Install trace wire in the bottom of the trench along the centerline of the trench prior to placing bedding.

Bring trace wire to surface at every valve box, and dead end and as called out in the drawings. Trace wire shall be brought to the surface at least every five hundred (500) feet. Take care not to damage the wire coating. Repair damaged coating with electrical tape.

Trace wire shall be brought to the surface in a separate access box. The trace wire shall be brought to the surface according to standard drawings.

Testing – all trace wire shall be tested for continuity by the Contractor in the presence of the inspector prior to acceptance.

526.06 – METHOD OF MEASUREMENT

Trace wire and Trace wire access boxes will not be measured separately.

526.07 – BASIS OF PAYMENT

All costs of trace wire and access boxes shall be included in the price bid for waterline.

SECTION 527 – BORING

527.01 – DESCRIPTION

This section covers furnishing of pipe by boring and casing as shown on the plans or specified.

Boring and casing consists of the initial installation of a steel casing pipe, installed mechanically, and with a suitable assembly designed to produce a smooth, straight shaft at the established line and grade. The pipe is then installed inside the casing pipe pursuant to the Standard Detail for Boring.

527.02 – MATERIALS

For casing pipe materials and submittal requirements, refer to section 528.

527.04 - CONSTRUCTION METHODS

A) General – Where pipe is required to be installed under railroad embankments, highways, streets, or other facilities by boring and casing, construction shall be made in such a manner that will not interfere with the operation of the railroad, street, highway, or other facility, and shall not weaken or damage any embankment or structure. During construction operations, barricades and lights to safeguard traffic and pedestrians shall be furnished and maintained, until such time as the backfill has been completed after which the barricades and lights shall be removed from the site.

The Contractor shall take proper precautions to avoid excavating earth or rock or shattering rock beyond the limits of excavation shown on the plans. All damages caused by the construction to either surface or subsurface structures, shall be repaired or replaced by the Contractor at his own cost and expense.

Suitable pits, shafts, or trenches shall be excavated for the purpose of conducting the boring and casing operations and for placing end joints of the pipe. Wherever end trenches are cut in the sides of the embankment or beyond it, such work shall be sheeted securely and braced in a manner satisfactory to the Engineer to prevent earth caving.

The removal of any obstruction that may be found to conflict with the placing of the pipe shall not be measured for payment nor paid for as a separate contract pay item. The removal of any such obstruction shall be included in the cost of other items.

Once the casing installation has commenced it shall be continued uninterrupted around the clock until the pipe has been installed between the specified limits.

Any pipe damaged during operations shall be removed and replaced by the contractor at his expense.

The pits or trenches excavated to facilitate the operations shall be backfilled immediately after the pipe has been installed.

B) Boring Requirements - Work shall comply with the Standard Detail for Boring. The excavation and backfill for pits shall be as outlined in Section 500.

Boring without the concurrent installation of a casing pipe shall not be permitted, unless shown on plans or directed by the Engineer. All joints in casing pipe shall be welded. Casing pipe shall extend through the entire fill and be installed in a manner that shall not disrupt traffic nor damage roadway grade and surface. The introduction of water into the excavation shall be prohibited.

The size of the bored hole shall not exceed the outside diameter of the pipe bell or casing pipe more than one inch (1"). The use of water or other fluids in connection with the boring operation shall only be permitted when approved by the Engineer.

Nothing contained herein shall be construed as relieving the Contractor from his responsibility for the safety of the work and for all damage to persons and property.

C) Skid Supports

Plastic or rubber skid supports, shall be used and fastened securely to the carrier pipe with steel strapping, cables or clamps. Use of petroleum products shall not be allowed as a lubricant to ease installation. Skid support spacing and position shall be in accordance with the Standard Detail for Boring.

D) Casing Pipe End Seals - Both ends of the casing pipe shall be sealed with a pull-on type EPDM, neoprene or comparable material flexible end seal manufactured for this purpose. End Seals shall be secured with stainless steel straps or clamps.

E) Filling Annular Space - The annular space between the waterline pipe and the steel casing pipe shall not be filled.

527.06 – METHOD OF MEASUREMENT

Bored and cased pipe shall be measured by the lineal foot of pipe bored and cased. Payment shall be made at the unit price bid per lineal foot for each size. The price established shall be full compensation for furnishing and placing all materials including steel casing pipe, carrier pipe, grout or concrete, excavation and backfill, sheeting, shoring, bracing and drainage, disposal of all surplus materials, labor, tools, equipment, and incidentals necessary to complete this item of work

527.07 – BASIS OF PAYMENT

The items measured as provided above will be paid for at the contract unit price bid:

(PIPE SIZE) Bored/Cased..... L.F.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 528 – STEEL CASING PIPE

528.01 - DESCRIPTION

This section covers steel pipe intended to be used as a casing pipe for boring installations.

528.02 – MATERIALS

528.02.01 – SUBMITTALS

The Contractor shall submit the following, provided that all applicable requirements are met, and that visual inspection at destination shows the workmanship and condition of material to be satisfactory.

- A) Type "A" certification for pipe
- B) Shop drawings of pipe, joints and seams
- C) Documentation of manufacturer's on-going quality control program.

528.02.02 – GENERAL

- A) General -Steel pipe shall conform to ASTM A-139, Standard Specification for Electric-Fusion (ARC)-Welded Steel Pipe (NPS 4 and Over). The steel material shall be new, smooth wall, carbon steel, Grade B, with minimum sixty thousand pounds per square inch (60,000 psi)

tensile strength, and minimum thirty-five thousand pounds per square inch (35,000 psi) yield strength.

The Pipe shall be straight seam pipe, shall be one hundred (100%) percent welded, and the weld's height over the outside wall surface shall be equal to or less than three-sixteenths (3/16") inch. All steel pipe shall be square cut and shall have a roundness such that the difference between the major and minor outside diameters shall not exceed one percent (1%) of the specified nominal outside diameter or one-fourth inch (¼"), whichever is less. The outside circumference must be within plus or minus (±) one percent (1%) of the nominal circumference or within plus or minus (±) one-half inch (½"), which is less. The pipe shall have a maximum allowable straightness deviation in any ten foot (10') length of one-eighth inch (1/8"). Steel pipe joints shall be continuously welded with an approved butt weld. The welds shall attain the full strength of the pipe and shall result in a fully watertight section. The welded joints shall conform to the requirements of AWWA C-206.

B) Boring Installation

1. Casing Pipe Size – Steel casing pipe shall have the follow minimum inside diameters:

Pipe Nominal Size (inches)	Casing Pipe Inside Diameter (inches)
6	10
8	14
10	16
12	20

2. Casing Pipe Thickness - Steel casing pipe wall thickness shall be 3/8" minimum.

528.07 – BASIS OF PAYMENT

Payment shall be made pursuant to the appropriate Section of 505.

SECTION 529 – HIGH DENSITY POLYETHYLENE (HDPE) PIPE

529.01 – DESCRIPTION

This specification lists the requirements for the material (pipe and fittings) and joining methods for high density polyethylene pipe (HDPE) piping systems for potable water supply, in sizes six inches (6") through twelve inches (12").

529.02 – MATERIALS

529.02.01 – GENERAL

Unless otherwise specified, references to documents shall mean the latest published edition of the referenced document in effect at the bid date of the project.

- ANSI/AWWA C906 Polyethylene (PE) Pressure Pipe and Fittings, 4 In. through 65 In., for Waterworks
- AWWA M55 Manual of Water Supply Practices, PE Pipe–Design and Installation
- PPI Handbook of Polyethylene Pipe
- PPI Material Handling Guide for HDPE Pipe and Fittings
- PPI TR-38 Bolt Torque for Polyethylene Flanged Joints
- PPI TN-42 Recommended Minimum Training Guidelines for PE Pipe Butt Fusion Joining Operators for Municipal and Industrial Projects
- ASTM F 714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside

Diameter

- ASTM F 1055 Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene (PEX) Pipe and
- ASTM F 1290 Standard Practice for Electrofusion Joining Polyolefin Pipe and Fittings
- ASTM F 2164 Standard Practice for Field Leak Testing of Polyethylene (PE) Pressure Piping Systems Using Hydrostatic Pressure
- ASTM F2206 Standard Specification for Fabricated Fittings of Butt-Fused Polyethylene (PE) Plastic Pipe, Fittings, Sheet Stock, Plate Stock, or Block Stock
- ASTM F 2620 Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
- ASTM D 2683 Standard Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
- ASTM D 2737 Standard Specification for Polyethylene (PE) Plastic Tubing
- ASTM F 2880 Standard Specification for Lap-Joint Type Flange Adapters for Polyethylene Pressure Pipe in Nominal Pipe Sizes 3/4 in. to 65 in.
- ASTM F 3124 Standard Practice for Data Recording the Procedure Used to Produce Heat Butt Fusion Joints
- ASTM D 3261 Standard Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
- ASTM D 3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- ASTM D 3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
- NSF/ANSI 61, Drinking Water System Components –Health Effects

529.02.02 – HIGH DENSITY POLYETHYLENE MATERIALS

A) Resin and Material Requirements

All material shall be manufactured from a PE 4710 resin listed in Plastic Pipe Institute (PPI) TR-4. The resin material shall meet the specifications of ASTM D 3350 with a minimum cell classification of 445474C. HDPE pipe and fittings shall contain no recycled compounds except that generated in the manufacturer's own plant from resin of the same specification from the same raw material. HDPE products shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects.

B) HDPE Pipe

1. Pipe shall be made of HDPE material with a minimum material designation code of PE4710 and with a minimum Cell Classification as noted above. The polyethylene compound shall be suitably protected against degradation by ultraviolet light by means of carbon black of not less than 2 percent. The manufacture of the HDPE resin shall certify the cell classification indicated.
2. Pipe sizes 3" and larger shall have a manufacturing standard of ASTM F 714. Pipe Dimension Ratio (DR) shall be as specified on plans. Pipe Outside Diameter shall be DIOD (ductile iron OD).
3. Pipe shall meet AWWA C906 (4" to 65"), and shall be listed as meeting NSF-61.
4. Pipe shall be manufactured by a manufacturer certified for such manufacture by the Plastic Pipes Institute.

C) HDPE Fittings

1. Butt Fusion Fittings- Fittings shall be made of HDPE material with a minimum material designation code of PE4710 and with a minimum Cell Classification as noted above. Fittings shall have a minimum long-term pressure rating equal to or greater than the pipe to which they are joined unless otherwise specified on the plans or accepted by owner/engineer. All fittings

shall meet the requirements of AWWA C906.

- a. Molded fittings shall comply with the requirements of ASTM D 3261.
 - b. Each fitting will be marked per ASTM F 2206.
 - c. Fusion pressure and temperature of fabricated fittings shall be recorded and such data shall be provided in the product submittal. Each fitting shall be stamped with unique joint number that corresponds to the joint report.
 - d. Socket fittings shall meet ASTM D 2683
2. Electrofusion Fittings - Fittings shall be made of HDPE material with a minimum material designation code of PE 4710 and with a minimum Cell Classification as noted in 2.01.A. Electrofusion Fittings shall have a manufacturing standard of ASTM F1055. Fittings shall have a minimum long-term pressure rating equal to or greater than the pipe to which they are joined unless otherwise specified on the plans.
 3. Bolted Connections – Flanged and Mechanical Joint Adapters can be made to ASTM D 3261 or if machined, must meet the requirements of ASTM F 2206. Flanges and MJ Adapters shall be fused onto the pipe and have a minimum long-term pressure rating equal to or greater than the pipe unless otherwise specified on the plans.

529.02.03 – SUBMITTALS

The Contractor shall submit the following and shall receive approval of same from the Engineer prior to incorporating any materials into the work. Review and approval of the Contractor submittals, by the Engineer, shall not be construed in any way as relieving the Contractor and the manufacturers of their responsibilities for manufacturing ductile iron pipe and fittings as described herein.

- A) General - Detail drawings of pipes, specials, fittings, and joints.
- B) Certification - Type "A" and "D" certification for pipe, specials, fittings, gaskets, and lining material pursuant to, but not limited to, applicable standards in Section 529.02.01. The affidavits of compliance and test reports shall be certified by a registered professional engineer.
- C) Copies - The Contractor shall provide three (3) copies of all submittals.

529.02.04 – DESIGN BASIS

- A) General - All HDPE pipes are to be designed in accordance with AWWA Manual M55.
- B) Depth of Cover - The minimum design depth of cover shall be five (5') feet. Pipe to be installed inside a casing shall be designed for full cover including live load (a single H-20 or Railroad E-80) neglecting the casing.

529.03 – SOURCE QUALITY CONTROL TESTING

- A) High Density Polyethylene Pipe shall be tested at the manufacturer's plant by the manufacturer in accordance with Section 5 of AWWA C-906.
- B) Contractor shall provide certifications stating the pipe and fittings meet these requirements.

Inspection - The Owner retains the right to inspect the pipe, specials and fittings, all work performed and materials furnished, at the manufacturer's plant and at the project site and to independently monitor the fabrication of the pipe, specials and fittings. Such inspection shall not relieve the Contractor or the manufacturer of their responsibilities to furnish material and perform work in

accordance with these specifications.

529.04 – TRANSPORTATION, HANDLING AND STORAGE

A) General - All HDPE pipe and fittings shall be cut, joined, and installed in accordance with the manufacturer's recommendations. Joining, laying, and pulling of polyethylene pipe shall be accomplished by personnel experienced in working with polyethylene pipe systems.

B) TRANSPORTATION, UNLOADING AND STORAGE

1. The manufacturer shall package product in a manner designed to deliver the pipe and fittings to the project neatly, intact and without physical damage. During transportation each pipe shall rest on suitable pads, strips skids, or blocks securely wedged or tied in place. The transportation carriers shall use appropriate methods and intermittent checks to insure the pipe is properly supported, stacked and restrained during transportation such that the pipe is not nicked, gouged, or physically damaged. The transportation carrier shall provide tarpaulins to cover any potable water pipe subject to exposure to diesel exhaust or smoke.
2. During loading, transportation, and unloading, every precaution should be taken to prevent damage to the pipe. Cuts or gouges that reduce the wall thickness by more than 10% is not acceptable. Locations with such damage shall be cut out and discarded at the expense of the contractor.
3. Handle the pipe in accordance with the PPI Handbook of Polyethylene Pipe. All pipe and accessories shall be loaded and unloaded by lifting with hoists or by skidding in order to avoid shock or damage. Under no circumstances shall materials be dropped. Pipe handled on skidways shall not be rolled or skidded against pipe on the ground. Slings, hooks or pipe tongs shall be padded and used in such a manner as to prevent damage to the exterior surface or interior of the pipe. All pipe and fittings shall be subjected to visual inspection at time of delivery and before they are lowered into the trench to be laid. Joints or fittings that do not conform to these specifications will be rejected and must be removed immediately by the Contractor.
4. The interior of the pipe as well as all sealing surfaces of mating components (i.e. flange faces) shall be kept free from dirt or foreign matter at all times.
5. Pipe shall not be stacked higher than the limits recommended by the manufacturer. The bottom tiers shall be kept off the ground on timbers, rails, or concrete. Pipe shall not be stored close to heat sources.
6. The open ends of all sections of joined and/or installed pipe (not in service) shall be plugged to prevent animals or foreign material from entering the pipe line or pipe section. The practice of stuffing cloth or paper in the open ends of the pipe will not be permitted. Waterproof nightcaps of approved design may be used but they shall be so constructed that they will prevent the entrance of any type of natural precipitation into the pipe and will be secured to the pipe in such a manner that the wind cannot blow them loose.
7. Where possible, the pipe shall be raised and supported at a suitable distance from the open end such that the open end will be below the level of the pipe at the point of support.

C) PIPE INSPECTION

All pipe and fittings shall be subjected to visual inspection at time of delivery and before they are installed or lowered into the trench to be laid. Defective, damaged, or unsound pipe will be rejected. Cuts, punctures, or gouges that penetrate or reduce the wall thickness by 10% or more are not acceptable. Locations with such damage shall be cut out and discarded at the expense of the contractor. Joints or fittings that do not conform to these specifications will be rejected and must be removed immediately by the Contractor.

D) HANDLING PIPE

1. The handling of the pipeline shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects. Sections of the pipes with cuts and gouges exceeding 10 percent of the pipe wall thickness or kinked sections shall be removed and the ends rejoined.
2. Refer to the PPI Material Handling Guide for HDPE Pipe and Fittings for recommendations, guidelines and instructions regarding the handling, lifting, loading, storing and installing polyethylene pipe and fittings.

529.05 – FUSING PIPE AND FITTINGS

E) FUSION JOINING REQUIREMENTS

1. All HDPE pipe shall be joined to itself by the heat fusion process which produces homogeneous, seal, leak tight joints. Tie-ins between sections of HDPE pipe shall be made by butt fusion whenever possible.
2. Butt Fusion: The pipe shall be joined by the butt fusion procedure outlined in ASTM F 2620 or PPI TR-33. All fusion joints shall be made in compliance with the pipe or fitting manufacturer's recommendations. Fusion joints shall be made by qualified fusion technicians per PPI TN-42. A record or certificate of training for the fusion operator must be provided that documents training to the fundamentals of ASTM F 2620. Considerations should be given to and provisions made for adverse weather conditions, such as temperatures below freezing, precipitation, or wind, which is accepted by the owner/engineer.

F) FUSION OPERATORS

1. The employer of the fusion machine operator is responsible for the fusion joint quality of the fusion weld made by that individual. The employer is responsible for documenting all qualification and training records of that individual.
2. All HDPE fusion equipment operators shall be qualified to the procedure used to perform pipe joining for the type(s) and size(s) of pipes to be used in the project. Fusion equipment operators shall have current, formal training on all fusion equipment employed on the project. Training received more than two years prior to operation with no evidence of activity within the past 6 months shall not be considered current.
3. For Projects with at least 5,000 feet or with pipe larger than 24 inches, operators or their supervisor must have a current McElroy Fusion Training Certificate for the equipment to be used on the project.

D) BUTT FUSION EQUIPMENT

1. For 6" and larger pipe sizes, the pipe butt fusion machine shall be a self-contained hydraulic fusion machine capable of butt fusing HDPE pipe. The carriage must be removable from the chassis for in-ditch use. The machine must be compatible with an electronic data recording device. Accessories will include all butt fusion inserts for the specified range of pipe sizes, a pyrometer kit for checking the surface temperature of the heater, extension cord (25' minimum), and hydraulic extension hoses (minimum of four). The butt fusion machine will be McElroy, or approved equivalent.
2. In areas where there may be insufficient space to layout the entire length of fused pipe to be pulled-back, the Contractor shall utilize a continuous HDPE pipe fusion equipment such as a PolyHorse by McElroy or other means in order to fuse the length of pipe necessary for the installation. The Contractor shall be responsible for securing and obtaining permission/permits from adjacent property if necessary, for staging and/or fusing of the pipe and HDD equipment at no additional cost to the Owner.

E) FUSION DATA RECORDING

1. For 6" and larger pipe sizes, McElroy DataLogger or equivalent fusion data recorder shall be used to record all fusion welds on hydraulically operated fusion machines. The device shall be capable of meeting the requirements of ASTM F 3124, "Standard Practice for Data Recording the Procedure used to Produce Heat Butt Fusion Joints in Plastic Piping Systems or Fittings". The device, or combination of devices, shall record the following variables of each fused joint:
 - a. Heater surface temperature immediately before inserting the heater plate. Alternatively, the heater plate may be measured with a pyrometer and entered into the weld record.
 - b. Gauge pressure during the initial heat cycle
 - c. Gauge pressure and elapsed time during the heat-soak cycle
 - d. Heater removal (dwell) time
 - e. Gauge pressure and elapsed time during the fusing/cool cycle
 - f. Drag pressure
 - g. Pipe diameter and wall thickness
 - h. Type of HDPE material (Specification and Classification) and manufacturer
 - i. Fusion Machine Identification
2. The device shall record the operator, a unique operator ID number, the date and time of each weld.
3. Records showing the device is up to date on all required calibration shall be available for presentation when requested.
4. All fusion welds should be traceable to the report (via operator and weld ID) with an indentation weld stamp or by permanent paint marker/pen next to fusion weld.
5. When requested prior to commencement of work, a weld location map may be requested by the owner or owner's representative.

F) BUTT FUSION EXAMINATION AND TESTING

1. Examinations
 - a. Visual: For pipe sections, examine the full exterior circumference for bead uniformity before cutting. After cutting the pipe section, review the interior bead. All beads should have visually acceptable bead formation as shown in Fig 4 and Appendix X2 of ASTM F 2620. In addition, the following characteristics are expected:
 - 1) There shall be no evidence of cracks or incomplete fusing
 - 2) There shall be no evidence of captured objects (e.g., pipe shavings, facer ribbons) between bonded surfaces.
 - 3) Variations in upset bead heights on opposite sides of the cleavage and around the circumference of fused pipe joints are acceptable.
 - 4) The apex of the cleavage between the upset beads of the fused joint shall remain above the base material surface
 - 5) Fused joints shall not display visible angular misalignment, and outside diameter mismatch shall be less than 10% of the nominal wall thickness
 - 6) Fusion data record review that meet criteria as listed below can be used as additional verification of visual indicators.
 - b. Fusion Data Record Review: The fusion data record for each fused joint shall be compared to the approved fusion procedure. The reviewer shall verify the following:
 - 1) That all data required by section 529.02.05E) was recorded
 - 2) Interfacial pressure was within the acceptable range

- 3) Heater surface temperature was within the acceptable range
- 4) Butt fusion pressure applied during the fusing/cool cycle was correctly calculated to include drag pressure, fell within the acceptable range for the applicable size and agrees with the recorded hydraulic fusing pressure.
- 5) Butt fusing pressure was reduced to a value less than or equal to drag pressure at the beginning of the heat soak cycle.
- 6) Fusing machine was opened at the end of the heat soak cycle, the heater was removed, and the end were brought together at the fusion pressure with the acceptable time range
- 7) Cooling time at butt fusing pressure met the minimum time specified
- c. If the recorded data in section 529.02.05 F) is outside the limits of the acceptable range, the joint is unacceptable.
- d. Frequency. Records for test fusion joints should be reviewed immediately after the joint is completed. Fusion joints for jobsite fusions should be reviewed daily or before being covered with backfill.

2. Mechanical Tests

- a. The Owner reserves the right to require the Contractor to mechanically test the fused pipe if any other test or inspection indicates noncompliance with approved procedures.
- b. If Mechanical tests are required:
 - 1) The fusion shall be allowed to cool completely, then fusion test straps shall be cut out.
 - 2) All samples shall be labeled with operator information. Testing must be done at 73 degrees F plus or minus 5 degrees. The test temperature and sample size are critical to testing. Testing performed at cold or elevated temperatures may not give similar results to tests performed at ambient temperatures.
 - 3) Each pipe sample weld shall be subjected to testing at two locations 180 degrees apart from each other in the joint weld. All specimens shall be tested by one of the following methods:
 - 4) Reverse Bend Test are allowed for pipe sizes 4" IPS or smaller. The specimens shall be removed and tested in accordance with ASTM F 2620, Appendix X4.
 - 5) Guided Side Bend Test are allowed for all pipe sizes 4" IPS and larger. The specimens shall be removed and tested.
 - 6) Hydrostatic Burst Test is allowed for pipe sizes 2"-24". The specimen length should measure 6 times pipe diameter with the butt fusion joint in the center of the specimen. The specimen should be tested in a tank filled with water, and testing conditions monitored and recorded with computerized equipment. The specimen will be tested at 4 times pipe rated pressure for 5 minutes with no failure of joint allowed.
- c. Results of any mechanical test shall be documented. Information on the weld and operator shall be transferred from the sample to the testing record.

529.06 – INSTALLATION

A) INSTALLATION

1. Safety: The Contractor shall carry out his operations in strict conformance with all Occupational

Safety and Health Administration and manufacturers' safety requirements.

2. Direct Burial

- a. Buried HDPE pipe and fittings shall be installed in accordance with ASTM D 2321 or ASTM D 2774 for pressure systems and AWWA Manual of Practice M55 Chapter 8. The Design Window identified in AWWA M55 Chapter 5 (page 65 of 2006 version) shall be considered acceptable design and installation conditions.
- b. Unless noted otherwise, no thrust blocks shall be placed in the HDPE pipe system since the fused system is fully restrained.

3. Trenchless Installation Methods

- a. Installation of HDPE Pipe by Horizontal Directional Drilling shall follow the guidelines of ASTM F1962 or PPI TR-46 and the following requirements. If the following requirements conflict with ASTM F1962 or PPI TR-46, the following requirements shall govern.
 - 1.) HDD Subcontractor shall be a firm actively engaged in horizontal directional drilling for a minimum of five (5) years. Submit documentation verifying compliance prior to beginning work.
 - 2.) Contractor and its HDD Subcontractor shall be responsible for all Design Considerations, Construction Safety, Construction Practices and Drilling Fluid Containment and Disposal related to HDD installation of the steel casing. Contractor and its HDD Subcontractor shall follow the North American Society of Trenchless Technology (NASTT) Horizontal Directional Drilling (HDD) Good Practices Guidelines, latest edition.
 - 3.) Prior to beginning work, Contractor shall submit to the Owner a typewritten Work Plan providing detail of the proposed procedure and schedule to execute the project. The work plan will be comprehensive, realistic, and based on actual working conditions for this particular project. The work plan shall document the planning required to successfully complete the project. The work plan shall include complete descriptions of proposed plans, procedures, equipment, personnel, and if applicable, supporting material, for the following:
 - a.) Drilling operations: describe the pilot hole drilling procedure, the reaming operation, the pullback procedure and illustrate the plan.
 - b.) Profile of the bore plotted at a scale appropriate for the crossing and acceptable to the Engineer.
 - c.) HDD site layout including entry and exit points.
 - d.) Directional drilling equipment list to include at a minimum: drilling rig, drill bit, back-reamer, mud mixing and pumping systems, down-hole tools, guidance system, and rig safety system. Provide calibration records for guidance equipment.
 - e.) Drilling fluid management plan: drilling fluid types and specifications, cleaning and recycling equipment, estimated flow rates, procedures for minimizing drilling fluid escape, and the method/location for final disposal of waste drilling fluids. Provide the MSDS for all drilling fluid additives that will be used.
 - f.) Pipe storage and handling details.
 - g.) Pipeline assembly and installation procedures.
 - h.) MSDS of any potentially hazardous substances to be used.
 - i.) Contingency plans for possible problems.
 - 4.) Contractor shall clean the work site of all excess slurry or spoils within forty-eight (48) hours of completing installation.
 - 5.) Contractor shall submit to the Owner a bore log to the Owner within seven (7) days

- of the completion of each bore path. The bore log shall include all of the following:
- a.) Name of person collecting data, including title, position and company name.
 - b.) The detection method used, bore diameter, utility diameter, drilling fluid composition, composition of any other materials used to fill the annular void between the bore and the utility diameter, or utilities placed out of service.
 - c.) A plan view of the bore path showing depths and offset dimensions to an accuracy of within one (1) inch of the physically exposed beginning and end points of the bore and other exposed points along the path and indicate if the bore failed.
 - d.) A profile or log of the bore depths to the nearest inch of the facility. Said profile or log shall be referenced to the benchmarks() shown on the plans.
- 6.) Bore or reaming hole diameter shall not exceed 1.5 times the casing O.D.
 - 7.) Contractor shall conduct reaming and back-pulling operations continuously until completion of the installation of casing.
 - 8.) Contractor shall dispose of or recycle drilling fluids consistent with local, state and federal regulations.
4. Pipe Assembly: Pipe lengths shall be stored in such a location and manner as to eliminate the possibility of scoring, gouges or otherwise damaging the pipe.
- a. Sections of the pipe shall be assembled and joined together prior to insertion of the pipe. Assembly shall be accomplished above ground. If the liner is to be dragged when transported or inserted, then sleds, rollers or other similar devices shall be furnished and utilized by the contractor to protect the pipe wall from damage due to cuts, gouges, or scrapes.
 - b. Joining shall be accomplished by the Thermal Butt Fusion method, in strict accordance with the Manufacturer's recommendations and with ASTM F 2620 or PPI TR-33. During fusion, pipes shall be given adequate support on rollers to allow them free movement.
 - c. All completed joints shall be watertight at the rated pressure for the pipe and shall have strength characteristics equal to or greater than the pipe itself. Improperly made or damaged joints shall be repaired or replaced as directed by the Owner at the Contractor's expense. The Owner shall be provided with samples of butt fused joints for testing upon request.
 - d. Mechanical connection of HDPE to auxiliary equipment such as valves, pumps and fittings shall use mechanical joint adapters and other devices in conformance with the PPI Handbook of Polyethylene Pipe and AWWA Manual of Practice M55.
 - e. Mechanical coupling shall be made by qualified technicians. Qualification of the field technician shall be demonstrated by evidence of mechanical coupling training with the past year. This training shall be on the equipment and pipe components to be utilized for this project.
5. Installation of HDPE pipe and fittings shall be completed in accordance with ASTM D2321 or ASTM2774 for pressure systems and AWWA Manual of Practice M55.
- a. The HDPE shall be lubricated in such a manner and with such materials as recommended by the pipe manufacturer.
 - b. A pulling head shall be attached to the leading end of the polyethylene liner with a power winch cable connected thereto. The power winch and cable shall be of sufficient

rating to pull the liner through the existing pipeline. Winching forces shall be continuously monitored. The Contractor shall provide all pulleys, rollers, bumpers, and other equipment required to protect the existing pipeline and the pipe from damage during the pulling operation. Any damage to the existing pipeline or lining shall be rectified by the Contractor at his own expense.

- c. Caution must be taken not to stretch the pipe beyond its elastic limit in the event of an impediment. The Contractor shall maintain on hand such equipment as might be required to withdraw the liner.
- d. Once insertion is initiated, the Contractor shall complete the pull without interruption.
- e. After insertion, the liner shall be allowed a minimum of twelve hours (or as otherwise recommended by the pipe manufacturer) to reach temperature equilibrium with the existing pipeline and to stress-relieve itself. After the liner has reached temperature equilibrium and stress-relieved itself, the lining shall be cut and finished, as required.

B) FLUSHING, CLEANING AND DISINFECTING

- 1. All mains shall be cleaned and flushed to remove all foreign matter.
- 2. Cleaning and disinfecting of potable water systems shall be in accordance with AWWA C651 and AWWA Manual of Practice M55 Chapter 9, and PPI Handbook of Polyethylene Pipe Chapter 2 (2nd Edition). The disinfection chemicals should be limited to less than 12% active chlorine. The duration of the disinfection should not exceed 24 hours. Upon completion, the system should be thoroughly flushed with fresh water, and sampled to verify the disinfectant chlorine level has been reduced to potable drinking water concentrations in all service water tubing and branch lateral pipes.
- 3. Obtain safe bacteriological samples on two consecutive days before placing the waterline into service.

C) TESTING AND LEAKAGE

- 1. All pumps, valves, temporary connections, temporary bulkheads, meters, gauges and other measuring devices shall be furnished, installed and operated by the Contractor and all such equipment and devices and their installation shall be approved by the Owner's Representative. The contractor shall restrain pipe, components, and test equipment as required to insure testing can be accomplished in a safe manner, including protection of personnel, equipment, and public in the event of a failure during testing.
- 2. The pressure gauges or data recorders should be calibrated and sufficiently sized to provide mid-range data (pressure tested will not be below 10% or greater than 90% of gauge capacity) that result in easy reading, interpretation. Gauges shall be accurate to within 2% of full scale with increments no greater than 10 psi.
- 3. Pressure Pipelines-Pressure testing shall be conducted in accordance with requirements and recommendations of ASTM F 2164 (Field Leak Testing of Polyethylene Pressure Piping Systems Using Hydrostatic Pressure), AWWA Manual of Practice M55 Chapter 9, and PPI Handbook of Polyethylene Pipe Chapter 2 (2nd Edition). Pneumatic (compressed air) leakage testing of HDPE pressure piping is prohibited for safety reasons.
 - a. The section of pipe to be tested shall be filled with potable approved by the Owner/Engineer. While the system is being filled with water, air shall be carefully and completely exhausted. If permanent air vents are not located at all high points, the Contractor shall install fittings and valves at such points so the air can be expelled as the pipe system is slowly filled with water.
 - b. If the Contractor elects to perform hydrostatic testing against valves in an existing

distribution system, it does so at his own risk and will bear the cost of any damages to the existing valve, piping system, private or public property, or the new pipeline under test.

- c. The test procedure for HDPE pipe consists of two steps: 1) the initial phase or expansion phase and 2) the test phase. During the initial/expansion phase, sufficient make-up water shall be added hourly for 3 hours to return to the test pressure. During the test phase, the expansion phase pressure is reduced by 10 psi to test phase pressure and monitored for at least one hour (3 hours maximum).
- d. Under no circumstances shall the total time under test exceed eight (8) hours. If the test is not completed due to leakage, equipment failure or any other reason, depressurize the test section and permit the system to "relax" for eight (8) hours prior to the next testing sequence.
- e. The test pressure should be related to the lowest point in elevation along the test section's vertical pipeline profile.
- f. All pressure and leakage testing shall be done in the presence of a representative of the Owner.
- g. The test pressure shall be 1.5 times the operating pressure at the lowest point in the system. In accordance with section 9.8 of ASTM F 2164, the pipe shall pass if the final pressure is within 5% of the test phase pressure for the testing period (3 hours maximum). If the test section fails this test, the Contractor shall repair or replace all defective materials and/or workmanship at no additional cost to the Owner.
- h. Leakage must not exceed 10 gal/inch diameter per mile of pipe per 24 hours at 150 psi testing pressure.

529.07 – METHOD OF MEASUREMENT

Payment shall be made pursuant to Section 505 for water line.

529.08 – BASIS OF PAYMENT

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

532 – TAPPING SLEEVES

532.01 - DESCRIPTION

This section covers tapping sleeves intended to be used for tapping water mains.

532.02 - MATERIALS

Tapping sleeves shall be manufactured in accordance with AWWA C-110 and equipped with gaskets made in accordance with AWWA C-111. Tapping Sleeve shall be Ductile Iron. Tapping sleeves shall be Mueller H-615 M. J. Tapping sleeve, or approved equivalent. Stainless Steel sleeves will not be permitted.

532.04 – CONSTRUCTION METHODS

The installation shall conform to the recommendation of the manufacturer of the pipe being tapped. Tapping sleeves shall be pressure tested. Sleeves shall maintain 150 psi for a minimum of two hours.

532.06 – METHOD OF MEASUREMENT

Payment for "Tapping Sleeve" shall be included in the unit price bid per each for Tapping Valve and Sleeve. The price established shall be full compensation for furnishing and placing of all materials including tapping sleeve, labor, tools, equipment, and incidentals necessary to complete this item of work.

532.07 – BASIS OF PAYMENT The items measured as provided above will be paid for at the contract unit price bid:

(SIZE) TAPPING VALVE AND SLEEVE..... EA.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

SECTION 533 – TAPPING CLAMPS

533.01 – DESCRIPTION

This section covers tapping clamps used for tapping water mains.

533.04 – CONSTRUCTION METHODS

- A) General -Tapping clamps shall have a body with a threaded outlet, seal, and suitable means for attachment to the main. The body shall be made to conform to the outside configuration of the main. Tapping clamps shall be designed to provide a drip-tight connection when used as a service connection to the main.
- B) Tapping clamps shall be required when tapping other than cast iron or ductile iron pipe. Clamps may be required on older cast-iron and ductile iron as directed by the Engineer. Tapping clamps shall be the same size as the service line. The reducing of tapping clamps shall not be allowed.
- C) Tapping Clamps shall meet the requirements of Section 510.

533.06 – METHOD OF MEASUREMENTS

Tapping clamp(s) will not be measured separately.

533.07 – BASIS OF PAYMENT

All cost of tapping clamps shall be included in the price bid for water services.

Such payment shall be compensation in full for furnishing all materials, labor, equipment, tools and incidentals, and for performing the work in accordance with these specifications.

LEGEND			
Ø	POWER POLE	⊗	GAS METER
○	UTILITY POLE	⊗	GAS VALVE
☆	LIGHT POLE	⊗	GAS PIPELINE MARKER
←	GUY ANCHOR	—	SIGN
⊞	ELECTRIC METER	⊗	FIRE HYDRANT
⊞	ELECTRIC MANHOLE	○	WATER METER
⊞	ELEC. TRANSFORMER	⊗	WATER VALVE
⊞	SANITARY SEWER MANHOLE	⊞	MAIL BOX
●	SANITARY SEWER CLEANOUT	EB	ELECTRIC BOX
⊞	STORM SEWER MANHOLE		
≡	IRON GRATE INLET		
⊞	TELEPHONE MANHOLE		
⊞	TELEPHONE PEDESTAL		

UTILITY LINES			
—	UW	—	WATER
—	GAS	—	GAS
—	SS	—	SANITARY SEWER
—	SD	—	STORM DRAIN
—	UT	—	TELEPHONE
—	UP	—	UNDERGROUND ELECTRIC
—	OHE	—	OVERHEAD POWERLINE
—	RW	—	RECLAIMED WATERLINE
—	SSP	—	SANITARY SEWER FORCE MAIN (PROJECTED)
MISC. LINES			
—	x	—	FENCE

TOTAL DISTURBED AREA = 0.15 ACRES

PRIOR TO PERFORMING ANY GRADING OR EXCAVATING WORK, THE CONTRACTOR SHALL CALL OKIE811, THE OKLAHOMA ONE-CALL SYSTEM NOT LESS THAN 48 HOURS IN ADVANCE AND SHALL VERIFY OR ESTABLISH THE EXACT LOCATION AND DEPTH OF ALL UNDERGROUND LINES.



ALL WORK LIES ENTIRELY WITHIN THE CORPORATE LIMITS OF CHICKASHA, OKLAHOMA.

CITY OF CHICKASHA SPECIFICATIONS AND CONSTRUCTION STANDARDS, OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY RULES AND REGULATIONS AND DETAILS PROVIDED HEREIN SHALL GOVERN THE WORK.

CHICKASHA MUNICIPAL AUTHORITY

PLAN OF PROPOSED WATER DISTRIBUTION IMPROVEMENTS

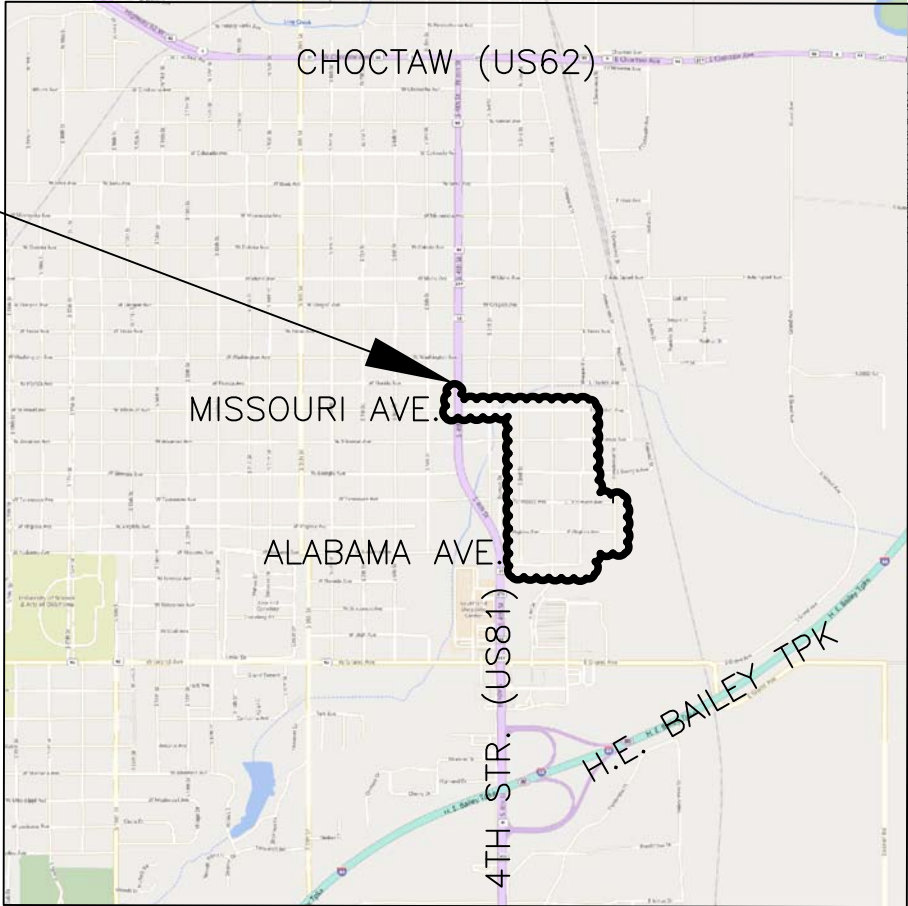
RFP CMA-2302

18608 CDBG 22

KEITH JOHNSON
CITY MANAGER

JIM CROSBY
PUBLIC WORKS DIRECTOR

PROJECT
LOCATION



LOCATION MAP

INDEX OF SHEETS

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	GENERAL CONSTRUCTION NOTES
3	QUANTITIES AND NOTES
4	LAYOUT MAP
5 - 7	PLAN AND PROFILE SHEETS
8 - 12	FIRE HYDRANT PLAN SHEETS

CITY OF CHICKASHA STANDARD DRAWINGS REQUIRED

WM1	WATER MAIN DETAILS
WM2	WATER MAIN DETAILS
WM3	WATER MAIN DETAILS
WM4	WATER MAIN DETAILS
WM5	WATER MAIN DETAILS

UTILITY PAVEMENT CUT REPAIRS DETAILS

UCPR1	ASPHALT SURFACE
UCPR2	ASPHALT OVER CONCRETE
UCPR3	P.C. CONCRETE

DATE APPROVED BY AMERICAN WATER ENTERPRISES, LLC

4/26/2023



DATE RANDALL SCOTT VAUGHN, OKLA. REG. NO. 15194

PREPARED BY:



CHISHOLM TRAIL CONSULTING, LLC
OK CA 7771
2124 SCOTT LANE
DUNCAN, OK 73533
580-467-8130

GENERAL CONSTRUCTION NOTES

ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE ODEQ REGULATIONS, AWWA STANDARDS, AND CITY OF CHICKASHA STANDARD SPECIFICATIONS AND STANDARD DRAWINGS.

ALL COSTS OF MAINTENANCE DURING CONSTRUCTION AND BEFORE THE PROJECT IS ACCEPTED SHALL BE INCLUDED IN THE UNIT PRICES BID ON THE VARIOUS PAY ITEMS. THE CONTRACTOR SHALL MAINTAIN THE WORK DURING CONSTRUCTION AND UNTIL THE PROJECT IS ACCEPTED. THIS MAINTENANCE SHALL CONSTITUTE CONTINUOUS AND EFFECTIVE WORK PROSECUTED DAY BY DAY, WITH ADEQUATE EQUIPMENT AND FORCES TO THE END THAT THE DRAINAGE CHANNEL, PRIVATE PROPERTY AND STRUCTURES ARE KEPT IN A SATISFACTORY CONDITION AT ALL TIMES. IF THE CONTRACTOR, AT ANY TIME, FAILS TO COMPLY WITH THESE PROVISIONS, THE OWNER’S REPRESENTATIVE MAY IMMEDIATELY NOTIFY THE CONTRACTOR OF SUCH NON-COMPLIANCE. IF THE CONTRACTOR FAILS TO REMEDY UNSATISFACTORY MAINTENANCE WITHIN 24 HOURS AFTER RECEIPT OF SUCH NOTICE, THE OWNER MAY IMMEDIATELY PROCEED TO MAINTAIN THE PROJECT, AND THE ENTIRE COST OF THIS MAINTENANCE WILL BE DEDUCTED FROM MONIES DUES OR BECOME DUE TO THE CONTRACTOR ON THIS CONTRACT.

THE CONTRACTOR SHALL NOTIFY THE CITY OF CHICKASHA IN WRITING A MINIMUM OF TWO WEEKS AND NO MORE THAN 30 DAYS PRIOR TO STARTING WORK.

A MINIMUM OF ONE LANE OF TRAVEL SHALL BE MAINTAINED ON ALL PUBLIC STREETS, UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR OR HIS REPRESENTATIVE.

THE CONTRACTOR SHALL NOTIFY THE CITY OF CHICKASHA IN WRITING A MINIMUM OF FIVE (5) DAYS AND A MAXIMUM OF TEN (10) DAYS PRIOR TO THE CLOSING OF ANY PUBLIC ROAD, INCLUDING LANE CLOSURES.

IN THE EVENT ANY PORTION OF A PUBLIC STREET IS CLOSED DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING, INSTALLING AND MAINTAINING ALL TRAFFIC CONTROL DEVICES. CONSTRUCTION TRAFFIC CONTROL SHALL BE DONE ACCORDING TO THE STANDARDS SET FORTH IN THE CURRENT EDITION OF THE "MUTCD", "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL RESIDENTS, OCCUPANTS OR BUSINESSES THAT MAY BE AFFECTED BY THE WORK. SAID WRITTEN NOTICE SHALL BE DELIVERED NO LESS THAN 48 HOURS, NOR MORE THAN 2 WEEKS PRIOR TO THE START TIME OF ANY DISRUPTION. THE WRITTEN FORM MAY BE "DOOR HANGERS", BUT IN ANY EVENT SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO USE. AT A MINIMUM THE FORM SHALL CONTAIN: PROJECT IDENTIFICATION, CONTRACTOR NAME, CONTRACTOR ADDRESS, CONTRACTOR TELEPHONE NUMBER, TYPE OF CONSTRUCTION, REASON FOR AFFECTING OR DISRUPTING SERVICE AND DURATION OF SUCH.

REVISIONS PROPOSED BY THE CONTRACTOR SHALL BE SUBMITTED TO THE OWNER’S REPRESENTATIVE FOR APPROVAL PRIOR TO BEGINNING ANY CONSTRUCTION SUBJECT TO THE REVISION.

THE CONTRACTOR SHALL TAKE ALL NECESSARY STEPS TO ENSURE ADEQUATE DRAINAGE DURING CONSTRUCTION. COST TO BE INCLUDED IN OTHER ITEMS OF WORK.

ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, SIGNS, GUARDRAIL, AND SLOPES SHALL BE REPAIRED AT CONTRACTORS EXPENSE TO THE SATISFACTION OF THE OWNER’S REPRESENTATIVE.

GENERAL CONSTRUCTION NOTES (CONT.)

THE PROJECT SHALL BE CONSTRUCTED TO MAINTAIN ACCESS TO ALL PROPERTIES AT ALL TIMES.

BIDDERS SHALL FULLY INFORM THEMSELVES OF THE NATURE OF THE WORK AND CONDITIONS UNDER WHICH IT WILL BE PERFORMED. THE CONTRACTOR SHALL ADOPT METHODS CONSISTENT WITH GOOD CONSTRUCTION PRACTICE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE IN EXISTING RIGHT-OF-WAY OR TO PRIVATE PROPERTY. ANY DAMAGE DONE DUE TO CONTRACTOR’S NEGLIGENCE SHALL BE PREPARED AT THE CONTRACTOR’S EXPENSE TO THE SATISFACTION OF THE OWNER’S REPRESENTATIVE.

THE PRICE BID ON ALL ITEMS SHALL INCLUDE ALL MATERIALS, LABOR, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK AS SHOWN ON THE PLANS.

EXISTING UTILITIES MAY OR MAY NOT BE SHOWN ON PLAN SHEETS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE INFLICTED TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF THEIR DIGGING, TRENCHING, BORING, ETC. PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL THE "OKIE 811" NOTIFICATION CENTER FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION. THE "OKIE 811" NOTIFICATION CENTER MAY BE NOTIFIED ONLINE AT okie811.org, BY CALLING 811 OR 1-800-522-6543. DEPTH OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. NO UTILITY RELOCATIONS TO ACCOMMODATE THE WORK ARE PLANNED.

ALL WORK SHALL BE CONDUCTED WITHIN EXISTING EASEMENTS AND RIGHTS-OF-WAY.

WATER MAIN MATERIALS AND INSTALLATION SHALL MEET REQUIREMENTS OF ODEQ 252:626 AND THE DETAILS PROVIDED HEREIN.

CONTRACTOR SHALL REMOVE AND RESET MAILBOXES DURING THE WORK TO ACCOMMODATE REGULAR MAIL DELIVERY. COST OF THIS WORK TO BE INCLUDED IN OTHER ITEMS OF WORK. ALL MAILBOXES SHALL BE RELOCATED TO THE ORIGINAL LOCATIONS PRIOR TO COMPLETING THE WORK.

CONTRACTOR SHALL REMOVE AND RESET ALL REGULATORY SIGNS DURING THE WORK TO ENSURE ADEQUATE TRAFFIC CONTROL IS IN PLACE AT ALL TIMES. ALL SIGNS SHALL BE RELOCATED TO THE ORIGINAL LOCATIONS PRIOR TO COMPLETING THE WORK.

CONCRETE CONTAINING FLY ASH, SLAG OR SILICA FUME WILL NOT BE ACCEPTED.

SEQUENCE OFCONSTRUCTION

1. SUBMIT A PROJECT SCHEDULE TO THE PUBLIC WORKS DIRECTOR A MINIMUM OF TWO WEEKS PRIOR TO STARTING WORK. RECEIVE APPROVAL OF SAID SCHEDULE PRIOR TO STARTING WORK.
2. INSTALL NEW IN-LINE VALVES WHERE SHOWN ON THE DRAWINGS TO MINIMIZE SERVICE DISRUPTIONS DURING FIRE HYDRANT WORK. COORDINATE THIS WORK WITH THE CITY OF CHICKASHA PUBLIC WORKS DEPARTMENT.
3. EXISTING WATER MAINS MUST BE TAKEN OUT OF SERVICE AND RETURNED TO SERVICE WITHIN THE SAME WORKDAY.
4. COMPLY WITH SECTION 500.04 D) OF THE SPECIFICATIONS AS FOLLOWS:

4.1. COORDINATE WATER MAIN SHUT-DOWN WITH THE CHICKASHA MUNICIPAL AUTHORITY WATER DEPARTMENT.

4.2. PROVIDE MINIMUM 72-HOUR NOTICE TO WATER DEPARTMENT STAFF AND THE CHICKASHA PUBLIC WORKS DIRECTOR.

4.3. CHICKASHA MUNICIPAL AUTHORITY STAFF ONLY WILL OPERATE ALL VALVES.
5. COMPLETE CONSTRUCTION WITHIN 150 CALENDAR DAYS.
6. REVISIONS TO THIS SEQUENCE MAY BE APPROVED BY THE PUBLIC WORKS DIRECTOR.

FIRE HYDRANT AND VALVE SCHEDULE											
Fire Hydrant ID	East/West Street	North/South Street	Manufacturer	Install New Fire Hydrant (Each)	Install 6-inch Extension (Each)	Install 12-inch Extension (Each)	Install Isolation Valve (Each)	Install In-Line Valve (Each)	Pavement Repairs (SY)	Replace Curb and Gutter (LF)	Paint Existing (Each)
FH1	Alabama	2nd	Mueller								1
FH2	Virginia	2nd	American Darling	1	1		1	1	11		
FH3	Tennessee	2nd	Mueller		1			1			1
FH4	Georgia	2nd	Mueller					1	11		
FH5	Arkansas	2nd	American Darling	1	1		1	1	11	10	
FH6	Missouri	2nd	American Darling	1	1		1	2	22	20	
FH7	Alabama	1st	American Darling	1		1		2	22		
FH8	Virginia	1st	Mueller	1	1		1	1	11		
FH9	Tennessee	1st	Mueller	1	1		1	1	11		
FH10	Georgia	1st	Mueller				1	1	11	10	1
FH11	Arkansas	1st	American Darling	1		1	1	1	11	10	
FH12	Missouri	1st	Mueller	1			1	3	33	20	
FH13	Alabama	Shepherd	Mueller	1	1		1				
FH14	Tennessee	Shepherd	Mueller		1			3	33	30	1
FH15	Georgia	Shepherd	American Darling	1				1	11	10	
FH16	Arkansas	Shepherd	Mueller				1	1	11	10	1
FH17	Missouri	Shepherd	American Darling			1					
Totals				10	8	3	10	20	211	120	5

PAY ITEM NOTES:

(1) PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF TRENCH EXCAVATION, BEDDING AND BACKFILL.

(2) PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF PROVIDING AND INSTALLING UP TO 5 LF OF 6-INCH CLASS 50 DUCTILE IRON PIPE AT EACH FIRE HYDRANT, AS NECESSARY. PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF REMOVAL, SALVAGING AND DELIVERY TO OWNER OF EXISTING FIRE HYDRANT. PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF EXCAVATION AND BACKFILL. ALL NEW FIRE HYDRANTS SHALL BE 4'-6" BURY.

(3) PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF SAWING PAVEMENT, REMOVAL AND DISPOSAL OF EXISTING PAVEMENT, COMPACTING SUBGRADE, INSTALLING AGGREGATE BASE, INSTALLING ASPHALT CONCRETE OR P.C. CONCRETE AND BACKFILL.

(4) PRICE BID FOR THIS ITEM SHALL INCLUDE THE COST OF SAWING, REMOVAL AND DISPOSAL OF EXISTING CURB AND GUTTER, COMPACTING SUBGRADE, INSTALLING AGGREGATE BASE, INSTALLING P.C. CONCRETE CURB AND GUTTER AND BACKFILL.

INSTALL ALL NEW VALVES WITHIN 5' OF FIRE HYDRANT TEES OR MAINLINE TEES UNLESS OTHERWISE APPROVED BY THE OWNER'S REPRESENTATIVE.

SLEEVES WILL NOT BE PAID FOR SEPARATELY.

PRICE BID FOR FITTINGS SHALL INCLUDE THE COST OF ALL ACCESSORIES.

SUMMARY OF QUANTITIES WATERLINE 1			
LOCATION: MISSOURI AVENUE FROM 4TH STREET TO 3RD STREET			
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY
1	6" PVC WL, TRENCHED	LF	420
2	6" X 6" MJ TEE, INSTALLED	EA	2
3	6" X 45° MJ BEND, INSTALLED	EA	2
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	5
5	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	1
6	PAVEMENT REPAIR	SY	18
7	REPLACE CURB AND GUTTER	LF	30
8	DISINFECTION	LSUM	1
9	HYDROSTATIC PRESSURE TESTING	LSUM	1
10	CONSTRUCTION TRAFFIC CONTROL	LSUM	1

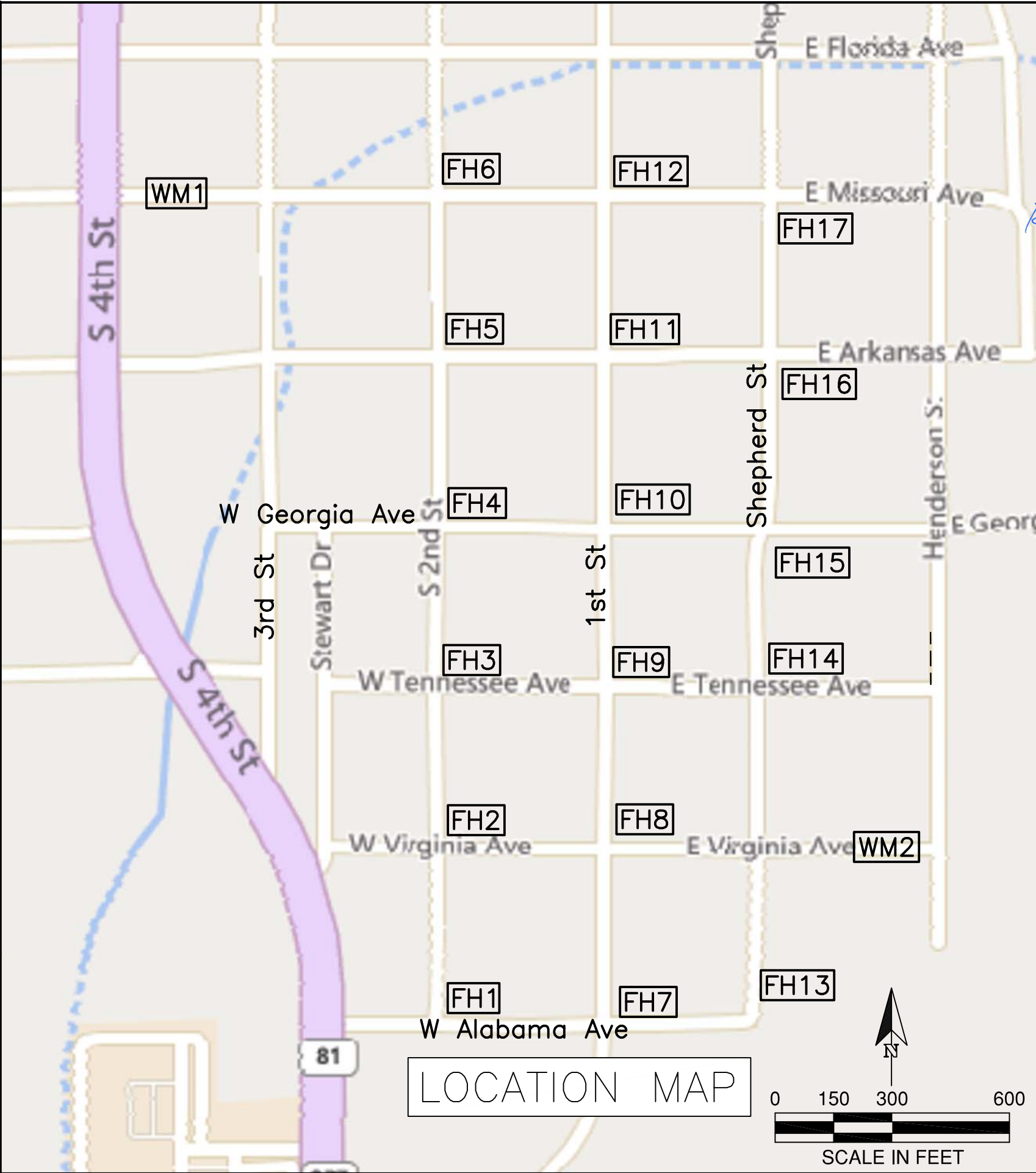
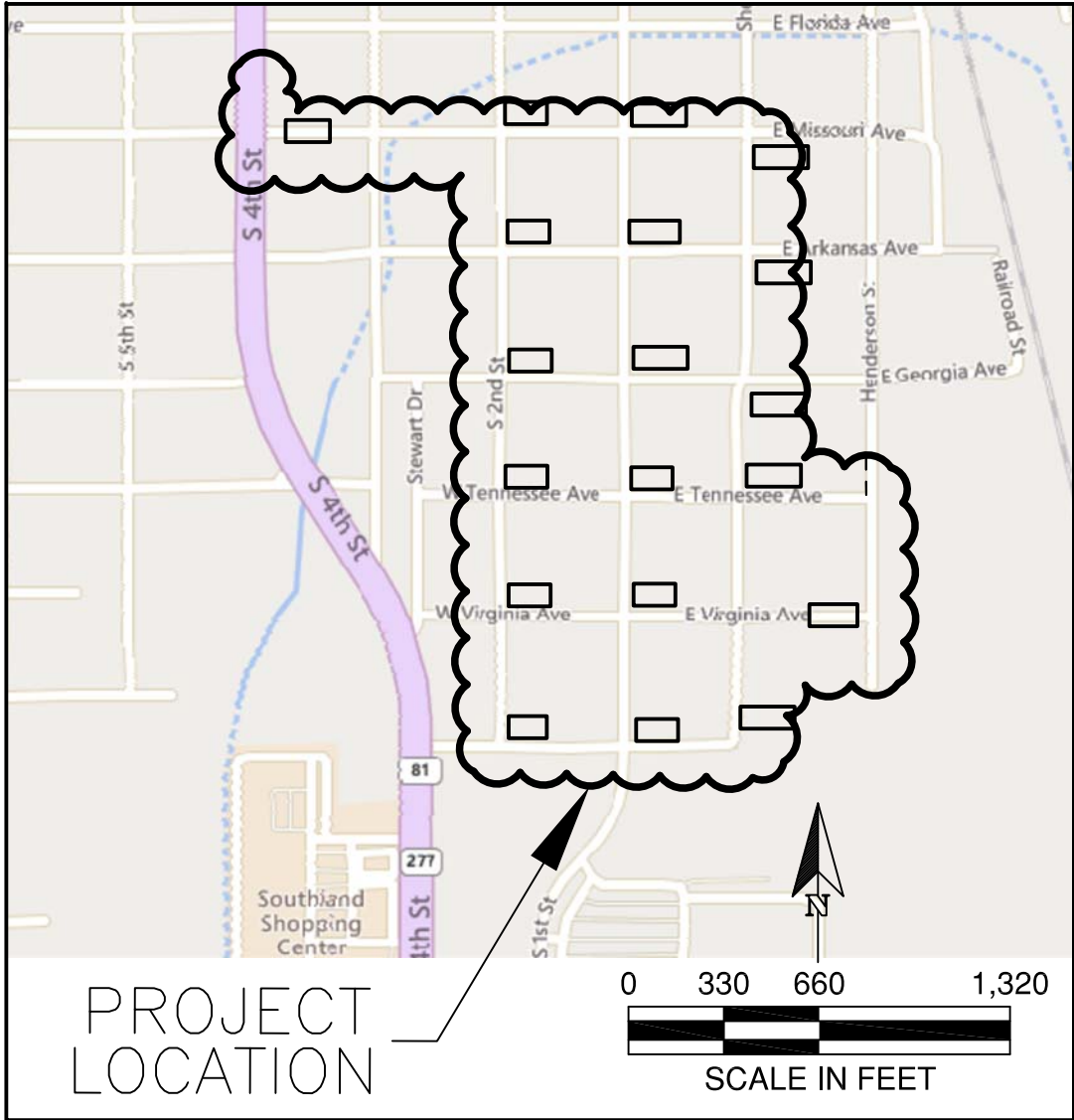
SUMMARY OF QUANTITIES WATERLINE 2			
LOCATION: VIRGINIA AVENUE FROM SHEPHERD TO HENDERSON AND HENDERSON FROM VIRGINIA TO ALLEY			
PAY ITEM	PAY ITEM DESCRIPTION	UNITS	EST QTY
1	6" PVC WL, TRENCHED	LF	620
2	6" X 6" MJ TEE, INSTALLED	EA	2
3	6" X 45° MJ BEND, INSTALLED	EA	2
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	5
5	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	1
6	PAVEMENT REPAIR	SY	11
7	REPLACE CURB AND GUTTER	LF	15
8	FENCE REMOVE AND RELOCATE	LF	125
9	DISINFECTION	LSUM	1
10	HYDROSTATIC PRESSURE TESTING	LSUM	1
11	CONSTRUCTION TRAFFIC CONTROL	LSUM	1

SUMMARY OF QUANTITIES FIRE HYDRANTS AND VALVES			
LOCATION: SEE SCHEDULE			
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNITS	EST QTY
1	FIRE HYDRANT ASSY (4'-6" BURY) INSTALLED	EA	10
2	6-INCH FIRE HYDRANT EXTENSION	EA	8
3	12-INCH FIRE HYDRANT EXTENSION	EA	3
4	6" MJ GATE VALVE W/ BOX, INSTALLED	EA	30
5	PAVEMENT REPAIR	SY	211
6	REPLACE CURB AND GUTTER	LF	120
7	PAINT EXISTING FIRE HYDRANT	EA	5

SUMMARY OF QUANTITIES PROVISIONAL WATERLINE			
LOCATION: HENDERSON FROM ALLEY TO TENNESSEE			
PAY ITEM NO.	PAY ITEM DESCRIPTION	UNITS	EST QTY
1	6" PVC WL, TRENCHED	LF	220
2	PAVEMENT REPAIR	SY	22
3	REPLACE CURB AND GUTTER	LF	25
4	DISINFECTION	LSUM	1
5	HYDROSTATIC PRESSURE TESTING	LSUM	1
6	CONSTRUCTION TRAFFIC CONTROL	LSUM	1

ABBREVIATIONS USED IN THESE DRAWINGS:

ASSY = ASSEMBLY
EX. = EXISTING
C&G = CURB AND GUTTER
FH = FIRE HYDRANT OR FIRE HYDRANT ASSEMBLY
GV = GATE VALVE



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REGISTERED PROFESSIONAL ENGINEER
RANDALL SCOTT VAUGHN
15194
OKLAHOMA

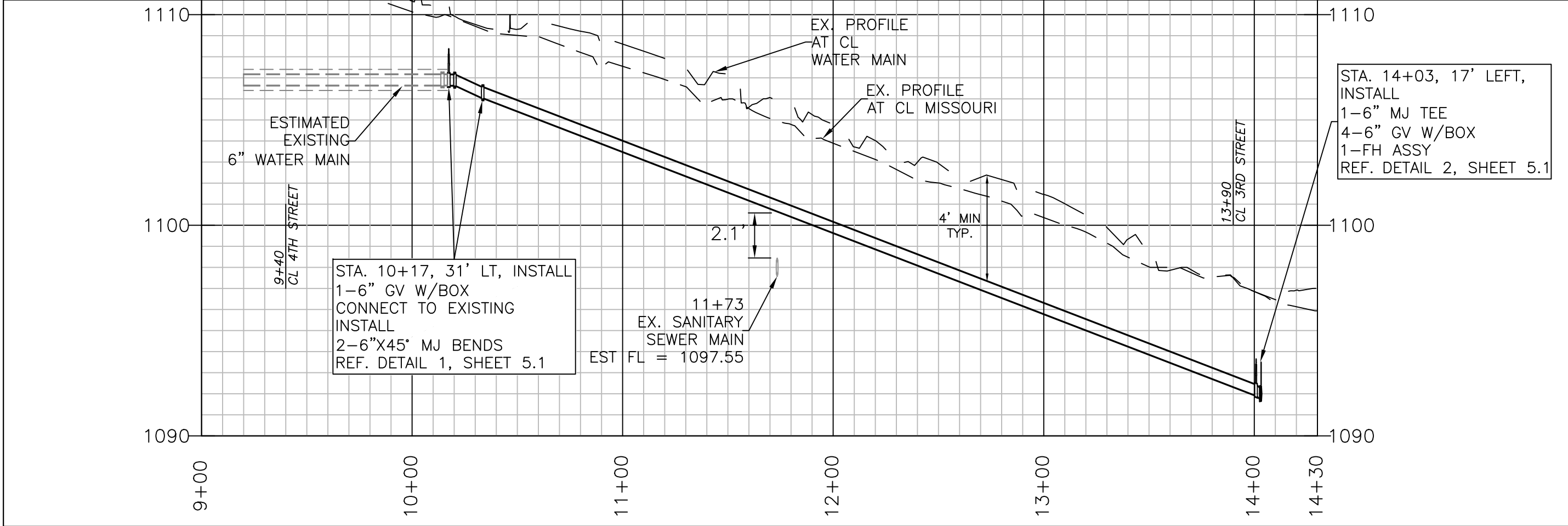
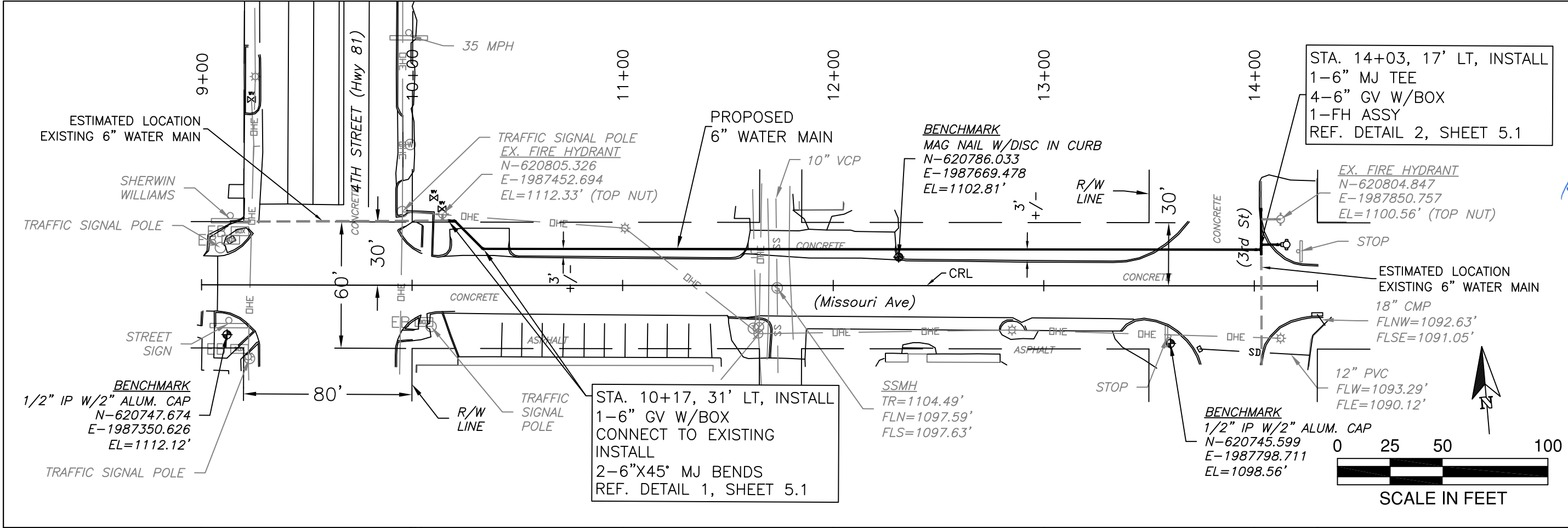
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Project **RFP CMA-2302**
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
LOCATION MAPS

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Date: 4/26/2023	



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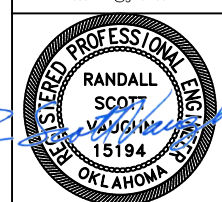
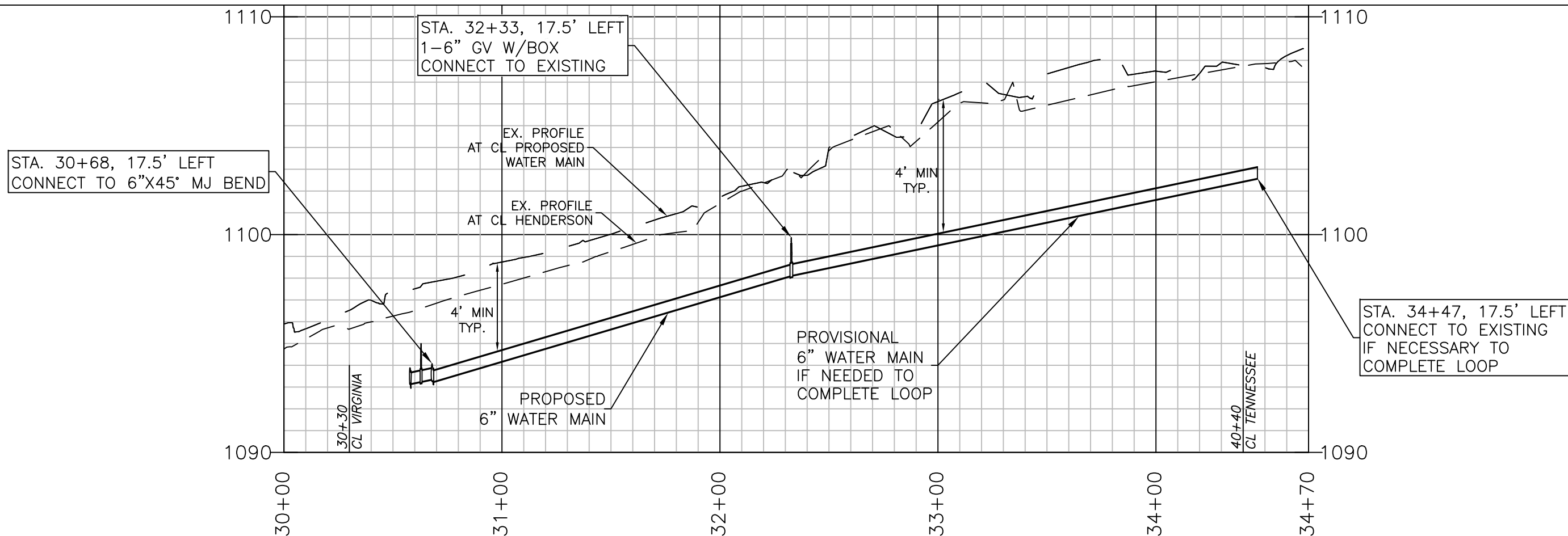
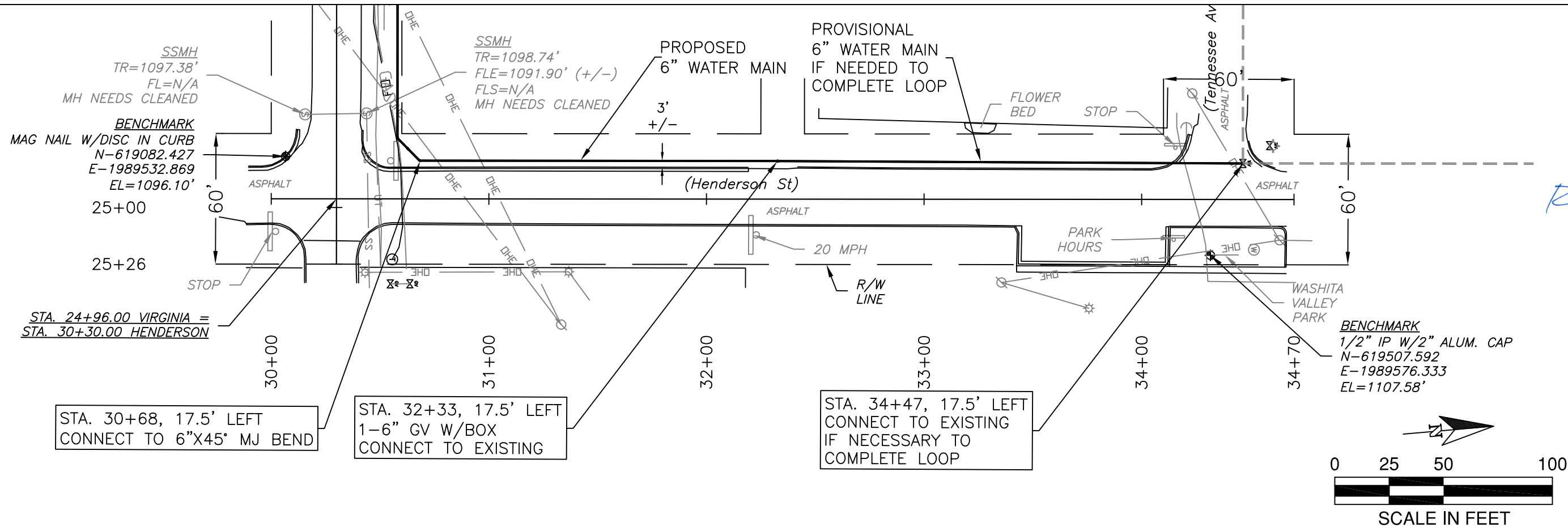
Project
RFP CMA-2302
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
PLAN AND PROFILE
MISSOURI AVE.

Scale: AS NOTED
Drawn: RSV
Checked: RSV
Date: 4/26/2023

Sheet #:
5



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4/26/2023

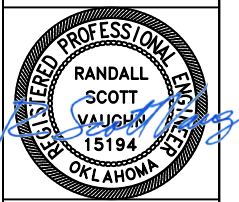
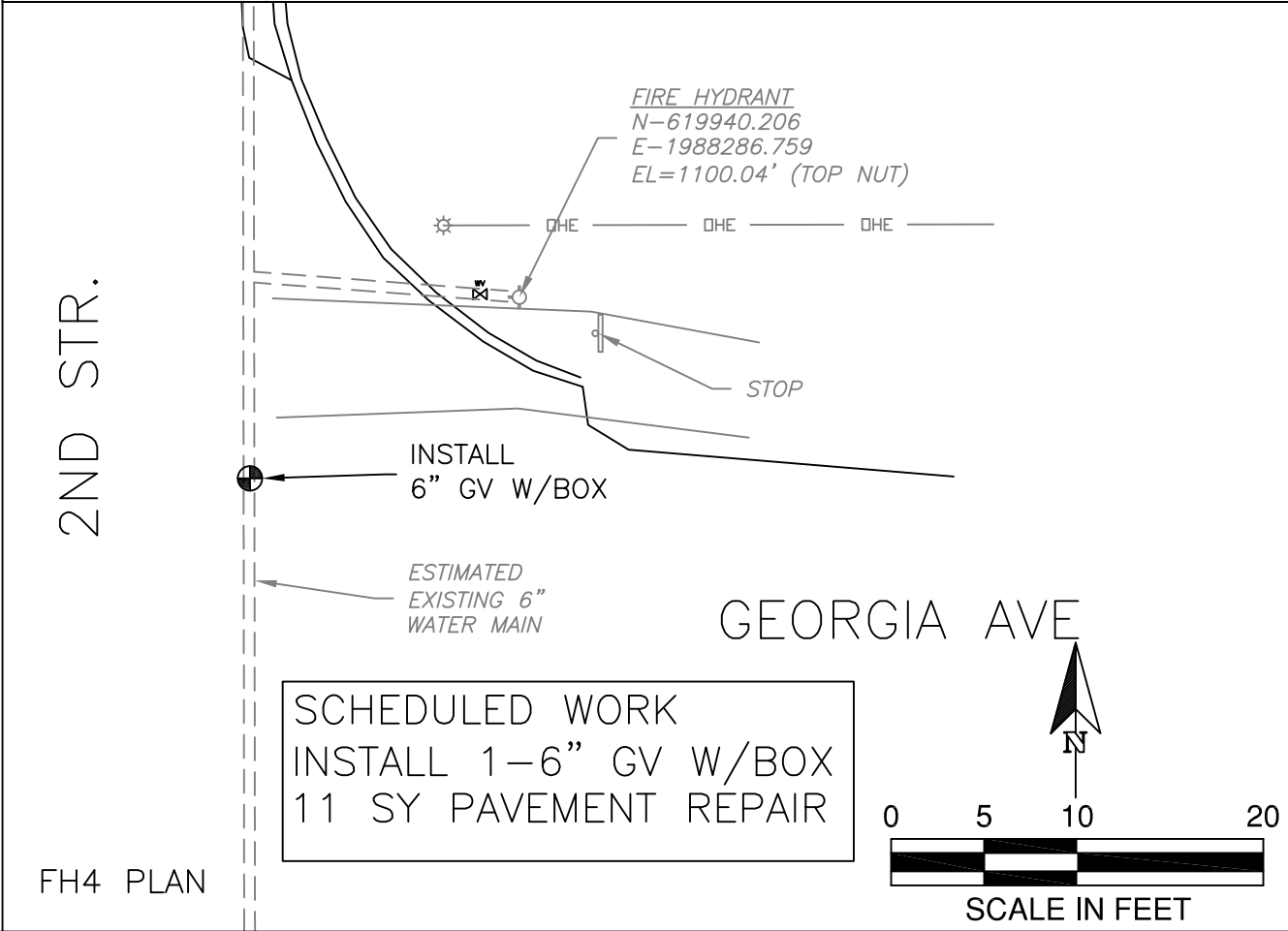
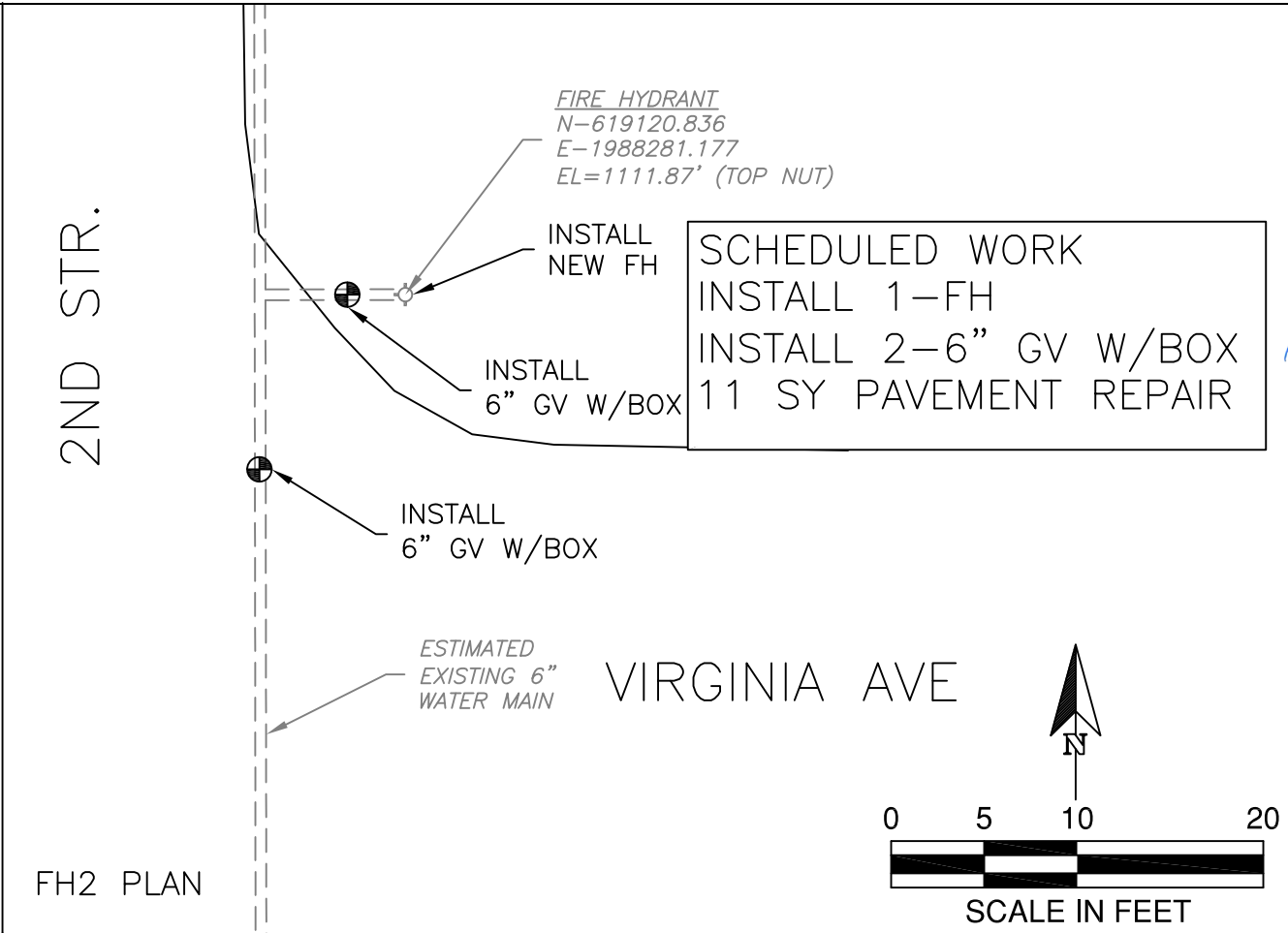
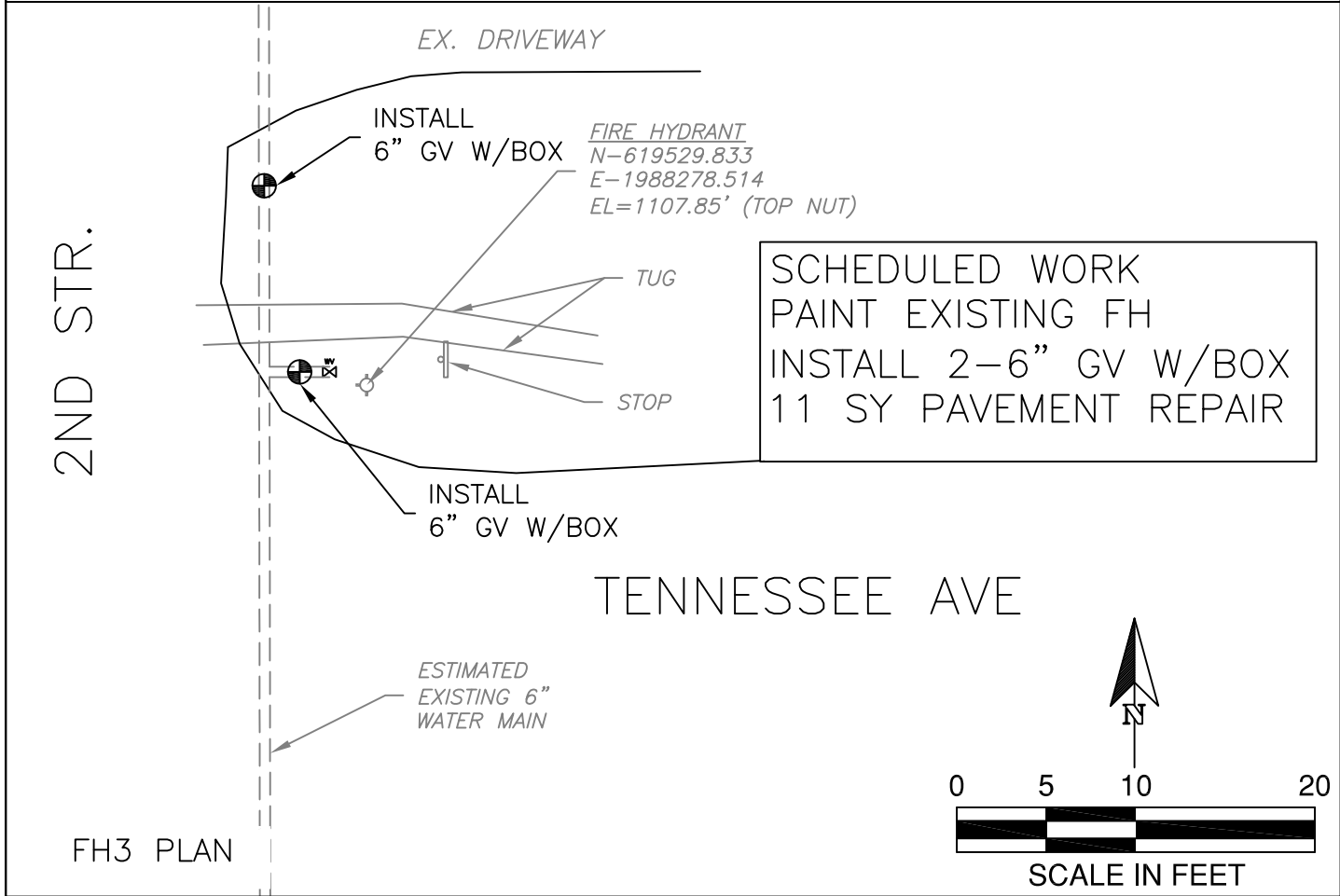
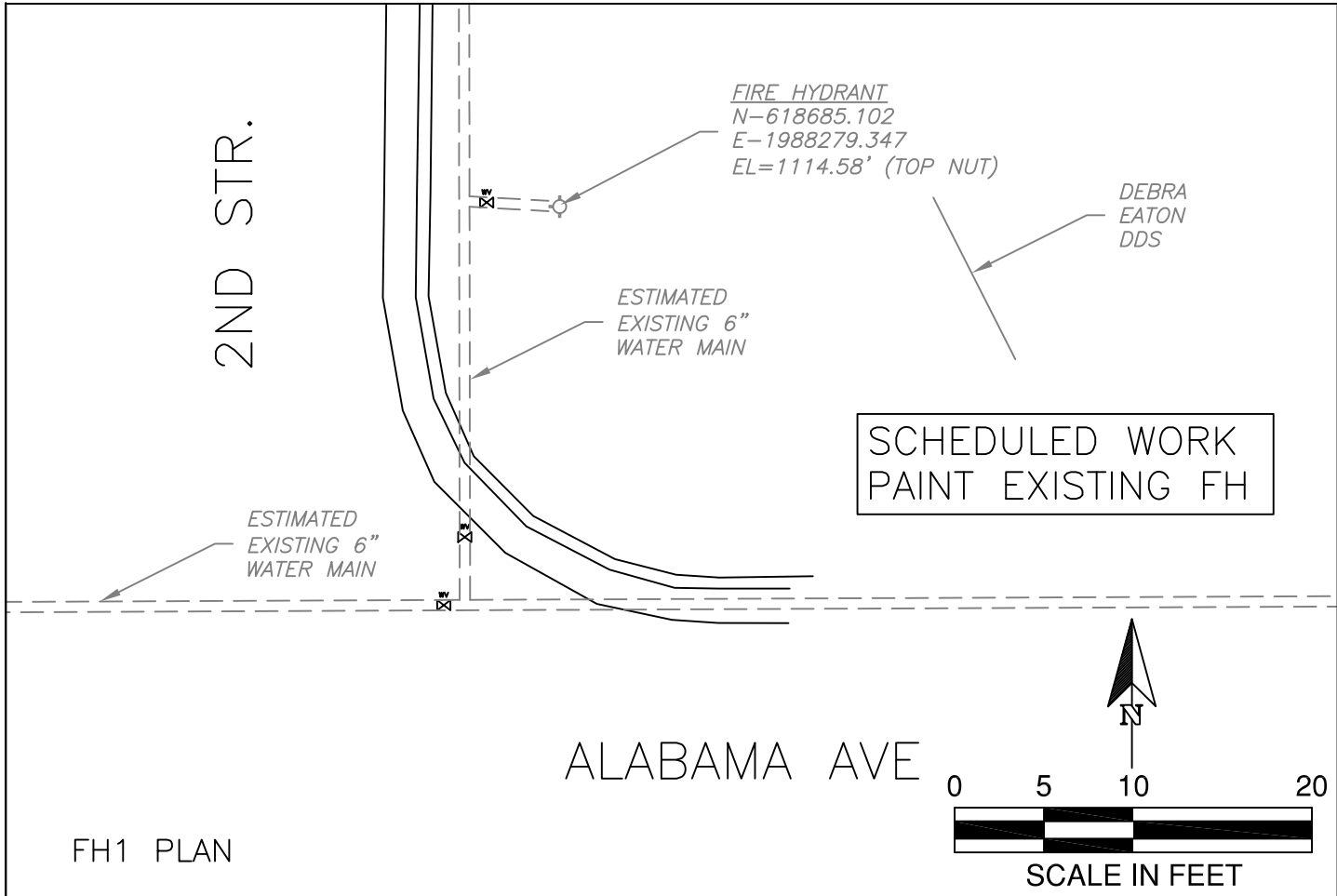
Project
RFP CMA-2302
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
**PLAN AND PROFILE
HENDERSON ST.**

Scale: AS NOTED
Drawn: RSV
Checked: RSV
Date: 4/26/2023

Sheet #:
7



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4/26/2023

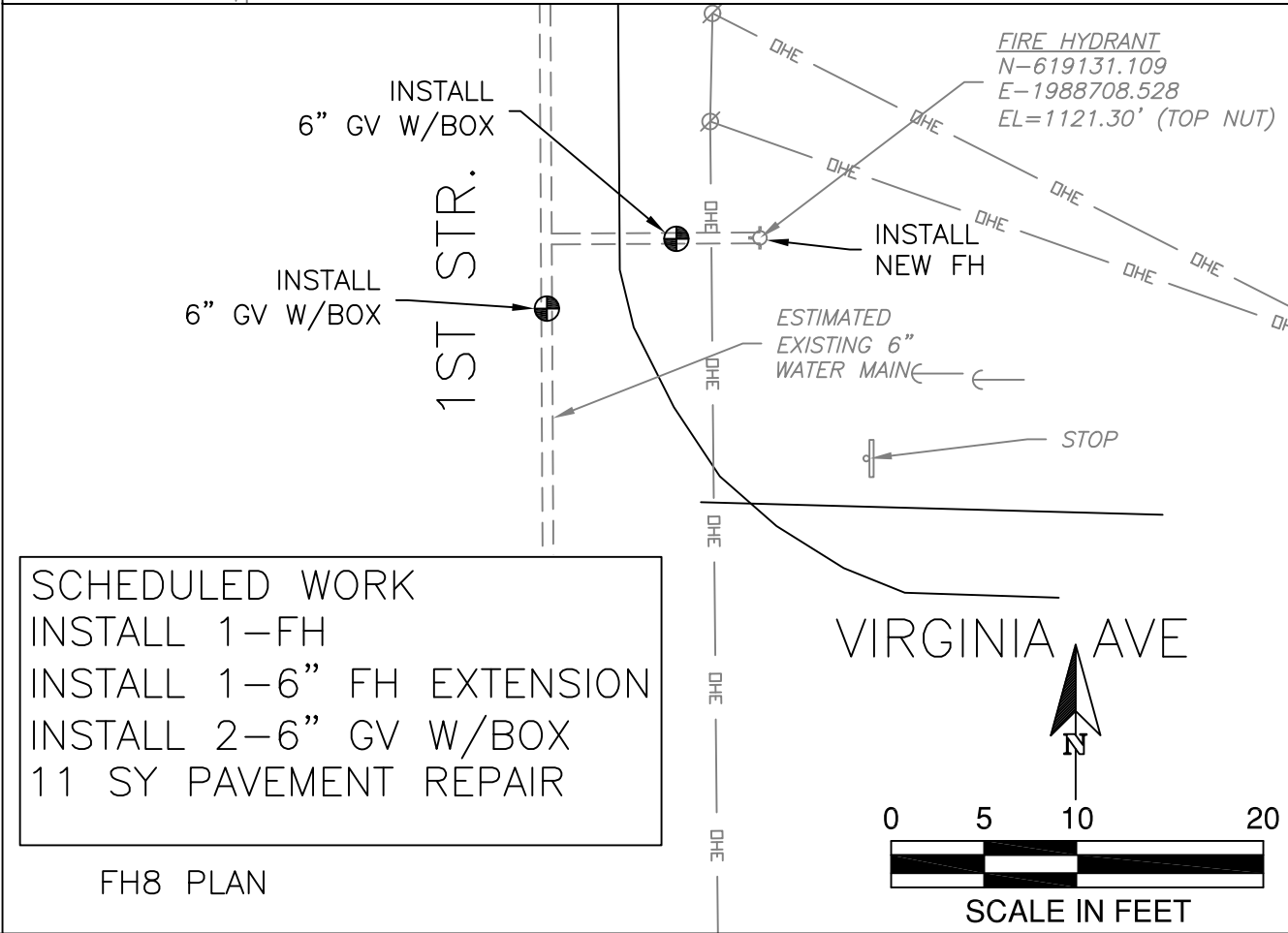
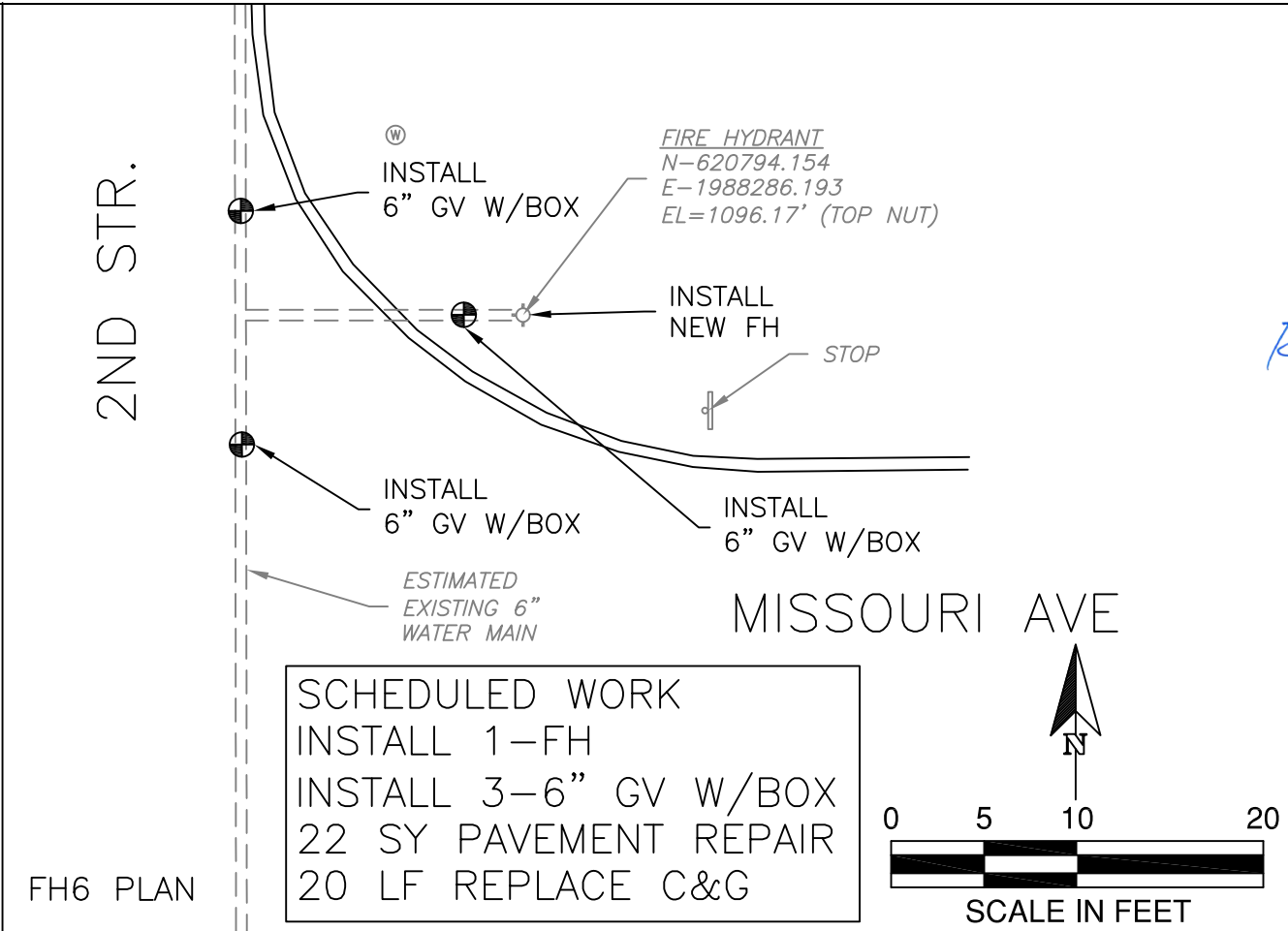
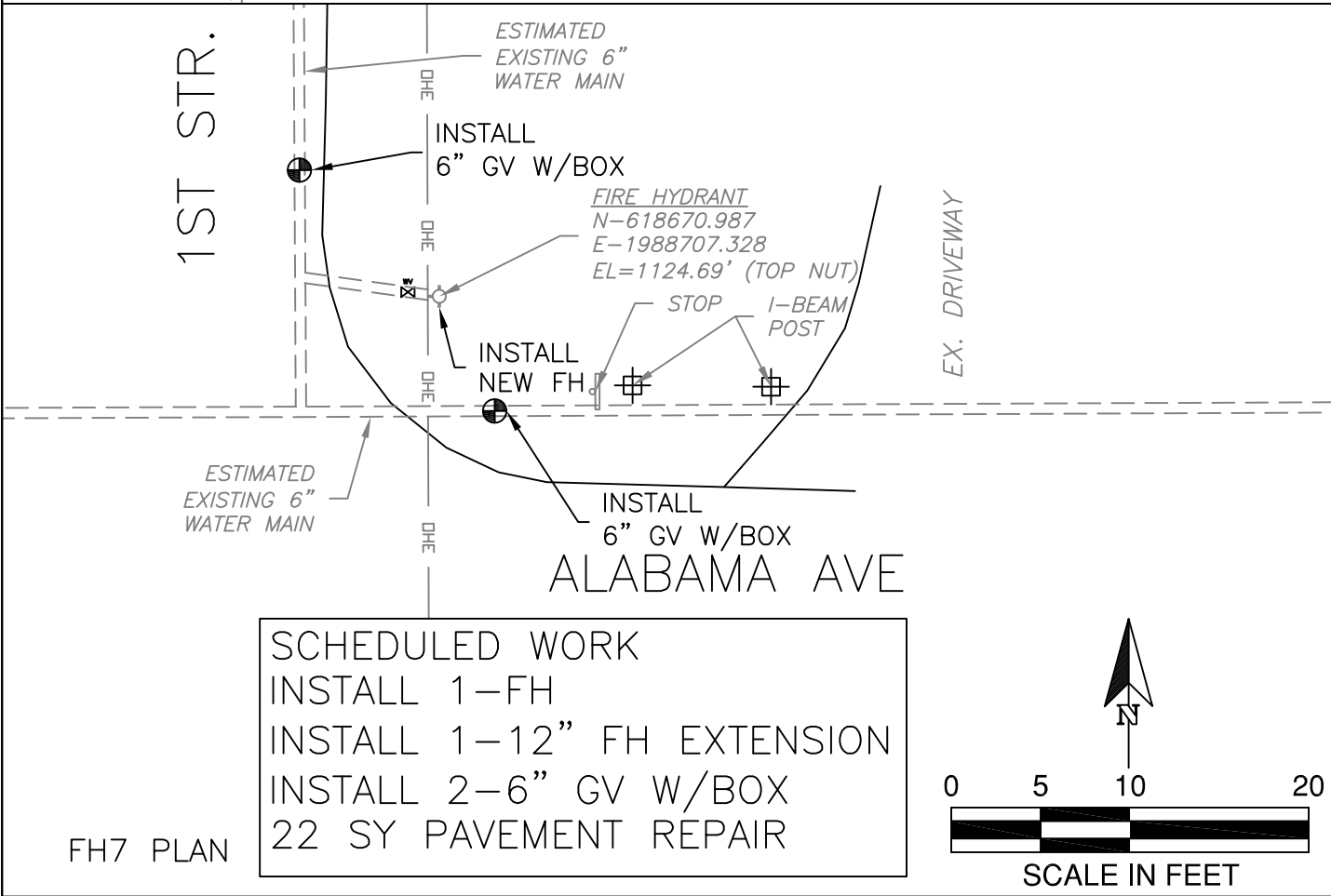
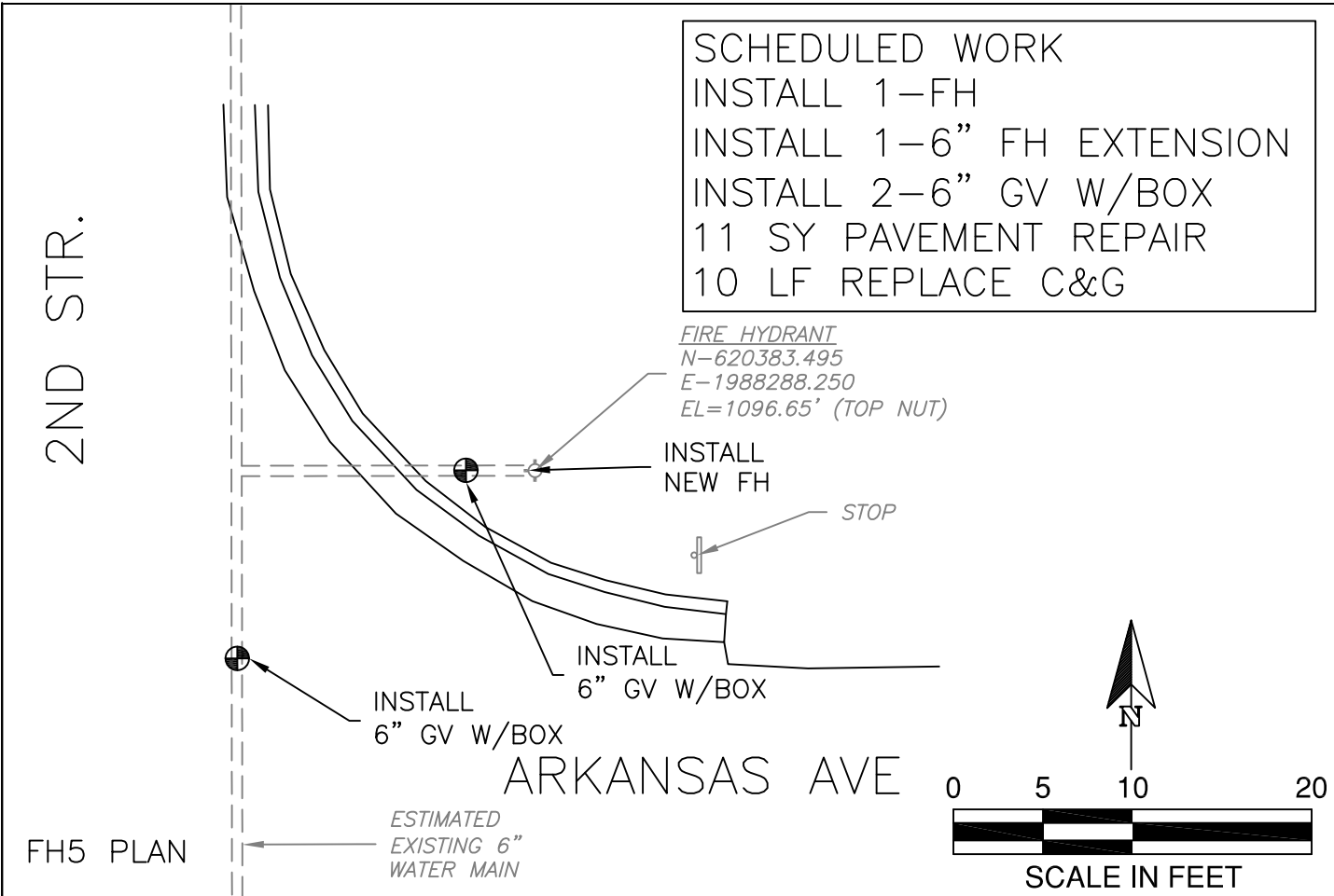
Project
RFP CMA-2302
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
FIRE HYDRANT PLAN SHEET

Scale: AS NOTED
Drawn: RSV
Checked: RSV
Date: 4/26/2023

Sheet #:
8



(digitally signed)
 4/26/2023

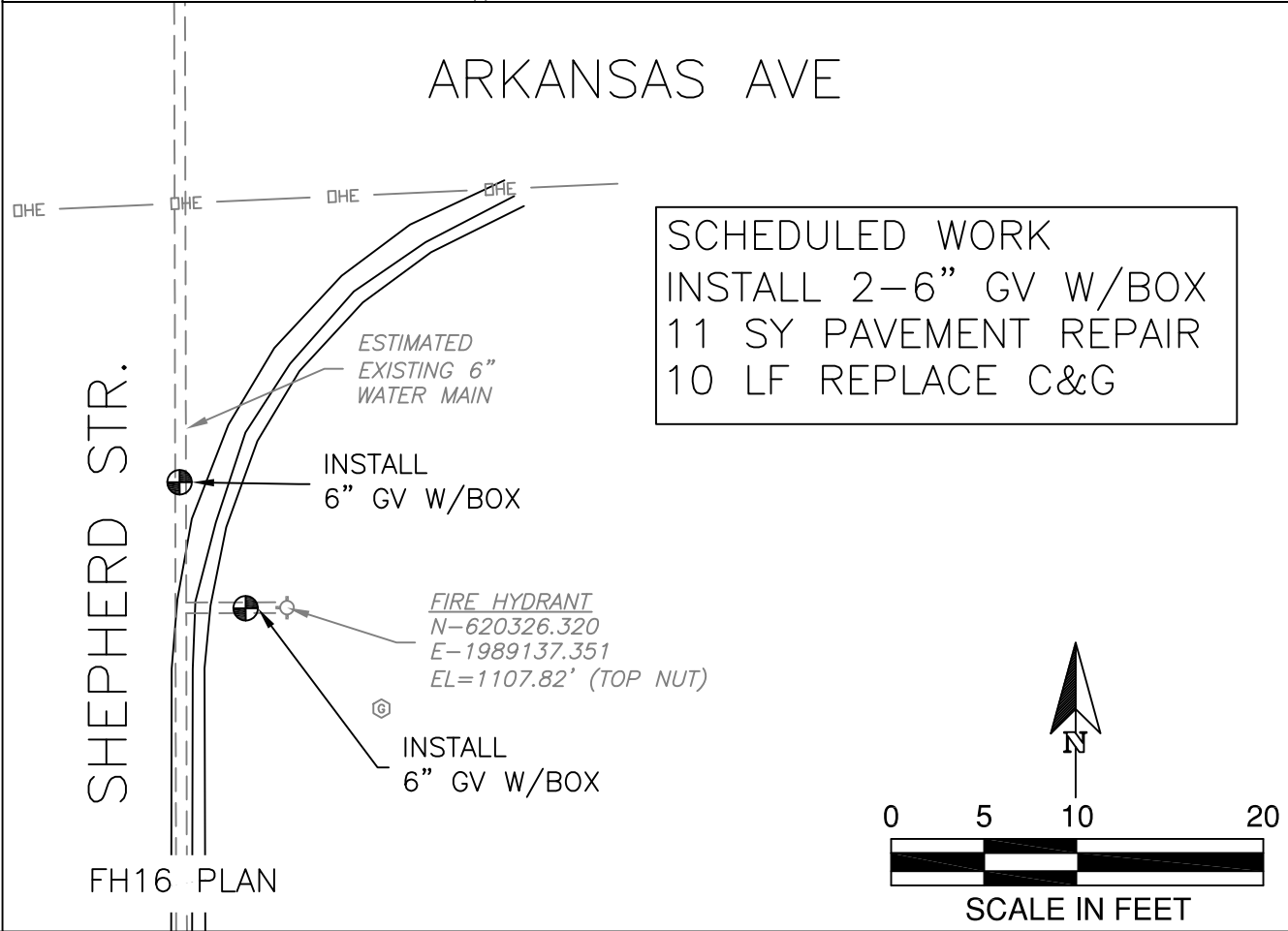
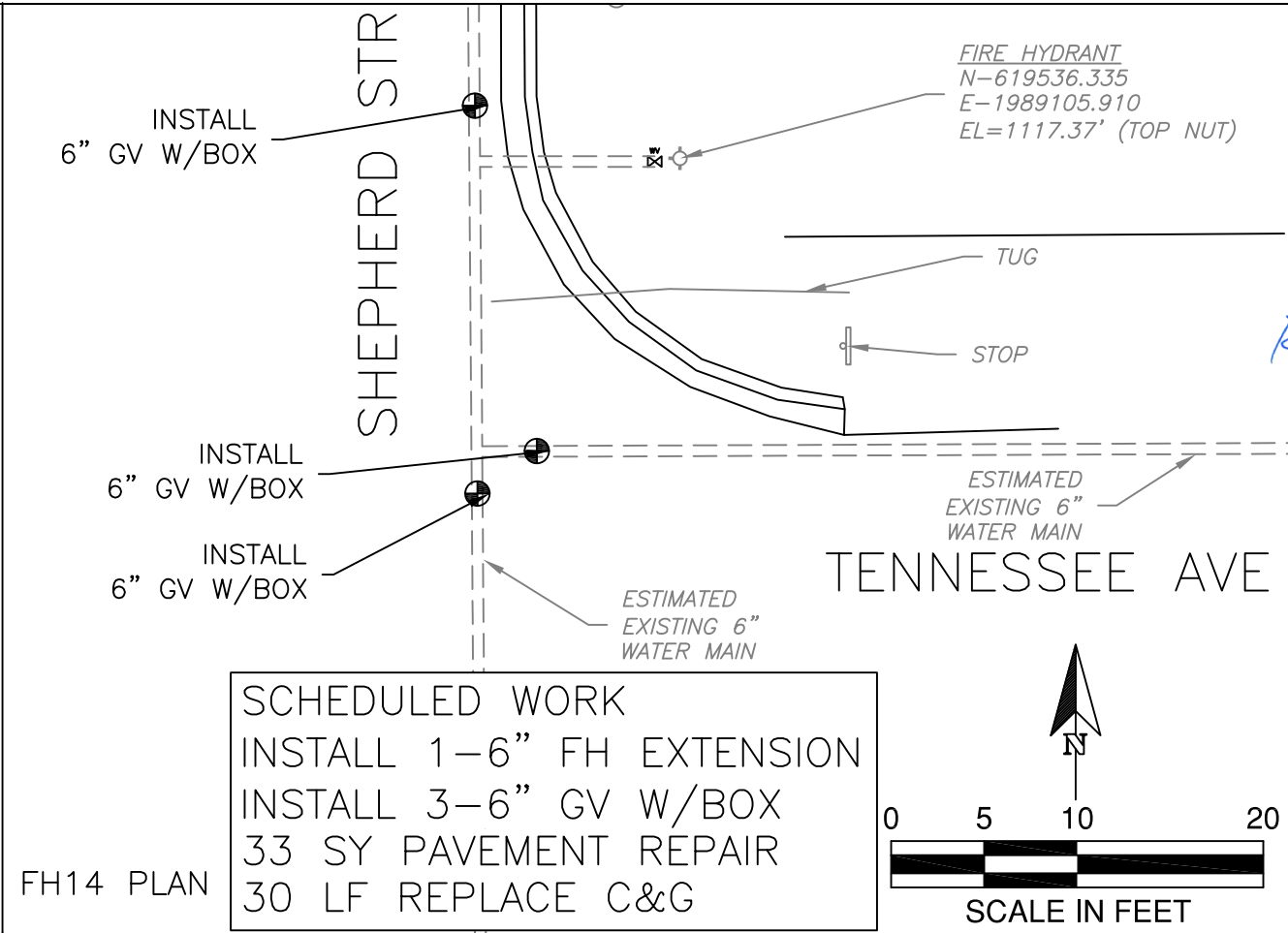
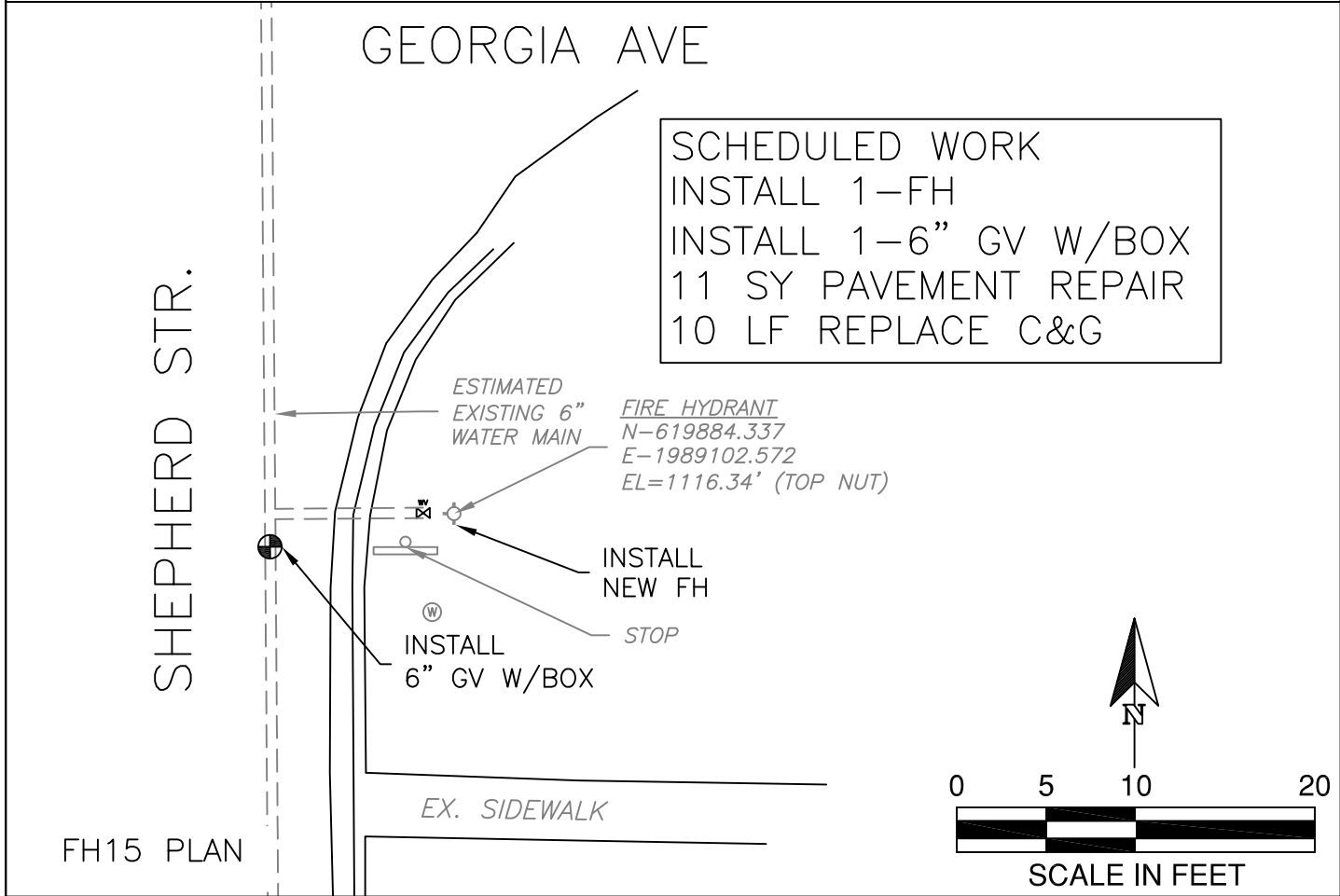
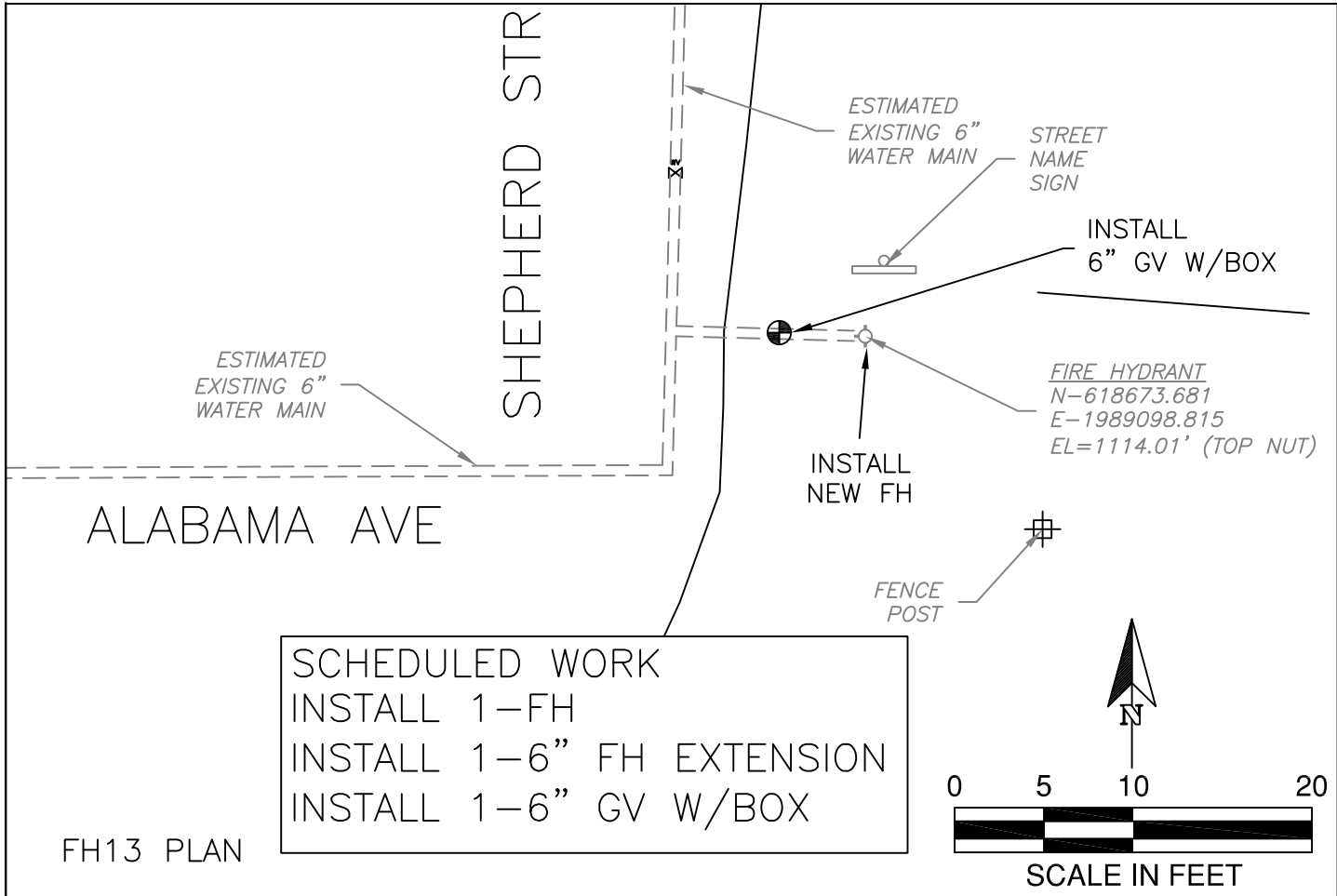
Project
RFP CMA-2302
 18608 CDBG 22
 Chickasha, OK

#	Description	Revisions	Date

Sheet Title
**FIRE HYDRANT
 PLAN SHEET**

Scale: AS NOTED
 Drawn: RSV
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 Date: 4/26/2023

Sheet #:
9



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4/26/2023

Project
RFP CMA-2302
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
**FIRE HYDRANT
PLAN SHEET**

Scale: AS NOTED
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Checked: RSV
Date: 4/26/2023

Sheet #:
11

SCHEDULED WORK
INSTALL 1-12" FIRE
HYDRANT EXTENSION

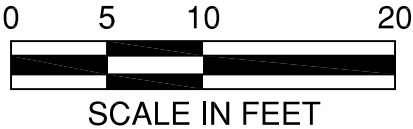
MISSOURI AVE

SHEPHERD STR.

ESTIMATED
EXISTING 6"
WATER MAIN

FIRE HYDRANT
N-620731.629
E-1989136.955
EL=1092.03' (TOP NUT)

APROXIMATE
LOCATION
EXISTING
WATER VALVE



FH17 PLAN



CHISHOLM TRAIL CONSULTING, LLC
OK CA7771
2124 SCOTT LANE
DUNCAN, OK 73533
580-467-8130
rscottv11@gmail.com



REGISTERED PROFESSIONAL ENGINEER
RANDALL
SCOTT
VAUGHN
15194
OKLAHOMA

(digitally signed)
4/26/2023

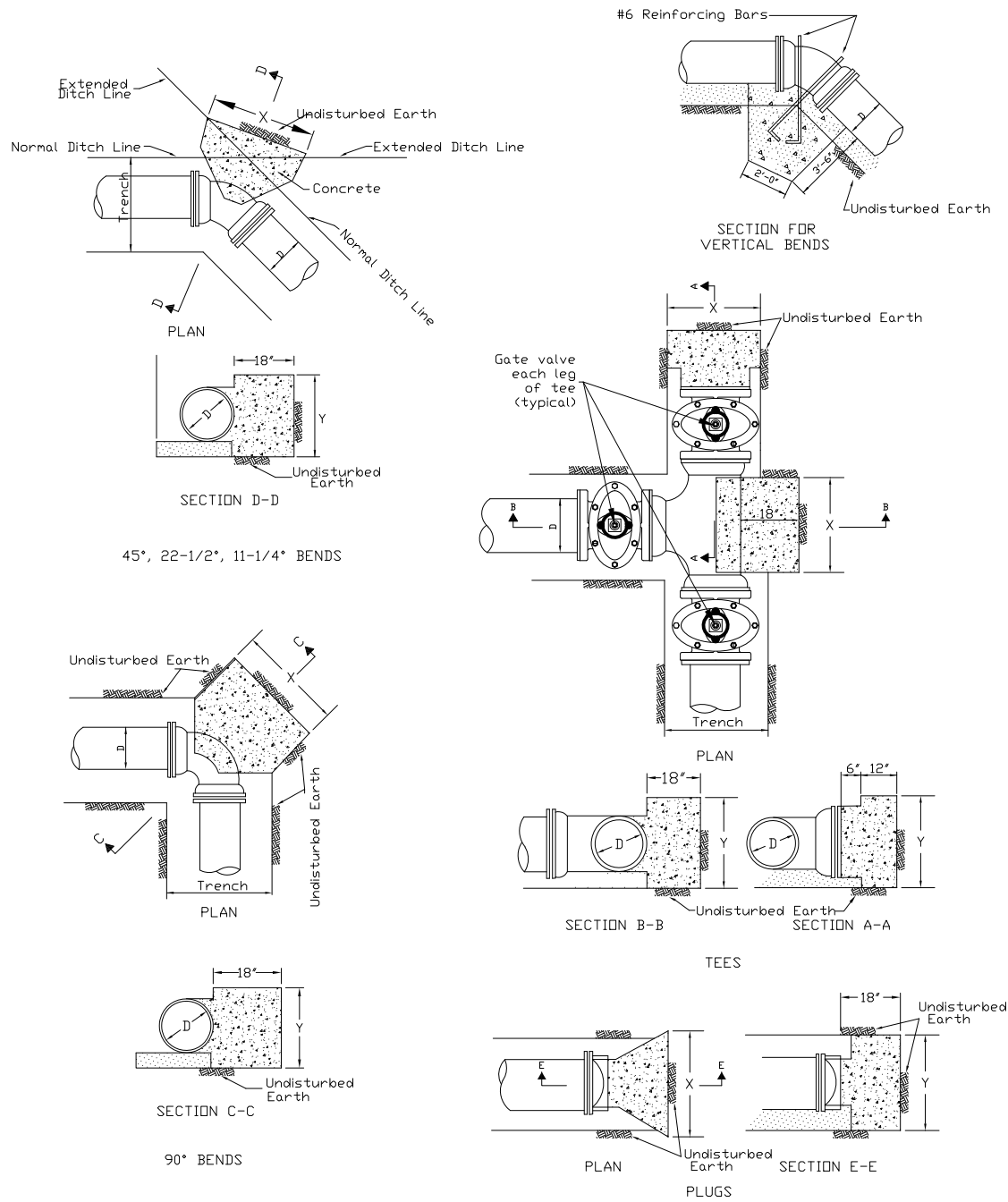
Project
RFP CMA-2302
18608 CDBG 22
Chickasha, OK

#	Description	Revisions	Date

Sheet Title
**FIRE HYDRANT
PLAN SHEET**

Scale: AS NOTED
Drawn: RSV
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Date: 4/26/2023

Sheet #:
12



Pipe Size (inches)	Trench Width (inches)	DIMENSIONS FOR CONCRETE THRUST BLOCKS (feet)											
		TEE, FH or PLUG		PLUG/BLOWOFF		90° Bends		45° Bends		22 1/2° Bends		11 1/4° Bends	
		X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
6	20	2.0	1.5	2.5	1.5	3.0	1.5	1.5	1.5	1.0	1.5	1.0	1.5
8	22	2.5	2.0	3.0	2.0	3.5	2.0	2.0	2.0	1.0	2.0	1.0	2.0
10	24	4.0	2.0	4.5	2.0	5.5	2.0	3.0	2.0	1.5	2.0	1.0	2.0
12	28	4.0	3.0	4.5	3.0	5.0	3.0	3.0	3.0	1.5	3.0	1.0	3.0

CONCRETE THRUST BLOCKS SHALL BE CAST IN PLACE CONCRETE WITH 3,500 PSI COMPRESSIVE STRENGTH AT 3 DAYS.

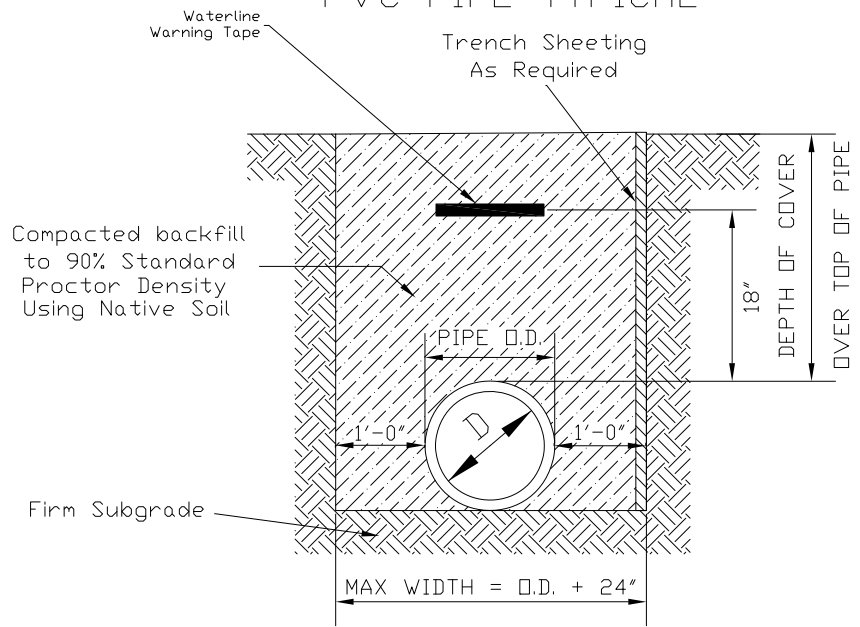
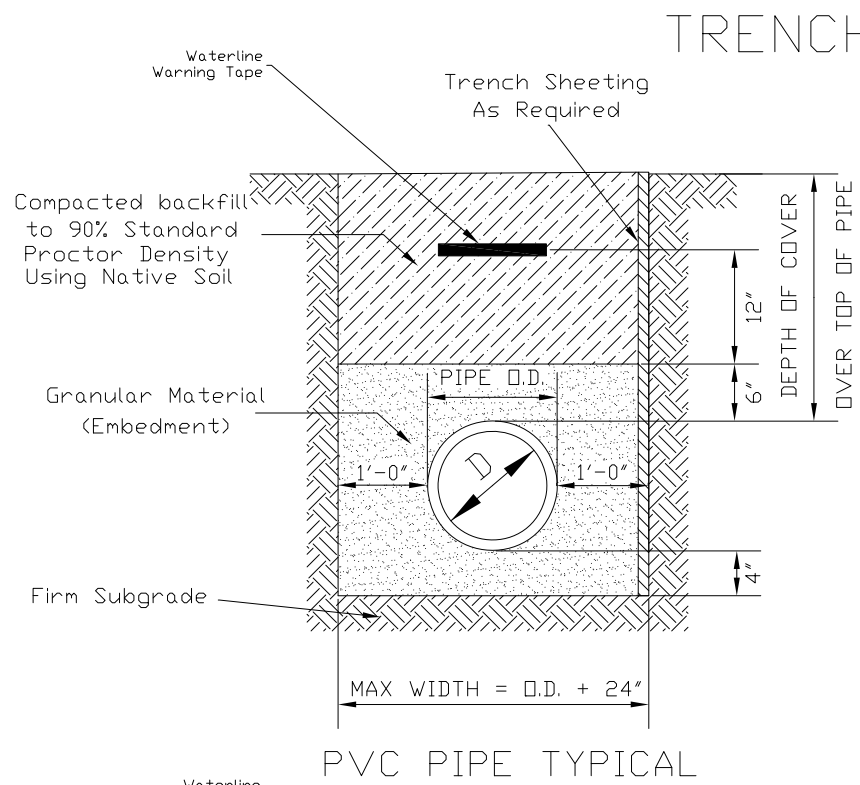
PLACE MINIMUM 8 MIL VISQUEEN BETWEEN THRUST BLOCK AND PIPE OR FITTING

ALL THRUST BLOCKS SHALL BE FORMED USING LUMBER OR SIMILAR SUITABLE MATERIAL

CONCRETE THRUST BLOCK DETAILS

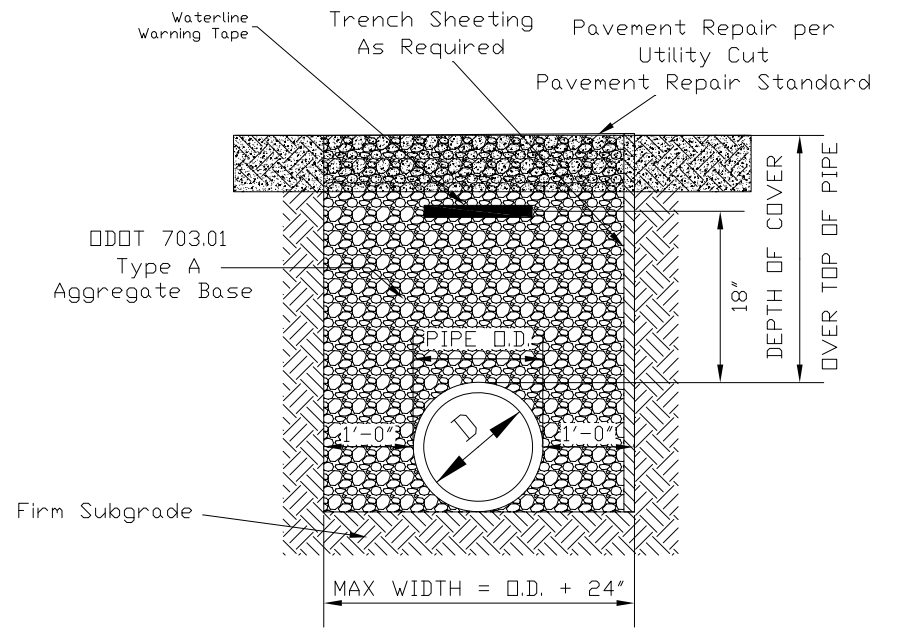
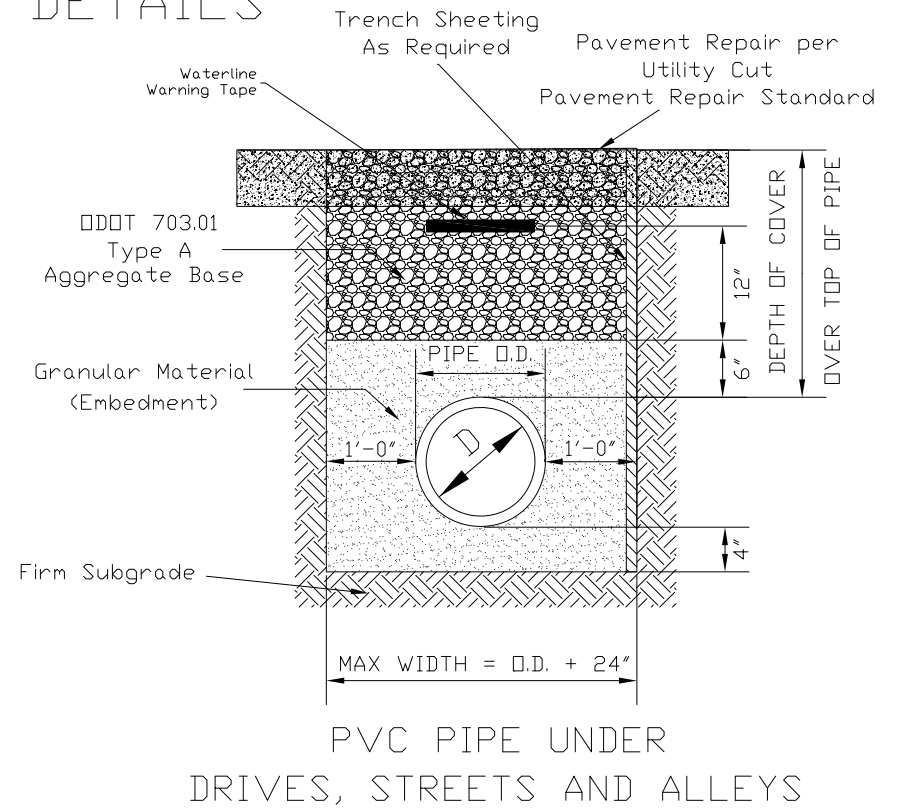
GENERAL INSTALLATION NOTES

1. PLACE WATER MAIN THREE (3) FEET BEHIND CURB.
2. DO NOT PLACE WATER MAIN UNDER STREETS, ROADS OR CURBS, EXCEPT AT CROSSINGS.
3. PLACE GATE VALVES ON EACH LEG OF ALL TEES.



DUCTILE IRON PIPE TYPICAL

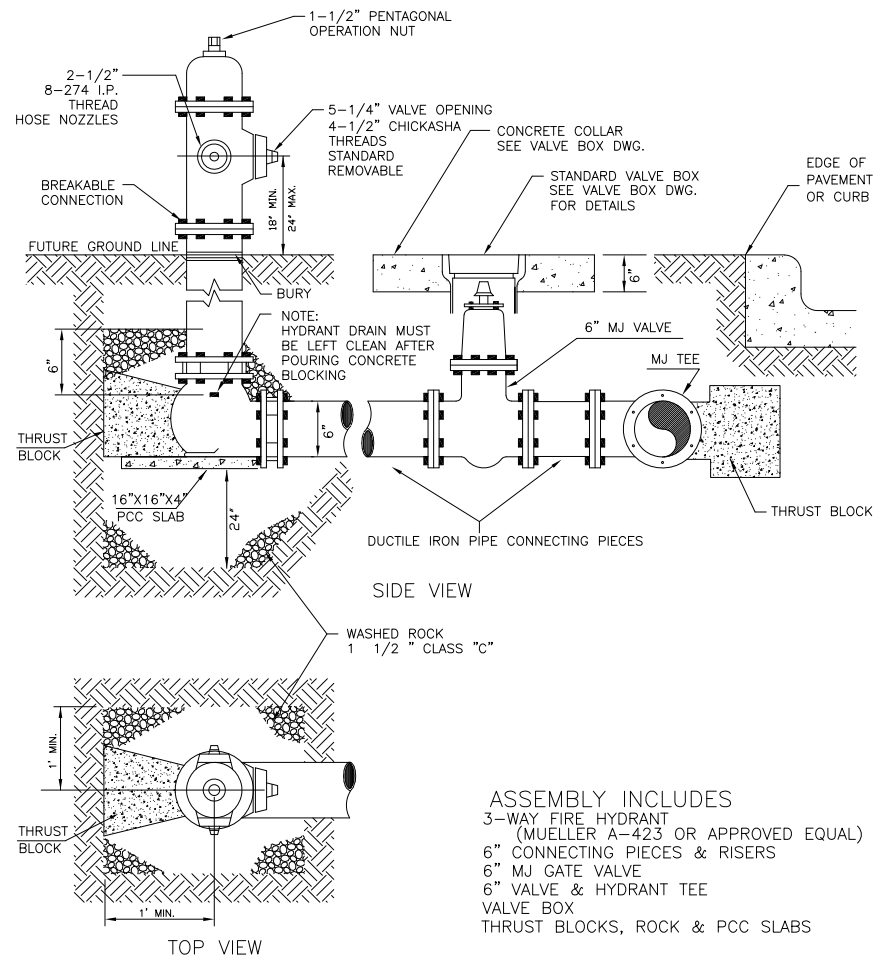
TRENCH WIDTHS		
NOMINAL PIPE DIAMETER (INCHES)	MINIMUM TRENCH WIDTH (INCHES)	MAXIMUM TRENCH WIDTH (INCHES)
6	20	31
8	22	36
10	24	38
12	28	40



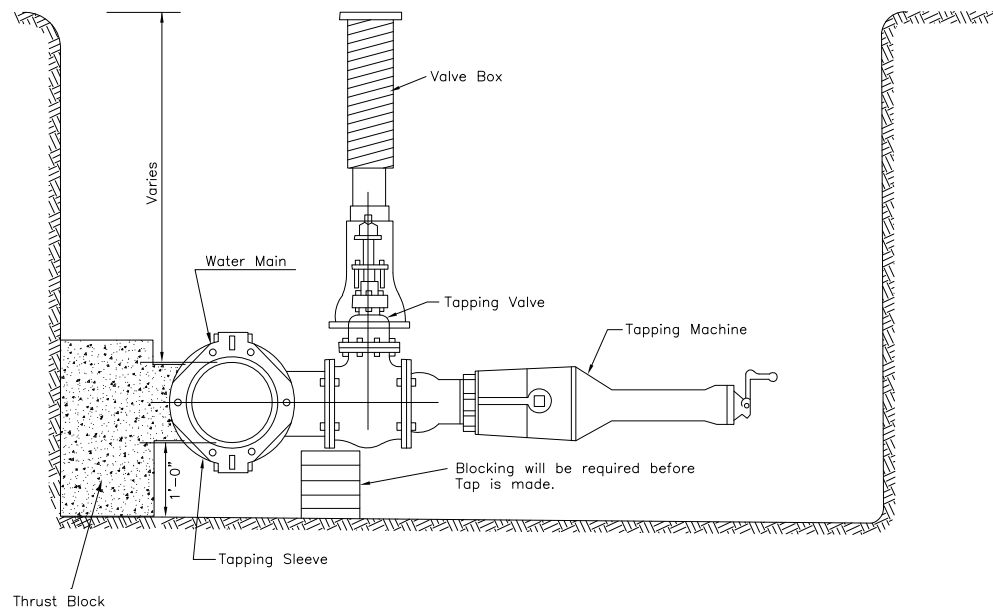
DUCTILE IRON PIPE UNDER DRIVES, STREETS AND ALLEYS

PREPARED BY: CHISHOLM TRAIL CONSULTING, LLC 2124 SCOTT LANE DUNCAN, OKLAHOMA 73533 CA 0K7771 RANDALL SCOTT VAUGHN, P.E. 15194	CITY OF CHICKASHA, OKLAHOMA STANDARD DRAWINGS	
	APPROVED AND ADOPTED BY THE CITY COUNCIL THIS ____ DAY OF _____, 202___.	
	MAYOR _____	ATTEST: CITY CLERK _____
	WATER MAIN DETAILS DO NOT SCALE	

DIGITALLY SIGNED 12/1/2022

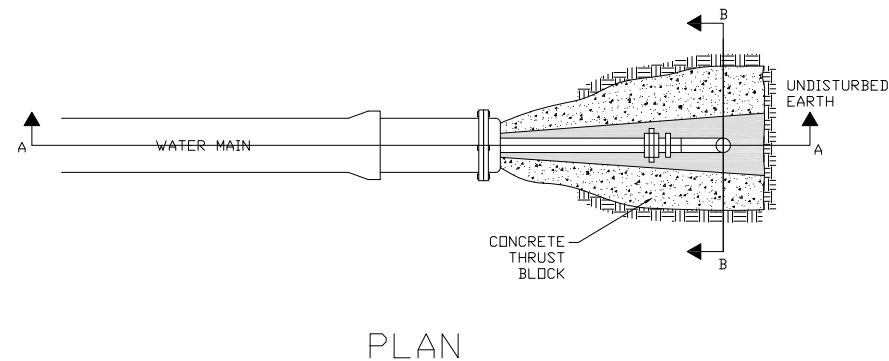


FIRE HYDRANT ASSEMBLY

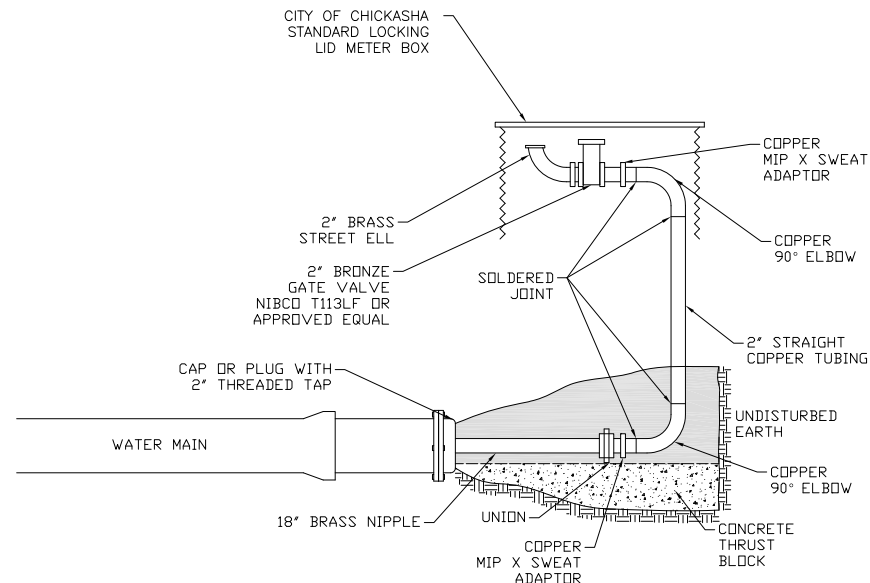


BLOCKING FOR TAPPING VALVE

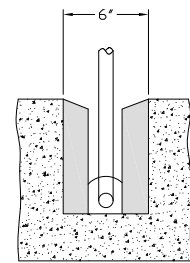
2" BLOWOFF FOR DEAD END WATERLINE



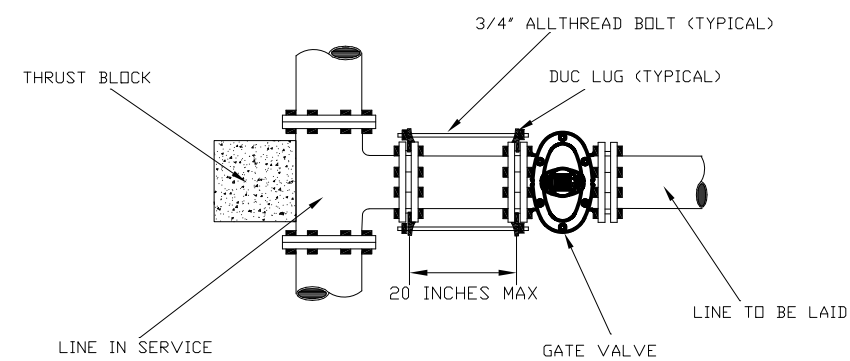
PLAN



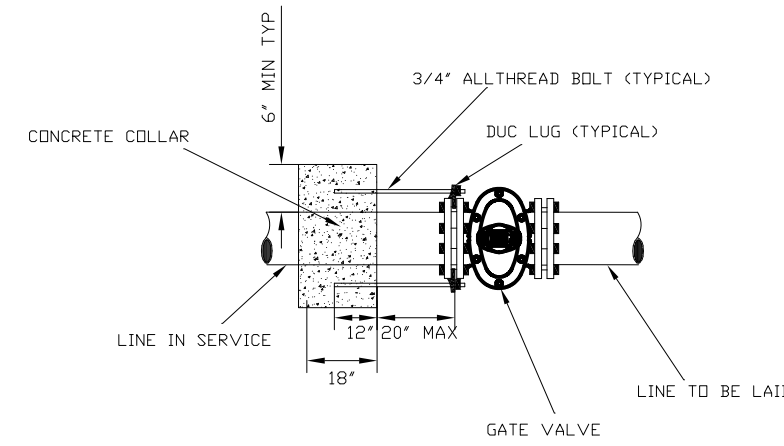
SECTION A-A



SECTION B-B



NOTE: USE NUMBER OF BOLTS W/ DUC LUGS ACCORDING TO THE SCHEDULE BELOW, EQUALLY SPACED.



NOTE: USE NUMBER OF BOLTS W/ DUC LUGS ACCORDING TO THE SCHEDULE BELOW, EQUALLY SPACED.

PIPE SIZE	MINIMUM NUMBER OF BOLTS
6"	2
8"	3
10"	4
12"	4

TYPICAL MECHANICAL JOINT RESTRAINTS
USING 3/4-INCH ALL-THREAD BOLTS AND DUC LUGS

PREPARED BY:
CHISHOLM TRAIL CONSULTING, LLC
2124 SCOTT LANE
DUNCAN, OKLAHOMA 73533
CA 0K7771
RANDALL SCOTT VAUGHN, P.E. 15194

PROFESSIONAL ENGINEER
RANDALL SCOTT VAUGHN
15194
OKLAHOMA

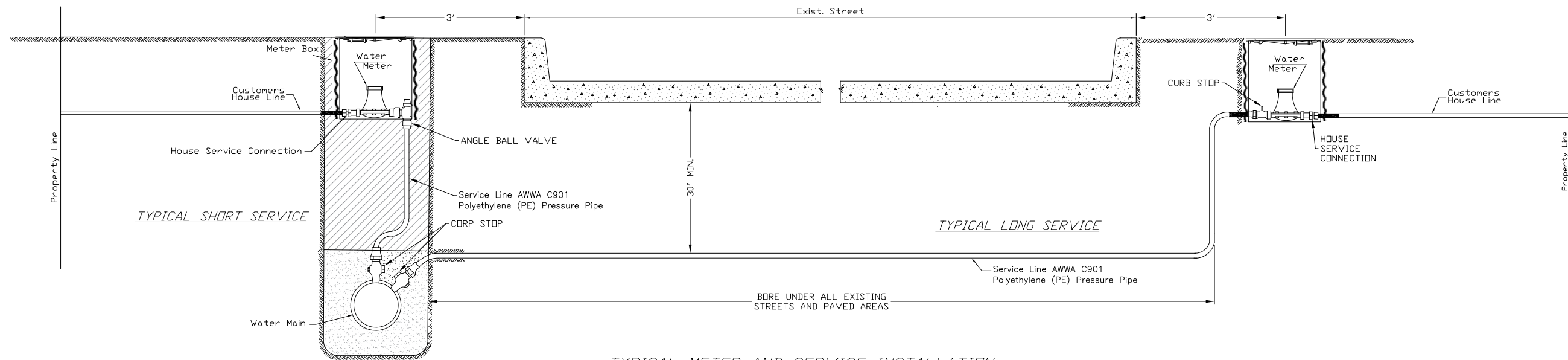
DIGITALLY SIGNED 12/1/2022

CITY OF CHICKASHA, OKLAHOMA
STANDARD DRAWINGS

APPROVED AND ADOPTED BY THE CITY COUNCIL
THIS ____ DAY OF _____, 202__.

MAYOR _____ ATTEST: CITY CLERK _____

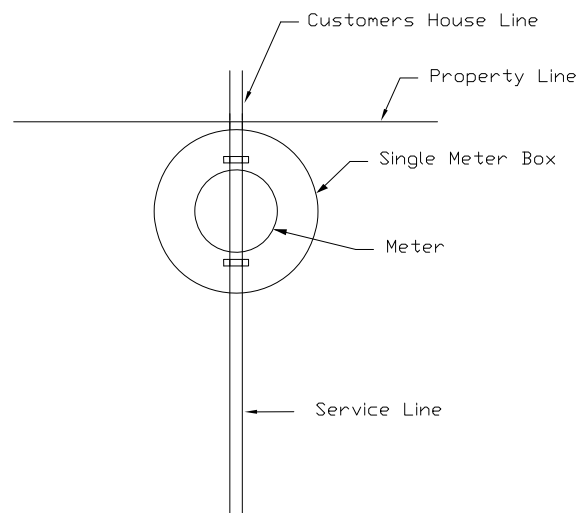
WATER MAIN DETAILS
DO NOT SCALE



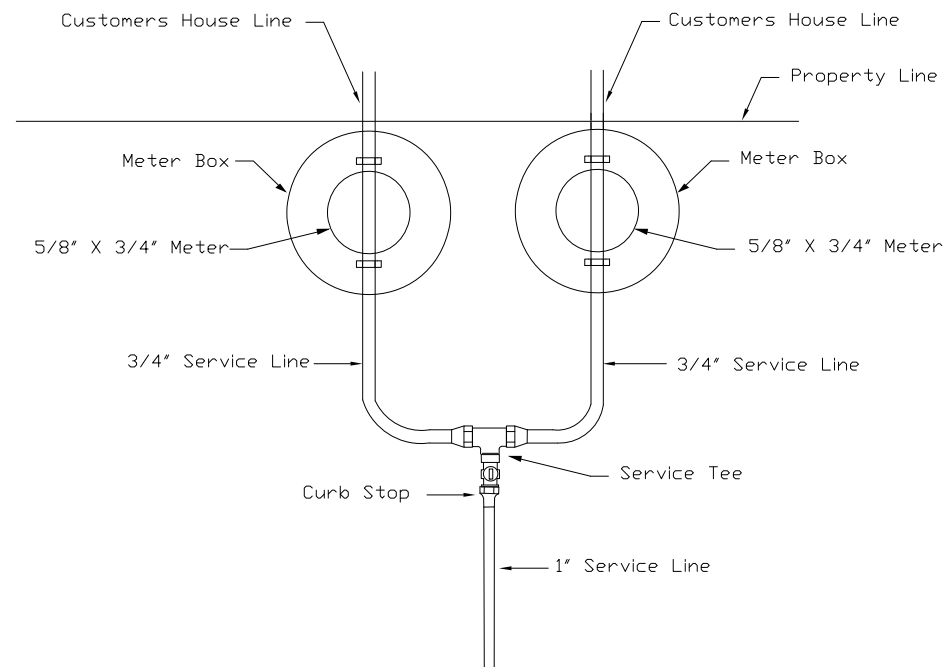
*TYPICAL METER AND SERVICE INSTALLATION
(NOT TO SCALE)*

METER AND SERVICE LINE INSTALLATION NOTES

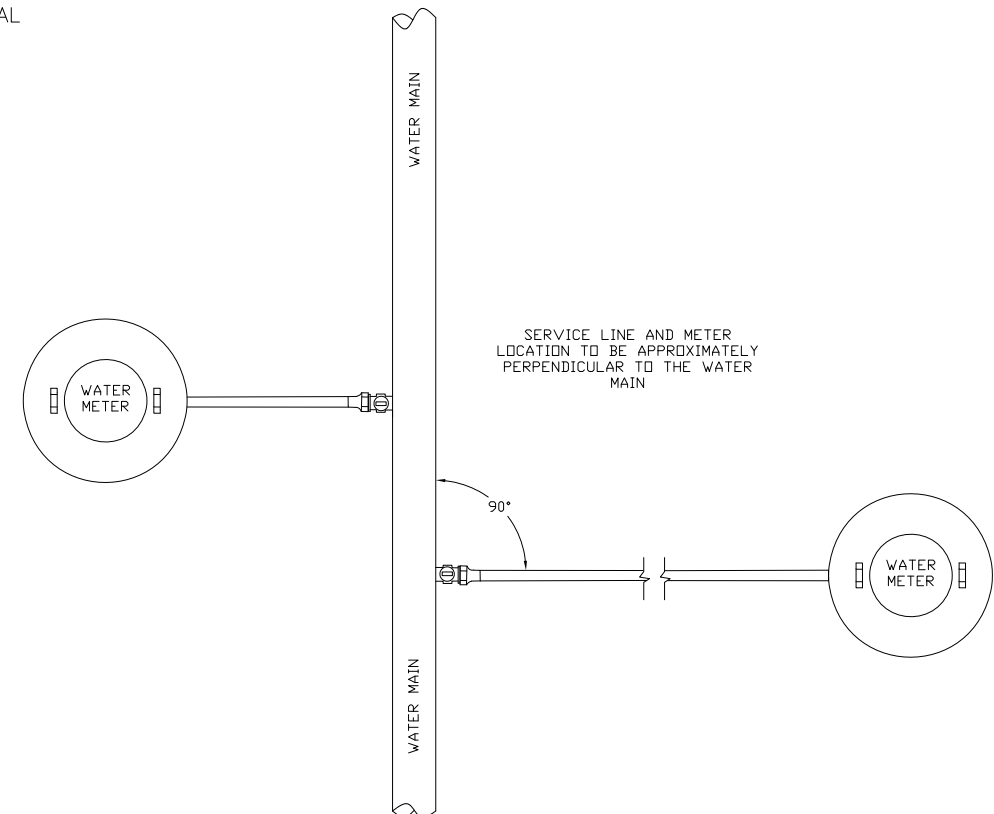
1. DEVELOPER SHALL INSTALL SERVICE LINES FROM CORP STOP TO CURB STOP OR ANGLE BALL VALVE, AS APPLICABLE.
2. DEVELOPER SHALL PLACE TEMPORARY MARKER PIPE APPROVED BY THE OWNER OVER END OF EACH SERVICE LINE.
3. PLACE TRACER WIRE WITH SERVICE LINE. REFER TO SHEET WM5 FOR TYPICAL INSTALLATION REQUIREMENTS.
4. DO NOT PLACE SERVICE LINES UNDER DRIVEWAYS.
5. CITY OF CHICKASHA/CHICKASHA MUNICIPAL AUTHORITY PERSONNEL WILL INSTALL METERS AND METER BOXES.



TYPICAL SINGLE METER SETTING



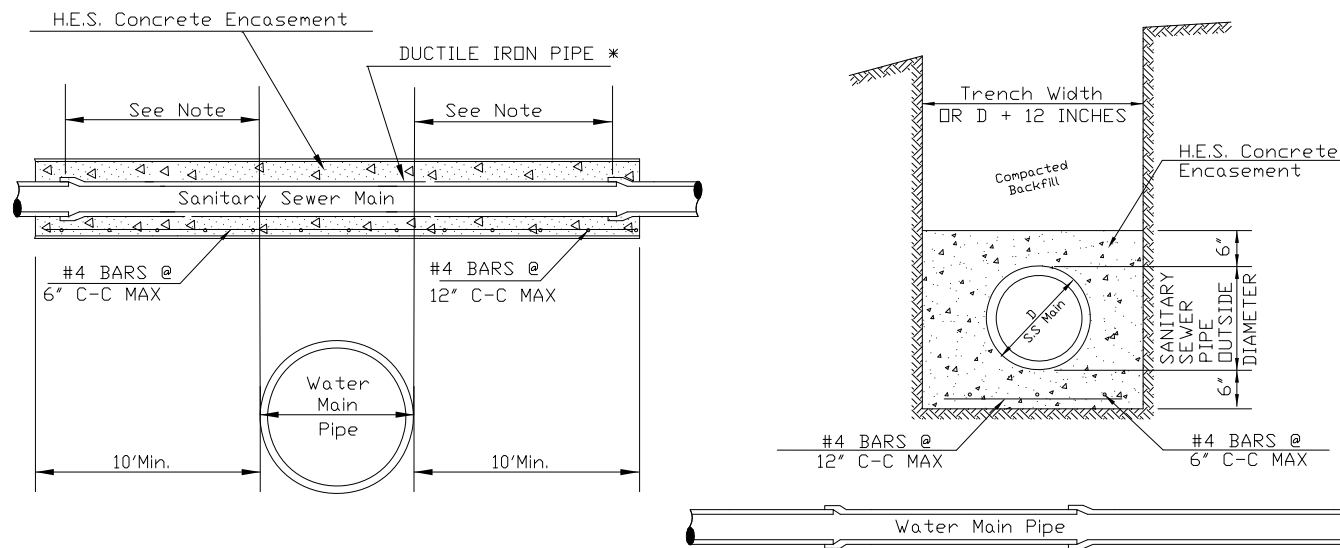
TYPICAL DOUBLE METER SETTING



ALL FITTINGS SHALL BE MUELLER OR APPROVED EQUAL
CORP STOP: MUELLER H-15000
CURB STOP: MUELLER H-15275
SERVICE TEE: MUELLER H-15386

NOTE: DOUBLE METER SETTINGS ARE ONLY PERMITTED WHEN SERVING TWO 5/8" X 3/4" METERS FROM A ONE INCH SERVICE LINE, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

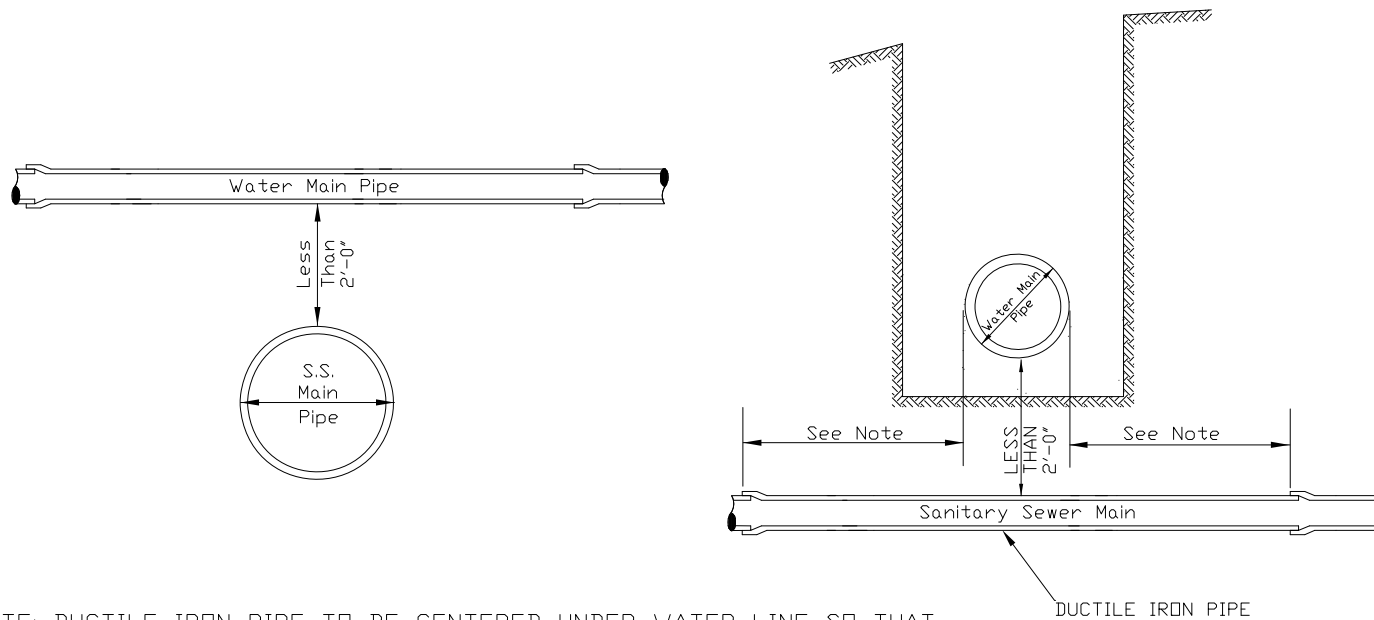
PREPARED BY: CHISHOLM TRAIL CONSULTING, LLC 2124 SCOTT LANE DUNCAN, OKLAHOMA 73533 CA 0K7771 RANDALL SCOTT VAUGHN, P.E. 15194		CITY OF CHICKASHA, OKLAHOMA STANDARD DRAWINGS	
APPROVED AND ADOPTED BY THE CITY COUNCIL THIS ____ DAY OF ____ 202__		MAYOR _____ ATTEST: CITY CLERK _____	
DIGITALLY SIGNED		WATER MAIN DETAILS DO NOT SCALE	
12/1/2022		Page 181 of 186	



NOTE: CONCRETE ENCASEMENT IS TO EXTEND 4-INCHES PAST THE NEAREST JOINT AT OR BEYOND THE 10-FOOT MINIMUM SHOWN. REINFORCEMENT STEEL TO HAVE TWO INCHES OF CONCRETE COVER. THE ENGINEER MAY APPROVE OTHER MEANS OF STRUCTURAL SUPPORT OF THE SANITARY SEWER MAIN.

*NOTE: IF CLEARANCE BETWEEN WATER MAIN AND SS MAIN IS LESS THAN 2 FEET DUCTILE IRON PIPE TO BE CENTERED OVER WATER LINE SO THAT JOINTS ARE PLACED EQUAL DISTANCE FROM CROSSING AS SHOWN.

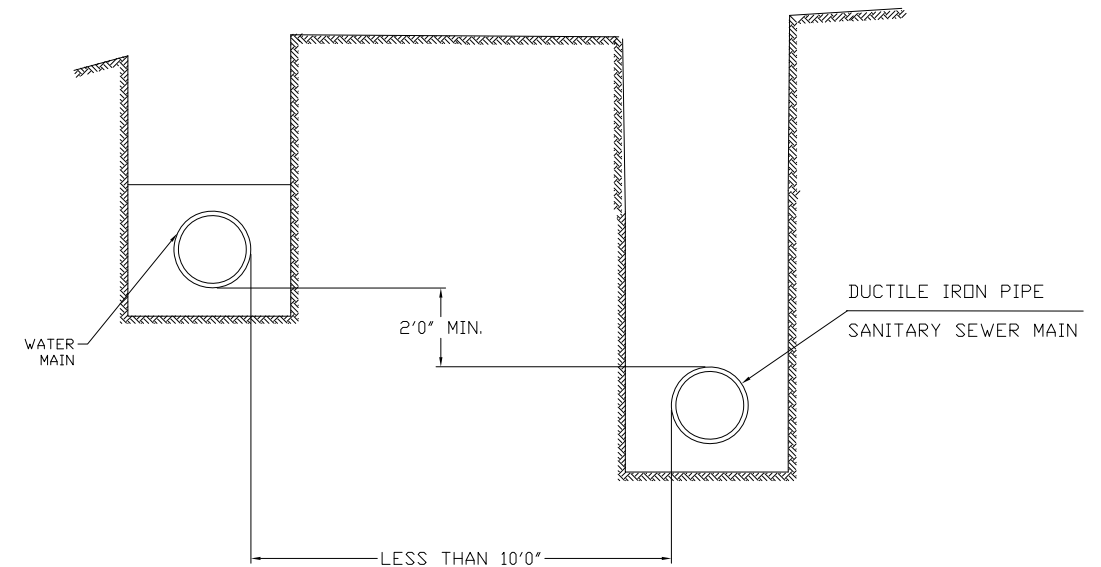
TYPICAL SECTIONS FOR WATER MAIN BELOW SEWER MAIN



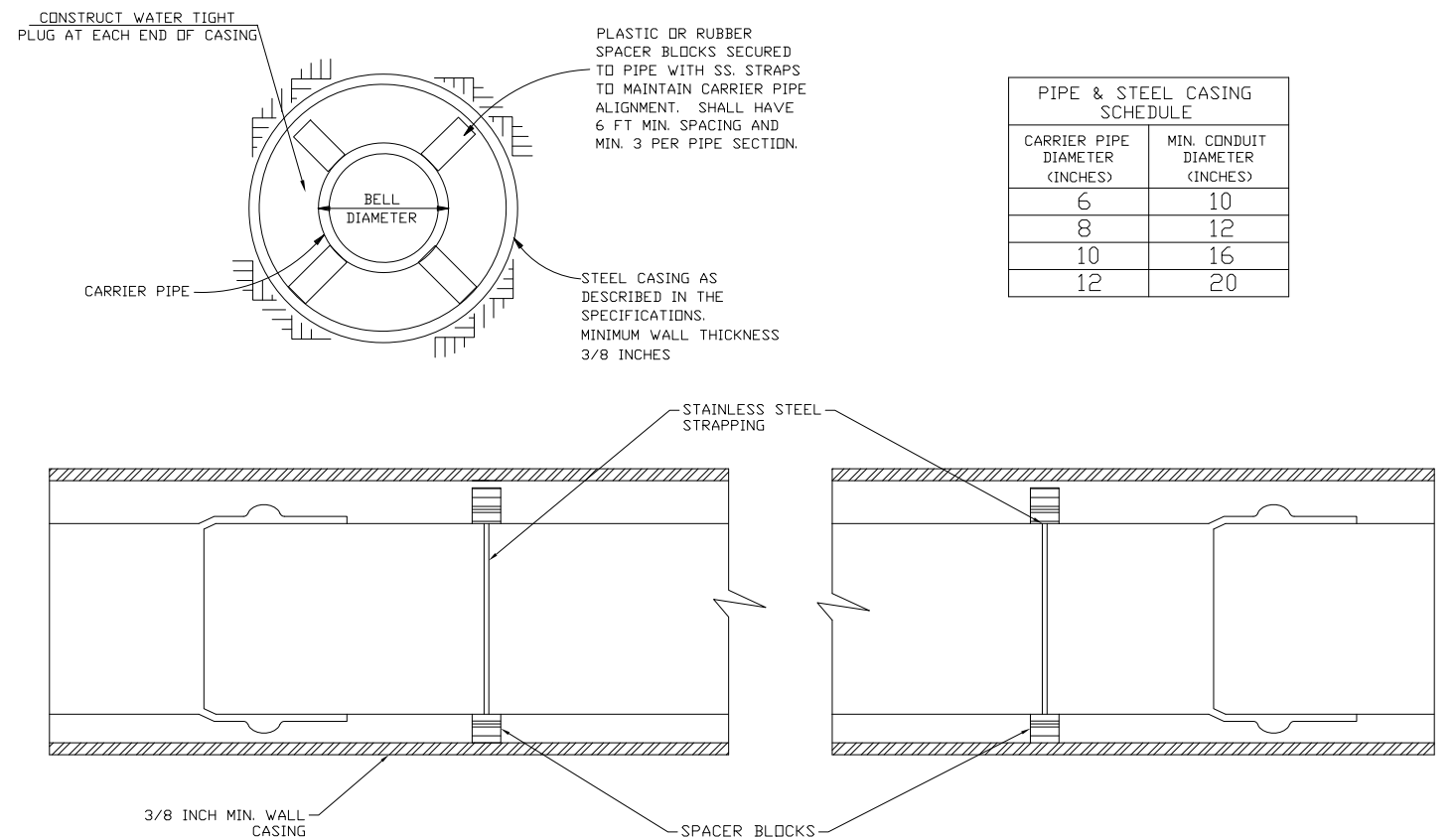
NOTE: DUCTILE IRON PIPE TO BE CENTERED UNDER WATER LINE SO THAT JOINTS ARE PLACED EQUAL DISTANCE FROM CROSSING AS SHOWN.

TYPICAL SECTIONS FOR WATER MAIN LESS THAN 2-FOOT ABOVE SEWER MAIN

WATER LINE AND SEWER CROSSINGS



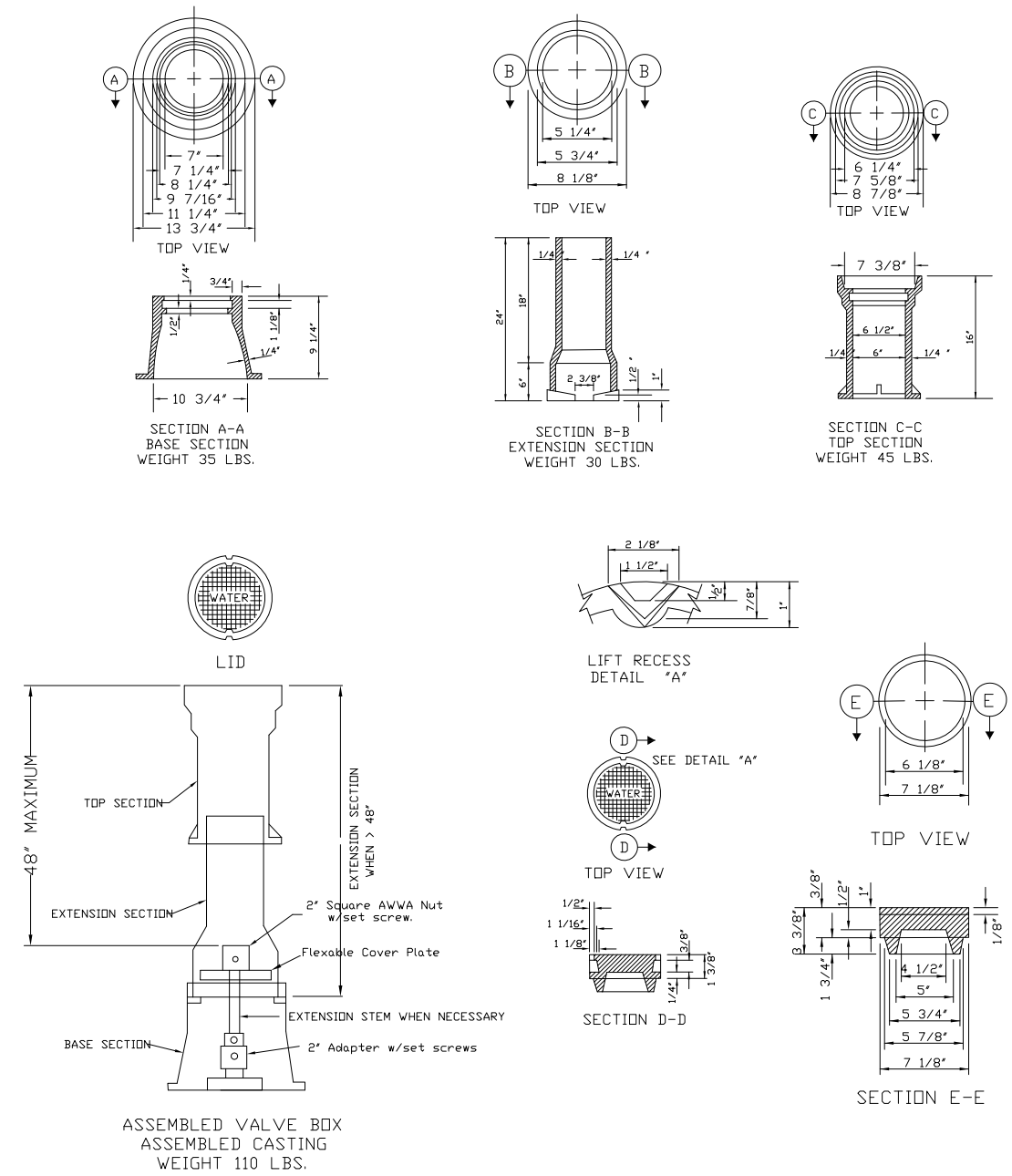
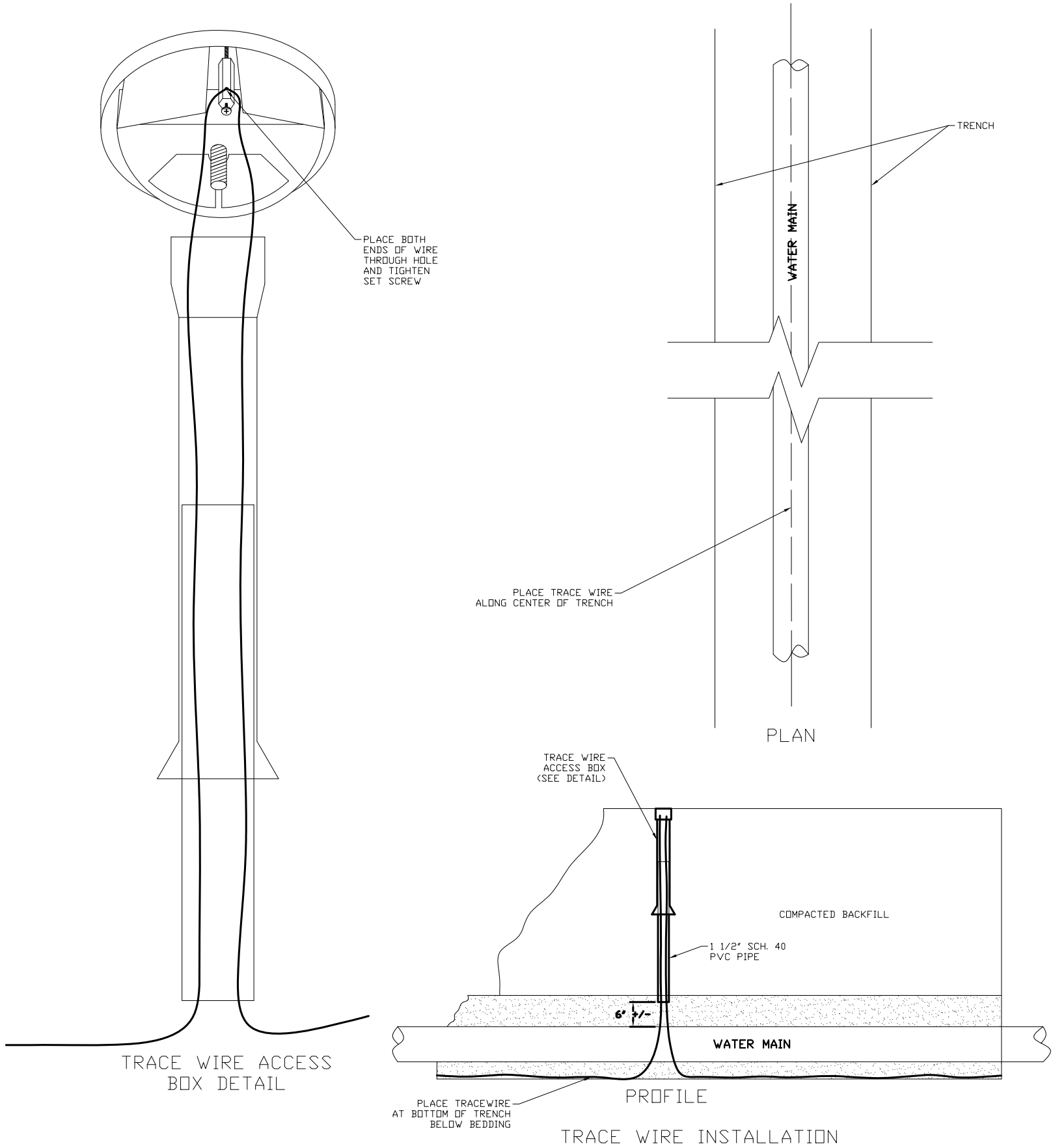
WATER AND SEWER LINES WITH HORIZONTAL CLEARANCE OF LESS THAN TEN FEET



PIPE & STEEL CASING SCHEDULE	
CARRIER PIPE DIAMETER (INCHES)	MIN. CONDUIT DIAMETER (INCHES)
6	10
8	12
10	16
12	20

BORING AND CASING

PREPARED BY: CHISHOLM TRAIL CONSULTING, LLC 2124 SCOTT LANE DUNCAN, OKLAHOMA 73533 CA 0K7771 RANDALL SCOTT VAUGHN, P.E. 15194		CITY OF CHICKASHA, OKLAHOMA STANDARD DRAWINGS APPROVED AND ADOPTED BY THE CITY COUNCIL THIS ____ DAY OF _____, 202___.	
MAYOR _____		ATTEST: CITY CLERK _____	
WATER MAIN DETAILS DO NOT SCALE		12/1/2022	



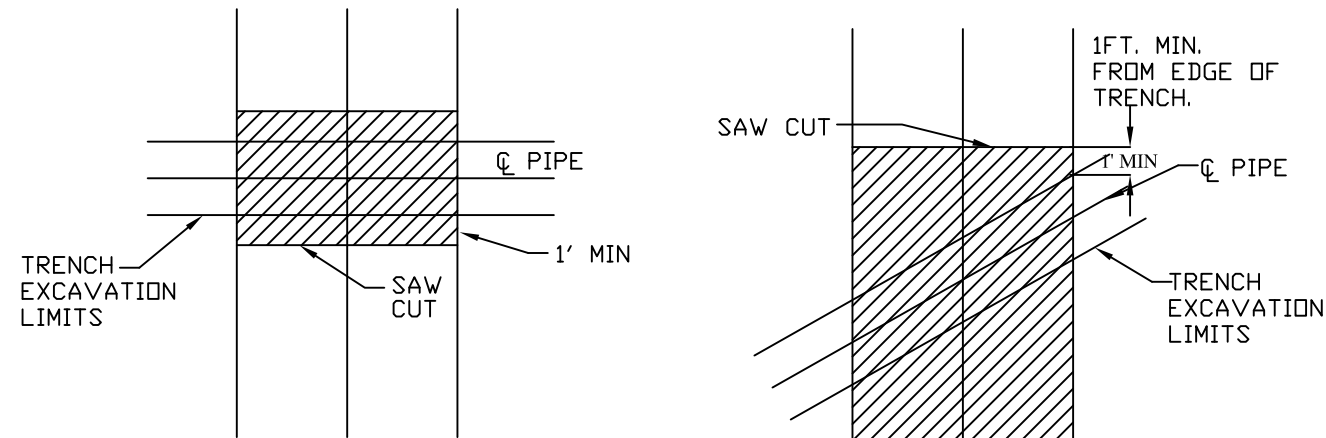
- NOTES:
1. WATER LINE CONTRACTOR SHALL PLACE TWO FOOT (2') SQUARE CONCRETE COLLAR SIX INCHES (6") THICK AROUND EACH WATER VALVE BOX TOP AFTER FINAL GRADING HAS BEEN COMPLETED AND TRENCHES HAVE SETTLED. ALL COST OF COLLAR TO BE INCLUDED IN THE COST OF THE VALVE BOX.
 2. VALVE BOXES REQUIRING OVER TWO ADDITIONAL BOTTOM SECTIONS SHALL BE EXTENDED USING CAST OR DUCTILE IRON PIPE WITH A BOTTOM AND TOP SECTION PLACED ON TOP OF THE CAST OR DUCTILE IRON PIPE.

CAST IRON VALVE BOX AND LID

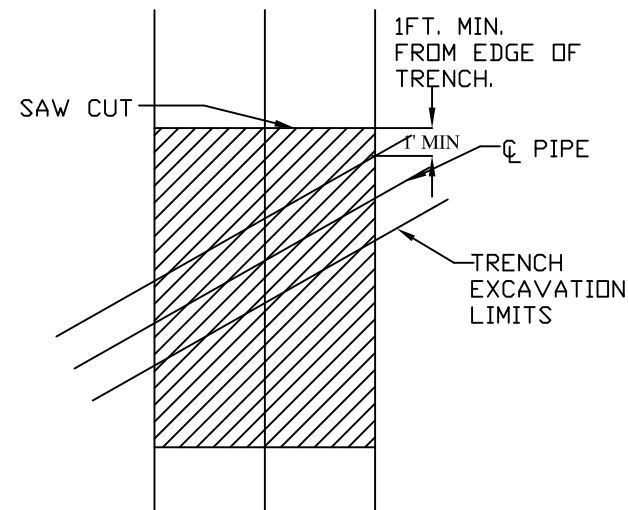
PREPARED BY: CHISHOLM TRAIL CONSULTING, LLC 2124 SCOTT LANE DUNCAN, OKLAHOMA 73533 CA 0K7771 RANDALL SCOTT VAUGHN, P.E. 15194	CITY OF CHICKASHA, OKLAHOMA STANDARD DRAWINGS	
	APPROVED AND ADOPTED BY THE CITY COUNCIL THIS ____ DAY OF _____, 202__.	
	_____ MAYOR	_____ ATTEST: CITY CLERK
	WATER MAIN DETAILS DO NOT SCALE	

DIGITALLY SIGNED

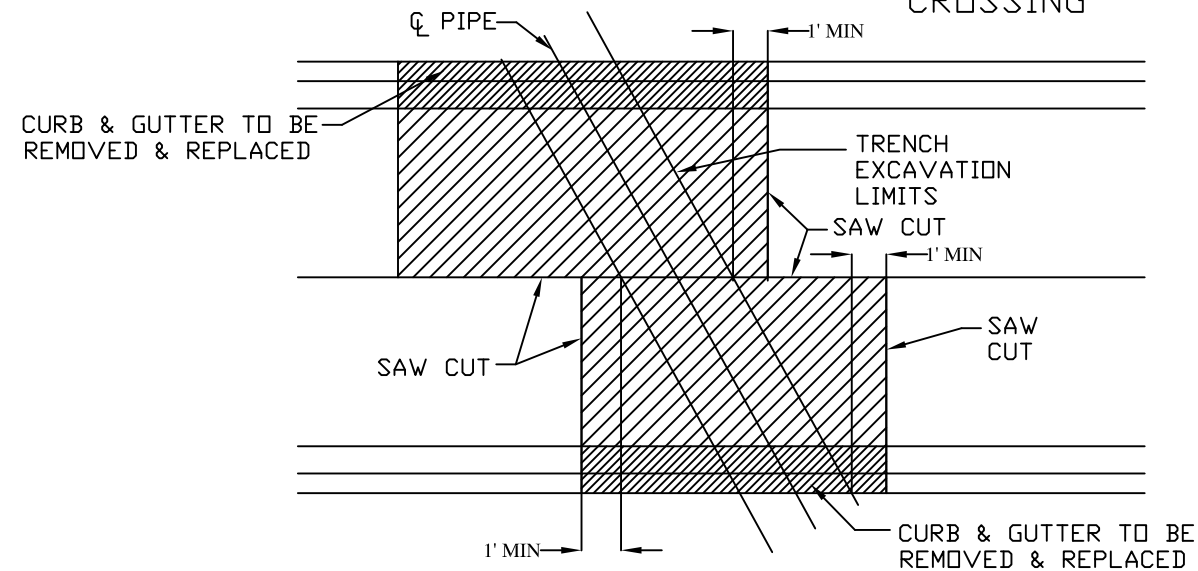
12/1/2022



TYP. STREET, DRIVEWAY, OR SIDEWALK WITH RIGHT ANGLE CROSSING



TYP. DRIVEWAY OR SIDEWALK W/ DIAGONAL CROSSING

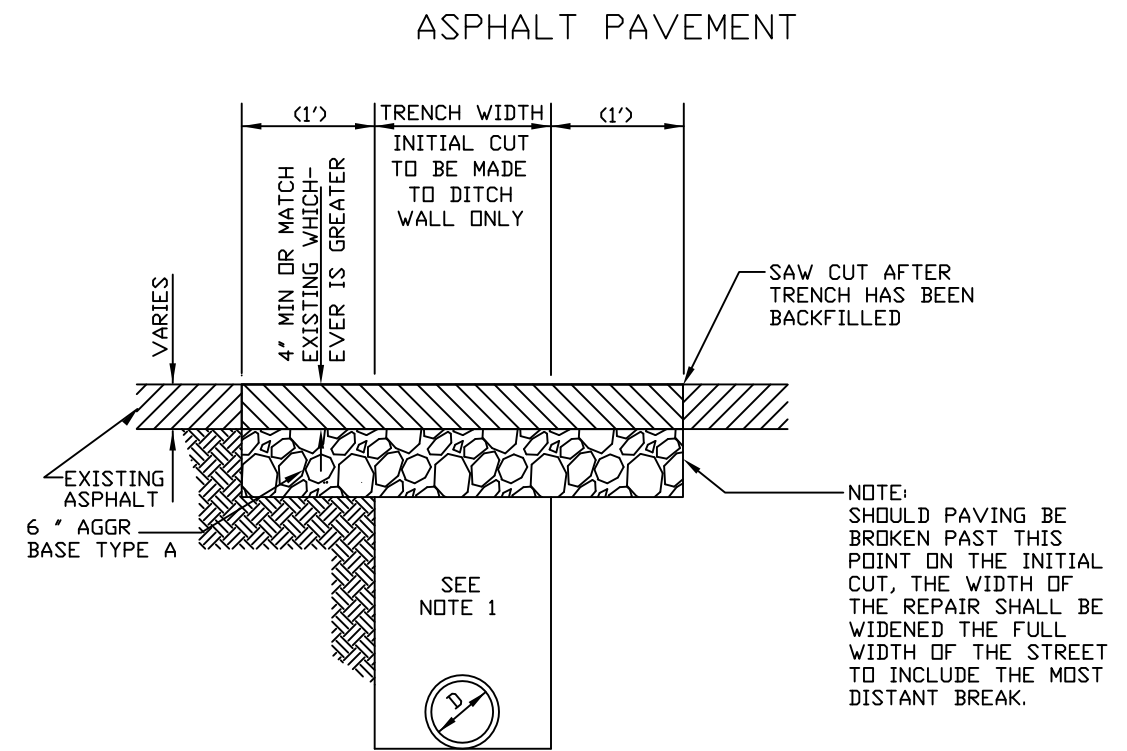


TYPICAL STREET WITH DIAGONAL CROSSING

NOTES:

1. REMOVE AND REPLACE PAVEMENT WITHIN SHADED AREAS BOUNDED BY SAW CUTS
2. FOR DIAGONAL CROSSING, REPLACE PAVEMENT USING SQUARED CUTS, AS SHOWN. PAY QUANTITY WILL INCLUDE SQUARED AREA.
3. FOR LONGITUDINAL INSTALLATIONS: REMOVE AND REPLACE PAVEMENT AND CURB TO EDGE OF STREET, IF THE SAW CUT IS LESS THAN 3 FT. FROM THE OUTSIDE EDGE OF THE PAVEMENT OR CURB. AVOID SAW CUTS IN THE EXISTING WHEEL PATH.

STANDARD PAVEMENT CUTS



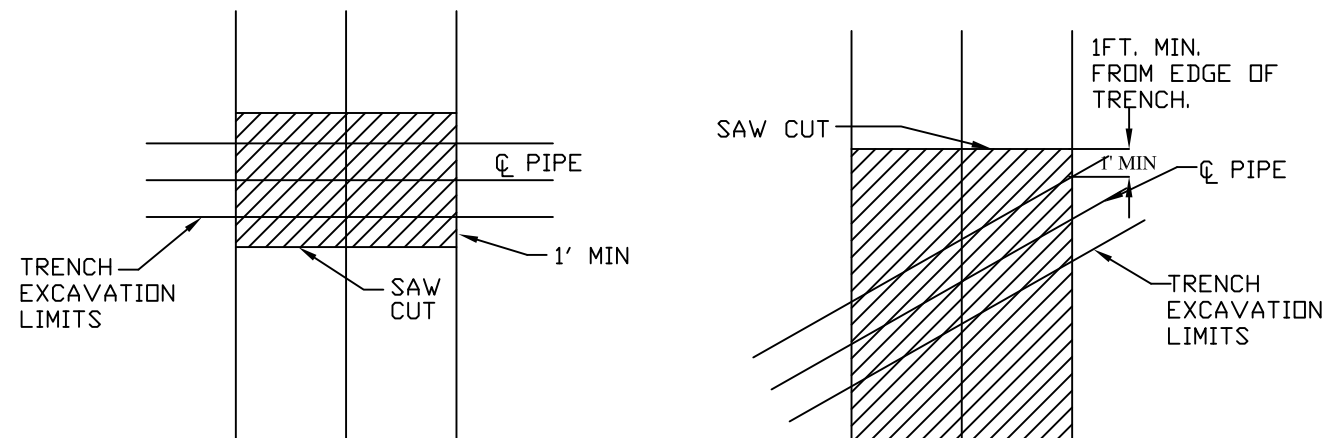
D	STD. TRENCH WIDTH
IN.	IN.
6	20
8	22
10	24
12	28
15	32
18	34
21	42
24	42
27	48
30	48
33	54
36	54
42	60
54	72
60	78
66	84

NOTE: SHOULD PAVING BE BROKEN PAST THIS POINT ON THE INITIAL CUT, THE WIDTH OF THE REPAIR SHALL BE WIDENED THE FULL WIDTH OF THE STREET TO INCLUDE THE MOST DISTANT BREAK.

GENERAL NOTES:

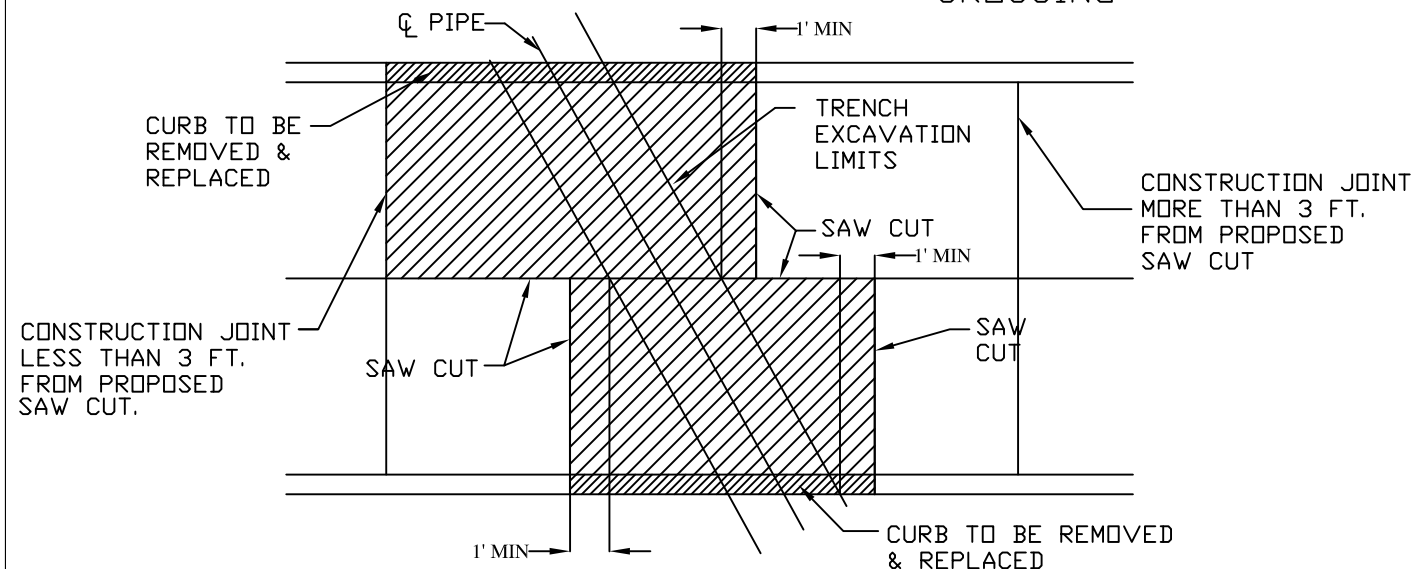
1. ALL PUBLIC ROAD CROSSINGS ARE TO BE BACKFILLED WITH ODOT 703.01 TYPE A AGGREGATE BASE OR APPROVED EQUIVALENT.
2. NO PAYMENT WILL BE MADE FOR REPLACEMENT OF PAVEMENT OUTSIDE OF STD. PAY WIDTH DUE TO TRENCH EXCAVATION WIDER THAN STANDARD TRENCH WIDTH.
3. PAY QUANTITY WILL INCLUDE REPLACEMENT OF PAVEMENT DUE TO SQUARING OF DIAGONAL CUTS.
4. WHERE TRENCH EXCAVATION IS WITHIN 12" OF BACK OF CURB, BACKFILL SHALL BE COMPACTED TO 95% STD. DENSITY FROM 6" ABOVE PIPE TO TOP OF TRENCH.
5. ASPH CONC TO BE TYPE B AS PER ODOT STD SPECS, SECTION 708.

PAVEMENT REMOVAL AND REPLACEMENT



TYP. STREET, DRIVEWAY, OR SIDEWALK WITH RIGHT ANGLE CROSSING

TYP. DRIVEWAY OR SIDEWALK W/ DIAGONAL CROSSING

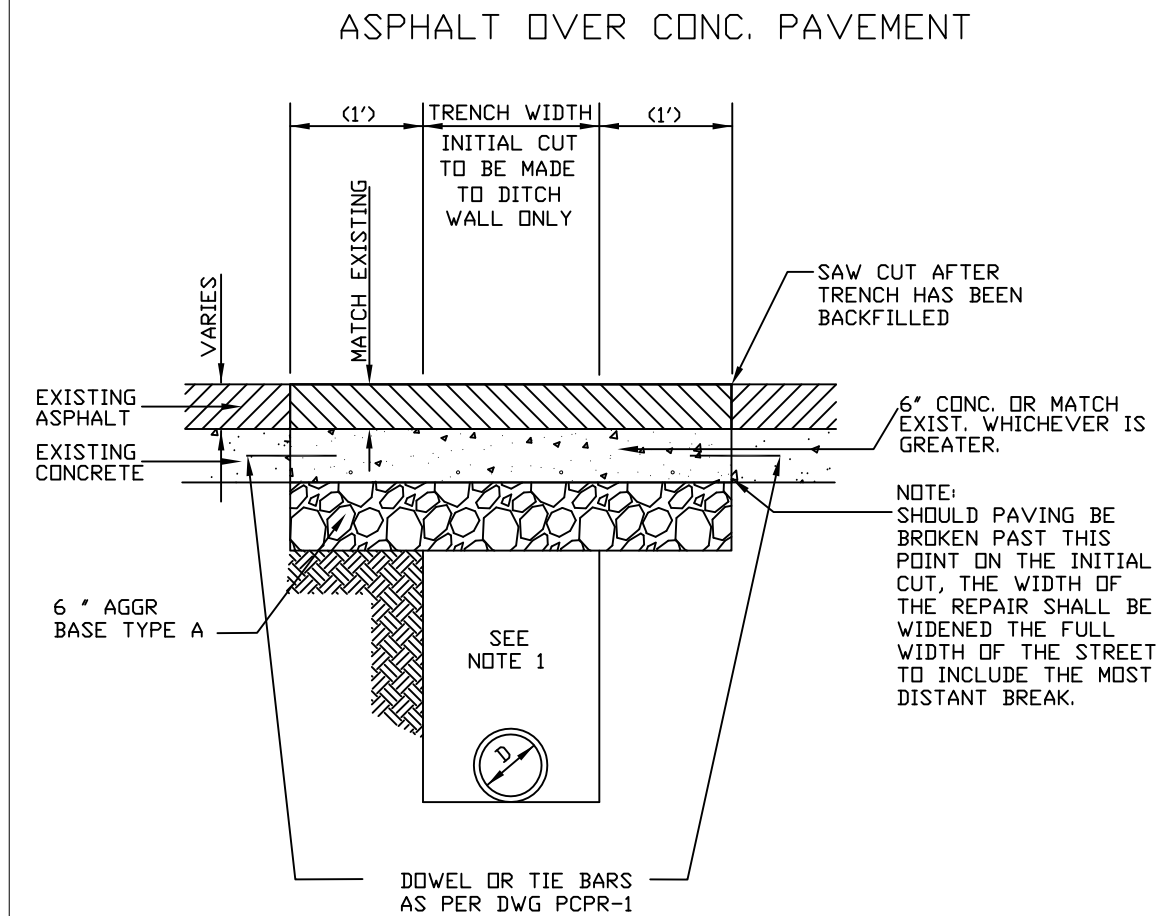


TYPICAL STREET WITH DIAGONAL CROSSING

NOTES:

1. REMOVE AND REPLACE PAVEMENT WITHIN SHADED AREAS BOUNDED BY SAW CUTS AND/OR CONSTRUCTION JOINTS.
2. FOR DIAGONAL CROSSING, REPLACE PAVEMENT USING SQUARED CUTS, AS SHOWN. PAY QUANTITY WILL INCLUDE SQUARED AREA.
3. REMOVE AND REPLACE PAVEMENT TO CONSTRUCTION JOINT IF LESS THAN 3 FT. FROM PROPOSED SAW CUT. EXTRA AREA WILL BE INCLUDED IN PAY QUANTITY.
4. FOR LONGITUDINAL INSTALLATIONS: REMOVE AND REPLACE PAVEMENT AND CURB TO EDGE OF STREET, IF THE SAW CUT IS LESS THAN 3 FT. FROM THE OUTSIDE EDGE OF THE PAVEMENT OR CURB. AVOID SAW CUTS IN THE EXISTING WHEEL PATH.
5. ALL JOINTS SHALL BE RE-ESTABLISHED IN ACCORDANCE WITH THE APPROPRIATE CITY STANDARDS FOR PORTLAND CEMENT CONCRETE PAVEMENT.

STANDARD PAVEMENT CUTS

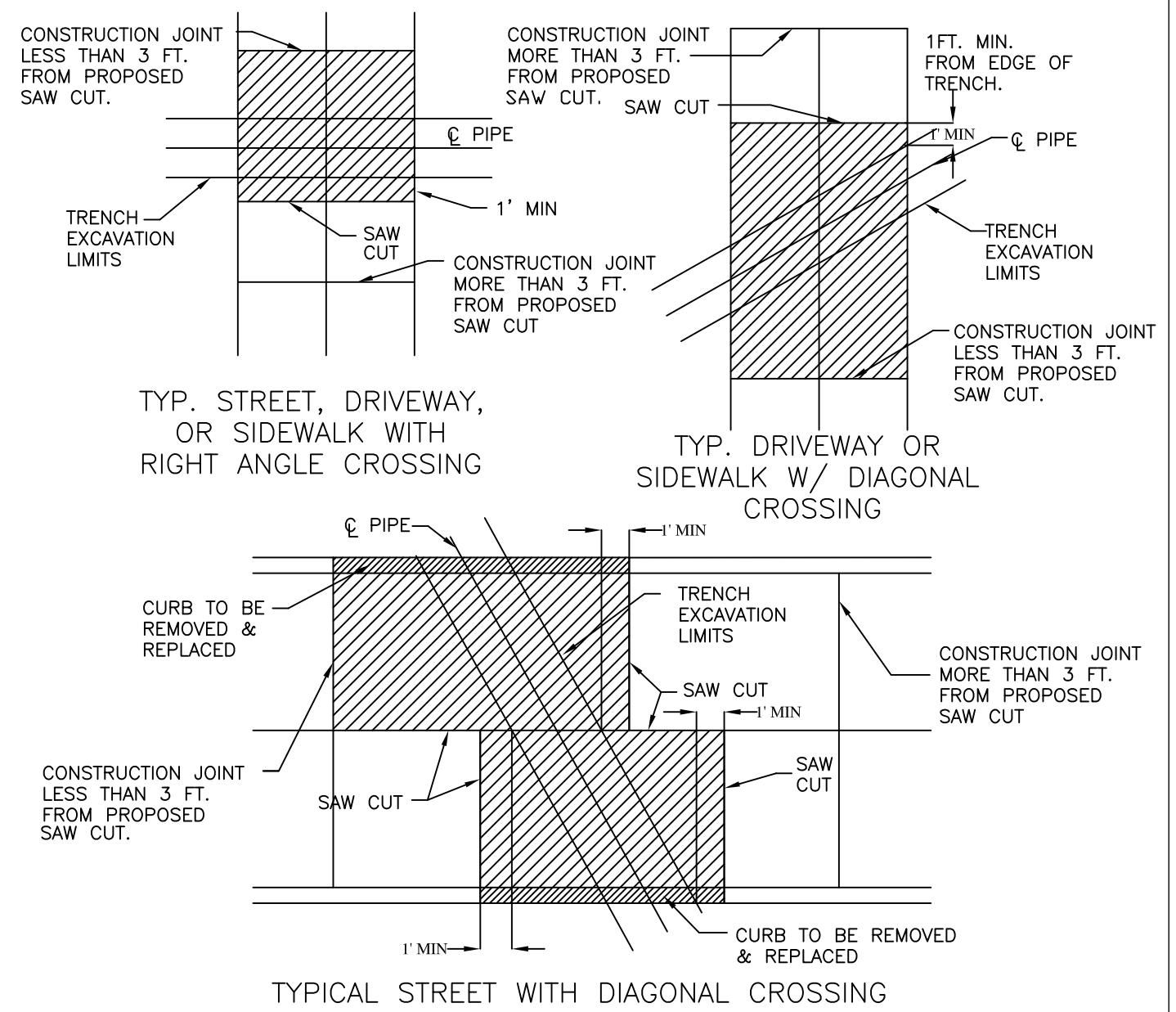


D	STD. TRENCH WIDTH
IN.	IN.
6	20
8	22
10	24
12	28
15	32
18	34
21	42
24	42
27	48
30	48
33	54
36	54
42	60
54	72
60	78
66	84

GENERAL NOTES:

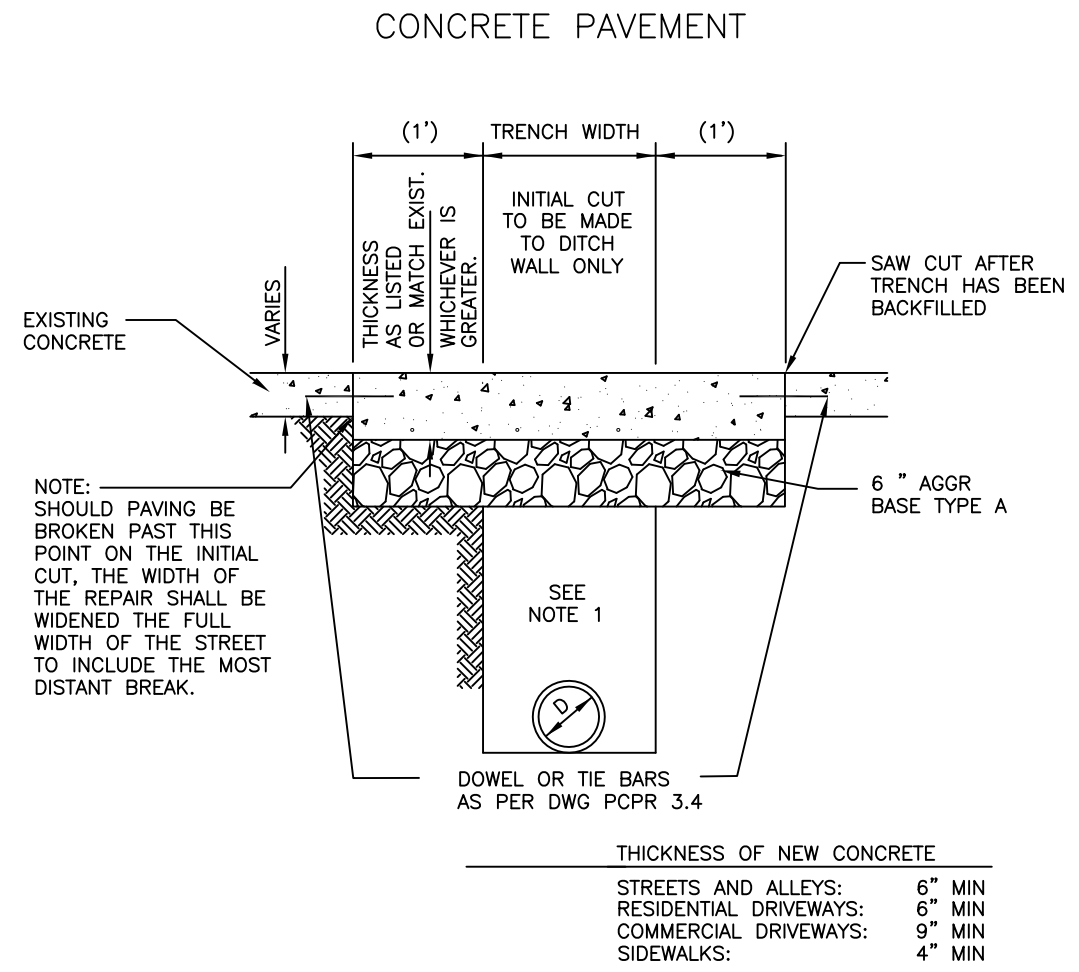
1. ALL PUBLIC ROAD CROSSINGS ARE TO BE BACKFILLED WITH ODOT 703.01 TYPE A AGGREGATE BASE OR APPROVED EQUIVALENT.
2. REMOVE AND REPLACE PAVEMENT TO NEAREST JOINT IF PROPOSED SAW CUT IS LESS THAN 3' FROM JOINT.
3. NO PAYMENT WILL BE MADE FOR REPLACEMENT OF PAVEMENT OUTSIDE OF STD. PAY WIDTH DUE TO TRENCH EXCAVATION WIDER THAN STANDARD TRENCH WIDTH.
4. PAY QUANTITY WILL INCLUDE REPLACEMENT OF PAVEMENT DUE TO SQUARING OF DIAGONAL CUTS.
5. WHERE TRENCH EXCAVATION IS WITHIN 12" OF BACK OF CURB BACKFILL SHALL BE COMPACTED TO 95% STD. DENSITY FROM 6" ABOVE PIPE TO TOP OF TRENCH.
6. ASPH CONC TO BE TYPE B AS PER ODOT STD SPECS, SECTION 708.
7. CONCRETE SHALL BE CLASS A OR CLASS A(HES) AS SPECIFIED IN THE PROPOSAL, AND SHALL COMPLY TO ODOT SPECS. SECTION 701. MIX DESIGNS SHALL BE APPROVED BY THE ENGINEER.
8. REFER TO DRAWING PCPR FOR ADDITIONAL DETAILS.

PAVEMENT REMOVAL AND REPLACEMENT



- NOTES:
1. REMOVE AND REPLACE PAVEMENT WITHIN SHADED AREAS BOUNDED BY SAW CUTS AND/OR CONSTRUCTION JOINTS.
 2. FOR DIAGONAL CROSSING, REPLACE PAVEMENT USING SQUARED CUTS, AS SHOWN. PAY QUANTITY WILL INCLUDED SQUARED AREA.
 3. REMOVE AND REPLACE PAVEMENT TO CONSTRUCTION JOINT IF LESS THAN 3 FT. FROM PROPOSED SAW CUT. EXTRA AREA WILL BE INCLUDED IN PAY QUANTITY.
 4. FOR LONGITUDINAL INSTALLATIONS: REMOVE AND REPLACE PAVEMENT AND CURB TO EDGE OF STREET, IF THE SAW CUT IS LESS THAN 3 FT. FROM THE OUTSIDE EDGE OF THE PAVEMENT OR CURB. AVOID SAW CUTS IN THE EXISTING WHEEL PATH.
 5. ALL JOINTS SHALL BE REESTABLISHED IN ACCORDANCE WITH THE CITY OF CHICKASHA STANDARDS FOR PORTLAND CEMENT CONCRETE PAVEMENT.

STANDARD PAVEMENT CUTS



D	STD. TRENCH WIDTH
IN.	IN.
6	20
8	22
10	24
12	28
14	32
18	34
21	42
24	42
27	48
30	48
33	54
36	54
42	60
54	72
60	78
66	84

THICKNESS OF NEW CONCRETE	
STREETS AND ALLEYS:	6" MIN
RESIDENTIAL DRIVEWAYS:	6" MIN
COMMERCIAL DRIVEWAYS:	9" MIN
SIDEWALKS:	4" MIN

- GENERAL NOTES:
1. ALL PUBLIC ROAD CROSSINGS ARE TO BE BACKFILLED WITH ODOT 703.01 TYPE A AGGREGATE BASE OR APPROVED EQUIVALENT.
 2. REMOVE AND REPLACE PAVEMENT TO NEAREST JOINT IF PROPOSED SAW CUT IS LESS THAN 3' FROM JOINT.
 3. NO PAYMENT WILL BE MADE FOR REPLACEMENT OF PAVEMENT OUTSIDE OF STD. PAY WIDTH DUE TO TRENCH EXCAVATION WIDER THAN STANDARD TRENCH WIDTH.
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 6. CONCRETE SHALL BE CLASS A OR CLASS A(HES) AS SPECIFIED IN THE PROPOSAL, AND SHALL COMPLY TO ODOT SPECS. SECTION 701. MIX DESIGNS SHALL BE APPROVED BY THE ENGINEER.
 7. REFER TO DRAWING PCPR FOR ADDITIONAL DETAILS.

PAVEMENT REMOVAL AND REPLACEMENT