CONSTRUCTION PLANS FOR

1500 TURBEVILLE SEWER EXTENSION

HICKORY CREEK, DENTON COUNTY, TEXAS A1163A J.W. SIMMONS, TR 37, 22.247 ACRES



VICINITY MAP

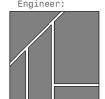
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Electrical Engineering Plans

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CCM Engineering

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JUNE, 2025

LCMUA GENERAL MANAGER APPROVAL BLOCK

LCMUA General Manager

DATE

GENERAL NOTES

GENERAL

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AND THE TOWN OF HICKORY CREEK ADDENDUM THERETO.
- BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PREPARE A CONSTRUCTION SEQUENCE SCHEDULE.
- THE CONSTRUCTION SCHEDULE SHALL BE SUCH THAT THERE IS MINIMUM INTERFERENCE WITH TRAFFIC ALONG OR ADJACENT TO THE PROJECT
- CONSTRUCTION MAY NOT BE REGUN FARLIER THAN 7:00 A.M. ON WEEKDAYS NOR CONTINUED AFTER DARK WITHOUT PERMISSION FROM THE TOWN OF HICKORY CREEK CONSTRUCTION ON SATURDAY MAY NOT BE BEGUN BEFORE 8:00 A.VI. AND WORK ON SUNDAY IS PROHIBITED WITHOUT SPECIAL PERMISSION
- UTILITIES SHOWN ON THE PLANS WERE TAKEN FROM FIELD SURVEYS AND INFORMATION PROVIDED BY THE UTILITY COMPANIES. THE COMPLETENESS AND THE ACCURACY OF THIS DATA IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES AND PROTECTING THEM FROM
- 5. WORK MAY NOT BE BACKFILLED OR COVERED UNTIL IT HAS BEEN INSPECTED BY LCMUA
- MATERIAL TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABCRATORY AND PAID FOR BY THE CONTRACTOR.
- ALL EXCAVATION ON THE PROJECT IS UNCLASSIFIED.
- TEMPORARY EROSION CONTROL SHALL BE USED TO MINIMIZE THE SPREAD OF SILT AND MUD FROM THE PROJECT ON TO EXISTING STREETS, ALLEYS, DRAINAGEWAYS AND PUBLIC AND PRIVATE PROPERTY. TEMPORARY EROSION CONTROLS MAY INCLUDE STRAW BALES, BERMS, DIKES, SWALES, STRIPS OF UNDISTURBED VEGETATION, CHECK DAMS AND OTHER METHODS AS REQUIRED BY THE CITY ENGINEER
- THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC AT ALL TIMES ALONG THE PROJECT.
- 10. REMOVE, SALVAGE AND REPLACE ALL STREET AND TRAFFIC CONTROL SIGNS WHICH MAY BE DAMAGED BY THE CONSTRUCTION OF THE PROJECT.
- ALL TRENCHING AND EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH OSHA STANDARDS
- 12. ALL BACKFILL WILL BE COMPACTED AT A MOISTURE CONTENT OF 2% OR HIGHER OF OPTIMUM MOISTURE AS DETERMINED BY ASTM D-698 WHERE ASTM D-698 IS THE APPLICABLE TEST METHOD. TEX 113-E MAY BE USED FOR GRANULAR SOILS.
- 13. A TWO YEAR 100% MAINTENANCE BOND SHALL BE PROVIDED TO LAKE CITIES MUNCIPAL UTILITY AUTHORITY (LCMUA) TO GUARANTEE THE PERFORMANCE AND REPAIR OF ALL PUBLIC SANITARY SEWER FACILITIES UPON COMPLETION AND ACCEPTANCE OF THE PROJECT BY LAKE CITIES MUNCIPAL UTILITY AUTHORITY (LCMUA).

GRADING

- TOP SOIL SHALL NOT BE REMOVED FROM RESIDENTIAL LOTS OR USED AS SPOIL, BUT SHALL BE STRIPPED AND REDISTRIBUTED SO AS TO PROVIDE AT LEAST SIX (6) INCHES OF COVER ON THE LOTS, PARKWAYS AND MEDIANS. PERMANENT EROSION CONTROL MEASURES SHALL BE PROVIDED THROUGHOUT THE DEVELOPMENT PRIOR TO FINAL ACCEPTANCE OF THE
- TEMPORARY EROSION CONTROL SHALL BE USED TO MINIMIZE THE SPREAD OF SILT AND MUD FROM THE PROJECT ON TO EXISTING STREETS, ALLEYS, DRAINAGEWAYS AND PUBLIC AND PRIVATE PROPERTY. TEMPORARY EROSION CONTROLS MAY INCLUDE SILT FENCES, STRAW BALES, BERMS, DIKES, SWALES, STRIPS OF UNDISTURBED VEGETATION, CHECK DAMS AND OTHER METHODS AS REQUIRED BY THE CITY ENGINEER AND AS SPECIFIED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS CONSTRUCTION (N.C.T.C.O.G.) BMP MANUAL
- 3. ALL STREET RIGHTS-OF-WAY, REGARDLESS OF SLOPE; ALL FINISHED GRADE SLOPES THAT ARE STEEPER THAN 6H:1V; AND THE FLOW LINES OF ALL DRAINAGE DITCHES AND SWALES SHALL BE SEEDED AND COMPLETELY COVERED WITH EROSION CONTROL MATTING AS SPECIFIED IN THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS CONSTRUCTION (N.C.T.C.C.G.)
- GRASS SHALL BE ESTABLISHED ON THE SLOPES OF ALL DRAINAGE CHANNELS. GRASS SHALL MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS OF THE TEXAS
- FINISHED SLOPES ON PUBLIC RIGHTS-OF-WAY AND EASEMENTS SHALL NOT BE STEEPER THAN 4H:1V. ALL SLOPES STEEPER THAN 6H:1V SHALL BE HYDROMULCHED AND MAINTAINED BY THE CONTRACTOR UNTIL GRASS COVERS ALL PARTS OF THE SLOPE. GRASS MUST BE LUSH, GREEN, VIGOROUS AND GROWING. NO BARE SPOTS OVER ONE SQUARE FOOT WILL BE ALLOWED. ALL RUTS FROM WASHING MUST BE FILLED IN AND GRASSED.
- ALL PERMEABLE SURFACES WITHIN THE DEVELOPMENT SHALL BE GRADED TO A SMOOTH AND UNIFORM APPEARANCE THAT CAN BE EASILY MOWED WITH A SMALL RESIDENTIAL RIDING
- IF FRANCHISE UTILITIES ARE INSTALLED AFTER PLANTING GRASS, ANY AREAS DISTURBED BY THE INSTALLATION OF THE FRANCHISE UTILITIES SHALL BE REPAIRED AND GRASS

WATER AND SANITARY SEWER

- WATER MAINS SHALL BE AWWA C-900 PVC CLASS 150 UNLESS OTHERWISE NOTED.
- MARKING TAPE SHALL BE INSTALLED OVER PVC WATER LINES.
- NO WATER METER BOXES OR SANITARY SEWER CLEANOUTS WILL BE ALLOWED IN DRIVEWAYS OR SIDEWALKS.
- FITTINGS FOR PVC WATER LINES SHALL BE DUCTILE IRON AND BE ENCASED IN A POLYETHYLENE SHEATH.
- VALVES SHALL BE RESILIENT SEAT GATE VALVES.
- ALL DIRECT BURIAL VALVES SHALL BE PROVIDED WITH CAST IRON VALVE BOXES WITH PVC STACKS. VALVE STACKS SHALL BE VERTICAL AND CONCENTRIC WITH THE VALVE STEM. STAINLESS STEEL VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES WHERE THE OPERATING NUT IS GREATER THAN 4 FEET BELOW FINISHED GRADE.
- FIRE HYDRANTS SHALL BE FIELD PAINTED PER LAKE CITIES MUNCIPAL UTILITY AUTHORITY (LCMUA) SPECIFICATIONS.
- ALL EXPOSED BOLTING ON ANY EQUIPMENT OR MATERIAL SHALL BE STAINLESS STEEL. INCLUDED ARE:
 - BONNET AND STUFFING BOX BOLTS ON VALVES.
 - SHOE BOLTS ON FIRE HYDRANTS.
- METER BOXES SHALL BE AS APPROVED BY THE LCMUA, LCMUA STANDARDS FOR DEVELOPMENT & CONSTRUCTION DETAILS SHALL GOVERN FOR
- 10. SANITARY SEWER MAINS SHALL BE MINIMUM SDR 26 PVC.
- 11. A GEOTEXTILE FABRIC SHALL BE PLACED BELOW ALL NEW MANHOLES.
- 12. ALL SANITARY SEWER SERVICE CONNECTIONS SHALL BE A MINIMUM OF SIX INCHES IN DIAMETER.
- 13. ALL SANITARY SEWER SERVICES SHALL BE VIDEOTAPED AFTER INSTALLATION OF FRANCHISE UTILITIES.
- 14. ALL SANITARY SEWER MANHOLES SHALL BE PROTECTED FROM SULFIDES AND GROUNDWATER INFILTRATION. ONE OF THE FOLLOWING METHODS OR APPROVED EQUAL MAY BE USED: RAVEN 405 COAT

GATOR WRAP OR APPROVED EQUAL SHALL BE INCLUDED ON ALL MANHOLE CONSTRUCTION JOINTS.

- 15. THE CONTRACTOR SHALL INSTALL AND MAINTAIN WATER TIGHT PLUGS IN ALL CONNECTIONS TO THE LCMUA SANITARY SEWER SYSTEM UNTIL THE
- 16. ALL SANITARY SEWER LINES AND MANHOLES SHALL BE LEAK TESTED BEFORE THE PROJECT IS ACCEPTED. DEFLECTION TESTING OF PVC SEWER
- 17. ALL SANITARY SEWER SHALL BE VIDEO TAPED AFTER INSTALLATION OF THE SERVICE CONNECTIONS, PRIOR TO ACCEPTANCE OF THE PROJECT. ALL SANITARY SEWER WILL BE RE-VIDEO TAPED BY THE DEVELOPER THREE MONTHS PRIOR TO THE EXPIRATION OF THE TWO YEAR MAINTENANCE AGREEMENT. THE PURPOSE OF THE SEWER VIDEO IS TO IDENTIFY ANY PROBLEMS THAT MAY HAVE OCCURRED SINCE ACCEPTANCE SUCH AS SETTLEMENT, CUTTING OFF THE LINES BY FRANCHISE UTILITIES, ETC.
- 18. NO BULLHEAD WATER SERVICE CONNECTIONS WILL BE ALLOWED.
- 19. NO METER BOXES WILL BE ALLOWED IN SIDEWALKS OR DRIVEWAYS
- 20. FULL BODY FITTINGS REQUIRED.
- 21. MEGA-LUGS REQUIRED ON ALL MJ FITTINGS.
- 22. DESIGN MUST MEET ALL APPLICABLE REQUIREMENT OF TCEQ CHAPTERS 290 AND 217.
- 23 THE FOLLOWING TYPES OF BACKELL ARE REQUIRED AT A MINIMUM:
 - WATER LINE: CLASS B-4:
 - SANITARY SEWER: CLASS B+ MODIFIED TO HAVE FINE GRADATION CRUSHED STONE 6' ABOVE THE
 - c. STORM SEWER: CLASS B-

USE OF OTHER MATERIALS WILL BE CONSIDERED UPON PROPER ENGINEERING JUSTIFICATION.

Engineering

CCM

407, Suite 209 I Village, Texas 7 691.6633 RM #605 2570 FM 4 Highland N Ph: 972. 6 TBPE FIRN





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FOWN OF HICKORY DENTON COUNTY,

1500 TURBEVILLE SEWER ADDITION

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GENERAL NOTES

PAVING

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND DETAILS OF THE TOWN OF HICKORY CREEK AND THE FOURTH EDITION OF THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION NORTH CENTRAL TEXAS HEREIN REFERRED TO AS "COG", COPIES MAY BE OBTAINED FROM THE NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS, 616 SX FLAGS DRIVE SUITE 200, ARLINGTON, TEXAS 76005-5888.
- SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH COG ITEM 301.
- LIME STABILIZED SUBGRADE SHALL BE INSTALLED IN ACCORDANCE WITH COG ITEM 301.2. LIME SHALL BE PLACED USING THE SLURRY METHOD, TO BE MIXED ON-SITE AND NOT TRUCKED IN. REFER TO COG ITEM 301.2.1.1.
- THE CONTRACTOR SHALL INSTALL SUPPORTING CHAIRS FOR REINFORCING STEEL ON A ONE PER SQUARE YARD SPACING IN ALL CONCRETE PAVEMENTS. THE CHAIRS ARE TO BE PLASTIC AND INSTALLED AS PER COG ITEM 303.2.11.
- 20% (BY WEIGHT) OF THE CEMENT CONTENT MAY BE REPLACED WITH TYPE C FLY ASH. REFER TO COG ITEM 303.2.4.
- CONCRETE FOR ALL PAVING AND CURBS WITHIN TOWN OF HICKORY CREEK SHALL HAVE A MINIMUM STRENGTH OF 4 000 PSLAT 28 DAYS FOR MACHINE PAVED. AND 4,500 PSI AT 28 DAYS FOR HAND POURED. THE TOWN SHALL APPROVE THE CONCRETE MIX DESIGN IN WRITING PRIOR TO USE
- SLUMP REQUIREMENTS FOR SLIP FORM PAVING SHALL BE ON AVERAGE OF THREE INCHES WITH A MAXIMUM OF FOUR INCHES, FOR HAND FORMED PAVING IT SHALL BE AN AVERAGE OF FOUR INCHES WITH A MAXIMUM OF FIVE INCHES; AND FOR SIDEWALK & OTHER IT SHALL BE SPECIFIED BY THE OWNER. REFER TO COG HEM 303.3.4.4.
- CURBS FOR FOR CONCRETE PAVEMENT SHALL BE POURED MONOLITHICALLY. REFER TO COG ITEM 303.5.9.
- THE CONTRACTOR SHALL USE A LIQUID MEMBRANE-FORMING COMPOUND AS PER COG ITEM 303 2 13 1 1
- 10. CONSTRUCTION JOINTS SHALL BE USED IN ALL BLOCK-OUTS FOR DRIVEWAYS
- 11. TRANSVERSE JOINTS SHALL BE SAWED ON 15 FOOT CENTERS FOR ALL PAVEMENT THICKNESSES. THE CONCRETE SAW MUST BE STATIONED ON THE JOB-SITE PRIOR TO PLACING THE PAVEMENTS. ALL JOINTS SHALL BE SAWED WITHIN AN EIGHTEEN (18) HOUR PERIOD FROM THE TIME OF THE POUR.
- 12. CONSTRUCTION AND LONGITUDINAL JOINTS SHALL BE PLACED IN ACCORDANCE WITH DETAILS. SAW JOINTS TO BE 1/4 INCH FOR EACH INCH OF PAVEMENT THICKNESS.
- 13. THE CONTRACTOR SHALL SUBMIT A JOINTING PLAN, FOR REVIEW BY THE TOWN, PRIOR TO PLACING.
- 14. PARKWAY, ROADWAY DITCHES AND ADJACENT DISTURBED AREAS FOR PAVING OF ROADWAYS IN UNDEVELOPED AREAS SHALL BE SEEDED WITH BERMUDA GRASS. PARKWAY AND ADJACENT DISTURBED AREAS FOR PAVING OF ROADWAYS IN DEVELOPED AREAS SHALL BE BLOCK SODDED WITH EITHER BERMUDA OR ST AUGUSTINE TO MATCH THE ADJACENT PRIVATE PROPERTY. MEDIANS SHALL BE BLOCK SODDED. ALL SODDING AND SEEDING WILL BE PLACED ON FOUR INCHES OF TOPSOIL. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE, INCLUDING MOWING AND WATERING LINTIL VEGETATION IS ESTABLISHED OF NOT LESS THAN 20 PLANTS PER SQUARE FOOT AREA, AND UNTIL ACCEPTED BY THE TOWN.
- 15. UNLESS STATED OTHERWISE IN THE CONTRACT DOCUMENTS, THE CONTRACTOR IS RESPONSIBLE FOR ALL TESTING. ALL FINAL REPORTS SHALL BE TURNED IN TO THE TOWN INSPECTOR WITHIN FIVE (5) WORKING DAYS, FAILED SAMPLES MUST BE REPORTED TO THE TOWN INSPECTOR IMMEDIATELY.
- A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE TOWN INSPECTOR AT LEAST 24 HOURS PRIOR TO ANY REQUIRED TESTING.
- B SOIL TESTING TECHNICIANS SHALL PROVIDE WRITTEN PROOF OF HAVING MINIMUM OF TWO (2) YEARS OF RELATED FIELD EXPERIENCE.
- C. THE CONTRACTOR SHALL COORDINATE ALL TESTING ACTIVITIES WITH THE TOWN INSPECTOR AND SHALL FACILITATE REQUIRED TESTING THROUGHOUT THE CONSTRUCTION PERIOD. THE INSPECTOR SHALL BE PRESENT DURING ALL
- D. THE TOWN SHALL MAKE FINAL DECISION AS TO THE VALIDITY OF ALL TESTING RESULTS
- E. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT MATERIALS TO BE TESTED ARE IN COMPLIANCE WITH ALL PLANS AND SPECIFICATIONS PRIOR TO TESTING. ALL MATERIALS FOUND NOT TO BE IN COMPLIANCE WITH THE PLANS AND SPECIFICATIONS BEFORE AND AFTER TESTING SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- AL COSTS ASSOCIATED WITH THE RETESTING OF WORK THAT FALLS TO MEET THE SPECIFICATIONS REQUIRED IN THE CONTRACT DOCUMENTS SHALL BE BORNE BY THE CONTRACTOR FOR TOWN PROJECTS RETESTING COST SHALL BE WITHHELD FROM PAY REQUESTS SUBMITTED BY THE CONTRACTOR, THIS COST WILL BE BASED ON THE TOWN'S COST WITH NO ADDITIONAL MARK-UP. A LETTER OF ACCEPTANCE WILL NOT BE ISSUED UNTIL ALL TESTING DEFICIENCIES ARE ADDRESSED AND ALL RELATED COST PAID.
- THE TOWN INSPECTOR SHALL BE NOTIFIED OF CONCRETE PLACEMENT 24 HOURS IN ADVANCE FOR STEEL AND FORM INSPECTION.

H. SUBGRADE TESTING

- SAMPLES SHALL BE TOKEN FOR ALL CLASSIFICATIONS OF SOILS ON SITE. TESTING FOR SULFATE PRESENCE AND LIME SERIES TESTS SHALL BE CONDUCTED FOR ALL SAMPLES PRIOR TO ANY STABILIZATION. IF SULFATE CONTENT IS GREATER THAN 2,000 PPM (PORTS PER MILLION), SPECIFIC RECOMMENDATION SHALL BE MADE BY GEOTECHNICAL ENGINEER FOR SUBGRADE PREPARATION AND THICKER PAVEMENT SECTION TO BE APPROVED BY THE TOWN THE USE OF LIME OR CEMENT AND THE CONTENT SHALL PERCENT CONTEN COMPLY THE GEDTECH ENGINEER RECOMMENDATIONS. ADDITIONAL GEOTECHNICAL TESTING AND RECOMMENDATIONS MAY BE REQUIRED BY TOWN AS FIELD CONDITIONS DICTATE. ATTERBERG LIMITS SHALL BE DETERMINED ON ALL PROCTOR SAMPLES.
- GRADATIONS FOR LIME TREATED SUBGRADE SHALL BE TAKEN AT INTERVALS NOT EXCEEDING 300 FEET ALONG ROAD AND MUST PASS 100% THROUGH A 1 3/4" SIEVE AND 60% THROUGH A NO. 4 SIEVE ACCORDING TO NCTCOG ITEN 301.2.3.5.1.
 3. GRADATIONS FOR PORTLAND CEMENT TREATED SUBGRADE SHALL BE TAKEN AT
- INTERVALS NOT EXCEEDING 100 FEET ALONG ROAD AND MUST PASS 100% THROUGH A 1 SIEVE AND 80% THROUGH A NO. 4 SIEVE ACCORDING TO NCTCOG ITEM 301.3.3.2.
- LIME SUBGRADE SHALL BE TESTED IN ACCORDANCE WITH NOTCOG ITEM 301.2.1.3. TESTS WILL BE PERFORMED BY EXCAVATING DEEPER THAN LIME TREATMENT AND ADMINISTERING A PHENOLPHTHALEIN INDICATOR.
- DENSITIES SHALL BE TAKEN ON SUBGRADE IN ACCORDANCE WITH THE WASTEWATER GENERAL NOTES 15.1.3 MECHANICAL TAMPING AND IN ACCORDANCE WITH NCTCOG ITEM 301.2.3.6 UNLESS OTHERWISE STATED ON THE PLANS OR IN THE
- 6. ALL SUBGRADE SHALL BE VISUALLY PROOF ROLLED AFTER IT IS TRIMMED AND PRIOR TO PLACEMENT OF STEEL
- DENSITIES SHALL BE TAKEN AT LEAST 72 HOURS BEFORE CONCRETE PLACEMENT (NCTCOG ITEM 303.5.11. IF MORE THAN 72 HOURS ELAPSE, DENSITIES MUST BE RETAKEN UNLESS ON APPROVED EMULSION SEALANT IS USED IN ACCORDANCE WITH NCTCOG ITEM 302.3.5.
- LOCATIONS FOR DENSITIES, GRADATIONS, AND DEPTH CHECKS SHALL BE OF THE DISCRETION OF THE INSPECTOR AND SHALL BE REPRESENTATIVE OF THE ENTIRE CROSS SECTION OF THE SUBGRADE.
- SUBGRADE FAILURES SHALL BE DEFINED BY INSPECTOR OR ENGINEER. REPAIR METHOD WILL BE DISCUSSED WITH INSPECTOR OR ENGINEER AND APPROVED PRIOR TO BEGINNING REPAIR WORK.
- 10. MULTIPLE TESTS MAY BE REQUIRED ACROSS WIDTH OF RIGHT-OF-WAY.
- FOR EMULSION PLACEMENT OVER SUBGRADE REFER TO NCTCOG ITEM 302.3.5.2.

I. CONCRETE TESTING FOR POVEMENTS, CURBS, SIDEWALKS AND DRIVEWAYS.

- 1. A CONCRETE MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE TOWN PRIOR TO ANY PLACEMENT OF CONCRETE. A MINIMUM OF FOUR TEST CYLINDERS SHALL BE OBTAINED PER ONE HUNDRED CUBIC YARD (100 CY) OF CONCRETE PLACED WITH A MINIMUM OF FOUR CYLINDERS PER PLACEMENT. TESTS SHALL ALSO INCLUDE SLUMP, AIR CONTENTS AND TEMPERATURE OF CONCRETE MIXTURE: FACH MIX DESIGN OF CONCRETE PLACED EACH DAY SHALL ALSO BE TESTED, CONCRETE STRENGTH SHALL BE TESTED AT 7 DAYS (2 CYLINDERS) AND 28 DAYS (2 CYLINDERS), ADDITIONAL CYLINDERS AND OR TESTS MAY BE REQUESTED OF THE TOWN INSPECTOR'S DISCRETION.
- CONCRETE WITH A TEMPERATURE OF 85 DEGREES OR HIGHER WILL REQUIRE A RETARDING AGENT ADMIXTURE.
- THE MAXIMUM TEMPERATURE OF CONCRETE AT THE TIME OF PLACEMENT SHALL NOT EXCEED 95 DEGREES IT SHALL BE THE CONTRACTOR AND/OR HIS SUPPLIER'S RESPONSIBILITY TO TAKE STEPS TO CONTROL THE TEMPERATURE OF CONCRETE. ALL CONCRETE THAT EXCEEDS THE TEMPERATURE LIMIT OF 95 DEGREES WILL BE
- 4. FORMS SHALL NOT BE REMOVED FROM PAVEMENT, SIDEWALKS, RAMPS, OR RETAINING WALLS FOR 24 HOURS MINIMUM, AND SHALL NOT BE BACK FILLED LESS THAN 72 HOURS AFTER CONCRETE PLACEMENT. PAVEMENT SHALL HAVE A MINIMUM CURE TIME OF 7 DAYS, BUT MAY BE OPENED TO TRAFFIC FARLIER AT THE DISCRETION OF THE INSPECTOR OR ENGINEER ONLY AFTER REVIEW OF COMPRESSIVE STRENGTH DATA. TEMPORARY PERPENDICULAR CROSSINGS MAY BE MADE AFTER 72 HOURS BY RAMPING SOIL OVER THE NEW PAVEMENT OF A DEPTH OF NOT LESS THAN 18-INCHES AND A WIDTH OF NOT LESS THAN 10-FEET. PRIOR TO GROUT WIPING ANY CONCRETE CONTRACTOR SHALL DEMONSTRATE METHOD OF SURFACE PREPARATION TO ENSURE
- 5. ALL STREET PAVEMENT SHALL BE CORED TO VERIFY PROPER PAVEMENT THICKNESS AND STRENGTH PRIOR TO ACCEPTANCE. CORES FOR STRENGTH AND DEPTH SHALL BE 4-INCHES DIAMETER AND TAKEN AT INTERVALS NOT EXCEEDING 800 FEET: CORES FOR DEPTH ONLY SHALL BE 2-INCHES DIAMETER AND SHALL BE TAKEN AT INTERMEDIATE INTERVALS NOT EXCEEDING 300-FEET, LOCATIONS WILL BE APPROVED BY THE TOWN, MULTIPLE CORES MAY BE REQUIRED AT EACH INTERVAL TO REPRESENT ENTIRE CROSS SECTION. ALL CORES SHALL BE TAKEN AT 28 DAYS AND RESULTS SHALL BE CORRELATED WITH THE CYLINDER TEST RESULTS. EVALUATION OF CORES WILL BE IN ACCORDANCE WITH NCTCOG ITEM 303.8.2. AL REQUIRED PAVEMENT REPLACEMENT SHALL BE IN FULL PANEL INCREMENTS

J. HOT-MIX ASPHALT CONCRETE PAVEMENT TESTING

- TXDOT STANDARD FOR HOT-MIX ASPHALTIC CONCRETE.
- A RELATIVE DENSITY OF NOT LESS THAN 92% WILL BE REQUIRED AFTER FINAL COMPACTION OF THE IN-PLACE PAVEMENT SECTION. THE CONTRACTOR SHALL SCHEDULE THE CMT LABORATORY TO COME OUT IN THE FIELD AND ESTABLISH A ROLLING PATTERN. THE USE OF NUCLEAR FIELD DENSITY DETERMINATIONS SHALL NOT BE ACCEPTED AS THE BASIS FOR ACCEPTANCE WITH RESPECT TO DENSITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ASSURING THAT THE COMPACTION OF THE ASPHALTIC CONCRETE IN PLACE WILL ATTAIN BETWEEN 5% AND 9% (FIVE AND NINE PERCENT) AIR VOIDS. THE CONTRACTOR'S RESPONSIBILITY FOR THE REQUIRED COMPACTION INCLUDES THE SELECTION OF ROLING EQUIPMENT AND SELECTION OF ROLLING PATTERNS TO ACHIEVE THE REQUIRED COMPACTION.
- HMAC MIX TEMPERATURE RANGE AT TIME OF PLACEMENT SHALL BE BETWEEN 260 DEGREES AND 325 DEGREES. THE ASPHALTIC MIXTURE SHALL NOT BE PLACED WHEN THE AIR TEMPERATURE IS BELOW 50 DEGREES BUT MAY BE PLACED WHEN THE AIR TEMPERATURE IS ABOVE 40 DEGREES AND RISING THE TEMPERATURE BEING TAKEN IN THE SHADE AND AWAY FROM ARTIFICIAL
- ASPHALTIC CONCRETE SHOULD BE PLACED AND COMPACTED TO CONTAIN NOT MORE THAN 9% (NINE PERCENT) NOR LESS THAN 5% (FIVE PERCENT) AIR VOID UNLESS OTHERWISE INDICATED. THE PERCENT AIR VOIDS WILL BE CALIBRATED USING THE MAXIMUM THEORETICAL SPECIFIC GRAVITY OF THE MIXTURE DETERMINED. ACCORDING TO TXDOT TEST METHOD TEX-227-F ROADWAY SPECIMEN, WHICH SHALL EITHER BE CORES OR SECTIONS OF PAVEMENT, WILL BE TESTED ACCORDING TO TXDOT TEST METHOD TEX-207-F. THE SAME SPECINEN SHALL BE USED IN DETERMINING BOTH THE THEORETICAL DENSITY AND FIELD DENSITY
- PRIME COAT WIL FOLLOW COG HEMS 302.7 AND 302.9.6.1.
- TACK COAT WILL FOLLOW COG SPECIFICATIONS ITEM 302.9.6.2.
- HMAC MIX DESIGNS SHALL FOLLOW COG ITEM 302.9.3 AND THE GRADING TABLES INCLUDED IN THIS SECTION. THESE MIXTURES WILL BE IN ACCORDANCE

- SPECIFICATIONS SHALL FOLLOW COG ITEM 302 AND CONFORM TO THE
- THE ASPHALTIC MIXTURE SHALL BE TESTED FOR OVEN BURN OFF/GRADATION AND STABILITY
- 5 IN-PLACE COMPACTION CONTROL IS REQUIRED FOR ALL MIXTURES

- WITH TXDOT TEST METHOD TEX-204-F, DESIGN OF BITUMINOUS MIXTURES.

Engineering

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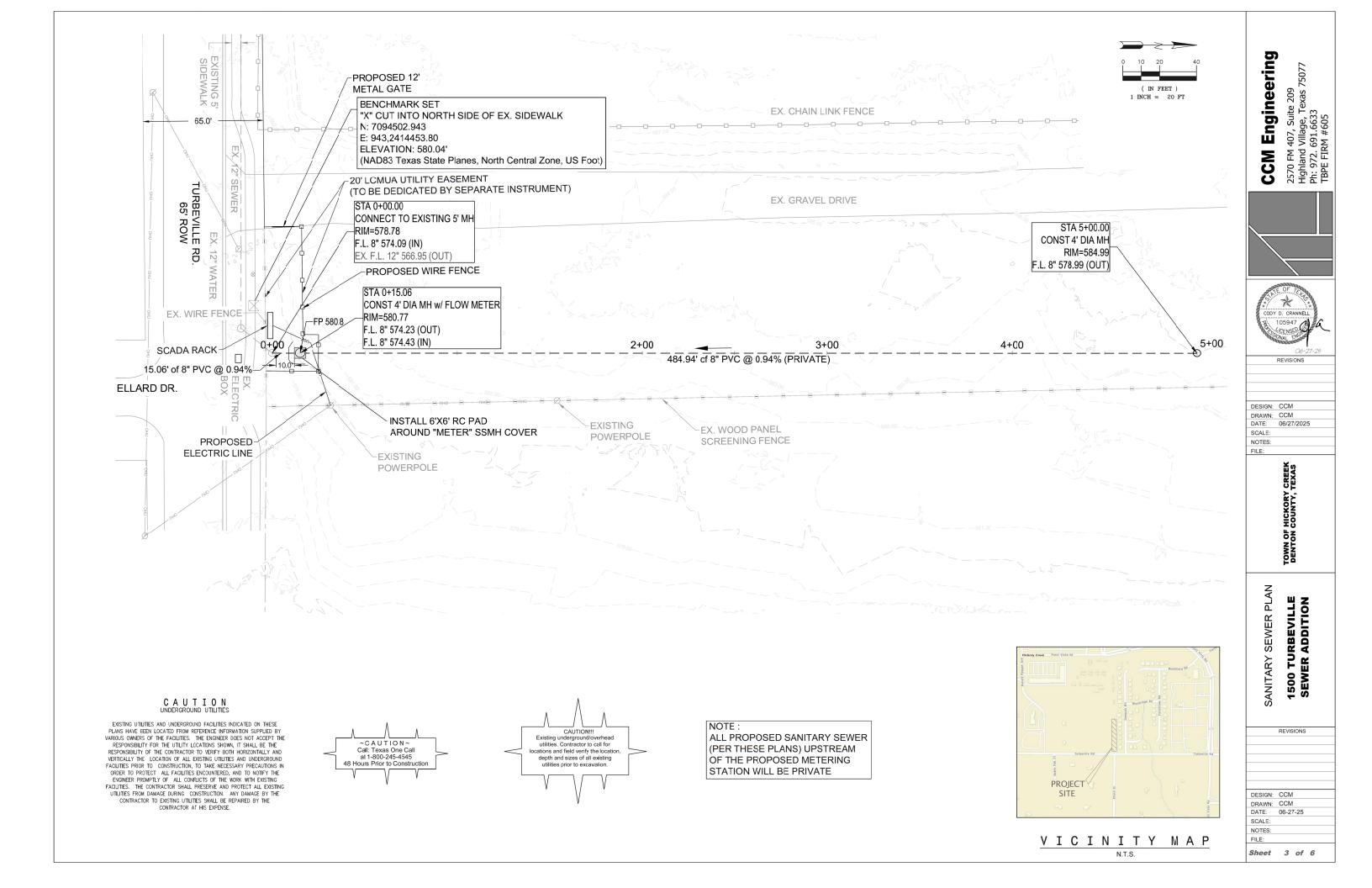
FOWN OF HICKORY CREEK DENTON COUNTY, TEXAS

1500 TURBEVILLE SEWER ADDITION GENERAL NOTES

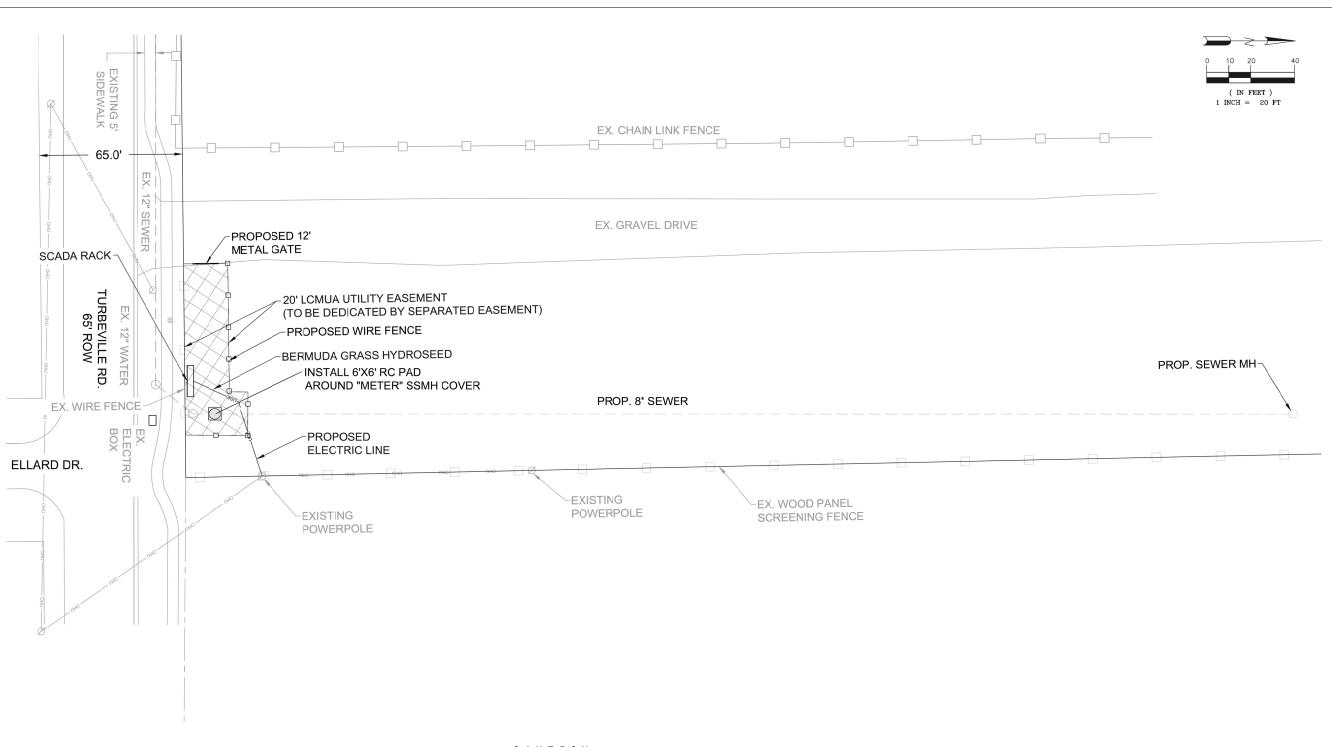
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Sheet



C A U T I O N UNDERGROUND UTILITIES EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN, IT SHALL BE THE RESPONSIBILITY FOR THE CONTRACTOR TO VERIFY BOTH HORIZONTALLY AND CCM Engineering 2570 FM 407, Suite 209 Highland Village, Texas 75077 Ph: 972, 691,6633 TBPE FIRM #605 CAUTION!!! CAUTION!!! Existing underground/overhead utilities. Contractor to call for locations and field verify the location, depth and sizes of all existing ~ C A UTION ~ Call: Texas One Call at 1-800-245-4545 48 Hours Prior to Construction PERSONSIBILITY OF THE CONTRACTOR TO VEHICL SHOT BOTH PHOREOGROUND FACILITIES AND UNDERGROUND FACILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTHY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR TO SENTING UTILITIES CHAIL FOR EXPENSE OF THE utilities prior to excavation. (IN FEET) 1 INCH = 20 FT CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. SEWER EXTENSION PROFILE Station -0+20 0+.00 1+00 2+,00 3+.00 4+00 5+00 5+20 PUBLI¢ PRIVATE STA 5+00.00 CONST 4' DIA MH RIM=584.99 590--590 * CODY D. CRANNE 105947 REVISIONS **EXISTING GROUND** STA 0+00.00 INSTALL AN EXTERNAL DROP CONNECT TO EX. 5' DIA MH RIM=578.78 DESIGN: CCM DRAWN: CCM DATE: 06/27/2025 SCALE: NOTES: FILE: TOWN OF HICKORY CREEK DENTON COUNTY, TEXAS 580 -580 INSTALL 484.94 LF OF 8" PVC (SDR-35) on 0.94% (PRIVATE) F.L. 8" 578.99 (OUT) NATIVE BACKFILL WITH 4' OF NATURAL GROUND -INSTALL 15.06 LF OF 8" PVC (SDR-35) on 0.94% 1500 TURBEVILLE SEWER ADDITION SANITARY SEWER PROFILE INSTALL CLSM FLOWABLE BACKFILL 570-F.L. 8" 574.23 (OUT) F.L. 8" 574.43 (IN) CORE-DRILL AND LINK SEAL PENETRATION REVISIONS EX. F.L. 12" 566.95 F.L. 8" 574.09 (IN) FL= 575.23 FL = 578.05577.11 FL= 578.97 ROW DESIGN: CCM DRAWN: CCM DATE: 06-27-25 1+00 2+00 3+00 4+00 5+00 -0+20 0+'00 5+20 SCALE: NOTES: FILE: Sheet 4 of 6



CAUTION

RESTORATION NOTES:

- BURMUDA GRASS SOD AREA SHALL INCLUDE THE PLACEMENT OF A MINIMUM 3" COMPOST ROLLED IN PLACE UPON FINAL GRADE ESTABLISHED IN THE GRADING AND PARKING AREA PLAN SHEETS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING ALL FESTORED AREAS A MINIMUM OF FOUR WEEKS OR UNTIL ALL VEGETATION IS UNIFORM AND SELF-SUSTAINING.
- PRIOR TO FINAL ACCEPTANCE, ALL RESTORED AREAS SHALL BE MOWED BY THE CONTRACTOR.
- THE GENERAL MANAGER AND PROPERTY OWNER SHALL DETERMINE THE ADEQUACY OF THE RESTORED AREAS UNIFORMITY AND SUSTAINABILITY.
- ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINAL PRIOR TO CONSTRUCTION.
- ALL RESTORED AREAS SHALL BE ROCK FREE WITH NO CLODS OR OTHER FOREIGN MATERIAL AND RAKED SMOOTH PRIOR TO SEEDING OR SODDING.

EXISTING UTILITIES AND UNDERGROUND FACILITES INDICATED ON THESE PLANS HAVE BEEN LOCATED FROM REFERENCE INFORMATION SUPPLIED BY VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DOES NOT ACCEPT THE VARIOUS OWNERS OF THE FACILITIES. THE ENGINEER DUES NOT ACCEPT THE RESPONSIBILITY FOR THE UTILITY LOCATIONS SHOWN, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY BOTH HORZONTALLY AND VERTICALLY THE LOCATION OF ALL EXISTING UTILITIES AND UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, TO TAKE NECESSARY PRECAUTIONS IN ORDER TO PROTECT ALL FACILITIES ENCOUNTERED, AND TO NOTIFY THE ENGINEER PROMPTLY OF ALL CONFLICTS OF THE WORK WITH EXISTING THE CONTRACTOR CHAIL DISCREPTION AND PROTECT ALL FACILITIES. FACILITIES. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION. ANY DAMAGE BY THE CONTRACTOR TO EXISTING UTILITIES SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.





LEGEND



BERMUDA GRASS HYDROSEED RATE OF 2LBS PER 1,000 SF AREA = 1633 SF

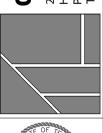


V I C I N I T Y M A P N.T.S.

SCALE: NOTES: FILE:

CCM Engineering

2570 FM 407, Suite 209 Highland Village, Texas 75077 Ph: 972. 691.6633 TBPE FIRM #605





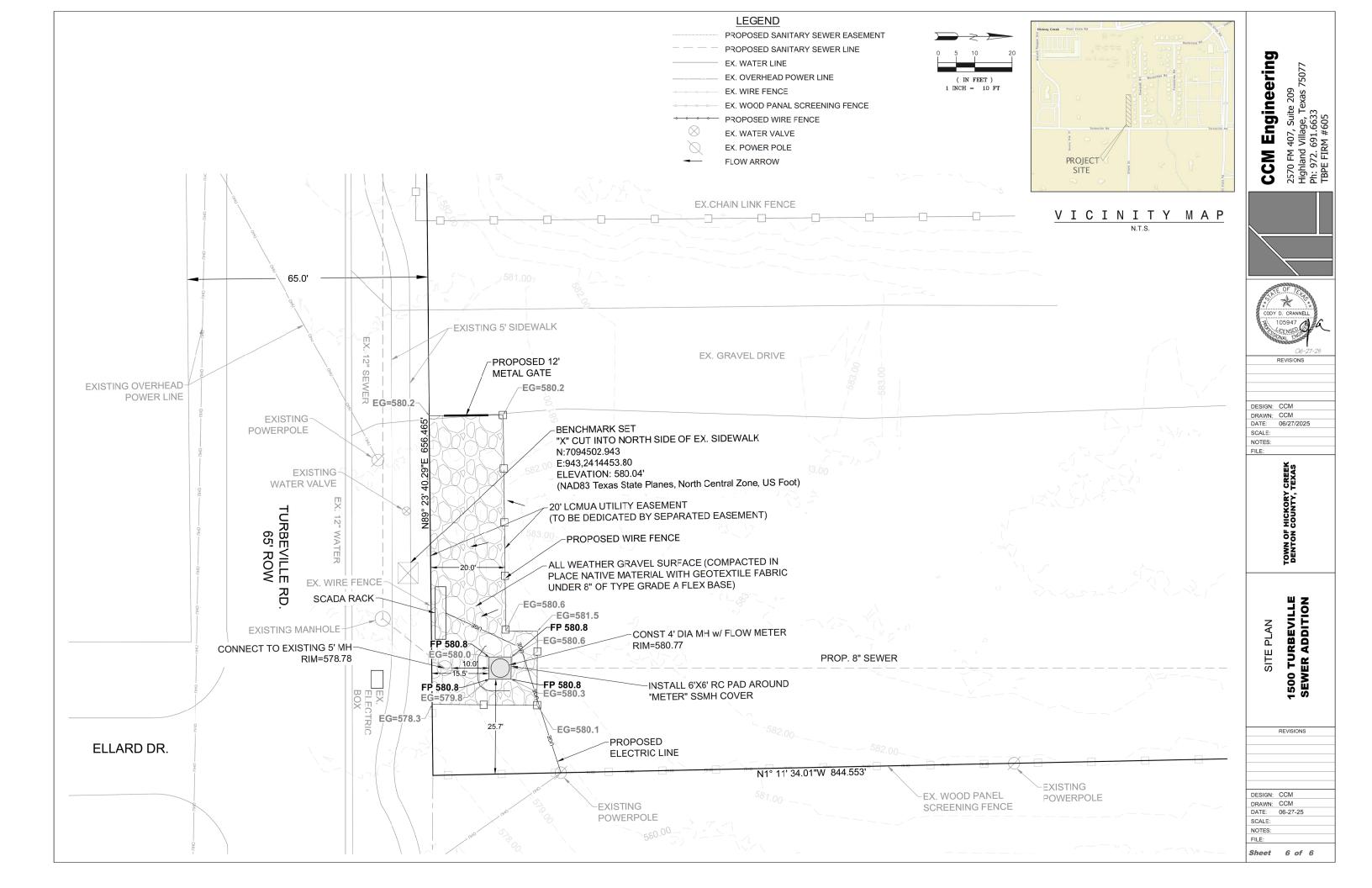
REVISIONS

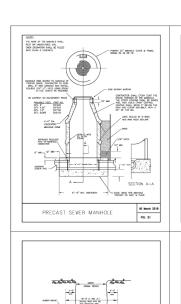
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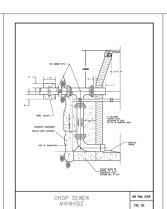
TOWN OF HICKORY CREEK DENTON COUNTY, TEXAS

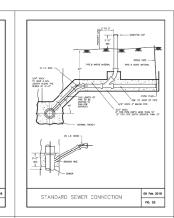
GROUNDCOVER
RESTORATION PLAN
1500 TURBEVILLE
SEWER ADDITION

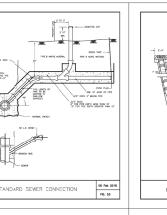
DESIGN: CCM DRAWN: CCM DATE: 06-27-25 Sheet 5 of 6

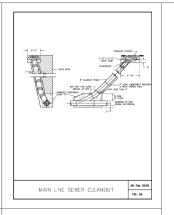


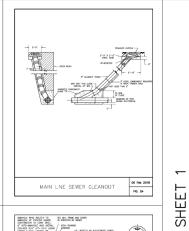


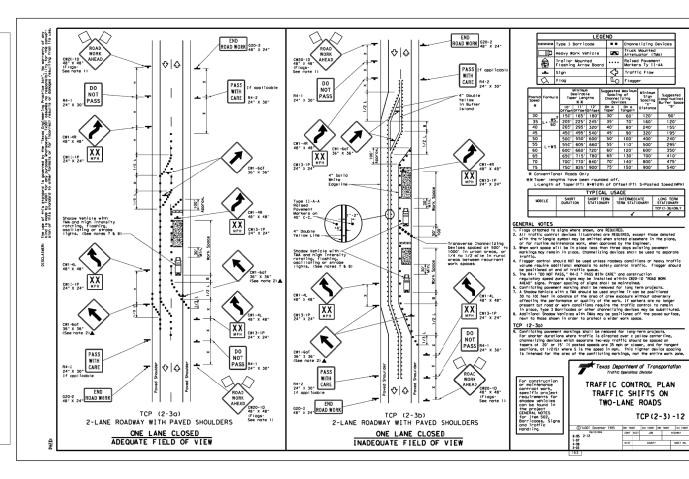




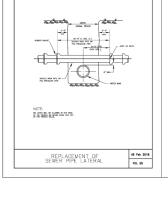








SETBACK TABLE



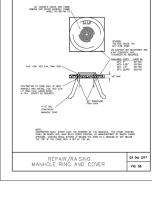
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3. IN CURBED STREETS, THE LOCATION OF UTILITIES SHALL BE SHOWN BY MOTCHING THE CURB ADJRICTMT TO THE UTILITY AS FOLLOWS:

WATER SCRAFGE I SEMER SCRAFGE II VALVE V MANHOLE M OLEAN OUT C

WATER SERVICE ...

MARK CONC CURB FACE WITH — 2—6" OUTS (2" SEPERATION) AT LOCATION OF SANITARY SCHER SERVICE

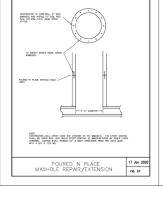


TYPE B AUTHE WITTEN. -NCTODG 604.2.3.3 ***

SPON NELL CLARACE (DM. "A") - X
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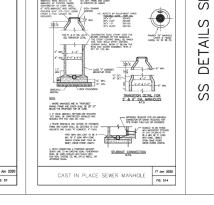
MARKER IN CENTER OF SPECET

4" SANTONY SEMEN LATERAL (TYP.) WATER VALVE LOCATED ON-PROPERTY CORNER, MARK CONC CURB FACE WITH "V" AT LOCATION OF VALVE WITH FORT OF "V" POINTING TOWARDS VALVE, C'HPT



THEY IS AUTHOR MATERIAL INCIDENCE SOLITION OF SOLITION

BUT ON DESCRIPTION OF SALES STATE STATES OF THE SALES SALES



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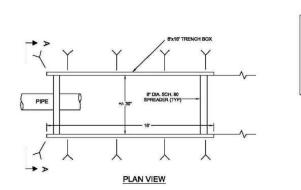
OTTO: MALL CLEARANCE (DM. "V) - VISHALL BE
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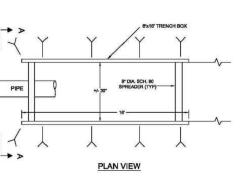
ASPHALT STREET REPAIR

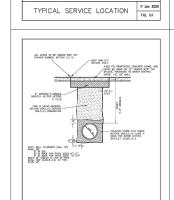
NEAT 548 OUT NOTODO 402.3

4" HAME SURFACE COURSE / NETCOS 463 (DISDOT TIPE "U")

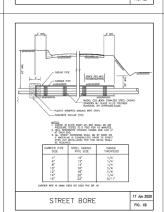
ORUSHID STOM FOR SEWER NOTCOG SOAS.1.15 CLASS H SAAD FOR MATER NOTCOG SOAS.2.7 CLASS B-3

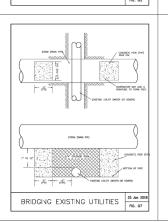






CONCRETE PAVEMENT REPAIR | 17 Jan 2020



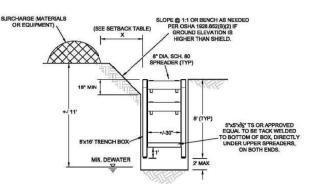


GRAVEL STREET REPAIR

CRUSHED STORE FOR STWER NOTCOG SOAS-2-15 CLASS H SAND FOR WATER NOTCOG SOA-5-2-7 CLASS B-3



S



SECTION A-A

CCM Engineering

2570 FM 407, Suite 209 Highland Village, Texas 75077 Ph: 972. 691.6633 TBPE FIRM #605

REVISIONS DESIGN: CCM DRAWN: CCM DATE: 06/27/2025 SCALE: NOTES: FILE: **TOWN OF HICKORY CREEK DENTON COUNTY, TEXAS**

REVISIONS DESIGN: CCM DRAWN: CCM DATE: 06-27-25 SCALE: NOTES: FILE: Sheet DT

1500 TURBEVILLE SEWER ADDITION

FURNISH AND INSTALL A COMPLETE ELECTRICAL SYSTEM AS DEPICTED FROM THE PLANS AND SPECIFICATIONS HEREIN - AS NOTED OR IMPLIED - NOT LIMITED TO T IS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH ALL TRADES AND PRCVIDING ALL EQUIPMENT, DEVICES, APPURTENANCES AND

- 1.2 ALL DRAWINGS ARE SCHEMATIC IN NATURE AND ALL APPURTENANCES, BASES, PADS, SUPPORTS NOT INDICATED TO MAKE A COMPLETE AND WORKING SYSTEM MUST BE INCLUDED IN THE CONTRACTORS BID
- 1.3 IF ANY ITEMS APPEAR TO BE CONTRADICTORY WITHIN THE DRAWINGS, OR CTHERWISE INCONSISTENT IN THE DESIGNS INTENT, IT IS THE CONTRACTORS RESPONSIBILITY TO CLARIEY THESE ITEMS PRIOR TO BID IN WRITING WITH THE ENGINEER. IF THE CONTRACTOR FAILS TO CLARIEY ANY QUESTIONS OF INCONSISTENCIES, HE ACCEPTS RESPONSIBILITY TO CORRECT AT HIS COST ANY SUCH ITEM TO MEET THE DESIGN INTENT AS DEFINED BY THE ENGINEER
- ANY PROPOSED DEVIATIONS FROM PLANS AND SPECIFICATIONS MUST BE APPROVED 3Y THE ENGINEER PRIOR TO COMMENCING WOR
- 1.5 ALL MATERIALS AND WORKMANSHIP WILL CONFORM TO THE LATEST ADOPTED EDITIONS OF NFPA 70, 70E, 72, 101, COUNTY, CITY, AND STATE REQUIREMENTS, AS REQUIRED BY THE ENGINEER, STATE CODES AND ORDINANCES, AND UTILITY COMPANY REQUIREMENTS.
- 1.6 CONTRACTOR SHALL SUPPLY INFORMATION AS REQUIRED TO ALL SERVING JTILITIES IN A TIMELY MANNERAS REQUIRED TO ASSURE SERVICE (POWER, WATER, TELEPHONE, ETC.) IS PROVIDED PER PROJECT SCHEDULE.
- 1.7 THE CONTRACTOR SHALL HAVE A COPY OF AHJ ADOPTED EDITION OF THE NATIONAL ELECTRICAL CODE, ON SITE, WITH THE AHJ APPROVED PLANS AT ALL TIMES DURING THE PROJECT CONSTRUCTION.
- 1.8 THE CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS WHICH MAY AFFECT THEIR BID OR WORK. NO ALLOWANCES WILL BE MADE AFTER THE BID FOR EXISTING CONDITIONS OR THE CONTRACTORS FAILURE TO VERIFY EXISTING CONDITIONS.
- 1.9 THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIPFURNISHED UNDER THIS CONTRACTOR FOR A PERIOD OF (2) YEARS FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK OF THIS CONTRACT BY THE OWNER AND THE ENGINEER AND PORVIDE A BOND TO VALIDATE THIS GUARANTEE. ANY DEFECTS DEVELOPING WITHIN THE PERIOD TRACEABLE TO MATERIALS OR WORKMANSHIP PERFORMED HERE UNDER, WILL BE MADE GOOD AT THE EXPENSE OF THE CONTRACTOR NOT THE OWNER OR ENGINEER. THE CONTRACTOR WILL ACCEPT AND FULLY UNDERSTAND THIS FROVISION PRIOR TO CONTRACT BEING AWARDED, AS NO CLAIM FOR EXTRA COMPENSATION WILL BE ALLOWED FOR CORRECTION OF FAULTY WORK OR DEFECTIVE MATERIALS. ANYTIME DURING THE CONSTRUCTION PERIOD, THE OWNERS REPRESENTATIVES AND THE ENGINEER RETAIN THE RIGHT TO REQUIRE THE CONTRACTOR TO REMOVE AND REINSTALL ANY EQUIPMENT OR MATERIALS NOT FOLLOWING THE STANDARDS AS PRESENTED HEREIN OR ON THE DRAWINGS WITHOUT COST TC THE OWNER OR ENGINEER.
- 1.10 PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT PRIOR TO ORDERING AND IN A TIMELY MANNER, WITHIN 1C DAYS OF BID AS DETERMINED BY ENGINEER; SO NOT TO DELAY WORK, TO ENGINEER FOR APPROVAL. (CONDUIT, SWITCHES, SWITCHBOARDS, PANELBOARDS, CONDUCTORS STARTERS, CONDUCTORS, TRANSFORMERS, FUSES (BUSSMAN ONLY), ETC.).
- 1.11 CONTRACTOR SHALL PROVIDE ACCURATE AND COMPLETE "AS-BUILT" DRAWINGS TO CWINER AND ENGINEER AT TIME OF OWNER ACCEPTANCE, ALL "AS-BUILT" DRAWINGS TO BE *1) SET OF "REDLINES" TO OWNER AND ENGINEER ON MAGNETIC MEDIA OR COMPACT DISC AUTOCAD 2007 OR LATER (BY AUTODESK). FAILURE TO DO SO WILL CONSTITUTE FORFEITURE OF ALL PAYMENTS DUE.
- 1.12 REFER TO CIVIL OR STRUCTURAL DRAWINGS AND SPECIFICATIONS FOR EQLIPMENT LOCATION. LOADS, AND ADDITIONAL REQUIREMENTS.
- 1.13 IF LOCAL POWER COMPANY REQUIRES SPECIFIC POWER FACTOR REQUIREMENTS TO BE MAINTAINED, CONTRACTOR MUST NOTIFY OWNER THAT THIS REQUIREMENT MAY CAUSE FOR SPECIFIC POWER FACTOR CORRECTION. THIS IS NOT PART OF ENGINEERING DESIGN AND WILL CONSTITUTE ADDITIONAL DESIGN AND CONSTRUCTION.
- 1.14 LOW VOLTAGE WORK SHALL BE PERFORMED BY LICENSED L11 ELECTRICAL CONTRACTOR. ALL WORK IS TO BE PERFORMED BY QUALIFIED TRADESMEN WITH EXPERIENCE IN THE TYPE OF WORK TO BE PERFORMED. ALL WORK WILL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER AND OWNER
- 1.15 THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR MAINTAINING CIRCUIT INTEGRITY TO ALL EQUIPMENT AND DEVICES TO REMAIN. THE CONTRACTOR WILL REPAIR ANY DAMAGE TO EXISTING EQUIPMENT OR DEVICES TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- 1.16 THE CONTRACTOR IS RESPONSIBLE FOR THE DISPOSAL OF DEMOLISHED EQUIPMENT AND DEVICES. THE CONTRACTOR WILL COORDINATE WITH THE OWNER FOR ANY EQUIPMENT TO BE RETURNED TO OWNER STOCK PRIOR TO DISPOSAL.
- 1.17 WORK HOURS AND ACCESS TO SITE TO BE PER OWNER'S REQUIREMENTS.
- 2.0 MATERIALS AND METHODS.
- 2.1 ALL FITTINGS MUST BE STEEL COMPRESSION TYPE; DIE CAST FITTINGS ARE UNACCEPTABLE. EACH RACEWAY WITH CODE SIZED COPPER BOND WIRE. MINIMUM CONDUIT 21mm (34") C. EXCEPT FIXTURE FLEXES BY MANUFACTURER. OVER 53mm (2") CONDUIT TO BE RIGID GALVANIZED STEEL. ALL WORK WILL BE IN CONDUIT; COMPLETED SYSTEM REAMED, AND SWABBED PRIOR TO CONDUCTOR INSTALL.
- 2.2 CONDUCTORS TO BE 600V STRANDED COPPER (98% CONDUCTIVITY), FEEDERS AND ANY CONDUIT EXPOSE) TO THE AMBIENT WILL CONTAIN CONDUCTORS WITH XHHW-2 INSULATION, BRANCH CIRCUITS MAY HAVE THHN/THWN INSULATION.
- MINIMUM LINE VOLTAGE WIRE SIZE IS 12 AWG. WIRING DEVICES TO BE INDUSTRIAL OR HEAVY DUTY GRADE, MINIMUM 20 AMPS FOR RECEPTACLES AND 20 AMPS FOR SWITCHES, HUBBELL OR ENGINEER APPROVED EQUAL, ALL SPECIAL RECEPTACLES AND GROUND FAULT PROTECTED DEVICES MUST BE PERMANENTLY MARKED WITH ENGRAVED COVER PLATES.
- 2.4 UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC OR RGS WRAPPED WITH PVC TAPE. MINIMUM CONDUIT DEPTH SHALL BE 24 INCHES. MINIMUM UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH. UNDERGROUND SWEEPS FOR RISERS TO ABOVE GROUND SHALL BE PVC COATED RGS.
- 2.5 NONMETALLIC CONDUIT MAY BE USED BELOW GRADE OR UNDER SLABS OR N CONCRETE OR MASONRY WALLS (EXCEPT AS PROHIBITED BY LOCAL CODES). CONDUITS SHALL BE A MINIMUM OF 152mm (6") DEEP UNDER SLAB.
- 2.6 CONTRACTOR SHALL PROVIDE LETTER TO ENGINEER CONFIRMING ALL EQUIPMENT AND TERMINATIONS ARE PROPERLY TORQUED AND SIGNED BY LICENSED
- 2.7 CIRCUIT CONDUCTORS #2 AWG OR SMALLER TO BE COPPER TYPE "XHHW" FOR BELOW GRADE INSTALLATION OR COPPER TYPE THHN/THWN FOR ABOVE GRADE INSTALLATIONS. #1 AWG OR LARGER SHALL BE COPPER TYPE "XHHW-2" STRANDED COPPER MINIMUM CONDUCTOR SIZE TO BE #12 AWG WITH #12 GND.
- 2.8 ALL 600V RATED POWER AND CONTROL CONDUCTORS SHALL BE TESTED AFTER PULLING IN CONDUIT AND PRIOR TO TERMINATION. INSULATION TESTS SHALL BE 1000V FOR 1 MIN BETWEEN PHASES AND EACH PHASE TO GROUND. MINIMUM ACCEPTABLE TEST RESULT VALUE IS 10M OHM. FOR CABLE FAILURES, ALL CABLES IN CONDUIT SHALL BE EXTRACTED AND NEW CABLE RE-PULLED AND TESTED UNTIL ACCEPTABLE TEST RESULTS AFE ACHIEVED. ALL TESTS SHALL BE RECORDED, SIGNED
- ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURERS NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS, AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
- PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS, OR ANY OTHER CAUSES. IPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS DEFECTIVE.
- 2.11 LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIFE SCRAPS, AND ALL VISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK SITE DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT, AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK
- 3.1 SERVICE TO ENTRANCE EQUIPMENT MUST BE LABELED WITH REFERENCE TO "SERVICE ENTRANCE".
- 4.1 PANEL BOARDS (NEW): TO BE RATED AS SHOWN ON DRAWINGS WITH PLATED COPPERBUSSING, FULL SIZE CIRCUIT BREAKERS TO BE EQUAL TO SQ D, GENERAL ELECTRICAL, OR AS APPROVED BY ENGINEER. NEMA ENCLOSURE AS REQUIRED BY CODE FOR LOCATION, BACK BOXES ENLARGED FOR DOUBLE NEUTRALS AND LUGS CAPABLE OF OVER SIZING - ISOLATED GROUND AND NORMAL GROUND BUS.
- CIRCUIT BREAKERS WILL BE SWITCH RATED AND AMBIENT COMPENSATED FOR ALL CIRCUITS. PROVIDE SWITCHED NEUTRALS ON ALL CIRCUIT BREAKERS FEEDING CLASS 1 AND CLASS 2 AREAS WITH NEUTRALS. GFCI ON CIRCUITS WITH NEUTRALS TO DEVICES ABOVE CLASSIFIED AREAS. CIRCUIT BREAKERS SERVING HVAC UNITS AND MOTORS WILL BE HACR TYPE
- ALL EQUIPMENT (PANELS, DISCONNECT SWITCHES, STARTERS, ETC.) WILL BE MARKED WITH LABELS BEARING THE PANEL AND CIRCUIT NUMBER
- 4.4 ALL PANEL BOARDS WILL HAVE TYPED DIRECTORY CARDS IDENTIFYING ALL CIRCUITS AND SPACES (REVISED FOR THIS WORK).
- 4.5 LABEL ALL PANELS / TRANSFORMERS / DISCONNECTS WITH "WARNING ELECTRICAL EQUIPMENT DANGER QUALIFIED PERSONNEL ONLY TO OPERATE ON OPEN EQUIPMENT".

FLECTRICAL ABBREVIATIONS

RIGID GALVANIZED STEEL REMOTE TERMINAL UNIT

SOUTHERN CALIFORNIA EDISON

ELEC	FRICAL ABBREVIATIONS			<u> </u>	ELEC	CTRICAL SYMBOLS			
AMP	AMPERE		SINGLE LINE DIAGRAMS	CONT	TROL	. WIRING DIAGRAMS		PLANS	
AL	ALUMINUM	A) AMVETER				——	CONDUIT RUN CONCEALED UNDER SLAB OR BELOW GRAD (CONCEALED IN SLAB WHERE SO NOTED OR WHERE ALLO	DE. OWED PER
ATS	AUTOMATIC TRANSFER SWITCH	(V)	VOLTMETER	NORMALLY N OPEN	CLOSED	Y DEVICE		SPECIFICATIONS). CONDUIT RUN EXPOSED UNLESS OTHERWISE NOTED	
AWG	AMERICAN WIRE GAUGE	(N	METER		-1/-	CONTACT	— —	EXISTING CONDUIT RUN	
BRK	BREAKER		GENERATOR	200	Do	LIMIT SWITCH		GROUND WIRE CONDUIT UP (OUT TOP OF EQUIPMENT)	
CAT	CATALOG		SELECTION	2€		LIMIT SWITCH HELD CLOSED		CONDUIT DOWN (OUT BOTTOM OF EQUIPMENT)	
CR	CARD READER	(kwh)	KILOWATT HOUR METER	0=		LIMIT SWITCH HELD OPEN		CONDUIT STUB3ED OUT AND CAPPED LIGHTING FIXTURE MOUNTED ON POLE OR POST OR ABOV	/F
CIRC.	MIL CIRCULAR MILS (AWG)	VS AS	-	000	To	PRESSURE OR VACUUM SWITCH	- ™ <	PLATFORM CELING MOUNTED LIGHTING FIXTURE	_
C.O.	CONDUIT ONLY		VOLTMETER SWITCH	200	TO	LIQUID LEVEL SWITCH	Ď.	BRACKET MOUNTED LIGHTING FIXTURE	
CKT	CIRCUIT	<u>~</u>	— CURRENT TRANSFORMER	000	T0	TEMPERATURE ACTUATED SWITCH	\triangleleft	FLOODLIGHT	
CP	CONTROL PANEL		POTENTIAL TRANSFORMER	1	4			T-LUORESCENT LIGHTING FIXTURE POLE MOUNTED LIGHT FIXTURE	
DIA	DIAMETER		POWER TRANSFORMER	200	Lo	FLOW SWITCH (AIR, WATER, ETC.)	⊗	EXIT LIGHT	
DS	DOOR SWITCH	1 4	CONTROL TRANSFORMER		Lo	PUSH BUTTON SINGLE CIRCUIT MOMENTARY CONTACT.		RECESSED INCANDESCENT OR MERCURY VAPOR LIGHTING	
DWG	DRAWING	- ≪ :	>> DRAW OUT TYPE EQUIPMENT		(PUSH BUTTON SINGLE CIRCUIT LOCK-		LIGHTING FIXTURES CONNECTED TO EMERGENCY CIRCUIT LIGHTING FIXTURE TYPE A, 100 WATTS, WITH 1 LAMP. SEE	
EA	EACH	•——	⊢•	0 0 0	مــــــــــــــــــــــــــــــــــــــ	OUT(LOCATED AT MOTOR UNLESS OTHERWISE NOTED)	A 1/100	FIXTURE SCHEDULE	
ELECT	ELECTRICAL	- -	PLUG-IN TYPE EQUIPMENT	000	To	TIMED CONTACT- CONTACT ACTION RELAY ON ENERGIZATION.	\$ \$2	SINGLE POLE, SINGLE THROW TOGGLE SWITCH DOJBLE POLE, SINGLE THROW TOGGLE SWITCH	
ELEV	ELEVATION	60	CIRCUIT BREAKER	0000	To	TIMED CONTACT- CONTACT ACTION RELAY ON DE-ENERGIZATION.	\$3	THREE-WAY TCGGLE SWITCH	AT +48" OR AS NOTED
EXIST	EXISTING	00	,	1	,	ON-OFF SWITCH.	\$4	FOUR-WAY TOGGLE SWITCH	RONGILD
FLA	FULL LOAD AMPS	_%_	_ OILFUSE CUTOUTS	ESB		EMERGENCY STOP PUSH BUTTON (MAINTAINED	\$м \$ _а	MANUAL MOTOR STARTER OUTLETS SHOWN WITH SUBSCRIPT "a" ADJACENT TO THEM	M SHALL BE
FUT	FUTURE			STOP 5	START	CONTACT) STOP -START PUSH-BUTTON STATION	-	CONTROLLED BY S a DUPLEX CONVENIENCE RECEPTACLE AT +12" OR AS NOTE	-D
FVNR	FULL VOLTAGE,		TRANSFER SWITCH, AUTOMATIC	0 1 0	O O	(MAINTAINED CONTACTS).	-	SINGLE CONVENIENCE RECEPTACLE AT +12" OR AS NOTED	D
	NON-REVERSING		DENICED VOLTAGE STARTER	214	, н		◎	SPECIAL PURPOSE RECEPTACLE AT +12" OR AS NOTED, RAINCICATED	ATING AS
GFCI	GROUND FAULT CIRCUIT INTERRUPTER		REDUCED VOLTAGE STARTER			HAND-OFF-AUTO SELECTOR SWITCH SEE NOTE 3. (THREE POSITION).	Θ-	JUNCTION BOX SIZE AS REQUIRED BY CODE THERMOSTAT OUTLET AT +54"	
GND	GROUND		FULL VOLTAGE NON REVERSING STARTER	-0_0/	<u>A</u>		⊕- © =	CLOCK OUTLET AT +7'-6" OR AS NOTED TELEPHONE OUTLET AT +12" OR AS NOTED	
HP	HORSE POWER		CONDUIT NUMBER #. SEE CONDUIT AND WIRING		_	TWO POSITION SELECTOR SWITCH SEE NOTE	Ϊ.	TELEPHONE FLOOR OUTLET	
HZ	HERTZ (CYCLES PER SECOND	#	SCHEDULE FOR SIZES AND QUANTITIES OF CONDUIT AND WIRES.			3.		HORN CONTROL DEVICE	
IC	INTERRUPTING CAPACITY	\$\frac{1}{2}\text{\$\frac{1}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}{2}\text{\$\frac{1}\text{\$\frac{1}\text{\$\frac{1}\text{\$\frac{1}\text{\$\frac{1}\text{\$\frac{1}\text{\$\frac{1}	VARIABLE FREQUENCY DRIVE (VFD)		_	PILOT LIGHT, Y=YELLOW, R=RED, A=AMBER, SEE NOTE 3. B=BLUE, W=WHITE, G=GREEN.		PD = PRESSURE TRANSDUCER FS = FLOAT SWTCH	
KV	KILOVOLTS		GROUND					L = LEVEL SWITCH V = CONTROL VALVE	
LCL	LONG CONTINUOUS LOAD	''E	GROUND KIRK KEY INTEFLOCKING OF EQUIPMENT		'	BELL		CONTROL STATION: PUSH-BUTTON STATION OR SELECTOR SWITCH. SEE CONTROL WIRING DIAGRAMS FOR REQUIREM	
LED	LIGHT EMITTING DIODE	PFR	PHASE FAILURE RELAY			HORN OR SIREN	(M)	EXISTING MOTOR	
LTG	LIGHTING	SPD	SURGE ARRESTER	(CR)		CONTROL RELAY	()		
LS	LEVEL SWITCH		,				(M)	NEW MOTOR	
MAX	MAXIMUM	(#)	MOFOR (# = ESTIMATED HP)	(M		STARTER COIL.	(M)	FUTURE MOTOR	
MCC	MOTOR CONTROL CENTER		EYS SEAL	(TDR)		TIME DELAY RELAY. (0-30 SECONDS UNLESS OTHERWISE NOTED).	, <u> </u>	GROUND WELL	
MCP	MAIN CONTROL PANEL	<	ELECTRONIC OVERLOAD RELAY		OL'S	MOTOR STARTER OVERLOAD RELAY	8	GROUND ROD	
MCM	THOUSAND CIRCULAR MIL (AWG)	′				CONTACTS CONTROL TRANSFORMER	Ť	DISCONNECT SWITCH. SEE SINGLE LINE DIAGRAM FOR SIZ	ZE.
MFR	MANUFACTURER				~	MANUAL MOTOR STARTER	\blacksquare	LIGHTING PANEL. SURFACE MOUNTED.	
MIN	MINIMUM			`	<u></u>	SOLENOID OPERATED CONTROL VALVE		SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTRO	OL CENTER
MIS	MISCELLANEOUS	SCHED	SCHEDULE			SOLETION OF EIGHTED SONTHOL WEVE		EQJIPMENT BYOTHERS	
MOV	MOTOR OPERATED VALVE	SES	SERVICE ENTRANCE SECTION		/	MOTOR	1	INDICATES TO REFER TO NOTE (1) ON DRAWING	
MPZ	MINI POWER ZONE	SPECS	SPECIFICATIONS			RUNNING TIME METER. (ELAPSED TIME METER)	W.P.	WEATHERPROOF. PROVIDE GASKETS AS REQUIRED	
MTG	MOUNTING	SS	SOFT STARTER	RTM)		SPACE HEATERS. (LOCATED AT MOTOR	c.o.	CONDUIT ONLY ELECTRICAL PULL BOX (SIZE AS REQUIRED)	
N.C.	NORMALLY CLOSED	SSS	SOLID STATE STARTER		_	UNLESS OTHERWISE NOTED).	C	CCMMUNICATIONS PULL BOX (SIZE AS REQUIRED)	
NEC	NATIONAL ELECTRICAL CODE	TEL	TELEPHONE	$ \bullet \rightarrow \vdash$	—	TERMINALS IN MOTOR CONTROL CENTER/MCP	•	OUTPUT TERMINAL	
N.O.	NORMALLY OPEN	TDR	TIME DELAY RELAY		_	CONTACT OR DEVICE REMOTE FROM MOTOR CONTROL CENTER/MCP		INFUT TERMINAL	
NO.	NUMBER	TTB	TELEPHONE TERMINAL BACKBOARD		— 0	TERMINALS IN MOTOR CONTROL CENTER/MCP		PROPOSED TRANSFORMER AUTOMATIC TRANSFER SWTCH (ATS)	
PLC	PROGRAMMABLE LOGIC CONTROLLER	TYP	TYPICAL	"	<u> </u>	CONTACT IN MOTOR CONTROL CENTER FOR CONNECTION TO REMOTE DEVICE/MCP			
PNL	PANEL	UG	UNDER GROUND		,		'	REMOVABLE BOLLARD	
PR	PAIR	US	ULTRASONIC SENSOR		1	DEVICE SIGNAL INDUT	AHH.	YAGI ANTENNA	
PVC	POLYVINYL CHLORIDE	UCP	UNIT CONTROL PANEL		1	DEVICE SIGNAL INPUT			
REC	RECEPTACLE	V	VOLTS	(K)		MECHANICAL INTERLOCK			
RGS	RIGID GALVANIZED STEEL	VFD	VARIABLE FREQJENCY	1					

VARIABLE FREQJENCY DRIVE

WEATHERPROOF

TRANSFORMER

XFMR

FURNISH AND INSTALL ALL LIGHTING FIXTURES COMPLETE WITH LAMPS AND ACCESSORIES AS DIRECTED BY THE

4.6 DISCONNECT SWITCHES WILL BE HEAVY-DUTY, QUICK-MAKE, QUICK-BREAK, FORSEPOWER RATED, NEMA-1 INDOOR, NEMA-3R GASKETED, (4X) NEMA-12, OR NEMA-7 AS APPLICABLE WITH CLASS RK-1 BUSSMANN FUSES AND REJECTION CLIPS, SIZED AS SHOWN ON DRAWINGS OR PROPER DISCONNECTS PER N.E.C. WILL BE PROVIDED FOR EACH PIECE OF ELECTRICAL EQUIPMENT.

5.2 ALL FIXTURES TO BE INSTALLED IN SYMMETRICAL MANNER FREE FROM LIGHT LEAKS AND DIRTY LENSES OR

6.1 THE ELECTRICAL DISTRIBUTION SYSTEM FROM SES TO EACH SERVICE DISCONNECT POINT TO BE TESTED WITH THE FOLLOWING:

6.1.2 MEGGER TESTED WITH ALL SWITCHES CLOSED BETWEEN EACH PHASE CONDUCTOR TO GROUND AND NEUTRAL PHASE CONDUCTOR WITH 900V FOR ONE (1) MINUTE.

- 6.1.3 EACH SUB-FEEDER SHALL BE TESTED FOR PROPER PHASING AND OUTLETS ARE TESTED FOR CORRECT POLARITY
- 6.1.4 EACH SERVICE DISCONNECT LOCATION SHALL BE TESTED TO ENSURE PHASING AND POLARITY 6.1.5 RTU TO HAVE FACTORY ACCEPTANCE TESTING PRIOR TO SITE DELIVERY
- 6.1.6 SITE ACCEPTANCE TESTING TO BE PERFORMED PRIOR TO TURN OVER

OLU 3

FIOLI PHO	CCM Engin 2570 FM 407, Suite 2 Highland Village, Tex Ph: 972, 691.6633 TBPE FIRM #605
	THIS DOCUMENT IS INCOMPLETE AND IS REPLIESED TRAPPORABILY FOR INITIATION FROM CONTRIBUTION TO ADMINISTRATION TO ADMINISTRATION TO ADMINISTRATION OF STRAIN TO 155284 DATE: NOVEMBER 2024
	REVISIONS

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SCALE: NOTES:

DATE: 1/7/2025

Engineering

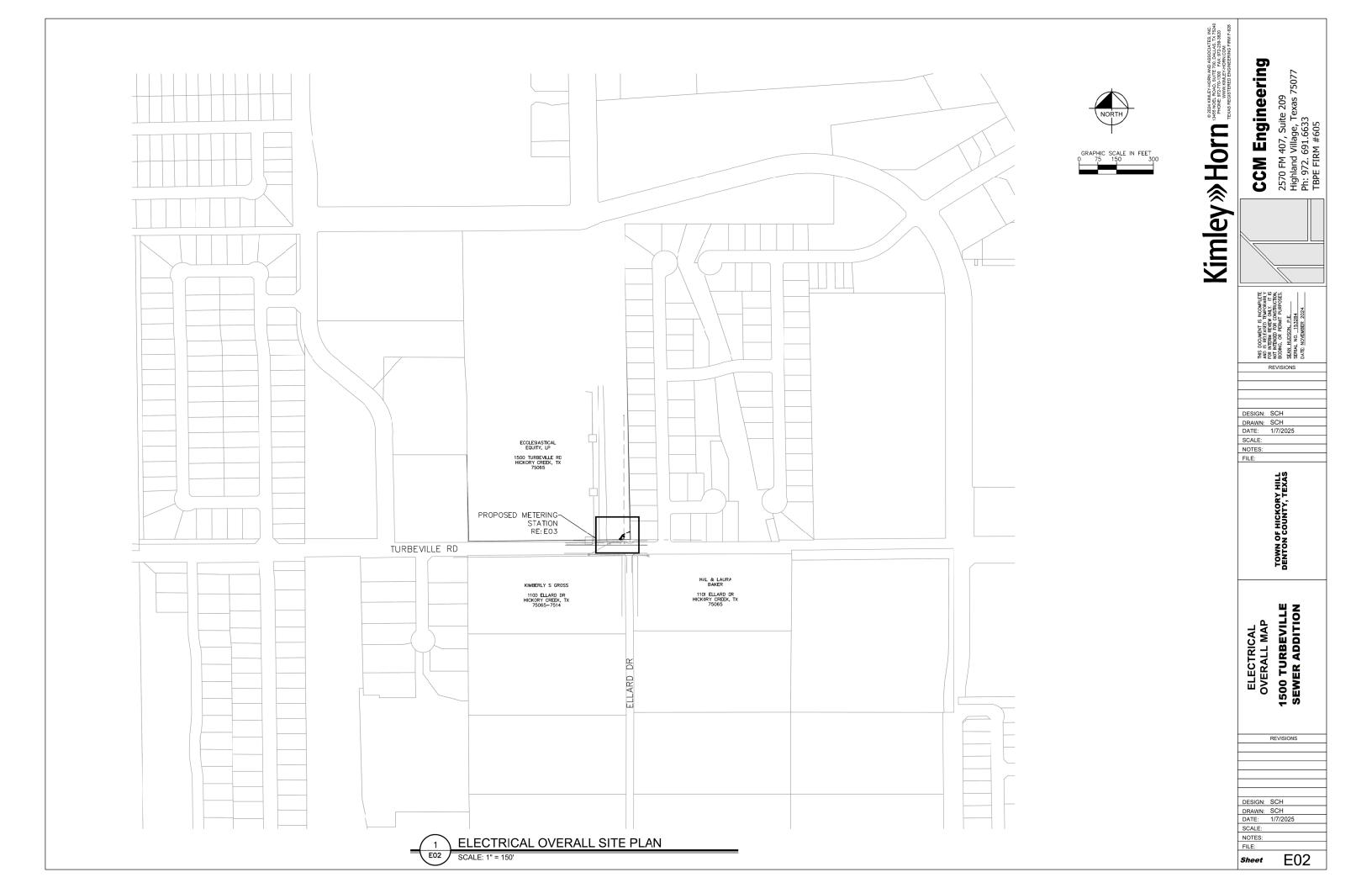
ELECTRICAL LEGEND, SYMBOLS, AND NOTES JRBEVILLE ADDITION 1500 TUI SEWER /

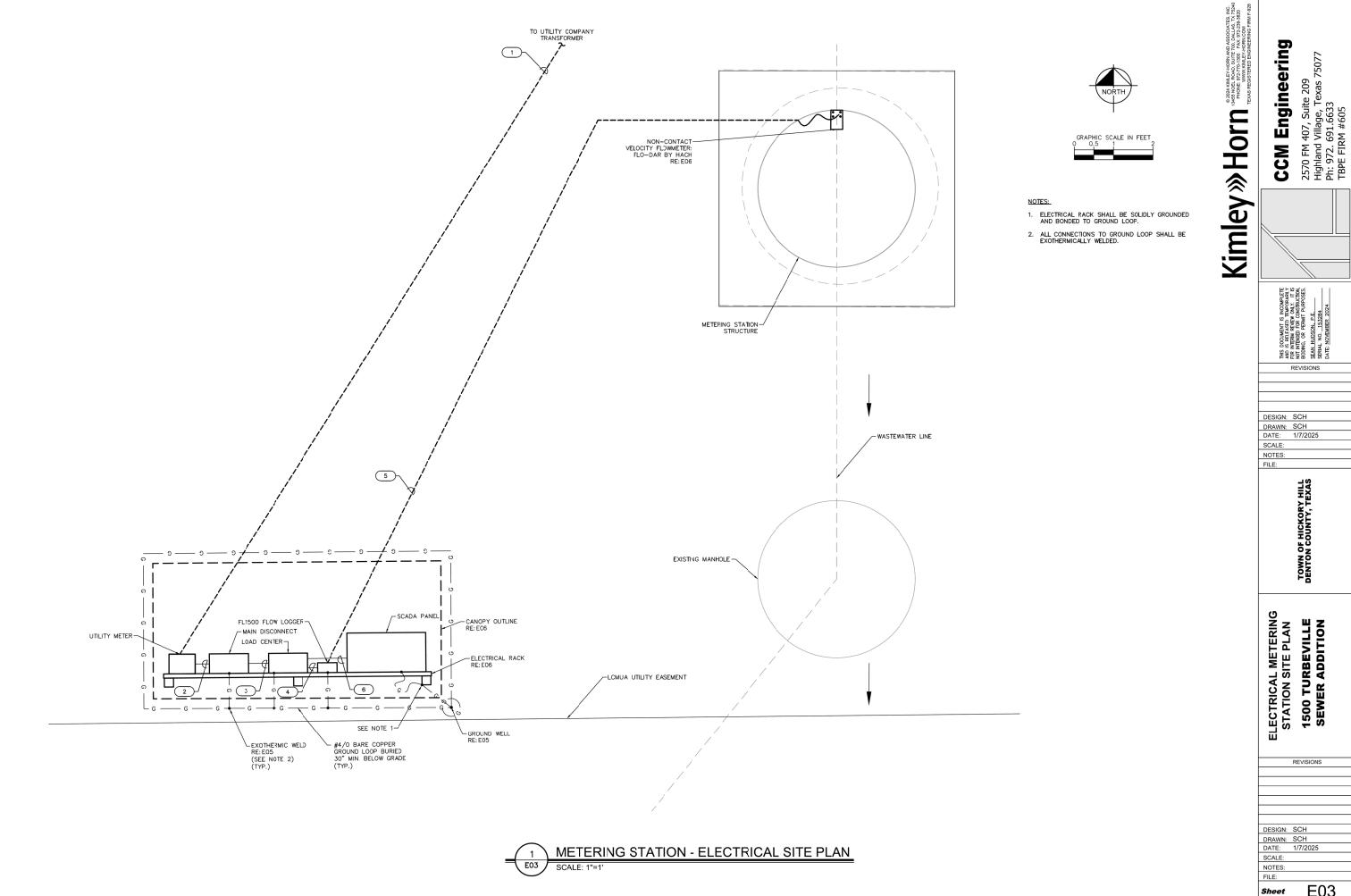
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E01

NOTES

Sheet





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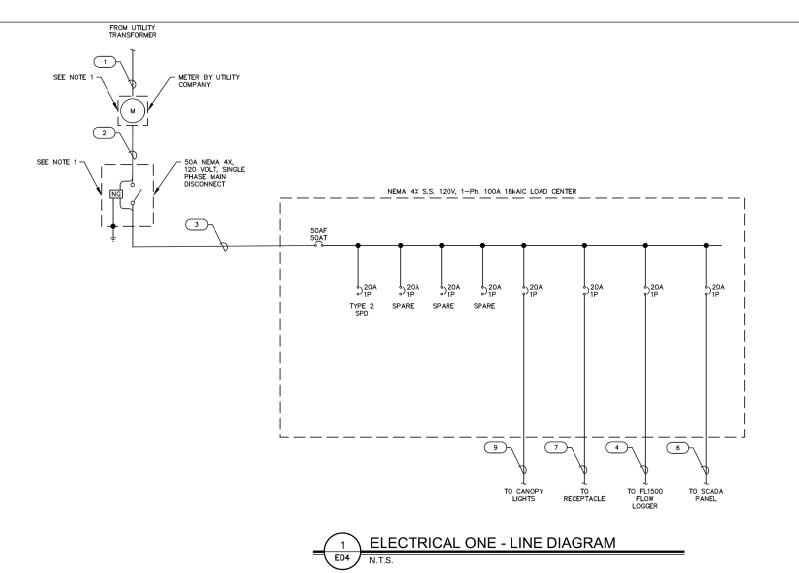
TOWN OF HICKORY HILL DENTON COUNTY, TEXAS

ELECTRICAL METERING STATION SITE PLAN 1500 TURBEVILLE SEWER ADDITION

REVISIONS

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DRAWN: SCH
DATE: 1/7/2025

E03



							CONDUIT SCHEDULE			
CON	DUIT			COND	NDUCTORS			o Buon u	DECEMANDO	COMMENT
TAG	SIZE	POWER	NEUTRAL	CONTROL	INSTRUM.	GROUND	DESCRIPTION	ORIGIN	DESTINATION	COMMENT
1	1"	2 - #6				#8	POWER	UTILITY TRANSFORMER	UTILITY COMPANY METER	
2	1"	2 - #6				#8	POWER	UTILITY COMPANY METER	MAIN DISCONNECT	
3	1"	2 - #6				#8	POWER	MAIN DISCONNECT	LOAD CENTER	
4	1"	2 - #12				#12	FLOW INDICATING TRANSMITTER POWER	LOAD CENTER	FL1500 FLOW LOGGER	
5	1"	2 - #12			#16 TSP	#12	FLOWMETER POWER AND SIGNAL	FL1500 FLOW LOGGER	TERMINAL BOX	
6	1"	2 - #12				#12	SCADA PANEL POWER	LOAD CENTER	SCADA PANEL	
7	1"	2 - #12				#12	RECEPTACLE POWER	LOAD CENTER	RECEPTACLE AT RACK	
8	1"				#16 T SP		FLOW LOGGER SIGNAL	FL1500 FLOW LOGGER	SCADA PANEL	
9	1"	2 - #12				#12	CANOPY LIGHTS POWER	LOAD CENTER	CANOPY LIGHTS	
10	1"				FLOWMETER CABLE		FLOWMETER POWER AND SIGNAL	TERMINAL BOX	FLOWMETER	MANUFACTURER CABLE

													$\overline{}$
					Р	ANI	ELS	CHE	DULE				
		DESIGNATION:	IACL	CENTE	R				MAINS:	100	AMP MAIN CIRCUIT BR	EAKER	П
		LOCATION:					l		BUS SIZE:	100	AMP		1 1
ш		VOLTAGE:	120/2	240			l		PANEL MOUNTING:	SUF	RFACE		ш
9		PHASE:	1PH	ASE, 3	WIRE				ALL BREAKERS:	10,0	000 A.I.C. (MINIMUM)		NOTE
	CKT.	LOAD		CKT.	BKR.	K١	VΑ		CKT. BKR.		LOAD	CKT.	ш
SEE	NO.	DESCRIPTION	KVA	AMPS	POLE	Α	В	AMPS	POLE	KVA	DESCRIPTION	NO.	SE
	1	FLOW INDICATING TRANSMITTER	1.08	20	1	2.28		20	1	1.20	SCADA PANEL	2	
	3	RECEPTACLE	1.08	20	1		2.08	20	1	1.00	CANOPY LIGHTS	4	
	5	SPARE	0.00	20	1	0.00		20	1	0.00	SPARE	6	
	7	SPARE	0.00	20	1		0.00	20	1	0.00	SPARE	8	
		TOTAL CONNECTED LOAD:				2.28	2.08		TOTAL =	4.36			
ЮТ	ES:												
Α.	FOR C	ONDUIT AND CABLE FOR EACH O	IFCUI	T, REFER	TO BRAI	CH CI	RCUIT	CONDUIT	AND CABLE SCHEDULE C	N THIS	SHEET.		
B.													
C.													
D.													

NOTES:

SERVICE ENTRANCE EQUIPMENT IS SHOWN FOR REFERENCE ONLY. MODIFY INSTALLATION PER UTILITY COMPANY STANDARDS.

KIMILEY)) HOFTH 1943 NOCH TO BOUND STAND OF THE STAND OF CCM Engineering 2570 FM 407, Suite 209 Highland Village, Texas 75077 Ph: 972. 691.6633 TBPE FIRM #605

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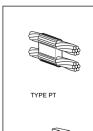
TOWN OF HICKORY HILL DENTON COUNTY, TEXAS

1500 TURBEVILLE SEWER ADDITION

ELECTRICAL DETAILS

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E04



TYPE VS



TYPE GL LUG

E05

TYPE GR

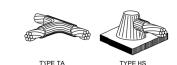
(TOWER GROUNDING TAB)

TYPE VBC

HEAT SHRINK ON GATES ONLY

1. CADWELD "TYPES" SHOWN ABOVE ARE EXAMPLES. PROVIDE APPROPRIATE TYPES AS REQUIRED.

TYPICAL CAD WELDS



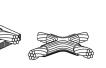
TYPE GT







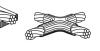
TYPE SS





FINISHED GRADE

CLAD GROUND ROD



TYPE HA TYPE XA



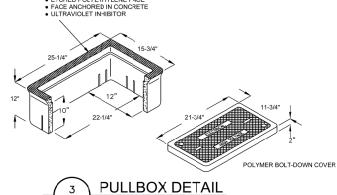
GROUND SYMBOL & WORDS CAST IN TOP OF COVER

GROUND

- CONCRETE CASE W/CAST IRON COVER -BROOKS PRODUCTS #3-RT

CONTINUOUS #6 AWG BARE COPPER GROUND CABLE.

ANTENNA



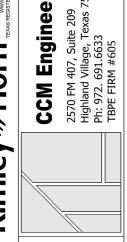
UNDERGROUND WARNING TAPE

CONDUITS)

DUCTBANK DETAIL

• ETCHED POLYETHYLENE FACE





Engineering

THIS AND FOR II NOT II BIDDIN SEAN SERIA DATE:

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NOTES:

TOWN OF HICKORY HILL DENTON COUNTY, TEXAS

ELECTRICAL DETAILS 1500 TURBEVILLE SEWER ADDITION

REVISIONS

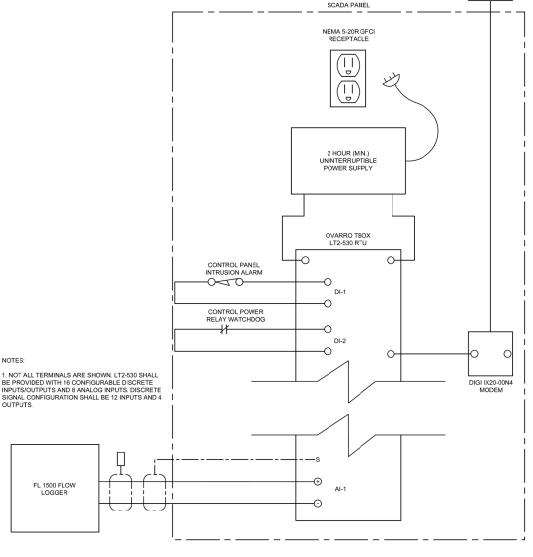
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DATE: 1/7/2025 SCALE: NOTES: FILE:

Sheet

FLOWMETER TERMINAL BOX DETAIL E05

	RTU I/O LIST	
NUMBER	DESCRIPTION	TYPE
DI-1	POWER FAILURE	DISCRETE INPUT
DI-2	RTU PANEL INTRUSION	DISCRETE INPUT
DI-3	ALARM	DISCRETE INPUT
DI-4	SPARE	DISCRETE INPUT
DI-5	SPARE	DISCRETE INPUT
DI-6	SPARE	DISCRETE INPUT
DI-7	SPARE	DISCRETE INPUT
DI-8	SPARE	DISCRETE INPUT
DI-9	SPARE	DISCRETE INPUT
DI-10	SPARE	DISCRETE INPUT
DI-11	SPARE	DISCRETE INPUT
DI-12	SPARE	DISCRETE INPUT
DO-1	SPARE	DISCRETE OUTPUT
D0-2	SPARE	DISCRETE OUTPUT
DO-3	SPARE	DISCRETE OUTPUT
DO-4	SPARE	DISCRETE OUTPUT
AI-1	SPARE	FLO-DAR FLOW
Al-2	FLO-DAR FLOW	ANALOG INPUT
AI-3	SPARE	ANALOG INPUT
Al-4	SPARE	ANALOG INPUT
AI-5	SPARE	ANALOG INPUT
Al-6	SPARE	ANALOG INPUT
AI-7	SPARE	ANALOG INPUT
AI-8	SPARE	ANALOG INPUT



★KEYED NOTES TO FL1500 FLOW LOGER 3 FLOWMETER CABLE TO MANHOLE

TERMINAL BOX NOTES COVERS OF TERMINAL BOXES ARE NOT SHOWN FOR CLARITY.

E05

PAVEMENT OR -EARTH COMPACTED TO 95%

BOND GROUND CONDUCTORS TO BACKPANEL OF TERMINAL BOX. INSTALL GROUND JUMPER FROM TERMINAL BOX DOOR TO TERMINAL BOX BACK PANEL.

INSTALL CSBE SEALS ON CONDUITS TO MANHOLE.

ARRANGEMENT SHOWN IS TYPICAL AND DOES NOT INCLUDE ALL CONDUIT, WIRE, OR FITTINGS. REFER TO CONDUIT SCHEDULE AND ONE—LINE DIAGRAM.

PROVDE 30A TERMINAL BLOCK FOR CONTROLS. PROVIDE TERMINAL BLOCK FOR EACH CABLE; DO NOT DOUBLE LUG.

PROVDE 6"x6"x4" MINIMUM NEMA 4X 316 STAINLESS STEEL TERMINAL BOX BOX SHALL BE EQUIPPED WITH CONTINUOUS PIANO HINGE AND PADLOCKABLE 3-POINT LATCH.

FINISHED GRADE

ALL HARDWARE TO BE 316 STAINLESS STEEL.

GROUND ALL COMPONENTS WITHIN TERMINAL BOX TO FORM CONTNUOUS GROUND TO GROUND BUS.

PROVDE LAMINATED WIRE TAGS FOR EACH CONDUCTOR CORRESPONDING TO AS-BUILT DRAWINGS.

COIL ADEQUATE SLACK WITHIN EACH TERMINAL BOX FOR MAINTENANCE.

PROVDE NAMEPLATES FOR EACH TERMINAL BOX. EQUIFMENT NAMEPLATES SHALL BE 3-PLY PHENOLIC MATERIAL APPROX. 3" LONG BY 1" MIDE, ENGRAVED WITH BLACK LETTERING ON A WHITE BACKGROUND. NAMEPLATES ARE PERMITTED TO HAVE 3 LINES OF TEXT WITH A MAXIMUM OF 16 — 3/16" CHARACTERS WITH A 0.8 CONDENSED FACTOR PER LINE. NAMEPLATES SHOULD INCLUDE NAME AND EQUIPMENT TAG AS SHOWN ON ONE—LINE DIAGRAM.

EYS SEALS NCT SHOWN. PROVIDE EYS SEALS ON CONDUIT BETWEEN TERMINAL BOX AND FL1500 FLOW LOGGER ONLY.

RTU I/O LIST

INTERCONNECTION DIAGRAM

E05

