

NATURAL GAS DISTRIBUTION SYSTEM

1. THIS SECTION COVERS THE SUPPLYING OF ALL LABOR, EQUIPMENT, MATERIALS, AND APPLIANCES AND PERFORMING ALL OTHER PROCEDURES NECESSARY FOR THE CONSTRUCTION OF A NATURAL GAS DISTRIBUTION SYSTEM IN ACCORDANCE WITH THE PLANS AND THESE SPECIFICATIONS. THE DISTRIBUTION SYSTEM INCLUDES THE DISTRIBUTION MAINS, VALVES, PIPELINE MARKERS, SERVICE VALVES AND SERVICE REGULATORS AND METERS.

2. REFERENCES: THE APPLICABLE PROVISIONS OF THE FOLLOWING STANDARDS SHALL APPLY AS IF WRITTEN HERE IN THEIR ENTIRETY:

- ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE
- ASTM – AMERICAN SOCIETY OF TESTING AND MATERIALS
- DOT – UNITED STATES DEPARTMENT OF TRANSPORTATION
- RRC – RAILROAD COMMISSION OF TEXAS

3. SUBMITTALS: THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF EACH SUBMITTAL, WHICH WILL BE RETAINED BY THE ENGINEER AND GAS FOREMAN, PLUS THE NUMBER OF COPIES THAT ARE TO BE RETURNED TO CONTRACTOR BY ENGINEER AFTER REVIEW IS COMPLETED.

4. PIPE: CERTIFICATION THAT THE PIPE PASSES THE SUSTAINED 1,000 HOUR TEST AS OUTLINED IN ASTM D-2513 IS REQUIRED FROM THE PIPE PRODUCER. THE PRODUCTION TESTS REPORT THAT MUST BE FURNISHED TO THE ENGINEER SHALL INCLUDE:

- 1) DATE OF TEST
- 2) MAXIMUM AND MINIMUM O.D. AND MINIMUM WALL THICKNESS
- 3) LOT NUMBER
- 4) QUICK BURST VALUE
- 5) SUSTAINED PRESSURE TEST CERTIFICATION

5. PIPE JOINERS: PROVIDE CERTIFICATION OF QUALIFICATION ISSUED BY AN ACCEPTABLE ORGANIZATION FOR EACH PERSON JOINING PLASTIC PIPE.

6. QUALITY ASSURANCE: ONLY PERSONS QUALIFIED UNDER 49 CFR 192.285 SHALL BE ALLOWED TO JOIN PLASTIC PIPE. PERSONS INSTALLING OR REPAIRING THE NATURAL GAS DISTRIBUTION SYSTEM SHALL UNDERGO DRUG TESTING IN ACCORDANCE WITH DOT AND RRC REQUIREMENTS.

7. DELIVERY, STORAGE, AND HANDLING: IN SHIPPING, DELIVERING, AND INSTALLING, POLYETHYLENE PIPE AND ACCESSORIES SHALL BE HANDLED IN SUCH A MANNER AS TO INSURE A SOUND UNDAMAGED CONDITION. CARE SHALL BE EXERCISED IN ORDER TO AVOID ROUGH HANDLING. THE PIPE AND ACCESSORIES SHALL NOT BE DROPPED OR HAVE ANY OBJECTS DROPPED UPON IT, NOR SHALL IT BE PUSHED OR PULLED OVER SHARP PROJECTIONS. CAUTION SHALL BE TAKEN TO PREVENT KINKING AND BUCKLING. ANY DAMAGE, INCLUDING KINDS AND BUCKLES WHICH OCCUR SHALL BE REMOVED BY CUTTING OUT AS A CYLINDER AND REPLACING AT THE COST OF THE CONTRACTOR.

8. ALL REGULATORS AND METERS MUST BE SHIPPED WITH DUST CAPS OR SEALS TO PREVENT THE ENTRY OF DUST OR MOISTURE UNDER NORMAL SHIPPING AND HANDLING CONDITIONS.

9. MANUFACTURERS: ALL POLYETHYLENE PIPE USED IN THE PROJECT MUST COMPLY WITH ASTM D-2513 AND BE MANUFACTURED IN THE UNITED STATES.

10. ALL VALVES ON THE POLYETHYLENE PIPE SHALL BE A FULL PORT POLYETHYLENE VALVE COMPATIBLE WITH THE PIPING MATERIAL, AND BE MANUFACTURED IN THE UNITED STATES. APPROVED VALVE AND VALVE MANUFACTURERS ARE AS FOLLOWS:

- 1) KEROTEST POLY-GAS VALVES
- 2) ROCKWELL POLYVALVE BALL VALVES
- 3) LYALL POLY BALL VALVE
- 4) HANDLEY VALVE BOX
- 5) CONTINENTAL INDUSTRIES ROADWAY VALVE BOX

11. POLYETHYLENE PIPE FOR THE NATURAL GAS DISTRIBUTION LINES SHALL MEET THE FOLLOWING REQUIREMENTS:

- A. ALL PIPE SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENTLY APPROVED ASTM D-2513 SPECIFICATION "THERMOPLASTIC GAS PRESSURE PIPE, TUBING AND FITTINGS." ALL FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-2683 SPECIFICATION "SOCKET-TYPE POLYETHYLENE FITTINGS FOR OUTSIDE DIAMETER-CONTROLLED POLYETHYLENE PIPE" OR ASTM D-3261 "BUTT HEAT FUSION POLYETHYLENE (PE) PLASTIC FITTINGS FOR POLYETHYLENE (PE) PLASTIC PIPE AND TUBING." ALL PIPE SHALL BE MANUFACTURED OF VIRGIN MATERIAL, WITH THE EXCEPTION OF THE CLEAN REWORK MATERIAL THAT IS GENERATED FROM THE MANUFACTURER'S OWN PRODUCTION, AS LONG AS THE PIPE AND/OR FITTINGS MEET THE REQUIRED SPECIFICATIONS. ALL PIPE FORMULATION MUST HAVE SUITABLE OUTDOOR WEATHER RESISTANCE. THE COLOR OF ALL POLYETHYLENE PIPE SHALL BE YELLOW.
- B. ALL PIPE SHALL BE DESIGNED FOR DIRECT BURIAL AS SPECIFIED IN D.O.T. TITLE 49, PART 192, "TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS," THROUGH CURRENT AMENDMENT, FOR NATURAL GAS MAINS AND SERVICES OPERATED AT 60 P.S.I.G OR LESS. THE PIPE MUST ALSO BE SUITABLE FOR REPLACING OLD STEEL MAINS AND SERVICES. THE PIPE MUST BE HOMOGENEOUS AND BE FREE OF HOLES, CRACKS, FOREIGN MATERIAL, BUSTERS OR DELETERIOUS FAULTS. THE MINIMUM DESIGN STRESS MUST COMPLY WITH THE REQUIREMENTS OF ASTM D-2513.
- C. THE PIPE SHALL BE DESIGNED AND PRESSURE RATED TO CONFORM TO THE REQUIREMENTS IN ASTM D-2406. THE MINIMUM WALL THICKNESS FOR DISTRIBUTION PRESSURES SHALL BE AS FOLLOWS:

SIZE	O.D.	S.D.R.	MIN WALL THICKNESS
1/2"	0.840	9.3	0.090
3/4"	1.050	11.0	0.095
1"	1.315	11.0	0.090
1 1/4"	1.660	11.0	0.090
1 1/2"	1.900	11.0	0.090
2"	2.375	11.0	0.090
3"	3.500	11.5	0.090
4"	4.500	11.5	0.090
6"	6.825	11.5	0.090

D. ANY DEFECT SUCH AS A GROOVE, NOTCH, OR GAUGE, GREATER THAN 10 PERCENT (10%) OF THE WALL THICKNESS OF THE PIPE, SHALL NOT BE USED.

12. GAS DISTRIBUTION SYSTEM VALVES SHALL BE IN COMPLIANCE WITH THE FOLLOWING SPECIFICATIONS:

- A. SERVICE-LINE VALVES (METER STOPS) INSTALLED ABOVE GROUND SHALL BE A "TAMPER-PROOF" IRON BODY, BRASS (OR BRONZE) CORE, LOCK WING STOP WHICH COMPLIES WITH THE REQUIREMENTS OF CODE OF REGULATIONS D.O.T. TITLE 49, 192.363. THE MINIMUM WORKING PRESSURE SHALL BE 125 P.S.I.G.
- B. THE POLYETHYLENE VALVE STUB ENDS MUST BE FABRICATED FROM MATERIAL THAT IS

COMPATIBLE WITH THE PIPE USED, INCLUDING THE STANDARD DIMENSION RATIOS (SDR)

13. SERVICE TAPS SHALL BE MADE BY A SELF-TAPPING TEE THAT ALSO ACTS AS A POSITIVE SHUT OFF AT THE MAIN. THE BASE OF THE TAPPING TEE SHALL BE DESIGNED FOR HEAT FUSION TO POLYETHYLENE PIPE AND A SOCKET AND BRANCH CONNECTION FOR HEAT FUSION TO THE SERVICE LINE PIPE. THE HEAT FUSION BASE AND SOCKET MUST BE MANUFACTURED FROM THE SAME MATERIAL AS THE PIPE. SERVICE TAPS SHALL INCORPORATE EXCESS FLOW VALVE ASSEMBLIES.

14. SERVICE RISER TO BE 1" IPS EPOXY COATED SCHEDULE 40 STEEL WITH 1" IPS POLYETHYLENE TRANSITION. RISER TO BE 24" VERTICAL BY 36" HORIZONTAL.

15. VALVE BOXES SHALL PROVIDE ACCESS FOR OPERATION AND MAINTENANCE FOR ALL VALVES. THE BOXES SHALL BE PROVIDED WITH A DROP IN LID AND THE WORDS "GAS" CLEARLY VISIBLE. BOX SHALL BE SELF ADJUSTING, HAVE A 6" SHAFT WITH AN ARCH BASE AND BE SUITABLE FOR USE IN AREAS WITH VEHICULAR TRAFFIC.

16. REGULATORS SHALL COMPLY WITH THE CURRENT AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) SERVICE-TYPE REGULATOR SPECIFICATION X-50865 AND THE REQUIREMENTS OF PARAGRAPH 192.197(A) AND (B), D.O.T. TITLE 49, CODE OF FEDERAL REGULATIONS. REGULATORS SHALL BE SHIPPED WITH DUST CAPS OR SEALS TO PREVENT DUST OR MOISTURE FORM ENTERING IN UNDER SHIPPING AND HANDLING CONDITIONS.

A. PHYSICAL CHARACTERISTICS		
BODY SIZE	1-INCH	
ORIFICE SIZE	1/8-INCH	
MAXIMUM INLET PRESSURE	125 P.S.I.G	
SET POINT	7-INCHES WATER COLUMN (W.C.)	
CAPACITY	360 CU.FT./HR. (MIN) @ 10 P.S.I.G. INLET	
INTERNAL RELIEF VALVE	1-INCH VENT	
FINISH	GRAY ENAMEL (ASA #49) OR EQUAL	
ASSEMBLY POSITION	RELIANCE, C-2	
ASSEMBLY POSITION	ROCKWELL #105	
ASSEMBLY POSITION	SPRAGUE, #3	

17. ALL METERS SHALL COMPLY WITH THE AMERICAN GAS ASSOCIATION (A.G.A.) SPECIFICATION OP-58-2. METERS MUST BE SHIPPED OR SEALED TO KEEP MOISTURE OR DUST FROM ENTERING UNDER SHIPPING AND HANDLING CONDITIONS. THE METERS SHALL HAVE THE FOLLOWING PHYSICAL CHARACTERISTICS:

- A. BODY & COVER: ALUMINUM
- B. INDEX: STANDARD 1/2", 2", & FOUR CIRCLES
- C. INDEX COVER: CLEAR, HIGH IMPACT STRENGTH MOLDED LEXAN, OR OTHER APPROVED PLASTIC
- D. DIAPHRAGMS: SYNTHETIC
- E. IDENTIFICATION PLATE: NON-CORROSIVE METALLIC MATERIAL (YEAR OF THE MANUFACTURER MUST BE SHOWN)
- F. PROOF: METER PROOFS AT CAPACITY AND CHECK RATES OF FLOW SHALL BE ZERO PERCENT (0%) ERROR WITH A TOLERANCE OF PLUS OR MINUS ON HALF PERCENT (±1/2%), BUT IN NO CASE SHALL THE PROOF AT THE CAPACITY RATE BE SLOWER THAN THE CHECK RATE. FACTORY METER PROOF DATA SHEETS SHALL BE SUPPLIED FOR ALL METERS.
- G. SWIVELS: 1-INCH BLACK STEEL MALE CONNECTIONS
- H. SWIVEL WASHERS: 1/8" THICK NEOPRENE OR OTHER MATERIAL SUITABLE FOR USE WITH NATURAL GAS
- I. SWIVEL NUTS (CAPS) BLACK STEEL FINISH: GRAY ENAMEL (ASA #49) OR EQUAL

18. LARGE CAPACITY METERS SHALL COMPLY WITH CURRENT A.G.A./ANSI SPECIFICATIONS. THE LARGE CAPACITY METERS SHALL HAVE THE FOLLOWING PHYSICAL CHARACTERISTICS:

- A. BODY & COVER(S): ALUMINUM
- B. INDEX: VERTICAL CIRCULAR READING
- C. INDEX COVER: CLEAR, HIGH IMPACT STRENGTH MOLDED LEXAN, OR OTHER APPROVED PLASTIC
- D. DIAPHRAGMS: SYNTHETIC
- E. IDENTIFICATION PLATE: NON-CORROSIVE METALLIC MATERIAL (YEAR OF THE MANUFACTURER MUST BE SHOWN)
- F. CAPACITY: SEE PLANS
- G. CONNECTIONS: SEE PLANS
- H. GRAY ENAMEL (ASA #49) OR EQUAL

19. PIPELINE MARKERS: SIGNS AND POSTS MUST BE USED TO MARK THE GAS PIPELINE AT EACH CROSSING OF A PUBLIC ROAD OR HIGHWAY, AT TRACER WIRE TEST BOXES OR WHEREVER IT IS NECESSARY TO IDENTIFY THE LOCATION OF THE PIPELINE TO REDUCE THE POSSIBILITY OF DAMAGE OR INTERFERENCE. ALL MARKERS MUST MEET THE D.O.T. REQUIREMENTS.

- A. SIGNS: 66" LONG COMPOSITE PIPELINE MARKERS, TRI-VIEW YELLOW POLYMER POST W\FLEX-PLUS ROD AND TRI-GRIP ANCHOR, OR PRE-APPROVED EQUAL SHALL BE USED. EACH SIGN MUST HAVE THE FOLLOWING PRINTED LEGIBLY ON A BACKGROUND OF SHARPLY CONTRASTING COLOR
 - A.A. THE WORD "WARNING" FOLLOWED BY THE WORDS "GAS PIPELINE" WITH A LETTER HEIGHT OF AT LEAST ONE (1) INCH AND A ONE-QUARTER (1/4) INCH WIDE STROKE.
 - A.B. THE NAME "OWNER" FOLLOWED BY "CITY OF TOMBALL: TELEPHONE NUMBER 281-290-1400". THE CONTRACTOR SHALL VERIFY THE TELEPHONE NUMBER BEFORE MANUFACTURING SIGNS.

20. ERECTION/INSTALLATION/APPLICATION AND/OR CONSTRUCTION OF POLYETHYLENE HEAT FUSION JOINTS: HEAT FUSION, IN ACCORDANCE WITH D.O.T. TITLE 49, CODE OF FEDERAL REGULATIONS AND WITH THE PROPER TOOLS DESIGNED FOR THIS PURPOSE, OR BUTT FUSION WITH SOCKET FITTINGS SHALL BE USED TO JOIN THE PIPE. THREADED FITTINGS AND JOINTS SHALL NOT BE PERMITTED. THE SAME MATERIALS AS THE PIPE SHALL BE USED TO MANUFACTURE THE MAIN BODY AND FUSION SURFACES OF THE PIPE FITTINGS. HEAT FUSION TOOLS SHALL BE MAINTAINED IN A GOOD WORKING, CLEAN CONDITION. ALL HEATING IRONS USED WILL BE CHECKED FOR THE CORRECT TEMPERATURE EACH DAY BEFORE PRODUCTION CONTINUES. AFTER EACH JOINTING PROCEDURE IS COMPLETED, THE HEATER FACES MUST BE CLEANED IN ORDER TO REMOVE ANY ACCUMULATED MATERIAL. ALL PIPE ENDS MUST BE CHAMBERED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS BEFORE JOINING THE PIPE TO SOCKET TYPE FITTINGS. PIPE ENDS SHALL BE PLANED PERFECTLY FLAT FOR BUTT FUSION JOINTS. ALIGN COMPONENT PARTS SO THAT NO STRAIN IS PLACED ON THE JOINT WHEN THEY ARE FINALLY POSITIONED. COUPLINGS AND FITTINGS SHALL BE SET TRUE.

21. WHEN PLACING POLYETHYLENE PIPE, SUFFICIENT SLACK SHALL BE PROVIDED TO ALLOW FOR POSSIBLE CONTRACTION. THE PIPE SHALL NOT HAVE A BEND THAT IS LESS THAN 25 TIMES THE OUTSIDE DIAMETER OF THE PIPE. IF A BEND IS REQUIRED THAT IS LESS THAN 25 TIMES THE OUTSIDE DIAMETER OF THE PIPE, THEN AN APPROVED POLYETHYLENE ELBOW FITTING IS REQUIRED. A FUSION JOINT SHALL NOT BE PLACED AT A BEND. DURING EXTREMELY HIGH TEMPERATURE CONDITIONS IT MAY BE NECESSARY TO COOL THE PIPE BEFORE THE LAST

CONNECTION.

22. NO POLYETHYLENE GAS LINE SHALL BE INSTALLED ABOVE GROUND. DURING MAINTENANCE, REPAIR AND TIE-IN WORK, TEMPORARY POLYETHYLENE GAS LINES MAY BE USED ABOVE GROUND.

TITLE 49, CODE OF FEDERAL REGULATIONS. WORKMEN SKILLED IN THIS INSTALLATION MUST PERFORM THE WORK. ALL JOINTS ON THE SERVICE LINE MUST CONFORM TO THE REQUIREMENTS OF PARAGRAPHS 192.281, 192.283 & 192.285, D.O.T., TITLE 49, CODE OF FEDERAL REGULATIONS.

- A. ALL HOT TAPS SHALL BE MADE BY QUALIFIED FUSERS USING SELF-TAPPING TEES. A SIDEWALL FUSION JIG MUST BE USED FOR TAPPING TEES. WHEN THE OUTLET FUSION JOINT IS FINISHED, IT MUST BE COVERED BY A PROTECTIVE SLEEVE.
- B. AN APPROVED SELF TAPPING WELDED TEE SHALL BE USED FOR MAKING SERVICE TAPS ON STEEL MAINS. ALL WELDING SHALL BE DONE BY WELDER CERTIFIED UNDER API-1104 STANDARDS.
- C. THE SERVICE RISER MUST BE PROTECTED FROM VEHICULAR TRAFFIC. SUPPORT FOR THE RISER MUST PREVENT THE TRANSFERAL OF FORCES TO THE SERVICE PIPE AS A RESULT OF ACCIDENTAL MOVEMENT OF THE RISER OR NATURAL SETTLING.

23. INSTALL CONDUCTIVE #12 TRACER WIRE (SOLID WIRE) WITH ALL POLYETHYLENE GAS LINES. TRACE WIRE SHALL BE BETWEEN 3" AND 6" FROM THE LINE PLACED.

24. PRIOR TO JOINING, ALL INDIVIDUAL GAS MAIN LENGTHS SHALL BE SWABBED. ALL GAS MAINS SHALL BE PIGGED PRIOR TO INITIATION OF GAS SERVICE, BUT AFTER JOINING HAS BEEN COMPLETE. THE PIGS USED SHALL BE SUITABLE FOR DIFFERENT SIZE PIPES AND BE DESIGNED FOR POLYETHYLENE PIPE USE. ANY PIG WHICH COULD DAMAGE THE PIPE, SUCH AS WIRE BRUSH TYPE PIGS, SHALL NOT BE ACCEPTABLE FOR USE. ONLY USE OF COMPRESSED AIR TO DRIVE THE PIG THROUGH THE PIPE SHALL BE PERMITTED.

25. INSTALL VALVES AND VALVE BOXES PLUMB. ALL BOXES SHALL BE INSTALLED FLUSH WITH THE FINISHED GRADE. SUPPORT BOX WITH BRICK OR OTHER APPROVED MATERIAL. ADEQUATE BACKFILL SHALL BE PLACED AROUND THE VALVE BOXES AND VALVE EXTENSION BOXES TO PREVENT ANY DAMAGE OR SETTLEMENT TO THE PIPELINE THAT MAY BE TRANSFERRED TO THE PIPE THROUGH THE VALVE BOX. PROTECTIVE SLEEVES SHALL BE INSTALLED OVER FUSION JOINTS AND EXTEND THROUGH THE VALVE BOXES ON THE POLYETHYLENE VALVE INSTALLATIONS.

26. AFTER THE PIPELINE INSTALLATION HAS BEEN COMPLETED, THE CONTRACTOR SHALL INSTALL SIGNS AND POSTS AT THE LOCATION DESIGNATED BY THE ENGINEER. BURY THE ANCHOR END OF ALL POSTS APPROXIMATELY TWO (2) FEET DEEP.

27. WHEN WORK HAS SHUT DOWN FOR EACH DAY, ALL LINES SHALL BE CAPPED, SEALED AND PRESSURED TO 20 POUNDS WITH AIR. WHEN A PROJECT IS NOT IMMEDIATELY TIED-IN, PLUS AND SEAL ALL OPENINGS IN THE PIPE. IF PIPELINE IS TO BE ABANDONED IN PLACE, THEN DISCONNECT THE GAS SUPPLY SOURCE, PURGE ALL OF THE GAS FROM THE ABANDONED SYSTEM, AND SEAL ALL OF THE ENDS.

28. A COMBUSTIBLE GAS INDICATOR SHALL BE USED WHEN PURGING MAINS AND PIPING. WHEN PURGING GAS FROM ABANDONED LINES, THE AIR AND THE GAS MUST BE DISCHARGED ABOVE GROUND AND DIRECTED AWAY FROM POWER LINES OR STRUCTURES. WHEN PURGING AIR FROM NEW LINES, INSTALLATION OF A 3/4 SERVICE SADDLE AND NON-CORRODIBLE RISER IS REQUIRED FOUR (4) FEET FROM EACH DEAD END ON ALL NEW INSTALLATIONS OF PIPE IN ORDER TO PURGE AIR FROM ALL DEAD ENDS SIMULTANEOUSLY. RELEASE GAS INTO NEW LINES AT A RATE THAT WILL PREVENT FORMATION OF A HAZARDOUS MIXTURE OF GAS AND AIR OR PRECEDE NATURAL GAS WITH A SLUG OF INERT GAS.

TESTING

29. FIELD QUALITY CONTROL: THE CONTRACTOR SHALL TEST ALL GAS MAINS WITH 90 P.S.I.G AIR AND SHOW THAT THE LINES ARE LEAK FREE, PRIOR TO THE INSTALLATION OF GAS SERVICE. EACH DAY'S WORK SHALL BE TIED INTO THE PRECEDING DAY'S WORK AND TESTED OVERNIGHT. A 24 HR PRESSURE CHART SHALL BE FURNISHED TO THE CITY. A PRESSURE-TIME GAUGE WITH A RANGE NO GREATER THAN 0 - 200 P.S.I.G AND IN GOOD WORKING ORDER SHALL BE FURNISHED BY THE CONTRACTOR. ALL TESTING SHALL COMPLY WITH D.O.T. TITLE 49, PART 192, TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS.

30. THE LOCATION OF THE PROJECT ALONG WITH THE TEMPERATURE AT THE TIME THE TEST PRESSURE IS PLACED UPON THE PIPE SHALL BE RECORDED ON THE PRESSURE CHART. THE PRESSURE CHARTS SHALL BE GIVEN TO THE ENGINEER ON A DAILY BASIS. IN ORDER TO FACILITATE DAILY TESTING, APPROPRIATE TESTING APPARATUS SHALL BE USED. LEAKS SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER, BEFORE ADDITIONAL LENGTHS OF PIPE THAT NEED TO BE TESTED ARE ADDED TO THE MAIN.

31. IF SERVICE LINES ARE INSTALLED AT THE SAME TIME AS THE MAINS, THEN SERVICE LINES SHALL BE INCLUDED IN THE TESTING OF THE MAINS. IF SERVICE LINES ARE INSTALLED AFTER GAS SERVICE HAS BEEN INITIATED, THEN THE CONTRACTOR SHALL TEST EACH SERVICE LINE INDIVIDUALLY TO STAND UP TO AN AIR TEST OF 90 P.S.I.G FOR TWENTY (20) MINUTES. IF A LEAK IS DISCOVERED, THEN THE CONTRACTOR SHALL IMMEDIATELY MAKE THE APPROPRIATE REPAIRS, IN A METHOD APPROVED BY THE ENGINEER. ALL EXISTING SERVICE LINES THAT ARE DISCONNECTED FROM THE MAIN TEMPORARILY SHALL BE TESTED AS IF THEY ARE NEW LINES BEFORE BEING PLACED BACK INTO SERVICE.

32. A 24-HOUR TEST SHALL BE PLACED ON THE ENTIRE SYSTEM OF MAINS PRIOR TO INITIATION OF GAS SERVICE. IF A PORTION OF THE GAS SERVICE HAS MET THE REQUIREMENTS OF THE LEAK TEST AND IT IS POSSIBLE FOR THE OTHER SECTIONS TO BE TESTED INDEPENDENTLY, THEN THE ENGINEER MAY APPROVE INITIATION OF GAS SERVICE FOR THAT PORTION.

NATURAL GAS CONTRACTOR QUALIFICATION REQUIREMENTS

1. THIS SECTION DESCRIBES THE REQUIREMENTS FOR CONTRACTOR QUALIFICATIONS INCLUDING A LIST OF COVERED TASKS FOR THIS PROJECT AND THE REQUIRED CONTRACTOR PERSONNEL QUALIFICATION PROGRAM (CPQP) THAT IS TO BE SUBMITTED WITH THE BID AND MAINTAINED THROUGHOUT CONSTRUCTION.
2. UNLESS OTHERWISE STATED IN THE BID FORM, NO SEPARATE PAYMENT WILL BE MADE FOR WORK PERFORMED UNDER THIS SPECIFICATION. UNLESS OTHERWISE STATED IN THE BID FORM, ALL COSTS SHALL BE INCLUDED IN THE RELATED ITEMS OF WORK LISTED IN THE BID FORM.
3. THE APPLICABLE PROVISIONS OF THE FOLLOWING STANDARDS SHALL APPLY AS IF WRITTEN HERE IN THEIR ENTIRETY.

- RRC – RAILROAD COMMISSION OF TEXAS
- DOT – UNITED STATES DEPARTMENT OF TRANSPORTATION

4. THE CONTRACTOR IS REQUIRED TO HAVE AN IN-HOUSE CONTRACTOR PERSONNEL QUALIFICATION PROGRAM (CPQP) THAT MEETS WITH THE APPROVAL OF THE CITY. THE CPQP SHALL BE SUBMITTED AS NOTED HEREIN AND IS SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL HAVE QUALIFIED PERSONNEL THAT ARE CAPABLE OF PERFORMING THE COVERED TASKS LISTED IN THIS SPECIFICATION. THE CITY HAS SOLE DISCRETION IN EVALUATING THE QUALIFICATIONS OF ALL CONTRACTOR PERSONNEL THROUGHOUT THE DURATION OF CONSTRUCTION.

5. CONTRACTOR WILL SUBMIT DOCUMENTATION OF A CPQP. THE CPQP SHALL CONTAIN ALL REQUIRED INFORMATION AS DESCRIBED HEREIN (SEE FOLLOWING PARAGRAPHS 7 TO 9). THE CITY RESERVES THE RIGHT TO REJECT ANY CONTRACTOR THAT DOES NOT INCLUDE A CPQP. THE CITY ALSO HAS SOLE DISCRETION IN EVALUATING AND DETERMINING THE SUITABILITY OF THE CPQP SUBMITTED AND MAY ELECT TO REJECT A CONTRACTOR IF, IN THE CITY'S OPINION, THE CPQP IS NOT ACCEPTABLE.

6. THE CITY RESERVES THE RIGHT TO REQUEST ADDITIONAL INFORMATION FROM THE CONTRACTOR PERTAINING TO THE CPQP DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE CITY WITH ALL UPDATES TO THE CPQP THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH PARAGRAPH 8 OF THIS SPECIFICATION.

7. THE CONTRACTOR SHALL HAVE AN IN-HOUSE CPQP THAT MEETS WITH THE APPROVAL OF THE CITY AND SHALL SUBMIT THE CPQP AS DESCRIBED IN THIS SECTION (SEE PRECEDING PARAGRAPH 5 AND 6). THE CPQP IS REQUIRED SO THAT THE CITY CAN DOCUMENT THE QUALIFICATION OF CONTRACTOR PERSONNEL UNDER THEIR OWN OPERATOR QUALIFICATION PROGRAM. THE CPQP SHALL CONTAIN ALL NECESSARY INFORMATION ON THE QUALIFICATIONS OF CONTRACTOR PERSONNEL THAT WILL BE RESPONSIBLE FOR PERFORMING THE COVERED TASKS THAT ARE TO BE DONE DURING THE EXECUTION OF THE WORK REQUIRED FOR THIS PROJECT. THE CPQP SHALL CONTAIN, BUT NOT BE LIMITED TO, THE FOLLOWING MINIMUM INFORMATION:

- NAME OF QUALIFIED INDIVIDUAL(S)
- DATES OF QUALIFICATIONS FOR ALL PERSONNEL
- METHOD OF QUALIFICATION FOR ALL PERSONNEL
- QUALIFICATION EXPIRATION DATE FOR ALL PERSONNEL
- COVERED TASKS THAT ALL PERSONNEL ARE QUALIFIED TO PERFORM.

THE CONTRACTOR IS ALSO ENCOURAGED TO SUBMIT ANY OTHER INFORMATION THAT WILL SUBSTANTIATE THE QUALIFICATIONS OF THEIR PERSONNEL INCLUDING WORK HISTORY, RESUMES, CERTIFICATIONS, TRAINING SCHEDULES, SAFETY PROGRAMS, ETC. THE ADDITIONAL INFORMATION WILL SERVE TO ASSIST THE CITY IN THEIR OPERATOR QUALIFICATION PROGRAM. THE CONTRACTOR IS REQUIRED TO BE FAMILIAR WITH AND MEET ALL RULES PROMULGATED BY THE D.O.T AND THE R.R.C. AS IT PERTAINS TO PERSONNEL QUALIFICATIONS AND DRUG TESTING.

8. CONTRACTOR SHALL UPDATE CPQP WHEN REQUESTED BY CITY AND WHEN THERE ARE ANY CHANGES IN PERSONNEL ASSIGNED TO COMPLETE THE COVERED TASKS ASSOCIATED WITH THIS PROJECT. UPDATES WILL ALSO BE PROVIDED WHEN PERSONNEL ARE RE-QUALIFIED FOR THE VARIOUS COVERED TASKS LISTED HEREIN.

9. THE CITY AND THEIR RESPONSIBLE PERSONNEL ARE HEREBY DEFINED AS THE OPERATOR OF THE GAS SYSTEM WHERE THE PROPOSED IMPROVEMENTS ARE TO BE CONSTRUCTED BY THE CONTRACTOR. THE CITY HAS ULTIMATE AUTHORITY IN THE EVALUATION OF CONTRACTOR PERSONNEL QUALIFICATIONS ON THE COVERED TASK AND MAY, AT THEIR DISCRETION, REFUSE TO ALLOW A CONTRACTOR PERSONNEL TO PERFORM A COVERED TASK AND/OR MAY REQUIRE THAT THE CONTRACTOR PERSONNEL BE SUPERVISED BY A QUALIFIED CONTRACTOR PERSONNEL. THE CITY RESERVES THE RIGHT TO MAKE PROCEDURAL CHANGES DURING CONSTRUCTION THAT AFFECT COVERED TASKS AND WILL COMMUNICATE THOSE CHANGES TO THE CONTRACTOR AND THE INDIVIDUALS PERFORMING THE COVERED TASKS. THE CONTRACTOR IS REQUIRED TO CONFORM WITH THE PROCEDURAL CHANGES WHEN SAFETY, TRAINING, AND QUALITY OF INSTALLATION ARE NOT CONFORMING WITH THE CITY'S POLICIES AND PROCEDURES. THE CITY ALSO RESERVES THE RIGHT TO MAKE CONTRACTOR PERSONNEL RE-QUALIFY FOR A SPECIFIC TASK IF, IN THE OPINION OF THE CITY, THE CURRENT QUALIFICATION OF A CONTRACTOR PERSONNEL IS QUESTIONABLE AS DETERMINED BY THE CITY.

10. THE CONTRACTOR SHALL EMPLOY PERSONNEL THAT ARE QUALIFIED FOR THE FOLLOWING TASKS ON THIS PROJECT

- 10.1 EMERGENCY VALVE INSPECTION
- 10.2 OVER-PRESSURE PROTECTION DEVICE INSPECTION
- 10.3 REGULATOR INSPECTION
- 10.4 CATHODIC PROTECTION PIPE-TO-SOIL READINGS
- 10.5 CORRECTION OF CATHODIC POTENTIAL DEFICIENCIES
- 10.6 INSTALLATION OF CATHODIC PROTECTION ANODES AND TESTING EQUIPMENT
- 10.7 RECTIFIER INSPECTION
- 10.8 LEAKAGE SURVEY
- 10.9 ABOVE GROUND LEAK REPAIR
- 10.10 BELOW GROUND LEAK REPAIR
- 10.11 WELDING ON GAS PIPELINES AND APPURTENANCES
- 10.12 JOINING OF PLASTIC PIPE AND APPURTENANCES
- 10.13 VISUAL INSPECTION OF PIPE AND PIPE COMPONENTS FOR DAMAGE PRIOR TO INSTALLATION
- 10.14 VISUAL INSPECTION OF PIPE AND PIPE COMPONENTS FOR CORRECT PRESSURE RATING AND CORRECT APPLICATION PRIOR TO INSTALLATION ON GAS PIPELINE FACILITIES.
- 10.15 LOCATING BELOW GROUND PIPELINE FACILITIES AND MARKING THE LOCATION OF THE FACILITIES
- 10.16 INSTALLING AND BUYING GAS PIPELINES IN A DITCH
- 10.17 INSTALLING AS PIPELINE BY BORE
- 10.18 TAPPING GAS MAIN
- 10.19 RESPONDING TO GAS EMERGENCIES AFTER BUSINESS HOURS
- 10.20 ABANDONING GAS PIPELINE FACILITIES
- 10.21 PRESSURE TESTING GAS PIPELINE FACILITIES

(END)

CITY OF TOMBALL
DEPARTMENT OF ENGINEERING & PLANNING

GAS NOTES

APPROVED BY COT:

DEPARTMENT OF ENGINEERING & PLANNING
EFFECTIVE OCTOBER 2024

SHEET 001 OF 001 DWG NO: COT GAS-02