



THE CITY OF FORT WORTH, TEXAS
PLANS FOR CONSTRUCTION OF
8" WATER LINE IMPROVEMENTS
TO SERVE
JOHN PETER SMITH HOSPITAL PEC
(JOHN PETER SMITH HOSPITAL SITE, LOT 1, BLK 1)

X-28388

CURRENT CONSTRUCTION STANDARDS FOR
DEVELOPMENTS DATED SEPTEMBER 6, 2024
SHALL GOVERN ON THIS PROJECT.

City Project No. 105900
IPRC Project No. 24-0208

Water Project No. WSL-2022-2192
FID No. 30114-0200431-105900-E07685

Water Line Improvements to serve John Peter Smith Hospital

MATTIE PARKER

MAYOR

JAY CHAPA

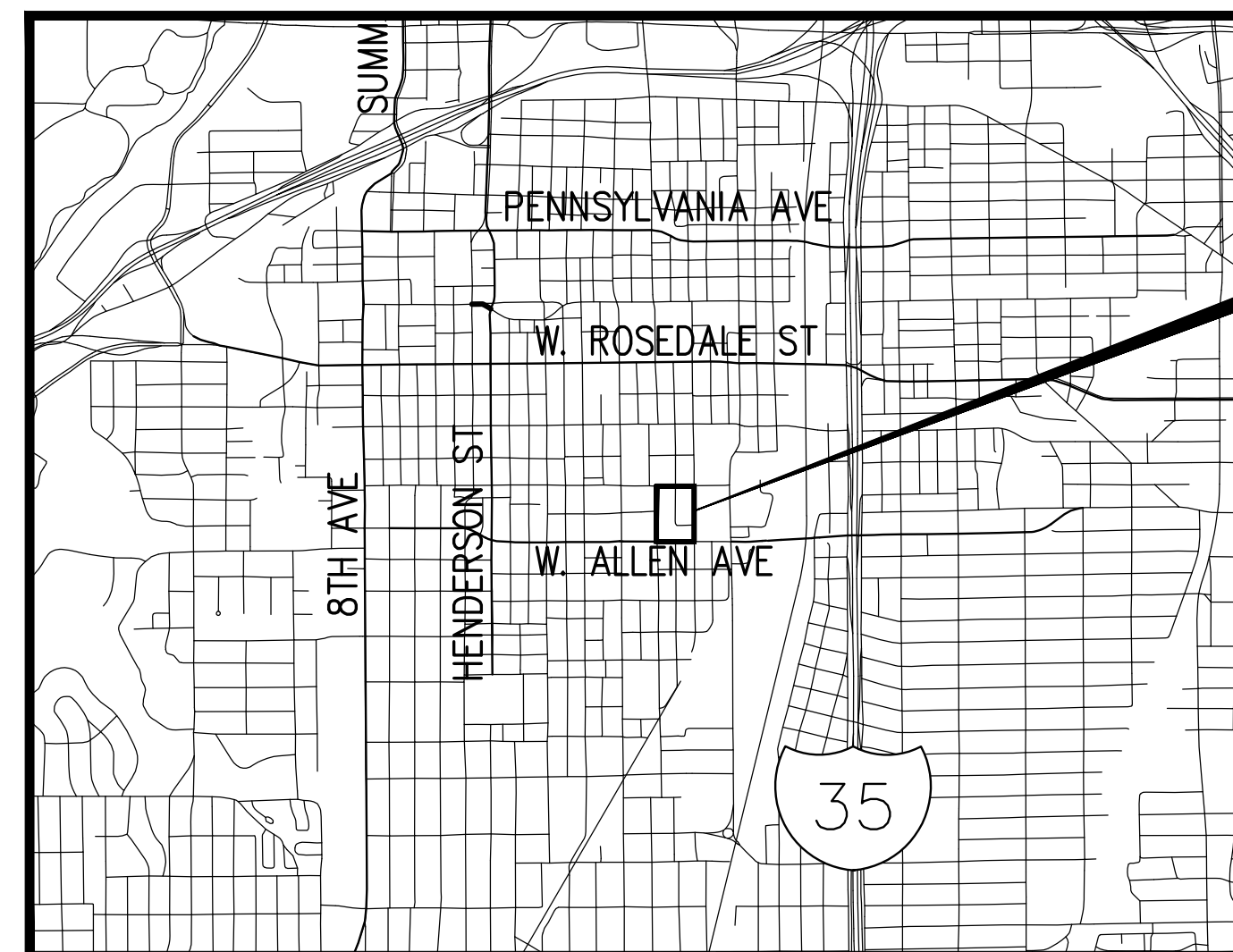
CITY MANAGER

LAUREN PRIEUR, P.E.

CITY ENGINEER, TRANSPORTATION AND
PUBLIC WORKS DEPARTMENT

CHRISTOPHER P. HARDER, P.E.

DIRECTOR, WATER DEPARTMENT



Location Map

N.T.S.

PROJECT LOCATION

Sheet List Table

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9	Water Details (3 OF 3)

This document is for interim review and is not
intended for construction, bidding or permit
purposes.

SCOTT A. GIBSON, P.E. Date: October 8, 2026

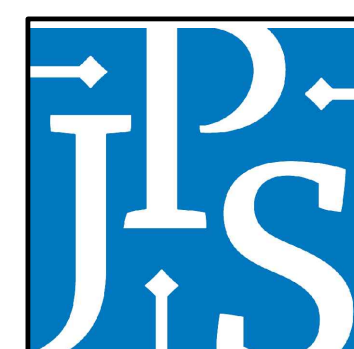
Tx. Reg. # 89290

Mapsco Page No. 77N

Council District 9

October 2026

Owned/Developed by: Prepared by:



Tarrant County Hospital District (dba
JPS Health Network)



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TBPE Registration No. F-230
www.tnpinc.com

DIRECTOR'S DESIGNEE FOR CONSTRUCTION PLAN
APPROVAL RESOLUTION NO. 01-10-2020

Date

Reviewed:

Project Manager

Date

X-28388

IPRC Project No. 24-0208

City Project No. 105900

Water Project No. WSL-2022-2192

FID No. 30114-0200431-105900-E07685

TNP No. BKA 21233

no.	revision	by	date

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GBPE No. PEF007431; TBAE No. BR 2673



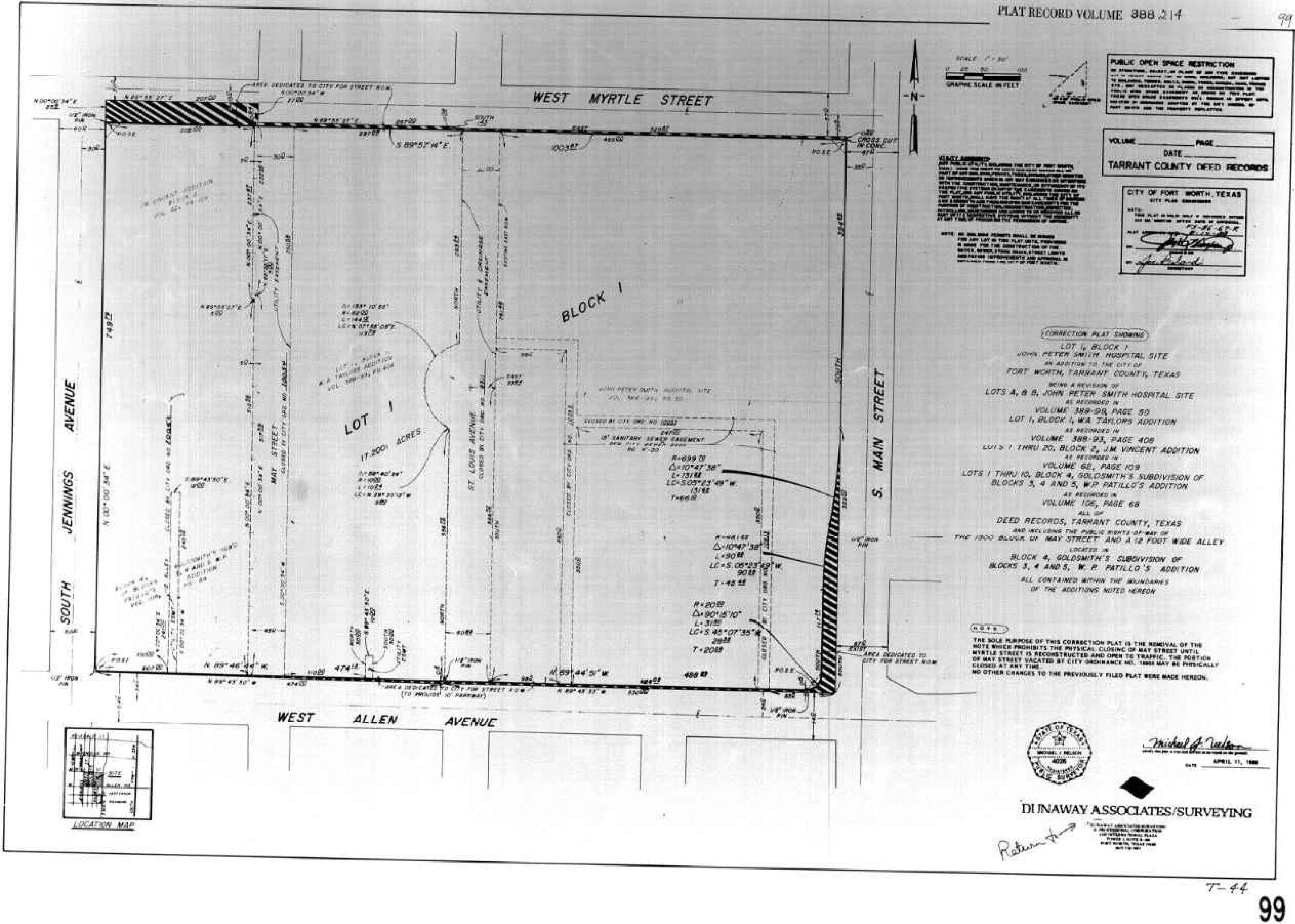
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THIS SHEET IS
FOR
INFORMATION
ONLY

City of Fort Worth, Texas John Peter Smith Hospital Water Line Improvements
Final Plat

Inp project
BKA 21233
sheet
2



GENERAL:

1. GENERAL: IT IS REQUIRED THAT A CONTRACTOR WORK ON PRIVATE PROPERTY WITHIN UTILITY EASEMENTS, THE CONTRACTOR SHALL CONTACT THE PROPERTY OWNER 48 HOURS PRIOR TO CONSTRUCTION, ONCE THE PIPE HAS BEEN INSTALLED OR REHABILITATED, THE CONTRACTOR SHALL IMMEDIATELY COMMENCE SURFACE RESTORATION. SURFACE RESTORATION MUST BE COMPLETED TO THE OWNER'S SATISFACTION WITHIN TEN (10) WORKING DAYS. FAILURE TO MAINTAIN AND/OR COMPLETE SITE RESTORATION, AS NOTED ABOVE, MAY RESULT IN DEFERMENT OF FURTHER PIPE REPLACEMENT AND/OR ADDITIONAL COSTS TO THE OWNER.
2. EXISTING VERTICAL DEFLECTIONS AND PIPE SLOPES SHOWN ON THE PLANS WERE OBTAINED FROM RECORD DRAWINGS AND HAVE NOT BEEN FIELD VERIFIED. SOME PIPELINE SLOPES WERE ADJUSTED TO MATCH SURVEYED MANHOLE FLOW LINES. RIM ELEVATIONS, FLOW LINES, AND HORIZONTAL LOCATIONS OF EXISTING MANHOLES WERE DETERMINED FROM FIELD SURVEY. HOWEVER, IF CONFLICTS WITH PAVING, ADDITIONAL FILL, STORM SEWER, AND/OR SANITARY SEWER LINES, BRICK PIPES, EMBEDMENTS, VENT WALLS, AND/OR GROUND STRUCTURES, FRANCHISE UTILITIES, ETC. HAVE BEEN IDENTIFIED, THE UTILITIES IN CONFLICT SHALL BE LOCATED AND POTHOLED USING VACUUM EXCAVATION METHOD PER SECTION 33.05.30 PRIOR TO CONSTRUCTION OF THE MAIN. CONTRACTOR SHALL PROVIDE ALL POTHOLE DATA AND OTHER DOCUMENTATION OF THESE CONFLICTS (PLANS, SHOP DRAWINGS, SURVEY DATA, ETC.) TO THE CITY INSPECTOR, WATER ENGINEERING, WATER FIELD OPERATIONS, AS PLANS SHALL BE REVISED AND APPROVED FOR CONSTRUCTION.
3. MAINTAIN ALL EXISTING WATER AND SEWER CONNECTIONS TO CUSTOMERS IN WORKING ORDER AT ALL TIMES, EXCEPT FOR BRIEF INTERRUPTIONS IN SERVICE FOR WATER AND SEWER SERVICES TO BE REINSTATED. IN NO CASE SHALL SERVICES BE ALLOWED TO REMAIN OUT OF SERVICE OVERNIGHT.
4. PROVIDE AND FOLLOW APPROVED CONFINED SPACE ENTRY PROGRAM IN ACCORDANCE WITH OSHA REQUIREMENTS. CONFINED SPACES SHALL INCLUDE MANHOLES AND ALL OTHER CONFINED SPACES IN ACCORDANCE WITH OSHA'S PERMIT REQUIRED FOR CONFINED SPACES.
5. EXISTING AND PROPOSED CONFINED SPACE ADJUSTMENTS, BY APPROPRIATE WATER DEPARTMENT WORK CATEGORY, SHALL BE ALLOWED TO ADJUST VALVE BOXES, MANHOLES, RING & COVERS, ETC.
6. CONTRACTOR IS RESPONSIBLE FOR ALL TRENSH SAFETY. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED WORK UTILIZING A TRENCH SAFETY PLAN PREPARED BY A LICENSED PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, FOR THIS PROJECT, IN ACCORDANCE WITH OSHA EXCAVATION AND SHIELDING REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRENCH SAFETY PLAN AND THE TRENCH SAFETY MEETING. PRE-CONSTRUCTION MEETING. THIS WOULD ALSO INCLUDE A GROUND WATER CONTROL PLAN IF CONDITIONS MEETING CRITERIA OUTLINED IN SECTION 33.05.10 EXIST.
7. ALL EMBEDMENT AND BACKFILL SHALL BE IN ACCORDANCE WITH SPECIFICATION 33.05.10. CONTRACTOR SHALL PROVIDE THE EMBEDMENT/BACKFILL DENSITY TESTING PLAN WHICH INCLUDES TESTING METHOD, FREQUENCY, TESTING LOG, TEST ADVISORS, TEST RESULTS, AND CONTACT FOR VERIFICATION. THE CONTRACTOR SHALL OBTAIN THE INSPECTOR'S WRITING TO OBTAIN SAMPLES AND PERFORM THE PROCTOR TEST IN ACCORDANCE WITH ASTM D698. UPON COMMENCING BACKFILL PLACEMENT, CONTRACTOR SHALL SCHEDULE A DEMONSTRATION OF MEANS AND METHODS TO MEET THE REQUIRED DENSITIES. DEPTH OF LIFTS FOR BACKFILL SHALL NOT EXCEED 12-INCHES. TEST REPORTS SHALL BE POSTED WITHIN 48 HOURS OF COMPLETION OF EACH LIFT. ALL EXISTING AND PROPOSED EMBEDEDMENTS SHALL BE REMOVED AND REPLACED WITH NEW. ALL PAVEMENT REPAIR SHALL BE PER SECTIONS 32.01 17, 32.01 18, AND 32.01 29. ALL NON-CONFORMING WORK SHALL BE REMOVED AND REPLACED.
8. EXISTING UTILITY INFORMATION IS PROVIDED FOR INFORMATION ONLY. ALTHOUGH THIS DATA IS SHOWN AS ACCURATELY AS POSSIBLE, THE CONTRACTOR IS CAUTIONED THAT THE CITY AND THE ENGINEER NEITHER ASSUMES NOR IMPLIES ANY RESPONSIBILITY FOR THE ACCURACY OF THE DATA.
9. EXISTING UTILITY CROSSINGS SHOWN ON THE PROFILE ARE FROM REFERENCE PLANS, AND FROM INFORMATION OBTAINED FROM THE UTILITY COMPANIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF THE EXISTING UTILITIES.

- WATER:
2. PROVIDE THRUST RESTRAINT BY MEANS OF CONCRETE JOINTS AT FITTINGS AND CONCRETE BLOCKING. WHEN SPECIFICALLY INDICATED ON THE DRAWINGS, PROVIDE THRUST RESTRAINT AT DESIGNATED JOINTS BEYOND THE FITTINGS. EACH METHOD SHALL BE CAPABLE OF THRUST RESTRAINT INDEPENDENT OF THE OTHER SYSTEM. THE CONTRACTOR SHALL REFER TO CITY STANDARD DETAILS FOR AREA REQUIRED TO INSTALL CONCRETE BLOCKING.
 2. ALL DUCTILE IRON MECHANICAL JOINT FITTINGS SHALL BE RESTRAINED TO PIPE USING RETAINER GLANDS.
 3. PROPOSED WATER MAINS SHALL HAVE A MINIMUM COVER OF 48-INCHES COVER ABOVE THE TOP OF PIPE, UNLESS SHOWN OTHERWISE ON THE DRAWINGS OR DETAILS.
 4. ALL WATER SERVICES SHALL BE INSTALLED ABOVE STREET SEWERS, EXCEPT WHERE SHOWN OTHERWISE IN THE DRAWINGS.
 5. ELEVATION ADJUSTMENT AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS, OR JOINT DEFLECTIONS. JOINT DEFLECTIONS SHALL NOT EXCEED FIFTY PERCENT (50%) OF MANUFACTURER'S RECOMMENDATIONS.
 6. TEMPORARY PRESSURE PLUGS REQUIRED FOR SEQUENCING OF CONSTRUCTION AND TESTING OF PROPOSED WATER MAINS SHALL BE CONSIDERED SEPARATE WORK TO BE INSTALLED IN THE PRICE BID FOR THE PROPOSAL FOR VARIOUS BID ITEMS.
 7. 12-INCH DIAMETER AND SMALLER WATER MAINS SHALL BE INSTALLED WITH A MINIMUM COVER OF 48-INCHES AND 16-INCH AND LARGER WATER MAINS SHALL BE INSTALLED A MINIMUM COVER OF 60-INCHES, MEASURED FROM TOP OF SURFACE (EXISTING AND PROPOSED) EXCEPT WHERE SHOWN OTHERWISE IN THESE PLANS.
 8. THE CONTRACTOR SHALL PROVIDE THE PLAN SUBMITTALS TO THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER FIELD OPERATIONS AND WATER ENGINEERING FOR REVIEW AT LEAST 1 WEEK PRIOR TO START OF CONSTRUCTION.
 9. FIRE HYDRANTS SHALL BE A MINIMUM OF 3 FT. BEHIND THE BACK OF CURB (MAXIMUM 9 FT.) AND IN LINE WITH THE PROPERTY/LOT LINES EXCEPT WHERE SHOWN OTHERWISE IN THESE PLANS. CONSTRUCTION AND SHOP DRAWING SUBMITTALS TO THE CITY INSPECTOR PER SECTIONS 33 12 40, 33 11 10, 33 11 11, 33 11 12, 33 11 13, 33 11 14, 33 11 15, 33 11 16, 33 11 17, 33 11 18, 33 11 19, 33 11 20, 33 11 21, 33 11 22, 33 11 23, 33 11 24, 33 11 25, 33 11 26, 33 11 27, 33 11 28, 33 11 29, 33 11 30, 33 11 31, 33 11 32, 33 11 33, 33 11 34, 33 11 35, 33 11 36, 33 11 37, 33 11 38, 33 11 39, 33 11 40, 33 11 41, 33 11 42, 33 11 43, 33 11 44, 33 11 45, 33 11 46, 33 11 47, 33 11 48, 33 11 49, 33 11 50, 33 11 51, 33 11 52, 33 11 53, 33 11 54, 33 11 55, 33 11 56, 33 11 57, 33 11 58, 33 11 59, 33 11 60, 33 11 61, 33 11 62, 33 11 63, 33 11 64, 33 11 65, 33 11 66, 33 11 67, 33 11 68, 33 11 69, 33 11 70, 33 11 71, 33 11 72, 33 11 73, 33 11 74, 33 11 75, 33 11 76, 33 11 77, 33 11 78, 33 11 79, 33 11 80, 33 11 81, 33 11 82, 33 11 83, 33 11 84, 33 11 85, 33 11 86, 33 11 87, 33 11 88, 33 11 89, 33 11 90, 33 11 91, 33 11 92, 33 11 93, 33 11 94, 33 11 95, 33 11 96, 33 11 97, 33 11 98, 33 11 99, 33 12 00, 33 12 01, 33 12 02, 33 12 03, 33 12 04, 33 12 05, 33 12 06, 33 12 07, 33 12 08, 33 12 09, 33 12 10, 33 12 11, 33 12 12, 33 12 13, 33 12 14, 33 12 15, 33 12 16, 33 12 17, 33 12 18, 33 12 19, 33 12 20, 33 12 21, 33 12 22, 33 12 23, 33 12 24, 33 12 25, 33 12 26, 33 12 27, 33 12 28, 33 12 29, 33 12 30, 33 12 31, 33 12 32, 33 12 33, 33 12 34, 33 12 35, 33 12 36, 33 12 37, 33 12 38, 33 12 39, 33 12 40, 33 12 41, 33 12 42, 33 12 43, 33 12 44, 33 12 45, 33 12 46, 33 12 47, 33 12 48, 33 12 49, 33 12 50, 33 12 51, 33 12 52, 33 12 53, 33 12 54, 33 12 55, 33 12 56, 33 12 57, 33 12 58, 33 12 59, 33 12 60, 33 12 61, 33 12 62, 33 12 63, 33 12 64, 33 12 65, 33 12 66, 33 12 67, 33 12 68, 33 12 69, 33 12 70, 33 12 71, 33 12 72, 33 12 73, 33 12 74, 33 12 75, 33 12 76, 33 12 77, 33 12 78, 33 12 79, 33 12 80, 33 12 81, 33 12 82, 33 12 83, 33 12 84, 33 12 85, 33 12 86, 33 12 87, 33 12 88, 33 12 89, 33 12 90, 33 12 91, 33 12 92, 33 12 93, 33 12 94, 33 12 95, 33 12 96, 33 12 97, 33 12 98, 33 12 99, 33 13 00, 33 13 01, 33 13 02, 33 13 03, 33 13 04, 33 13 05, 33 13 06, 33 13 07, 33 13 08, 33 13 09, 33 13 10, 33 13 11, 33 13 12, 33 13 13, 33 13 14, 33 13 15, 33 13 16, 33 13 17, 33 13 18, 33 13 19, 33 13 20, 33 13 21, 33 13 22, 33 13 23, 33 13 24, 33 13 25, 33 13 26, 33 13 27, 33 13 28, 33 13 29, 33 13 30, 33 13 31, 33 13 32, 33 13 33, 33 13 34, 33 13 35, 33 13 36, 33 13 37, 33 13 38, 33 13 39, 33 13 40, 33 13 41, 33 13 42, 33 13 43, 33 13 44, 33 13 45, 33 13 46, 33 13 47, 33 13 48, 33 13 49, 33 13 50, 33 13 51, 33 13 52, 33 13 53, 33 13 54, 33 13 55, 33 13 56, 33 13 57, 33 13 58, 33 13 59, 33 13 60, 33 13 61, 33 13 62, 33 13 63, 33 13 64, 33 13 65, 33 13 66, 33 13 67, 33 13 68, 33 13 69, 33 13 70, 33 13 71, 33 13 72, 33 13 73, 33 13 74, 33 13 75, 33 13 76, 33 13 77, 33 13 78, 33 13 79, 33 13 80, 33 13 81, 33 13 82, 33 13 83, 33 13 84, 33 13 85, 33 13 86, 33 13 87, 33 13 88, 33 13 89, 33 13 90, 33 13 91, 33 13 92, 33 13 93, 33 13 94, 33 13 95, 33 13 96, 33 13 97, 33 13 98, 33 13 99, 33 14 00, 33 14 01, 33 14 02, 33 14 03, 33 14 04, 33 14 05, 33 14 06, 33 14 07, 33 14 08, 33 14 09, 33 14 10, 33 14 11, 33 14 12, 33 14 13, 33 14 14, 33 14 15, 33 14 16, 33 14 17, 33 14 18, 33 14 19, 33 14 20, 33 14 21, 33 14 22, 33 14 23, 33 14 24, 33 14 25, 33 14 26, 33 14 27, 33 14 28, 33 14 29, 33 14 30, 33 14 31, 33 14 32, 33 14 33, 33 14 34, 33 14 35, 33 14 36, 33 14 37, 33 14 38, 33 14 39, 33 14 40, 33 14 41, 33 14 42, 33 14 43, 33 14 44, 33 14 45, 33 14 46, 33 14 47, 33 14 48, 33 14 49, 33 14 50, 33 14 51, 33 14 52, 33 14 53, 33 14 54, 33 14 55, 33 14 56, 33 14 57, 33 14 58, 33 14 59, 33 14 60, 33 14 61

GENERAL:

- SANITARY SEWER**

- SAFARI SEWER:
1. VERIFY THAT ALL CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE FOR SANITARY SEWER ONLY. NOTIFY CITY OF ANY DISCOVERED ILLEGAL CONNECTIONS.
 2. CONTRACTOR SHALL BE LIABLE FOR ALL DAMAGES TO PROPERTIES, HOMES, AND BASEMENTS FROM BACKUP, WHICH MAY RESULT DURING THE INSTALLATION OF NEW PIPE AND/OR ABANDONMENT OF EXISTING PIPE. THE CONTRACTOR WILL BE ALLOWED TO OPEN CLEAN OUTS WHERE AVAILABLE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CLEAN UP ASSOCIATED WITH OPENING CLEAN OUTS.
 3. FOR ALL SANITARY SEWER SERVICE CONNECTIONS AT MANHOLES, PROVIDE A HYDRAULIC SLIDE IN THE MANHOLE.
 4. CONTRACTOR SHALL BE RESPONSIBLE TO AT TIMES WILL BE IN CHARGE OF ALL EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS FOR THE SUPPORT AND PROTECTION OF ALL UTILITIES, POLES, GAS MAINS, TELEPHONE CABLES, SANITARY SEWER MAINS, WATER MAINS, DRAINAGE PIPES, UTILITY SERVICES, AND ALL OTHER UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AT THE PRE-CONSTRUCTION MEETING PER SECTION 33 01 30. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL 15-INCH DIAMETER AND SMALLER LATERALS AND ALL 12-INCH AND SMALLER MAINS (LARGER) FOR REVIEW BY CITY INSPECTOR, WATER ENGINEERING, AND WATER FIELD OPERATIONS PRIOR TO CONSTRUCTION IN THESE AREAS. IN ADDITION, THE CONTRACTOR SHALL SUBMIT A CONTINGENCY PLAN AND EMERGENCY PLAN TO THE SAME PERSONNEL, WHICH INCLUDES ACCEPTABLE PIPE MATERIALS ON-SITE FOR REPAIRS. THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO EXISTING WATER AND SANITARY SEWER MAINS AS A RESULT OF THE PRE-CONSTRUCTION TELEVISION INSPECTION.
 5. CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION TELEVISION INSPECTION (CCTV) OF ALL EXISTING SANITARY SEWER LINES, WHICH ARE TO BE ABANDONED OR REHABILITATED VIA TRENCHLESS METHODS, TO VERIFY LOCATIONS OF ALL SANITARY SEWER SERVICE CONNECTIONS PRIOR TO CONSTRUCTION OF THE ENTIRE PROJECT. FORMAT OF THE CCTV VIDEO, PLAN EXHIBITS, AND REPORT SHALL BE IN ACCORDANCE WITH SECTION 33 01 30. CONTRACTOR SHALL SUBMIT THE CCTV VIDEO, PLAN EXHIBITS, AND REPORT TO THE CITY ENGINEER, SANITARY SEWER DIVISION, 1000 N. 10TH AVENUE, ADDRESS, PIPE SIZE, PIPE MATERIAL, SERVICE LOCATIONS, PIPE MATERIAL CHANGES, ETC. COPIES OF THE CCTV VIDEO, LAYOUT, MARKED UP PLAN SHOWING LIMITS, AND REPORT SHALL BE PROVIDED TO THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS, AS THE SCHEDULE SHALL ALLOW FOR A REVIEW TIME OF 2 WEEKS.
 6. CONTRACTOR SHALL BE RESPONSIBLE TO AT TIMES WILL BE IN CHARGE OF ALL EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. CONTRACTOR SHALL BE RESPONSIBLE TO AT TIMES WILL BE IN CHARGE OF ALL EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS OF ANY POTENTIAL CONFLICTS PRIOR TO CONSTRUCTION, SO MODIFICATIONS TO THE PLANS CAN BE MADE IF NECESSARY. NOT A SEPARATE PAY ITEM, AS THIS WORK SHALL BE SUBSIDIARY TO THE PRE-CONSTRUCTION TELEVISION INSPECTION OF SANITARY SEWER MAINS. CONTRACTOR SHALL SUBMIT THE CCTV VIDEO, PLAN EXHIBITS, AND REPORT TO THE CITY ENGINEER, SANITARY SEWER DIVISION, 1000 N. 10TH AVENUE, ADDRESS, PIPE SIZE, PIPE MATERIAL, SERVICE LOCATIONS, PIPE MATERIAL CHANGES, ETC. COPIES OF THE CCTV VIDEO, LAYOUT, MARKED UP PLAN SHOWING LIMITS, AND REPORT SHALL BE PROVIDED TO THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS, AS THE SCHEDULE SHALL ALLOW FOR A REVIEW TIME OF 2 WEEKS. CONTRACTOR SHALL BE RESPONSIBLE TO AT TIMES WILL BE IN CHARGE OF ALL EXISTING UTILITIES AND STRUCTURES BOTH ABOVE AND BELOW GROUND. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR, CITY PROJECT MANAGER, WATER ENGINEERING, AND WATER FIELD OPERATIONS OF ANY POTENTIAL CONFLICTS PRIOR TO CONSTRUCTION, SO MODIFICATIONS TO THE PLANS CAN BE MADE IF NECESSARY. NOT A SEPARATE PAY ITEM FOR LINES 15-INCH DIAMETER AND SMALLER. PAYMENT SHALL BE INCIDENTAL TO THE REPLACEMENT OF SEWER.
 7. NEW MANHOLES SHALL BE CONSTRUCTED SUCH THAT THE MANHOLE COVER IS AT FINISHED SURFACE GRADE, OR AS NOTED ON THE PLANS. CONCRETE COLLARS PER SPECIFICATION 33 05 13 AND DETAIL SHALL BE INSTALLED WITH ALL NEW MANHOLES (INCLUDING MANHOLES OUTSIDE OF PAYMENT AND/OR ABANDONMENTS), AS REQUIRED FOR PROJECT. CONCRETE COLLARS IDENTIFIED IN THE FIELD THAT ARE NOT IN COMPLIANCE WITH THE SPECIFICATIONS AND DETAILS (IE. INADEQUATE COLLAR THICKNESS, NO STEEL REINFORCEMENT) SHALL BE REMOVED AND REPLACED IN THE CONTRACTOR'S EXPENSE.

- STORM DRAIN:

- ## DIVISION 34 – TRANSPORTATION

CONDUIT:

- TRAFFIC CONTROL:

- ELECTRIC SERVICE:

1. INSTALL THE REQUIRED ELECTRIC SERVICES AND OBTAIN AN ELECTRICAL SERVICE PERMIT IN EACH INSTANCE, COST OF WHICH WILL BE PAID BY THE CONTRACTOR.
2. THE ELECTRICAL SERVICE SHALL COMPLY WITH CITY LIGHTING STANDARDS, SPECIFICATIONS AND DETAILS AS APPLICABLE PER PLANS.

LUMINAIRES:

1. THE PRE-QUALIFIED LIGHTING CONTRACTOR SHALL SUBMIT A CONTRACTOR MATERIAL PACKAGE ALONG WITH A COPY OF APPLICABLE PLAN SHEETS OF THE PROJECT TO THE TRANSPORTATION PUBLIC WORKS, STREET LIGHT DEPARTMENT FOR REVIEW AND APPROVAL BEFORE PURCHASING ANY LIGHTING MATERIAL FOR SAID PROJECT. ALL MATERIALS LOCATED WITHIN THE CITY LIGHTING SYSTEM SHALL BE AN APPROVED PRODUCT.
2. THE CITY WILL NOT FURNISH LIGHTING SYSTEM MATERIAL TO THE CONTRACTOR. THE PRE-QUALIFIED LIGHTING CONTRACTOR SHALL FURNISH AND INSTALL LIGHTING SYSTEM IN ACCORDANCE WITH THE LATEST CITY STANDARD SPECIFICATIONS, CITY DETAILS, AND PLANS.
3. THE LIGHTING SYSTEM MUST FOLLOW THE CURRENT CITY LIGHTING STANDARDS, SPECIFICATIONS, AND DETAILS. CONTACT THE CITY STREET LIGHT SECTION FOR DIRECTION ON LIGHT POLE TYPES ALLOWED AND DESIGN REQUIREMENTS.

EROSION CONTROL NOTES

1. SOIL EROSION AND SEDIMENT CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH CITY OF FORT WORTH EROSION REGULATIONS.
2. RESPONSIBILITY FOR INSTALLATION, ROUTINE INSPECTION, AND MAINTENANCE OF EROSION CONTROL SHOULD BE DEFINED AND ASSIGNED TO APPROPRIATE PERSON(S) PRIOR TO COMMENCEMENT OF ANY SOIL DISTURBING ACTIVITY.
3. EROSION CONTROL MEASURES MUST BE CONSTRUCTED AND FUNCTIONAL BEFORE ANY GRADING OR LAND DISTURBANCE TAKES PLACE.
4. TEMPORARY OR PERMANENT SOIL STABILIZATION MUST BE APPLIED TO ALL DENUDED AREAS WHEN FINAL GRADE IS REACHED ON ANY PORTION OF SITE. TEMPORARY SOIL STABILIZATION MUST BE APPLIED TO DISTURBED AREAS LEFT DORMANT FOR 14 DAYS.
5. IN THE EVENT THAT MEASURES BEING USED ARE DEEMED TO BE INEFFECTIVE BY CITY INSPECTORS, ADDITIONAL MEASURES OR CHANGES IN THE ORIGINAL PLAN MAY BE REQUIRED BY THE CITY OF FORT WORTH.
6. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED BY THE SITE FOREMAN DAILY, ANY STRUCTURE OR CONTROL DEVICE WHICH IS DAMAGED OR INOPERATIVE WILL BE REPAIRED OR REPLACED IMMEDIATELY.
7. SANITARY FACILITIES SHALL BE PROVIDED ON THE SITE & REGULARLY SERVICED AS RECOMMENDED BY THE SUPPLIER. TRASH & DEBRIS SHALL BE STORED IN COVERED BINS OR ENCLOSURES.
8. CONSTRUCTION ENTRANCES/EXITS SHOULD BE LIMITED AND PROTECTION PROVIDED TO PREVENT TRACKING OF SOILS ONTO CITY STREETS.
9. REMOVE SILT OR SEDIMENTS FROM STREETS, CURBS, GUTTERS, FLUMES, HANDICAP ACCESS RAMPS, CURB INLETS, STORM DRAINS, AND ANY OTHER PUBLIC DRAINAGE FACILITIES DAILY OR AS ACCUMULATION OCCURS.
10. EROSION CONTROL SHOULD BE EVALUATED TO DETERMINE THE EFFECTIVENESS OF THOSE DEVICES BY THE PERSON ASSIGNED TO INSPECT EROSION CONTROL DEVICES, AND CHANGES MADE IF NECESSARY.
11. SOIL TRACKED ONTO PUBLIC ROADS SHALL BE REMOVED DAILY IF FEASIBLE, OR WHEN VISIBLY ACCUMULATED SEDIMENT HAS BEEN DEPOSITED. DISCHARGED SEDIMENT SHALL BE REMOVED AS SOON AS POSSIBLE.
12. USING WASH WATER TO WASH SEDIMENT FROM STREETS IS PROHIBITED.

PARD COMMENTS FOR CITY—MAINTAINED ROW

1. CONTRACTOR NEEDS TO MOW GRASS IN THE RIGHT AWAYS, MEDIANS, OR ROUNDABOUTS IN THEIR CONSTRUCTION AND STAGING AREAS. IN THE EVENT THEY ARE BLOCKING THE ROW, MEDIAN, OR ROUNDABOUT THEY NEED TO MAINTAIN THESE AREAS ALSO. ONCE CONSTRUCTION IS COMPLETE ROW OR MEDIANS SHOULD BE IN THE SAME OR BETTER CONDITION WITH 90% ESTABLISHMENT OF GRASS IF NOT ROCK OR CONCRETE.

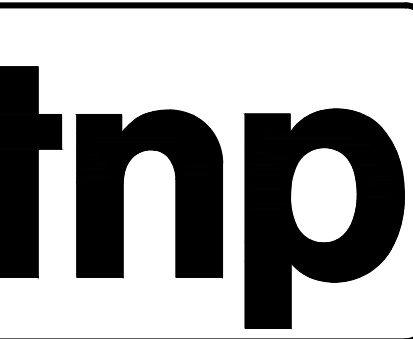
CITY TREES (CONTACT CITY FORESTER 817-392-5729, 817-392-5739)

10. PER CHAPTER 33, PARK & RECREATION—FORESTRY SECTION (PARD—FORESTRY) HAS JURISDICTION OVER TREES ON CITY-OWNED PROPERTY INCLUDING RIGHT-OF-WAY. APPROVAL OF PLANS DOES NOT CONSTITUTE APPROVAL TO PROCEED WITH WORK UNTIL CORRESPONDING PERMIT HAS BEEN ISSUED. PERMITS FOR REMOVAL, PLANTING OR PRUNING OF CITY-OWNED TREES SHALL BE OBTAINED FROM PARD—FORESTRY. PRUNING REQUIRED FOR PRECONSTRUCTION PURPOSES REQUIRES THE UTILIZATION OF AN ISA-CERTIFIED ARBORIST, AS STATED IN THE PERMIT, AT NO EXPENSE TO PARD. CONTACT PARD—FORESTRY: WWW.FORTWORTHTEXAS.GOV/DEPARTMENTS/PARKS/SERVICES/FORESTRY OR CITYTREEPERSON@FORTWORTHTEXAS.GOV OR 817/392-5729 OR 817/392-5739.

- g. TREE PROTECTION SHALL BE PUT IN PLACE BEFORE GRADING/CONSTRUCTION BEGINS, BE INSPECTED BY CITY FORESTER AND REMAIN UNTIL COMPLETION OF THE PROJECT.
- i. 4-FOOT TALL, CHAIN LINK FENCING INSTALLED AT THE TREE DRIPLINE WITH BILINGUAL SIGN ON PROTECTIVE FENCING IN ENGLISH AND SPANISH THAT READS, "KEEP OUT, TREE PROTECTION AREA" ("NO ENTRE, AREA DE PROTECCIÓN DE ÁRBOLES").
- ii. NO ENTRY, GRADING, EXCAVATION, PARKING OR STORING OF EQUIPMENT OR SUPPLIES INSIDE THE PROTECTIVE TREE FENCING WITHOUT CITY FORESTER APPROVAL.
- iii. ALL WORK INSIDE PROTECTIVE TREE FENCING TO BE DONE BY HAND, UNLESS PRIOR APPROVAL GIVEN BY CITY FORESTER.
- iv. ROOTS 2-INCH OR LARGER SHALL NOT BE CUT WITHOUT CITY FORESTER APPROVAL. ROOTS SHALL BE CLEAN CUT WITH A SAW.
- v. ALL CUTS ON OAK TREES, INCLUDING ROOTS, SHALL BE PAINTED WITH GENERAL PURPOSE SPRAY PAINT WITHIN 30 MINUTES OF EXPOSURE TO PREVENT OAK WILT SPREAD.
- b. ASSESSMENT OF DAMAGES TO TREES
- i. THE CONTRACTOR WILL CHECK TREES IN THE CONTRACT AREA BEFORE CONTRACT WORK BEGINS, ANY DAMAGE WILL BE NOTED AND REPORTED TO THE CONTRACT ADMINISTRATOR.
- ii. THE CONTRACT ADMINISTRATOR WILL CONDUCT RANDOM CHECKS OF THE TREES DURING THE CONTRACT PERIOD.
- iii. A CHECK OF ALL TREES MAY BE MADE AT THE END OF THE CONTRACT PERIOD. CITY FORESTER, CONTRACT ADMINISTRATOR, AND CONTRACTOR WILL ATTEND THE INSPECTION.
- iv. DAMAGES SHALL BE DOCUMENTED BY MEMO TO THE CITY FORESTER WITH COPY TO CONTRACT FILE AND THE CONTRACTOR.
- v. CONTRACTOR MAY HAVE THE OPTION OF REPLACEMENT OR PAYMENT FOR SEVERELY DAMAGED TREES AT A LOCATION TO BE DESIGNATED BY PARD. REPLACEMENT SHALL BE MADE ON A CALIPER INCH PER CALIPER INCH BASIS WITH A MINIMUM SIZE OF REPLACEMENT TREE OF 2-INCH IN CALIPER FOR TREES DAMAGED OR REMOVED WHICH ARE LESS THAN 30-INCH DBH AND 2-INCH PER INCH FOR TREES WHICH ARE 30-INCH DBH OR GREATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLANTING, WATERING, MULCHING AND MAINTENANCE OF REPLACEMENT TREES FOR A PERIOD OF NOT LESS THAN 2-YEARS. ANY TREE THAT DOES NOT SURVIVE THE 2-YEAR ESTABLISHMENT PERIOD SHALL BE COMPENSATED FOR BY THE CONTRACTOR TO TREE FUND AT A RATE OF \$200 PER CALIPER INCH.
- vi. SLIGHT DAMAGE SHALL BE DEFINED, IN THE OPINION OF THE CITY FORESTER, AS DAMAGE THAT MAY COMPARTMENTALIZE. EXAMPLES INCLUDE BUT ARE NOT LIMITED TO: SCARRING OF THE TRUNK INTO THE CAMBIAL LAYER Y" TO 2-INCH IN WIDTH, BUT LESS THAN 1/3 TRUNK CIRCUMFERENCE; OR BREAKING OF LIMBS LESS THAN 2-INCH IN DIAMETER OR LIMBS LESS THAN 1/3 TRUNK CALIPER, WHICHEVER IS LESS. SLIGHT DAMAGE SHALL ALSO INCLUDE: REMOVAL OR LAYING DOWN OF PROTECTIVE TREE FENCING PRIOR TO END OF CONSTRUCTION; STORING EQUIPMENT OR SUPPLIES WITHIN THE CRITICAL ROOT ZONE (CRZ); OR DISPOSING OF PAINT OR CONCRETE WITHIN THE CRZ, BUT NOT CLOSER TO THE TRUNK THAN 50% RADIUS OF THE CRZ. SLIGHT DAMAGE TO TREES SHALL BE ASSESSED AT A RATE OF \$100.00 FOR EACH INSTANCE. EACH DAY TREE FENCING IS NOT PROPERLY PLACED, EQUIPMENT OR SUPPLIES ARE STORED WITHIN CRZ, OR FILL IS STORED WITHIN THE CRZ SHALL BE CONSIDERED SLIGHT DAMAGE.
- vii. MODERATE DAMAGE SHALL BE DEFINED, IN THE OPINION OF THE CITY FORESTER, AS DAMAGE THAT CONTRIBUTES TO THE POOR HEALTH AND REDUCED LONGEVITY OF THE TREE. EXAMPLES INCLUDE, BUT ARE NOT LIMITED TO: SCARRING OF THE TRUNK INTO THE CAMBIAL LAYER GREATER THAN 2-INCH, BUT LESS THAN 1/3 THE TRUNK CIRCUMFERENCE; OR BREAKING OF LIMBS MORE THAN 2-INCH IN DIAMETER, BUT LESS THAN 1/3 TRUNK CALIPER. MODERATE DAMAGE SHALL ALSO INCLUDE: COMPACTION OF SOIL; GRADING OR FILLING IN 20% OF THE CRZ ON 1 OF 4 SIDES, BUT OUTSIDE THE 50% RADIUS OF THE CRZ; OR DISPOSING OF PAINT OR CONCRETE WITHIN 50% RADIUS OF THE CRZ. MODERATE DAMAGES SHALL BE CALCULATED AT A RATE OF % THE ASSESSED VALUE OF THE TREE PER EACH INSTANCE OF DAMAGE.
- viii. SEVERE DAMAGE OR REMOVAL OF TREES IS SUBJECT TO PENALTY OF \$200 PER DIAMETER INCH OF TREES REMOVED OR DAMAGED FOR TREES LESS THAN 30-INCH DBH OR \$400 PER DIAMETER INCH FOR TREES 30-INCH DBH OR GREATER. SEVERE DAMAGE OR REMOVAL SHALL INCLUDE, BUT IS NOT LIMITED TO: SCARRING OF THE TRUNK TO THE CAMBIAL LAYER GREATER THAN 1/3 THE TRUNK CIRCUMFERENCE; UPROOTING OR CAUSING A TREE TO LEAN; OR DAMAGE TO A SCAFFOLDING BRANCH OR ANY BRANCH GREATER THAN 1/3 OF TRUNK CALIPER. SEVERE DAMAGE SHALL ALSO INCLUDE: COMPACTION OF SOIL, GRADING OR FILLING MORE THAN 20% OF THE CRZ, OR WITHIN 50% RADIUS OF THE CRZ, OR ON MORE THAN ONE OF 4 SIDES, CUTTING 1/3 OF THE BUTTRUSS ROOTS WITHIN 3 TIMES THE DISTANCE OF THE DBH OF THE TRUNK, OR CUTTING 4 ROOTS 4-INCH OR GREATER IN DIAMETER WITHIN 4-FEET OF THE TRUNK SHALL ALSO BE CONSIDERED SEVERE DAMAGE.
- ix. DAMAGES SHALL BE MEASURED AT THE POINT OF ATTACHMENT OR AT THE LATERAL TO WHICH THE BRANCH WOULD BE PRUNED BACK TO ACCORDING TO ANSI STANDARDS. TREES CALIPER SHALL BE MEASURED ACCORDING TO ACCEPTED INDUSTRY STANDARDS. TREES GREATER THAN 6-INCH IN CALIPER SHALL BE MEASURED USING DIAMETER AT BREAST HEIGHT (DBH). TREES THAT MUST BE REMOVED DUE TO DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REMOVED BY THE FORESTRY SECTION'S TREE REMOVAL CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
- x. ALL DAMAGES SHALL BE PAID TO THE CITY TREE FUND. FAILURE TO REPLACE OR PAY FOR DAMAGED TREES SHALL RESULT IN A BREACH OF CONTRACT AND THE CONTRACTOR WILL BE AUTOMATICALLY ASSESSED DAMAGES. DAMAGES AS DESCRIBED HEREIN SHALL BE DEDUCED FROM PAYMENTS OTHERWISE DUE THE CONTRACTOR.
- WATER STUDY NUMBER: WSI-2022-2102

WATER STUDY NUMBER: WSL-2022-2192

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OCT 2026



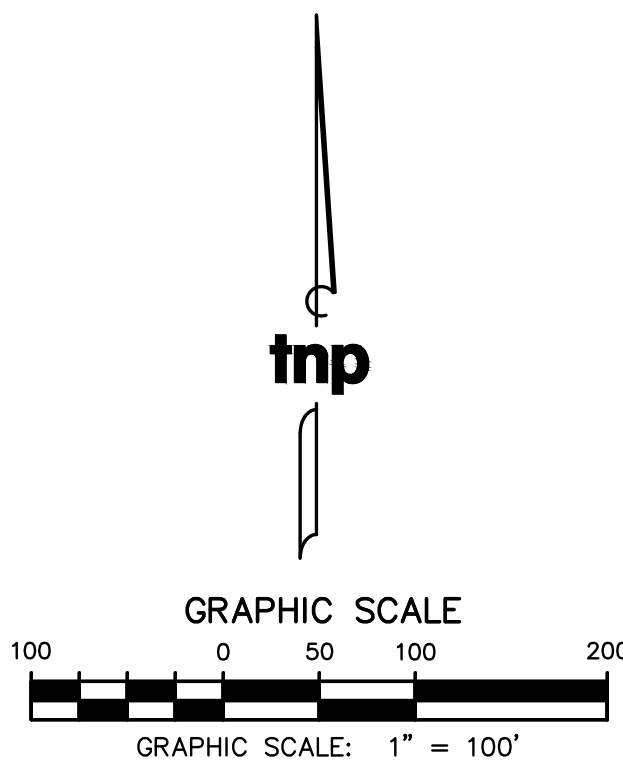
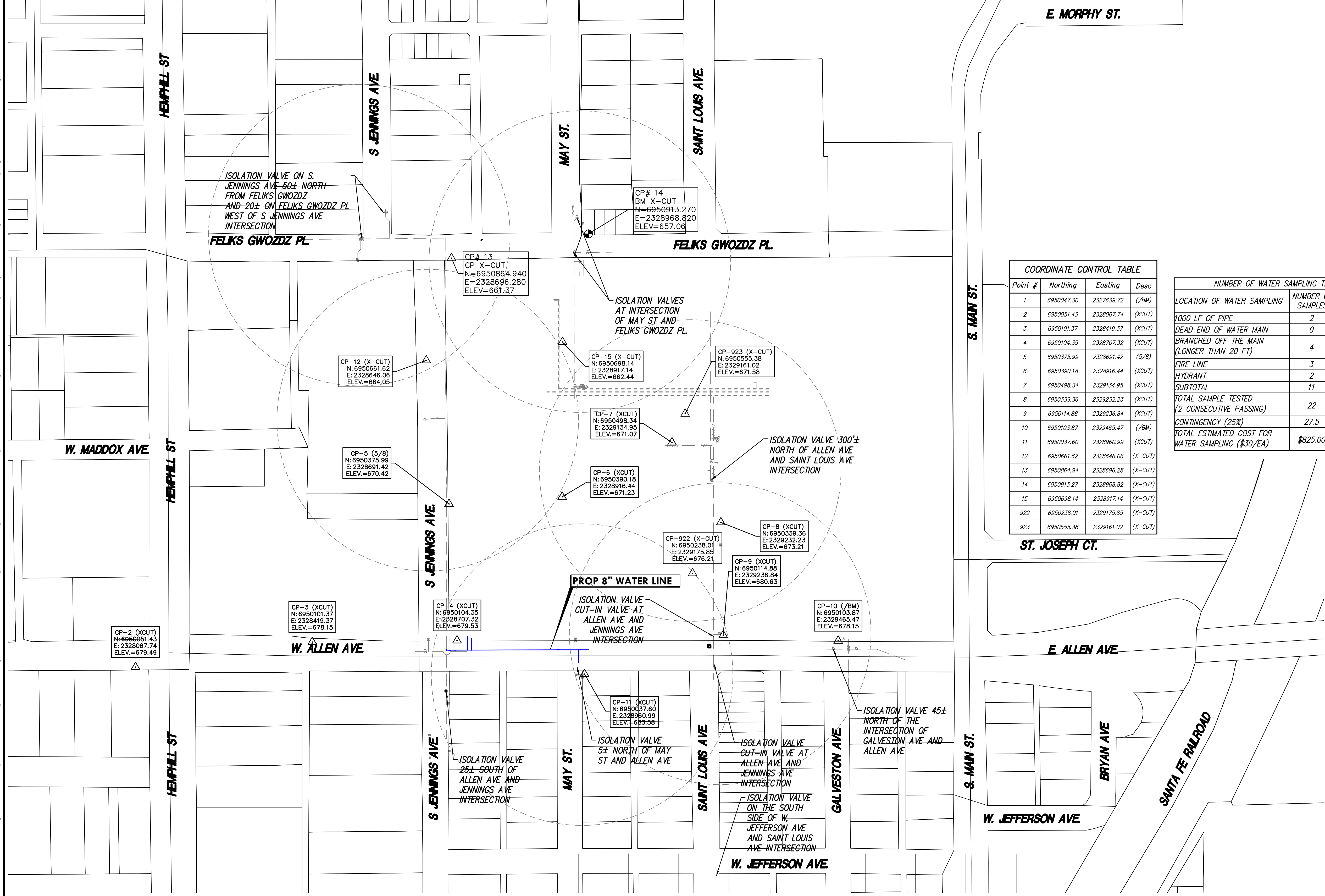
This document is for interim review and is not intended for construction, bidding or permit purposes.

SCOTT A. GIBSON P.F. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas	Inp project BKA 21233
John Peter Smith Hospital Water Line Improvements	sheet 3
General Notes	

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE Water Lines Construction Plans\Phasing Layout.dwg at Oct 08, 2026 - 5:01pm by Aronero
Layout: 4 Water Layout & Survey Control Xrefs: X3D-BASE.dwg - XREF-BLOC.dwg - XREF-BLOC-CONNECTOR.dwg - X3D-MS.dwg - X3D-MS-OFFSITE.dwg - X3D-MS-OS-PHZ.dwg - X3D-MS-ABANDON.dwg - City of Fort Worth.dwg - Tarrant County.dwg - XREF-BORDER-2234.dwg



COORDINATE CONTROL TABLE			
Point #	Northing	Easting	Desc
1	6950047.30	2327639.72	(/BM)
2	6950051.43	2328067.74	(XCUT)
3	6950101.37	2328419.37	(XCUT)
4	6950104.35	2328707.32	(XCUT)
5	6950375.99	2328691.42	(5/8)
6	6950390.18	2328916.44	(XCUT)
7	6950498.34	2329134.95	(XCUT)
8	6950339.36	2329232.23	(XCUT)
9	6950114.88	2329236.84	(XCUT)
10	6950103.87	2329465.47	(/BM)
11	6950037.60	2328960.99	(XCUT)
12	6950661.62	2328646.06	(X-CUT)
13	6950864.94	2328696.28	(X-CUT)
14	6950913.27	2328968.82	(X-CUT)
15	6950698.14	2328917.14	(X-CUT)
922	6950238.01	2329175.85	(X-CUT)
923	6950555.38	2329161.02	(X-CUT)

NUMBER OF WATER SAMPLING TABLE		
LOCATION OF WATER SAMPLING	NUMBER OF SAMPLES	
1000 LF OF PIPE	2	EA
DEAD END OF WATER MAIN BRANCHED OFF THE MAIN (LONGER THAN 20 FT)	0	EA
FIRE LINE	3	EA
HYDRANT	2	EA
SUBTOTAL	11	EA
TOTAL SAMPLE TESTED (2 CONSECUTIVE PASSING)	22	EA
CONTINGENCY (25%)	27.5	
TOTAL ESTIMATED COST FOR WATER SAMPLING (\$30/EA)	\$825.00	

- NOTES:**
- ALL CONSTRUCTION SHALL REMAIN WITHIN R.O.W. AND PROPOSED WATER FACILITY EASEMENTS.
 - EROSION CONTROL - INSTALL SILT FENCE AND/OR FILTER LOG AROUND EXCAVATED AREA TO CONTROL SEDIMENTATION LOSS.
 - CONTRACTOR SHALL MATCH EXISTING GRADES WHEN COVERING (UTILITY/WATER/SEWER/GAS) LINES TO INSURE THEY DO NOT POND, ALTER, OR CHANNELIZE ANY STORMWATER.

UTILITY NOTE:

THE UTILITIES SHOWN ON THE PLANS WERE COMPILED FROM VARIOUS SOURCES AND ARE INTENDED TO SHOW THE GENERAL EXISTENCE AND LOCATION OF UTILITIES IN THE AREA OF CONSTRUCTION. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE UTILITY INFORMATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT UTILITY COMPANIES 48 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY CONFLICT WITH THE PROPOSED FACILITIES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

- SPECIAL NOTES:**
- CONCRETE THRUST BLOCKS SHALL BE PROVIDED AT ALL VERTICAL AND HORIZONTAL CHANGES IN DIRECTION (TEE, BENDS, ELBOWS, CROSSES). CHANGE IN PIPE DIAMETER (REDUCERS), PLUGS, VALVES AND OTHER LOCATIONS UNLESS NOTED OTHERWISE, REFER TO SPECIFICATIONS FOR DETAILS. WHERE APPROPRIATE SOIL BEARINGS CANNOT BE ACHIEVED FOR A THRUST BLOCK, RESTRAINED JOINTS SHALL BE PROVIDED.
 - CUT-IN VALVES OR TEES TO BE INSTALLED AFTER 6 PM ON WEEKDAYS OR AFTER 2 PM ON WEEKENDS. COORDINATE WITH CITY INSPECTION AND AFFECTED PROPERTY OWNER OR MANAGER PRIOR TO ISOLATION VALVE SHUT OFF.
 - ALL ABANDONED LINES TO BE FILLED WITH FLOWABLE FILL. SAWCUT, REMOVE & REPLACE PAVING WHERE EXISTING LINE IS CAPPED.

NOTES:

RADIUS OF CURVATURE/JOINT DEFLECTION: MINIMUM RADIUS OF CURVE AND MAXIMUM DEFLECTION ANGLE OF PIPE JOINTS WILL BE RESTRICTED TO 50% OF MANUFACTURER'S RECOMMENDATION, AFTER WHICH THE USE OF HORIZONTAL OR VERTICAL BENDS WILL BE REQUIRED. NO BENDING OF PIPE IS ALLOWED. DCM 5.6.1

ALL WATER SHEETS ALL VERTICAL AND HORIZONTAL FITTINGS AND VALVES SHALL BE DESIGNED WITH RESTRAINED JOINTS IN ADDITION TO CONCRETE THRUST BLOCKING. ANCHOR TEES OR ANCHOR COUPLINGS SHOULD BE USED TO SECURE ALL BRANCH VALVES TO FITTINGS. DCM 5.6.3

ALL WATER SHEETS- ALL WATER LINE PVC PIPE SHOULD BE IN ACCORDANCE WITH AWWA C900, DR-14 SPECIFICATION- 33.11.12 PART 2 B

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

teague nall and perkins, inc

5237 N. Riverside Dr, Suite 100
Ft Worth, Texas 76137
817.336.5773 ph 817.336.2813 fx
www.tnpsc.com

TBPE: F-230; TBPLS: 10011600, 10011601, 10194381
GBPE No. PEF007431; TBAE No. BR 2673



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1" = 100'

vert
N/A

date
OCT 2026



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SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

City of Fort Worth, Texas

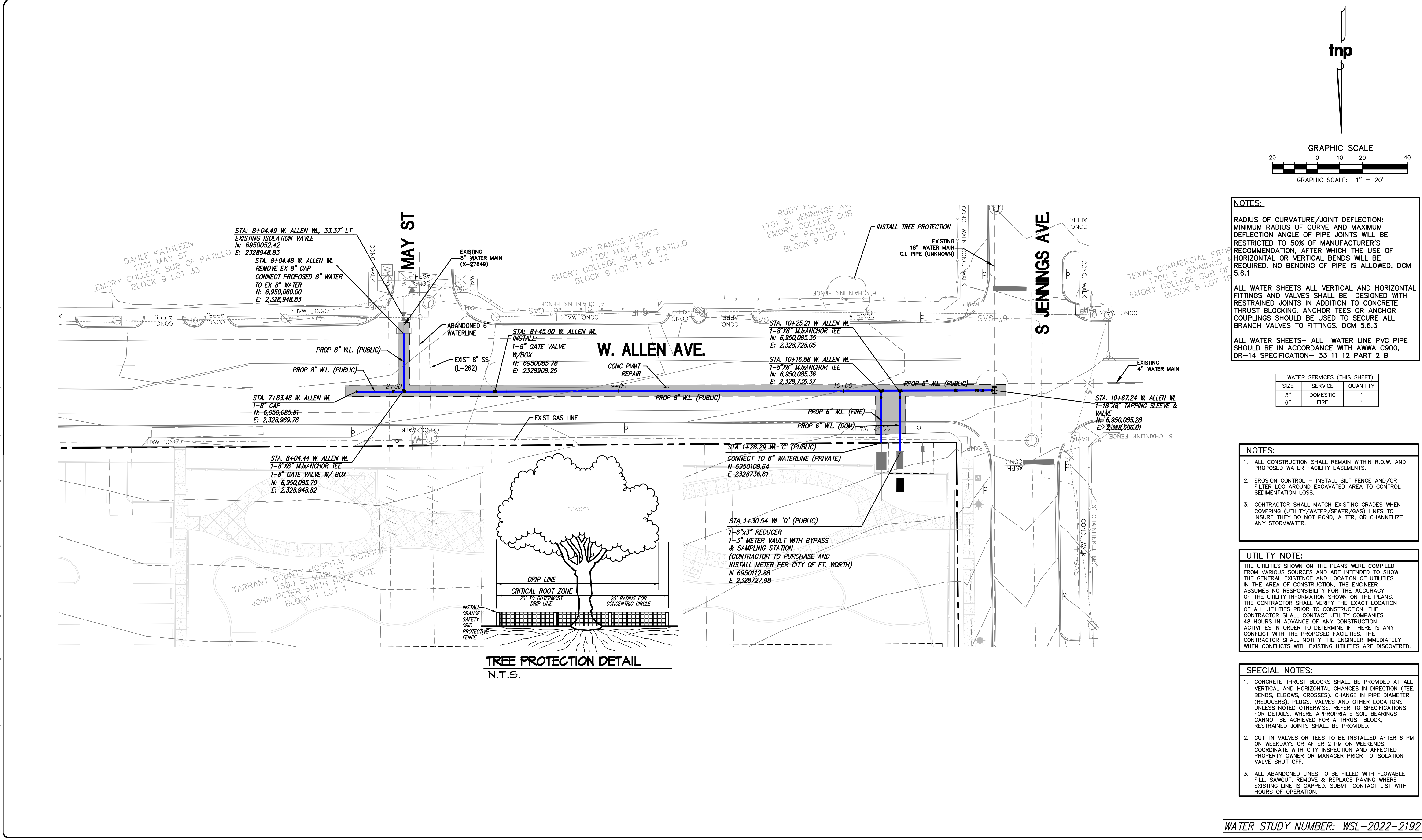
John Peter Smith Hospital
Water Line Improvements

Water Layout & Survey Control

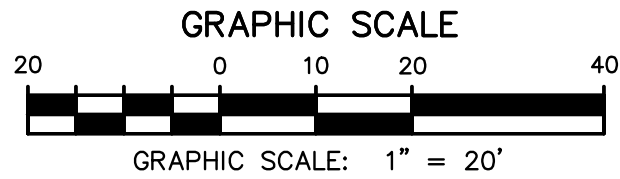
Inp project
BKA 21233

sheet
4

Drawing: T:\Projects\BKA21233\Eng-C3D\CAD\OFFSITE WATER Water Lines Construction Plans\W. Allen Ave Begin to Sta 6+50.dwg at Oct 08, 2026 - 5:01pm by Aflamero
Layout: 5 W. Allen Ave Sta 6+50 to End Xrefs: XREF-BORDER-22x34.dwg - X3D-WSS-OS-PH2.dwg - X3D-WSS-ABANDON.dwg - X3D-WSS-OFFSITE.dwg - X3D-BASE.dwg - XREF-BLDG-CONNECTOR.dwg



tnp



- NOTES:**
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MINIMUM RADIUS OF CURVE AND MAXIMUM
DEFLECTION ANGLE OF PIPE JOINTS WILL BE
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RECOMMENDATION, AFTER WHICH THE USE OF
HORIZONTAL OR VERTICAL BENDS WILL BE
REQUIRED. NO BENDING OF PIPE IS ALLOWED. DCM
5.6.1
- ALL WATER SHEETS ALL VERTICAL AND HORIZONTAL
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RESTRAINED JOINTS IN ADDITION TO CONCRETE
THRUST BLOCKING. ANCHOR TEES OR ANCHOR
COUPLINGS SHOULD BE USED TO SECURE ALL
BRANCH VALVES TO FITTINGS. DCM 5.6.3
- ALL WATER SHEETS- ALL WATER LINE PVC PIPE
SHOULD BE IN ACCORDANCE WITH AWWA C900,
DR-14 SPECIFICATION- 33 11 12 PART 2 B

WATER SERVICES (THIS SHEET)		
SIZE	SERVICE	QUANTITY
3"	DOMESTIC	1
6"	FIRE	1

- NOTES:**
- ALL CONSTRUCTION SHALL REMAIN WITHIN R.O.W. AND
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 - EROSION CONTROL - INSTALL SILT FENCE AND/OR
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 - CONTRACTOR SHALL MATCH EXISTING GRADES WHEN
COVERING (UTILITY/WATER/SEWER/GAS) LINES TO
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THE GENERAL EXISTENCE AND LOCATION OF UTILITIES
IN THE AREA OF CONSTRUCTION. THE ENGINEER
ASSUMES NO RESPONSIBILITY FOR THE ACCURACY
OF THE UTILITY INFORMATION SHOWN ON THE PLANS.
THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION
OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE
CONTRACTOR SHALL CONTACT UTILITY COMPANIES
48 HOURS IN ADVANCE OF ANY CONSTRUCTION
ACTIVITIES IN ORDER TO DETERMINE IF THERE IS ANY
CONFLICT WITH THE PROPOSED FACILITIES. THE
CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY
WHEN CONFLICTS WITH EXISTING UTILITIES ARE DISCOVERED.

- SPECIAL NOTES:**
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(REDUCERS), PLUGS, VALVES AND OTHER LOCATIONS
UNLESS NOTED OTHERWISE. REFER TO SPECIFICATIONS
FOR DETAILS. WHERE APPROPRIATE SOIL BEARINGS
CANNOT BE ACHIEVED FOR A THRUST BLOCK,
RESTRAINED JOINTS SHALL BE PROVIDED.
 - CUT-IN VALVES OR TEES TO BE INSTALLED AFTER 6 PM
ON WEEKDAYS OR AFTER 2 PM ON WEEKENDS.
COORDINATE WITH CITY INSPECTION AND AFFECTED
PROPERTY OWNER OR MANAGER PRIOR TO ISOLATION
VALVE SHUT OFF.
 - ALL ABANDONED LINES TO BE FILLED WITH FLOWABLE
FILL. SAWCUT, REMOVE & REPLACE PAVING WHERE
EXISTING LINE IS CAPPED. SUBMIT CONTACT LIST WITH
HOURS OF OPERATION.

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

teague nall and perkins, inc
5237 N. Riverside Dr, Suite 100
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www.tnpsc.com
TBPE: F-230; TBPLS: 10011600, 10011601, 10194381
GBPE No. PEF007431; TBAE No. BR 2673



scale
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1" = 20'
vert
1" = 4'
date
OCT 2026



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purposes.

SCOTT A. GIBSON, P.E. Date: October 8, 2026

Tx. Reg. # 89290

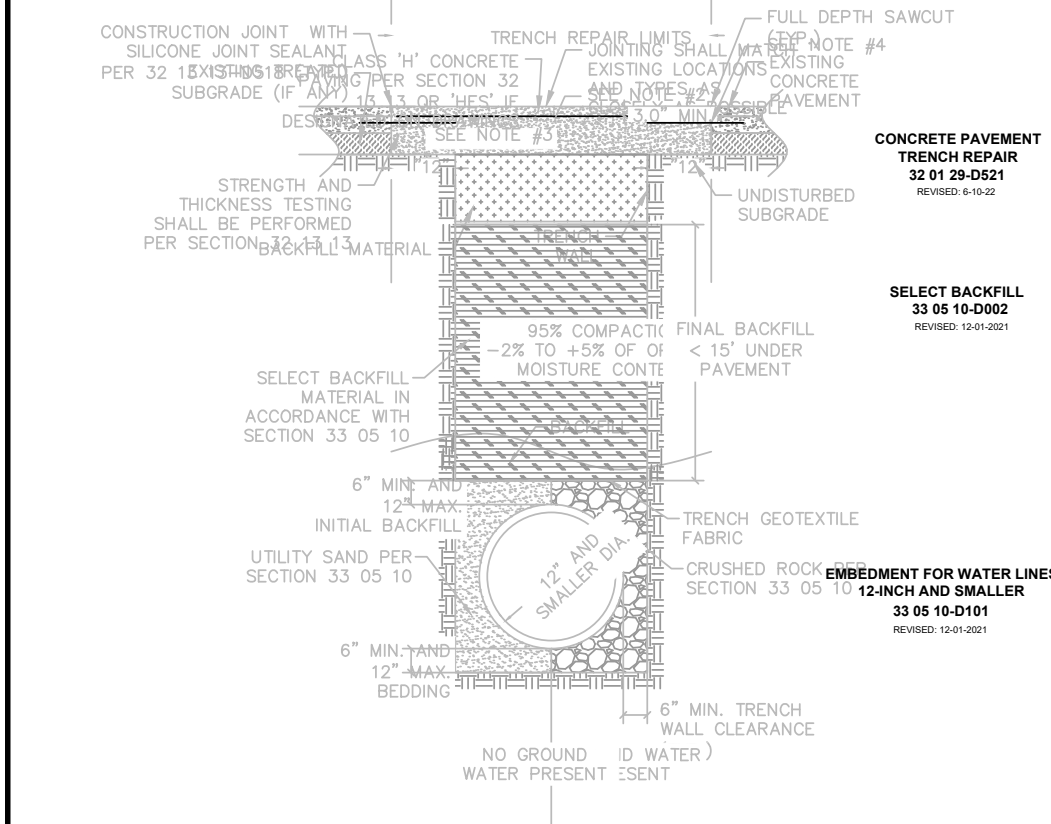
City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements
8" Water Line Plan & Profile
W. Allen Ave Sta 6+50 to End

Inp project
BKA 21233
sheet
5

Water Line Improvements to serve John Peter Smith Hospital

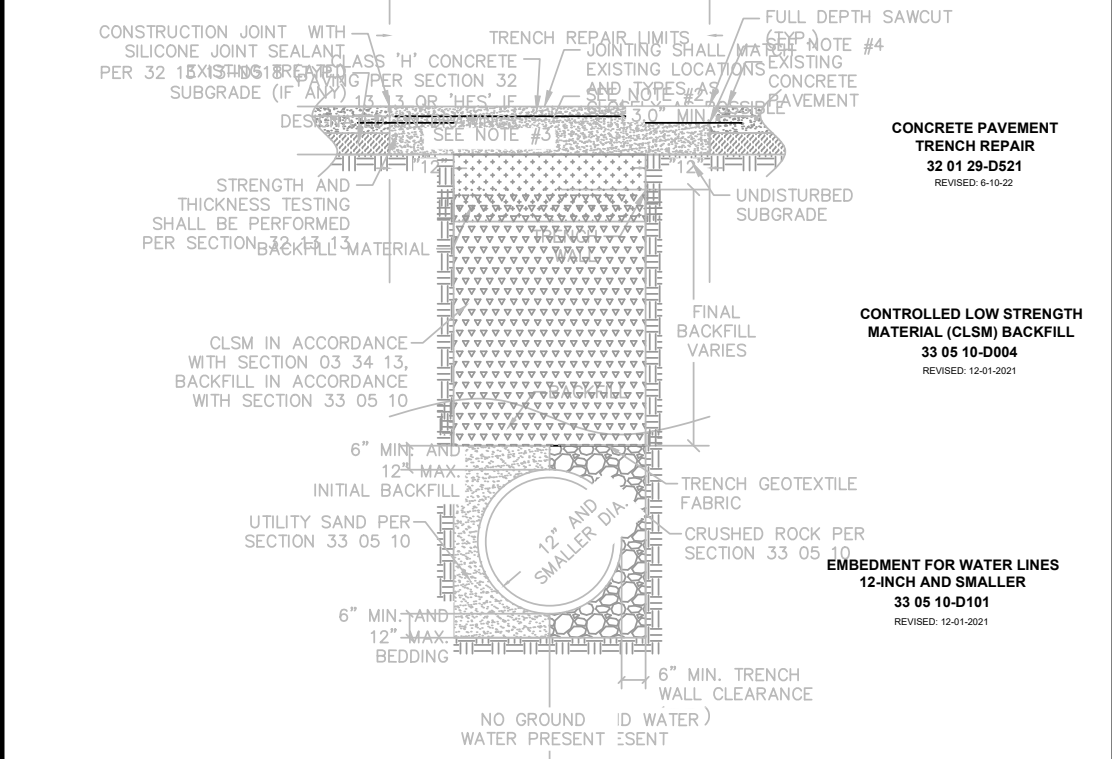
WSL-2022-2192

NOTES:
1. FLOWABLE FILL IS REQUIRED TO BACKFILL ALL TRENCHES IN DOWNTOWN STREETS, AND OPTIONAL IN OTHER AREAS. BACKFILL SHALL MEET STANDARD SPECIFICATION 33 05 10.
2. FOR RESIDENTIAL STREET USE #4 BARS AT 18" O.C.E.W. AND 12" O.C.E.W. FOR ARTERIALS AND INDUSTRIAL STREETS.
3. REINFORCED CONCRETE PAVEMENT SHALL BE REPLACED TO A MINIMUM DEPTH OF 9" FOR RESIDENTIAL STREETS OR 11" FOR ARTERIAL AND INDUSTRIAL STREETS.
4. FOR RESIDENTIAL STREETS, USE #4/18" PREFORMED BARS, DOWEL AND EPOXYED A MIN 6" INTO EXISTING PAVEMENT AT 18" O.C. (TYP.) AND 12" O.C. FOR ARTERIAL AND INDUSTRIAL STREETS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF FORT WORTH STANDARD SPECIFICATIONS.

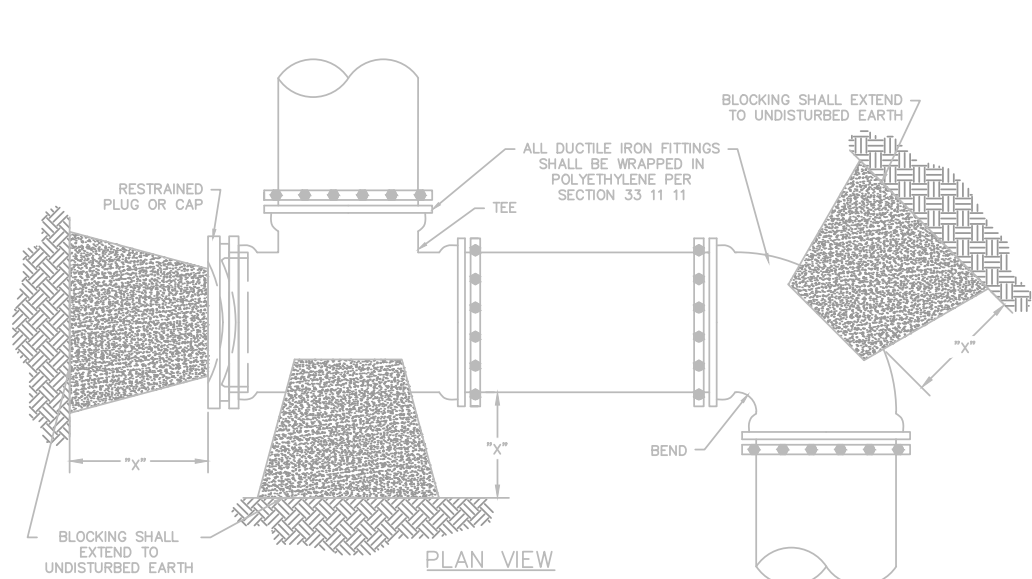


FORT WORTH CITY OF FORT WORTH, TEXAS
TRENCH EMBEDMENT & REPAIR FOR WATER LINES 12-INCH AND SMALLER

NOTES:
1. FLOWABLE FILL IS REQUIRED TO BACKFILL ALL TRENCHES IN DOWNTOWN STREETS, AND OPTIONAL IN OTHER AREAS. BACKFILL SHALL MEET STANDARD SPECIFICATION 33 05 10.
2. FOR RESIDENTIAL STREET USE #4 BARS AT 18" O.C.E.W. AND 12" O.C.E.W. FOR ARTERIALS AND INDUSTRIAL STREETS.
3. REINFORCED CONCRETE PAVEMENT SHALL BE REPLACED TO A MINIMUM DEPTH OF 9" FOR RESIDENTIAL STREETS OR 11" FOR ARTERIAL AND INDUSTRIAL STREETS.
4. FOR RESIDENTIAL STREETS, USE #4/18" PREFORMED BARS, DOWEL AND EPOXYED A MIN 6" INTO EXISTING PAVEMENT AT 18" O.C. (TYP.) AND 12" O.C. FOR ARTERIAL AND INDUSTRIAL STREETS.
5. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF FORT WORTH STANDARD SPECIFICATIONS.



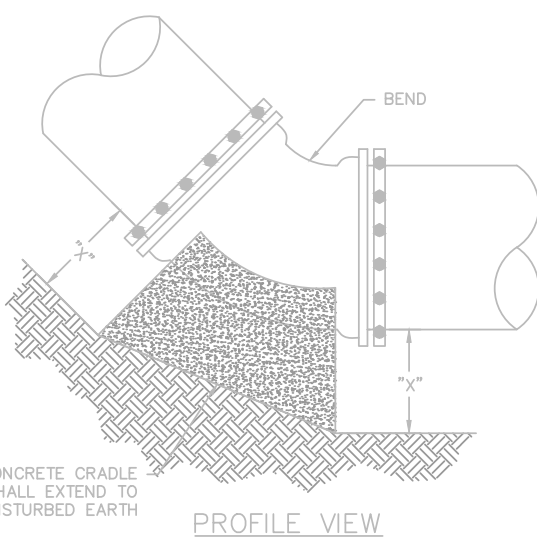
FORT WORTH CITY OF FORT WORTH, TEXAS
TRENCH EMBEDMENT & REPAIR FOR WATER LINES 12-INCH AND SMALLER



HORIZONTAL THRUST BLOCKING TABLE									
PIPE SIZE DIM. **	"x"	90° BENDS		45° BENDS		22.5° BENDS		11.25° BENDS	
		MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)
6"	1'-6"	4.00*	4.30	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*
8"	1'-6"	5.85	6.50	4.33	4.00*	4.00*	4.00*	4.00*	4.00*
10"	1'-6"	8.84	12.50	6.76	4.00*	4.00*	4.00*	4.00*	4.00*
12"	1'-6"	12.72	17.99	9.74	4.96	4.00*	4.00*	4.00*	4.00*
14"	2'-0"	22.62	31.99	17.31	8.83	4.43	4.00*	4.00*	4.00*
16"	2'-0"	35.34	49.98	27.05	13.79	6.93	4.00*	4.00*	4.00*
24"	2'-0"	50.98	71.97	38.59	19.86	9.98	4.00*	4.00*	4.00*

NOTES:
1. THRUST BLOCKING AREAS SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE.
1.2. 3,000 PSF HORIZONTAL OR LATERAL BEARING PRESSURE FOR ACCEPTABLE SOILS.
1.3. MINIMUM COVER OF 42".
1.4. A SAFETY FACTOR OF 1.5.
2. THE ENGINEER SHALL PROVIDE A SEPARATE BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF THRUST BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
4. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
5. BLOCKING FOR WATER LINES LARGER THAN 24" SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
6. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
7. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

FORT WORTH CITY OF FORT WORTH, TEXAS
HORIZONTAL THRUST BLOCKING

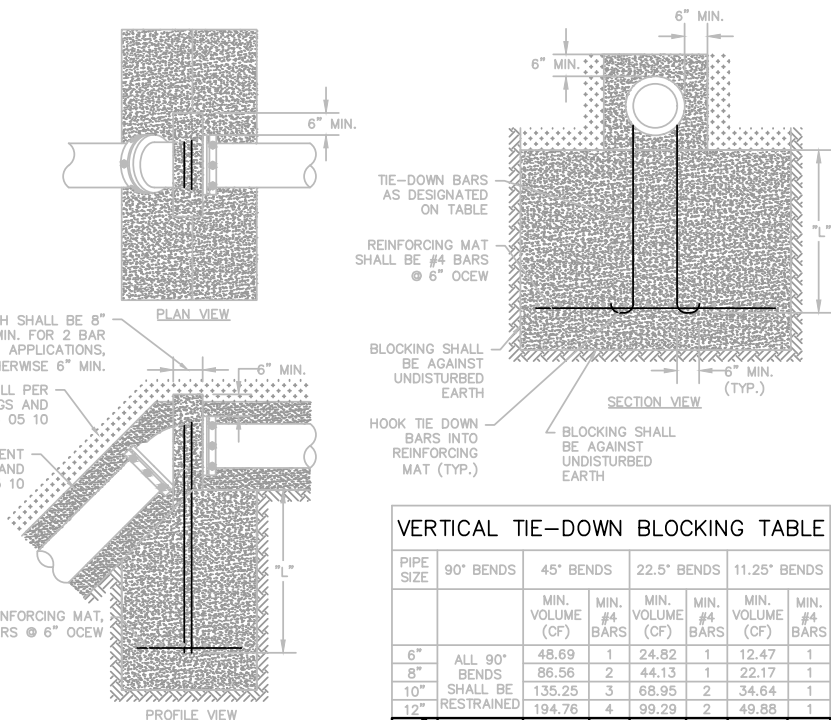


CONCRETE CRADLE TABLE									
PIPE SIZE DIM. **	"x"	90° BENDS		45° BENDS		22.5° BENDS		11.25° BENDS	
		MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)	MIN. AREA (SQ)
6"	1'-6"	4.50	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*
8"	1'-6"	8.00	4.33	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*
10"	1'-6"	12.50	6.76	4.00*	4.00*	4.00*	4.00*	4.00*	4.00*
12"	1'-6"	17.99	9.74	4.96	4.00*	4.00*	4.00*	4.00*	4.00*
14"	2'-0"	31.99	17.31	8.83	4.43	4.00*	4.00*	4.00*	4.00*
16"	2'-0"	49.98	27.05	13.79	6.93	4.00*	4.00*	4.00*	4.00*
24"	2'-0"	71.97	38.59	19.86	9.98	4.00*	4.00*	4.00*	4.00*

*MINIMUM THRUST BLOCKING SURFACE AREA SHALL BE 4 SQUARE FEET.
*DIMENSION "X" TO BE A MINIMUM OF ONE FOOT AND SIX INCHES, BUT IS TO BE INCREASED WHERE NECESSARY TO PROVIDE BEARING AGAINST UNDISTURBED TRENCH BOTTOM.

NOTES:
1. THRUST BLOCKING AREAS SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE.
1.2. 3,000 PSF HORIZONTAL OR LATERAL BEARING PRESSURE FOR ACCEPTABLE SOILS.
1.3. MINIMUM COVER OF 42".
1.4. A SAFETY FACTOR OF 1.5.
2. THE ENGINEER SHALL PROVIDE A SEPARATE BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
3. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF THRUST BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
4. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
5. CRADLES FOR WATER LINES LARGER THAN 24" SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
6. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
7. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

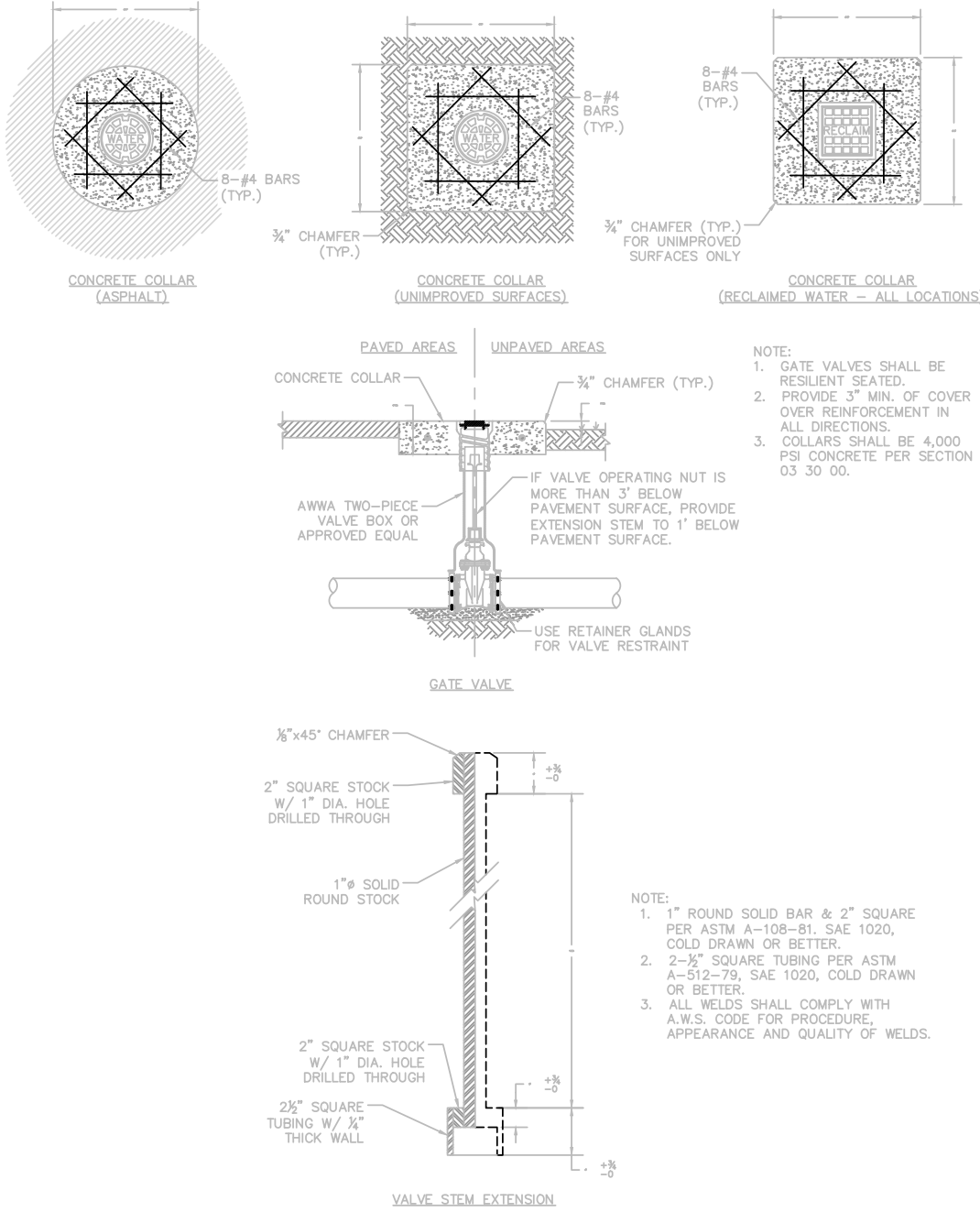
FORT WORTH CITY OF FORT WORTH, TEXAS
CONCRETE CRADLE



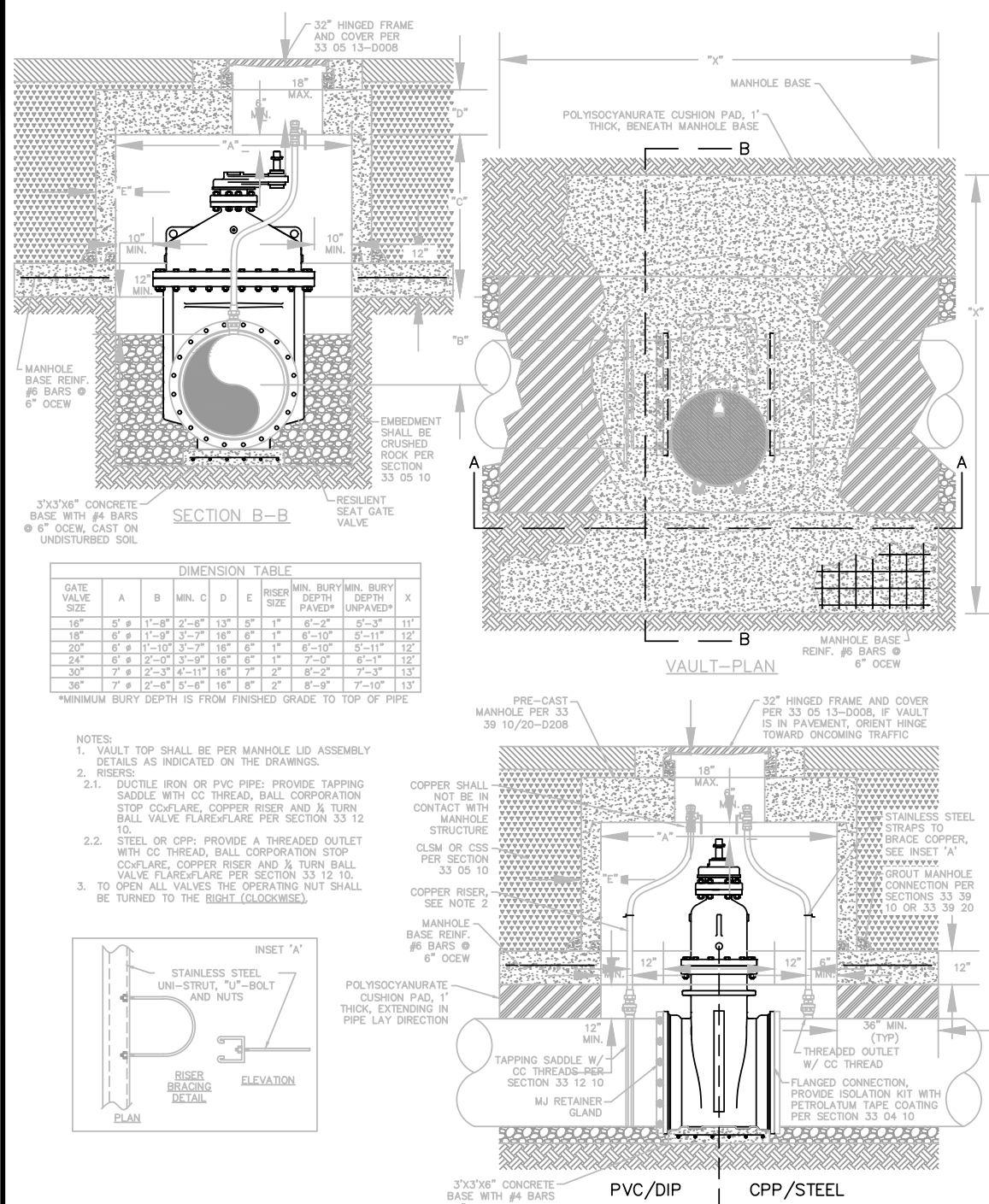
VERTICAL TIE-DOWN BLOCKING TABLE									
PIPE SIZE	90° BENDS	45° BENDS	22.5° BENDS	11.25° BENDS	MIN. VOLUME (CY)	MIN. VOLUME (CY)	MIN. VOLUME (CY)	MIN. VOLUME (CY)	MIN. VOLUME (CY)
6"	ALL 90°	48.69	1	24.42	1	12.47	1	12.47	1
8"	BENDS	88.56	2	44.13	1	22.07	1	22.07	1
10"	SHALL BE	135.25	3	68.95	2	34.84	1	34.84	1
12"	RESTRAINED	194.76	4	98.92	2	49.98	1	49.98	1
16"		256.50	5	130.75	3	65.38	2	65.38	2

NOTES:
1. VERTICAL TIE-DOWN BLOCKING VOLUMES SHOWN ARE BASED ON:
1.1. 225 PSI TEST PRESSURE.
1.2. 180 PCF CONCRETE DENSITY.
1.3. A SAFETY FACTOR OF 1.5.
2. BAR QUANTITIES ARE BASED ON:
2.1. #5 #4 STEEL REINFORCEMENT BAR.
2.2. A FACTOR OF SAFETY OF 1.5.
2.3. "X" SHALL BE A MINIMUM OF 18".
3. THE ENGINEER SHALL PROVIDE A SEPARATE VERTICAL TIE-DOWN BLOCKING TABLE WHEN THE CONDITIONS DO NOT MEET THE ABOVE ASSUMPTIONS.
4. THE CONTRACTOR IS REQUIRED TO PROVIDE THRUST RESTRAINT BY MEANS OF VERTICAL TIE-DOWN BLOCKING FOR ALL PIPES. THIS ITEM SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
5. ALL MJ FITTINGS SHALL BE ADDITIONALLY RESTRAINED WITH RETAINER GLANDS.
6. NOTING, LOCATING AND DEPTHS MAY VARY BUT SATISFACTION OF ABOVE MINIMUM VOLUMES MUST BE DEMONSTRATED.
7. KEEP CONCRETE CLEAR OF PIPE JOINTS AND BOLTS.
8. VERTICAL TIE-DOWN BLOCKING FOR LINES 18" AND LARGER SHALL BE DESIGNED FOR THE SPECIFIC LOCATION AND SHOWN ON THE DRAWINGS.
9. ALL DUCTILE IRON FITTINGS SHALL BE WRAPPED IN POLYETHYLENE ENCASEMENT PRIOR TO PLACING OF BLOCKING.
10. CONCRETE MATERIAL SHALL CONFORM TO SECTION 03 30 00.

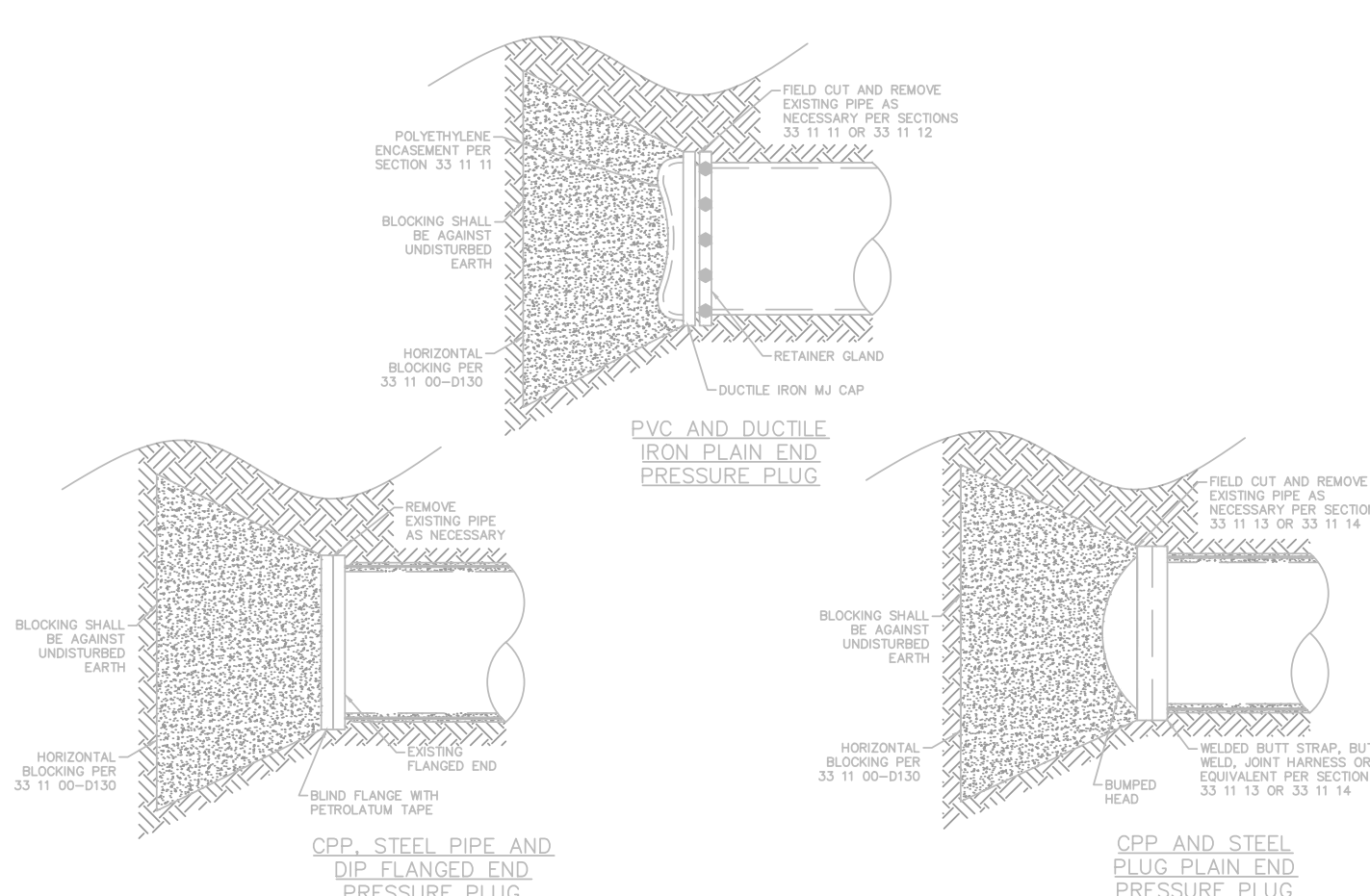
FORT WORTH CITY OF FORT WORTH, TEXAS
VERTICAL TIE-DOWN BLOCKING



FORT WORTH CITY OF FORT WORTH, TEXAS
WATER DISTRIBUTION GATE VALVE & BOX (12" AND SMALLER)



FORT WORTH CITY OF FORT WORTH, TEXAS
WATER TRANSMISSION GATE VALVE & VAULT (16\"/>



FORT WORTH CITY OF FORT WORTH, TEXAS
PVC, DUCTILE IRON, CONCRETE PRESSURE AND BURIED STEEL PIPE PRESSURE PLUGS

WATER STUDY NUMBER: WSL-2022-2192

no.	revision	by	date

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GBPE No. PEF007431; TBAE No. BR 2673



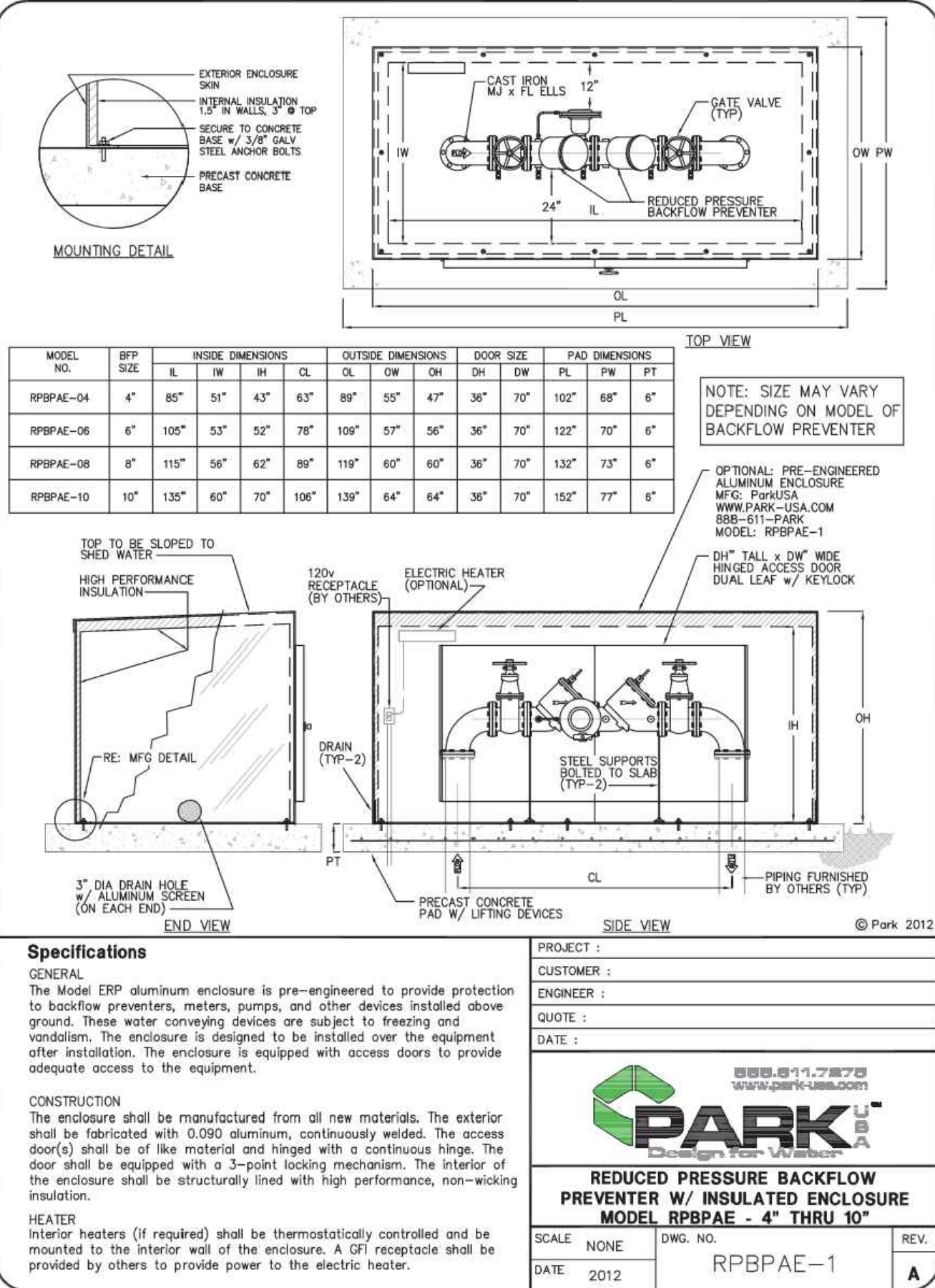
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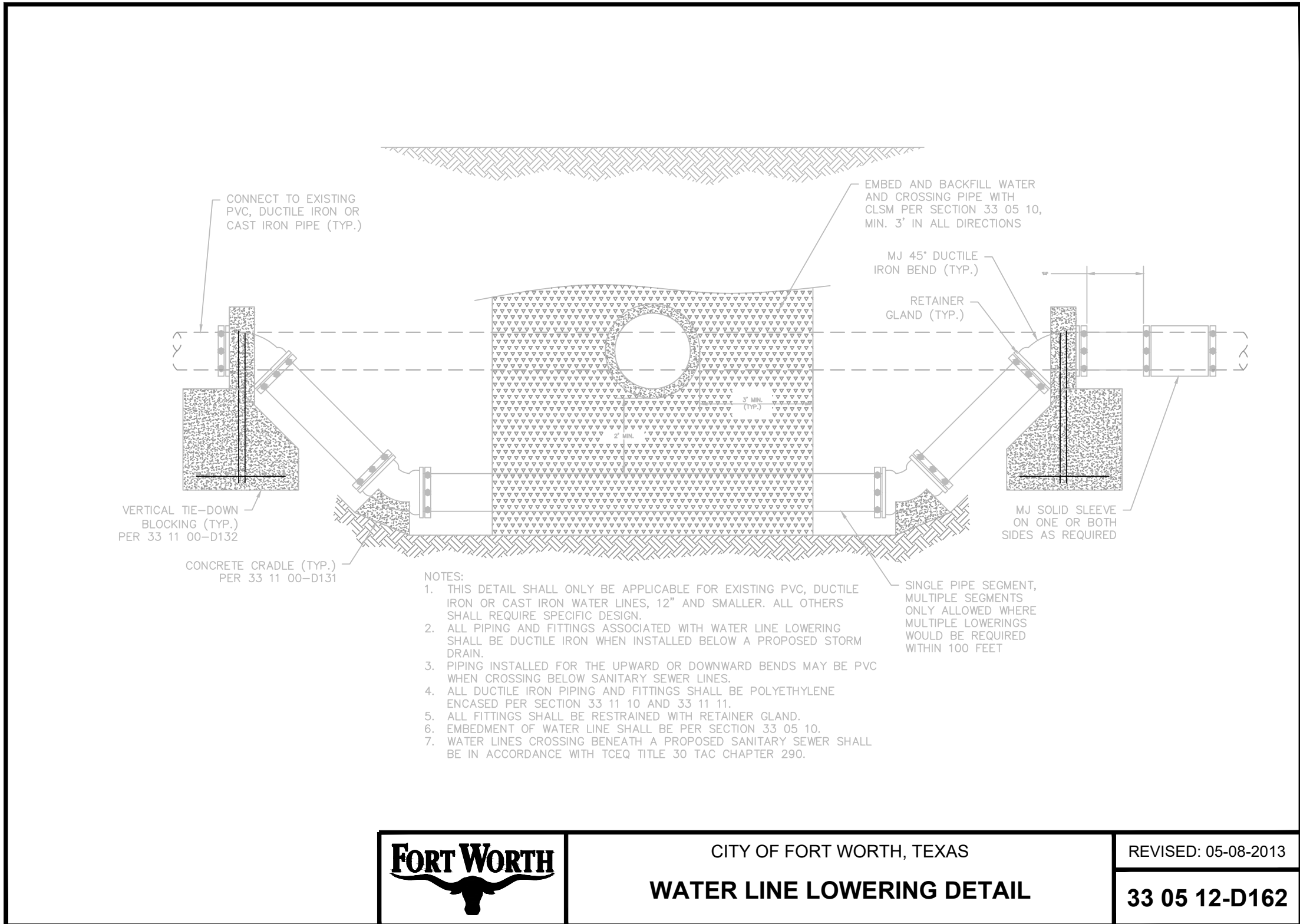
This document is for interim review and is not intended for construction, bidding or permit purposes.
SCOTT A. GIBSON, P.E. Date: October 8, 2026
Tx. Reg. # 89290

City of Fort Worth, Texas
John Peter Smith Hospital
Water Line Improvements
Water Details (1 OF 2)

Imp project
BKA 21233
sheet
8

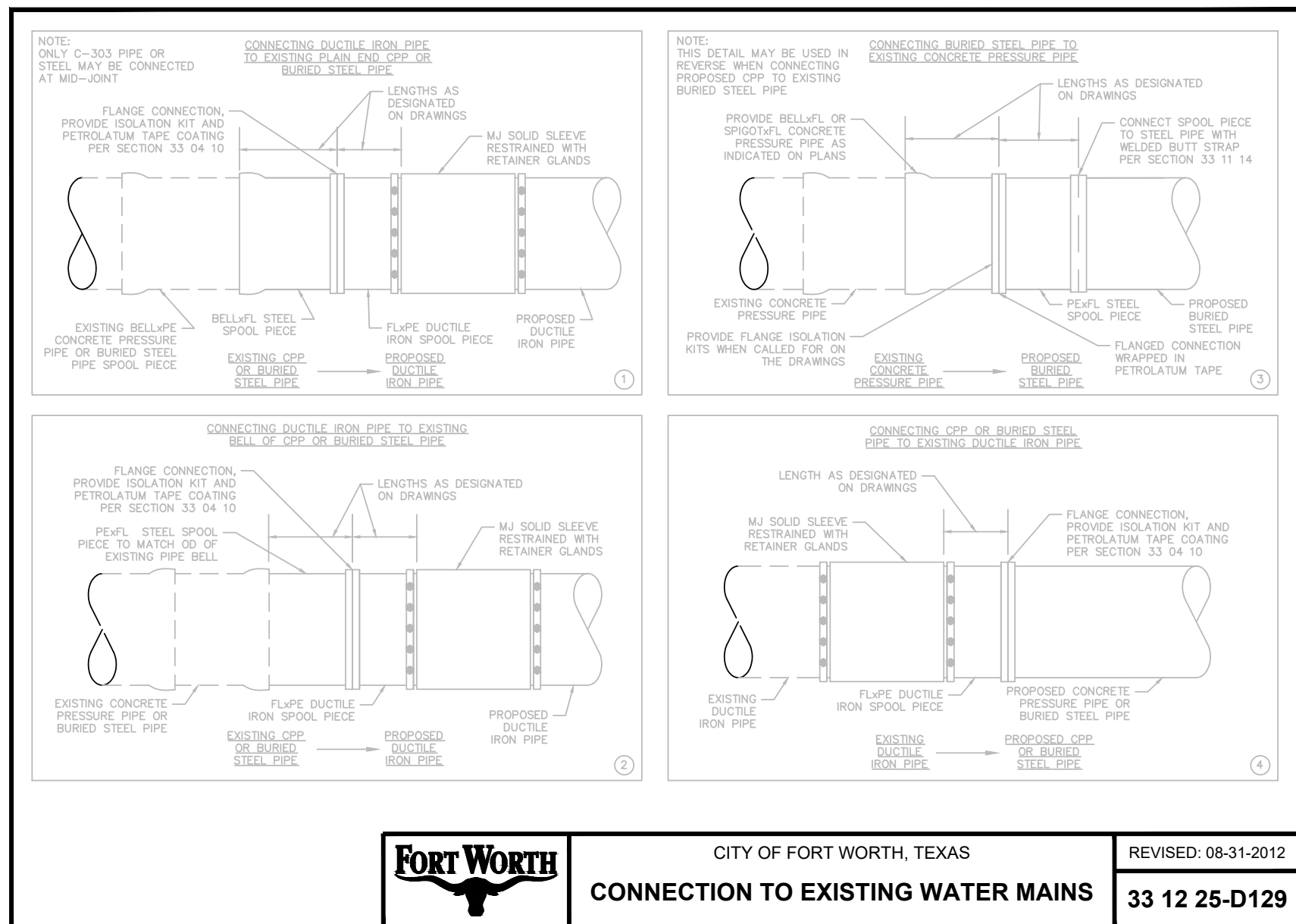


1-11



CITY OF FORT WORTH, TEXAS
WATER LINE LOWERING DETAIL

REVISED: 05-08-2013
33 05 12-D162



CITY OF FORT WORTH, TEXAS
CONNECTION TO EXISTING WATER MAINS

REVISED: 08-31-2012
33 12 25-D129

