

Document 00001

TITLE SHEET

PROJECT MANUAL
FOR
CITY OF WESLACO
6TH STREET WATER LINE IMPROVEMENTS

FOR

WESLACO, TEXAS

CITY ENGINEER



M. Hinojosa, PE

Signature

6-11-15

Date

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Document 00020

NOTICE TO BIDDERS

Owner/Engineer: City of Weslaco, Texas
255 S. Kansas Avenue
Weslaco, Texas 78596
Phone: (956) 968-3181
Fax: (956) 973-3128

1.00 INVITATION

- A. Bidders are invited to submit an offer for performance of a Contract to the City of Weslaco located at the above address, for the following construction Project:
Project: City of Weslaco, 6th Street Waterline Improvements
Located: In the City of Weslaco, Hidalgo County, Texas
- B. Work of the Project consists of construction of Water Distribution.
- C. The Contract Documents are identified 6th Street Waterline Improvements as listed in the Project Manual, issued by the City of Weslaco/Engineer of Record.
- D. The bidder shall bear all costs associated with the preparation and submission of its bid, and the Owner will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.
- E. When requested, the successful Bidder shall present satisfactory evidence that Bidder has regularly engaged in furnishing products and performing construction work as proposed, and has the capital, labor, equipment, and material to execute the Work required by Contract Documents.

2.00 BID SUBMISSION

- A. Bids signed by an officer of the company and dated will be received at the City of Weslaco Purchasing Office, at 255 South Kansas Ave. Weslaco, Texas until 3:00 P.M. local time, on Friday, 12 of June, 2015.
- B. Bids submitted after the above time will be returned to the Bidder unopened.
- C. Bids shall be submitted in United States Currency and the English language on the Bid Forms and Supplements to Bid Forms provided with this Project Manual.
- D. Oral, telephonic, facsimile, or telegraphic bids are invalid and will not receive consideration.
- E. Bids will be opened and publicly read in the City of Weslaco Purchasing Conference Room at 255 S. Kansas Ave. Weslaco, Texas, on the same date bids are received.
- F. Bids will be irrevocable for **90 days** from the bid date. Bidder may withdraw after 90 days without penalty if no mutual agreement can be reached.

3.00 MODIFICATION OR WITHDRAWAL



- A. Bids submitted early may be modified or withdrawn by notice to the City of Weslaco at the place and prior to the time designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder and shall be so worded as not to reveal the amount of the original Bid.
- B. Oral, telephonic, facsimile, or telegraphic modification of Bids will not receive consideration.
- C. Withdrawn Bids may be resubmitted up to the time designated for receipt of Bids.

4.00 CONTRACT TIME

- A. The Work shall be performed within **90 calendar days** from the date established in the Notice to Proceed.
- B. Contractor shall pay liquidated damages in the amounts stated in Document 00500 - Agreement for failure to complete the Work within the Contract Time.
- C. Contract is for **90 calendar days**. The work is to be performed only during weekdays 8:00 AM to 5:00 PM (Monday to Friday). City recognized holidays are recommended to be avoided. Work performed during weekends (Saturday-Sunday) and holidays will incur a Contractor payment of **\$50** per hour to Owner for onsite inspection.

5.00 SECURITY DEPOSIT REQUIREMENTS

- A. Bids shall be accompanied by a security deposit as stated in Document 00100 - Instructions to Bidders.

6.00 EXAMINATION

- A. Bid Documents are on display on the City of Weslaco website and may be examined at the City of Weslaco- Planning Department.

7.00 AVAILABILITY

- A. Bid Documents may be purchased from the Planning Department or are available for printing at <http://www.weslacotx.gov/Bids.htm>.
- B. Bid Documents may be purchased by bidders upon receipt of a cashier's check, certified check, money order, company check, or personal check in the amount established by City of Weslaco Master Fee Schedule. The cost includes the Project Manual w/ Specifications and one full sized set of Drawings. They can also be downloaded at no cost, as specified on 7(A).
- C. **The cost for the bid documents will not be refunded.**
- D. Bid Documents are made available only for the purpose of obtaining offers for this Project. Purchase of Bid Documents does not grant a license for other purposes.
- E. On receipt of Bid Documents, verify that documents are legible and complete. Compare contents of Project Manual with Table of Contents; see that all drawings listed in the List of Drawings are included. Notify City of Weslaco should the documents be incomplete as issued.

8.00 QUESTIONS AND INTERPRETATIONS

- A. Bidder is required to study Bid Documents, the site, and conditions affecting the Work, and submit written questions on interpretation of those documents and conditions, or other factors affecting the Work, to the City of Weslaco.



- B. Written questions may be submitted by facsimile or email, addressed to the Engineer. **No questions will be accepted after 5:00 PM, Wednesday, June 10, 2015.** All facsimile communications shall be confirmed by mailing the original correspondence to the City of Weslaco Planning Department, if applicable.
- C. Immediately notify the Engineer upon finding discrepancies or omissions in the Bid Documents.

9.00 ACCEPTANCE/REJECTION OF BIDS

- A. The Owner reserves the right to reject or accept any bids as stated in Document 00100 - Instructions to Bidders.

10.00 PRE-BID CONFERENCE

- A. One (1) pre-bid conference will be conducted by the Owner on Tuesday, June 9th, 2015 at 11:00 AM. The pre-bid conference shall be conducted at the City of Weslaco Planning Conference Room: located at 255 S. Kansas Ave. in Weslaco, Texas. **Attendance by prospective Bidders is highly recommended.** Sub-contractors, suppliers, and equipment suppliers may attend.
- B. Recognizing that free and open communication will benefit all participants, the Owner does not intend to limit or curtail the exchange of information between the Engineer and the prospective Bidders. However, the pre-bid conference is conducted primarily for the benefit of prospective Bidders. As such, a specific procedure will be followed during the conference:
 - a. All attendees will sign-in, indicating their role with the project: contractor, supplier, manufacturer, etc.
 - b. Seating priority will be given to Prospective Bidders. Sub-contractors, suppliers, and manufacturer's representatives shall remain behind the contractor area.
 - c. The Owner will make introductions of his staff and consultants.
 - d. The Owner and consultants will give a brief description of the project.
 - e. Only Contracting firms (Prospective Bidders) are permitted to ask questions. Sub-contractors suppliers, and manufacturer's shall deliver their questions to the Contractor they are working with for presentation.
 - f. Questions and answers will be recorded and developed into Meeting Minutes. Meeting Minutes will be distributed to meeting attendees. The Owner reserves the right to use electronic recording, or some other method to record the meeting.
- C. The meeting will be conducted in English. Translators will not be provided.
- D. If necessary, written clarifications or instructions will be issued in the form of an Addendum. Refer to Section 00100 – Instructions to Bidders for specific information concerning Addendums.

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Document 00405

SCHEDULE OF UNIT PRICE WORK

This Document, constitutes a Supplement to Document 00310 - Form of Proposal.
When a Contract is awarded, this Document becomes a supplement to Document 00500 - Form of Agreement Between Owner and Contractor.

Base Waterline Bid					
SPEC NO.	DESCRIPTION	QTY	UNIT	UNIT PRICE (in figures)	UNIT TOTAL (in figures)
02511-01	8" Water line DR-18 C-900 w/fittings	6825	LF	\$	\$
02511-02	2" Water line Schedule 40 w/fittings	203	LF	\$	\$
02511-03	8" Cap	6	EA	\$	\$
02521-01	8" Gate Valve w/box	34	EA	\$	\$
02520-01	Fire Hydrant w/valve	2	EA	\$	\$
02501-01	8" 90° Elbow	2	EA	\$	\$
02501-02	8" 45° Elbow	16	EA	\$	\$
02501-03	8" 11.25° Bend	1	EA	\$	\$
02511-04	8" Tee	28	EA	\$	\$
02511-05	12" Tee	2	EA	\$	\$
02511-06	16" Tee	2	EA	\$	\$
02511-07	8" Cross	3	EA	\$	\$
01555-01	Traffic Control Plan	1	LS	\$	\$
02270-01	Filter Fabric Inlet Protection	29	LF	\$	\$
02512-01	Water Services	31	EA	\$	\$
02621-01	Geotextile Fabric	4739	SY	\$	\$
01561-01	Trench Protection	129	LF	\$	\$
Waterline Total					\$
In case of DISCREPANCIES, Unit Price RULES OVER Unit Total and Total Amounts.					

TOTAL BID PRICE (Total Unit Prices)

\$ _____

Notes:

(1) United States Dollars. In the event of a discrepancy, this column shall govern.

Project: _____

Project No. _____ Bidder's Signature: _____



Company: _____ Name: _____

Date: _____ Title: _____

END OF DOCUMENT



Section 02511

WATER MAINS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Installation of water mains.

1.02 MEASUREMENT AND PAYMENT

- A. Unit Prices.
 - 1. Payment for water mains installed by open-cut is on a linear foot basis for each size of pipe installed. Measurement is detailed as follows:
 - a. Mains: Measured along the centerline axis of the pipe, through fittings and valves.
 - b. Branch Pipes: Measured from the centerline of the main, through fittings and valves, to the end of the branch. Tie-ins are subsidiary to this item.
 - 2. Payment for augered casing with carrier pipe shall be as specified under Section 02447.
 - 3. Payment for interconnections made by tapping sleeves and tapping gate valves shall be as covered under separate Section.
 - 4. Refer to Section 01270 - Measurement and Payment for unit price procedures.
- B. Stipulated Price (Lump Sum). If the Contract is a Stipulated Price Contract, payment for work in this Section is included in the total Stipulated Price.

1.03 REFERENCES

- A. ANSI/NSF Standard 61.
- B. ASTM A 126 - Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
- C. ASTM B 21 - Specification for Naval Brass Rod, Bar, and Shapes.
- D. ASTM B 98 - Specification for Copper-Silicon Alloy Rod, Bar, and Shapes.
- E. ASTM B 584 - Specification for Copper Alloy Sand Castings for General Applications.
- F. AWWA C 206 - Standard for Field Welding of Steel Water Pipe.
- G. AWWA C 207 - Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 Inches through 144 Inches.

1.04 SUBMITTALS

- A. Submittals shall conform to requirements of Section 01330 - Submittal Procedures.



- B. Photographs: Prior to commencement of construction, take 35mm color photographs of entire route of project and present one copy of prints and negatives to Engineer. Submit one copy of prints to Resident Project Representative. Required items in photographs include, but are not limited to, the following:
1. Date fixed on negative by calendate attachment in camera (automatically includes date on film).
 2. Location of photograph, house numbers and streets, direction of view, along with project numbers on chalkboard in photo.
 3. Condition of:
 - a. Yard (near side and far side of street).
 - b. House walk and sidewalk.
 - c. Curb.
 - d. Area between walk and curb.
 - e. Particular features (yard light, shrubs, fences, trees, etc.).
 - f. Street failures.
 4. Take sufficient number of photographs to show existence or nonexistence of cracked asphalt, concrete, trees, shrubs, and grass required above. Bind photographs in 3-ring notebook within plastic pockets. No payment will be made for photography under this Section. Include cost in unit price for water mains.

PART 2 PRODUCTS

2.01 PIPE MATERIALS

- A. Install pipe materials which conform to following:
1. Section 02501 - Ductile Iron Pipe and Fittings.
 2. Section 02502 - Steel Pipe and Fittings.
 3. Section 02506 - Polyvinyl Chloride Pipe.
- B. Conform to American National Standards Institute/National Sanitation Foundation (ANSI/NSF) Standard 61 and have certified by an organization accredited by ANSI.

2.02 JOINT RESTRAINTS

- A. Ductile-Iron Pipe:
1. Series 1100 Megalug Mechanical Joint Restraint by EBAA Iron, Inc.
 2. Super-Lock Joint by Clow Corporation.
 3. Flex-Ring or Lok-Ring by American Cast Iron Pipe Company.



4. TR-Flex or Field-Lok Joint by U.S. Pipe and Foundry Company.

B. PVC Pipe:

1. Fittings: JCM 610 Sur-Grip Fitting Restrainer by JCM Industries, Inc. or Series 2000 PV Mechanical Joint Restraint Gland by EBAA Iron, Inc., or approved equal.
2. Bell and Spigot: JCM 620 or 621 Sur-Grip Bell Joint Restrainer by JCM Industries, Inc. or Series 1600 or Series 2800 Restraint Harness by EBAA Iron, Inc., or approved equal.

2.03 COUPLINGS AND APPURTENANCES

A. Flexible (Dresser-type) Couplings.

1. Install where shown on Drawings or where allowed by Resident Project Representative for Contractor's convenience. Use galvanized flexible couplings when installed on galvanized pipe which is cement lined, or when underground. Provide gaskets manufactured from Neoprene or Buna-N.
2. For steel pipe; sleeve-type flexible couplings, Dresser Style 38, Rockwell Type 411, or equal. Thickness of middle ring equal to or greater than thickness of pipe wall.
3. Flanged adapter couplings for steel pipe; Dresser Style 128, Rockwell Type 913, or approved equal.
4. Use Type 316 stainless steel bolts, nuts and washers where flexible couplings are installed underground. Coat entire coupling with 20-mil of T.C. Mastic as manufactured by the Tape Coat Company, Inc., Bitumastic No. 50 as manufacturer by Koppers Company, Inc., or approved equal.

- B. Victaulic Joints. Make joint with Victaulic Style 77 coupling fitted with Grade H molded synthetic rubber gasket.

PART 3 EXECUTION

3.01 PREPARATION

- A. Conform to applicable installation specifications for types of pipe used.
- B. Employ workmen who are skilled and experienced in laying pipe of type and joint configuration being furnished. Provide watertight pipe and pipe joints. Lay pipe with bell ends facing in direction of laying.
- C. Lay pipe to lines and grades shown on Drawings. Use adequate surveying methods and equipment; employ personnel competent in use of this equipment. Horizontal and vertical deviations from alignment as indicated on Drawings shall not exceed 0.10 feet. Measure and record "as-built" horizontal alignment and vertical grade at maximum of every 50 feet on record drawings.
- D. Confirm that separation from gravity sanitary sewers and manholes or from force mains have minimum clearance as specified in this Section or 9 feet in all directions unless a special design is provided on the Drawings.
 1. Parallel water line and gravity sanitary sewer, force main or manhole with no leaks: Minimum 4 foot horizontal clearance from outside wall of water line to outside wall of gravity sanitary sewer, force main, or manhole.



2. Water line crossing above a gravity sanitary sewer or force main with no leaks: Minimum 2 foot vertical clearance.
- E. Where above clearances cannot be attained, and a special design has not been provided on Drawings, obtain direction from Engineer before proceeding with construction.
- F. Keep pipe trenches free of water which might impair pipe laying operations. Prevent pipe bells from coming in contact with subgrade. Grade pipe trenches to provide uniform support along bottom of pipe. Excavate for bell holes for proper sealing of pipe joints after bottom has been graded and in advance of placing pipe. Lay not more than 300 feet of pipe in trench ahead of backfilling operations. Cover or backfill laid pipe if pipe laying operations are interrupted and during non-working hours. Place backfill carefully and simultaneously on each side of pipe to avoid lateral displacement of pipe and damage to joints. If adjustment of pipe is required after it has been laid, remove and re-lay as new pipe.
- G. If asbestos-cement pipe is encountered, follow safety practices outlined in the Asbestos-Cement Pipe Producers Association publication, Recommended Work Practices for A/C Pipe. Strictly adhere to recommended practices contained in said publication.

3.02 HANDLING, CLEANING AND INSPECTION

- A. Handling:
 1. Place pipe along project site where storm water or other water will not enter or pass through pipe.
 2. Load, transport, unload, and otherwise handle pipe and fittings to prevent damage of any kind. Handle and transport pipe with equipment designed, constructed and arranged to prevent damage to pipe, lining and coating. Do not permit bare chains, hooks, metal bars, or narrow skids or cradles to come in contact with coatings. Where required, provide pipe fittings with sufficient interior strutting or cross bracing to prevent deflection under their own weight.
 3. Hoist pipe from trench side into trench by means of sling of smooth steel cable, canvas, leather, nylon or similar material.
 4. For large-diameter water mains, handle pipe only by means of a sling of canvas, leather, nylon, or similar material. The sling shall be a minimum 36 inches in width. Do not tear or wrinkle tape layers.
 5. Use precautions to prevent injury to pipe, protective linings and coatings.
 - a. Package stacked pipe on timbers. Place protective pads under banding straps at time of packaging.
 - b. Pad fork trucks with carpet or other suitable material. Use nylon straps around pipe for lift when relocating pipe with crane or backhoe.
 - c. Do not lift pipe using hooks at each end of pipe.
 - d. Do not place debris, tools, clothing, or other materials on pipe.
 6. Repair damage to pipe or protective lining and coating before final acceptance.
 7. Permit no visible cracks longer than 6 inches, measured within 15 degrees of a line parallel to pipe longitudinal axis in the cores of finished pipe with the following exceptions:



- a. In the surface laitance of centrifugally cast concrete.
 - b. In sections of pipe with steel reinforcing collars or wrappers.
 - c. Within 12 inches of pipe ends.
 - d. Reject pipe with visible cracks (not meeting exceptions) and remove from project site.
- B. Cleaning: Keep joint contact surfaces clean until jointing is completed. Do not place debris, tools, clothing or other materials in pipe.
- C. Inspection: Before installation, inspect each pipe and fitting for defects. Reject defective, damaged or unsound pipe and fittings and remove them from site.

3.03 EARTHWORK

- A. Conform to applicable provisions of Section 02317 - Excavation and Backfilling for Utilities and Section 02447 - Augering Pipe for Water Lines.
- B. Bedding: Use bedding materials in conformance with Section 02320 - Utility Backfill Materials.
- C. Backfill: Use bank run sand or earth or native soil as specified in Section 02320 - Utility Backfill Materials. Backfill excavated areas in the same day excavated. When not possible, cover excavated areas using steel plates on paved areas and other protective measures elsewhere.
- D. Place material in uniform layers of prescribed maximum loose thickness and wet or dry material to approximately optimum moisture content. Compact to prescribed density. Field density tests may be made at a frequency determined by the Engineer. Water tamping or jetting is not allowed.

3.04 PIPE CUTTING

- A. Make cuts smooth and at right angles to axis of pipe. Bevel plain end with heavy file or grinder to remove sharp edges in accordance with pipe manufacturers recommendations.

3.05 PIPING INSTALLATION

- A. Do not lay pipe unless subgrade is free of water. Make adjustments of pipe to line and grade by scraping away subgrade or filling in with granular material. Wedging or blocking up bell will not be acceptable.
- B. Do not install pipe at greater depth than its design allows.
- C. Protection of Pipeline: Securely place stoppers or bulkheads in openings and in end of line when construction is stopped temporarily and at end of each day's work.

3.06 JOINTS AND JOINTING

- A. Rubber Gasketed Bell-and-Spigot Joints:
- 1. After rubber gasket is placed in spigot groove of pipe, equalize rubber gasket cross section by inserting tool or bar recommended by manufacturer under rubber gasket and moving it around periphery of pipe spigot.
 - 2. Lubricate gaskets with nontoxic water-soluble lubricant, recommended by pipe manufacturer for potable water use, before pipe units are joined.



3. Fit pipe units together in manner to avoid twisting or otherwise displacing or damaging rubber gasket.
4. After the pipe sections are joined, check gaskets to ensure that no displacement of gasket has occurred. If displacement has occurred, remove pipe section and remake joint as for new pipe. Remove old gasket, inspect for damage and replace if necessary before remaking joint.
5. Where preventing movement is necessary due to thrust, use joint restraints.

B. Mechanical Joints:

1. Thoroughly clean socket and plain end of all rust or foreign material; slip the gland over plain end with the lip extension toward plain end, followed by the gasket with thick section facing the gland. Gaskets to be installed during very cold weather should be warmed first.
2. Lubricate socket, gasket and plain end with soapy water or an approved pipe lubricant meeting requirements of AWWA C111.
3. Insert plain end into socket and push gasket into position, making sure it is evenly seated in socket.
4. Slide gland into position, insert bolts and run nuts up finger-tight.
5. Using a torque wrench, tighten bolts to draw gland toward the pipe flange evenly, maintaining approximately the same distance between the gland and the face of the flange at all points around the joint. This process shall be repeated until all bolts are within the manufacturer's recommended torque range.

C. Flanged Joints:

1. AWWA C 207. Prior to installation of bolts, accurately center and align flanged joints to prevent mechanical prestressing of flanges, pipe and equipment. Align bolt holes to straddle vertical, horizontal or north-south center line. Do not exceed 3/64 inch per foot inclination of flange face from true alignment.
2. Use full-face gaskets for flanged joints. Provide 1/8-inch-thick cloth inserted rubber gasket material. Cut gaskets at the factory to proper dimensions.
3. Use high-strength, low-alloy, corrosion resistant steel conforming to ASTM A325 (Type 3). Tighten bolts progressively to prevent unbalanced stress. Draw bolts tight to ensure proper seating of gaskets.
4. For in-line flange joints sized between 12 inches in diameter and greater and 24 inches in diameter and smaller, provide Phenolic PSI with nitrile seal, Type E LineBacker gasket as manufactured by Pipeline Seal and Insulator, Inc., or approved equal conforming to ANSI 21.11.

D. Welded Joints:

1. Prior to starting work, provide certification of qualification for welders employed on the project for type of work procedures and positions involved.
2. Joints: AWWA C 206. Full-fillet, single lap-welded slip-type either inside or outside, or double butt-welded type; use automatic or hand welders; completely penetrate deposited metal with



- base metal; use filler metal compatible with base metal; keep inside of fittings and joints free from globules of weld metal which would restrict flow or become loose. Do not use mitered joints. Provide adequate working room under and beside pipe. Use exterior welds.
3. Furnish welded joints with trimmed spigots.
 4. Bell-and-spigot, lap-welded slip joints: Deflection may be taken at joint by pulling joint up to 3/4 inch as long as 1-1/2-inch minimum lap is maintained. Spigot end may be miter cut to take deflections up to 5 degrees as long as joint tolerances are maintained. Miter end cuts of both ends of butt-welded joints may be used for joint deflections of up to 5 degrees.
 5. Align piping and equipment so that no part is offset more than 1/8 inch. Set fittings and joints square and true, and preserve alignment during welding operation. For butt-welded joints, align abutting ends to minimize offset between surfaces. For pipe of same nominal wall thickness, do not exceed 1/16 inch offset. Use line-up clamps for this purpose; however, care shall be taken to avoid damage to linings and coatings.
 6. Protect coal-tar-epoxy lining during welding by draping an 18-inch-wide strip of heat-resistant material over top half of pipe on each side of lining holdback to avoid damage to lining by hot splatter. Protect tape coating similarly if external welding is required.
 7. Welding rods: Compatible with metal to be welded to obtain strongest bond, E-70XX.
 8. Deposit metal in successive layers to provide at least 2 passes or beads for automatic welding and 3 passes or beads for manual welding in completed weld.
 9. Deposit no more than 1/4 inch of metal on each pass. Thoroughly clean each individual pass with wire brush or hammer to remove dirt, slag or flux.
 10. Do not weld under any weather condition that would impair strength of weld, such as wet surface, rain or snow, dust or high winds, unless work is properly protected.
 11. Make tack weld of same material and by same procedure as completed weld. Otherwise, remove tack welds during welding operation.
 12. Remove dirt, scale, and other foreign matter from inside piping before tying in sections, fittings, or valves.
 13. Welded Joints:
 - a. Only one end may be miter cut. Miter end cuts of both ends of butt-welded joints may be used for joint deflections of up to 2-1/2 degrees.
 - b. Employ an independent certified testing laboratory to perform weld acceptance tests on welded joints. Include cost of such testing in contract unit price bid for water line. Furnish copies of all test reports to Engineer for review. Test by magnetic particle test method for lap welds or by X-ray methods for butt welds, for 100 percent of all joint welds. Engineer has final decision as to suitability of all welds tested.
- E. Make curves and bends by deflecting joints or other method as recommended by manufacturer and approved by the Engineer. Contractor shall submit details of other methods of providing curves and bends for consideration by Engineer, and if accepted, shall be installed at no additional cost to the Owner.



1. Deflection of pipe joints shall not exceed maximum deflection recommended by pipe manufacturer.
2. If deflection exceeds that specified but is less than 5 percent, repair entire deflected pipe section such that maximum deflection allowed is not exceeded.
3. If deflection is equal to or exceeds 5 percent from that specified, remove entire portion of deflected pipe section and install new pipe.
4. Replace, repair, or reapply coatings and linings as required.
5. Assessment of deflection may be measured by Engineer at any location along pipe. Arithmetical averages of deflection or similar average measurement methods will not be deemed as meeting intent of standard.
6. When rubber gasketed pipe is laid on a curve, join pipe in a straight alignment and then deflect to curved alignment.

3.07 CATHODIC PROTECTION APPURTENANCES

- A. Where identified on Drawings, modify pipe for cathodic protection as detailed on Drawings and specified. Unless otherwise noted, provide insulation kits at connections to existing water system or at locations to isolate one type of cathodic system from another type, between water main, access manhole piping and other major openings in water main, or as shown on Drawings.
- B. Bond joints for pipe installed in tunnel or open cut, except where insulating flanges are provided. Weld strap or clip between bell and spigot of each joint. No additional bonding required where joints are welded for thrust restraint.
- C. Bonding Strap or Clip: Free of foreign material that may increase contact resistance between wire and strap or clip.

3.08 SECURING, SUPPORTING AND ANCHORING

- A. Support piping as shown on Drawings and as specified in this Section, to maintain line and grade and prevent transfer of stress to adjacent structures.
- B. Where shown on Drawings, anchor pipe fittings and bends installed on water main.
- C. Use adequate temporary blocking of fittings when making connections to distribution system and during hydrostatic tests. Use sufficient anchorage and blocking to resist stresses and forces encountered while tapping existing water line.

3.09 THRUST RESTRAINT

- A. For existing water lines and water lines less than 16 inches in diameter, restrain pipe joints with concrete thrust blocks or provide joints as specified.
- B. Thrust restraint lengths shown on Drawings are minimum anticipated lengths. Adjustments in deflections or use of other pipe material may result in reduction or increase of thrust lengths. Perform calculations by pipe manufacturer to verify proposed thrust restraint lengths. Submit calculations for all pipe materials sealed by a registered Professional Engineer for review by Engineer. Make adjustments in thrust restraint lengths at no additional cost to the Owner.
- C. Passive resistance of soil will not be permitted in calculation of thrust restraint.



- D. Use minimum 16-foot length of pipe in and out of joints made up of beveled pipe where restraint joint lengths are not identified on Drawings. Otherwise, provide welded restraint joints for a minimum length of 16 feet on each side of beveled joints.

3.10 POLYETHYLENE WRAP

- A. Conform to requirements of Section 02528 - Polyethylene Wrap.

3.11 CLEANUP AND RESTORATION

- A. Provide cleanup and restoration crews to work closely behind pipe laying crews, and where necessary, during chlorination, testing, service transfers, abandonment of old mains, backfill and surface restoration.
- B. Upon completion of section not exceeding 4000 feet per crew, chlorinate and pressure test. Begin transfer of services no later than 7 calendar days after successful completion of chlorination and pressure testing.
- C. After transfer of services, but no later than 21 calendar days after successful completion of chlorination and pressure testing, begin abandonment of old mains, including resodding and placement of sidewalks and pavements.
- D. Do not begin construction of additional sections if above conditions are not met.

3.12 CLEANING PIPING SYSTEMS

- A. Remove construction debris or foreign material and thoroughly clean and flush piping systems. Provide temporary connections, equipment and labor for cleaning.

3.13 DISINFECTION OF WATER LINES

- A. Conform to requirements of Section 02514 - Disinfection of Water lines.

3.14 FIELD HYDROSTATIC TESTS

- A. Conform to requirements of Section 02515 - Hydrostatic Testing of Pipelines.

3.15 LOCATION MARKING

- A. Conform to requirements of Section 02535 – Non-Metallic Utility Line Marking and the drawings.

END OF SECTION



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City of Weslaco

"The City on the Grow"



David Suarez, Mayor
Olga M. Noriega, Mayor Pro-Tem, District 3
David R. Fox, Commissioner, District 1
Greg Kerr, Commissioner, District 2
Gerardo "Jerry" Tafolla, Commissioner, District 4
Lupe V. Rivera, Commissioner, District 5
Fidel L. Pena, III, Commissioner, District 6

Mike R. Perez, City Manager

6th St. Pre-Bid Conference

June 9, 2015 11:00am

Meeting Minutes

- I. Introduction on behalf of City Engineer
 - a. Sign in sheet will be passed around
 - b. Introduction of self and other employees

- II. Addendum
 - a. No addendum has been posted; will be posted early this week on contract documents
 - b. Refer to City Engineer for any questions on the contract documents/addendum

- III. Length of project
 - a. Length of the project will be 90 calendar days
 - b. Hours of construction will be Monday-Friday from 8am to 5pm
 - c. Any Saturday construction days will pay inspection fees to City of Weslaco city inspector in the amount of \$50/hr. This is part of the contract documents.
 - d. School areas to be prioritized and coordination with city staff is needed.

- IV. Description of project
 - a. Approx. 6745 Linear feet of 8" PVC line on 6th St. from Texas Avenue to U.S. Business 83.
 - b. No alternates.
 - c. Fire Hydrants and deflection are stated in general notes and are included as part of the contract documents if the problem occurs.
 - d. Erosion control measures are implemented into the construction project.
 - e. Only trenches will be paved.
 - f. Type of asphalt to be specified on details.
 - g. Rebar on curb and gutter to be placed as per detail on utility crossings only.
 - h. Tie-ins have linear feet of pipe installed as a pay item.

- V. Bids due
 - a. Bids are due by June 12th to the purchasing department with Homer Rhodes
 - b. Stay posted about changes to the front end documents and Plans (addendums)

GENERAL NOTES:

1. All improvements to be in accordance with City of Weslaco Codes.
2. Contractor to plan and perform his work in a manner that will permit safe public traffic movement on all streets.
3. Contractor to be responsible for protection and/or safety of the work site. Workers, Sub-Contractors, Materials and/or Equipment.
4. Contractor shall be responsible for obtaining all permits required and at Contractor's expense.
5. Contractor shall give notice to all authorized inspectors, superintendents, or persons in charge of private and public utilities affected by his operations prior to commencement of work. Notify Texas One Call for utility locations prior to any and all excavations.
6. Upon completion of construction contractor shall return the site to original contours unless different finished elevations are shown on plans. Contractor to insure no areas of ponding are present. Upon completion of construction contractor shall return the site to original conditions including but not limited to backfill, top soil, hydro mulch, etc.
7. Concrete Notes:
 - A. All concrete work to be formed, unless otherwise approved.
 - B. All concrete to be 3500-PSI minimum at 28 days, unless otherwise shown. Strength to be determined by cylinder break test.
 - C. All reinforcing steel to be ASTM A-615, Grade 60, unless otherwise shown.
 - D. All exposed concrete work to be chamfered.
8. Contractor to insure same day access to all residence and businesses adjacent to construction.
9. Demolition, removal & disposal of all excess concrete, curbs, rubble, etc. to be done in a legal manner at contractor's expense.
10. Prior to construction, Contractor, Owner and City Engineer to perform on-site field inspection to document existing conditions (notes & photos).
11. Contractor to contact all utilities companies in the area for field verification of existing facilities.
12. Contractor to expose any existing facility that may be in conflict prior to start of excavation.
13. It shall be the Contractor's responsibility to remove all excavated material and debris from the site.
14. Contractor shall at all times allow access to existing driveway or provide/maintain alternative all-weather routes.
15. All traffic control devices shall be in conformance with the Texas Manual of Uniform Traffic Control Devices latest edition. Trenches or excavations may not be left open overnight.
16. Any damages to fences, walks or private property shall be repaired by the contractor at the contractor's expense, no separate pay.
17. All construction materials testing will be coordinated through City of Weslaco Planning & Code Enforcement Department.

WATER LINES:

1. Waterlines to be constructed in accordance with specification Section 02511 "Water Mains".
2. Waterlines to be constructed with a 3-foot minimum cover or as shown on profile.
3. Waterlines and fittings to conform to AWWA C-900 Class 150 DR-18, for 4-inch through 12-inch, unless otherwise noted on plans or directed by owner. Service line smaller than 2-inches shall be polyethylene water tubing "tough tubing" ASTM D2737. Service lines 2-inches or greater shall be PVC SCH 40.
4. All values and ductile iron fittings, except fire hydrants, shall be wrapped with 8-mil polyethylene film. Secure polyethylene wrap with 3-inch-wide plastic-backed adhesive tape (polyethylene No. 900. Scotchwrap No. 50 or approved equal). All fittings shall be mechanical joint with restraining gland (EBBA Iron Inc. Mega-lug or approved equal), no separate pay if not identified on quantities.
5. Contractor to provide adequate concrete thrust blocking to withstand test pressure of 150psi.
6. Contractor shall notify the City Engineer immediately upon encountering any leaking sanitary sewer during installation of waterlines.
7. Contractor shall maintain the integrity of the existing waterlines during construction. Following construction, testing, and disinfection of new waterlines contractor shall, upon 24-hour notice to the City Engineer, cut, plug, and abandon existing waterlines, remove fire hydrants, and valves on fire hydrant leads. Transfer all affected services to the proposed mains prior to abandonment of existing mains. Unless otherwise directed by the City Engineer, all fire hydrants and valves on fire hydrant leads shall be taken to the City of Weslaco salvage yard unless otherwise instructed.
8. Inline valves on existing lines being abandoned shall be closed watertight, plugged, thrust blocked, and the operating nut on said valve be cut off. All valve boxes on abandoned lines shall be removed, except those in paved areas. Those located in paved areas shall be poured full of concrete and the cap shall be permanently removed. Contractor to notify the City Engineer when any valve on a line being abandoned fails to fully close or is not fully operational. All existing lines to be abandoned to be completely severed from new system.
9. Contractor may deflect waterlines slightly to avoid conflicts with utilities or other obstruction. The City of Weslaco Public Utilities and Planning Departments must be contacted for approval at least 24-hours in advance of any decision to deflect waterlines. Contractor to keep accurate records of locations where waterlines are deflected for required reline record print set.
10. Contractor is to install temporary blow-off valves as required to flush the newly constructed waterline for chlorination and testing. Temporary blow-off valves shall be removed by the contractor promptly upon successful completion of all testing.
11. Contractor to allow 6-inch minimum clearance between proposed waterlines and other facilities unless otherwise noted.
12. Contractor to maintain 9-foot minimum clearance in all directions between proposed waterlines and sanitary sewer, force mains, and sanitary manholes unless otherwise noted. Where this cannot be achieved, provide clearance as required by the TCEQ rules and regulations for public water systems. (Latest Revision).

WATER LINES CONT'D:

13. Contractor shall maintain a 2-foot absolute minimum clearance (out-to-out) of pipes where the proposed waterline crosses over sanitary sewer. Contractor shall maintain a 9-foot absolute minimum clearance (out-to-out) of pipes where the proposed waterline must cross under a sanitary sewer. Otherwise install proposed waterline in 20-foot joint of steel casing pipe centered on sewer. Where proposed sewer is parallel to waterlines, maintain 2-foot vertical and 4-foot horizontal clearances.
14. For requirements for steel encasement pipe, seals, spacers, etc... See specification section 02447 Augering Pipe for Water Lines.
15. Where proposed waterlines cross within 9 feet of the end of a sanitary sewer, center one (1) 20-foot joint of C-900 PVC DR-18, Class 150 waterline over the sanitary sewer.
16. Backfill in pipe zone to be in accordance with specification section 02511 "Water Mains".

WATER MAIN – SANITARY SEWER CROSSINGS:

Primary Condition	Proposed Water Existing Sanitary				Proposed Water Proposed Sanitary or Existing Water Proposed Sanitary			
	Water Over Sanitary		Water Under Sanitary		Water Over Sanitary		Water Under Sanitary	
If the Clearance is	Less Than 2'	Greater Than 2' But Less Than 9'	Less Than 2'	Greater Than 2' But Less Than 9'	Less Than 2'	Greater Than 2' But Less Than 9'	Less Than 2'	Greater Than 2' But Less Than 9'
*Protection Requirement	1	2	3	4	5	6	3	6

**Protection requirements for sanitary sewer crossings (Unless variance is granted by the TCEQ) (All clearances shall be measured from outside wall to outside wall)*

1. Center one (1) 20-foot joint of C-900 PVC DR-18, Class 150, waterline pipe over sanitary sewer; 6-inch absolute minimum clearance.
2. If no evidence of sanitary sewer leakage, center one joint of water line over sanitary sewer: 24-inch absolute minimum clearance. If the sewer line is leaking, the sewer line shall be replaced with 150 psi lined ductile iron or pvc pipe with appropriate adapters on all lined ductile iron or pvc pipe with appropriate adapters on all portions of the sanitary sewer within 9-feet of the water main.
3. Not allowed
4. Auger 9-feet minimum each side of sanitary sewer, place one 20-foot joint of C-900 PVC, 150 psi, centered under sanitary sewer. Fill bored hole with bentonite/clay moisture: 2-foot absolute minimum clearance or replace the existing sanitary sewer with 150 psi line ductile iron or PVC pipe with appropriate adapters on all portions of the sanitary within 9-feet of the water main.
5. Minimum 18-foot joint of sanitary sewer, 150 psi lined ductile iron or PVC pipe centered at the water line; 6-inch absolute minimum clearance.
6. If clearance is between 2 to 9-feet
 - a. Center a minimum 18-foot joint of 150 psi lined ductile iron or PVC pipe at water line.
 - b. Use cement-stabilized sand backfill (minimum 2 sacks cement per cubic yard of sand) starting at a pint ¼ of the pipe diameter above the bottom of the sanitary sewer to 1-foot above the top of sanitary sewer, or one sanitary sewer diameter, whichever is larger. Center one joint of sanitary sewer pipe about the water main.
7. All water crossings to be approved by the City of Weslaco upon completion.

EROSION CONTROL:

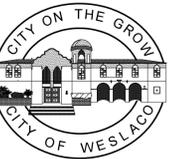
1. It is the intent of this suggested erosion control plan and within the specifications to be used as the general guidelines of the Storm Water Pollution Prevention Plan (SW3P) for this project to establish a minimum basis of compliance with federal regulations. Contractor shall prepare and submit a notice of intent per the requirements in the NPDES general permit. The contractor shall prepare the Storm Water Pollution Prevention Plan (SW3P) and be solely responsible for its implementation. The Storm Water Pollution Prevention Plan (SW3P) shall meet the requirements set forth in the Texas Commission on Environmental Quality (TCEQ) TPDES general permit for Region 6 for storm water discharges from construction sites.
2. The Storm Water Pollution Prevention Plan (SW3P) should address three goals:
 - a. Diversion of upslope water around disturbed areas of the site;
 - b. Limits the exposure of disturbed areas to the shortest duration possible; and
 - c. Removal of sediment from storm water before it leaves the site.
3. The contractor shall make the Storm Water Pollution Prevention Plan (SW3P) available, upon request, to TCEQ.
4. The contractor must amend plans whenever there is a change in design, construction, operation, or maintenance of the plan, or when the existing plan proves ineffective. Modifications including design and all additional materials and work shall be accomplished by the contractor at no additional expense to the owner.

EROSION CONTROL CONT'D:

5. Stabilization measures are to be inspected at a minimum of once every 14 days and within 24 hours after any storm even greater than 0.5 inches. Repairs and inadequacies revealed by the inspection must be implemented within 7 calendar days following the inspection.
6. An inspection report that summarizes inspection activities and implementation of the Storm Water Pollution Prevention Plan (SW3P) shall be retained and made part of the plan.
7. All contractors and subcontractors identified in the plan must certify as to an understanding of the NPDES general permit before conducting any activity identified in the pollution prevention plan.
8. The contractor shall adopt appropriate construction site management practices to prevent the discharge of oils, grease, paints, gasoline, and other pollutants to storm water. Appropriate practices can include:
 - a. Designating areas for equipment maintenance and repair;
 - b. Regular collection of waste;
 - c. Conveniently located waste receptacles; and
 - d. Designating and controlling equipment wash down.
9. The contractor shall amend or modify this plan as required by construction means, methods and sequence. Modifications shall not compromise the intent of the requirements of law and this plan. Modifications shall not be basis for additional cost to the owner.
10. Areas of construction elsewhere on the job site shall conform to the details shown on the plans.
11. Borrow areas, if excavated, shall be protected and stabilized utilizing the plan details. All work shall conform to the governmental requirements and become part of the Storm Water Pollution Prevention Plan (SW3P). The work shall be done by the contractor at no additional expense to the owner.
12. All non-paved areas shall be mulched and seeded with erosion protection immediately upon completion of final grading. This includes all ditches and embankments. The contractor shall maintain final grading and keep seeded areas watered until fully established and accepted by the owner.
13. The contractor shall construct a stabilized construction exit at all traffic exit points prior to existing onto any paved roadway.



BASE BID		
Description	Unit	Estimated Quantity
Water Improvements Base Bid		
8" PVC DR-18 C-900 w/fittings	LF	6825
2" PVC SCH-40	LF	203
8" Cap	EA	6
Fire Hydrant w/valve	EA	2
8" Gate Valve w/box	EA	34
8" Cross	EA	3
8" Tee	EA	28
12" Tee	EA	2
16" Tee	EA	2
8" 45° Elbow	EA	16
8" 90° Bend	EA	2
8" 11.25° Bend	EA	1
Saddle Taps	EA	12
Connect Water Services	EA	31
Trench Protection	LF	129
Water Line Tie Ins	EA	35
Erosion Control		
Filter Fabric Inlet Protection	EA	29
Pavement Improvements		
Geotextile Fabric (Nonwoven)	SY	4737
Traffic Control		
Traffic Control Plan	LS	1



6TH ST. WATER LINE IMPROVEMENTS WESLACO, TEXAS

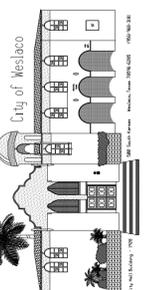
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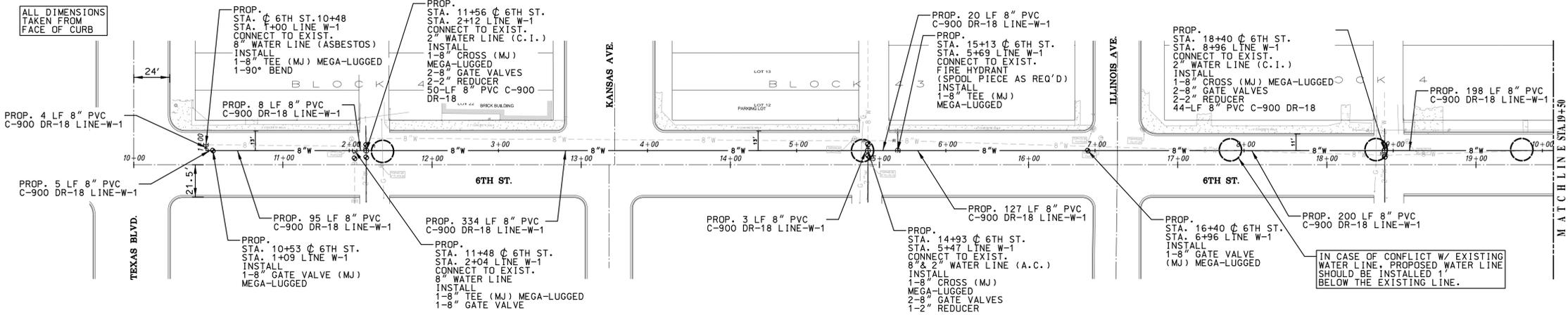
REVISIONS:

1	JUNE 10, 2015 SEE ADDENDUM 1
2	ADDED GEOTEXTILE FABRIC QTY, 8" CAP ITEM, 8" ELBOW ITEM, TRENCH PROTECTION ITEM, SADDLE TAPS, WATERLINE TIE INS, TIE, AND TRAFFIC CONTROL PLAN ITEM.

C-1 GENERAL NOTES/ EST. QUANTITIES



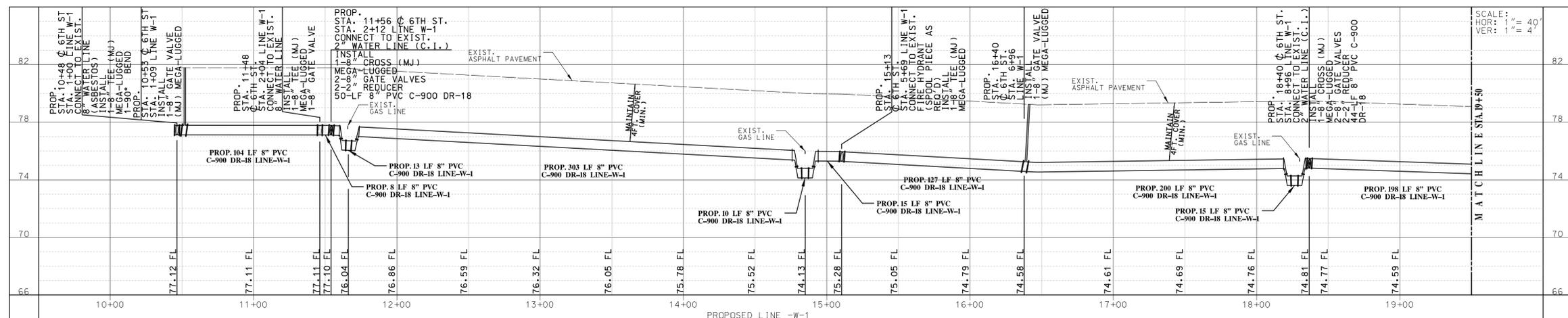
ALL DIMENSIONS TAKEN FROM FACE OF CURB



SCALE: 1"=40'

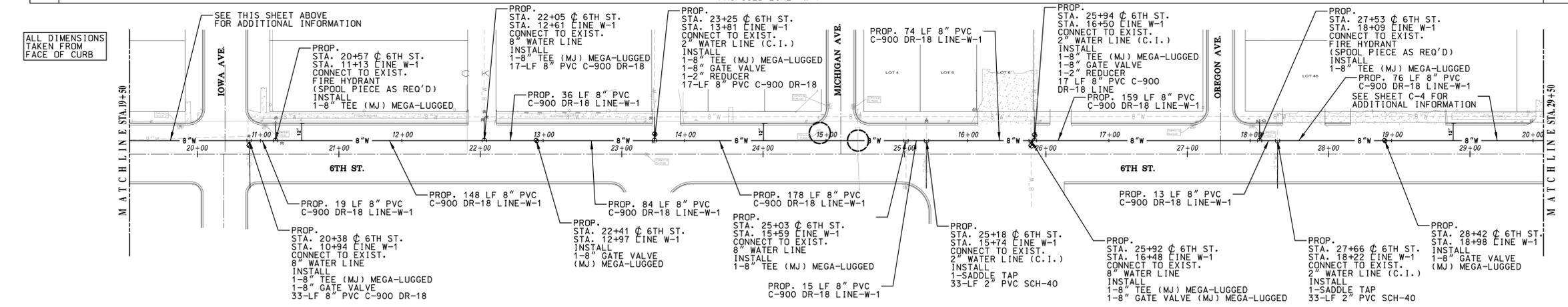
LEGEND

- EX. FIRE HYDRANT
- EX. 2" WATER LINE
- EX. 8" WATER LINE
- EX. 12" WATER LINE
- EX. 16" WATER LINE
- EX. 18" STORM DRAIN
- EX. 24" STORM DRAIN
- EX. 30" STORM DRAIN
- EX. GAS LINE
- EX. FENCE
- PROP. GATE VALVE
- PROP. FIRE HYDRANT
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- EX. SEWER MANHOLE
- EX. WATER METER
- EX. WATER VALVE
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- EX. GAS METER
- EX. STORM INLET
- EX. SIGN
- EX. GUY WIRE
- EX. SPRINKLER VALVE
- EX. ELECTRIC METER
- EX. UTILITY POLES
- EX. COMMUNICATIONS BOX
- CAUTION UTILITY CROSSING



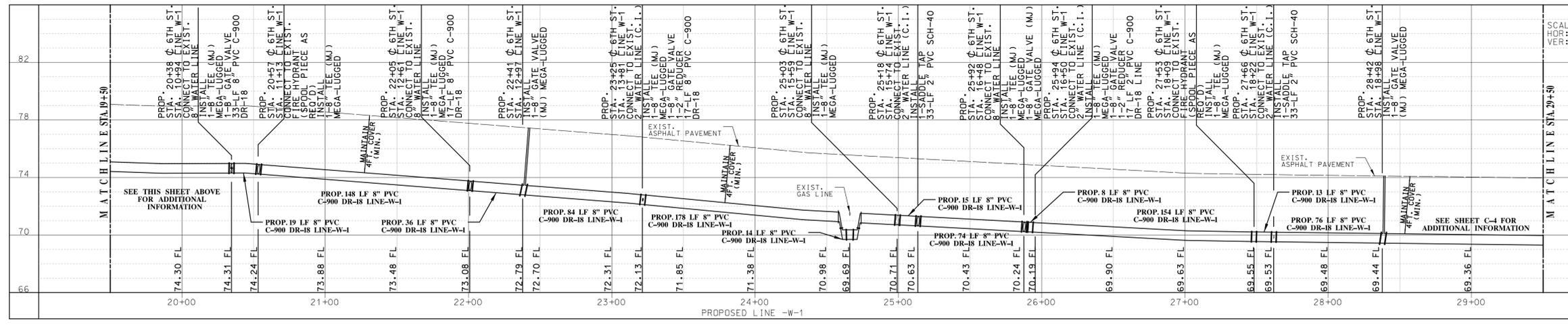
SCALE: HOR: 1"=40' VER: 1"=4'

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NOTES:

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3. CONTRACTOR TO ENSURE THAT A MINIMUM 4 FT. DEPTH IS MAINTAINED FOR WATER LINE INSTALLATION.
4. ACTIVE VALVES FOR FIRE HYDRANTS AND SERVICE CONNECTIONS TO BE REPLACED DEPENDING ON THE CONDITION OF THE VALVE. CITY ENGINEER AND INSPECTORS SHALL BE NOTIFIED ON THE CONDITIONS.



SCALE: HOR: 1"=40' VER: 1"=4'



6TH ST.
WATER LINE IMPROVEMENTS
WESLACO, TEXAS

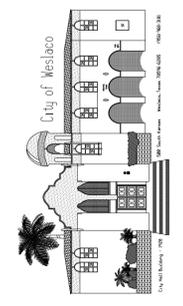


REVISIONS:

NO.	DATE	DESCRIPTION
1	06-11-15	ISSUE FOR PERMITS
2		UPDATE FOR PERMITS

C-3
LINE - W-1
PLAN/PROFILE
(1 OF 4)

SCALE: 1"=40'





6TH ST. WATER LINE IMPROVEMENTS WESLACO, TEXAS

LEGEND

- EX. FIRE HYDRANT
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- EX. UTILITY POLES
- EX. COMMUNICATIONS BOX
- CAUTION UTILITY CROSSING

NOTES:

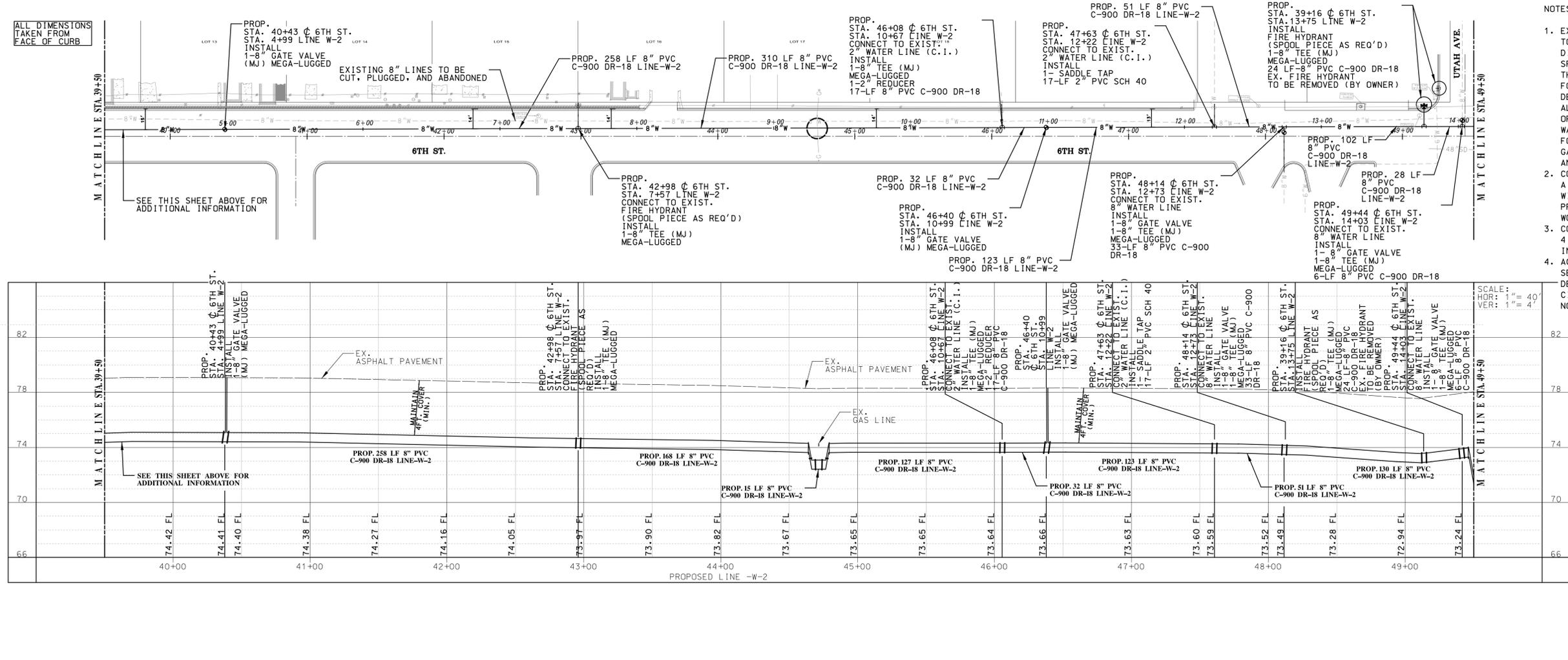
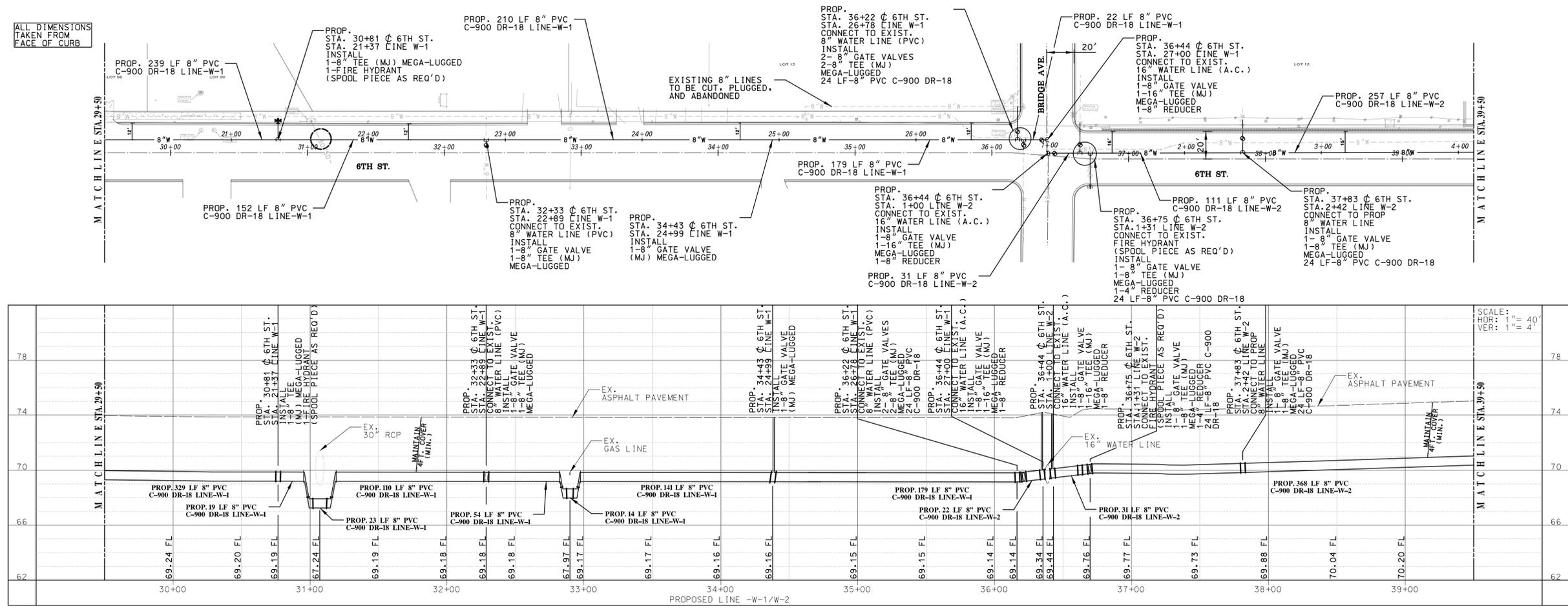
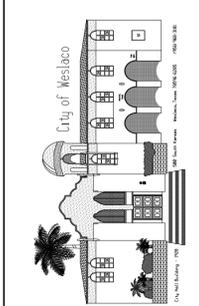
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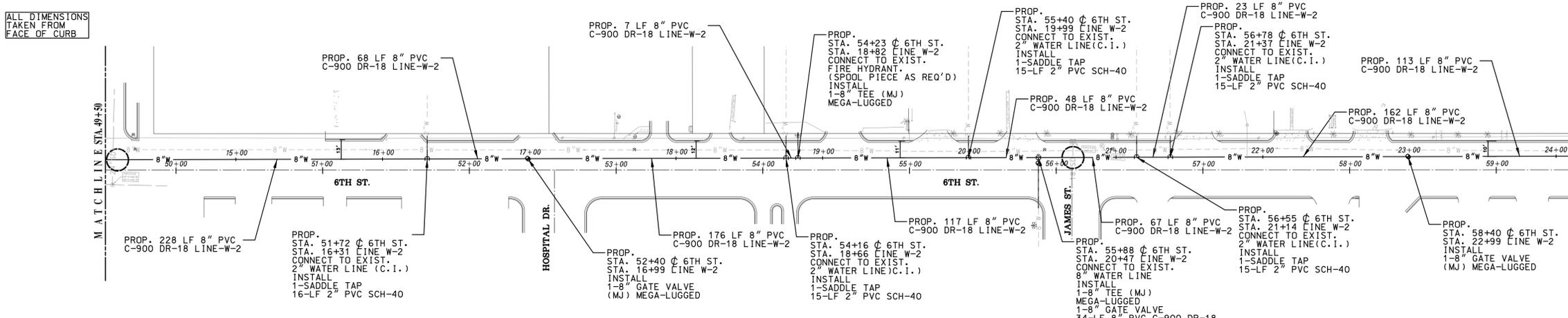
REVISIONS:

1	JUNE 10, 2015 SEE APPENDIX I
2	UPDATED 8" PVC LINE IMPROVEMENT QUANTITIES

C-4 LINE - W-1/W-2 PLAN/PROFILE (2 OF 4)

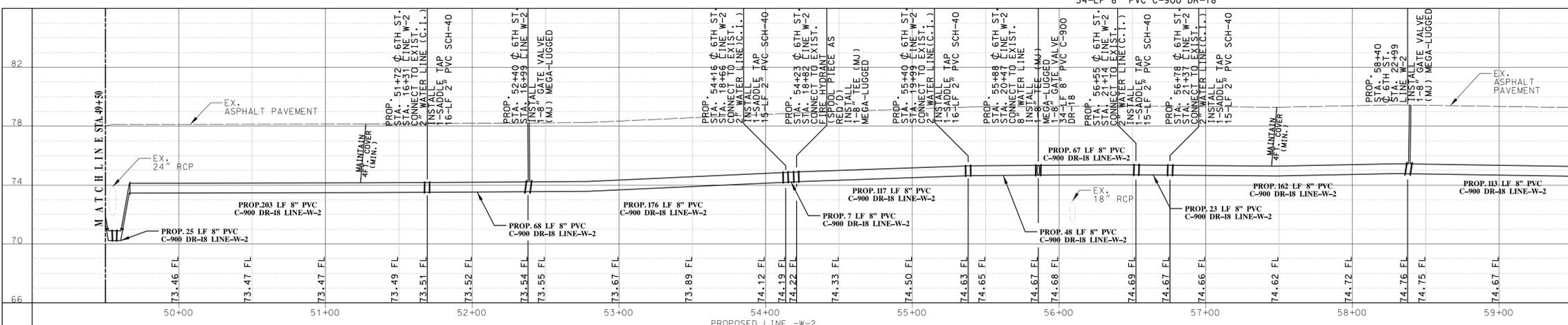


ALL DIMENSIONS TAKEN FROM FACE OF CURB

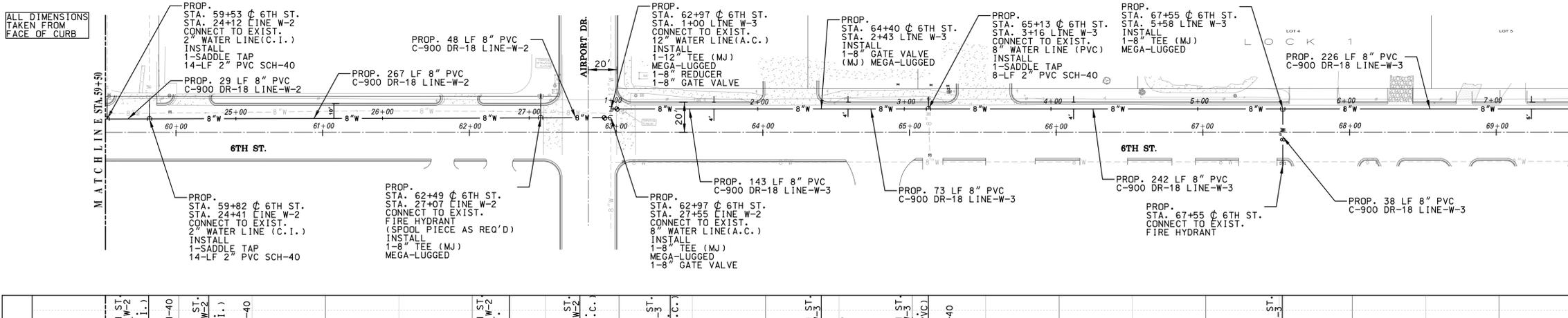


LEGEND

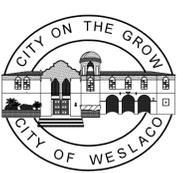
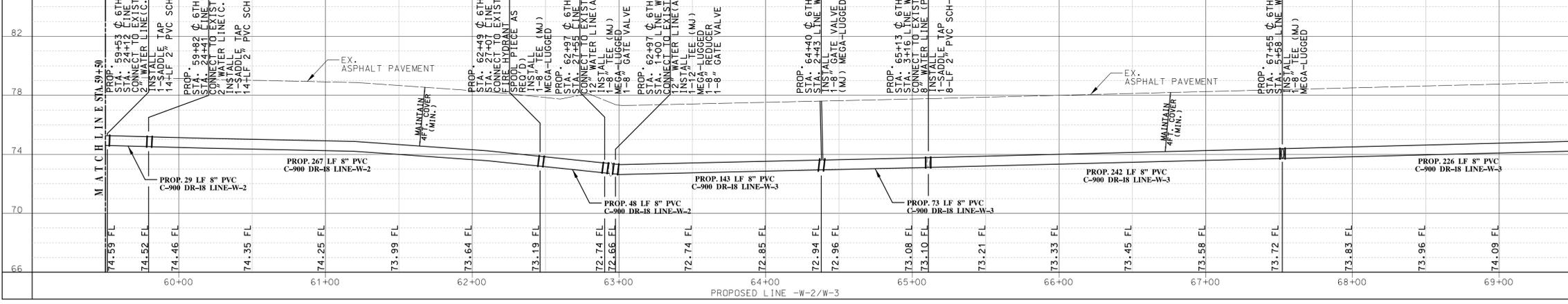
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6TH ST. WATER LINE IMPROVEMENTS WESLACO, TEXAS

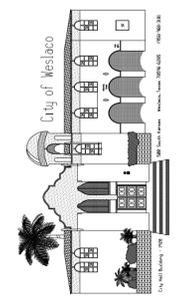


REVISIONS:

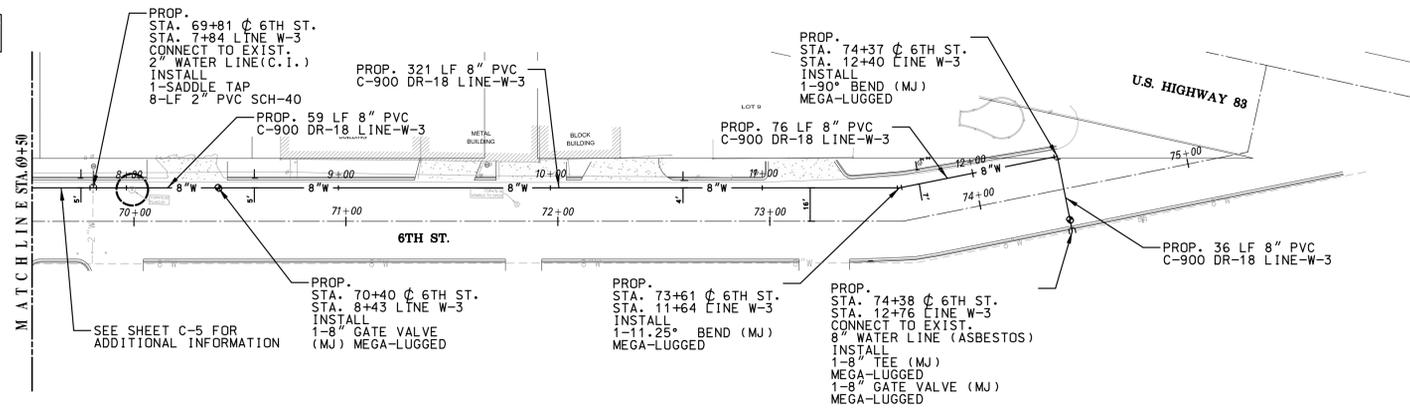
NO.	DATE	DESCRIPTION
1	JUNE 10, 2015	ISSUE ADDENDUM 1
2		UPDATED P.V.C. LINE IMPROVEMENT QUANTITIES

C-5 LINE - W-2/W-3 PLAN/PROFILE (3 OF 4)

SCALE: 1" = 40'

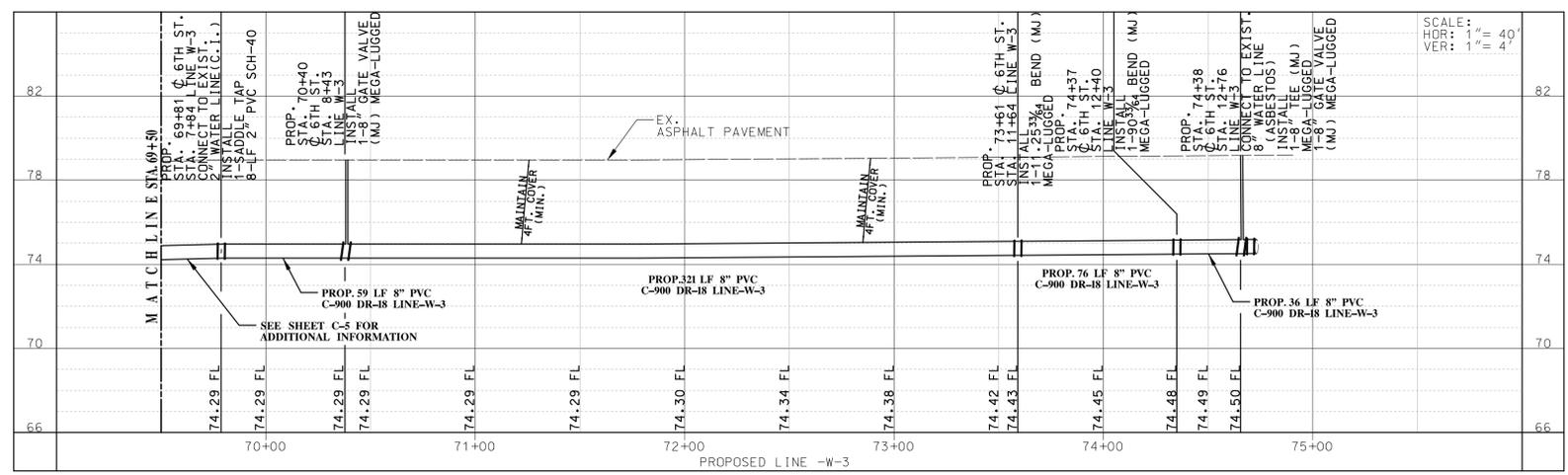


ALL DIMENSIONS
TAKEN FROM
FACE OF CURB



LEGEND

- EX. FIRE HYDRANT
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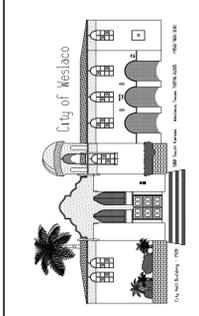
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SEAL:

REVISIONS:

C-6
LINE - W-3
PLAN/PROFILE
(4 OF 4)
SCALE: 1" = 40'



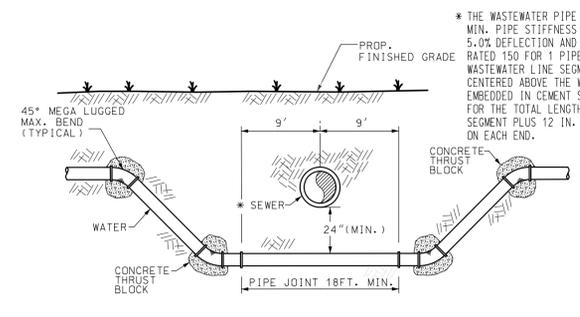
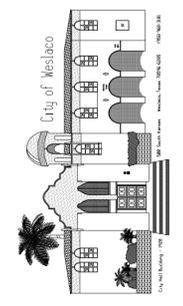


6TH ST. WATER LINE IMPROVEMENTS WESLACO, TEXAS

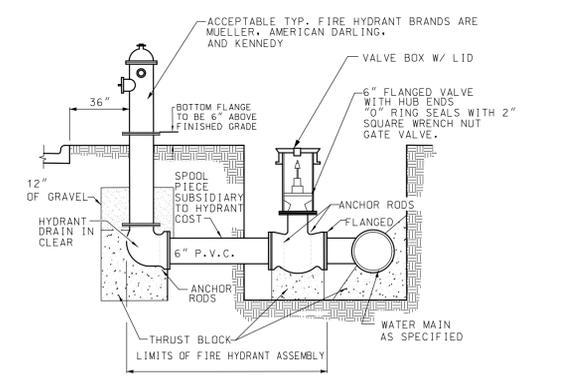


REVISIONS:
 Δ JUNE 10, 2015 SEE APPENDIX I FOR UPDATED MISCELLANEOUS DETAILS

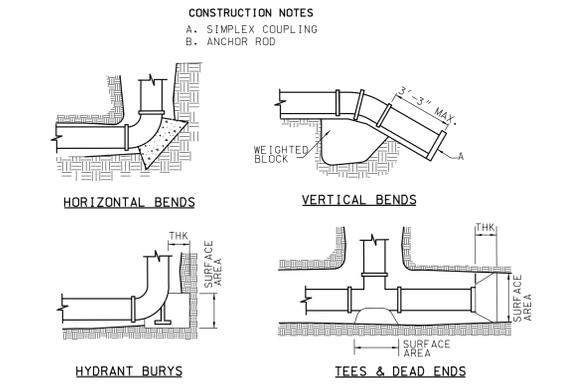
C-7 MISCELLANEOUS DETAILS



TYPICAL WATER DEFLECTION
NTS

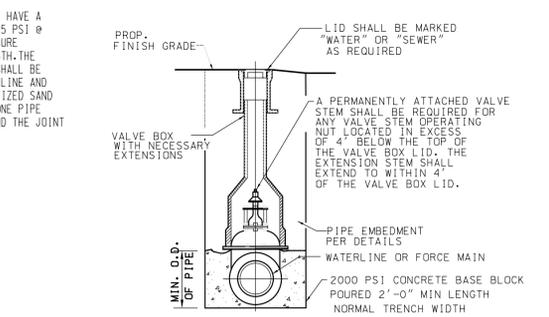


FIRE HYDRANT INSTALLATION
NTS

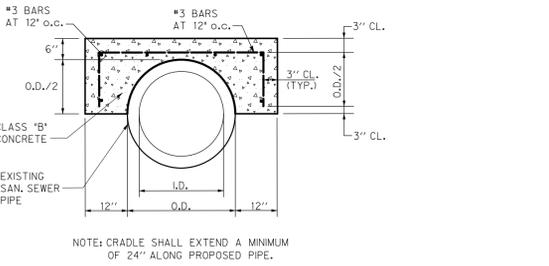


TYPICAL THRUST BLOCK DETAILS
NTS

GENERAL NOTES
 1. SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS. (SHEET 2 OF 2)
 2. THE LOCATION OF THRUST BLOCKS DEPENDS UPON THE DIRECTION OF THRUST AND TYPE FITTINGS.

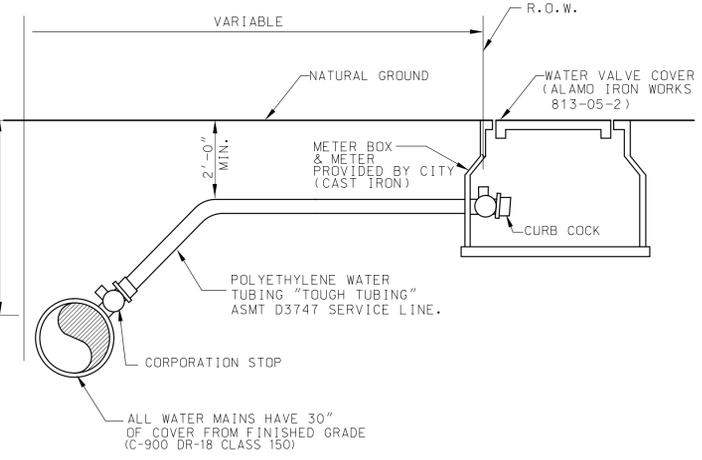


GATE VALVE AND BOX
NTS

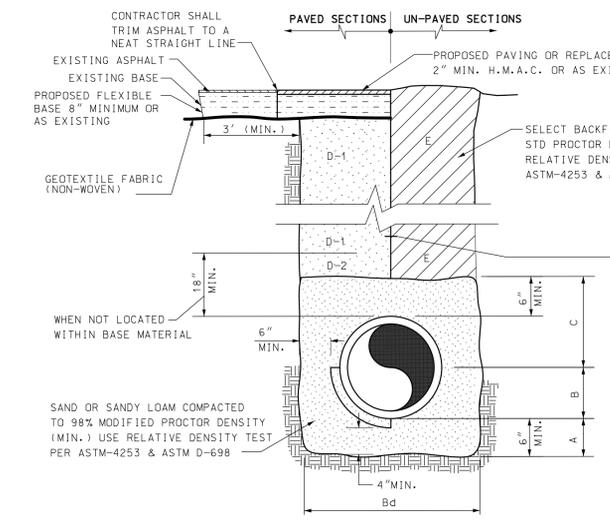


CONCRETE SADDLE
NTS

THRUST BLOCK SIZE			
DIAMETER OF PIPE INCHES	HORIZONTAL SURFACE AREA SQ. FEET	BEND AT THICKNESS INCHES	WEIGHT AT VERTICAL BENDS-LBS.
22-1/2" BENDS			
6 OR LESS	2	8	1700
8	3	8	3,000
10	3.5	12	4,500
12	4	14	6,600
14	5	18	9,000
16	6	18	11,800
45" BENDS			
6 OR LESS	4	12	3,200
8	5	14	5,800
10	6	18	9,000
12	7	18	13,000
14	8	24	17,000
16	11.5	24	23,200
90" BENDS			
6 OR LESS	6	12	6,000
8	8	15	10,700
10	10	18	16,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700
TEES & DEAD ENDS			
6 OR LESS	3	12	
8	4	15	
10	6	18	
12	8.5	18	
14	11.5	24	
16	15	24	

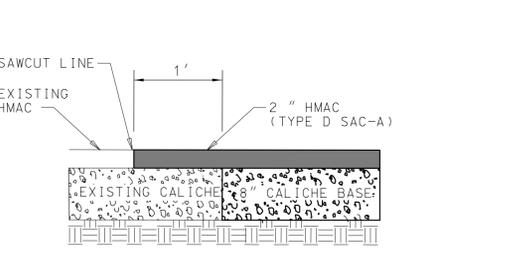


TYPICAL SERVICE CONNECTION
NTS



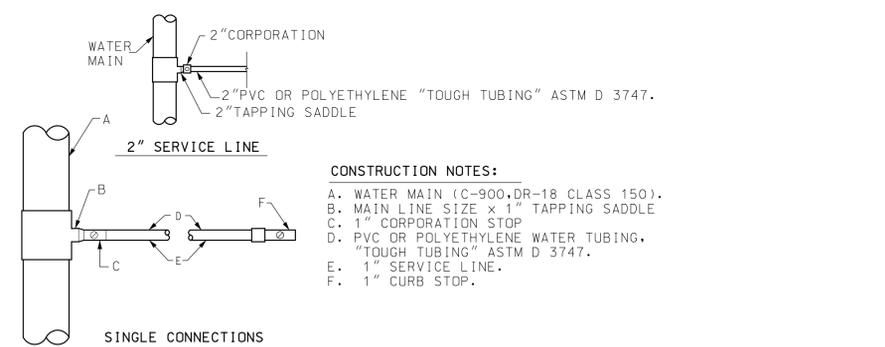
WATER LINE BEDDING
NTS

TYPICAL WATER / SANITARY SEWER CROSSING
NTS

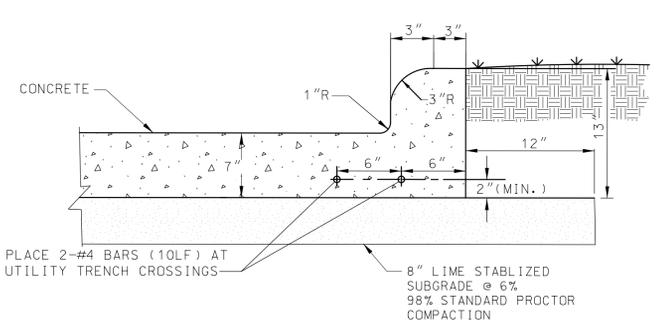


SAWCUT DETAIL
NTS

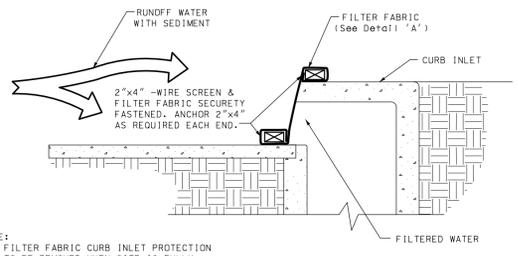
ASPHALT PAVEMENT SECTION
NTS



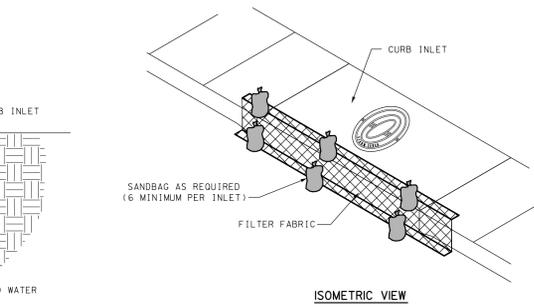
TYPICAL SINGLE SERVICE CONNECTION
NTS



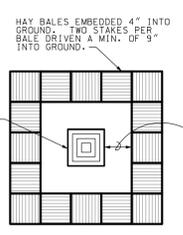
TYPICAL MONOLITHIC CURB
NTS



FILTER FABRIC CURB INLET PROTECTION
NTS



FILTER FABRIC GRATE INLET PROTECTION
NTS



HAY BALE INLET PROTECTION
NTS

- NOTE:**
- 1.) FILTER FABRIC CURB INLET PROTECTION TO BE REMOVED WHEN SITE IS FULLY STABILIZED.
 - 2.) FILTER FABRIC TO BE CLEANED AFTER EACH RAIN EVENT.
 - 3.) 2X4 LUMBER TO BE CUT AS REQUIRED TO FIT CONTOURS OF GUTTER LINE.
 - 4.) ALL BAGS TO BE USED FOR INLET PROTECTION TO BE U.V. RESISTANT.