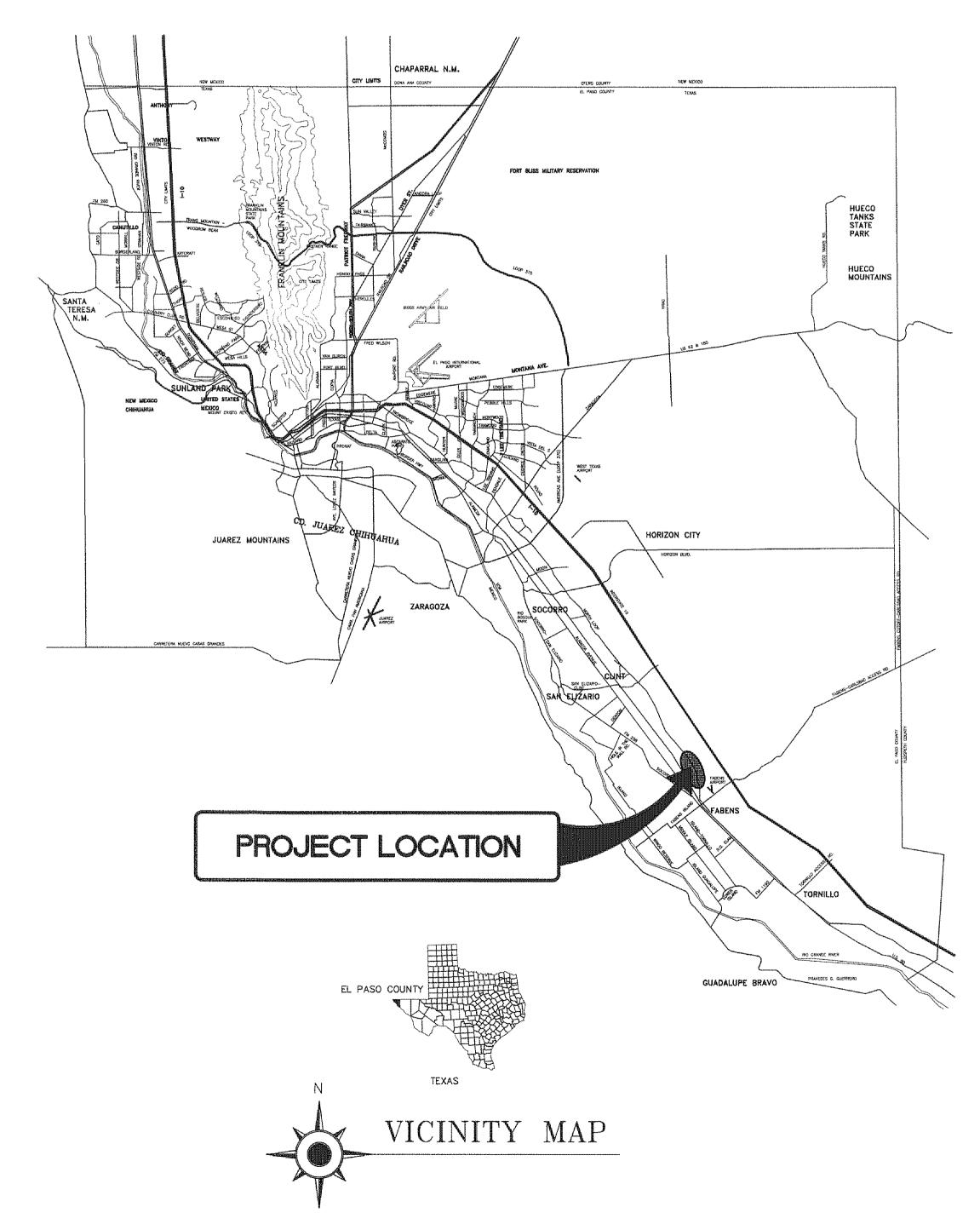
COUNTY OF EL PASO, TEXAS

LOURDES ESTATES & EL CONQUISTADOR DEL PASO SUBDIVISIONS WATER MAIN EXTENSION FACILITIES

(TEXAS DEPARTMENT OF RURAL AFFAIRS/ C.D.B.G. 710066)

JUNE 2011

EL PASO COUNTY, TEXAS





COUNTY OF EL PASO

COUNTY JUDGE
HON. VERONICA ESCOBAR

COUNTY COMMISSIONERS

COMM. ANNA PEREZ, PCT. 1 COMM. SERGIO LEWIS, PCT. 2 COMM. WILLIE GANDARA JR., PCT. 3

ROAD & BRIDGE

COMM. DANIEL R. HAGGERTY, PCT. 4

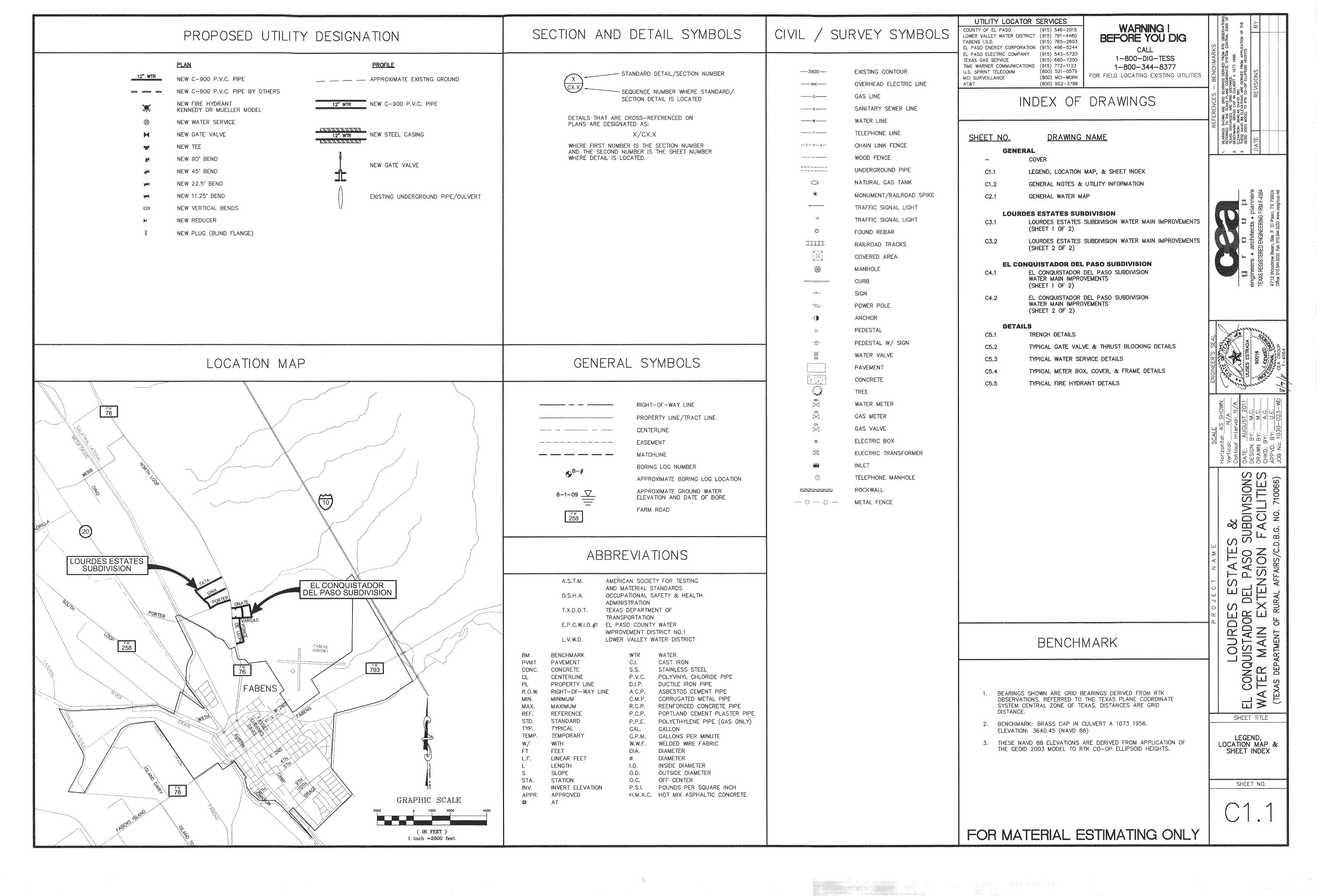
ROBERT RIVERA, P.E. PUBLIC WORKS DIRECTOR

CONSULTING ENGINEER



FUNDING AGENCY





GENERAL NOTES

- PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES TO VERIFY LOCATION OF EXISTING UTILITIES AND CONTRACTOR SHALL CALL THE RESPECTIVE "1-CALL" NUMBER FOR SUCH UTILITIES. ALL EXISTING UTILITY DEPTHS ARE UNKNOWN. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ACQUIRING FIELD DEPTHS OF ALL UTILITIES WITHIN THE PROJECT AREAS.
- ALTHOUGH ALL EFFORTS HAVE BEEN MADE TO INDICATE ALL MAJOR EXISTING UTILITIES ON PLANS, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO LOCATE AND PROTECT ALL SAID UTILITIES AS WELL AS SERVICE CONNECTIONS (WHETHER OR NOT INDICATED ON PLANS) PRIOR TO AND DURING CONSTRUCTION. SERVICE CONNECTIONS ARE NOT SHOWN ON THE PLANS. CONTRACTOR TO SUPPORT AND MAINTAIN ALL EXISTING EXPOSED UTILITIES IN SERVICE. ALL EXISTING UTILITIES CURRENTLY IN SERVICE MUST REMAIN IN SERVICE THROUGHOUT CONSTRUCTION OF THE NEW LINE EXCEPT AS NOTED IN THE DRAWINGS.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH GAS, OIL, ELECTRIC, TELEPHONE, FIBER OPTIC, CABLE TV, SEWER AND WATER UTILITIES OWNERS ETC. FOR ANY RELOCATION AND/OR PROTECTION OF EXISTING LINES, POLES OR CABLES AS REQUIRED, DUE TO CONSTRUCTION ACTIVITIES. CONTRACTOR TO MAINTAIN A MINIMUM COVER OF TWO (2') FEET UNDER TELEPHONE /CABLE/FIBER OPTIC AND GAS LINES. CONTRACTOR TO EXERCISE CAUTION WHEN PERFORMING WORK IN VICINITY OF OVERHEAD POWER LINES.
- 4. EXISTING STRUCTURES AND UTILITIES LOCATION WERE OBTAINED FROM SURVEYS AND OWNER'S AS-BUILT INFORMATION. UNDERGROUND LOCATIONS, SIZE AND ELEVATIONS MAY VARY FROM LOCATIONS SHOWN. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITY LINES BY POT-HOLING AND/OR OTHER METHODS AT LEAST 14 DAYS AHEAD OF PIPE LAYING CREWS TO ALLOW THE ENGINEER A REASONABLE AMOUNT OF TIME TO INITIATE ANY NECESSARY CHANGES IN ALIGNMENT AND/OR GRADE OF PIPELINE. THE CONTRACTOR SHALL OBTAIN JURISDICTIONAL APPROVALS AND PERMITS FROM THE TOWN OF CLINT. ALL POT-HOLES MADE WITHIN PAVED OR CONCRETE FINISHED SURFACES SHALL BE BACKFILLED WITH 2-SAC CEMENT STABILIZED BACKFILL THE BACKFILL SHALL BE PLACED ALL THE WAY TO THE SURFACE OF THE POT-HOLE, FULL DEPTH THE SURFACE OF THE POT-HOLES SHALL BE NEATLY CORED OR SAW CUT. CUTS MADE BY HAND TOOLS OR JACK HAMMER WILL NOT BE ALLOWED.
- THE CONTRACTOR SHALL FIELD VERIFY ELEVATIONS, MEASUREMENTS AND EXISTING CONDITIONS PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES. NOTIFY THE ENGINEER PROMPTLY, AND AT LEAST TWO (2) WEEKS PRIOR TO ANY WORK OR MOBILIZATION, OF ANY OMISSIONS, ERRORS, OR DISCREPANCIES FOUND SO THAT NECESSARY CORRECTIONS AND INTERPRETATIONS BE MADE PRIOR TO CONSTRUCTION.
- 6. ALL CONSTRUCTION PRACTICES AND PROCEDURES WILL COMPLY WITH THE PERTINENT PROVISIONS OF THE OCCUPATIONAL SAFETY AND HEALTH STANDARD (TITLE 29, CODE OF FEDERAL REGULATIONS) PUBLISHED BY THE O.S.H.A., DEPARTMENT OF LABOR.
- 7. TRAFFIC CONTROL PLANS & PHASING FOR THE ENTIRE WATER MAIN ROUTE AND PROPOSED TRUCK ROUTE, SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY EL PASO COUNTY AND TXDOT. PAVING CUT AND EXCAVATION PERMITS FOR BORE PITS, TRENCHING, POT-HOLING, AND ANY OTHER EXCAVATION SHALL BE OBTAINED FROM EL PASO COUNTY AND TXDOT, PRIOR TO CONSTRUCTION WITHIN OR ADJACENT TO CORRESPONDING R.O.W.
- 8. CONTRACTOR SHALL INSTALL A TRENCH SAFETY SYSTEM TO PROVIDE FOR THE SAFE EXCAVATION OF ALL TRENCHES EXCEEDING A DEPTH OF FIVE FEET (5') AS REQUIRED BY O.S.H.A. FXISTING SOIL CONDITIONS MAY DICTATE THE NEED FOR A TRENCH SAFETY SYSTEM WHEN TRENCH IS LESS THAN 5' IN DEPTH.
- 9. PAVEMENT REPLACEMENT LIMITS WILL ONLY BE PAID TO CONTRACTOR AS SHOWN IN TYPICAL DETAILS OR AS SPECIFIED.
- 10. THE CONTRACTOR SHALL SUBMIT A PROJECT SCHEDULE, COMMENCEMENT AND COMPLETION OF THE CONSTRUCTION, FOR REVIEW BY THE ENGINEER, PRIOR TO CONSTRUCTION, ADDITIONALLY, CONTRACTOR SHALL PROVIDE A TWO-WEEK CONSTRUCTION SCHEDULE, UPDATED WEEKLY, TO THE ENGINEER.
- 11. THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY IN WRITING, OF ANY PROPOSED DUMP SITE(S) FOR OVERBURDEN AND ANY CONSTRUCTION DEBRIS FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL OBTAIN APPROVAL OF ITS HAUL ROUTE TO THE DUMP SITE, AS WELL AS FOR THE MATERIALS IT SHALL BE HAULING BEFORE REMOVAL OF OVERBURDEN FROM PROJECT SITE.
- 12. THE CONTRACTOR SHALL NOTIFY ALL RESIDENTS AND BUSINESS OWNERS THAT MAY BE AFFECTED BY THE CONSTRUCTION FOURTEEN (14) DAYS PRIOR TO CONSTRUCTION.
- 13. PEDESTRIAN AND VEHICULAR ACCESS TO ALL RESIDENTS AND COMMERCIAL SITES SHALL BE PROVIDED AT ALL TIMES. COORDINATION FOR THIS ACTIVITY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASCERTAINING THE NATURE AND EXTENT OF ANY COLLATERAL WORK DONE BY OTHER TRADES. CONTRACTOR SHALL BE AWARE OF ANY AND ALL CONCURRENT WORK IN THE AREA THAT WILL REQUIRE COORDINATION FOR TIE-INS OF THIS WORK. IF NECESSARY TO AVOID OR MINIMIZE DAMAGE OR DELAY, THE CONTRACTOR SHALL REDEPLOY HIS WORK FORCE TO OTHER AREAS OF THE WORK AT NO COST TO THE OWNER.
- 15. THE CONTRACTOR SHALL COORDINATE, AS NEEDED, WITH CONTRACTOR RESPONSIBLE FOR ANY SURROUNDING IMPROVEMENT PROJECTS IF PROJECTS ARE UNDER CONSTRUCTION SIMULTANEOUSLY.
- INSTALLATION OF THE WATER LINES SHALL BE COORDINATED WITH, AND ALL RESTORATION INSPECTIONS/REQUIREMENTS WILL BE BY, EL PASO COUNTY AND/OR LOWER VALLEY WATER DISTRICT AND/OR TXDOT DURING CONSTRUCTION.
- 17. VERTICAL CONTROL FOR THIS PROJECT IS BASED UPON NAVD88 DATUM. REFER TO SHEET C1.1 FOR BENCHMARK AND SHEET C2.1 FOR TEMPORARY BENCHMARKS.
- STATIONING FOR THIS PROJECT IS ALONG CENTERLINE OF NEW WATER LINE PIPE. COORDINATES SHOWN AT PIPE BENDS, TIE-INS, TEES & CAPS. ALL DIMENSIONS ARE TO EXISTING FENCE LINES AND POWER POLES. ALL DIMENSIONS ARE APPROXIMATE.
- 19. THE INTENT OF THE OWNER IS TO HAVE THE WATER LINES INSTALLED TO SUCH A DEPTH THAT THEY WILL HAVE AT LEAST 48" OF COVER BELOW EXISTING NATURAL GROUND AT ALL LOCATIONS. THE WATER LINE SHALL HAVE NO DIPS, SAGS OR HUMPS OR OTHER IRREGULARITIES IN VERTICAL ALIGNMENT. CONSIDERING UTILITIES AND OTHER CONDITIONS, VARIANCE FROM GRADE PROFILE IS NOT RECOMMENDED IF OTHER EXISTING UTILITIES OR OBSTRUCTIONS ARE ENCOUNTERED DURING THE WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES PRIOR TO INSTALLING THE WATER LINE SO THAT AN ACCEPTABLE PROFILE CAN BE ESTABLISHED PRIOR TO INSTALLATION OF THE PIPELINE. THE OWNER WILL BE NOTIFIED AT LEAST TWO (2) WEEKS IN ADVANCE FOR ANY NECESSARY WATER LINE RELOCATION.

- 20. ALL EXISTING AND PROPOSED WATER SERVICE CONNECTIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY FINAL LOCATION OF SERVICE LINE CONNECTIONS WITH PROPERTY OWNERS.
- 21. CONTRACTOR SHALL PROVIDE THE REQUIRED COUPLINGS, ELBOWS, PLUGS, AND NECESSARY PIPING APPURTENANCES FOR A COMPLETE AND OPERATIONAL WATER SYSTEM. ALL BENDS AND ELBOWS SHALL BE MECHANICALLY RESTRAINED AS PER L.V.W.D. STANDARDS. ALL PIPING TO BE ABANDONED SHALL BE PLUGGED IN ACCORDANCE WITH L.V.W.D. STANDARDS.
- 22. UPON COMPLETING THE INSTALLATION OF THE PIPELINE, RESTORE FARMLAND/EASEMENTS/PAVEMENT STRUCTURE TO ORIGINAL OR BETTER CONDITIONS. REFER TO DETAILS.
- 23. AS-BUILT STATIONING, OFFSET FROM R.O.W. AND INVERT ELEVATIONS SHALL BE ACCURATELY RECORDED BY THE CONTRACTOR ON A CLEAN SET OF PLANS FOR EACH VALVE, FIRE HYDRANT, ELBOW, SERVICE CONNECTION AND/OR STUB-OUT, WITH RESPECT TO THE APPROPRIATE PROJECT CONTROL POINT.
- 24. PRIOR TO TIE-IN CONTRACTOR SHALL TEST THE PIPELINE THOROUGHLY IN ACCORDANCE WITH SPECIFICATIONS.
- 25. ALL TIE-INS SHALL BE CLOSELY COORDINATED WITH L.V.W.D. AT LEAST 72 HOURS PRIOR TO ACTUAL CONSTRUCTION. A L.V.W.D. REPRESENTATIVE MUST BE PRESENT WHEN TIE-IN AN EXISTING WATER MAIN. CLOSING AND OPENING OF EXISTING VALVES SHALL BE OPERATED BY L.V.W.D. ONLY. A MAXIMUM OF FOUR (4) CONSECUTIVE HOURS WILL BE ALLOWED FOR ALL TIE-INS. SHOULD TIE-IN REQUIRE MORE THAN THE ALLOWED TIME, THE WORK SHALL BE COMPLETED AT NIGHT BETWEEN THE HOURS OF 11:00 P.M. TO 5:30 A.M. CONTACT SAUL TREJO AT 915-791-4480 WITH L.V.W.D.
- 26. ALL EXISTING ROADWAYS, SIDEWALKS, SIGNS, LANDSCAPING, DRAINAGE AND IRRIGATION STRUCTURES AND DRIVEWAYS AFFECTED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER BY CONTRACTOR AT NO COST TO THE OWNER. ALL BUSINESSES, RESIDENCES, SCHOOLS, ETC. SHALL BE PROVIDED WITH FULL ACCESS AT ALL TIMES, INCLUDING ALL DRIVEWAYS.
- 27. CONTRACTOR SHALL KEEP ALL DEBRIS AND SPOIL OUT OF DRAINS, CULVERTS, AND DROP INLETS AND ENSURE THAT THEY DO NOT BECOME CLOGGED AS A RESULT OF CONSTRUCTION ACTIVITIES.
- 28. CONTRACTOR SHALL KEEP ALL DRAINAGE AND IRRIGATION STRUCTURES, FACILITIES AND CONVEYANCE SYSTEMS ALONG THE PIPE ROUTE UNDISTURBED AND IN OPERATION TO THE MAXIMUM EXTENT POSSIBLE. IF AREAS ARE DISTURBED, CONTRACTOR SHALL RESTORE THEM TO THEIR ORIGINAL CONDITION.
- 29. THE CONTRACTOR SHALL PRESERVE, DURING CONSTRUCTION, ALL STOP SIGNS, SPEED LIMIT SIGNS, UNDERGROUND SIGNAL CONDUITS AND ALL OTHER TRAFFIC REGULATORY SIGNS, COORDINATION SHALL BE WITH EL PASO COUNTY AND TXDOT. CONTRACTOR SHALL COORDINATE WITH THE ABOVE ENTITIES FOR THE LOCATION AND SPOTTING OF TRAFFIC SIGNAL CONDUITS.
- 30. AS PER EL PASO COUNTY, ANY EXISTING CONCRETE CURB AND GUTTER DAMAGED AT THE STREET INTERSECTIONS SHALL BE REPLACED WITH A WHEELCHAIR RAMP AND SIDEWALK IN ACCORDANCE WITH A.D.A. GUIDELINES AND STANDARDS. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SHOP DRAWING/DETAIL OF THE RAMP TO BE INSTALLED. SHOP DRAWING SHALL ILLUSTRATE, AT MINIMUM, DIMENSIONS, PROPOSED SPOT ELEVATIONS AND EVIDENCE THAT DETAIL MEETS ALL CITY AND A.D.A. REQUIREMENTS. ALL WORK SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 31. A GEOTECHNICAL STUDY WAS PERFORMED ON MARCH 1, 2010. THE STUDY IS AVAILABLE FOR THE CONTRACTORS REVIEW AT ANY TIME AT THE ENGINEER'S OFFICE.
- 32. THE TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) MUST BE NOTIFIED 72 HOURS IN ADVANCE OF ANY CONSTRUCTION ACTIVITIES WITHIN OR ADJACENT TO THEIR R.O.W., AND ALL DENSITY TESTS TAKEN WITHIN TXDOT R.O.W. SHALL BE FORWARDED TO TXDOT AND OWNER BY CONTRACTOR. A TRAFFIC CONTROL PLAN, IN COMPLIANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MUST BE APPROVED BY TXDOT BEFORE CONSTRUCTION IN OR ADJACENT TO TXDOT R.O.W. IS BEGUN.
- 33. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR ALL STREETS NOT SPECIALLY ADDRESSED IN THE DRAWINGS. THE PLAN IS TO BE SUBMITTED TO EL PASO COUNTY AND TXDOT WHERE APPLICABLE, FOR WRITTEN APPROVAL, PRIOR TO BEGINNING CONSTRUCTION IN STREET OR STATE R.O.W. OR ADJACENT TO STATE R.O.W. IN NO CASE WILL EXCAVATED MATERIAL BE ALLOWED TO BE STOCK-PILED WITHIN STREET R.O.W. AFTER NORMAL WORKING HOURS. THE AMOUNT OF PIPELINE STRUNG OUT WITHIN STREET R.O.W. SHALL BE LIMITED TO THE AMOUNT OF PIPELINE THAT CAN BE INSTALLED IN ONE DAY'S WORK. AT THE END OF EACH WORK DAY, THE END OF PIPE SHALL BE SEALED, MARKED AND BACK FILLED SO AS NOT TO LEAVE ANY OPEN TRENCH.
- 34. ALL WORK WITHIN OR ADJACENT TO TXDOT R.O.W. SHALL BE PERFORMED IN ACCORDANCE WITH TXDOT RULES AND REGULATIONS, INCLUDING TXDOT'S UTILITY ACCOMMODATION RULES.
- 35. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY. IF SUBSURFACE CONTAMINATION IS ENCOUNTERED OR SUSPECTED DURING POT HOLING, EXCAVATION OR BORING. ALL EXCAVATION AND CONSTRUCTION OPERATIONS SHALL BE CEASED UNTIL FURTHER NOTICE FROM THE MUNICIPAL SERVICES DEPARTMENT.
- 36. AERIAL IMAGES ON PLANS ARE FOR ASSISTANCE ONLY. AERIAL IMAGES ARE NOT TIED TO SURVEY. CONTRACTOR SHALL NOT USE AERIAL IMAGES FOR CONSTRUCTION PURPOSES.
- 37. ALL INSTANCES WHERE THE TERM "PROPOSED" OR "NEW" APPEARS ON THESE DOCUMENTS SHALL BE CONSIDERED AS WORK NECESSARY TO COMPLETE THE REQUIRED IMPROVEMENTS AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL INCLUDE ALL "PROPOSED" ITEMS AS PART OF HIS BID. THE TERMS "PROPOSED" AND "NEW" SHALL BE CONSIDERED EQUAL WHEN BIDDING THIS PROJECT.

UTILITY LOCATOR SERVICES

COUNTY OF EL PASO (915) 546-2015 LOWER VALLEY WATER DISTRICT (915) 791-4480 FABENS I.S.D. (915) 765-2603 EL PASO ENERGY CORPORATION (915) 496-5244 EL PASO ELECTRIC COMPANY (915) 543-5720 TEXAS GAS SERVICE (915) 680-7200 TIME WARNER COMMUNICATIONS (915) 772-1123

U.S. SPRINT TELECOMM

MCI SURVEILLANCE

AT&T

(800) 521-0579 (800) MCI-WORK (800) 852-3786

1-800-DIG-TESS 1-800-344-8377 FOR FIELD LOCATING EXISTING UTILITIES

WARNING

BEFORE YOU DIG

LIST OF UTILITIES AND AGENCIES

<u>GENERAL UTILITIES</u> TEXAS EXCAVATION SAFETY SERVICE 11884 GREENVILLE AVENUE. DALLAS, TX. 75243 (800) 344-8377

CABLE TELEVISION TIME WARNER COMMUNICATIONS 7010 AIRPORT ROAD EL PASO, TX. 79906 (915) 772-1123 MR. RAYMOND MENDOZA

FIBER OPTICS U.S. SPRINT 151 N. BOONE ST. EL PASO, TX. 79905 (915) 534-7910 MR. RICK DERAGISCH

MCI TELECOMMUNICATIONS CORPS. 4045 DONIPHAN PARK CIRCLE EL PASO, TX. 79922 (915) 542-2770 EXT. 201 MR. DANIEL HERNANDEZ

AT & T P.O. BOX 1650 EL PASO, TX. 79949 1(800) 852-3786 MS. DARLENE NORIS

SCHOOL DISTRICT FABENS INDEPENDENT SCHOOL DISTRICT 821 NE G AVENUE FABENS, TX, 79838 (915) 765-2603 EXT. 2103 MR. GILBERT ALARCON

ENGINEER CEA GROUP CASTNER CENTER @ TRANSMOUNTAIN 4712 WOODROW BEAN, STE. F EL PASO, TX. 79924 (915) 544-5232 MR. ULISES ESTRADA, P.E.

<u>WATER & SEWER</u> LOWER VALLEY WATER DISTRICT 1557 F.M. 1110 CLINT, TX 79836 (915) 791-4480 MR. SAUL TREJO, P.E.

EL PASO ELECTRIC CO. 501 W. SAN ANTONIO ST. EL PASO, TX. 79902 (915) 543-2076 MR. FRANK VEJIL (DISTRIBUTION)

<u>TELEPHONE</u> AT & T P.O. BOX 1650 EL PASO, TX. 79949 1(800) 852-3786 MS. DARLENE NORIS

STATE HIGHWAYS & FARMROADS TEXAS DEPARTMENT OF TRANSPORTATION 13301 GATEWAY WEST EL PASO, TX. 79927 (915) 790-4319 MR. LEO BETANCOURT, P.E.

RESIDENTIAL GAS LINES TEXAS GAS CO. 4700 POLLARD ST

EL PASO, TX 79930 (915) 680-8218 MR. JOSE DE ALBA ROAD & BRIDGE

COUNTY OF EL PASO

EL PASO, TX 79935

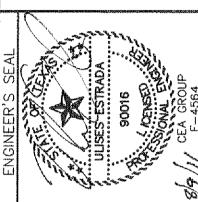
(915) 591-5709

EL PASO, TX 79901 (915) 546-2015 MR. ROBERT RIVERA, P.E. **SURVEYOR** BARRAGAN & ASSOCIATES 10950 PELLICANO DRIVE, BLDG "F"

MR. BENITO BARRAGAN, R.P.L.S.

800 E. OVERLAND STE. 407

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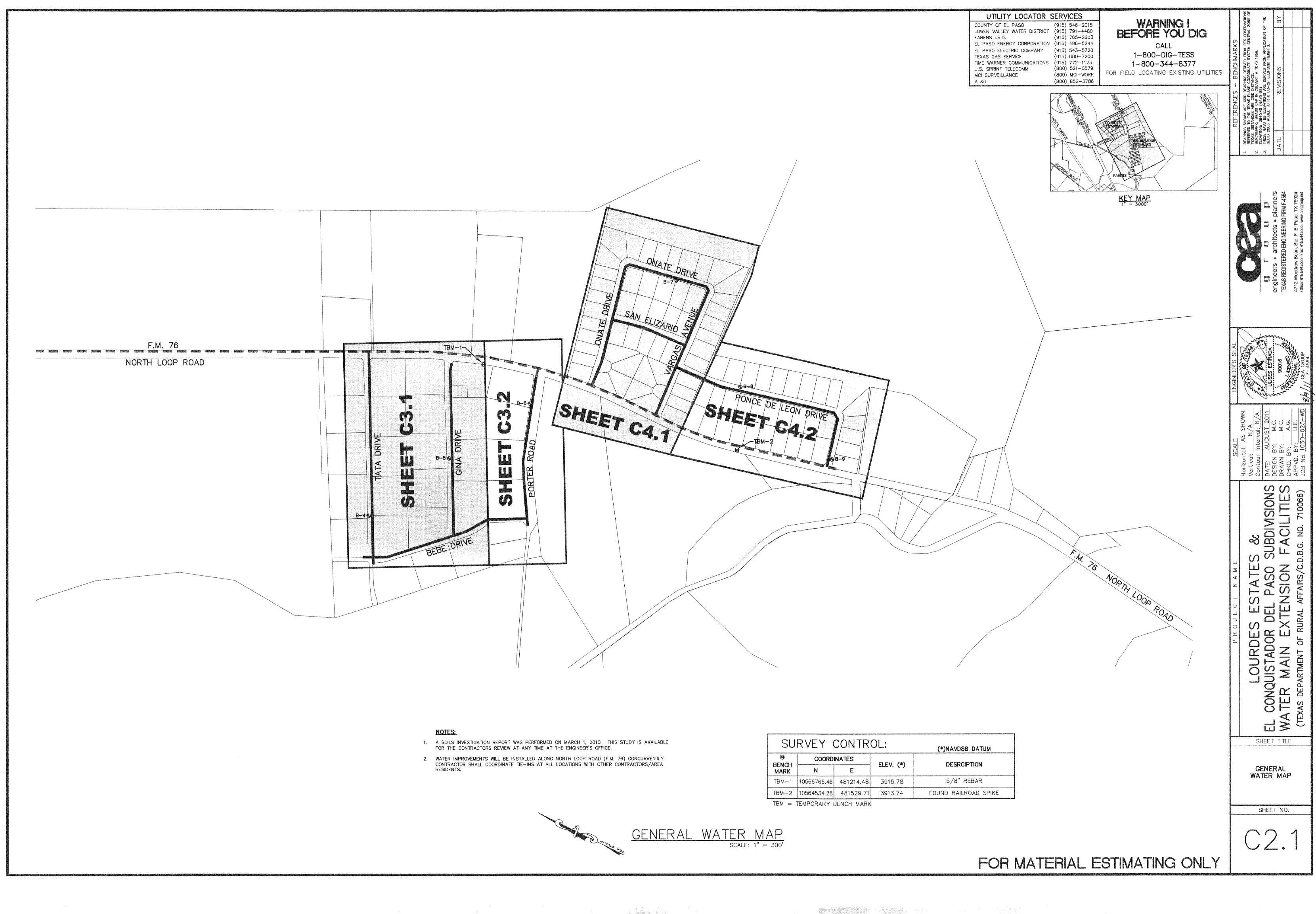
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GENERAL NOTES AND UTILTIY INFORMATION

SHEET TITLE

SHEET NO.





UTILITY LOCATOR SERVICES COUNTY OF EL PASO (915) 546-2015 LOWER VALLEY WATER DISTRICT (915) 791-4480 FABENS I.S.D. (915) 765-2603 EL PASO ENERGY CORPORATION (915) 496-5244 EL PASO ENERGY CORPORATION (915) 496-5244

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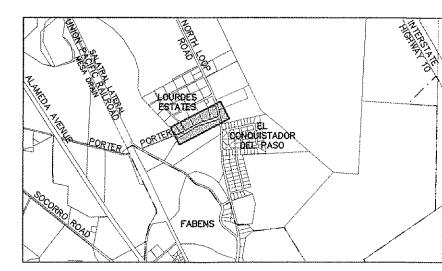
U.S. SPRINT TELECOMM (800) 521-0579

MCI SURVEILLANCE (800) MCI-WORK

AT&T (800) 852-3786

WARNING ! BEFORE YOU DIG

1-800-DIG-TESS 1-800-344-8377 FOR FIELD LOCATING EXISTING UTILITIES





SITE PLAN

SCALE: 1" = 60'

KEYED NOTES:

- 1 8" TEE
- 2 8" CROSS
- 3 8" GATE VALVE
- 4 8" PLUG (BLIND FLANGE)
- 5 8" 45" BEND
- 6 8" 22.5" BEND
- (7) 8" 11.25' BEND
- (B) 8" VERTICAL BEND
- 9 8" X 6" TEE (10) 8" X 6" REDUCER
- (11) 6" GATE VALVE
- (12) 6"PLUG
- (13) FIRE HYDRANT
- 14 SERVICE METER

- STATIONING FOR THIS PROJECT IS ALONG CENTERLINE OF THE PROPOSED PIPE.
- PROPOSED WATER LINE TO BE AT FOUR (4') FEET MINIMUM COVER.
- ALL DIMENSIONS ARE TO EXISTING FENCE LINES AND POWER POLES. DIMENSIONS ARE APPROXIMATE. 4. MINIMUM SEPARATION DISTANCE OF FIRE HYDRANT TO POWER POLE IS TEN (10')
- 5. SPARKPLUG TO COORDINATE FINAL LOCATION WATER SERVICE INSTALLATIONS WITH PROPPERTY OWNER

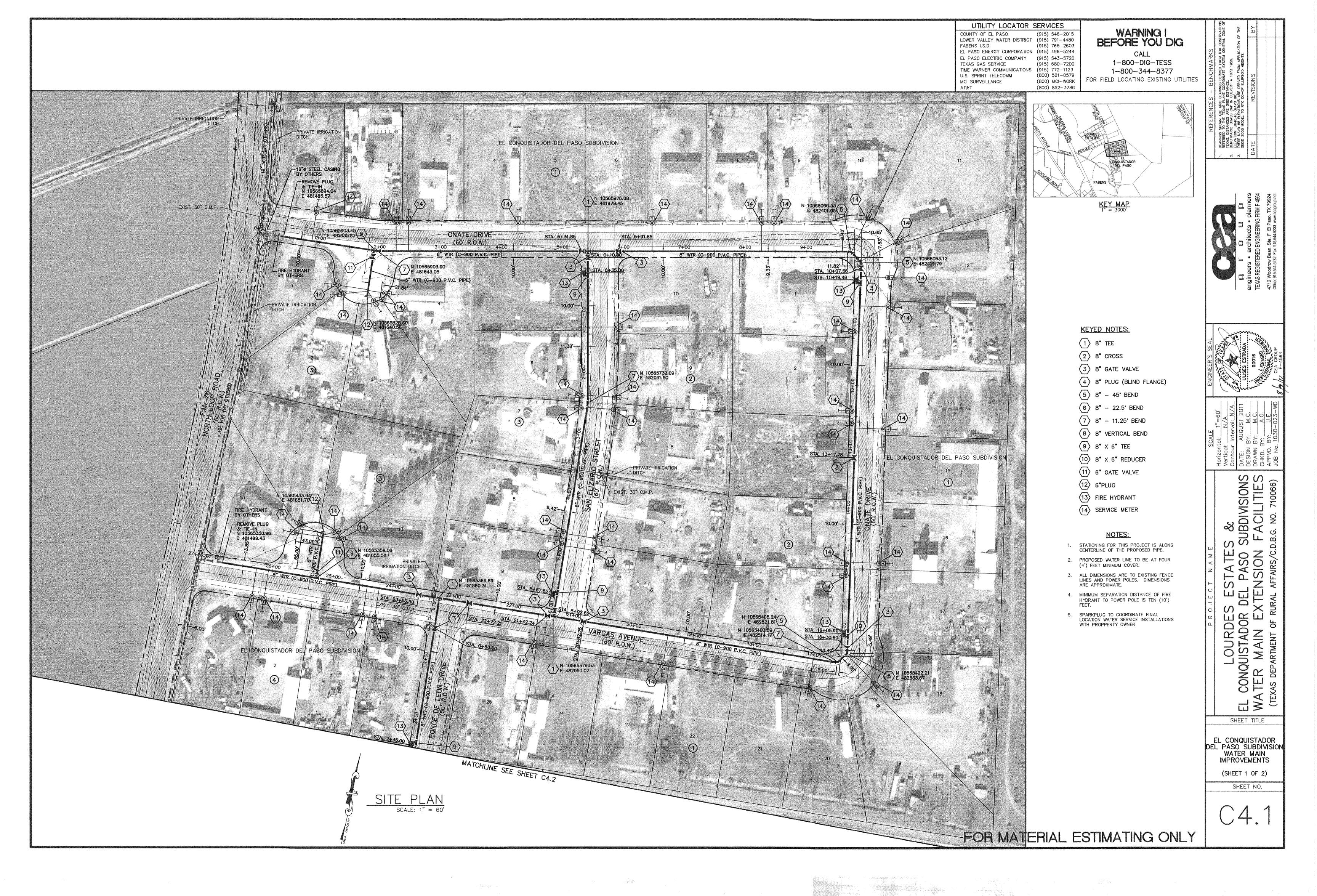
| NETENEROES - DENCHMARAS | 1. BEARINGS SHOWN ARE GRID BEARINGS DERIVED FROM RTK REFERRED TO THE TEXAS PLANE COORDINATE SYSTEM CENTEXAS. DISTANCES ARE GRID DISTANCE. 2. BENCHMARK: BRASS CAP IN CULVERT A 1073 1956. ELEVATION: 3640.45 (NAVD 88) 3. THESE NAVD 88 ELEVATIONS ARE DERIVED FROM APPLICATIONED 2003 MODEL. TO RTK CO-OP ELLIPSOID HEIGHTS. | REVISIONS | | | |
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CONQUISTADOR DEL PASO SUBDIVISIONS
TER MAIN EXTENSION FACILITIES

XAS DEPARTMENT OF RURAL AFFAIRS/C.D.B.G. NO. 710066)

SHEET TITLE LOURDES ESTATES SUBDIVISION WATER MAIN **IMPROVEMENTS**

> (SHEET 2 OF 2) SHEET NO.





UTILITY LOCATOR SERVICES WARNING I BEFORE YOU DIG

COUNTY OF EL PASO (915) 546-2010 (915) 791-4480 (915) 765-2603 EL PASO ENERGY CORPORATION (915) 496-5244 EL PASO ELECTRIC COMPANY (915) 543-5720 TEXAS GAS SERVICE TIME WARNER COMMUNICATIONS (915) 772-1123 U.S. SPRINT TELECOMM (800) 521-0579 U.S. SPRINT TELECOMM MCI SURVEILLANCE AT&T

(915) 680-7200 (800) MCI-WORK (800) 852-3786 1-800-DIG-TESS

1-800-344-8377 FOR FIELD LOCATING EXISTING UTILITIES

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D.B.G. NO. 710066)

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KEYED NOTES:

1 8" TEE

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14 SERVICE METER

NOTES:

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SPARKPLUG TO COORDINATE FINAL LOCATION WATER SERVICE INSTALLATIONS WITH PROPPERTY OWNER.

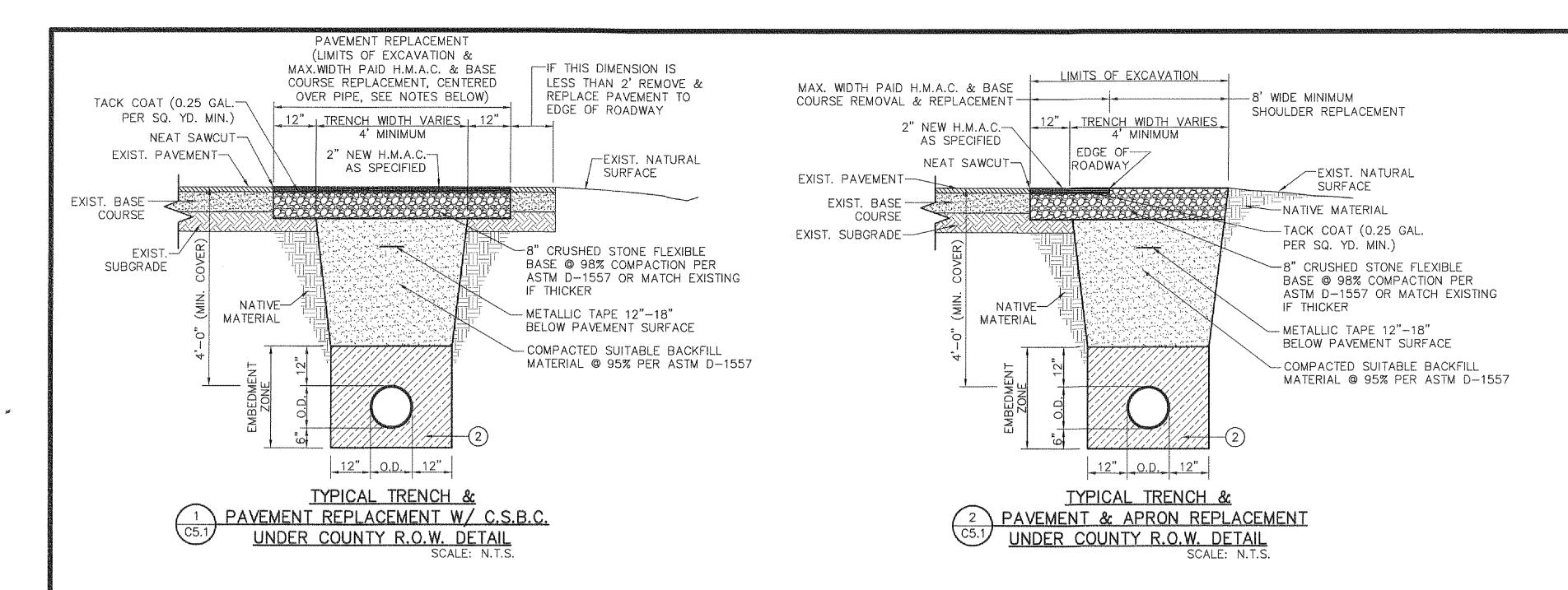
SERVICE CONNECTIONS FOR LOTS 15-24, BLOCK 4 NOT PART OF THIS CONTRACT. YARDLINES TO BE INSTALLED UNDER THIS PROJECT.

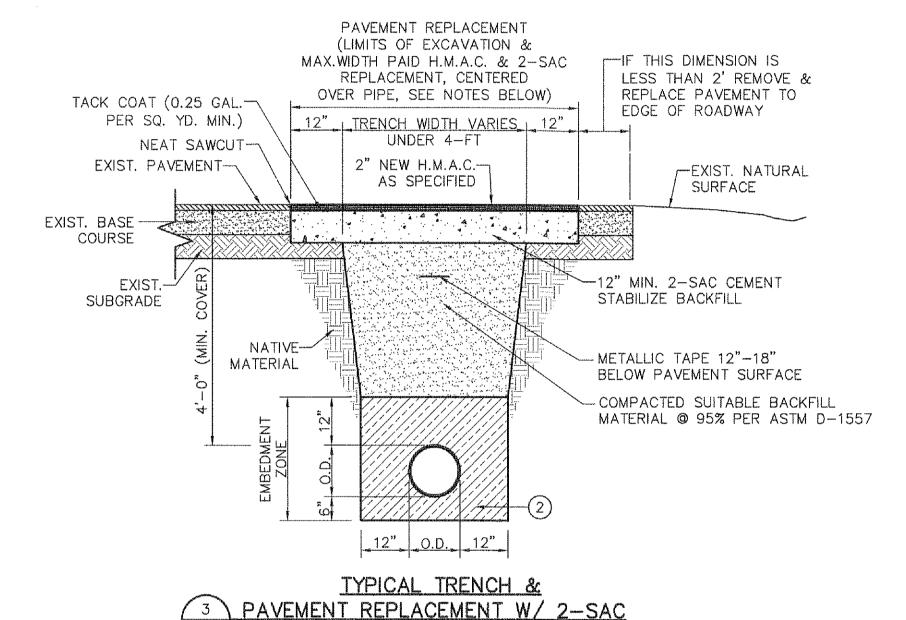
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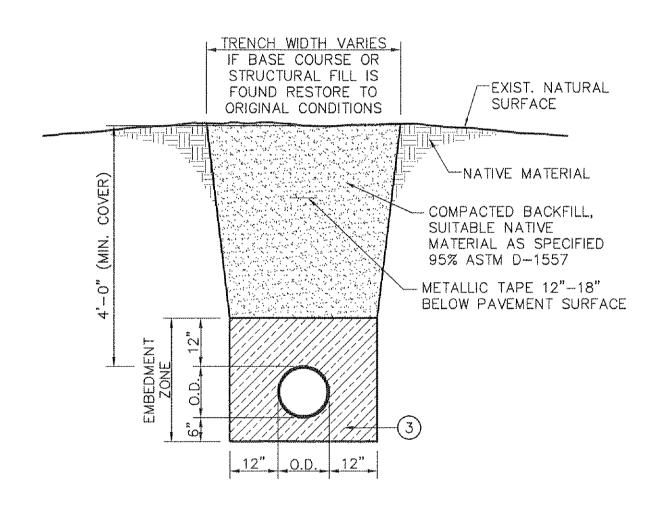


UNDER COUNTY R.O.W. DETAIL

TRENCH & BACKFILL NOTES:

1. THE PAVEMENT REPLACEMENT SYSTEM (HMAC, BASE, SUBGRADE) SHOWN ARE GENERAL REQUIREMENTS AND WILL WORK IN GOOD TO MODERATE SOIL CONDITIONS. REFER TO SITE SPECIFIC GEOTECHNICAL STUDY FOR PAVEMENT RECOMMENDATIONS IN AREAS OF BAD SOIL CONDITIONS AND FOR NEW SUBDIVISIONS.

- 2. <u>UNIFORM TRENCH BOTTOM</u> PIPE SHALL GENERALLY BE LAID ON UNIFORM, EVENLY GRADED TRENCH BOTTOM. TRENCH BOTTOM SHALL BE SHAPED AT 11. CONTRACTOR TO COORDINATE EXISTING PAVEMENT LIMITS WITH EVERY BELL TO PROVIDE UNIFORM BEARING OF PIPE BARREL.
- 3. <u>NON-UNIFORM TRENCH BOTTOM</u> WHEN A UNIFORM TRENCH BOTTOM IS UNATTAINABLE (ie ROCKY OR UNEVENLY GRADED) A 6" SAND BEDDING SHALL BE REQUIRED.
- 4. EMBEDMENT BACKFILL USE CLASS II COARSE GRAVELS PER ASTM D-2487 W/<12% FINES & MAX SIZE 1-1/2". NATIVE MATERIAL OR IMPORTED SELECT MATERIAL, MEETING OR EXCEEDING CLASS II REQUIREMENTS, MAY BE USED. CLASS I MATERIAL (MAXIMUM 1-1/2" SIZE) IS ACCEPTABLE AT THE DISCRETION OF THE CONTRACTOR.
- 5. FINAL BACKFILL SUITABLE COMPACTED NATIVE MATERIAL, MINIMUM 3" SIZE IS ACCEPTABLE.
- 6. SHORING (TRENCH SAFETY) SHALL BE AS PER O.S.H.A. REQUIREMENTS. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM R.O.W. OWNER TO PERFORM "ANGLE OF REPOSE" ON TRENCH WALLS.
- 7. SUITABLE BACKFILL MATERIAL SHALL MEET OR EXCEED ASTM D-2487 CLASS II REQUIREMENTS, W/<12% FINES AND MAX. SIZE 1 1/2".
- 8. THE SLOPING OF THE TRENCH WALLS WILL NOT BE PERMITTED ALONG TXDOT RIGHT-OF-WAY.

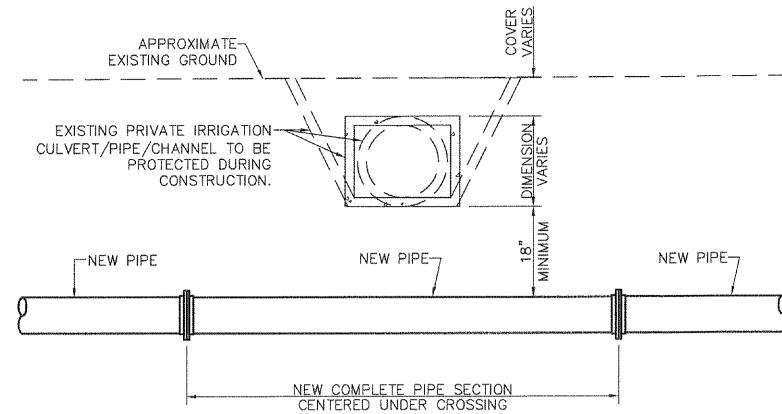


TYPICAL TRENCH UNDER NATURAL GROUND DETAIL

EXCAVATION NOTES:

- CONTRACTOR SHALL COORDINATE WITH EL PASO COUNTY INSPECTOR AND TXDOT INSPECTOR FOR INSPECTION AND TESTING ABOVE THE EMBEDMENT ZONE.
- 10. IF MORE THAN 50% OF THE ROADWAY PAVEMENT WIDTH IS DAMAGED, CONTRACTOR SHALL REPLACE THE ENTIRE ROADWAY PAVEMENT WIDTH
- OWNER/ENGINEER'S RESPONSIBILITY BEFORE REMOVING PAVEMENT. CONTRACTOR TO REPLACE PAVEMENT TO ORIGINAL PAVEMENT LIMITS.
- 12. IF PAVEMENT REPLACEMENT IS SIX (6') FEET OR LESS REFER TO DETAIL 3.

 IF PAVEMENT REPLACEMENT IS SIX (6') FEET OR GREATER REFER TO DETAIL (1) C5.1



NOTES:

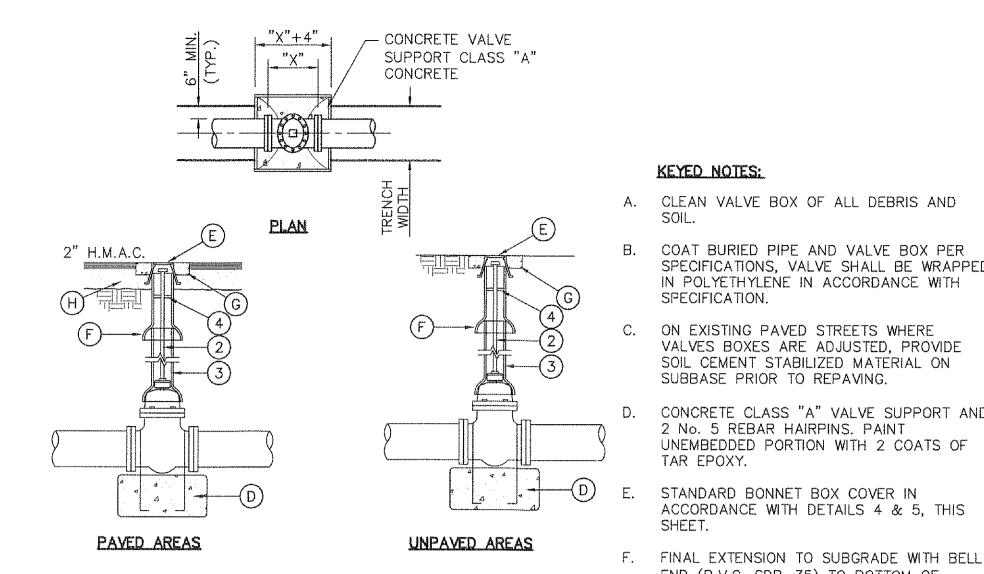
- CONTRACTOR SHALL VERIFY LOCATION, DEPTH, SIZE AND TYPE OF CULVERT/PIPE BEFORE
- CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE OF EIGHTEEN INCHES BELOW IRRIGATION CULVERT/PIPE TO TOP OF NEW SEWER PIPE.
- 3. CONTRACTOR TO INSTALL A MINIMUM 20 L.F. PIPE SECTION CENTERED UNDER CROSSING.
- TYPICAL CROSSING UNDER PRIVATE CULVERT/PIPE/CHANNEL DETAIL

SUBDIVISIONS
SUBDIVISIONS
FACILITIES
D.B.G. NO. 710066) PASO SION S H CONQUISTABOR MAIN DO

SHEET TITLE

TRENCH DETAILS

SHEET NO.



- 1. VALVE TYPE AND VALVE ENDS SHALL BE AS SHOWN ON THE PLANS.
- 2. ALL BURIED VALVES 5' AND DEEPER SHALL BE PROVIDED WITH SOLID STEEL EXTENSION STEM OPERATOR WITH 2" SQUARE AWWA NUT WITHIN 36" OF VALVE BOX COVER. NUT IS TO INDICATE DIRECTION OF ROTATION TO OPEN VALVE.
- 3. 6" DIA. MINIMUM P.V.C. SDR-35 PIPE. PIPE SHALL NOT REST ON VALVE BODY.
- 4. 1/4" THICK STEEL TRASH RING VALVE BOX INSIDE DIAMETER MINUS 1/8".

TYPICAL GATE VALVE INSTALLATION DETAIL

KEYED NOTES:

SPECIFICATION.

TAR EPOXY.

BONNET BOX.

DETAIL 4 C5.5

COAT BURIED PIPE AND VALVE BOX PER

ON EXISTING PAVED STREETS WHERE

SUBBASE PRIOR TO REPAVING.

2 No. 5 REBAR HAIRPINS. PAINT

STANDARD BONNET BOX COVER IN

END (P.V.C. SDR-35) TO BOTTOM OF

G. REFER TO SQUARE CONCRETE COLLAR

H. 12" SOIL CEMENT STABILIZED BACKFILL

(2-SAC) IN PAVED AREAS.

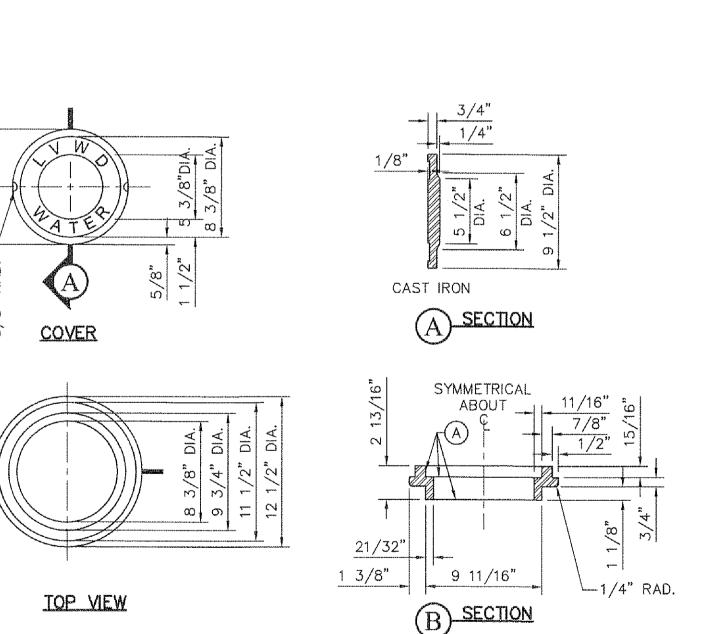
VALVES BOXES ARE ADJUSTED, PROVIDE SOIL CEMENT STABILIZED MATERIAL ON

CONCRETE CLASS "A" VALVE SUPPORT AND

UNEMBEDDED PORTION WITH 2 COATS OF

ACCORDANCE WITH DETAILS 4 & 5, THIS

SPECIFICATIONS, VALVE SHALL BE WRAPPED IN POLYETHYLENE IN ACCORDANCE WITH

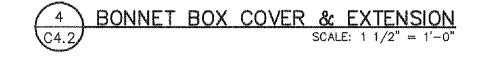


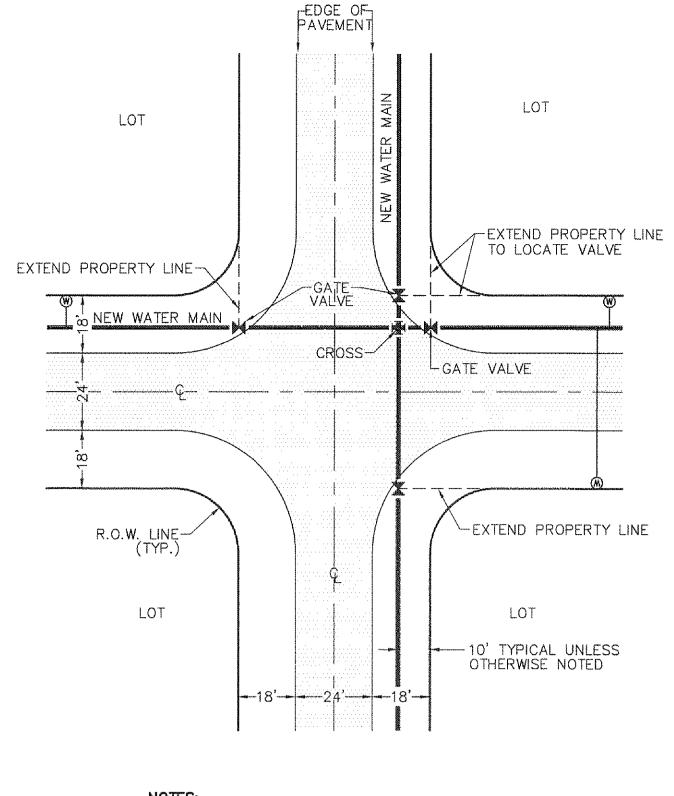
<u>NOTES:</u>

- 1. CASTINGS TO BE SMOOTH AND VOID OF AIR HOLES.
- 2. WEIGHT OF BONNET BOX EXTENSION IS 25 POUNDS.
- 3. WEIGHT OF COVER IS 10 POUNDS.

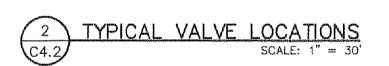
KEYED NOTES:

A. TO BE ROUGH GROUND OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT.





- 3. THE NUMBER OF VALVES INSTALLED AT THE INTERSECTION MUST EQUAL THE NUMBER OF INCOMING



11 1/4" DIA.

9 3/4" DIA.

14 3/8" DIA.

1. CASTING TO BE SMOOTH AND VOID OF AIR HOLES.

A. TO BE ROUGH GROUND OF ANY IRREGULARITIES

THAT WOULD PREVENT A SNUG FIT.

2. WEIGHT OF BONNET BOX IS 95 POUNDS.

1 13/16"

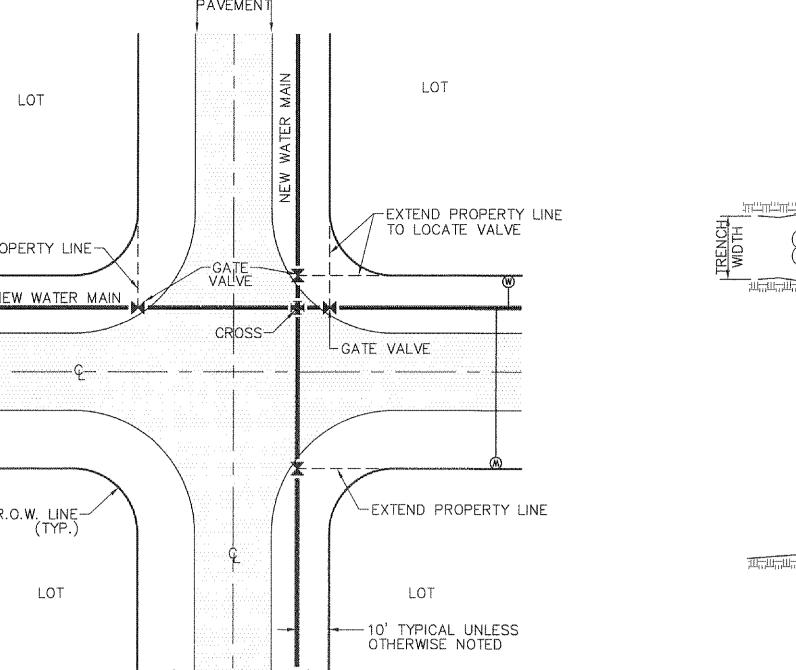
KEYED NOTES:

BONNET BOX DETAIL

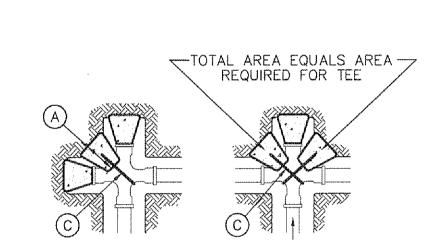
SCALE: 1 1/2" = 1'-0"

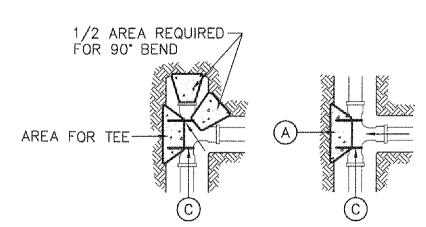
TOP VIEW

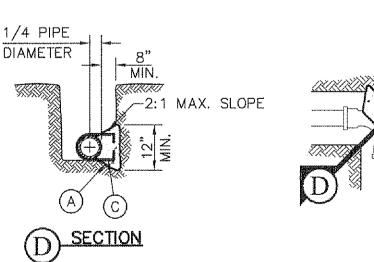
BOTTOM VIEW

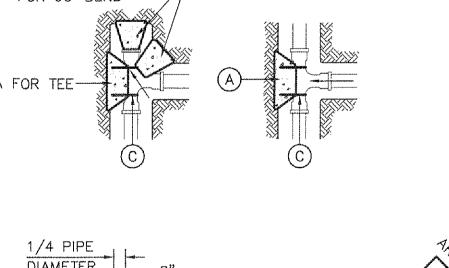


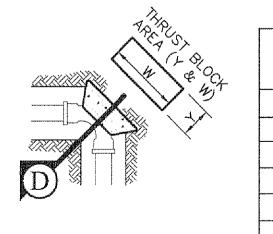
- 1. SEE PLANS FOR SIZE AND LOCATION OF WATER MAIN AND LOTS TO BE SERVICED.
- 2. LOCATION OF THE 3/4" OR 1" SERVICE CONNECTION TO BE INSTALLED PER L.V.W.D. STANDARDS.











COMPLY WITH REQUIREMENTS OF AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES.

<u>KEYED NOTES:</u>

- A. TWO No.5 REBAR HAIR PINS. PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF TAR EPOXY.
- B. CONCRETE VALVE SUPPORT, CLASS "C" CONCRETE.
- C. APPROVED PIPE.

<u>PLAN</u>

SECTION

- 1. TABLE IS BASED ON 2000#/SQ. FT. SOIL. IF CONDITIONS ARE FOUND TO INDICATE SOIL BEARING IS LESS, THE AREAS SHALL BE INCREASED ACCORDINGLY.
- 2. AREAS FOR PIPE LARGER THAN 20" SHALL BE CALCULATED.
- 3. CONCRETE SHALL HAVE A MINIMUM COMPRESSION STRENGTH OF 2500 PSI.
- 4. THRUST BLOCK IS TO EXTEND TO UNDISTURBED SOIL.
- 5. SIZE MAY BE DECREASED FOR LESSER DEGREE BENDS AS DETERMINED BY ENGINEER.
- 6. KEEP CONCRETE CLEAR OF M.J. OR BELL AND SPIGOT
- 7. BLOCK IN A SIMILAR MANNER AT TEES, HYDRANTS, PLUG OR OTHER LOCATIONS AS REQUIRED.
- 8. IF CONCRETE BLOCKS CANNOT BE POURED, THEN USE TIE-RODS OR OTHER APPROVED METHOD TO RESTRAIN

KEYED NOTES:

- LENGTH "Y & W" AS REQUIRED TO OBTAIN BEARING AREA AGAINST UNDISTURBED SOIL.
- ADDITIONAL EXCAVATION IF NECESSARY TO OBTAIN REQUIRED BEARING AREA.
- NO. 5 REBAR HAIR PIN(S). PAINT UNEMBEDDED PORTION OF REBARS WITH TWO COATS OF TAR EPOXY.
- MINIMUM THRUST BLOCK AREA REQUIREMENTS FOR (Y & W) AS FOLLOWS:

| PIPE | WATER PIPE | | |
|--|---------------------------|--------------------------|--|
| sizĒ | TEE, DEAD END 90° BEND | 45° AND 22 1/2° BENDS | |
| 4" & LESS | 3 SQ. FEET | 3 SQ. FEET | |
| 6" | 4 SQ. FEET | 3 SQ. FEET | |
| 8" | 6 SQ. FEET | 3 SQ. FEET | |
| 10" | 9 SQ. FEET | 5 SQ. FEET | |
| 12" | 13 SQ. FEET | 7 SQ. FEET | |
| 16" | 23 SQ. FEET | 12 SQ. FEET | |
| THE RESIDENCE OF THE PERSON OF | | | |

33 SQ. FEET 20 SQ. FEET

TYPICAL THRUST BLOCKING DETAIL
SCALE: N.T.S.

FOR MATERIAL ESTIMATING ONLY

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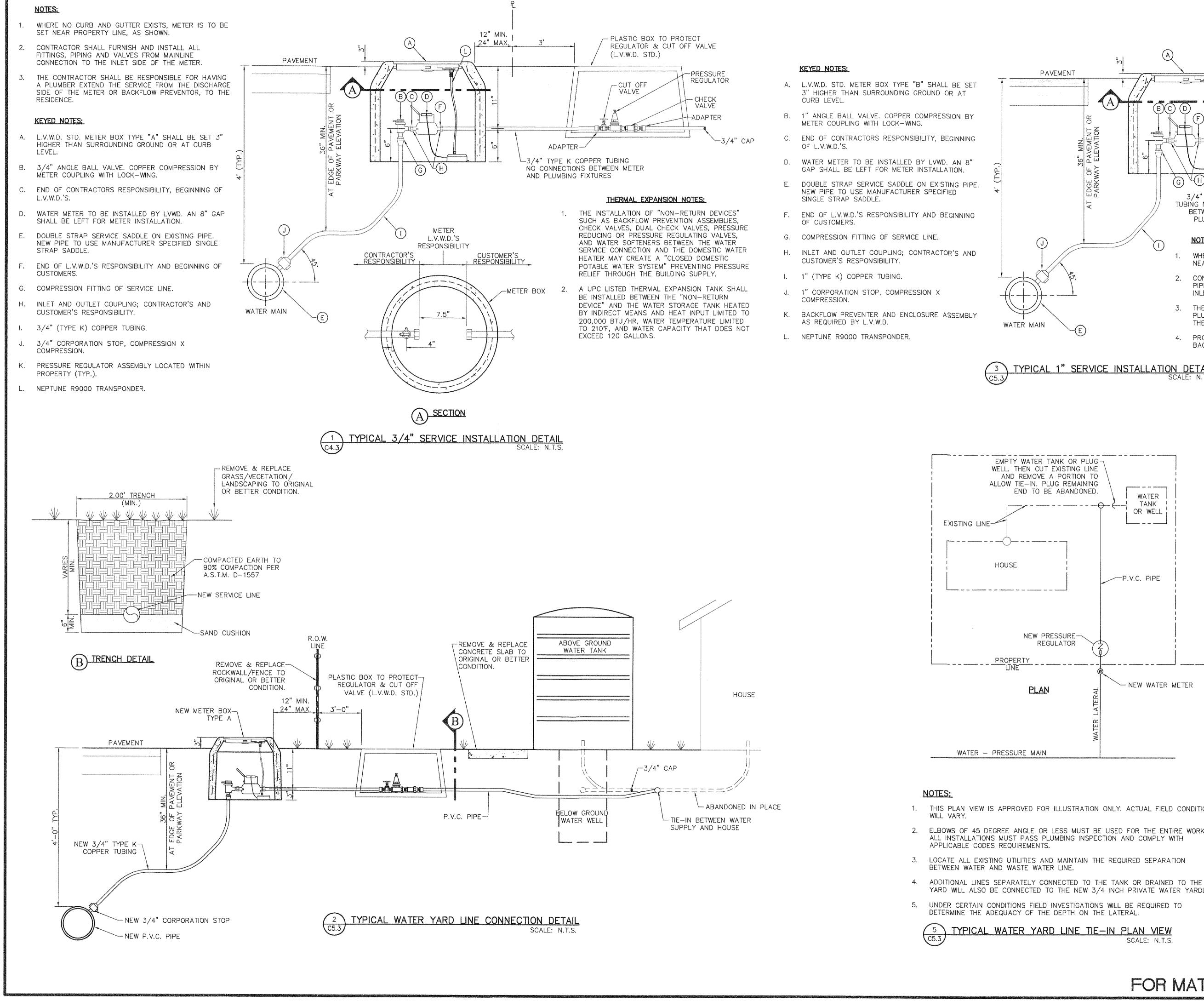
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TO B.G. NO. 710066)

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SHEET TITLE

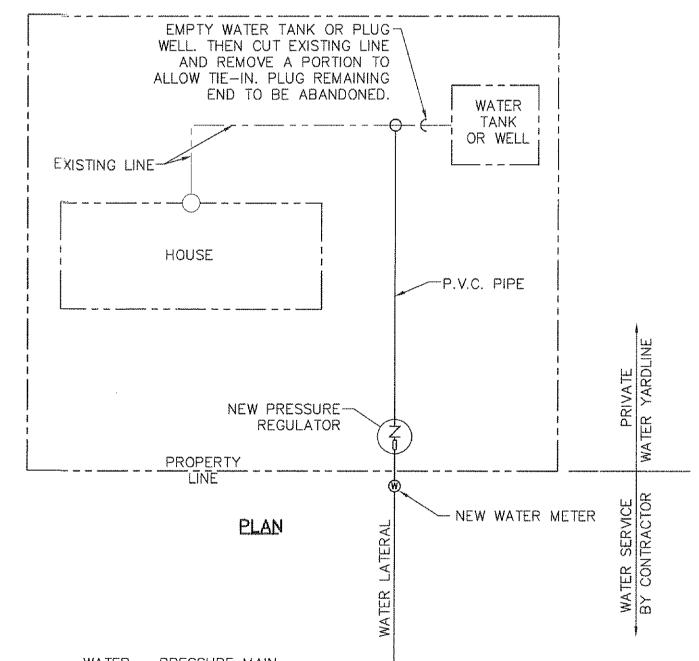
TYPICAL GATE VALVE AND THRUST BLOCKING DETAILS

SHEET NO.



(L) 24" MAX. 3/4" TYPE K COPPER-TUBING NO CONNECTIONS BETWEEN METER AND PLUMBING FIXTURES 1. WHERE NO CURB AND GUTTER EXISTS, METER IS TO BE SET NEAR PROPERTY LINE, AS SHOWN. 2. CONTRACTOR SHALL FURNISH AND INSTALL ALL FITTINGS, PIPING AND VALVES FROM MAINLINE CONNECTION TO THE INLET SIDE OF THE METER. 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING A PLUMBER EXTEND THE SERVICE FROM THE DISCHARGE SIDE OF THE METER OR BACKFLOW PREVENTOR, TO THE RESIDENCE. 4. PROPERTY OWNERS WILL REQUIRE THE USE OF A WILKINS BACKFLOW PREVENTOR ASSEMBLY.

TYPICAL 1" SERVICE INSTALLATION DETAIL



- 1. THIS PLAN VIEW IS APPROVED FOR ILLUSTRATION ONLY. ACTUAL FIELD CONDITIONS
- 2. ELBOWS OF 45 DEGREE ANGLE OR LESS MUST BE USED FOR THE ENTIRE WORK. ALL INSTALLATIONS MUST PASS PLUMBING INSPECTION AND COMPLY WITH
- 3. LOCATE ALL EXISTING UTILITIES AND MAINTAIN THE REQUIRED SEPARATION
- YARD WILL ALSO BE CONNECTED TO THE NEW 3/4 INCH PRIVATE WATER YARDLINE.
- 5. UNDER CERTAIN CONDITIONS FIELD INVESTIGATIONS WILL BE REQUIRED TO

TYPICAL WATER YARD LINE TIE-IN PLAN VIEW SCALE: N.T.S.

FOR MATERIAL ESTIMATING ONLY

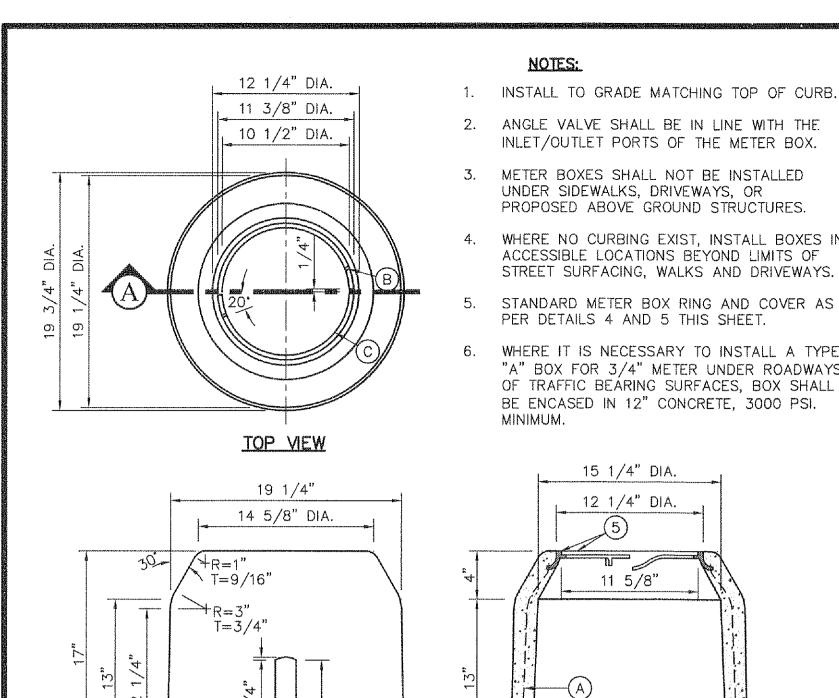
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SHEET TITLE

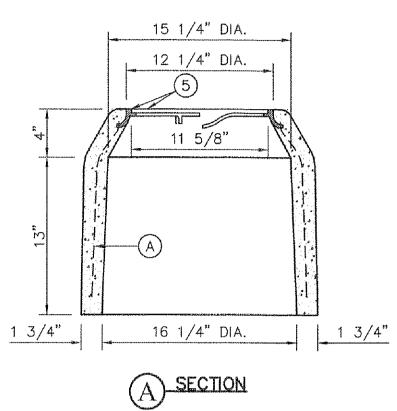
TYPICAL WATER SERVICE DETAILS

SHEET NO.



3. METER BOXES SHALL NOT BE INSTALLED

- 2. ANGLE VALVE SHALL BE IN LINE WITH THE INLET/OUTLET PORTS OF THE METER BOX.
- PROPOSED ABOVE GROUND STRUCTURES. WHERE NO CURBING EXIST, INSTALL BOXES IN ACCESSIBLE LOCATIONS BEYOND LIMITS OF
- STANDARD METER BOX RING AND COVER AS PER DETAILS 4 AND 5 THIS SHEET.
- WHERE IT IS NECESSARY TO INSTALL A TYPE "A" BOX FOR 3/4" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE, 3000 PSI.



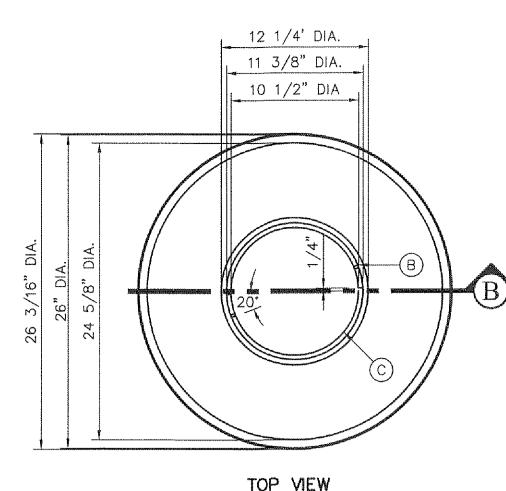
KEYED NOTES:

19 3/4" DIA.

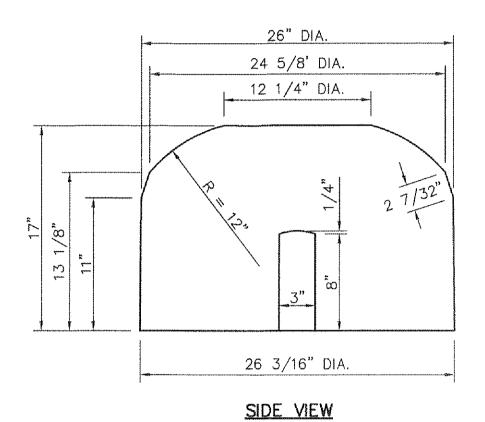
SIDE VIEW

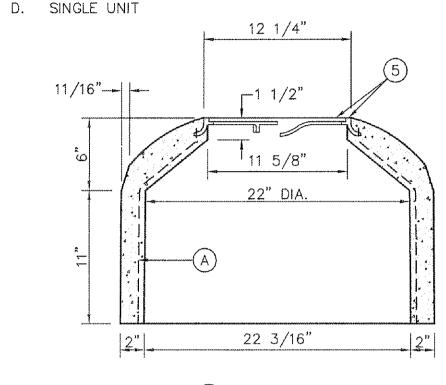
- A. 3/16", 9 GAUGE BLACK ANNEALED WIRE
- B. LUG-STOP
- C. STANDARD CAST IRON RING D. SINGLE UNIT





TOP VIEW





SURFACING, WALKS AND DRIVEWAYS. 5. STANDARD METER BOX RING AND COVER AS PER

1. INSTALL TO GRADE MATCHING TOP OF CURB.

INLET/OUTLET PORTS OF THE METER BOX.

3. METER BOXES SHALL NOT BE INSTALLED UNDER

4. WHERE NO CURBING EXIST, INSTALL BOXES IN

SIDEWALKS, DRIVEWAYS, OR PROPOSED ABOVE GROUND

ACCESSIBLE LOCATIONS BEYOND LIMITS OF STREET

2. ANGLE VALVE SHALL BE IN LINE WITH THE

DETAILS 4 AND 5 THIS SHEET. WHERE IT IS NECESSARY TO INSTALL A TYPE "B" BOX FOR 1" METER UNDER ROADWAYS OF TRAFFIC BEARING SURFACES, BOX SHALL BE ENCASED IN 12" CONCRETE,

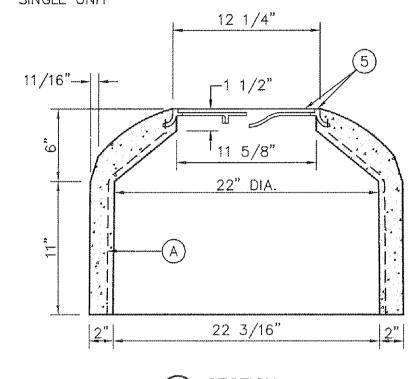
KEYED NOTES:

STRUCTURES.

NOTES:

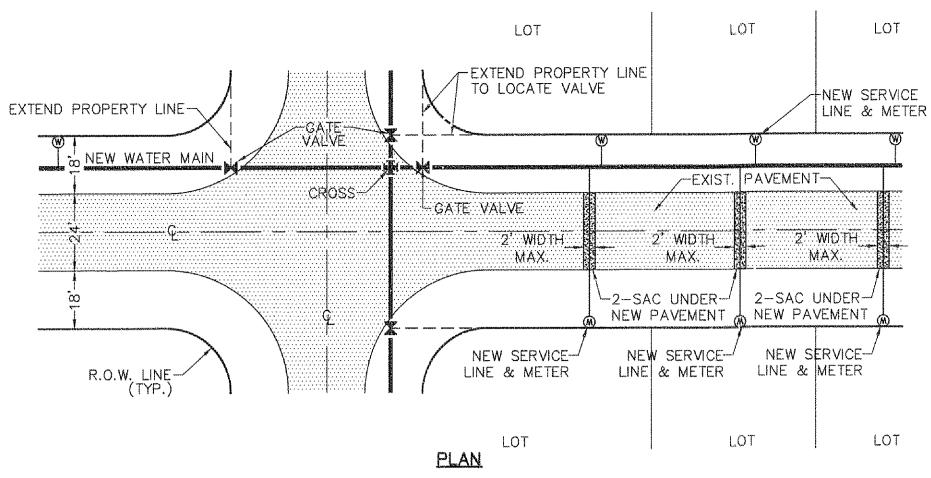
- A. 3/16", 9 GAUGE BLACK ANNEALED WIRE
- B. LUG-STOP
- C. STANDARD CAST IRON RING

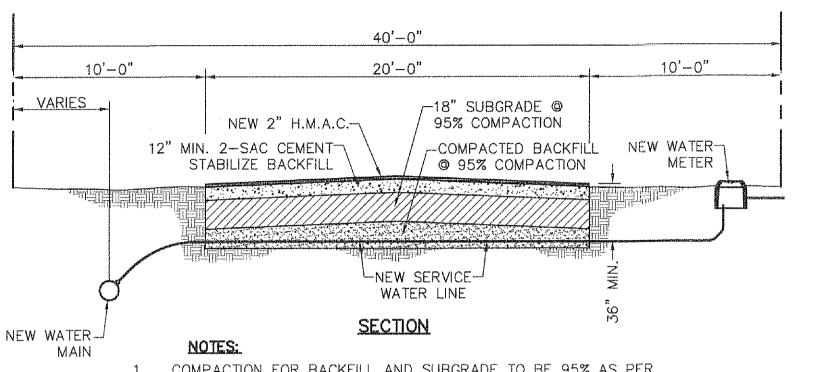
3000 PSI MINIMUM.



(B) SECTION





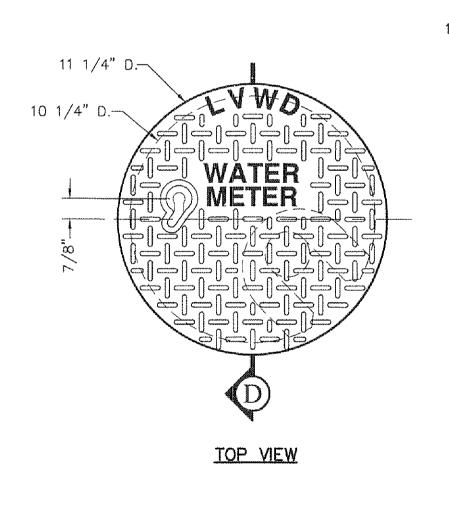


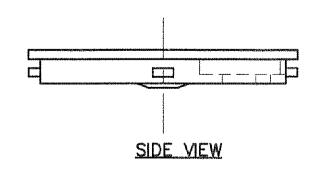
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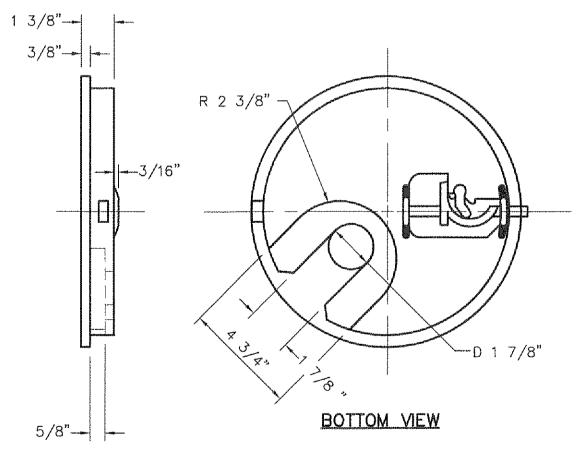
SHEET TITLE

TYPICAL METER BOX,

SHEET NO.





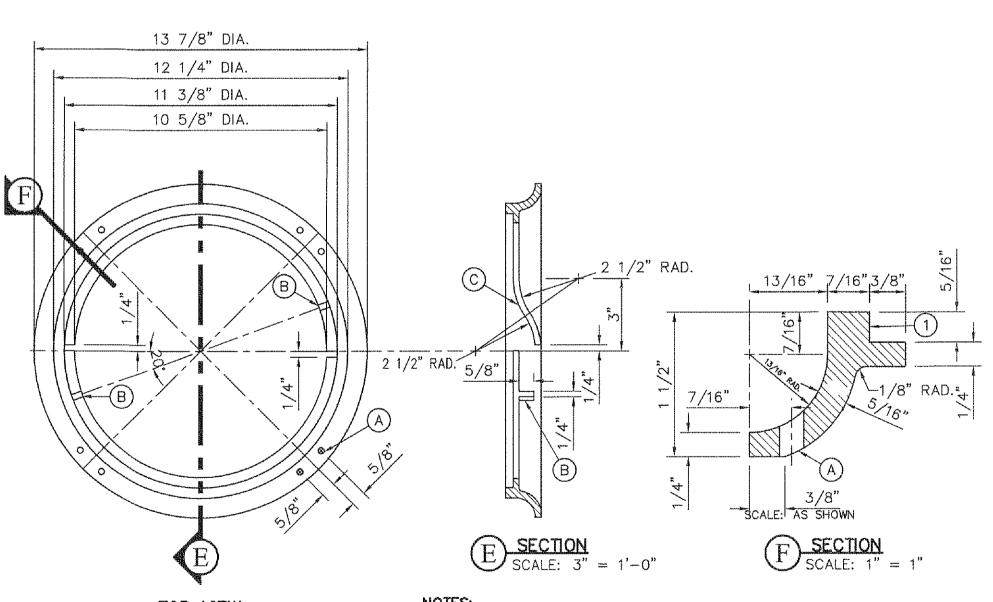


PLASTIC LID: THE LID SHALL BE BLACK.

- 2. THE LID CAN HAVE A LOGO MOLDED ON ITS SURFACE.
- 3. THE SHALL HAVE THE WORDING "WATER METER" MOLDED ON ITS SURFACE.
- 4. THE LID SHALL HAVE A DIAMOND PATTERN FOR SKID RESISTANCE.
- 5. THE LID SHALL BE SOLID AND WEIGH A MINIMUM OF 4LBS.
- 6. THE LID SHALL HAVE A MOLDED ERT POCKET ON ITS BOTTOM SIDE THAT WILL ACCOMIDATE AN "NEPTUNE R9000 TRANSPONDER".
- 7. THE LID SHALL HAVE A PLASTIC LOOKING MECHANISM STAINLESS STEEL COIL SPRING THAT CAN BE OPENED AND CLOSED USING A STANDARD BRASS KEY.
- 8. THE LID DIMENSIONS SHALL BE APROXIMATELY: 11 1/4 DIA X 1 3/8 INCHES

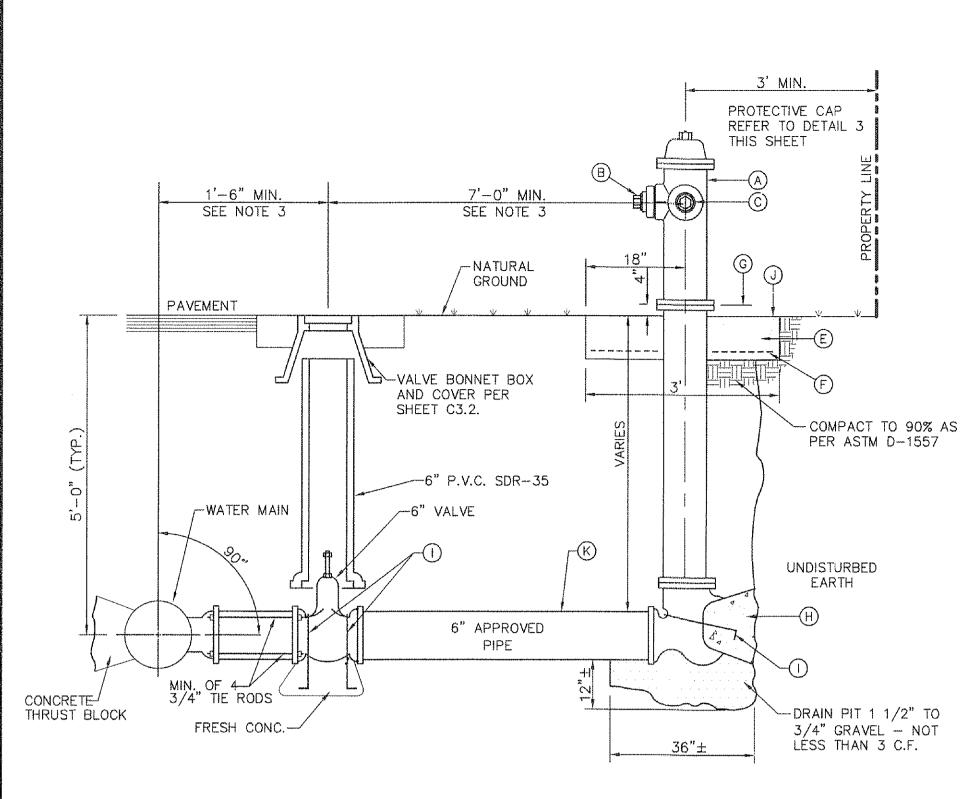
4 METER BOX COVER DETAIL

SCALE: 3" = 1'-0"



12 1/4" DIA.

NEW WATER-COMPACTION FOR BACKFILL AND SUBGRADE TO BE 95% AS PER ASTM D-1557. SUITABLE NATIVE MATERIAL COULD BE USED AS SUBGRADE AS PER SPECIFICATIONS. 2. SERVICES INSTALLED BY BORING METHODS ARE ACCEPTABLE. TYPICAL SERVICE TRENCH DETAILS TOP VIEW SCALE: 3'' = 1'-0''1. MATCHING SURFACES TO BE FINISHED OF ANY IRREGULARITIES THAT WOULD PREVENT A SNUG FIT. 2. CASTING TO BE SMOOTH AND VOID OF AIR HOLES. 3. METER BOX RING WEIGHT = 7 LBS. 4. METER BOX RING MADE OF CAST IRON. COVER AND FRAME DETAILS KEYED NOTES: 13 7/8" DIA. A. 1/4" DIAMETER HOLES FOR ANCHORING RING TO CONCRETE METER BOX. B. LUG STOP C. LOCKING LUG SLIDE METER BOX RING DETAIL SCALE: AS SHOWN

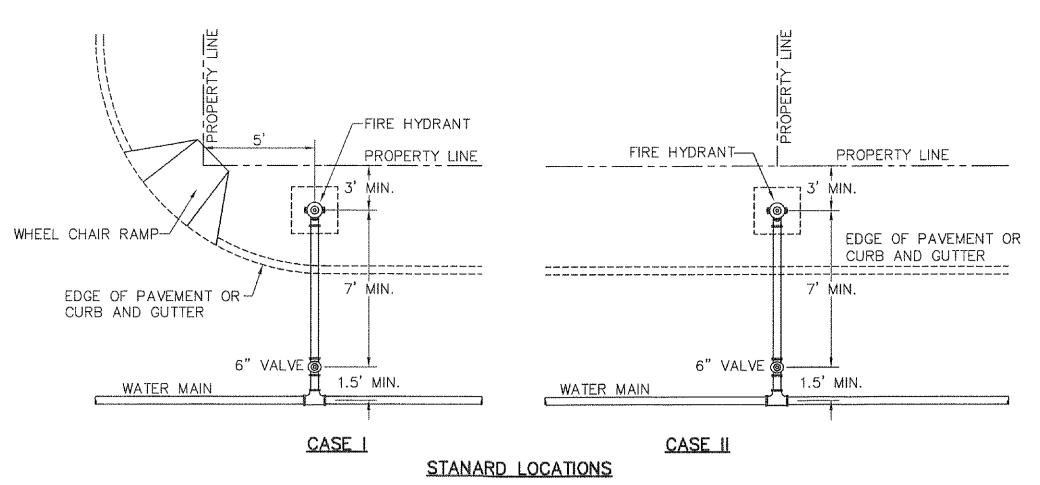


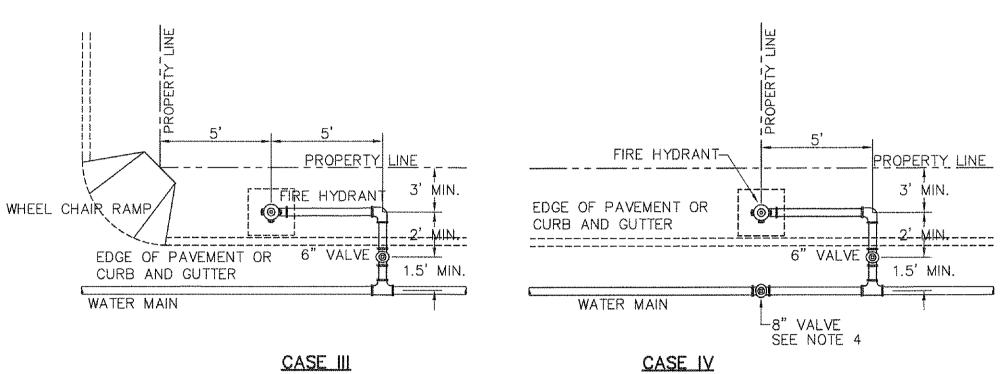
NOTES:

- 1. NO OBSTRUCTIONS WILL BE PERMITTED WITHIN 3 FT. IN ALL DIRECTIONS OF FIRE HYDRANT. FIRE HYDRANT SHALL NOT BE PLACED IN WHEEL CHAIR RAMP OR DRIVEWAY.
- 2. FIRE HYDRANT SHALL BE LOCATED AT THE BEGINNING OF CURB RETURN OR AT THE PROPERTY LINE COMMON TO ADJOINING LOTS, UNLESS OTHERWISE SHOWN ON PLANS. REFER TO DETAIL 2 THIS SHEET FOR SPECIAL CASES.
- 3. WHERE DISTANCE IS LESS THAN 7', HYDRANT SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL 2 THIS SHEET.
- 4. VALVE MAY BE CONNECTED TO TEE AT MAIN LINE. USE FLANGED MECHANICAL JOINT ENDS. WHERE SPOOL IS REQUIRED BETWEEN TEE AND VALVE, USE FLANGED MECHANICAL ENDS WITH 3/4" DIAMETER TIE RODS.
- 5. COMPLY WITH REQUIREMENTS OF AWWA C-502, DRY BARREL FIRE HYDRANTS AND AWWA C-550, PROTECTIVE EPOXY INTERIOR COATINGS FOR VALVES AND HYDRANTS.
- 6. ALL JOINTS TO BE RESTRAINED WITH "MEGA-LUG" OR BETTER.
- BOLLARDS WILL BE REQUIRED TO PROTECT FIRE HYDRANT IN AREAS OF HIGH TRAFFIC. COORDINATE WITH L.V.W.D.

KEYED NOTES:

- A. FIRE HYDRANT TO BE MUELLER, KENNEDY MODEL OR APPROVED EQUAL.
- B. PUMPER NOZZLE 4 1/2" TO BE FACING THE TRAVELED WAY, UNLESS OTHERWISE NOTED IN THE PLANS.
- C. HOSE NOZZLE 2 1/2".
- D. 1/2" PREMOLDED EXPANSION JOINT WITH 1" TOP FILLER.
- E. 3'x3'x6" CONC. SQ. PAD, TO BE CONSTRUCTED AROUND FIRE HYDRANT'S CENTER LINE WHEN NOT LOCATED WITHIN SIDEWALK OR CONC. AREA.
- F. #10; 6/6 WWF.
- CONTROLLED ELEVATION LINE, LEVEL IN ALL DIRECTIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR SETTING TOP FLANGE OF THE HYRANT TO CONTROLLED ELEVATION.
- H. CONC. THRUST BLOCK, APPROX. 2'x2'x3' TO BE POURED AGAINST UNDISTURBED EARTH. F.H. WEEP HOLE MUST BE UNOBSTRUCTED.
- I. No. 5 REBAR ANCHOR PINS.
- TOP OF SLAB SHALL BE AT CURB LEVEL 4" BELOW THE BREAK LINE OF THE HYDRANT. UNDER SPECIAL CONDITIONS THE ENGINEER MAY ALLOW VARIATIONS TO THIS CONSTRUCTION.
- K. CONTRACTOR IS TO PROVIDE ADDITIONAL SPOOLS IF NEEDED TO MAINTAIN THE 4" MIN. CLEARANCE FROM THE CONTROLLED ELEV. LINE TO TOP OF SLAB.
- GREASE ALL NUTS AND BOLTS PRIOR TO WRAPPING WITH POLYETHYLENE.





SPECIAL LOCATIONS

 #3 REINFORCING STEEL -CONCRETE COLLAR

#3 REINFORCING STEEL

EQUALLY SPACED

-CONCRETE COLLAR

"A" MINIMUM

CONCRETE

HORIZONTAL

DIMENSION FROM

PENETRATION

6"

PLAN VIEW - SINGLE REBAR

PLAN VIEW - THREE REBARS

"D" DIAMETER OF

PENETRATION

0" TO 6.01"

6.01" TO 18.01"

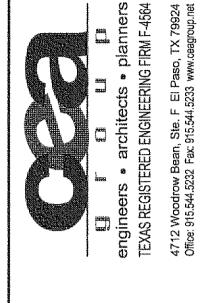
18.01" AND OVER

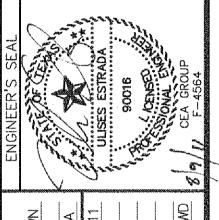
1 1/2"

1 1/2"

FIRE HYDRANT LOCATIONS

- 1. FOR CASE I FIRE HYDRANT SHALL BE LOCATED AT A DISTANCE OF 5 FT. MINIMUM FROM THE PROPERTY LINE OR AT THE BEGINNING OF CURB RETURN.
- 2. FOR CASE II FIRE HYDRANT SHALL BE LOCATED AT THE PROPERTY LINE COMMON TO ADJOINING LOTS.
- FOR CASE III AND IV WHERE THE DISTANCE BETWEEN THE VALVE AND THE HYDRANT IS LESS THAN 7 FT. PLACE HYDRANT AS SHOWN.
- 4. FOR CASE IV PLACE WATER MAIN VALVE PERPENDICULAR TO PROPERTY LINE.
- 5. FOR INSTALLATION OF FIRE HYDRANT SEE DETAIL 1 THIS SHEET.
- A MINIMUM CLEARANCE OF 3 FT. WILL BE PROVIDED BETWEEN A FIRE HYDRANT AND A PERMANENT OBSTRUCTION (UTILITY POLE, LIGHT STANDARD, TRAFFIC SIGNAL, WHEEL CHAIR RAMP, FENCE PROTECTIVE POSTS,
- 7. LOCATION OF FIRE HYDRANT WITHIN SIDEWALK AND/OR PARKWAY SHALL CONSIDER ALL A.D.A. REQUIREMENTS.





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SHEET TITLE

TYPICAL

FIRE HYDRANT

DETAILS

RDE

SUBDIVISIONS SUBDIVISIONS FACILITIES D.B.G. NO. 710066)

COMPRESSIVE STRENGTH 4000 PSI, HIGH EARLY CONCRETE IS REQUIRED.) 2. TOPS OF PENETRATION COLLAR SHALL BE FLUSH WITH ROADWAY SURFACE OR FINISHED GRADE UNLESS

1. THE PENETRATION COLLAR SHOULD BE CAST

IN-PLACE CONCRETE. (MINIMUM 28 DAY

- OTHERWISE SPECIFIED BY THE ENGINEER. 3. ANY DISTURBED SUBGRADE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 95% DENSITY ± 3% OPTIMUM MOISTURE CONTENT IN ACCORDANCE
- WITH ASTM D-1557. 4. ANY DISTURBED COARSE UNDER THE CONCRETE COLLAR SHALL BE COMPACTED TO 100% DENSITY ± 2% OPTIMUM MOISTURE CONTENT IN ACCORDANCE
- 5. PROVIDE A MINIMUM OF 1 1/2" OF CONCRETE COVER FOR ALL REINFORCEMENT STEEL.
- 6. REINFORCING SHALL MEET ASTM C-478 AND TRAFFIC LOADING (HS-20).
- 7. NO. 3 REINFORCING STEEL HOOPS SHALL BE SPACED EQUALLY.

KEY NOTES:

- A. #3 REINFORCING STEEL.
- B. CONCRETE COLLAR.

WITH ASTM D-1557.

- C. #3 REINFORCING STEEL EQUALLY SPACED.
- D. COMPACTED BASE COARSE.

-#3 REINFORCING STEEL

CONCRETE COLLAR

-CONCRETE COLLAR

L-COMPACTED BASE COURSE

EDGE OF CONCRETE | PENETRATION EDGE

OF NEAREST REBAR NEAREST REBAR

COMPACTED SUBGRADE

SECTION VIEW

"B" MINIMUM

CLEARANCE FROM

APRON TO CENTER

1½"

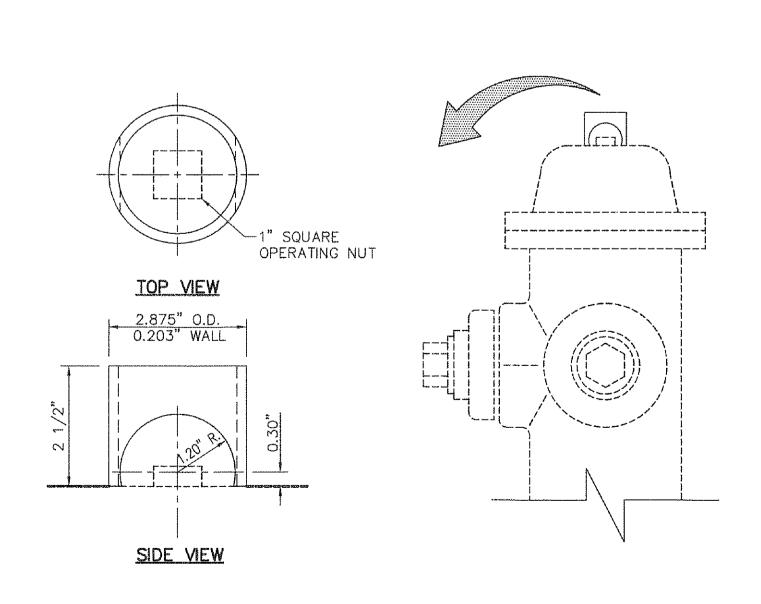
-#3 REINFORCING STEEL

EQUALLY SPACED

CLEARANCE FROM

TO CENTER OF

11/2"



STANDARD FIRE HYDRANT INSTALLATION

NOTES:

- 1. STEEL CAPS TO BE MACHINED FROM STEEL PIPE: NOMINAL SIZE = $2 \frac{1}{2}$ " DIA. OUTSIDE DIA. = 2.875" WALL THICKNESS = 0.203LBS/FT. = 5.79
- 2. CAPS ARE TO BE TACK WELDED OR BRAZED ON FIRE HYDRANT BONNET OR WEATHER CAP.
- 3. THE CAPS OVER THE OPERATING NUT WILL PREVENT ACCESS TO THE UNAUTHORIZED USE OF HYDRANT WATER.

| 4 | SQUARE | CONCRE |
|--------|--------|--------|
| (05.5) | | |

CONCRETE COLLARS FOR CIRCULAR PENETRATIONS IN ASPHALT

REINFORCING STEEL

ETE COLLAR DETAIL SCALE: N.T.

11/2" 11/2"

M

PLAN VIEW - TWO REBARS

PAVEMENT-

E. PAVEMENT. F. COMPACTED SUBGRADE.

SHEET NO.