

*TREVOR FIELDS PUBLIC WATER MAIN*  
*CITY OF SAN ANTONIO, TEXAS*  
*WATER IMPROVEMENTS*

## GENERAL WATER NOTES

- I. All materials and construction procedures within the scope of this project shall be approved by the San Antonio Water System (SAWS) and comply with the following as applicable:
- A. Current "San Antonio Water System Standard Specifications for Construction"
  - B. Current "San Antonio Water System Utility Service Regulations"
  - C. Current City of San Antonio "Standard Specifications for Public Works Construction"
  - D. Current TxDOT "Standard Specification for Construction of Highways, Streets and Drainage"
  - E. Current City of San Antonio "Right - Of - Way Ordinance and Criteria Manual".

2. The Contractor shall not proceed with any pipe installation work until they obtain a copy of the approved G.C.P. from the Consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements.

3. The locations and depths of existing utilities, including service laterals, and drainage structures shown on the plans are approximate only. The Contractor shall verify the exact location and depths of underground utilities at least 48 hours prior to construction whether shown on plans or not, and to protect the same during construction.

- |   |                |
|---|----------------|
| San Antonio Water System (Water, Sewer & Recycle Water) | 210-233-2010   |
| COSA Drainage   | 210-207-8200   |
| City Sidewalk and Trenching Division                    | 210-821-3240   |
| COSA Traffic Signal Operations                          | 210-207-7765   |
| *Texas State Wide One Call Locator                      | 1-800-545-6005 |
| City Public Service                                     | "              |
| AT & T  | "              |
| Time Warner   | "              |
| Valero Energy Co.                                       | "              |

4. No meter boxes to be set in driveways. Any meter boxes set in driveways will be relocated at contractor's and/or Developer's expense.

5. The Contractor shall be responsible for restoring to its original or better condition from damage done to existing fences, curbs, streets, driveways, landscaping and structures.

6. The Contractor shall avoid cutting roots larger than one inch in diameter when excavating near existing trees. Excavation in vicinity of trees shall proceed with caution. The Contractor shall contact the City Arborist at 207-8053 and the SAWS construction inspector for guidance.

### SUPPLEMENTARY NOTES

7. No extra-payment shall be allowed for work called for on the plans but not included on the bid schedule. This incidental work will be required and shall be included under the pay item to which it relates.

8. The Developer dedicates the water mains upon completion by the Developer and acceptance by the San Antonio Water System. The San Antonio Water System will own and maintain said water mains which are located within this particular subdivision. (As applicable)

9. Contractor and/or Contractor's independently retained employee or structural design/geotechnical/safety/equipment consultant, if any, shall review these plans and available geotechnical information and the anticipated installation site(s) within the project work area in order to implement Contractor's trench excavation safety protection systems, programs and/or procedures. The Contractor's implementation of the systems, programs and/or procedures shall provide for adequate trench excavation safety protection that complies with as a minimum, OSHA Standards for trench excavations. Specifically, Contractor and/or Contractor's independently retained employee or safety consultant shall implement a trench safety program in accordance with OSHA Standards governing the presence and activities of individuals working in and around trench excavation.

10. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

11. The contractor will keep the area on top of and around the water meter box free of all objects and debris

12. Water System to be completely restrained. Restrained length calculations are for P.V.C. Pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

- Note: These calculations are provided for reference. The restrained lengths shall be designed base upon the conditions encountered during the installation. See SAWS Specification Book

ADDITIONAL WATER NOTES

1. All valves shall read "open right"

2. **Lead Free Fire Hydrants:**  
 "SAWS require GCPs and counter permits to use lead free (< 0.25% lead) fire hydrants."

3. **PRVs Required:**
- Contractor to verify that no portion of the tract is below ground elevation of 934 feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below 934 feet, the Developer or Builder shall install at each lot, on the customer's side of the meter, an approved type pressure regulator in conformance with the Plumbing Code of the City of San Antonio. No dual services allowed for any lot(s) if "PRV is/are required for such lot(s), only single service connections shall be allowed. "Note: A pressure regulator is also known as a pressure reducing valve (PRV).

4. 98% COMPACTION NOTE:  
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

5. **Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item #847):**  
Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed for main repairs. The Contractor shall utilize all appropriate safety measure to protect his personnel during disinfection operations.

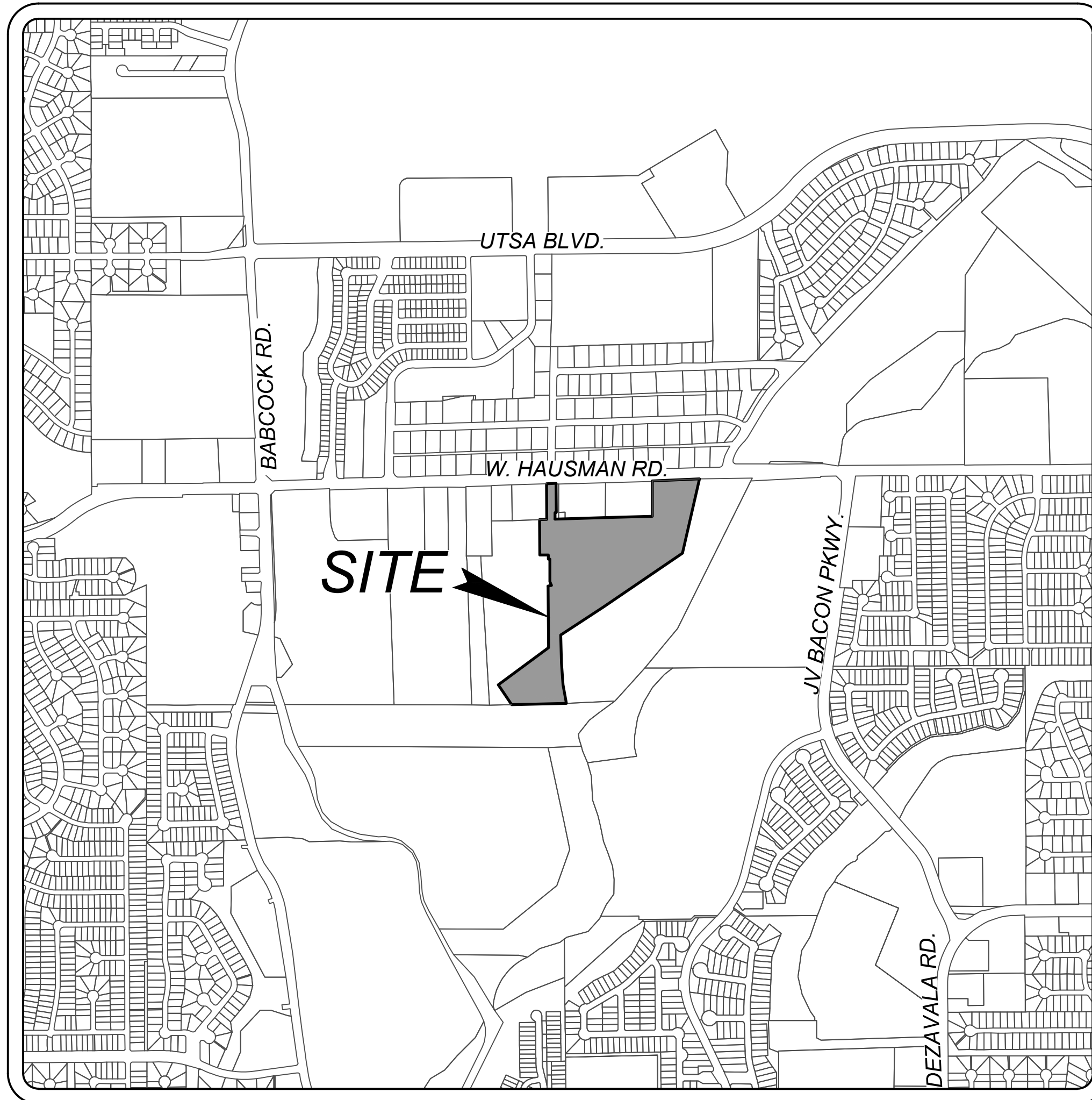
6. **Spills, Overflows, or Discharges of Wastewater:**  
**Attention Contractors:** All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to your counter permit or General Construction Permit (GCP). This requirement applies to every spill, overflow, or discharge - regardless of size. Your compliance will enable SAWS to fulfill regulatory reporting requirements.

- It is the Contractor's responsibility to control sewer flows so that a spill overflow, or discharge does not occur. In the event that a spill, overflows, or discharge occurs, the Contractor may liable for:*

7. All fines, penalties, or other costs assessed to or against SAWS by any State, Federal, or other governmental agency

8. SAWS staff and material costs to respond to the spill, overflow, or discharge, or to mitigate the effects of the spill, overflow or discharge, or to support the cleanup effort.

9. All damages caused to SAWS, or any other persons or entities that result from the spill, overflow or discharge.



*LOCATION MAP*  
*NOT-TO-SCALE*

OWNER INFORMATION  
BEAZER HOMES

11467 HUEBNER ROAD, SUITE 225  
SAN ANTONIO, TEXAS 78230

## INDEX

DESCRIPTION	SHEET NUMBER
WATER DISTRIBUTION COVER SHEET	1.0
WATER DISTRIBUTION PLAN	1.1

[illegible]

*BID SET  
NOT FOR  
CONSTRUCTION*

**CLAYTON J. LINNEY**  
TEXAS LICENSED PROFESSIONAL ENGINEER  
LICENSE NUMBER: 111543  
COLLIERS ENGINEERING & DESIGN, INC.  
TBPE Firm#: F-14909 - TBPLS Firm#: 10194550

**TREVOR FIELDS, UNIT 1  
STREET, DRAINAGE,  
WATER, SANITARY SEWER &  
UTILITY IMPROVEMENTS  
FOR  
BEAZER HOMES**

CITY OF SAN ANTONIO  
BEXAR COUNTY  
TEXAS

**Colliers**  
Engineering & Design

SCALE: AS SHOWN	DATE: DEC - 2023	DRAWN BY: JA	CHECKED BY: CL
PROJECT NUMBER: 1065-13-03		DRAWING NAME: OW10651303	

SHEET TITLE:

## WATER DISTRIBUTION COVER SHEET

SHEET NUMBER:

# 1.0

DEVELOPER'S NAME: BEAZER HOMES	
DEVELOPER'S ADDRESS: 11467 HUEBNER ROAD, SUITE 225	
CITY: SAN ANTONIO	STATE: TX
PHONE#:	FAX#:
TOTAL ACREAGE: AC.	
SAWS BLOCK MAP#: 118630, 118632, 120630, 120632	TOTAL EDUS:
TOTAL LINEAR FOOTAGE OF PIPE: 2.112 I.F. OF C900 PVC PIPE	
PLAT NO.:	
NUMBER OF LOTS:	SAWS JOB#:

SERVICE AREA: --

**NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION**

CAUTION!! THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

#### WATER PLAN NOTES:

- ALL PVC PIPE 8" TO BE A MINIMUM OF C-900 DR 18 CLASS 235.
- FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.
- FOR ADDITIONAL WATER NOTES AND DETAILS SEE SHEET ?.
- WATER METER BY LOCATIONS BY LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD S.A.W.S. WATER DETAILS & SPECIFICATIONS.
- WHERE WATER SERVICES AND LIGHT POLE FOUNDATIONS ARE PROPOSED TO BE AT THE SAME LOT CORNERS, SERVICE TAPS AND LEADS SHOULD BE AT LEAST 3 FEET FROM THE LIGHT POLE FOUNDATION.
- ALL VALVES SHALL READ "OPEN RIGHT"
- ALL PVC PIPE TO BE C-900 CLASS 150 (DR 18).
- FOR PRV DETAIL SEE S.A.W.S. STANDARD DETAIL DD-833-03.

#### NOTE:

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET ---, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

#### SAWS NOTE:

- "SAWS REQUIRES GCPs AND COUNTER PERMIT TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS."
- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATIONS.

#### FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

#### COMPACTION NOTE:

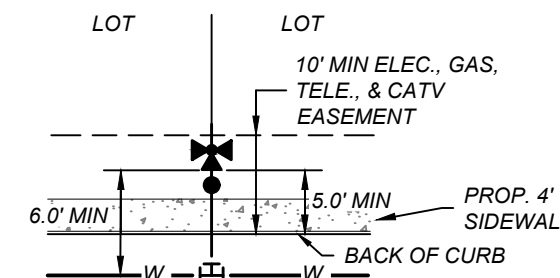
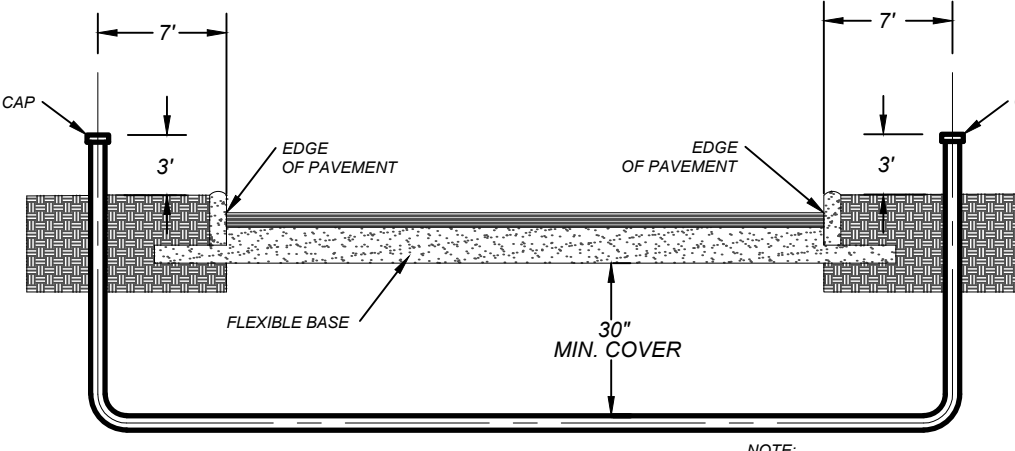
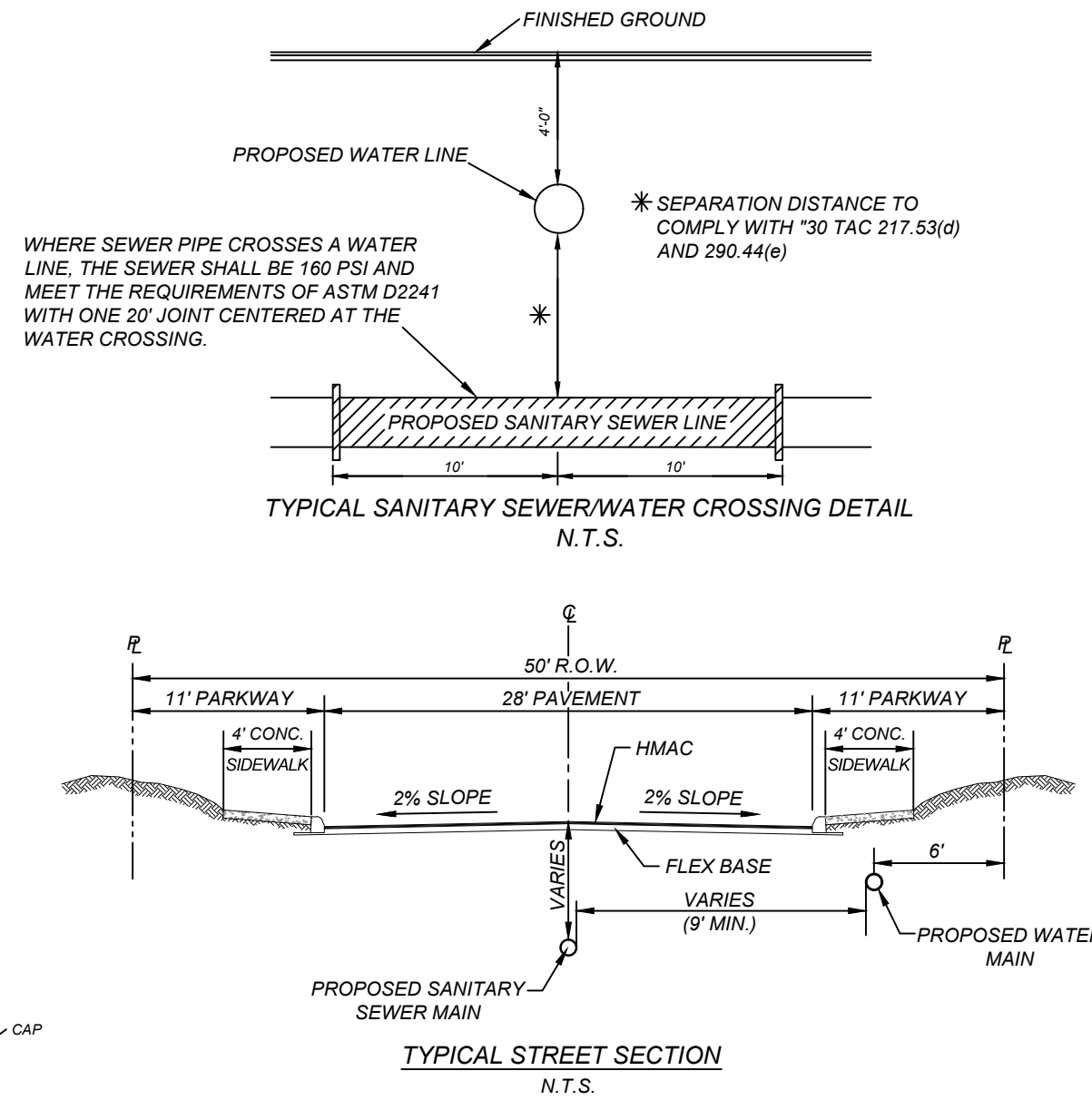
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL, AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR. PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

#### JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

#### TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.



#### LEGEND

- PROPOSED WATER MAIN = W
- PROPOSED WATER SERVICE & METER BOX = W
- PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX = W
- PROPOSED FIRE HYDRANT = W
- PROPOSED WATER VALVE = W
- PROPOSED SANITARY SEWER MAIN = SS
- PROPOSED SANITARY SEWER MANHOLE = SS
- PROPOSED ELECTRIC, GAS, TELE. & CABLE TV EASEMENT = E, G, T, & TV ESMT
- EXISTING WATER MAIN = E ?" W
- EXISTING FIRE HYDRANT = E ?" W
- EXISTING WATER VALVE = E ?" W
- EXISTING SANITARY SEWER MAIN = E ?" SS
- EXISTING SANITARY SEWER MANHOLE = E ?" SS
- EXISTING OVERHEAD ELECTRIC W/POWER POLE = OHE
- EXISTING GUY WIRE/OVERHEAD ELECTRIC = OHE

