ORIGINAL SUBMITTAL (2018), CURRENT SUBMITTAL
PW-2024-30-SER (290-24-013)

CONSTRUCTION PLANS FOR

ORCHARD RANCH OFFSITE

12-INCH WATERLINE IMPROVEMENTS

TRAVIS COUNTY, TEXAS

OCTOBER 2024

OWNER:
CLAYTON PROPERTIES GROUP INC.
(DBA BROHN HOMES)
6720 VAUGHT RANCH ROAD SUITE 200
AUSTIN, TEXAS 78730
(512) 320-8833

ENGINEER:
GRAY ENGINEERING INC.
8834 N. CAPITAL OF TEXAS HWY., SUITE 140
AUSTIN, TEXAS 78759
(512) 452-0371
FAX (512) 454-9933

SURVEYOR:
CHAPARRAL PROFESSIONAL LAND SURVEYORS
3500 McCALL LANE
AUSTIN, TEXAS 78744
(512) 443-1724

NOTES:

1. TRAVIS COUNTY APPRAISAL DISTRICT PARCEL NUMBERS: 0415670118 & 0415670127
2. THIS SUBDIVISION IS LOCATED WITHIN THE BARTON CREEK WATERSHED AND THE SLAUGHTER CREEK WATERSHED.
3. THIS SUBDIVISION IS LOCATED WITHIN THE EDWARDS AQUIFER CONTRIBUTING ZONE AS DEFINED BY TCEQ.
4. THIS SUBDIVISION AS SHOWN HEREON LIES WITHIN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN), AS IDENTIFIED BY FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), NATIONAL FLOOD INSURANCE PROGRAM, AS SHOWN ON MAP NO. 48453C0555H DATED SEPTEMBER 26, 2008 FOR TRAVIS COUNTY, TEXAS AND INCORPORATED AREAS.

WEST TRAVIS COUNTY PUA NOTES:

1. THE WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY IS THE RETAIL WATER SERVICE PROVIDER.
2. WTPUA DOES NOT GUARANTEE FIRE FLOW.
3. A WTPUA REPRESENTATIVE MUST BE PRESENT AT THE TIME OF CONNECTION TO EXISTING SYSTEM.
4. ALL WATER AND WASTEWATER INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF AUSTIN WATER AND WASTEWATER CONSTRUCTION SPECIFICATIONS AND WITH MATERIALS FORM THE CURRENT APPROVED CITY OF AUSTIN STANDARD PRODUCTS LIST (SPL).

WATER SERVICE INFORMATION
CALCUALTED DESGN PRESSURE (HIGH): 98.13 (1339.46' HGL)
CALCULATED DESIGN PRESSURE (LOW): 78.93 (1339.15' HGL)
FIRE FLOW REQUIRED: 1,000 GPM
FIRE FLOW AVAILABLE: 1,500 GPM

LINEAR FEET OF DISTURBANCE: 1800 LF
DISTURBED AREA (SF): 23057 SF

PRIOR TO SCHEDULING THE PRE-CONSTRUCTION MEETING ENSURE THAT ALL REQUIRED NOTICES AND PERMITS ARE POSTED AND THE CERTIFIED INSPECTOR FOR YOUR SITE HAS UPLOADED A SWP3 INSPECTION REPORT TO YOUR ACCOUNT THAT CONFIRMS THAT THE FIRST PHASE OF TEMPORARY ESC HAVE BEEN INSTALLED PER PLANS AND SPECIFICATIONS.

ALONG WITH THE CITY OF AUSTIN, SCHEDULE YOUR PROJECTS PRE-CONSTRUCTION MEETING THROUGH THE MYPERMITNOW.ORG ACCOUNT AFTER THE INITIAL 3RD PARTY SWP3 INSPECTION REPORT HAS BEEN UPLOADED AND ALL PERMITS AND NOTICES HAVE BEEN POSTED THEN FOLLOW UP WITH AN EMAIL TO THE TRAVIS COUNTY DEVELOPMENT SERVICES ENGINEERING INSPECTOR, JOHNNY ANGLIN, AT JOHNNY.ANGLIN@TRAVISCOUNTY.GOV

REVIEWED BY:

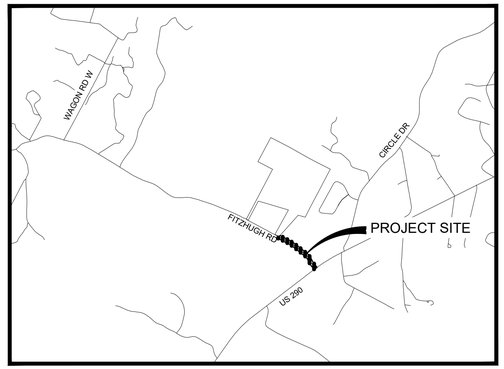
TRAVIS COUNTY TRANSPORTATION AND NATURAL RESOURCES HAS COMPLETED THE REVIEW OF DEVELOPMENT PERMIT NUMBER 23-42665 ON MAY 16, 2025, BY CHRISTOPHER PRIGMORE, P.E. THERE ARE NO OUTSTANDING ENGINEERING COMMENTS. IN LIEU OF SIGNATURE, THIS STATEMENT IS POSTED ON THE COVER SHEET. DIRECT ANY QUESTIONS TO CHRISTOPHER PRIGMORE, P.E., TNR DEVELOPMENT SERVICES, AT (512) 854-4699, AND AT CHRISTOPHER.PRIGMORE@TRAVISCOUNTYTX.GOV

Tricia S, Tichenor-Altamirano, PE

Digitally signed by Tricia S, Tichenor-Altamirano, PE
Date: 2025.02.25 13:11:09-06'00'

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY DATE

THE ENGINEER WHO PREPARED THESE PLANS IS RESPONSIBLE FOR THEIR ADEQUACY. IN APPROVING THESE PLANS, TRAVIS COUNTY MUST RELY ON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.



VICINITY MAP

COA GRID: WX18, WX19, WY18, WY19
MAPSCO GRID: 609Z, 610W, 639D, 640A
WTPUA GRID MAP: AI-16, AJ-16 HWY 290 WATER
SYSTEM, HGL - 1308/1340 MSL

DATE OF SUBMITTAL
SEPTEMBER 2022

BENCHMARK:

BENCHMARK #1
- 4" ALUMINUM DISK IN CONCRETE STAMPED P942, ±8 SOUTH OF THE SOUTH EDGE OF ASPHALT OF FITZHUGH ROAD & ±1230' EAST OF THE INTERSECTION OF FITZHUGH ROAD AND RUTTER LANE.
  ELEVATION: 1117.36 FEET NAV-88

BENCHMARK #2
- MAG NAIL WITH WASHER IN EAST SIDE OF THE CURB OF CONCRETE DRIVEWAY ON THE NORTH SIDE OF FITZHUGH ROAD, ±547' WEST OF THE INTERSECTION OF FITZHUGH ROAD AND U.S. HIGHWAY 290 WEST.
  ELEVATION: 1096.40 FEET NAV-88

BENCHMARK #3
- MAG NAIL WITH WASHER IN THE SOUTHWEST CORNER OF THE CONCRETE BASE OF THE FIRST METAL ELECTRIC TRANSMISSION LINE POLE EAST OF THE NORTHWEST CORNER OF THE SUBJECT TRACT.
  ELEVATION: 1127.67 FEET NAV-88

SUBMITTED BY:

CHRIS RAWLS 2/24/25
CHRIS RAWLS, PE DATE
GRAY ENGINEERING, INC. TBPE NO. F-2946
8834 N. CAPITAL OF TEXAS HIGHWAY, SUITE 140
AUSTIN, TX 78759
(512) 452-0371

STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER

NO.	DATE	SHEETS	REVISION DESCRIPTION

Sheet List Table

SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	GENERAL NOTES (1 OF 3)
3	GENERAL NOTES (2 OF 3)
4	GENERAL NOTES (3 OF 3)
5	EROSION CONTROL & SEDIMENTATION PLAN
6	VALVE SHUT-OFF PLAN
7	OVERALL WATER DISTRIBUTION PLAN
8	JOINT RESTRAINT CALCULATION TABLE
9	OFFSITE WL A PLAN & PROFILE 1+00 TO 8+50
10	OFFSITE WL A PLAN & PROFILE 8+50 TO END
11	OFFSITE WL B PLAN & PROFILE 1+00 TO END
12	EROSION CONTROL DETAILS
13	WATER DETAILS
14	TRAFFIC CONTROL DETAILS

QUANTITIES TO BE CONVEYED TO THE WTPUA

OFFSITE WATER QUANTITIES		
12-INCH CL 350 DI WL (NON-RJ)	1175	LF
12-INCH CL 350 DI WL (RJ)	575	LF
12-INCH GATE VALVE W/BOX COVER	9	EA
FIRE HYDRANT ASSEMBLY & VALVE	3	EA
24-INCH STEEL ENCASEMENT	55	LF
12"X12" TEE	1	EA
12" CAP	2	EA
12"X12" TEE	2	EA
12"X8" CROSSING	1	EA
8-INCH CL 150 C900 PVC WL	113	LF
8-INCH GATE VALVE W/BOX COVER	5	EA
16-INCH STEEL ENCASEMENT	61	LF
6-INCH GATE VALVE W/BOX COVER	2	EA
45° BEND	8	EA
22° BEND	2	EA
11.25° BEND	1	EA
6.25° BEND	2	EA

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TBPELS FIRM #2946

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-COVR.DWG DATE: 2/24/2025 4:13:44 PM BY: CRAWLS

PROJECT NO: 11741 ORCHARD RANCH

TRAVIS COUNTY STANDARD CONSTRUCTION NOTES FOR WATER :

1. BEFORE BEGINNING ANY CONSTRUCTION, THE OWNER MUST OBTAIN A TRAVIS COUNTY DEVELOPMENT PERMIT AND POST THE DEVELOPMENT PERMIT, THE TCEQ SITE NOTICE, AND ANY OTHER REQUIRED PERMITS AT THE JOB SITE.
2. CONSTRUCTION MAY NOT TAKE PLACE WITHIN TRAVIS COUNTY RIGHT–OF–WAY UNTIL AFTER THE OWNER HAS SUBMITTED A TRAFFIC CONTROL PLAN TO TRAVIS COUNTY AND OBTAINED WRITTEN APPROVAL OF THE TRAFFIC CONTROL PLAN FROM TRAVIS COUNTY.
3. THE CONTRACTOR AND PRIMARY OPERATOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION AND THE SW3P IN THESE APPROVED PLANS. THE CONTRACTOR AND PRIMARY OPERATOR SHALL REQUEST TRAVIS COUNTY INSPECTION AT SPECIFIC MILESTONES IN THE SEQUENCE OF THE CONSTRUCTION OF THE SITE DEVELOPMENT CORRESPONDING TO THE PRIORITY INSPECTION SPECIFIED IN CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS. DEVELOPMENT OUTSIDE THE LIMITS OF CONSTRUCTION SPECIFIED IN THE APPROVED PERMIT AND CONSTRUCTION PLANS IS PROHIBITED.
4. BEFORE BEGINNING ANY CONSTRUCTION, ALL STORM WATER POLLUTION PREVENTION PLAN (SW3P) REQUIREMENTS SHALL BE MET, AND THE FIRST PHASE OF THE TEMPORARY EROSION CONTROL (ESC) PLAN INSTALLED WITH A SW3P INSPECTION REPORT UPLOADED TO MYPERMITNOW.ORG. ALL SW3P AND ESC PLAN MEASURES AND PRIMARY OPERATOR SW3P INSPECTIONS MUST BE PERFORMED BY THE PRIMARY OPERATOR IN ACCORDANCE WITH THE APPROVED PLANS AND SW3P AND ESC PLAN NOTES THROUGHOUT THE CONSTRUCTION PROCESS.
5. BEFORE STARTING CONSTRUCTION, THE OWNER OR CONTRACTOR OR THEIR DESIGNATED REPRESENTATIVES SHALL SUBMIT A REQUEST VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY TO REQUEST AND SCHEDULE A MANDATORY PRECONSTRUCTION CONFERENCE AND ESC INSPECTION. IF FURTHER ASSISTANCE IS NEEDED, THE TNR PLANNING AND ENGINEERING DIVISION STAFF OR TNR STORM WATER MANAGEMENT PROGRAM STAFF CAN BE CONTACTED BY TELEPHONE AT 512–854–9383.
6. THE CONTRACTOR SHALL KEEP TRAVIS COUNTY TNR ASSIGNED INSPECTION STAFF CURRENT ON THE STATUS OF SITE DEVELOPMENT AND UTILITY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY TRAVIS COUNTY AND REQUEST PRIORITY INSPECTIONS THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY IN ACCORDANCE WITH THE SPECIFIC MILESTONES IN THE CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS.
7. CONTOUR DATA SOURCE: ON–THE–GROUND CONTOURS BY CHAPARRAL PROFESSIONAL LAND SURVEYING, DATED 12/20/2017.
8. FILL MATERIAL MUST BE MANAGED AND DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS SPECIFIED IN THE APPROVED PLANS, SW3P, AND THE TRAVIS COUNTY CODE. THE CONTRACTOR SHALL STOCKPILE FILL AND CONSTRUCTION MATERIALS ONLY IN THE AREAS DESIGNATED AND THE APPROVED PLANS AND NOT WITHIN THE 100–YEAR FLOOD PLAIN WATERWAY SETBACK, CRITICAL ENVIRONMENTAL FEATURE SETBACK, OR OUTSIDE THE LIMITS OF CONSTRUCTION. DISPOSAL OF SOLID WASTE MATERIAL, AS DEFINED BY THE STATE LAW (E.G., LITTER, TIRES, DECOMPOSABLE WASTES, ETC.) IS PROHIBITED IN PERMANENT FILL SITES.
9. BEFORE DISPOSING ANY EXCESS FILL MATERIAL OFF–SITE, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR DOCUMENTATION THAT DEMONSTRATES THAT ALL REQUIRED PERMITS FOR THE PROPOSED DISPOSAL SITE LOCATION, INCLUDING TRAVIS COUNTY, TCEQ NOTICE, AND OTHER APPLICABLE DEVELOPMENT PERMITS, HAVE BEEN OBTAINED. THE OWNER OR PRIMARY OPERATOR MUST REVISE THE SW3P AND ESC PLAN IF HANDLING OR PLACEMENT OF EXCESS FILL ON THE CONSTRUCTION SITE IS REVISED FROM THE EXISTING SW3P. IF THE FILL DISPOSAL LOCATION IS OUTSIDE TRAVIS COUNTY OR DOES NOT REQUIRE A DEVELOPMENT PERMIT, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR THE SITE ADDRESS, CONTACT INFORMATION FOR THE PROPERTY OWNER OF THE FILL.
10. THE DESIGN ENGINEER IS RESPONSIBLE FOR THE ADEQUACY OF THE CONSTRUCTION PLANS. IN REVIEWING THE CONSTRUCTION PLANS, TRAVIS COUNTY WILL RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
11. IN THE EVENT OF ANY CONFLICTS BETWEEN THE CONTENT IN THE SW3P SITE NOTEBOOK AND THE CONTENT IN THE CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY, THE CONSTRUCTION PLANS SHALL TAKE PRECEDENCE.
12. A MINIMUM OF TWO SURVEY BENCHMARKS SHALL BE SET, INCLUDING DESCRIPTION, LOCATION AND ELEVATION; THE BENCHMARKS SHOULD BE TIED TO A TRAVIS COUNTY CONTROL BENCHMARK WHEN POSSIBLE.
13. ANY EXISTING PAVEMENT, CURBS, SIDEWALKS, OR DRAINAGE STRUCTURES WITHIN COUNTY RIGHT–OF–WAY WHICH ARE DAMAGED, REMOVED, OR SILTED, WILL BE REPAIRED BY THE CONTRACTOR AT OWNER OR CONTRACTOR'S EXPENSE BEFORE APPROVAL AND ACCEPTANCE OF THE CONSTRUCTION BY TRAVIS COUNTY.
14. CALL THE TEXAS EXCAVATION SAFETY SYSTEM AT 811 AT LEAST 2 BUSINESS DAYS BEFORE BEGINNING EXCAVATION ACTIVITIES.
15. CONTRACTOR IS REQUIRED TO OBTAIN A UTILITY INSTALLATION PERMIT IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 82.901(a)(3) BEFORE ANY CONSTRUCTION OF UTILITIES WITHIN ANY TRAVIS COUNTY RIGHT–OF–WAY.
16. TEMPORARY STABILIZATION MUST BE PERFORMED IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SW3P AND ESC PLAN SHEET NOTES.
17. PERMANENT SITE STABILIZATION/RE–VEGETATION MUST BE PERFORMED IMMEDIATELY IN ALL SITE AREAS WHICH ARE AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED IN THE APPROVED PLANS FOR PHASED RE–VEGETATION, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SW3P AND ESC PLAN SHEET NOTES.
18. ALL TREES WITHIN THE RIGHT–OF–WAY AND DRAINAGE EASEMENTS SHALL BE SAVED OR REMOVED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS. TRAVIS COUNTY TREE PRESERVATION STANDARDS IN TRAVIS COUNTY CODE SECTION 82.973, INCLUDING INSTALLATION AND MAINTENANCE OF ALL SPECIFIED TREE PROTECTION MEASURES, MUST BE FOLLOWED DURING CONSTRUCTION.
19. AN ENGINEER'S CONCURRENCE LETTER IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 82.953 MUST BE SUBMITTED VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE. THE ENGINEER'S CONCURRENCE LETTER MUST BE SUBMITTED BEFORE THE CONTRACTOR OR PRIMARY OPERATOR REQUESTS A FINAL INSPECTION BY TRAVIS COUNTY.
20. SITE IMPROVEMENTS MUST BE CONSTRUCTED IN CONFORMANCE WITH THE ENGINEER'S CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY. NON–CONFORMANCE WITH THE APPROVED PLANS WILL DELAY FINAL INSPECTION APPROVAL BY THE COUNTY UNTIL PLAN CONFORMANCE IS ACHIEVED OR ANY REQUIRED PLAN REVISIONS ARE APPROVED.
21. FINAL SITE STABILIZATION. ALL AREAS DISTURBED BY THE CONSTRUCTION MUST BE PERMANENTLY REVEGETATED AND ALL TEMPORARY SEDIMENT CONTROLS AND ACCUMULATED SEDIMENTATION MUST BE REMOVED BEFORE THE COUNTY WILL ISSUE A CERTIFICATE OF COMPLIANCE FOR FINAL SITE STABILIZATION AS PART OF FINAL INSPECTION AND PROJECT COMPLETION. A DEVELOPERS CONTRACT, AS DESCRIBED IN THE SW3P AND ESC NOTES SHEET MAY BE EXECUTED WITH TRAVIS COUNTY FOR CONDITIONAL ACCEPTANCE OF A PROJECT FOR WHICH HAS ESC FISCAL SECURITY POSTED AND FOR WHICH ALL ITEMS ARE COMPLETE.
22. SOIL DATA SOURCES: MLA GEOTECHNICAL, DATED 11/30/2017.
23. THE OWNER, UTILITY CONTRACTOR, OR DESIGNATED REPRESENTATIVE SHALL SUBMIT A NOTICE OF CONSTRUCTION VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY AT LEAST TWO WORKING DAYS PRIOR TO CONSTRUCTION. IF FURTHER ASSISTANCE IS NEEDED, THE TNR PLANNING AND ENGINEERING DIVISION STAFF CAN BE CONTACTED BY TELEPHONE AT 512–854–9383.
24. THE WORK WILL NOT BE ACCEPTED AND THE ONE–YEAR WARRANTY PERFORMANCE PERIOD WILL NOT BEGIN UNTIL AFTER THE CONTRACTOR HAS OBTAINED TNR APPROVAL OF THE CONSTRUCTION.
25. THE CONTRACTOR SHALL INSTALL ALL TRAFFIC MARKING, BARRICADES, AND SIGNAGE IN ACCORDANCE WITH THE LATEST EDITION OF TXDOT'S MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES PRIOR TO TNR APPROVAL OF THE ROADWAY CONSTRUCTION.

SPOILS MANAGEMENT AND DISPOSAL NOTES:

1. TEMPORARY HOLDING SITES AS NECESSARY TO STOCKPILE EXCAVATED SOILS, EMBEDMENT MATERIAL, AND/OR PIPING AND APPURTENANCES MAY BE LOCATED WITHIN THE LIMITS OF CONSTRUCTION AS SHOWN ON THE PLANS.
2. NO PERMANENT SPOILS DISPOSAL SHALL BE ALLOWED ON–SITE, UNLESS APPROVED BY THE OWNER AND GOVERNING AUTHORITY.
3. ALL SPOILS MATERIALS SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL DISPOSAL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE; AND SHALL NOTIFY THE OWNER AND/OR ENGINEER AT LEAST FORTY–EIGHT (48) HOURS PRIOR TO DISPOSAL OF ANY SPOILS MATERIAL.

WEST TRAVIS COUNTY PUBLIC UTILITY AGENCY (WTCPUA) NOTES:

HOURS OF CONSTRUCTION:

1. NO WORK SHALL BE DONE BETWEEN THE HOURS OF 8:00 P.M. AND 6:00 A.M; NOR ON SUNDAYS OR LEGAL HOLIDAYS WITHOUT THE WRITTEN PERMISSION OF THE WTCPUA IN EACH CASE, EXCEPT SUCH WORK AS MAY BE NECESSARY FOR THE PROPER CARE, MAINTENANCE AND PROTECTION OF THE WORK ALREADY DONE OR IN THE CASE OF AN EMERGENCY.

LIMITS OF CONSTRUCTION:

1. THE LIMITS OF CONSTRUCTION SHALL BE BOUNDED BY THE RIGHT OF WAY LINE OR PERMANENT/TEMPORARY EASEMENT LIMITS SHOWN ON THE PLANS. LIMITS OF CONSTRUCTION MAY BE FURTHER RESTRICTED BY PLACEMENT OF SILT FENCE, TREE PROTECTION FENCING, OR OTHER APPURTENANCES AS SHOWN ON THE PLANS.
2. LIMITS OF CONSTRUCTION SHALL BE CLEARLY DELINEATED BY THE CONTRACTOR BY INSTALLING SILT FENCE, ORANGE TENSAR FENCING (4–FOOT ROLL TIED TO 6–FOOT POSTS SET AT 10–FOOT INTERVALS) OR OTHER BARRIERS AS APPROVED BY THE ENGINEER. ALL TEMPORARY BARRIERS SHALL BE REMOVED AT THE END OF THE PROJECT.
3. ANY AREAS OUTSIDE THE LIMITS OF CONSTRUCTION DISTURBED BY THE CONTRACTOR SHALL IMMEDIATELY BE RESTORED TO PRECONSTRUCTION CONDITION.

SANITARY FACILITIES:

1. PROVISIONS SHALL BE MADE FOR NECESSARY SANITARY CONVENIENCES FOR THE USE OF LABORERS ON THE WORK. THE FACILITIES MUST BE PROPERLY SECLUDED FROM PUBLIC OBSERVATION AND SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

PROTECTION OF BORE PITS:

1. INSTALL BARRIER FENCING (TENSAR ORANGE FENCING OR CHAIN LINK FENCING) TO SURROUND THE BORE PITS. BARRIER FENCING SHALL REMAIN IN PLACE AT ALL TIMES WHILE THE BORE PIT IS OPEN. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURITY AND SAFETY AT BORE PITS.

HORIZONTAL CONTROLS:

1. ALL LINE WORK SHALL BE STAKED PRIOR TO CONSTRUCTION WITH SEALED CUT SHEETS PROVIDED TO THE WTCPUA INSPECTOR PRIOR TO CONSTRUCTION.

CONSTRUCTION SEQUENCING:

1. 48 HOURS PRIOR TO BEGINNING ANY WORK, CALL THE ONE–CALL BOARD OF TEXAS AT 811 OR 1–800–545–6005 FOR UTILITY LOCATIONS AND OBTAIN STREET CUT PERMIT FOR ANY WORK WITHIN CITY. COUNTY, AND/OR STATE RIGHT–OF–WAY.
2. INSTALL TEMPORARY EROSION CONTROLS AND TREE/NATURAL AREA PROTECTION FENCING PRIOR TO PRE–CONSTRUCTION MEETING AND PRIOR TO ANY SITE CLEARING, GRUBBING, EXCAVATION, MATERIAL STOCKPILING, OR OTHER CONSTRUCTION OPERATIONS.
3. SCHEDULE AND CONVENE A PRECONSTRUCTION MEETING INCLUDING BUT NOT LIMITED TO THE OWNER'S REPRESENTATIVE, ENGINEER, WTCPUA REPRESENTATIVE, FIRE DEPARTMENT, CITY, COUNTY, TXDOT REPRESENTATIVE, AND TCEQ REPRESENTATIVE, AS APPLICABLE.
4. INSTALL TRAFFIC CONTROL MEASURES.
5. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO INITIATING CONSTRUCTION.
6. ROUGH CUT WATER QUALITY PONDS AND DIRECT RUNOFF TO PONDS TO ACT AS A SEDIMENT TRAP.
7. REMOVE AND STOCKPILE TOPSOIL IN AREAS AS REQUIRED.
8. ROUGH CUT ROADS/SITE, AS NECESSARY
9. INSTALL ALL UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE WTCPUA WHEN SWITCHING SERVICE TO THE WTCPUA SYSTEM. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MATERIALS/FACILITIES TO ENDURE SERVICE IS MAINTAINED DURING SWITCHOVER.
10. COMPLETE ALL UNDERGROUND INSTALLATIONS, INCLUDING INSTALLATION OF SLEEVES.
11. COMPLETE SUBGRADE.
12. COMPLETE 1ST COURSE BASE.
13. COMPLETE FINAL COURSE BASE.
14. LAY PAVEMENT AND/OR COMPLETE PAVEMENT REPAIR.
15. COMPLETE WATER QUALITY PONDS.
16. COMPLETE PERMANENT EROSION CONTROL AND SITE RESTORATION.
17. REMOVE AND DISPOSE OF TERMPORARY EROSION CONTROLS.
18. COMPLETE ANY NECESSARY FINAL DRESS UP OF AREAS DISTURBED BY CONSTRUCTION OPERATIONS.

TRAFFIC CONTROL NOTES:

1. PLANS SHALL INDICATE RESPONSIBLE AGENT FOR TRAFFIC CONTROL (ENGINEER OR CONTRACTOR).
2. CONTRACTOR SHALL MAINTAIN REASONABLE LOCAL VEHICULAR TRAFFIC THROUGHOUT CONSTRUCTION OPERATIONS.
3. CONTRACTOR SHALL PROVIDE SIGNS, BARRICADES, FLAGGERS, AND OTHER MEASURES AS REQUIRED TO ALLOW FOR VEHICULAR AND PEDESTRIAN TRAFFIC TO PROCEED SAFELY WITH MINIMUM INCONVENIENCE
4. SIGNS, BARRICADES, FLAGGERS, AND RELATED WORK SHALL BE IN ACCORDANCE WITH THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND WITH THE REQUIREMENTS OF THE GOVERNING CITY/COUNTY.
5. FOR ANY ACTIVITY WITHIN TXDOT RIGHT–OF–WAY, PROJECT MUST HAVE A TXDOT PERMIT. A COPY OF THE TXDOT PERMIT SHALL BE PROVIDED TO THE WTCPUA PRIOR TO CONSTRUCTION.

SWPPP NOTES:

THIS PROJECT IS SUBJECT TO THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY'S (TCEQ) TEXAS POLLUTION DISCHARGE ELIMINATION SYSTEM (TPDES) GENERAL PERMIT TXR150000 FOR CONSTRUCTION ACTIVITIES. THE GENERAL PERMIT REQUIRES THE PREPARATION OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), WHICH HAS BEEN PROVIDED BY THE OWNER FOR USE BY THE CONTRACTOR. THE OWNER SHALL PROVIDE THE OWNER'S NOTICE OF INTENT (NOI) AND NOTICE OF TERMINATION (NOT) TO THE TCEQ. THE CONTRACTOR'S RESPONSIBILITIES ARE AS FOLLOWS:

1. MAINTAIN A COPY OF THE SWPPP AND A SET OF CONSTRUCTION PLANS WITH THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AT THE WORK SITE AT ALL TIMES.
2. FILE A NOTICE OF INTENT (NOI) AND APPLICABLE PAYMENT TO THE TCEQ AT LEAST 2 DAYS PRIOR TO SITE DISTURBANCE.
3. POST A COPY OF THE OWNER'S AND CONTRACTOR'S NOI FORMS AT THE WORK SITE.
4. SIGN THE CERTIFICATION AND OBTAIN A SIGNED CERTIFICATION STATEMENT FROM ALL SUBCONTRACTORS RESPONSIBLE FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL MEASURES WHICH INDICATES THAT THE CONTRACTOR AND SUBCONTRACTOR UNDERSTANDS THE PERMIT REQUIREMENTS (FORMS ARE IN THE SWPPP) FOLLOW AND COMPLY WITH ALL ASPECTS OF THE TPDES GENERAL PERMIT NO. TXR150000. THIS INCLUDES BUT IS NOT LIMITED TO FIELD INSPECTIONS AND REPORT, MAINTAINING AND REPAIRING EROSION CONTROLS AND UPDATING EROSION CONTROLS AND UPDATING EROSION CONTROL PLAN SHEETS BASED ON FIELD CHANGES AND MODIFICATIONS FILE A COPY OF THE CONTRACTOR'S NOTICE OF TERMINATION (NOT) WITH THE TCEQ ONCE THE WORK IS COMPLETED IN ACCORDANCE WITH THE TPDES GENERAL PERMIT NO TXR150000 AND HAS BEEN ACCEPTED BY THE OWNER.

WTCPUA WATER AND WASTEWATER GENERAL CONSTRUCTION NOTES:

1. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE STATE STATUTES AND U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION REGULATIONS (O.S.H.A.). COPIES OF O.S.H.A. STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE OBTAINED FROM O.S.H.A. LA COSTA GREEN BLDG. 1033 LA POSADA DR., SUITE 375 AUSTIN, TX 78752–3832, 512–374–0271.
2. THE ATTENTION OF THE CONTRACTOR IS DIRECTED TO THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND TO THE STATE LAW, (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436 ©) AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES WHEN OPERATING IN THE VICINITY OF ELECTRICAL LINES. THE CONTRACTOR IS RESPONSIBLE FOR ALL SAFETY REQUIREMENTS, AND FOR COORDINATION OF ALL WORK WITH THE APPROPRIATE ELECTRIC UTILITY COMPANY.
3. THE CONTRACTOR SHALL CONTACT THE ONE–CALL BOARD OF TEXAS AT 811 OR 1–800–545–6005 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. THE LOCATION AND TYPE OF UTILITIES AND UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED TO BE ACCURATE OR ALL–INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ALL EXISTING UTILITIES. THE CONTRACTOR SHALL VERIFY ALL DEPTHS AND LOCATIONS OF EXISTING UTILITIES PRIOR TO ANY CONSTRUCTION. IN ADDITIONAL TO NORMAL PRECAUTIONS WHEN EXCAVATING, USE EXTRA CAUTION WHEN EXCAVATING WITHIN 25 FEET OF ANY UTILITIES SHOWN ON THE PLANS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THE PROJECT. THIS INCLUDES ALL WATER, WASTEWATER, GAS, ELECTRICAL, TELEPHONE, CABLE TELEVISION, AND STREET AND DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER AND THE WTCPUA INSPECTOR WITHIN TWENTY–FOUR (24) HOURS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING OF ALL SPOILS MATERIAL FROM THE CONSTRUCTION SITE. ALL SPOILS MATERIAL SHALL BE DISPOSED OF BY THE CONTRACTOR AT AN APPROVED SPOIL SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND SECURING A PERMIT FOR THE SITE, SHALL NOTIFY THE WTCPUA INSPECTOR AT LEAST FORTY–EIGHT (48) HOURS PRIOR TO DISPOSAL OF THE MATERIAL. NO SPOILS ARE TO REMAIN OVERNIGHT IN THE FLOODPLAIN.
6. NO BLASTING OR BURNING WILL BE ALLOWED.
7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR, AT HIS EXPENSE, ALL UTILITIES, PAVEMENT, CURB, FENCES OR ANY OTHER ITEMS DAMAGED DURING CONSTRUCTION REGARDLESS OF WHETHER THESE ITEMS ARE SHOWN ON THE CONSTRUCTION PLANS.
8. WHENEVER EXISTING UTILITIES, INDICATED OR NOT ON PLANS, PRESENT OBSTRUCTIONS TO GRADE AND/OR ALIGNMENT OF PROPOSED PIPE, CONTRACTOR IS TO IMMEDIATELY NOTIFY THE ENGINEER WHO WILL DETERMINE IF EXISTING IMPROVEMENTS ARE TO BE RELOCATED OR IF THE GRADE AND/OR ALIGNMENT OF PROPOSED PIPE IS TO BE CHANGED.
9. DUST PREVENTION SHALL BE PROVIDED BY THE CONTRACTOR AT HIS OWN EXPENSE. DUST CONTROL SHALL INCLUDE SPRAYING OF WATER ON ALL DISTURBED AREAS, SPOIL PILES, OR HAUL MATERIALS ASSOCIATED WITH THE PROJECT OR OTHER METHODS APPROVED BY THE WTCPUA.
10. CLEANUP – UPON COMPLETION AND BEFORE MAKING APPLICATION FOR ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL CLEAN ALL STREETS AND ALL GROUND OCCUPIED BY HIM IN CONNECTION WITH THE WORK OF ALL RUBBISH, EXCESS MATERIALS, EXCESS EXCAVATED MATERIALS, TEMPORARY STRUCTURES AND EQUIPMENT. ALL PARTS OF THE WORK SHALL BE LEFT IN A NEAT AND PRESENTABLE CONDITION SATISFACTORY TO THE WTCPUA AND OTHER GOVERNMENTAL BODIES HAVING JURISDICTION PRIOR TO SUBMITTAL OF THE FINAL PAYMENT.
11. THE CONTRACTOR SHALL MAINTAIN ACCESS TO BUSINESS AND RESIDENCES AT ALL TIMES. THE CONTRACTOR SHALL COORDINATE WITH PROPERTY OWNERS TO MINIMIZE DISRUPTION OF DELIVERIES, PARKING, AND OTHER ACTIVITIES.
12. DEWATERING, IF NECESSARY, SHALL BE CONSIDERED INCIDENTAL TO THE WORK AND SHALL NOT CONSTITUTE A BASIS FOR ADDITIONAL PAYMENT.
13. THE MINIMUM DEPTH OF COVER FROM TOP OF PIPE TO FINISHED GRADE FOR ALL WATER LINES SHALL BE FOUR FEET. INSTALL LINES TO AVOID HIGH POINTS.
14. CONCRETE SHALL BE CLASS 'A' WITH A MINIMUM 28–DAY COMPRESSIVE STRENGTH OF 3,000 PSI, UNLESS OTHERWISE NOTED.
15. REINFORCING STEEL SHALL BE ASTM A 615M, GRADE 60 UNLESS OTHERWISE NOTED.
16. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE WTCPUA MUST RELY ON THE ADEQUACY OF THE DESIGN ENGINEER. APPROVAL OF THESE PLANS BY THE WTCPUA DOES NOT RELEASE THE DESIGN ENGINEER OF THESE RESPONSIBILITIES.

WEST TRAVIS COUNTY PUA WATER AND WASTEWATER UTILTY NOTES:

1. WEST TRAVIS COUNTY PUA IS THE WATER AND/OR WASTEWATER SERVICE PROVIDER FOR THIS PROJECT. A PRE–CONSTRUCTION MEETING WITH THE WTCPUA SHALL BE HELD PRIOR TO COMMENCEMENT OF CONSTRUCTION TO SCHEDULE INSPECTION OF INSTALLATION OF WATER/WASTEWATER FACILITIES. WATER FACILITIES WILL BE INSPECTED UP TO, AND INCLUDING, THE WATER METER AND/OR FIRE HYDRANTS. THE CONTACT NUMBER FOR WTCPUA IS (512) 263–0100.
2. THE CITY OF AUSTIN STANDARD SPECIFICATIONS AND STANDARD DETAILS CURRENT AT THE TIME OF CONSTRUCTION SHALL GOVERN MATERIALS AND METHODS USED TO PERFORM THIS WORK. CITY OF AUSTIN SPECIFICATIONS AND STANDARD DETAILS ARE AVAILABLE AT HTTP://LIBRARY.MUNICODE.COM/TX/AUSTIN/CODES/
3. CONTRACTOR SHALL OBTAIN ALL APPROVALS AND PERMITS, INCLUDING BUT NOT LIMITED TO STREET/DRIVEWAY CUT AND UTILITY CUT PERMITS FROM THE APPROPRIATE GOVERNMENTAL AGENCY BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT–OF–WAY OF A PUBLIC STREET OR ALLEY.
4. THE WTCPUA SHALL BE CONTACTED AT (512) 263–0100 AT LEAST 48 HOURS BEFORE CONNECTING TO THEIR EXISTING WATER AND/OR WASTEWATER FACILITIES.
5. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 811 OR 1–800–545–6005 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION. IN ADVANCE OF CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS.
6. NO OTHER UTILITY SERVICE/APPURTENANCES SHALL BE PLACED NEAR THE PROPERTY LINE, OR OTHER ASSIGNED LOCATION DESIGNATED FOR WATER AND WASTEWATER UTILITY SERVICE THAT WOULD INTERFERE WITH THE WATER AND/OR WASTEWATER SERVICES.
7. WHERE THE WATER LINES AND SEWER LINES ARE INSTALLED WITH A SEPARATION DISTANCE CLOSER THAN NINE FEET (I.E. WATER LINES CROSSING WASTEWATER LINES, WATER LINES PARALLELING WASTEWATER LINES, OR WATER LINES NEXT TO MANHOLES) THE INSTALLATION MUST MEET THE REQUIREMENTS OF 30 TAC §217.53(d) (PIPE DESIGN) AND 30 TAC §290.44(e) (WATER DISTRIBUTION). ANY DEVIATION THESE STANDARDS SHALL REQUIRE A VARIANCE APPROVED BY TCEQ BEFORE SUBMITTING PIPING ASSIGNMENTS FOR THE WTCPUA.
8. THE CITY OF AUSTIN SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE. CONTRACT DOCUMENTS, WHICH INCLUDE A TRENCH SAFETY PLAN AND A PAY ITEM FOR TRENCH SAFETY MEASURES, IN COMPLIANCE WITH OSHA, STATE, COUNTY, AND ALL CITY REQUIREMENTS BEFORE BEGINNING WORK ON THE PROJECT.
9. ALL MATERIAL TESTS, INCLUDING SOIL DENSITY TESTS AND RELATED SOIL ANALYSIS, SHALL BE ACCOMPLISHED BY AN INDEPENDENT LABORATORY FUNDED BY THE OWNER IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 1804S.4.
10. CONNECTIONS TO EXISTING WTCPUA WATER LINES SHALL BE MADE BY CUT–IN TEES IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(24). ISOLATION VALVES SHALL BE INSTALLED ON THE ENDS OF THE CUT–IN TEE, AS NECESSARY. A SHUT–OUT VALVE PLAN SHALL BE PROVIDED SHOWING THE LOCATION OF EXISTING GATE VALVES IN THE VICINITY OF THE CONNECTION. THE SHUT–OUT PLAN SHALL IDENTIFY ALL AFFECTED PROPERTY OWNERS. CONTRACTOR SHALL PERFORM ALL WORK AND SHALL FURNISH ALL MATERIALS, INCLUDING DRAINING AND CUTTING INTO EXISTING PIPING AND CONNECTING A NEW PIPELINE OR OTHER EXTENSIONS INTO THE EXISTING PRESSURE PIPING, FORMING AN ADDITION TO THE POTABLE WATER TRANSMISSION AND DISTRIBUTION NETWORK PERFORMING NECESSARY SHUTOFFS. CONTRACTOR SHALL SCHEDULE ALL SUCH CONNECTIONS IN ADVANCE AND SUCH SCHEDULE SHALL BE APPROVED BY THE WTCPUA BEFORE BEGINNING WORK. AT LEAST 72 HOURS NOTICE SHALL BE GIVEN TO THE WTCPUA PRIOR TO MAKING THE CONNECTION, AND REPRESENTATIVE FROM THE WTCPUA SHALL BE PRESENT WHEN THE CONNECTION IS MADE. PRESSURE TAPS MAY BE APPROVED ON A CASE–BY–CASE BASIS. "SIZE ON SIZE" TAPS WILL NOT PERMITTED. WHEN APPROVED, ANY TAPS SHALL BE MADE BY USE OF AND APPROVED FULL CIRCLE, GASKETED CAST IRON OR DUCTILE IRON TAPPING SLEEVE. CONCRETE BLOCKING SHALL BE PLACED BEHIND AND UNDER ALL TAP SLEEVES PRIOR TO MAKING THE PRESSURE TAP AND THE USE OF PRECAST BLOCKS MAY BE USED TO HOLD THE TAP IN ITS CORRECTION POSITION PRIOR TO BLOCKING. THE BLOCKING BEHIND AND UNDER THE TAP SHALL HAVE A MINIMUM OF 24 HOURS CURING TIME BEFORE THE VALVE CAN BE REOPENED FOR SERVICE FROM THAT TAP.
11. THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(22).
12. FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY OF STANDARD SPECIFICATION ITEM 511S.3 E AND SHALL BE APPROVED BY FIRE DEPARTMENT OR OTHER APPROPRIATE PARTY PRIOR TO INSTALLATION. FIRE HYDRANTS ON MAINS UNDER CONSTRUCTION SHALL BE SECURELY WRAPPED WITH A POLY WRAP BAG AND TAPED INTO PLACE. THE POLY WRAP WILL BE REMOVED WHEN THE MAINS ARE ACCEPTED AND PLACED IN SERVICE. FIRE HYDRANTS THAT ARE TO BE USED AS DRAIN HYDRANTS SHALL BE PAINTED SILVER W/BLUE CAPS PRIOR TO ACCEPTANCE. WHERE STORZ ADAPTORS ARE REQUIRED (HAYS COUNTY), FIRE HYDRANTS SHALL BE MANUFACTURED WITH INTEGRAL STORZ ADAPTORS.
13. WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(29) AND/OR TCEQ RULES.
14. TEST PRESSURE FOR 2–HOUR TEST SHALL BE AT 175 PSI AT THE LOWEST POINT IN THE LINE.

NOTE: PRIOR TO TESTING, CONTRACTOR SHALL VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT BACK TO AND INCLUDING THE VALVE AGAINST WHICH THE PRESSURE TEST SHALL BE PERFORMED, HAS BEEN INSTALLED TO AT LEAST THE SPECIFICATIONS OF THIS PROJECT. FAILURE TO VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT IN THE EXISTING LINE MEETS OR EXCEEDS THE SPECIFICATION OF THIS PROJECT MAY RESULT IN SERIOUS DAMAGE TO THE EXISTING WATERLINE.

15. WATER LINES SHALL BE FILLED WITH WATER AND ALL AIR EXPELLED AT LEAST 24 HOURS BEFORE TESTING. ALL SERVICE LATERALS AND DRAIN VALVE LEADS, WITH THE HYDRANT VALVES CLOSED AND NOZZLE CAPS OPEN SHALL BE INCLUDED IN THE TESTS.
16. CONTRACTOR SHALL SUBMIT A DISINFECTION AND FLUSHING PLAN IN ACCORDANCE WITH AWWA STANDARDS TO THE WTCPUA FOR APPROVAL. REQUIRED FLUSHING VOLUMES, FLUSHING SCHEDULE, AND METHOD OF DISPOSAL OF FLUSH WATER SHALL BE IN ACCORDANCE WITH THE APPROVED PLAN.
17. GATE VALVES SHALL BE RESILIENT SEATED GATE VALVES CONFORMING TO AWWA C509, WITH A MINIMUM RATED WORKING PRESSURE OF 250 PSIG.
18. FORCE MAIN TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATION ITEM 510.3(27) AND/OR TCEQ RULES.
19. GRAVITY SANITARY SEWER MAIN TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD SPECIFICATION ITEMS 510.3(26) AND/OR TCEQ RULES. IN ADDITION, ALL GRAVITY SANITARY SEWER MAINS SHALL BE TELEVISED PRIOR TO ACCEPTANCE BY WTCPUA. DIGITAL FILES (VIA CD–ROM) CLEARLY SHOWING TELEVISED RECORDING SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOLLOWING INSPECTION.
20. LOCATOR 'FINDER' WIRE – ALL NON–METALLIC WATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY–INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT EACH ISOLATION VALVE SUCH THAT IT IS ACCESSIBLE FROM THE VALVE BOX.
21. LOCATOR 'FINDER' WIRE – ALL NON–METALLIC WASTEWATER LINES SHALL HAVE A FINDER WIRE LOCATED ABOVE THE PIPE. THE WIRE SHALL BE POLY–INSULATED NO. 10 SOLID COPPER AND WILL TERMINATE AT READILY ACCESSIBLE LOCATIONS THROUGHOUT THE COLLECTION SYSTEM.
22. TEST STATIONS SHALL BE INSTALLED WHERE WATER AND/OR WASTEWATER LINES/APPURTENANCES AND WASTEWATER MANHOLES ARE INSTALLED OFFSITE OR OUTSIDE PAVEMENT.
23. ALL VALVE RISERS SHALL HAVE A 1'–6" SQUARE CONCRETE BOX POURED AROUND THEM AT FINISHED GRADE.
24. ALL MANHOLES SHALL BE LINED WITH A CORROSION RESISTANT LINING APPROVED BY THE WTCPUA.
25. BOLTED AND GASKETED COVERS SHALL BE USED FOR ALL MANHOLES LOCATED IN THE 100–YEAR FLOODPLAIN. WHERE THERE ARE MORE THAN THREE GASKETED MANHOLES IN A ROW, VENTS SHALL BE PROVIDE ON EVERY THIRD MANHOLE.
26. THE DOWN STREAM END OF ANY FORCE MAIN SHALL BE TERMINATED IN A SANITARY SEWER MANHOLE IN A MANNER TO MINIMIZE TURBULENCE.
27. CONTRACTOR SHALL HAVE NECESSARY EROSION AND SEDIMENTATION CONTROLS IN PLACE PRIOR TO COMMENCING WATER/WASTEWATER FACILITY CONSTRUCTION.
28. RECORD DRAWINGS, AS STIPULATED BY THE WTCPUA, SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR VERIFICATION AND FURNISHED TO THE WTCPUA UPON COMPLETION OF THE PROJECT.
29. THE WTCPUA WILL OWN AND OPERATE ALL WATER LINES AND APPURTENANCES UP TO AND INCLUDING THE WATER METER. THESE IMPROVEMENTS WILL BE DEFINED BY A RECORDED EASEMENT OR IN PUBLIC RIGHT–OF–WAY.
30. ANY PORTIONS OF WASTEWATER LINES INCLUDING SERVICES THAT ARE LOCATED OUTSIDE OF A RECORDED EASEMENT OR PUBLIC RIGHT–OF–WAY WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER, OR HIS/HER ASSIGNS.
31. WHERE EXISTING WATER AND/OR WASTEWATER INFRASTRUCTURE IS TO BE ABANDONED, THE ENGINEER SHALL SUBMIT AN ABANDONMENT PLAN FOR APPROVAL BY THE WTCPUA.
32. WATER SERVICES SHALL BE INSTALLED USING HDPE PIPE. COPPER IS NOT ALLOWED. MINIMUM SERVICE TAP SHALL BE 2" DIAMETER.
33. 33. FOR ANY STORM SEWER LINE CROSSING A WATER OR WASTEWATER LINE CLOSER THAN 18", THE STORM SEWER PIPE SHALL BE LAID SUCH THAT NO STORM SEWER JOINTS WILL BE OVER THE WATER PIPE CROSSING

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

GENERAL NOTES (1 OF 3)

PROJECT NO: 1636-11741

DESIGNED BY: CLO

DRAWN BY: TAM

CHECKED BY: CLO

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED
PROFESSIONAL ENGINEER

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-NOTES.DWG DATE: 2/24/2025 4:14:17 PM BY: CDIXON

TCEQ WATER DISTRIBUTION SYSTEM GENERAL CONSTRUCTION NOTES:

1. THIS WATER DISTRIBUTION SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT TEXAS COMMISSION ON ENVIRONMENT QUALITY (TCEQ) RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS 20 TEXAS ADMINISTRATIVE CODE (TAC) CHAPTER 290 SUBCHAPTER D. WHEN CONFLICTS ARE NOTED WITH LOCAL STANDARDS, THE MORE STRINGENT REQUIREMENT SHALL BE APPLIED. AT MINIMUM, CONSTRUCTION FOR PUBLIC WATER SYSTEMS MUST ALWAYS MEET TCEQ'S "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS."
2. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)/NSF INTERNATIONAL STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI [(§290.44(a)(1)].
3. PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST BEAR THE NSF INTERNATIONAL SEAL OF APPROVAL (NSF-pw) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATION OF 26 OR LESS [(§290.44(a)(2)].
4. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN THE CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY DRINKING WATER SUPPLY [(§290.44(a)(3)].
5. ALL WATER LINE CROSSING OF WASTEWATER MAINS SHALL BE PERPENDICULAR [(§290.44(e)(4)(B)]
6. WATER TRANSMISSION AND DISTRIBUTION LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER, THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE (§290.44(a)(4)].
7. THE MAXIMUM ALLOWABLE LEAD CONTENT OF PIPES, PIPE FITTINGS, PLUMBING FITTINGS, AND FIXTURES IS 0.25 PERCENT (§290.44(b)].
8. THE CONTRACTOR SHALL INSTALL APPROPRIATE AIR RELEASE DEVICES WITH VENT OPENINGS TO THE ATMOSPHERE COVERED WITH 16-MESH OR FINER, CORROSION RESISTANT SCREENING MATERIAL OR AN ACCEPTABLE EQUIVALENT (§290.44(d)(1)].
9. THE CONTRACTOR SHALL NOT PLACE THE PIPE IN WATER OR WHERE IT CAN BE FLOODED WITH WATER OR SEWAGE DURING ITS STORAGE OR INSTALLATION (§290.44(f)(1)].
10. WHEN WATERLINES ARE LAID UNDER ANY FLOWING OR INTERMITTENT STREAM OR SEMI-PERMANENT BODY OF WATER THE WATERLINE SHALL BE INSTALLED IN A SEPARATE WATERTIGHT PIPE ENCASEMENT. VALVES MUST BE PROVIDED ON EACH SIDE OF THE CROSSING WITH FACILITIES TO ALLOW THE UNDERWATER PORTION OF THE SYSTEM TO BE ISOLATED AND TESTED [(§290.44(f)(2)].
11. PURSUANT TO 30 TAC §290.44(a)(5), THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY THE MOST CURRENT AWWA FORMULAS FOR PVC PIPE, CAST IRON AND DUCTILE IRON PIPE. INCLUDE THE FORMULAS IN THE NOTES ON THE PLANS.

    o THE HYDROSTATIC LEAKAGE RATE FOR POLYVINYL CHLORIDE (PVC) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-605 AS REQUIRED IN 30 TAC §290.44(a)(5). PLEASE ENSURE THE THE FORMULA FOR THIS CALCULATON IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$\frac{LD\sqrt{P}}{148{,}000}$$

    WHERE:
    Q = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
    L = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
    D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND,
    P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

    o THE HYDROSTATIC LEAKAGE RATE FOR DUCTILE IRON (DI) PIPE AND APPURTENANCES SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY FORMULAS IN AMERICA WATER WORKS ASSOCIATION (AWWA) C-600 AS REQUIRED IN 30 TAC §290.44(a)(5). PLEASE ENSURE THAT THE FORMULA FOR THIS CALCULATION IS CORRECT AND MOST CURRENT FORMULA IS IN USE;

$$\frac{SD\sqrt{P}}{148{,}000}$$

    WHERE:
    L = THE QUANTITY OF MAKEUP WATER IN GALLONS PER HOUR,
    S = THE LENGTH OF THE PIPE SECTION BEING TESTED, IN FEET,
    D = THE NOMINAL DIAMETER OF THE PIPE IN INCHES, AND
    P = THE AVERAGE TEST PRESSURE DURING THE HYDROSTATIC TEST IN POUNDS PER SQUARE INCH (PSI).

12. THE CONTRACTOR SHALL MAINTAIN A MINIMUM SEPARATION DISTANCE IN ALL DIRECTIONS OF NINE FEET BETWEEN THE PROPOSED WATERLINE AND WASTEWATER COLLECTION FACILITIES INCLUDING MANHOLES. IF THIS DISTANCE CANNOT BE MAINTAINED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTION. SEPARATION DISTANCES, INSTALLATION METHODS, AND MATERIALS UTILIZE MUST MEET §290.44(e)(1)-(4).
13. THE SEPARATION DISTANCE FROM POTABLE WATERLINE TO A WASTEWATER MAIN OR LATERAL MANHOLE OR CLEANOUT SHALL BE A MINIMUM OF NINE FEET. WHERE THE NINE-FOOT SEPARATION DISTANCE CANNOT BE ACHIEVED, THE POTABLE WATERLINE SHALL BE ENCASED IN A JOINT OF AT LEAST 150 PSI PRESSURE CLASS PIPE AT LEAST 18 FEET LONG AND TWO NOMINAL SIZES LARGER THAN THE NEW CONVEYANCE. THE SPACE AROUND THE CARRIER PIPE SHALL BE SUPPORTED AT FICE-FOOT INTERVALS WITH SPACERS OR BE FILLED TO THE SPRINGLINE WITH WASHED SAND. THE ENCASEMENT PIPE SHALL BE CENTERED ON THE CROSSING AND BOTH ENDS SEALED WITH CEMENT GROUT OR MANUFACTURED SEALANT [§290.44(e)(5)].
14. FIRE HYDRANTS SHALL NOT BE INSTALLED WITHIN NINE FEET VERTICALLY OR HORIZONTALLY OF ANY WASTEWATER LINE, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE REGARDLESS OF CONSTRUCTION [§290.44(e)(6)].
15. SUCTION MAINS TO PUMPING EQUIPMENT SHALL NOT CROSS WASTEWATER MAINS, WASTEWATER LATERALS, OR WASTEWATER SERVICE LINES. RAW WATER SUPPLY LINES SHALL NOT BE INSTALLED WITHIN FIVE FEET OF ANY TILE OR CONCRETE WASTEWATER MAIN, WASTEWATER LATERAL, OR WASTEWATER SERVICE LINE [§290.44(e)(7)].
16. WATERLINES SHALL NOT BE INSTALLED CLOSER THAN TEN FEET TO SEPTIC TANK DRAINFIELDS [§290.44(e)(8)].
17. THE CONTRACTOR SHALL DISINFECT THE NEW WATERLINES IN ACCORDANCE WITH AWWA STANDARDS C-651-14 OR MOST RECENT, THEN FLUSH AND SAMPLE THE LINES BEFORE BEING PLACED INTO SERVICE. SAMPLES SHALL BE COLLECTED FOR MICROBIOLOGICAL ANALYSIS TO CHECK THE EFFECTIVENESS OF THE DISINFECTION PROCEDURE WHICH SHALL BE REPEATED IF CONTAMINATION PERSISTS. A MINIMUM OF ONE SAMPLE FOR EACH 1,000 FEET OF COMPLETED WATERLINE WILL BE REQUIRED OR AT THE NEXT AVAILABLE SAMPLING POINT BEYOND 1,000 FEET AS DESIGNATED BY THE DESIGN ENGINEER [§290.44(f)(3)].
18. DE-CHLORINATION OF DISINFECTING WATER SHALL BE IN STRICT ACCORDANCE WITH CURRENT AWWA STANDARD C655-09 OR MOST RECENT.

TCEQ WATER NOTES:

1. ALL NEWLY INSTALLED PIPES AND RELATED PRODUCTS MUST CONFORM TO AMERICAN NATIONAL STANDARDS INSTITUTE/NATIONAL SANITATION FOUNDATION (ANSI/NSF) STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED ANSI.
2. ALL PLASTIC PIPE FOR USE IN PUBLIC WATER SYSTEMS MUST ALSO BEAR THE NATIONAL SANITATION FOUNDATION SEAL OF APPROVAL (NSF-PW) AND HAVE AN ASTM DESIGN PRESSURE RATING OF AT LEAST 150 PSI OR A STANDARD DIMENSION RATIO OF 26 OR LESS.
3. NO PIPE WHICH HAS BEEN USED FOR ANY PURPOSE OTHER THAN CONVEYANCE OF DRINKING WATER SHALL BE ACCEPTED OR RELOCATED FOR USE IN ANY PUBLIC DRINKING WATER SUPPLY.
4. WATER TRANSMISSION AND DISTRIBUTION LINES MUST BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. HOWEVER THE TOP OF THE WATER LINE MUST BE LOCATED BELOW THE FROST LINE AND IN NO CASE SHALL THE TOP OF THE WATER LINE BE LESS THAN 24 INCHES BELOW GROUND SURFACE
5. THE HYDROSTATIC LEAKAGE RATE SHALL NOT EXCEED THE AMOUNT ALLOWED OR RECOMMENDED BY AWWA FORMULAS.
6. ALL WATER LINES SHALL BE HYDROSTATIC LEAK TESTED IN CONFORMANCE WITH AWWA C600 FOR DUCTILE IRON PIPE AND AWWA C605 FOR PVC PIPE.
7. ALL WATER LINES SHALL BE DISINFECTED IN CONFORMANCE WITH AWWA C651.

TCEQ WATER/WASTEWATER SEPARATION NOTES:

1. NEW WATERLINE INSTALLATION - PARALLEL LINES: WHEN NEW POTABLE WATER DISTRIBUTION LINES ARE CONSTRUCTED, THEY SHALL BE INSTALLED NO CLOSER THAN NINE FEET IN ALL DIRECTIONS TO WASTEWATER COLLECTION FACILITIES. ALL SEPARATION DISTANCES SHALL BE MEASURED FROM THE OUTSIDE SURFACE OF EACH OF THE RESPECTIVE PIECES.
2. NEW WATERLINE INSTALLATION - CROSSING LINES: WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL IS DISTURBED OR SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
    WHERE A NEW POTABLE WATERLINE CROSSES AN EXISTING, PRESSURE RATED WASTEWATER MAIN OR LATERAL, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST SIX INCHES ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. IF THE EXISTING WASTEWATER MAIN OR LATERAL SHOWS SIGNS OF LEAKING, IT SHALL BE REPLACED FOR AT LEAST NINE FEET IN BOTH DIRECTIONS (18 FEET TOTAL) WITH AT LEAST 150 PSI PRESSURE RATED PIPE.
    NOTE:
    PRIOR TO PRESSURE TESTING, CONTRACTOR SHALL VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT BACK TO AND INCLUDING THE VALVE AGAINST WHICH THE PRESSURE TEST SHALL BE PERFORMED, HAS BEEN INSTALLED TO AT LEAST THE SPECIFICATIONS OF THIS PROJECT. FAILURE TO VERIFY THAT THRUST BLOCKING AND/OR THRUST RESTRAINT IN THE EXISTING LINE MEETS OR EXCEEDS THE SPECIFICATIONS OF THIS PROJECT MAY RESULT IN SERIOUS DAMAGE TO THE EXISTING WATERLINE.

CONTACT INFORMATION:

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JRIECHERS@WTCPUA.ORG

LAND OWNER:
CLAYTON PROPERTIES GROUP INC.
(DBA BROHN HOMES)
6720 VAUGHT RANCH RD.
SUITE 200
AUSTIN, TX 78730
512-320-8833

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
GRAY ENGINEERING, INC, TBPE NO. F-2946
8834 N, CAPITAL OF TEXAS HWY., SUITE 140
AUSTIN, TEXAS 78759
(512) 452-0371

TRAVIS COUNTY STANDARD CONSTRUCTION NOTES FOR SITE DEVELOPMENT:

1. EACH DRIVEWAY MUST BE CONSTRUCTED IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.302(G), AND EACH DRAINAGE STRUCTURE OR SYSTEM MUST BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF AUSTIN DRAINAGE CRITERIA MANUAL, UNLESS OTHER DESIGN CRITERIA ARE APPROVED BY TRAVIS COUNTY.
2. BEFORE BEGINNING ANY CONSTRUCTION, THE OWNER MUST OBTAIN A TRAVIS COUNTY DEVELOPMENT PERMIT AND POST THE DEVELOPMENT PERMIT, THE TCEQ SITE NOTICE, AND ANY OTHER REQUIRED PERMITS AT THE JOB SITE.
3. CONSTRUCTION MAY NOT TAKE PLACE WITHIN TRAVIS COUNTY RIGHT-OF-WAY UNTIL AFTER THE OWNER HAS SUBMITTED A TRAFFIC CONTROL PLAN TO TRAVIS COUNTY AND OBTAINED WRITTEN APPROVAL OF THE TRAFFIC CONTROL PLAN FROM TRAVIS COUNTY.
4. THE CONTRACTOR AND PRIMARY OPERATOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION AND THE SWP3 IN THESE APPROVED PLANS. THE CONTRACTOR AND PRIMARY OPERATOR SHALL REQUEST TRAVIS COUNTY INSPECTION AT SPECIFIC MILESTONES IN THE SEQUENCE OF THE CONSTRUCTION OF THE SITE DEVELOPMENT CORRESPONDING TO THE PRIORITY INSPECTIONS SPECIFIED IN CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS. DEVELOPMENT OUTSIDE THE LIMITS OF CONSTRUCTION SPECIFIED IN THE APPROVED PERMIT AND CONSTRUCTION PLANS IS PROHIBITED.
5. BEFORE BEGINNING ANY CONSTRUCTION, ALL STORM WATER POLLUTION PREVENTION PLAN (SWP3) REQUIREMENTS SHALL BE MET, AND THE FIRST PHASE OF THE TEMPORARY EROSION CONTROL (ESC) PLAN INSTALLED WITH A SWP3 INSPECTION REPORT UPLOADED TO MYPERMITNOW.ORG. ALL SWP3 AND ESC PLAN MEASURES AND PRIMARY OPERATOR SWP3 INSPECTIONS MUST BE PERFORMED BY THE PRIMARY OPERATOR IN ACCORDANCE WITH THE APPROVED PLANS AND SWP3 AND ESC PLAN NOTES THROUGHOUT THE CONSTRUCTION PROCESS.
6. BEFORE STARTING CONSTRUCTION, THE OWNER OR CONTRACTOR OR THEIR DESIGNATED REPRESENTATIVES SHALL SUBMIT A REQUEST VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY TO REQUEST AND SCHEDULE A MANDATORY PRECONSTRUCTION CONFERENCE AND ESC INSPECTION. IF FURTHER ASSISTANCE IS NEEDED, THE TNR PLANNING AND ENGINEERING DIVISION STAFF OR TNR STORM WATER MANAGEMENT PROGRAM STAFF CAN BE CONTACTED BY TELEPHONE AT 512-854-9383.
7. THE CONTRACTOR SHALL KEEP TRAVIS COUNTY TNR ASSIGNED INSPECTION STAFF CURRENT ON THE STATUS OF SITE DEVELOPMENT AND UTILITY CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY TRAVIS COUNTY AND REQUEST PRIORITY INSPECTIONS THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY IN ACCORDANCE WITH THE SPECIFIC MILESTONES IN THE CONSTRUCTION SEQUENCING NOTES IN THESE APPROVED PLANS.
8. CONTOUR DATA SOURCE: CHAPPARAL SURVEYING, ON THE GROUND TOPO SURVEY 8/9/2018
9. FILL MATERIAL MUST BE MANAGED AND DISPOSED OF IN ACCORDANCE WITH ALL REQUIREMENTS SPECIFIED IN THE APPROVED PLANS, SWP3, AND THE TRAVIS COUNTY CODE. THE CONTRACTOR SHALL STOCKPILE FILL AND CONSTRUCTION MATERIALS ONLY IN THE AREAS DESIGNATED ON THE APPROVED PLANS AND NOT WITHIN THE 0.2 PERCENT ANNUAL CHANCE FLOODPLAIN OR THE 1 PERCENT ANNUAL CHANCE FLOODPLAIN, WATERWAY SETBACK, CRITICAL ENVIRONMENTAL FEATURE SETBACK, OR OUTSIDE THE LIMITS OF CONSTRUCTION. DISPOSAL OF SOLID WASTE MATERIALS, AS DEFINED BY STATE LAW (E.G., LITTER, TIRES, DECOMPOSABLE WASTES, ETC.) IS PROHIBITED IN PERMANENT FILL SITES.
10. BEFORE DISPOSING ANY EXCESS FILL MATERIAL OFF-SITE, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR DOCUMENTATION THAT DEMONSTRATES THAT ALL REQUIRED PERMITS FOR THE PROPOSED DISPOSAL SITE LOCATION, INCLUDING TRAVIS COUNTY, TCEQ NOTICE, AND OTHER APPLICABLE DEVELOPMENT PERMITS, HAVE BEEN OBTAINED. THE OWNER OR PRIMARY OPERATOR MUST REVISE THE SWP3 AND ESC PLAN IF HANDLING OR PLACEMENT OF EXCESS FILL ON THE CONSTRUCTION SITE IS REVISED FROM THE EXISTING SWP3. IF THE FILL DISPOSAL LOCATION IS OUTSIDE TRAVIS COUNTY OR DOES NOT REQUIRE A DEVELOPMENT PERMIT, THE CONTRACTOR OR PRIMARY OPERATOR MUST PROVIDE THE COUNTY INSPECTOR THE SITE ADDRESS, CONTACT INFORMATION FOR THE PROPERTY OWNER OF THE FILL
11. THE DESIGN ENGINEER IS RESPONSIBLE FOR THE ADEQUACY OF THE CONSTRUCTION PLANS. IN REVIEWING THE CONSTRUCTION PLANS, TRAVIS COUNTY WILL RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.
12. IN THE EVENT OF ANY CONFLICTS BETWEEN THE CONTENT IN THE SWP3 SITE NOTEBOOK AND THE CONTENT IN THE CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY, THE CONSTRUCTION PLANS SHALL TAKE PRECEDENCE.
13. A MINIMUM OF TWO SURVEY BENCHMARKS SHALL BE SET, INCLUDING DESCRIPTION, LOCATION, AND ELEVATION; THE BENCHMARKS SHOULD BE TIED TO A TRAVIS COUNTY CONTROL BENCHMARK WHEN POSSIBLE.
14. ANY EXISTING PAVEMENT, CURBS, SIDEWALKS, OR DRAINAGE STRUCTURES WITHIN COUNTY RIGHT-OF-WAY WHICH ARE DAMAGED, REMOVED, OR SILTED, WILL BE REPAIRED BY THE CONTRACTOR AT OWNER OR CONTRACTOR'S EXPENSE BEFORE APPROVAL AND ACCEPTANCE OF THE CONSTRUCTION BY TRAVIS COUNTY.
15. CALL THE TEXAS EXCAVATION SAFETY SYSTEM AT 8-1-1 AT LEAST 2 BUSINESS DAYS BEFORE BEGINNING EXCAVATION ACTIVITIES.
16. ALL STORM SEWER PIPES SHALL BE CLASS III RCP, UNLESS OTHERWISE NOTED.
17. CONTRACTOR IS REQUIRED TO OBTAIN A UTILITY INSTALLATION PERMIT IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.901(A)(3) BEFORE ANY CONSTRUCTION OF UTILITIES WITHIN ANY TRAVIS COUNTY RIGHT-OF-WAY.
18. THIS PROJECT IS LOCATED ON FLOOD INSURANCE RATE MAP 48453 CO 555J.
19. TEMPORARY STABILIZATION MUST BE PERFORMED IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES.
20. PERMANENT SITE STABILIZATION/RE-VEGETATION MUST BE PERFORMED IMMEDIATELY IN ALL SITE AREAS WHICH ARE AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED IN THE APPROVED PLANS FOR PHASED RE-VEGETATION, IN ACCORDANCE WITH THE STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES.
21. ALL TREES WITHIN THE RIGHT-OF-WAY AND DRAINAGE EASEMENTS SHALL BE SAVED OR REMOVED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION PLANS. TRAVIS COUNTY TREE PRESERVATION STANDARDS IN TRAVIS COUNTY CODE SECTION 482.973, INCLUDING INSTALLATION AND MAINTENANCE OF ALL SPECIFIED TREE PROTECTION MEASURES, MUST BE FOLLOWED DURING CONSTRUCTION.
22. AN ENGINEER'S CONCURRENCE LETTER IN ACCORDANCE WITH TRAVIS COUNTY CODE SECTION 482.953 MUST BE SUBMITTED VIA THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE. THE ENGINEER'S CONCURRENCE LETTER MUST BE SUBMITTED BEFORE THE CONTRACTOR OR PRIMARY OPERATOR REQUESTS A FINAL INSPECTION BY TRAVIS COUNTY.
23. SITE IMPROVEMENTS MUST BE CONSTRUCTED IN CONFORMANCE WITH THE ENGINEER'S CONSTRUCTION PLANS APPROVED BY TRAVIS COUNTY. NON-CONFORMANCE WITH THE APPROVED PLANS WILL DELAY FINAL INSPECTION APPROVAL BY THE COUNTY UNTIL PLAN CONFORMANCE IS ACHIEVED OR ANY REQUIRED PLAN REVISIONS ARE APPROVED.
24. FINAL SITE STABILIZATION. ALL AREAS DISTURBED BY THE CONSTRUCTION MUST BE PERMANENTLY REVEGETATED AND ALL TEMPORARY SEDIMENT CONTROLS AND ACCUMULATED SEDIMENTATION MUST BE REMOVED BEFORE THE COUNTY WILL ISSUE A CERTIFICATE OF COMPLIANCE FOR FINAL SITE STABILIZATION AS PART OF FINAL INSPECTION AND PROJECT COMPLETION. A DEVELOPERS CONTRACT, AS DESCRIBED IN THE SWP3 AND ESC NOTES SHEET MAY BE EXECUTED WITH TRAVIS COUNTY FOR CONDITIONAL ACCEPTANCE OF A PROJECT FOR WHICH HAS ESC FISCAL SECURITY POSTED AND FOR WHICH ALL ITEMS ARE COMPLETE

SEQUENCE OF CONSTRUCTION AND PRIORITY INSPECTIONS:

1. ESC INSTALLATION. INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROLS (ESC) AND TREE PROTECTION MEASURES IN ACCORDANCE WITH THE APPROVED ESC PLAN SHEETS AND THE SWP3.
    1.a. HAVE A QUALIFIED INSPECTOR (AS SPECIFIED IN SECTION 482.934(C)(3) OF THE TRAVIS COUNTY CODE) INSPECT THE TEMPORARY EROSION AND SEDIMENT CONTROLS AND PREPARE A CERTIFIED SWP3 INSPECTION REPORT REGARDING WHETHER THE TEMPORARY EROSION AND SEDIMENT CONTROLS WERE INSTALLED IN CONFORMANCE WITH THE APPROVED PLANS;
    1.b. UPLOAD THE QUALIFIED INSPECTOR'S CERTIFIED SWP3 INSPECTION REPORT TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY; AND
    1.c. REQUEST A MANDATORY PRE-CONSTRUCTION MEETING WITH TRAVIS COUNTY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION.
2. PRE-CONSTRUCTION MEETING AND ESC INSPECTION. HOLD A MANDATORY PRE-CONSTRUCTION MEETING THAT ADDRESSES THE ITEMS IN EXHIBIT 482.950 AND THE ESC PRE-CONSTRUCTION INSPECTION BY THE COUNTY AND OBTAIN COUNTY'S APPROVAL TO START CONSTRUCTION. (PRIORITY INSPECTION)
3. INSPECT FOR COMPLIANCE WITH SWP3 AND ESC PLAN, MAINTAIN AND INSPECT THE SWP3 CONTROLS AND PREPARE AND UPLOAD A WEEKLY CERTIFIED SWP3 INSPECTION REPORT THAT INCLUDES THE CONTENTS LISTED IN EXHIBIT 482.951 TO THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY.
4. CONSTRUCT SEDIMENT BASIN(S). CONSTRUCT ANY STORM WATER POND(S) FIRST, WHENEVER APPLICABLE, TO BE FUNCTIONAL AS CONSTRUCTION SEDIMENT BASIN(S) BEFORE GRADING AND EXCAVATING THE ENTIRE SITE, AS FOLLOWS:
    4.a. CLEAR, GRUB, AND EXCAVATE ONLY THE SITE AREAS AND CUT AND FILL QUANTITIES NECESSARY TO CONSTRUCT THE POND(S) IN ACCORDANCE WITH THESE APPROVED PLANS AND THE MINIMUM STANDARDS DESCRIBED IN THE SWP3 AND ESC PLAN SHEET NOTES FOR THE TEMPORARY SEDIMENT BASIN EMBANKMENTS, WALLS, INFLOWS, OUTFALLS, DRAINAGE CONVEYANCE MEASURES, SEDIMENT CONTROLS, AND STABILIZATION.
    4.b. REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE TEMPORARY SEDIMENT BASIN(S) BEFORE PROCEEDING FURTHER IN THE SEQUENCE OF CONSTRUCTION. (PRIORITY INSPECTION)
5. CONSTRUCT SITE IMPROVEMENTS. BEGIN THE PRIMARY SITE CLEARING, EXCAVATION, AND CONSTRUCTION ACTIVITIES AND CONTINUE THE SWP3 AND ESC PLAN IMPLEMENTATION AND MAINTENANCE PER THE APPROVED PLANS.
6. CONSTRUCT DRIVEWAY APPROACH AND RIGHT-OF-WAY IMPROVEMENTS. INSTALL DRIVEWAY APPROACH AND DRAINAGE AND ROAD IMPROVEMENTS IN THE COUNTY RIGHT-OF-WAY PER APPROVED PLANS, WHEN APPLICABLE. REQUEST A COUNTY PRE-POUR INSPECTION OF THE DRIVEWAY THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY GIVING AT LEAST 3 BUSINESS DAYS NOTIFICATION. (PRIORITY INSPECTION).
7. PERFORM TEMPORARY STABILIZATION IN ALL DISTURBED AREAS THAT HAVE CEASED CONSTRUCTION ACTIVITIES FOR 14 DAYS OR LONGER.
8. PERFORM PERMANENT SITE STABILIZATION/RE-VEGETATION IMMEDIATELY IN ALL SITE AREAS AT FINAL PLAN GRADE AND IN ALL SITE AREAS SPECIFIED FOR PHASED RE-VEGETATION.
9. COMPLETE PERMANENT WATER QUALITY CONTROLS. BEGIN COMPLETION OF PERMANENT WATER QUALITY CONTROL(S) AND INSTALL THE UNDERDRAIN PER APPROVED PLANS, WHEN APPLICABLE.
    9.a. REMOVE CONSTRUCTION SEDIMENT, RE-ESTABLISH THE BASIN SUBGRADE, AND INSTALL UNDERDRAIN PIPING.
    9.b. REQUEST COUNTY INSPECTION AND OBTAIN COUNTY'S WRITTEN APPROVAL OF THE UNDERDRAIN PIPING INSTALLATION AND ASSOCIATED CONSTRUCTION MATERIALS (AGGREGATE, FILTER MEDIA, ETC.) BEFORE COVERING THE UNDERDRAIN AND PROCEEDING WITH CONSTRUCTION OF THE CONTROL. (PRIORITY INSPECTION).
10. COMPLETE CONSTRUCTION SITE IMPROVEMENTS AND FINAL STABILIZATION PER THE APPROVED PLANS.
11. PROVIDE ENGINEER'S CONCURRENCE LETTER THROUGH THE MYPERMITNOW.ORG CUSTOMER PORTAL FOR TRAVIS COUNTY WHEN CONSTRUCTION IS SUBSTANTIALLY COMPLETE AND REQUEST A FINAL INSPECTION BY TRAVIS COUNTY. (PRIORITY INSPECTION)
12. OBTAIN A CERTIFICATE OF COMPLIANCE WHEN ALL FINAL INSPECTION PUNCH LIST ITEMS, INCLUDING FINAL SITE STABILIZATION AND REMOVAL OF TEMPORARY SEDIMENT CONTROLS. IF NECESSARY, PROVIDE A DEVELOPERS CONTRACT TO THE COUNTY TO REQUEST CONDITIONAL ACCEPTANCE FOR USE OR OCCUPANCY OF THE SITE WITH ALL ITEMS COMPLETED EXCEPT RE-VEGETATION GROWTH COVERAGE. REQUEST A RE-INSPECTION WHEN RE-VEGETATION COVERAGE IS COMPLETE. (PRIORITY INSPECTION)

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TBPELS FIRM #2946
GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

GENERAL NOTES (2 OF 3)

PROJECT NO: 1636-11741
DESIGNED BY: CLO
DRAWN BY: TAM
CHECKED BY: CLO

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER
CHRIS RAWLS

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-NOTES.DWG DATE: 2/24/2025 4:14:18 PM BY: CDIXON

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING, AND CONDUCT "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR EXCAVATION).
2. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE ENVIRONMENTAL CRITERIA MANUAL AND THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE COA ESC PLAN SHALL BE CONSULTED AND USED AS THE BASIS FOR A TPDES REQUIRED SWPPP. IF A SWPPP IS REQUIRED, IT SHALL BE AVAILABLE FOR REVIEW BY THE CITY OF AUSTIN ENVIRONMENTAL INSPECTOR AT ALL TIMES DURING CONSTRUCTION, INCLUDING AT THE PRE-CONSTRUCTION MEETING.
3. THE PLACEMENT OF TREE/NATURAL AREA PROTECTIVE FENCING SHALL BE IN ACCORDANCE WITH THE CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION AND THE APPROVED GRADING/TREE AND NATURAL AREA PLAN.
4. A PRE-CONSTRUCTION CONFERENCE SHALL BE HELD ON-SITE WITH THE CONTRACTOR, DESIGN ENGINEER/PERMIT APPLICANT AND ENVIRONMENTAL INSPECTOR AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTION MEASURES AND "PRE-CONSTRUCTION" TREE FERTILIZATION (IF APPLICABLE) PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE OWNER OR OWNER'S REPRESENTATIVE SHALL NOTIFY THE DEVELOPMENT SERVICES DEPARTMENT, 512-974-2278 OR BY EMAIL AT ENVIRONMENTAL.INSPECTIONS@AUSTINTEXAS.GOV, AT LEAST THREE DAYS PRIOR TO THE MEETING DATE. COA APPROVED ESC PLAN AND TPDES SWPPP (IF REQUIRED) SHOULD BE REVIEWED BY COA EV INSPECTOR AT THIS TIME.
5. ANY MAJOR VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS WILL REQUIRE A REVISION AND MUST BE APPROVED BY THE REVIEWING ENGINEER, ENVIRONMENTAL SPECIALIST OR CITY ARBORIST AS APPROPRIATE. MAJOR REVISIONS MUST BE APPROVED BY AUTHORIZED COA STAFF. MINOR CHANGES TO BE MADE AS FIELD REVISIONS TO THE EROSION AND SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE ENVIRONMENTAL INSPECTOR DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES.
6. THE CONTRACTOR IS REQUIRED TO PROVIDE A CERTIFIED INSPECTOR WITH EITHER A LICENSED ENGINEER (OR PERSON DIRECTLY SUPERVISED BY THE LICENSED ENGINEER) OR CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC OR CPESC – IT), CERTIFIED EROSION, SEDIMENT AND STORMWATER-INSPECTOR (CESSWI OR CESSWI – IT) OR CERTIFIED INSPECTOR OF SEDIMENTATION AND EROSION CONTROLS (CISEC OR CISEC – IT) CERTIFICATION TO INSPECT THE CONTROLS AND FENCES AT BI-WEEKLY INTERVALS AND AFTER ONE-HALF (½) INCH OR GREATER RAINFALL EVENTS TO INSURE THAT THEY ARE FUNCTIONING PROPERLY. THE PERSON(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL IMMEDIATELY MAKE ANY NECESSARY REPAIRS TO DAMAGED AREAS. SILT ACCUMULATION AT CONTROLS MUST BE REMOVED WHEN THE DEPTH REACHES SIX (6) INCHES OR ONE-THIRD (⅓) OF THE INSTALLED HEIGHT OF THE CONTROL WHICHEVER IS LESS.
7. PRIOR TO FINAL ACCEPTANCE BY THE CITY, HAUL ROADS AND WATERWAY CROSSINGS CONSTRUCTED FOR TEMPORARY CONTRACTOR ACCESS MUST BE REMOVED, ACCUMULATED SEDIMENT REMOVED FROM THE WATERWAY AND THE AREA RESTORED TO THE ORIGINAL GRADE AND REVEGETATED. ALL LAND CLEARING DEBRIS SHALL BE DISPOSED OF IN APPROVED SPOIL DISPOSAL SITES.
8. ALL WORK MUST STOP IF A VOID IN THE ROCK SUBSTRATE IS DISCOVERED WHICH IS; ONE SQUARE FOOT IN TOTAL AREA; BLOWS AIR FROM WITHIN THE SUBSTRATE AND/OR CONSISTENTLY RECEIVES WATER DURING ANY RAIN EVENT. AT THIS TIME IT IS THE RESPONSIBILITY OF THE PROJECT MANAGER TO IMMEDIATELY CONTACT A CITY OF AUSTIN ENVIRONMENTAL INSPECTOR FOR FURTHER INVESTIGATION.
9. TEMPORARY AND PERMANENT EROSION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW:
   A. ALL DISTURBED AREAS TO BE REVEGETATED ARE REQUIRED TO PLACE A MINIMUM OF SIX (6) INCHES OF TOPSOIL [SEE STANDARD SPECIFICATION ITEM NO. 601S.3(A)]. DO NOT ADD TOPSOIL WITHIN THE CRITICAL ROOT ZONE OF EXISTING TREES.
   - TOPSOIL SALVAGED FROM THE EXISTING SITE IS ENCOURAGED FOR USE, BUT IT SHOULD MEET THE STANDARDS SET FORTH IN 601S.

   AN OWNER/ENGINEER MAY PROPOSE USE OF ONSITE SALVAGED TOPSOIL WHICH DOES NOT MEET THE CRITERIA OF STANDARD SPECIFICATIONS 601S BY PROVIDING A SOIL ANALYSIS AND A WRITTEN STATEMENT FROM A QUALIFIED PROFESSIONAL IN SOILS, LANDSCAPE ARCHITECTURE, OR AGRONOMY INDICATING THE ONSITE TOPSOIL WILL PROVIDE AN EQUIVALENT GROWTH MEDIA AND SPECIFYING WHAT, IF ANY, SOIL AMENDMENTS ARE REQUIRED.

   SOIL AMENDMENTS SHALL BE WORKED INTO THE EXISTING ONSITE TOPSOIL WITH A DISC OR TILLER TO CREATE A WELL-BLENDED MATERIAL.

THE VEGETATIVE STABILIZATION OF AREAS DISTURBED BY CONSTRUCTION SHALL BE AS FOLLOWS:

TEMPORARY VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING SHALL BE WITH OR INCLUDE A COOL SEASON COVER CROP: WESTERN WHEATGRASS (Pascopyrum smithii) 5.6 POUNDS PER ACRE, OATS (Avena sativa) AT 4.0 POUNDS PER ACRE, CEREAL RYE GRAIN (Secale cereale) AT 45 POUNDS PER ACRE. CONTRACTOR MUST ENSURE THAT ANY SEE APPLICATION REQUIRING A COOL SEASON COVER CROP DOES NOT UTILIZE ANNUAL RYEGRASS (Lolium multiflorum) OR PERENNIAL RYEGRASS (Lolium perenne). COOL SEASON COVER CROPS ARE NOT PERMANENT EROSION CONTROL.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 POUNDS PER ACRE OR A NATIVE PLANT SEED MIX CONFORMING TO ITEM 604S OR 609S.
   A. FERTILIZER SHALL BE APPLIED ONLY IF WARRANTED BY A SOIL TEST AND SHALL CONFORM TO ITEM NO. 606S, FERTILIZER. FERTILIZATION SHOULD NOT OCCUR WHEN RAINFALL IS EXPECTED OR DURING SLOW PLANT GROWTH OR DORMANCY. CHEMICAL FERTILIZER MAY NOT BE APPLIED IN THE CRITICAL WATER QUALITY ZONE.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 1, BELOW.
   C. TEMPORARY EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH 95% TOTAL COVERAGE SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR TEMPORARY STABILIZATION ARE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   D. WHEN REQUIRED, NATIVE PLANT SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, AND STANDARD SPECIFICATION 604S OR 609S.

TABLE 1: HYDROMULCHING FOR TEMPORARY VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTION	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
100% OR ANY BLEND OF WOOD CELLULOSE, STRAW AND/OR COTTON PLANT MATERIAL (EXCEPT NO MULCH SHALL EXCEED 30% PAPER)	10% OR GREATER WOOD/STRAW 30% OR LESS PAPER OR NATURAL FIBERS	0-3 MONTHS	MODERATE SLOPES; FROM FLAT TO 3:1	1500 TO 2000 LBS PER ACRE

PERMANENT VEGETATIVE STABILIZATION:

1. FROM SEPTEMBER 15 TO MARCH 1, SEEDING IS CONSIDERED TO BE TEMPORARY STABILIZATION ONLY. IF COOL SEASON COVER CROPS EXIST WHERE PERMANENT VEGETATIVE STABILIZATION IS DESIRED, THE GRASSES SHALL BE MOWED TO A HEIGHT OF LESS THAN ONE-HALF (½) INCH AND THE AREA SHALL BE RE-SEEDED IN ACCORDANCE WITH TABLE 2 BELOW. ALTERNATIVELY, THE COOL SEASON COVER CROP CAN BE MIXED WITH BERMUDA GRASS OR NATIVE SEED AND INSTALLED TOGETHER, UNDERSTANDING THAT GERMINATION OF WARM-SEASON SEED TYPICALLY REQUIRES SOIL TEMPERATURES OF 60 TO 70 DEGREES.
2. FROM MARCH 2 TO SEPTEMBER 14, SEEDING SHALL BE WITH HULLED BERMUDA AT A RATE OF 45 LBS PER ACRE WITH A PURITY OF 95% AND A MINIMUM PURE LIVE SEED (PLS) OF 0.83. BERMUDA GRASS IS A WARM SEASON GRASS AND IS CONSIDERED PERMANENT EROSION CONTROL. PERMANENT VEGETATIVE STABILIZATION CAN ALSO BE ACCOMPLISHED WITH A NATIVE PLANT (SEE MIX CONFORMING TO ITEM 604S OR 609S).
   A. FERTILIZER USE SHALL FOLLOW THE RECOMMENDATION OF A SOIL TEST. SEE ITEM 606S, FERTILIZER. APPLICATIONS OF FERTILIZER (AND PESTICIDE) ON CITY-OWNED AND MANAGER PROPERTY REQUIRES THE YEARLY SUBMITTAL OF A PESTICIDE AND FERTILIZER APPLICATION RECORD, ALONG WITH A CURRENT COPY OF THE APPLICATOR'S LICENSE. FOR CURRENT COPY OF THE RECORD TEMPLATE CONTACT THE CITY OF AUSTIN'S IPM COORDINATOR.
   B. HYDROMULCH SHALL COMPLY WITH TABLE 2, BELOW.
   C. WATER THE SEEDED AREAS IMMEDIATELY AFTER INSTALLATION TO ACHIEVE GERMINATION AND A HEALTHY STAND OF PLANTS THAT CAN ULTIMATELY SURVIVE WITHOUT SUPPLEMENTAL WATER. APPLY THE WATER UNIFORMLY TO THE PLANTED AREAS WITHOUT CAUSING DISPLACEMENT OR EROSION OF THE MATERIALS OR SOIL. MAINTAIN THE SEEDBED IN A MOIST CONDITION FAVORABLE FOR PLANT GROWTH. ALL WATERING SHALL COMPLY WITH CITY CODE CHAPTER 6-4 (WATER CONSERVATION), AT RATES AND FREQUENCIES DETERMINED BY A LICENSED IRRIGATOR OR OTHER QUALIFIED PROFESSIONAL, AND AS ALLOWED BY THE AUSTIN WATER UTILITY AND CURRENT WATER RESTRICTIONS AND WATER CONSERVATION INITIATIVES.
   D. PERMANENT EROSION CONTROL SHALL BE ACCEPTABLE WHEN THE GRASS HAS GROWN AT LEAST 1½ INCHES HIGH WITH 95% FOR THE NON-NATIVE MIX, AND 95% COVERAGE FOR THE NATIVE MIX SO THAT ALL AREAS OF A SITE THAT RELY ON VEGETATION FOR STABILITY MUST BE UNIFORMLY VEGETATED, AND PROVIDED THERE ARE NO BARE SPOTS LARGER THAN 10 SQUARE FEET.
   E. WHEN REQUIRED, NATIVE GRASS SEEDING SHALL COMPLY WITH REQUIREMENTS OF THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL, ITEMS 604S AND 609S.

TABLE 2: HYDROMULCHING FOR PERMANENT VEGETATIVE STABILIZATION

MATERIAL	DESCRIPTIONS	LONGEVITY	TYPICAL APPLICATIONS	APPLICATION RATES
BONDED FIBER MATRIX (BFM)	80% ORGANIC DEFIBRATED FIBERS 10% TACKIFIIER	6 MONTHS	ON SLOPES UP TO 2:1 AND EROSIVE SOIL CONDITIONS	2500 TO 4000 LBS PER ACRE (SEE MANUFACTURES RECOMMENDATIONS)
FIBER REINFORCED MATRIX (FRM)	65% ORGANIC DEFIBRATED FIVERS 25% REINFORCING FIBERS OR LESS 10% TACKIFIER	UP TO 12 MONTHS	ON SLOPS UP TO 1:1 AND EROSIVE SOIL CONDITIONS	3000 TO 4500 LBS PER ACRE (SEE MANUFACTURERS RECOMMENDATIONS

10. DEVELOPER INFORMATION:
    OWNER: CLAYTON PROPERTIES GROUP INC (DBA BROHN HOMES)
    PHONE #: 512-320-8833
    ADDRESS: 6720 VAUGHT RANCH RD., SUITE 200
    AUSTIN, TEXAS 78730

    OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:
    GRAY ENGINEERING INC
    PHONE #: 512-452-0371

    PERSON OR FIRM RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE: _____
    PHONE # _____

    PERSON OR FIRM RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE: _____
    PHONE # _____
11. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE DEVELOPMENT SERVICES DEPARTMENT AT 512-974-2278 AT LEAST 48 HOURS PRIOR WITH THE LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

CITY OF AUSTIN STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION:

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ABORIST;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.
6. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
   C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
   D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 512-974-1876 TO DISCUSS ALTERNATIVES.

SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.
9. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL. BACKFILL ROOT AREAS WITH GOOD QUALITY TOP SOIL AS SOON AS POSSIBLE. IF EXPOSED ROOT AREAS ARE NOT BACKFILLED WITHIN 2 DAYS, COVER THEM WITH ORGANIC MATERIAL IN A MANNER WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION.
10. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.
11. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIP LINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.
12. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE DAMAGE OCCURS (RIPPING OF BRANCHES, ETC.).
13. ALL FINISHED PRUNING SHALL BE DONE ACCORDING TO RECOGNIZED, APPROVED STANDARDS OF THE INDUSTRY (REFERENCE THE NATIONAL ARBORIST ASSOCIATION PRUNING STANDARDS FOR SHADE TREES AVAILABLE ON REQUEST FROM THE CITY ARBORIST).
14. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NON-COMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

GENERAL NOTES (3 OF 3)

PROJECT NO: 1636-11741

DESIGNED BY: CLO

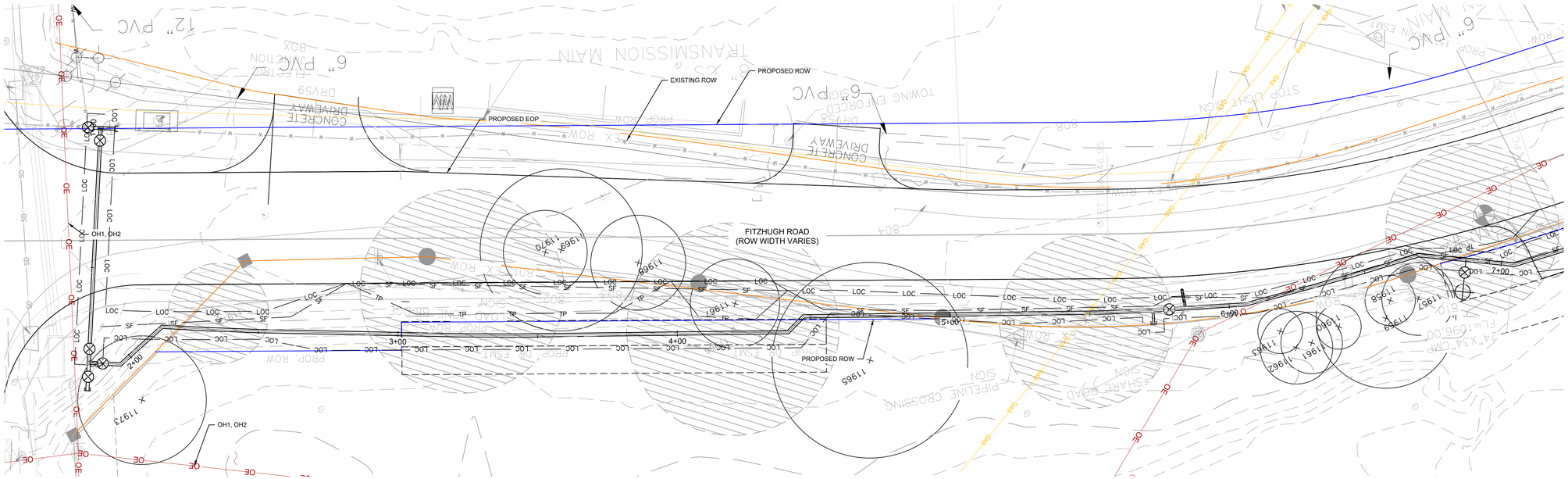
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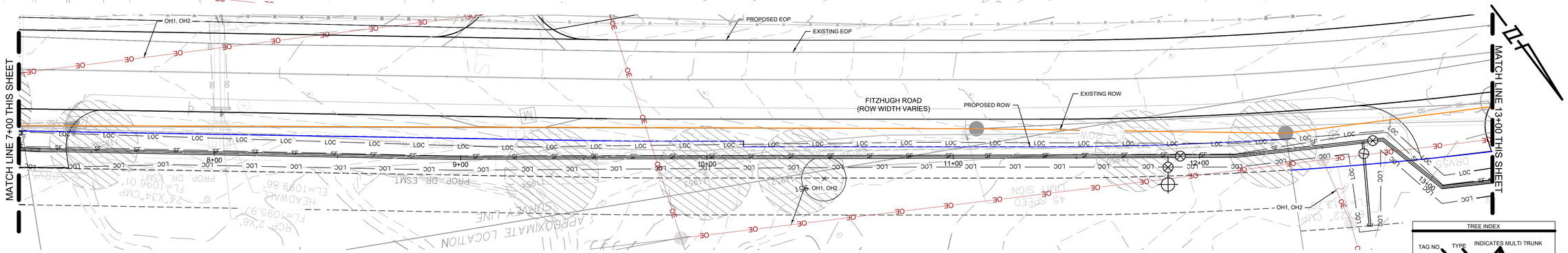
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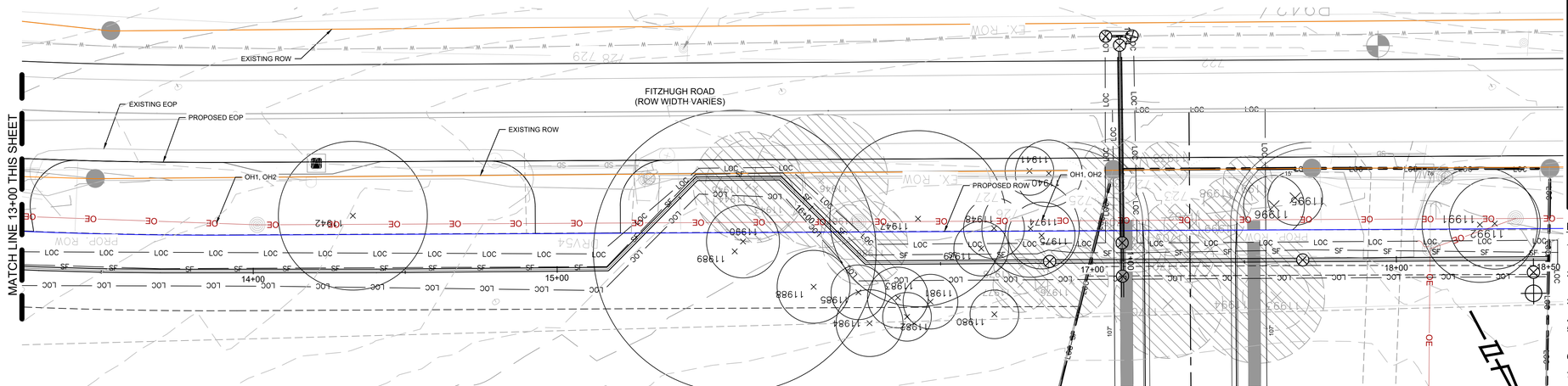
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2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED
PROFESSIONAL ENGINEER
CHRIS RAWLS

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-NOTES.DWG DATE: 2/24/2025 4:14:19 PM BY: CDIXON







SCALE: 1"=20'
GRAPHIC SCALE IN FEET
0 10 20 30 40

LEGEND

LOC	LIMITS OF CONSTRUCTION
SF	SILT FENCE
TP	TREE PROTECTION
	INLET PROTECTION
	TEMPORARY ROCK BERM
#XX	TREES TO REMAIN (SEE LIST THIS SHEET)
#XX	TREES TO BE REMOVED (SEE LIST THIS SHEET)

TREE LIST

11705 LO 10	11966 LO 38 (R)
11940 LO 11	11967 CDR 16
11941 LO 8	11968 LO 17
11942 LO 17 15	11969 LO 29
11943 LO 9 9 (R)	11970 CDR 15
11944 LO 12 9 (R)	11971 LO 20 17 16
11945 LO 12 12 (R)	11972 LO 18 (R)
11946 LO 16 12 (R)	11973 LO 23
11947 LO 29	11974 LO 16
11948 LO 10	11975 LO 11
11949 CDR 18 (R)	11976 LO 12 (R)
11950 CDR 11 11 (R)	11977 LO 9 (R)
11951 CDR 9	11978 LO 9 (R)
11952 CDR 10 9 6 (R)	11979 LO 9
11953 CDR 19 (R)	11980 LO 8
11954 LO 19 (R)	11981 LO 9
11955 CE 18 (R)	11982 LO 8
11956 LO 31 (R)	11983 LO 10 (R)
11957 CDR 11 4	11984 LO 11
11958 CDR 9	11985 LO 9
11959 LO 21 8	11986 CE 14 (R)
11960 CDR 8	11987 LO 9 (R)
11961 LO 11	11988 LO 12
11962 LO 13	11989 LO 22 18 17 14
11963 LO 8	11990 LO 12
11964 LO 18 17 9 (R)	
11965 LO 19 16 16	

(R)= EX. TREES PROPOSED TO BE REMOVED

TREE INDEX

TAG NO TYPE INDICATES MULTI TRUNK

514 LO 17 14 11

INDIVIDUAL TRUNK DIA. (IN INCHES)

CRITICAL ROOT ZONES (TREE CIRCLES) ARE SHOWN USING THE COA FORMULA FOR SINGLE AND MULTI TRUNK TREES.

CDR = CEDAR
HB = HACKBERRY
LO = LIVE OAK
CB = CHINA BERRY
CE = CEDAR ELM
PO = POST OAK
WAL = WALNUT
BUM = WOOLY BUMELIA
RO = RED OAK
SHIN OAK = SHIN OAK
PEAR = PEAR
WO=WHITE OAK

NOTE ABOUT DEAD TREES: IF THE TREE APPEARED TO BE DEAD, THEN IT HAS BEEN NOTED AS DEAD; HOWEVER, SUCH DETERMINATION IS SUBJECT TO VERIFICATION BY A QUALIFIED ARBORIST.

NOTES:

1. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING.
2. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM OR AS DIRECTED BY THE CITY INSPECTOR.
3. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATES ONTO EXISTING PUBLIC ROADS A MINIMUM OF ONCE DAILY.
4. INITIATE FINAL STABILIZATION WITHIN 7 DAYS OF ACHIEVING FINAL GRADE.
5. ANY DIRT, MUD, ROCKS, DEBRIS, ETC. THAT IS SPILLED, TRACKED, OR OTHERWISE DEPOSITED ON ANY EXISTING PAVED STREETS SHALL BE CLEANED IMMEDIATELY BY THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE.
6. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO AREAS WITHIN THE R.O.W., EASEMENTS, SPOILS DISPOSAL AND STAGING AREAS ONLY.
7. TREE PROTECTION FENCING SHALL BE PROVIDED FOR ANY HARDWOOD TREES WITHIN 20' OF CONSTRUCTION ACTIVITIES ASSOCIATED WITH THESE IMPROVEMENTS.
8. DEBRIS REMOVAL FROM SITE SHALL, AT A MINIMUM, INCLUDE OLD STRUCTURES, CONCRETE FOUNDATIONS, PROPANE TANKS, SCRAP METAL, EXPOSED WIRE/PLUMBING FIXTURES; SEPTIC TANK(S) REMOVAL; WATER WELL PROPER TCEQ ABANDONMENT (CAPPING & DOCUMENTATION); OLD TIRES, FARM EQUIPMENT, FENCING, AND ANY VISIBLE TRASH.

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GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH OFFSITE WATERLINE CONSTRUCTION PLANS

EROSION CONTROL & SEDIMENTATION PLAN

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

CHECKED BY: CR

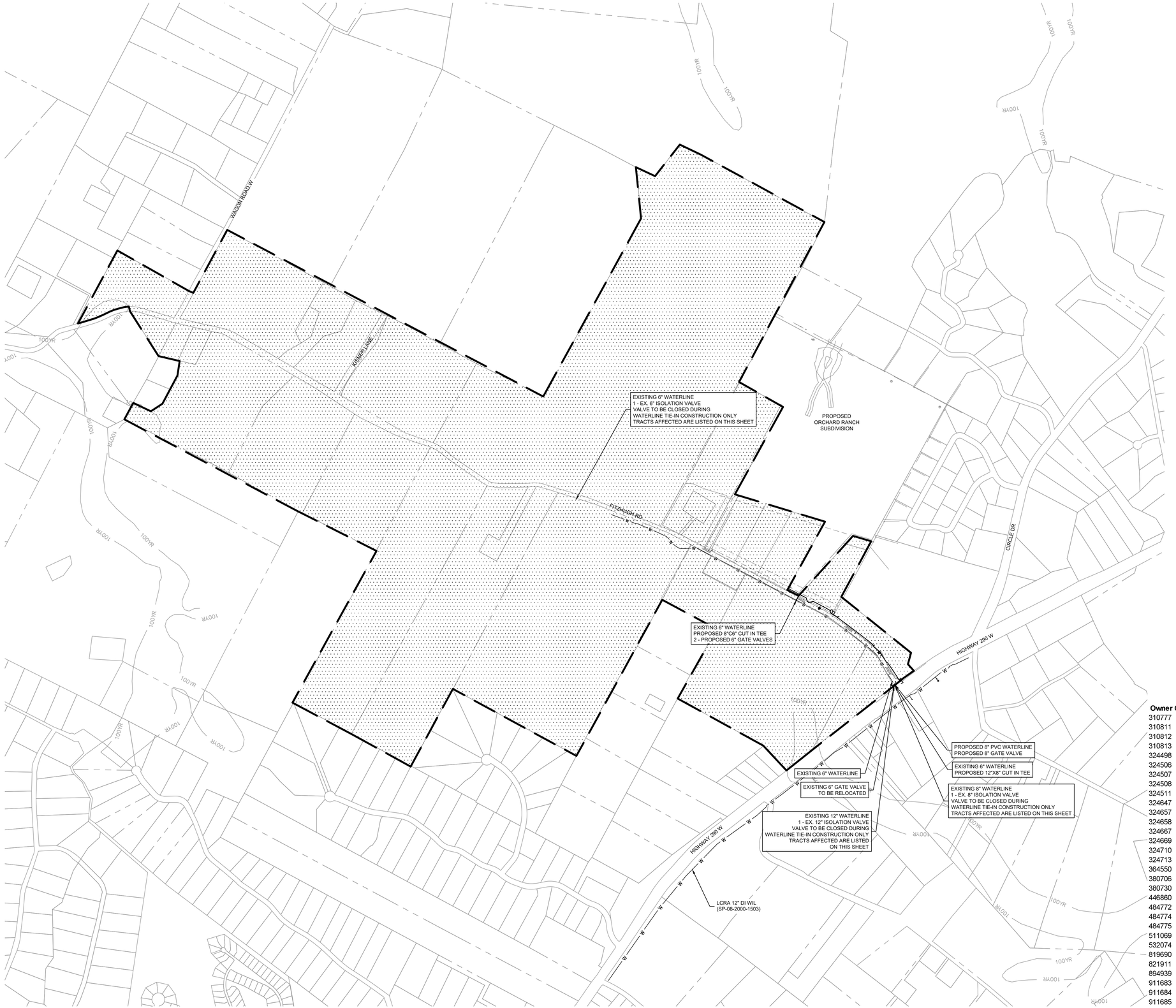
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3/10/26

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CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER

SHEET 5 OF 14

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-EROS.DWG DATE: 3/10/2026 9:37:25 AM BY: TMARSHALL



SCALE: 1"=500'
GRAPHIC SCALE IN FEET
0 250 500 750 1000

LEGEND

TRACTS AFFECTED FROM VALVE SHUT-OFF

NOTE: TRACTS TO BE AFFECTED WILL HAVE WATER SHUT-OFF ONLY DURING THE TIME OF CONSTRUCTION TIE-IN.

AFFECTED TRACTS

Owner Quick	Owner Name	Situs
310777	REEVES HERBERT DALE & CAROL	12016 FITZHUGH RD, AUSTN, TX 78736
310811	SCHENK THEODORE R & VICKI L	12219 FITZHUGH RD, AUSTIN, TX 78736
310812	KOENNING ROGER & BARBARA	12141 FITZHUGH RD, AUSTIN, TX 78736
310813	NOVODVORSCHI ROBERT & GISELA	12131 FITZHUGH RD, AUSTIN, TX 78736
324498	LONE STAR LAND PARTNERS LLC	11104 FITZHUGH RD, AUSTIN, TX 78736
324506	59 ACRES LLC	11017 FITZHUGH RD, AUSTIN, TX 78736
324507	RRM LLC	10908 W US HY 29, AUSTIN, TX 78737
324508	SIMPSON PATRICIA C	11097 FITZHUGH RD, AUSTIN, TX 78736
324511	SIMPSON PATRICIA C	11097 FITZHUGH RD, AUSTIN, TX 78736
324647	HEYENS HOLDINGS TX LLC	11903 FITZHUGH RD, AUSTIN, TX 78736
324657	RUTTER GLENDA J	11401 FITZHUGH RD, AUSTIN, TX 78736
324658	TURNER JOSEPH A	11217 FITZHUGH RD, AUSTIN, TX 78736
324667	CODE RANCH LLC	12121 FITZHUGH RD, AUSTIN, TX 78736
324669	WRIGHT RANDY L & SHARON	11901 FITZHUGH RD, AUSTIN, TX 78736
324710	RUTTER GLENN W	11401 FITZHUGH RD, AUSTIN, TX 78736
324713	STONERIDGE CAPITAL PARTNERS LTD	11218 FITZHUGH RD, AUSTIN, TX 78736
364550	KINSER KAREN S	11908 FITZHUGH RD, AUSTN, TX 78736
380706	EVANS THOMAS A	11110 FITZHUGH RD, AUSTIN, TX 78736
380730	WHEELER PRESTON E	11700 FITZHUGH RD, AUSTN, TX 78736
446860	KITOWSKI ROGER P & NANNETTE HI	10808 W US HY 290, AUSTIN, TX 78653
484772	VASQUEZ CRYSTAL SECTION 142 TRUST	11090 FITZHUGH RD, AUSTIN, TX 78736
484774	PARKER MICHAEL J &KARYN PONDER PAI	11094 FITZHUGH RD, AUSTIN, TX 78736
484775	POWELL ANTHONY R & DIANE	11098 FITZHUGH RD, AUSTIN, TX 78736
511069	FABAN REALESTATE GROUP LLC	10900 W US HY 290, AUSTIN, TX 78737
532074	BROWN H LYNN & JAN H	10944 FITZHUGH RD, AUSTIN, TX 78736
819690	COUNTRY FAMILY VENTURE	11701 FITZHUGH RD, AUSTIN, TX 78736
821911	MORTON MICHAEL	11605 FITZHUGH RD, AUSTIN, TX 78736
894939	PRICE ROYALE M & ANDERSON	12104 FITZHUGH RD, AUSTN, TX 78736
911683	COLLINS AURA RENEE	12314B FITZHUGH RD, AUSTIN, TX 7873(
911684	COLLINS AURA RENEE	12314 FITZHUGH RD, AUSTIN, TX 78736
911685	BREWSTER JOSEPH & TOBY	12410 FITZHUGH RD, AUSTIN, TX 78736

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ORCHARD RANCH SUBDIVISION CONSTRUCTION PLANS

VALVE SHUT-OFF PLAN

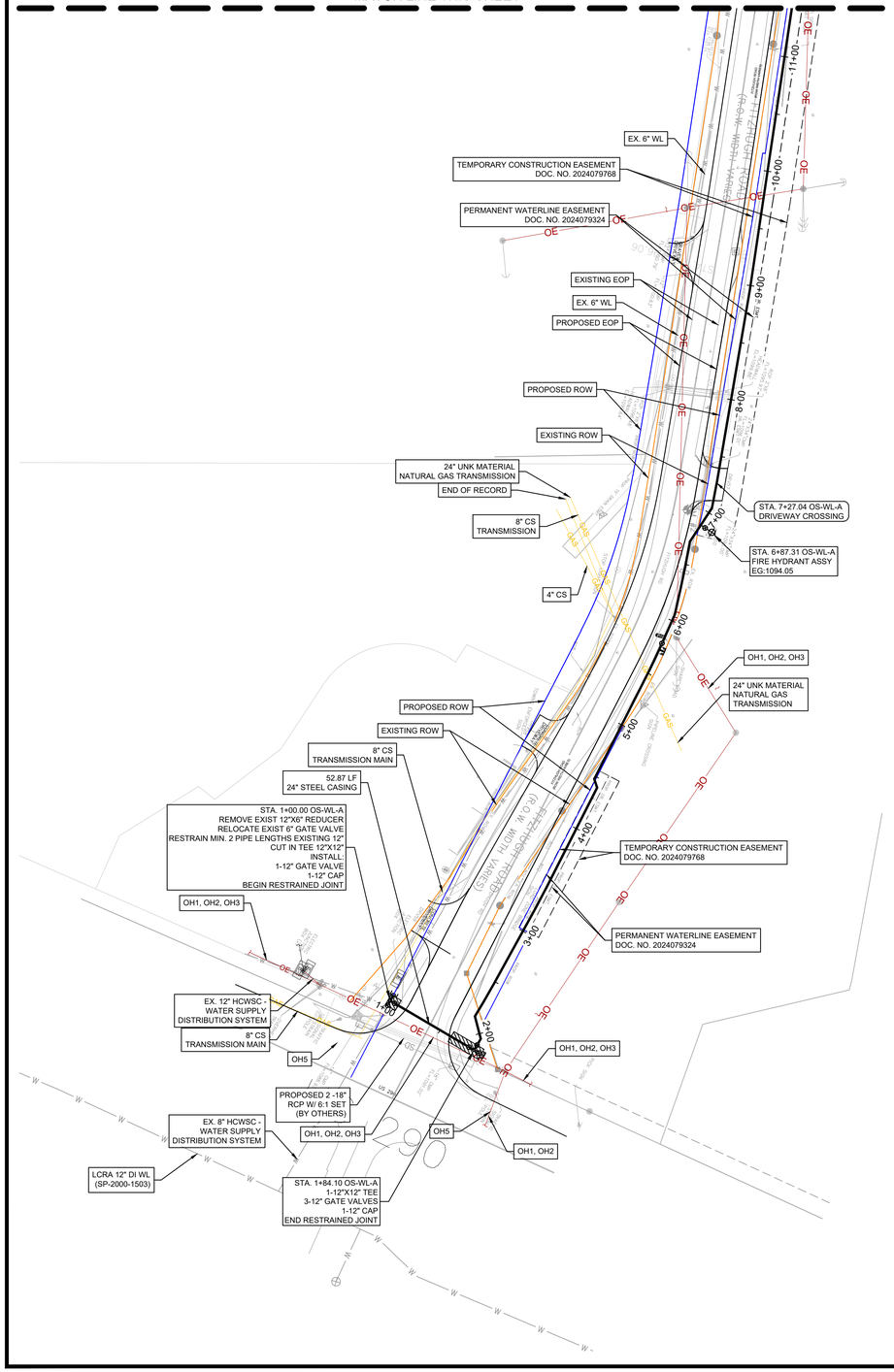
PROJECT NO: 1636-11741
DESIGNED BY: CLO
DRAWN BY: TAM
CHECKED BY: CLO

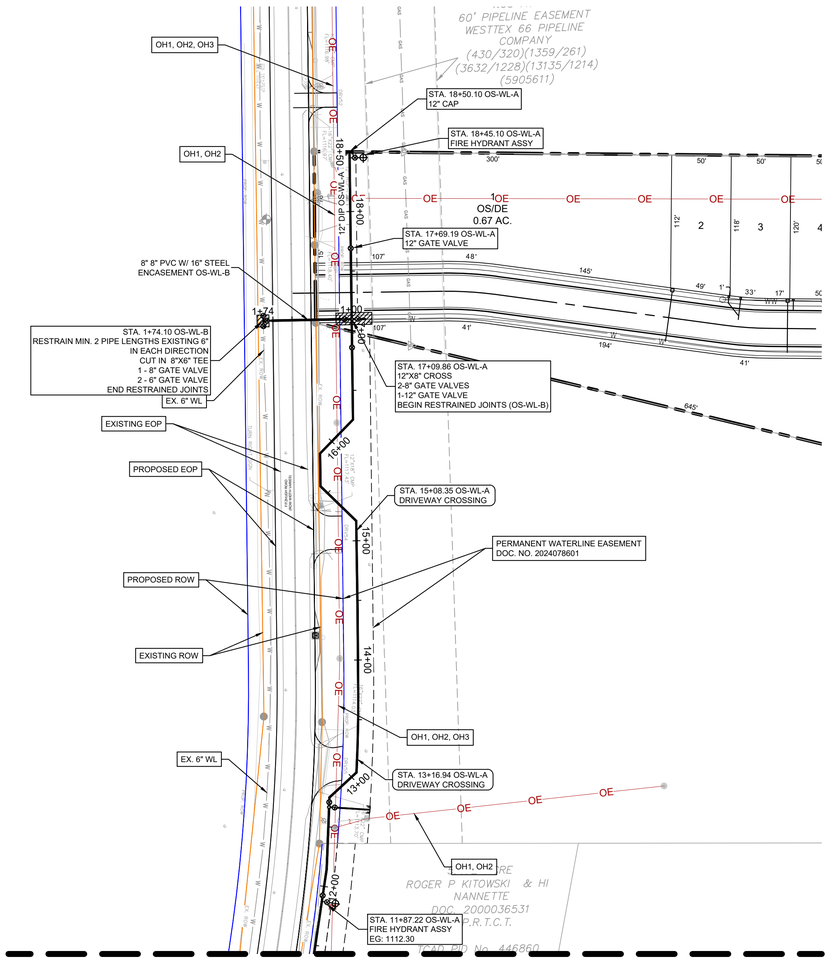
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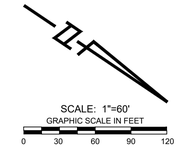
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STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER
CHRIS RAWLS

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEET\WATERLINE\11741-C-VALVE.DWG DATE: 2/24/2025 4:19:36 PM BY: CDIXON

MATCH LINE THIS SHEET



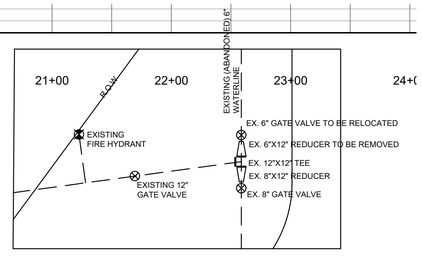




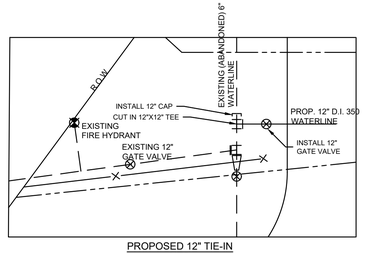
LEGEND

- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED PLUG
- EXISTING WATER LINE

MATCH LINE THIS SHEET



EXISTING
NTS



PROPOSED 12" TIE-IN
NTS

NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE ASSOCIATED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
2. WHERE A NEW POTABLE WATERLINE CROSSES A NEW, NON-PRESSURE RATED WASTEWATER MAIN OR LATERAL AND THE STANDARD PIPE SEGMENT LENGTH OF THE WASTEWATER MAIN OR LATERAL IS AT LEAST 18 FEET, ONE SEGMENT OF THE WATERLINE PIPE SHALL BE CENTERED OVER THE WASTEWATER MAIN OR LATERAL SUCH THAT THE JOINTS OF THE WATERLINE PIPE ARE EQUIDISTANT AND AT LEAST NINE FEET HORIZONTALLY FROM THE CENTERLINE OF THE WASTEWATER MAIN OR LATERAL. THE POTABLE WATERLINE SHALL BE AT LEAST TWO FEET ABOVE THE WASTEWATER MAIN OR LATERAL. WHENEVER POSSIBLE, THE CROSSING SHALL BE CENTERED BETWEEN THE JOINTS OF THE WASTEWATER MAIN OR LATERAL. THE WASTEWATER PIPE SHALL HAVE A MINIMUM STIFFNESS OF 115 PSI AT 5.0% DEFLECTION. THE WASTEWATER MAIN OR LATERAL SHALL BE EMBEDDED IN CEMENT STABILIZED (SEE CLAUSE (vi) OF THIS SUBPARAGRAPH) SAND FOR THE TOTAL LENGTH OF ONE PIPE SEGMENT PLUS 12 INCHES BEYOND THE JOINT ON EACH END.
3. FIRE HYDRANTS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY. SEE DETAIL SHEET FOR PLACEMENT OF APPURTENANCES. FIRE HYDRANT ASSEMBLY CONSISTS OF, BUT NOT LIMITED TO 5 1/4" FIRE HYDRANT, 6" GATE VALVE, 6" D.I. FIRE LEAD.
4. ALL FIRE HYDRANT SHOULD BE LOCATED 2 FEET OFF THE R.O.W. PC/PT SO THAT THERE WILL BE NO CONFLICT WITH THE SIDEWALK RAMPS.
5. ALL 45° BENDS SHALL INCLUDE MEGA LUG RESTRAINED JOINT.
6. NO WATER METERS LOCATED IN SIDEWALK AREA.
7. SERVICES TO BE LOCATED PER DETAIL SHEET.
8. CONTRACTOR TO VERIFY ACTUAL DEPTH OF ALL EXISTING UTILITIES TO BE EXTENDED OR TIED INTO PRIOR TO EXCAVATING.
9. VALVE TO REMAIN CLOSED AFTER TESTING.
10. ALL WATERLINES SHALL BE CL 350 DI, UNLESS NOTED OTHERWISE HEREON THE PLANS.
11. ALL NEWLY INSTALLED PIPE AND FITTINGS MUST CONFORM TO ANSI/NSF STANDARD 61 AND MUST BE CERTIFIED BY AN ORGANIZATION ACCREDITED BY ANSI.
12. DO NOT INSTALL SERVICES AND FITTINGS OR WITHIN THREE (3') FEET OF A PIPE JOINT OR FITTING.
13. ALL SERVICES TO BE SLEEVED AT SIDEWALK CROSSINGS PER COA DETAIL 432S-1.
14. ALL WATER VALVES ARE LOCATED INLINE WITH PROPERTY LINE PC/PT RETURNS, UNLESS OTHERWISE NOTED.
15. NO WATER METERS LOCATED IN THE SIDEWALK AREA.
16. SERVICES TO BE LOCATED PER DETAIL SHEET.
17. FIRE HYDRANT LEADS TO BE DUCTILE IRON PIPE, CL 350.
18. CONNECTION TO THE WTCPUA WATER SYSTEM WILL NOT BE ALLOWED UNTIL ALL PROPOSED WATER LINES HAVE BEEN INSTALLED OR AFTER WTCPUA HAS ACCEPTED PORTIONS THAT HAVE PASSED TESTING AND DISINFECTION REQUIREMENTS. UNDER NO CIRCUMSTANCE WILL THE WTCPUA CONNECTION BE ALLOWED WHERE COMPACTED COVER OVER NEW WATERLINES STILL BE NEEDED OR INCOMPLETE AT THE TIME OF CONNECTION.
19. CHANGES IN ALIGNMENT OF WATER LINES, BOTH HORIZONTAL AND VERTICAL, SHALL BE ACHIEVED BY DEFLECTION OF JOINTS OR BY USE OF FITTINGS. DEFLECTION OF PIPE IS NOT ALLOWED. CHANGES IN DIRECTION OF PVC PIPE SHALL ONLY BE BY USE OF FITTINGS OR BY DEFLECTING STRAIGHT PIPE SECTIONS AT JOINTS. DEFLECTION OF STRAIGHT PIPE SECTIONS SHALL NOT EXCEED 1 DEGREE AT EACH JOINT EVEN IF JOINT RESTRAINT DEVICES ARE INSTALLED.
20. MAGELLAN GAS MAIN AND EASEMENT LOCATION ARE GENERALLY SHOWN FOR VICINITY AND CONCEPTUAL INFORMATION ONLY. CONTACT MAGELLAN A MINIMUM OF 7 DAYS PRIOR TO CONSTRUCTION COMMENCEMENT TO DETERMINE EXACT LOCATION AND DEPTH.
21. ALL DRIVEWAY CROSSING SHALL BE REPAIRED PER COA STREET AND BRIDGE STANDARD PAVEMENT REPAIR DETAILS AND SPECIFICATIONS EXCEPT THE CONTRACTOR SHALL INSTALL CRUSHED LIMESTONE FOR EACH DRIVEWAY INSTEAD OF CONCRETE AS PER THE COA DETAIL.

NOTE:

ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE U.S. SAFE DRINKING WATER ACT. EXAMPLES ARE VALVES (CORPORATION STOP, CURB STOP, AND PRESSURE REDUCING), NIPPLES, BUSHINGS, PIPE FITTINGS, BACKFLOW PREVENTERS AND FIRE HYDRANTS. TAPPING SADDLES AND 2 INCH AND LARGER GATE VALVES ARE THE ONLY COMPONENTS EXEMPT FROM THIS REQUIREMENT. COMPONENTS THAT ARE NOT CLEARLY IDENTIFIED BY THE MANUFACTURER AS MEETING THIS REQUIREMENT EITHER BY MARKINGS ON THE COMPONENT OR THE PACKAGING SHALL NOT BE INSTALLED.

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NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH OFFSITE WATERLINE CONSTRUCTION PLANS

OVERALL WATER DISTRIBUTION PLAN

PROJECT NO: 1636-11783

DESIGNED BY: CLO

DRAWN BY: TAM

CHECKED BY: CLO

NOTICE:
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2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER

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JOINT RESTRAINT CALCULATIONS TABLE

ALIGNMENT	FITTING STATION	FITTING TYPE	PIPE MATERIAL	SOIL TYPE	SAFETY FACTOR	TRENCH TYPE	BURY DEPTH	TEST PRESSURE	PIPE SIZE	BEND ANGLE	RESTRAINT LENGTH (FT)	RESTRAINT LENGTH 2 (FT)	RESTRAINT BEGIN	RESTRAINT END
OFFSITE WL	1+04.48	GATE VALVE	DI	GW, Grav. Fill	1.5	4	5	200	12		44		+60.48	1+48.48
OFFSITE WL	1+79.10	GATE VALVE	DI	GW, Grav. Fill	1.5	4	5	200	12		44		1+35.10	2+23.10
OFFSITE WL	1+84.10	TEE	DI	GW, Grav. Fill	1.5	4	6	200	12		26		1+58.10	2+10.10
OFFSITE WL	1+89.10	GATE VALVE	DI	GW, Grav. Fill	1.5	4	7	200	12		32		1+57.10	2+21.10
OFFSITE WL	4+39.68	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	8	200	12	45	4		4+35.68	4+43.68
OFFSITE WL	5+72.63	GATE VALVE	DI	GW, Grav. Fill	1.5	4	9	200	12		25		5+47.63	5+97.63
OFFSITE WL	6+70.39	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	6	200	12	22.5	3		6+67.39	6+73.39
OFFSITE WL	7+04.99	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	7	200	12	22.5	3		7+01.99	7+07.99
OFFSITE WL	11+92.22	GATE VALVE	DI	GW, Grav. Fill	1.5	4	6	200	12		37		11+55.22	12+29.22
OFFSITE WL	13+05.71	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	6	200	12	45	5		13+00.71	13+10.71
OFFSITE WL	15+16.62	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	6	200	12	45	5		15+11.62	15+21.62
OFFSITE WL	16+25.50	HORIZONTAL BEND	DI	GW, Grav. Fill	1.5	4	5	200	12	45	6		16+19.50	16+31.50
OFFSITE WL	16+85.91	GATE VALVE	DI	GW, Grav. Fill	1.5	4	6	200	12		37		16+48.91	17+22.91
OFFSITE WL	17+71.55	GATE VALVE	DI	GW, Grav. Fill	1.5	4	5	200	12		44		17+27.55	18+15.55
OFFSITE WL	17+71.55	DEAD END	DI	GW, Grav. Fill	1.5	4	4	200	12		54		17+17.55	18+25.55
OFFSITE WL B-2	1+00.00	TEE	DI	GW, Grav. Fill	1.5	4	4	200	8		54		+46.00	1+54.00
OFFSITE WL B-2	1+74.86	TEE	DI	GW, Grav. Fill	1.5	4	4	200	8		29		1+45.86	2+03.86

8834 N. Capital of Texas Hwy.
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Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPELS FIRM #2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

JOINT RESTRAINT
CALCULATION TABLE

PROJECT NO: 1636-11741

DESIGNED BY: CLO

DRAWN BY: TAM

CHECKED BY: CLO

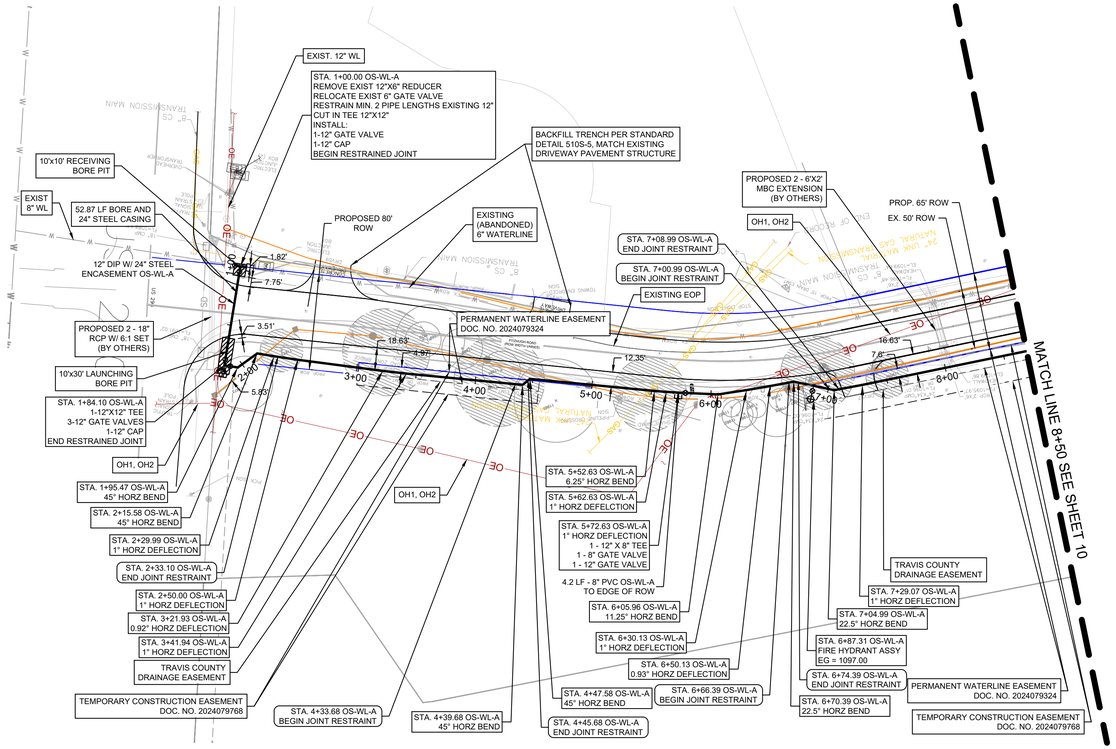
NOTICE:
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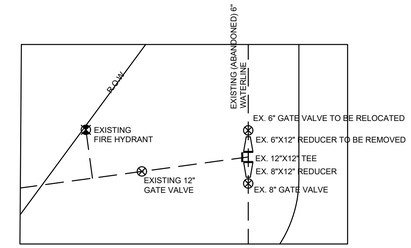
2/24/25

STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED
PROFESSIONAL ENGINEER

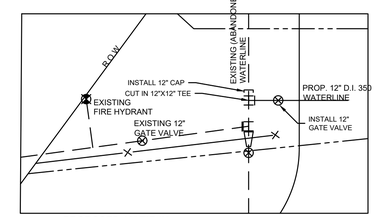
SHEET 8 OF 14

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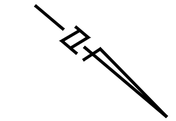




EXISTING
NTS



PROPOSED 12" TIE-IN
NTS



LEGEND
PROPOSED WATER LINE
PROPOSED FIRE HYDRANT
PROPOSED GATE VALVE
PROPOSED PLUG
EXISTING WATER LINE

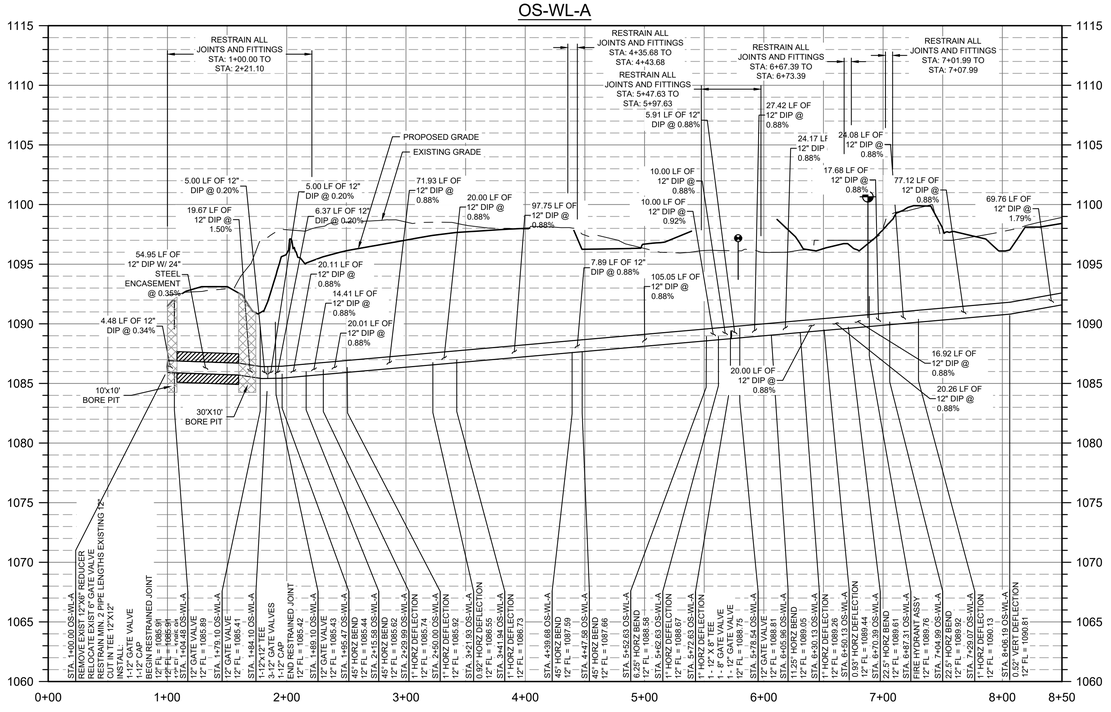
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OS-WL-A



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TBPELS FIRM #2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
OFFSITE WATERLINE
CONSTRUCTION PLANS

OFFSITE WL A PLAN &
PROFILE 1+00 TO 8+50

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

CHECKED BY: CR

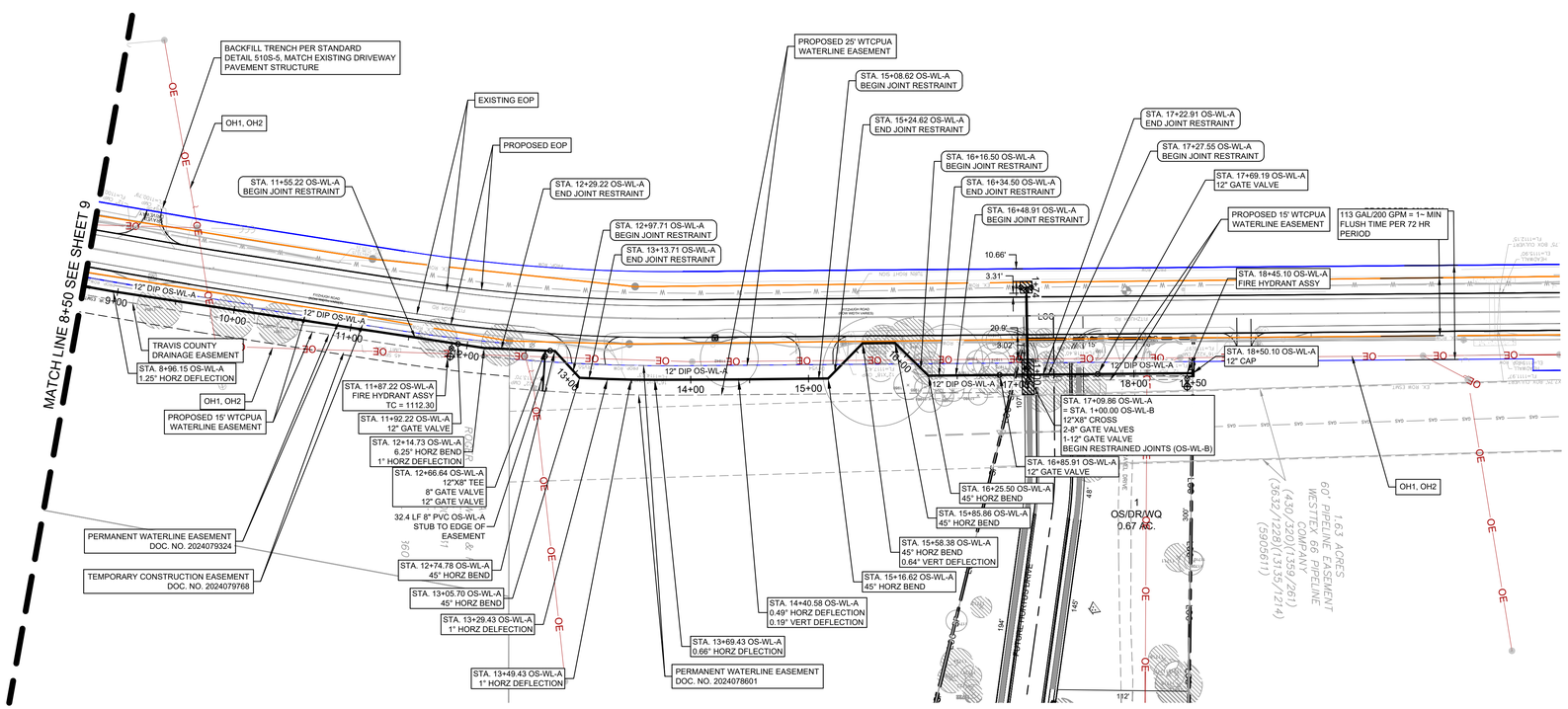
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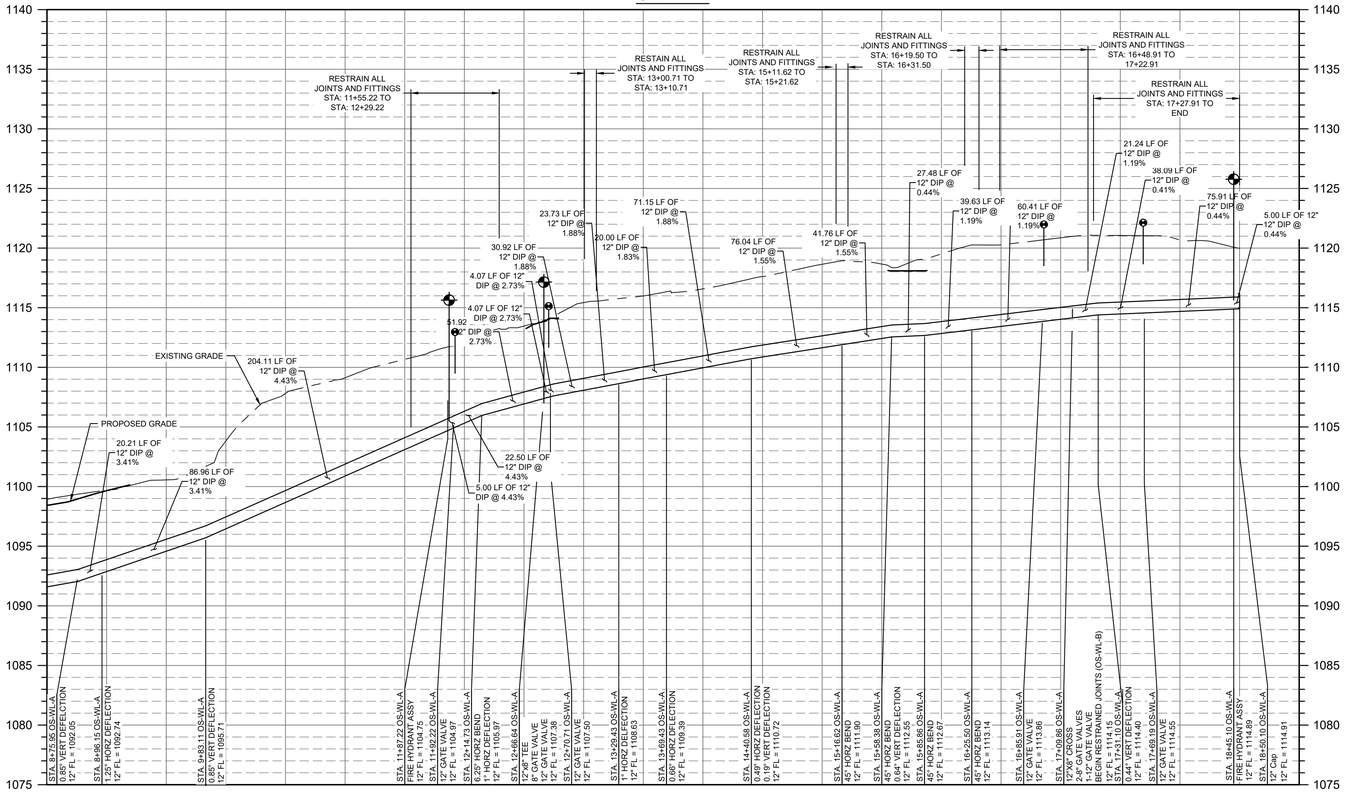
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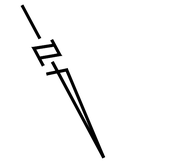
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED
PROFESSIONAL ENGINEER

SHEET 9 OF 14

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-OSWL-P&P.DWG DATE: 3/10/2026 9:36:31 AM BY: TMARSHALL







LEGEND

- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED PLUG
- EXISTING WATER LINE

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Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPELS FIRM #2946
GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH OFFSITE WATERLINE CONSTRUCTION PLANS

OFFSITE WL A PLAN & PROFILE 8+50 TO END

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

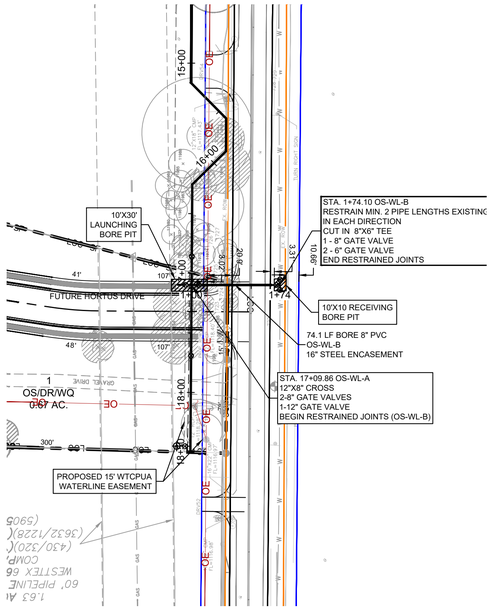
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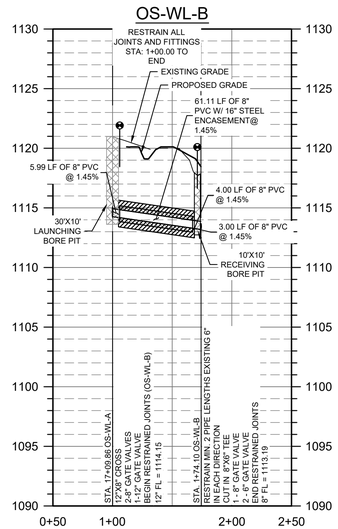
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3/10/26

STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER
CHRIS RAWLS

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-OSWL-P&P.DWG DATE: 3/10/2026 9:38:44 AM BY: TMARSHALL







SCALE: 1"=60'

GRAPHIC SCALE IN FEET

0 30 60 90 120

LEGEND	
	PROPOSED WATER LINE
	PROPOSED FIRE HYDRANT
	PROPOSED GATE VALVE
	PROPOSED PLUG
	EXISTING WATER LINE

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TBPELS FIRM #2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH OFFSITE WATERLINE CONSTRUCTION PLANS

OFFSITE WL B PLAN & PROFILE 1+00 TO END

PROJECT NO: 1636-11741

DESIGNED BY: BG

DRAWN BY: TAM

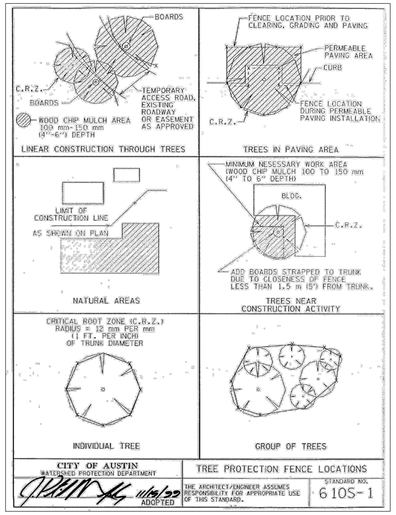
CHECKED BY: CR

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

3/10/26



H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-OSWL-P&P.DWG DATE: 3/10/2026 9:36:57 AM BY: TMARSHALL



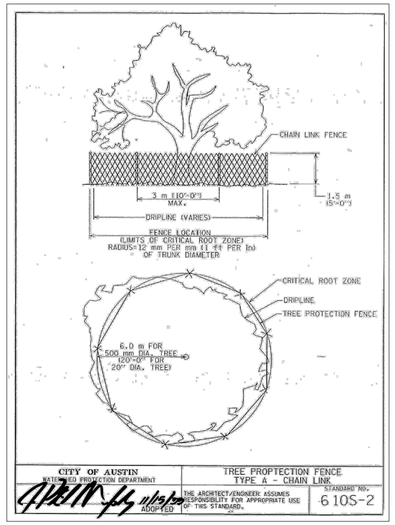
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

TREE PROTECTION FENCE LOCATIONS

11/9/22 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-1



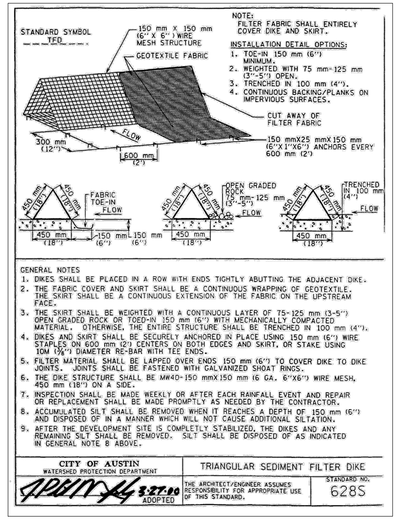
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

TREE PROPTECTION FENCE TYPE A - CHAIN LINK

11/9/22 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 610S-2



GENERAL NOTES

1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER OF 75-125 mm (3-5") OPEN GRADED ROCK OR TOED-IN 150 mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100 mm (4").
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150 mm (6") WIRE STAPLES ON 600 mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M (⅜") DIAMETER RE-BAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150 mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE MW40-150 mmX150 mm (6 GA. 6"X6") WIRE MESH, 450 mm (18") ON A SIDE.
7. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
8. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6") AND DISPOSED OF IN A MANNER WHICH WILL NOT CAUSE ADDITIONAL SILTATION.
9. AFTER THE DEVELOPMENT SITE IS COMPLETLY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

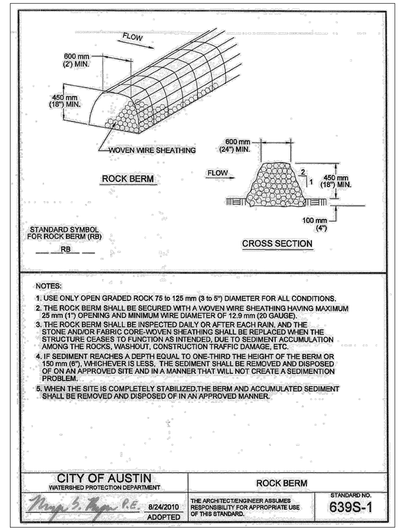
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

TRIANGULAR SEDIMENT FILTER DIKE

8-27-80 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 628S



NOTES:

1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE-WOVEN SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SEDIMENT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. IF SEDIMENT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE BERM OR 150 mm (6"), WHICHEVER IS LESS, THE SEDIMENT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CREATE A SEDIMENTION PROBLEM.
5. WHEN THE SITE IS COMPLETELY STABILIZED,THE BERM AND ACCUMULATED SEDIMENT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

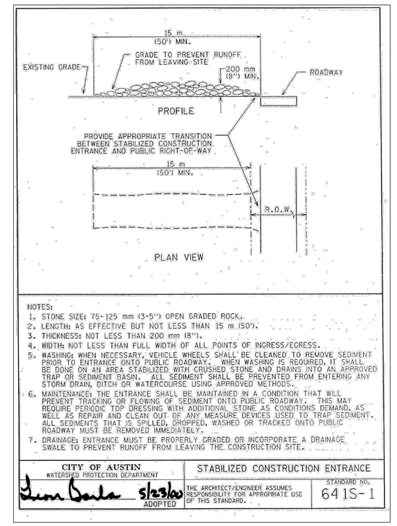
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

ROCK BERM

8/24/2010 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 639S-1



NOTES:

1. STONE SIZE: 75-125 mm (3-5") OPEN GRADED ROCK.
2. LENGTH: AS EFFECTIVE BUT NOT LESS THAN 15 m (50').
3. THICKNESS: NOT LESS THAN 200 mm (8").
4. WIDTH: NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS/EGRESS.
5. WASHING: WHEN NECESSARY, VEHICLE WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATERCOURSE USING APPROVED METHODS.
6. MAINTENANCE: THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AS WELL AS REPAIR AND CLEAN OUT OF ANY MEASURE DEVICES USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

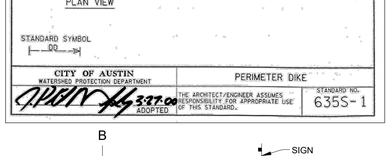
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

STABILIZED CONSTRUCTION ENTRANCE

5/23/06 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 641S-1



GENERAL NOTES:

1. ALL DIKES SHALL BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. a. DIVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL HAVE ITS FLOW DIRECTED TO AN UNDISTURBED STABILIZED AREA OR INTO A LEVEL SPREADER OR GRADE STABILIZATION STRUCTURE.
   b. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE, SUCH AS A ROCK BERM, BRUSH BERM, STONE OUTLET STRUCUTRE, SEDIMENT TRAP OR SEDIMENT BASIN OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICE.
4. UNLESS OTHERWISE SPECIFIED, EROSION STABILIZATION SHALL BE OPEN GRADED ROCK 75-125 mm (3-5") IN DIAMETER PLACED IN A 75 mm (3") THICK LAYER AND EMBEDDED INTO THE SOIL.
5. INSPECTION SHALL BE CONDUCTED WEEKLY OR AFTER EACH RAINFALL EVENT.

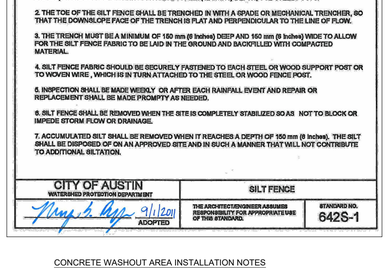
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

PERIMETER DIKE

3-27-00 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 635S-1



1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 Inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A GRADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH MUST BE A MINIMUM OF 150 mm (6 Inches) DEEP AND 150 mm (6 Inches) WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 Inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

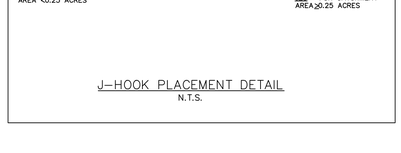
CITY OF AUSTIN — WATERSHED PROTECTION DEPARTMENT

SILT FENCE

9/1/2011 ADOPTED

THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.

STANDARD NO. 642S-1

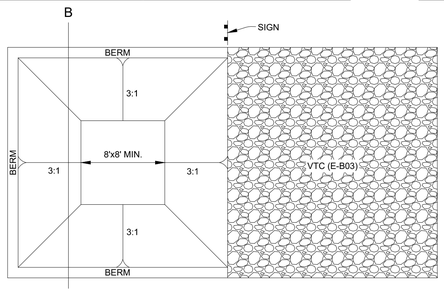


J-HOOK PLACEMENT DETAIL
N.T.S.

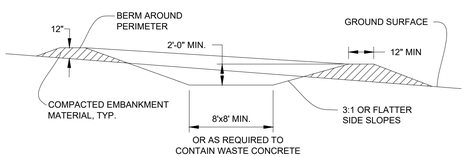


* MORTAR SLURRY TO BE WET ENOUGH FOR SMOOTH/FLUSH FINISH. ENTIRE 12-INCH DEPTH TO BE UNIFORMLY WORKED AND FILLED WITH MORTAR.

MORTARED ROCK RIPRAP
N.T.S.



SECTION A
N.T.S



SECTION B
N.T.S.

CONCRETE WASHOUT AREA

CONCRETE WASHOUT AREA INSTALLATION NOTES

1. CONTRACTOR SHALL SELECT A SUITABLE LOCATION FOR CONCRETE WASHOUT AREA(S). (TO BE PLACED A MINIMUM OF 100' FROM DRINAGEWAYS, BODIES OF WATER, AND INLETS.)
2. LOCATION FOR CONCRETE WASHOUT SHALL BE ADDED TO APPROVED SWP3 KEPT ON SITE.
3. THE CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
4. CONCRETE WASHOUT AREA SHALL BE LINED WITH 10 MIL MIN LINER AND ANCHORED WITH SANDBAGS OR ROCKS.
5. VEHICLE TRACKING CONTROL (DETAIL E-B03) IS REQUIRED AT THE ACCESS POINT.
6. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
7. EXCAVATED MATERIAL SHALL BE UTILIZED IN PERIMETER BERM CONSTRUCTION.

CONCRETE WASHOUT AREA MAINTENANCE NOTES

1. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
2. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN APPROVED WASTE SITE.
3. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE DRILL SEEDED AND CRIMP MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE CITY.
4. INSPECT WEEKLY, DURING AND AFTER ANY STORM EVENT.

8834 N. Capital of Texas Hwy.
Suite 140
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(512)452-0371
FAX(512)454-9933
TBPELS FIRM #2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

EROSION CONTROL DETAILS

PROJECT NO: 1636-11741

DESIGNED BY: CLO

DRAWN BY: TAM

CHECKED BY: CLO

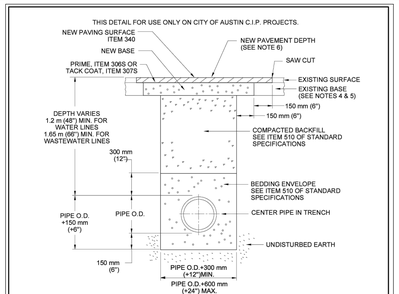
NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

2/24/25

STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER

SHEET 12 OF 14

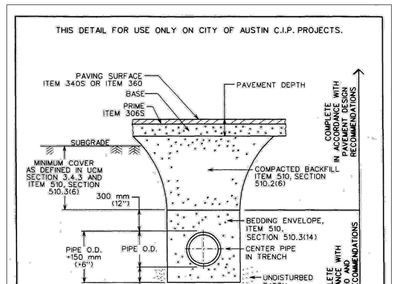
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NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE A MINIMUM OF 300 mm (12") WIDER THAN THE UNDISTURBED SIDES OF THE TRENCH, SYMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. ANY CONCRETE PAVING SHALL BE SAW CUT 150 mm (6") WIDER THAN UNDISTURBED SIDES OF EXCAVATION.
3. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX OR TEMPORARY HOT MIX ASPHALTIC CONCRETE.
4. ROAD BASE AND SURFACE MATERIALS IN THE TRENCH CUT SHALL BE REPLACED IN KIND OF EQUAL THICKNESS, OR MINIMUM BASE THICKNESS OF 250 mm (10"), WHICHEVER IS GREATER.
5. ALL DAMAGED AREAS OF PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH MINIMUM OF 200 mm (8") OF BASE OR MATCH EXISTING THICKNESS, WHICHEVER IS GREATER.
6. SURFACE PAVEMENT SHALL BE OF THE KIND AND THICKNESS AS EXISTING, OR MINIMUM 50 mm (2"), WHICHEVER IS GREATER.

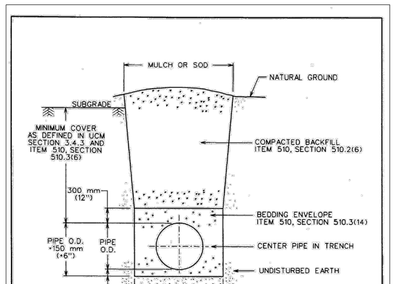
CITY OF AUSTIN WATER AND WASTEWATER UTILITY		TYPICAL TRENCH WITH PAVED SURFACE	
RECORD COPY SIGNED BY LEON BARBA	8/19/02 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 510S-3 1 OF 1



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

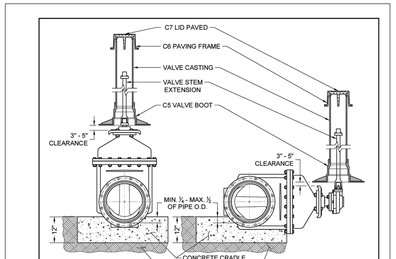
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL DETAIL FOR PROPOSED STREET	
Lee Gardner	3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-4



REFERENCES:

1. UTILITY CRITERIA MANUAL SECTION 3.4.3, "FINAL DESIGN"
2. STANDARD SPECIFICATION MANUAL ITEM 510, SECTION 510.2(6), "SELECT BACKFILL OR BORROW"; SECTION 510.3(6), "TRENCH DEPTH AND DEPTH OF COVER"; SECTION 510.3(14), "PIPE BEDDING ENVELOPE"

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE	
Lee Gardner	3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 510S-5



VERTICAL VALVE

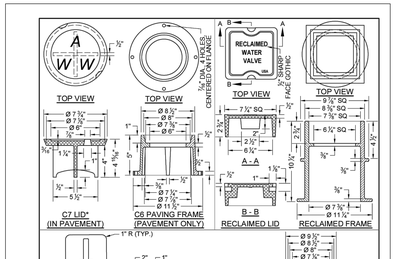
HORIZONTAL VALVE
ONLY TO BE USED WHEN CALLED OUT ON THE DRAWINGS.

NOTES:

1. WELD SOCKET 2½" x 2" DEEP TO 1" SCH. 40 CARBON STEEL ROUND STEM EXTENSION, FITTED ON OPERATING NUT, [SCH. 80 FOR LENGTHS OVER 10']
2. VALVE CASTING SHALL BE 6" DI PIPE WITH BELL OR COLLAR CENTERED OVER VALVE BOOT.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 2" LONG WELDED TO TOP OF ROD.
4. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 3' DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 12" AND 18" FROM FINISHED GRADE.

RECLAIMED WATER: ALL RECLAIMED PVC PIPE SHALL BE MANUFACTURED PURPLE PIPE. HDPE PIPE SHALL BE MANUFACTURED WITH PURPLE STRIPES. ALL OTHER PIPE AND APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL PIPE AND FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL BURIED DI AND CI PIPE AND FITTINGS SHALL ALSO BE WRAPPED IN PURPLE POLYETHYLENE PER SPL WW-27D. ALL COVERS SHALL HAVE **"RECLAIMED WATER"** CAST INTO THEM.

CITY OF AUSTIN AUSTIN WATER		TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS	05/18/2016 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-01 1 OF 4



NOTES:

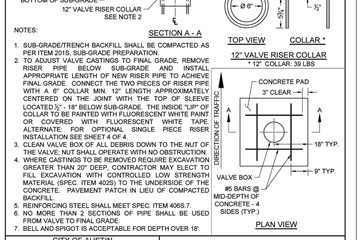
4. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
5. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID, FRAME, COLLAR AND BASE.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
7. CASTING FINISH BY MANUFACTURER SHALL INCLUDE REMOVAL OF FINS AND FLASHING, AND PAINT WITH BLACK ASPHALT COATING.

WEIGHTS:

C7 LID: 13 LBS
RECLAIMED LID: 15 LBS
C6 FRAME: 23 LBS
RECLAIMED FRAME: 33 LBS
C5 BASE: 78 LBS

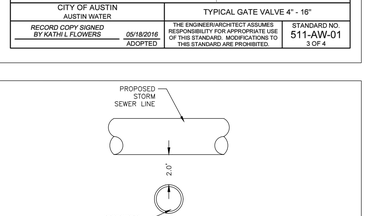
* LETTERING SHALL BE 1 ½" 2 PICK BAR SLOTS REQUIRED

CITY OF AUSTIN AUSTIN WATER		TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS	05/18/2016 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-01 2 OF 4



NOTES:

1. SUB-GRADE/TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. TO ADJUST VALVE CASTINGS TO FINAL GRADE, REMOVE RISER PIPE BELOW SUB-GRADE AND INSTALL APPROPRIATE LENGTH OF NEW RISER PIPE TO ACHIEVE FINAL GRADE. CONNECT THE TWO PIECES OF RISER PIPE WITH A 6" COLLAR MIN. 12" LENGTH APPROXIMATELY CENTERED ON THE JOINT WITH THE TOP OF SLEEVE LOCATED ½" - 18" BELOW SUB-GRADE. THE INSIDE "LIP" OF COLLAR TO BE PAINTED WITH FLUORESCENT WHITE PAINT OR COVERED WITH FLUORESCENT WHITE TAPE, ALTERNATE FOR OPTIONAL SINGLE PIECE RISER INSTALLATION SEE SHEET 4 OF 4.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. WHERE CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 20" DEEP, CONTRACTOR MAY ELECT TO FILL EXCAVATION WITH CONTROLLED LOW STRENGTH MATERIAL (SPEC. ITEM 402S) TO THE UNDERSIDE OF THE CONCRETE PAVEMENT PATCH IN LIEU OF COMPACTED BACKFILL.
5. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.7.
6. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
7. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 18'.

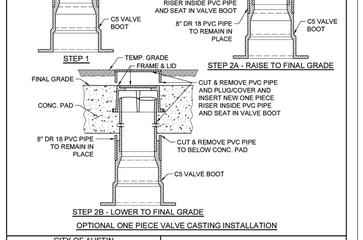


COLLAR *: 12" COLLAR: 39 LBS

CITY OF AUSTIN AUSTIN WATER		TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS	05/18/2016 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-01 3 OF 4

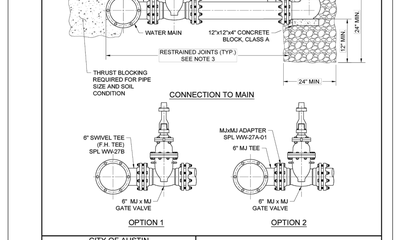
NOTES (CONT):

8. PAVING FRAME SHALL BE FLUSH WITH THE CONC. PAD AND PLACED ½" - 2" ABOVE RISER PIPE (FRAME SHALL NOT REST ON RISER.)
9. IN UNPAVED AREAS, INSTALL ONE DELINEATOR STAKE IMMEDIATELY ADJACENT TO THE EDGE OF THE CONCRETE PAD. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES.
10. VALVE SHALL TYPICALLY BE CENTERED IN CONCRETE DIAMOND BUT MAY BE OFFSET WITH A MIN. OF 12" FROM CENTER OF VALVE LID TO EDGE OF CONCRETE IN ALL DIRECTIONS.
11. MIN. TOTAL DEPTH OF ASPHALT PLUS CONC. IS 9" AND MIN. DEPTH OF CONC. PAD SHALL BE 5"

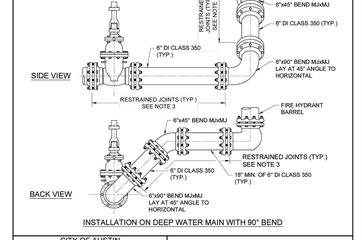


OPTIONAL ONE PIECE VALVE CASTING INSTALLATION

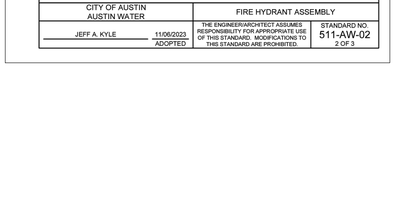
CITY OF AUSTIN AUSTIN WATER		TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS	05/18/2016 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-01 4 OF 4



CITY OF AUSTIN AUSTIN WATER		FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE	11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 1 OF 3



INSTALLATION ON DEEP WATER MAIN



INSTALLATION ON DEEP WATER MAIN WITH 90° BEND

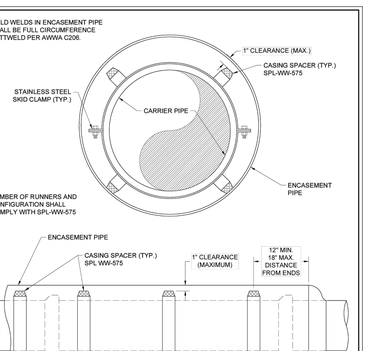
CITY OF AUSTIN AUSTIN WATER		FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE	11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 2 OF 3

NOTES: APPLICABLE TO ALL INSTALLATION TYPES.

1. NO PART OF A HYDRANT OR ITS NOZZLE CAPS SHALL BE WITHIN 6" OF ANY SIDEWALK OR PEDESTRIAN RAMP. ANY FIRE HYDRANT PLACED NEAR A STREET CORNER SHALL BE LOCATED OUTSIDE THE CURVE RADIUS AND A MINIMUM OF 4' FROM RAMPS.
2. ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH MAY BE INSTALLED DIRECTLY BELOW THE FIRE HYDRANT IN ORDER TO MEET THE REQUIRED BURY DEPTH OF 4' - 5'. BREAK AWAY BOLTS (SHOE TYPES) SHALL BE PROPERLY SPACED AND PLACED.
3. FIRE LINE SHALL HAVE ALL JOINTS RESTRAINED FROM MAIN TO FIRE HYDRANT INCLUDING MJ RESTRAINT OF TEE AT THE MAIN. JOINTS SHOWN MAY VARY. SEE SPL WW-27A, WW-27A-01, AND WW-27B FOR RESTRAINT OPTIONS.
4. BELOW EACH HYDRANT, A DRAINAGE PIT 24" IN DIAMETER AND 12" DEEP SHALL BE EXCAVATED AND FILLED WITH COMPACTED COARSE GRAVEL OR BROKEN STONE MIXED WITH COARSE SAND UNDER AND AROUND THE BOWL OF THE HYDRANT, AND TO A LEVEL 12" ABOVE THE HYDRANT DRAIN OPENING (SEE STD. SPEC. 510). THE HYDRANT DRAINAGE PIT SHALL NOT BE CONNECTED TO A SANITARY SEWER. THE DRAIN GRAVEL SHALL BE COVERED WITH FILTER FABRIC PER STD. SPEC. 620.
5. WRAP 8 MIL. POLY-FILM WRAP ON ALL BURIED PIPE AND FITTINGS. CUT SLITS IN POLY-FILM WRAP AT BOOT TO ALLOW WATER TO ESCAPE FROM WEEP HOLES AND POLY-WRAP.
6. A BLUE TYPE II-B-B REFLECTORIZED PAVEMENT MARKER, CONFORMING TO STANDARD SPECIFICATION ITEM NO. 663S, SHALL BE PLACED 2 TO 3 FEET OFFSET FROM THE CENTERLINE OF PAVED STREETS, ON THE SIDE OF AND IN LINE WITH ALL NEWLY INSTALLED FIRE HYDRANTS.

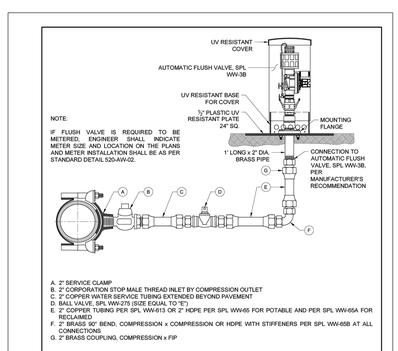
CITY OF AUSTIN AUSTIN WATER		FIRE HYDRANT ASSEMBLY	
JEFF A. KYLE	11/06/2023 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-02 3 OF 3

STORM SEWER & WATERLINE CROSSING DETAIL



APPLICABLE REFERENCES:
STANDARD SPECIFICATION: ITEM 505.4 & 510.3 (19)

CITY OF AUSTIN AUSTIN WATER		ENCASEMENT PIPE DETAIL WITH CASING SPACERS	
JEFF A. KYLE	02/22/2021 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 501-AW-01 1 OF 1



NOTE:
IF FLUSH VALVE IS REQUIRED TO BE METERED, ENGINEER SHALL INDICATE METER SIZE AND LOCATION ON THE PLANS AND METER INSTALLATION SHALL BE AS PER STANDARD DETAIL 520-AW-02.

A. 2" SERVICE CLAMP
B. 2" CORPORATION STOP MALE THREAD INLET BY COMPRESSION OUTLET
C. 2" COPPER WATER SERVICE TUBING EXTENDED BEYOND PAVEMENT
D. BALL VALVE, SPL WW-27S (SIZE EQUAL TO "E")
E. 2" COPPER TUBING PER SPL WW-61S OR 2" HDPE PER SPL WW-65 FOR POTABLE AND PER SPL WW-65A FOR RECLAIMED
F. 2" BRASS 90° BEND, COMPRESSION x COMPRESSION OR HDPE WITH STIFFENERS PER SPL WW-65B AT ALL CONNECTIONS
G. 2" BRASS COUPLING, COMPRESSION x FIP

NOTES:

1. AUTOMATIC FLUSH VALVE MAY ALSO BE USED ON TAPPED PLUGS AND CAPS.
2. THE CONTRACTOR SHALL PROVIDE THE FLUSH VALVE ACCESS KEY TO AUSTIN WATER UPON FLUSH VALVE ACCEPTANCE.
3. VALVE "D" SHALL NOT BE LOCATED MORE THAN 36" BELOW FLUSH VALVE OR MORE THAN 24" HORIZONTALLY FROM FLUSH VALVE. VALVE "D" SHALL NOT BE LOCATED IN A SIDEWALK OR DRIVEWAY.
4. METER BOX (IF REQUIRED) AND FLUSH VALVE SHALL NOT BE LOCATED IN A SIDEWALK, DRIVEWAY, PEDESTRIAN WAY OR TRAFFIC WAY. TEMPORARY FLUSH VALVES SHALL BE LOCATED AS SHOWN ON APPROVED PLANS.
5. A DRAINAGE WAY, CONTAINED WITHIN THE R.O.W. OR AN EASEMENT, SHALL BE PROVIDED FROM FLUSH VALVE TO STORM SEWER SYSTEM OR PUBLIC DRAINAGE WAY.
6. DESIGN ENGINEER SHALL PROVIDE CALCULATIONS WITH PLANS AT THE TIME OF REVIEW INCLUDING FREQUENCY AND FLUSH RATE REQUIRED TO CIRCULATE WATER IN DEAD END MAIN EVERY 72 HOURS.

CITY OF AUSTIN AUSTIN WATER		AUTOMATIC FLUSH VALVE	
RECORD COPY SIGNED BY KATHI L FLOWERS	05/18/2016 ADOPTED	THE ENGINEER/ARCHITECT ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. MODIFICATIONS TO THIS STANDARD ARE PROHIBITED.	STANDARD NO. 511-AW-05 1 OF 1

8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPELS FIRM #2946
GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

WATER DETAILS

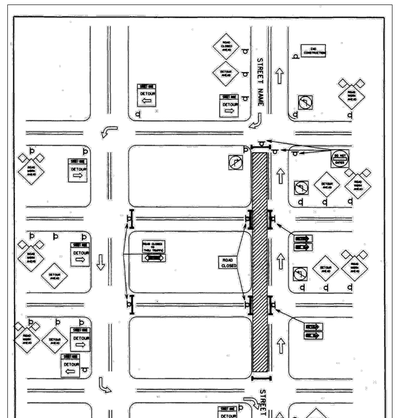
PROJECT NO: 1636-11741
DESIGNED BY: CLO
DRAWN BY: TAM
CHECKED BY: CLO

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

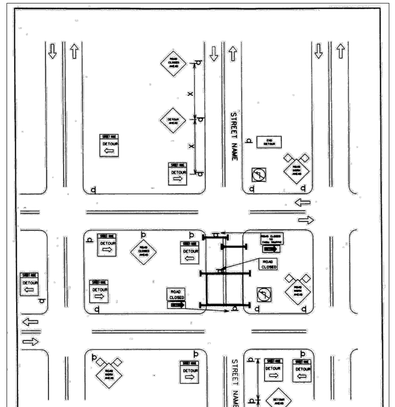
2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER
CHRIS RAWLS

SHEET 13 OF 14

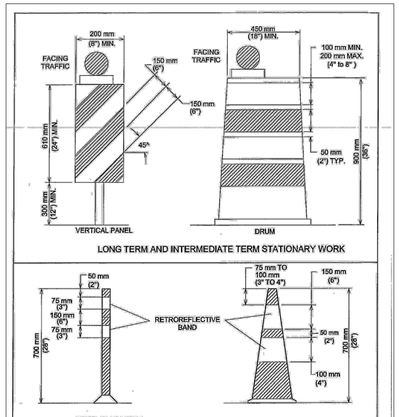
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CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	STREET DETOUR SINGLE DIRECTION
3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-2 5 OF 8



CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	STREET DETOUR BOTH DIRECTIONS
3/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-2 6 OF 8



SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES
11/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 1 OF 13

CHANNELIZING DEVICES

1. ALL CHANNELIZING DEVICES SHALL HAVE WARNING LIGHTS OR LARGE REFLECTORS WHEN USED AT NIGHT. FLASHING WARNING LIGHTS MAY BE PLACED ON CHANNELIZING DEVICES USED SINGULARLY OR IN GROUPS TO MARK A SPOT CONDITION. WARNING LIGHTS ON CHANNELIZING DEVICES USED IN A SERIES SHALL BE STEADY-BURN. CHANNELIZING DEVICES IN TAPERS AT NIGHT SHALL HAVE TYPE C WARNING LIGHTS.
2. THE RETROREFLECTIVE MATERIAL USED ON CHANNELIZING DEVICES SHALL HAVE A SMOOTH, SEALED OUTER SURFACE.
3. THE NAME AND TELEPHONE NUMBER OF THE AGENCY, CONTRACTOR OR SUPPLIER SHALL BE SHOWN ON THE NON-RETROREFLECTIVE SURFACE OF ALL CHANNELIZING DEVICES. THE SHOWN NAME AND NUMBERS SHALL BE A NON-RETROREFLECTIVE COLOR AND NOT OVER 50 mm (2") IN HEIGHT.
4. PARTICULAR ATTENTION SHOULD BE GIVEN TO ASSURE THAT CHANNELIZING DEVICES ARE MAINTAINED AND KEPT CLEAN, VISIBLE AND PROPERLY POSITIONED AT ALL TIMES. DEVICES SHALL BE REPLACED THAT ARE DAMAGED AND HAVE LOST A SIGNIFICANT AMOUNT OF THEIR RETROREFLECTIVITY AND EFFECTIVENESS.

CONES

CONES SHALL PREDOMINANTLY BE ORANGE, FLUORESCENT RED-ORANGE, OR FLUORESCENT YELLOW-ORANGE IN COLOR, NOT LESS THAN 70 mm (28") IN HEIGHT, AND SHALL BE MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES. FOR NIGHT TIME USE, TUBULAR MARKERS SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM USE. CONES SHALL BE RETROREFLECTIVE OR CONES SHALL BE PROVIDED BY A WHITE BOND 150 mm (6") WIDE, NO LESS THAN 75 TO 100 mm (3 TO 4") FROM THE TOP OF THE CONE, AND AN ADDITIONAL 100 mm (4") WHITE BAND A MINIMUM OF 50 mm (2") BELOW THE 150 mm (6") BAND. TRAFFIC CONES ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, CONES MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

TUBULAR MARKERS

TUBULAR MARKERS SHALL PREDOMINANTLY BE ORANGE IN COLOR, NOT LESS THAN 700 mm (28") IN HEIGHT , A MINIMUM 50 mm (2") WIDE WHEN FACING TRAFFIC AND MADE OF A MATERIAL THAT CAN BE STRUCK WITHOUT DAMAGING VEHICLES. FOR NIGHT TIME USE, TUBULAR MARKERS SHALL BE RETROREFLECTIVE PROVIDED BY TWO (2) 75 mm (3") WIDE WHITE BANDS PLACED A MAXIMUM OF 50 mm (2") FROM THE TOP, WITH A MAXIMUM OF 150 mm (6") BETWEEN BANDS. TUBULAR MARKERS ARE NORMALLY USED FOR SHORT-TERM STATIONARY AND SHORT DURATION WORK. HOWEVER, TUBULAR MARKERS MAY BE USED FOR INTERMEDIATE-TERM STATIONARY WORK AT NIGHT, IF THE SITE IS CONTINUOUSLY MANNED.

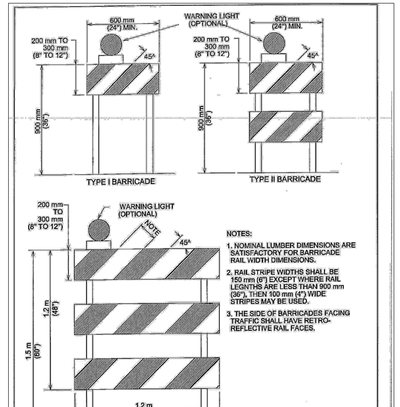
VERTICAL PANELS

VERTICAL PANELS SHALL BE 200 TO 300 mm (8 TO 12") WIDE AND AT LEAST 600 mm (24") IN HEIGHT. THEY SHALL HAVE ORANGE AND WHITE STRIPES, AND BE RETROREFLECTIVE. PANEL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE PANEL HEIGHTS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") STRIPES MAY BE USED. IF USED FOR TWO-WAY TRAFFIC, BACK-TO-BACK PANELS SHALL BE USED.

DRUMS

1. DRUMS USED FOR TRAFFIC WARNING OR CHANNELIZATION SHALL BE CONSTRUCTED OF LIGHT-WEIGHT FLEXIBLE AND DEFORMABLE MATERIALS AND BE A MINIMUM OF 900 mm (36") IN HEIGHT, AND HAVE AT LEAST 450 mm (18") MINIMUM WIDTH, REGARDLESS OF ORIENTATION. STEEL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL CIRCUMFERENTIAL ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES 100 TO 200 mm (4 TO 8") WIDE. EACH DRUM SHALL HAVE A MINIMUM OF TWO (2) ORANGE AND TWO (2) WHITE STRIPES. ANY NON-RETROREFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 50 mm (2") WIDE. DRUMS SHALL HAVE CLOSED TOPS THAT WILL NOT ALLOW COLLECTION OF RAIN/SNOW OR OTHER DEBRIS.
2. DRUMS SHOULD NOT BE WEIGHTED WITH SAND, WATER OR ANY MATERIAL TO AN EXTENT THAT WOULD MAKE THE HAZARDOUS TO MOTORISTS, PEDESTRIANS OR WORKERS. WHEN THEY ARE USED IN REGIONS SUSCEPTIBLE TO FREEZING, THEY SHOULD HAVE DRAINAGE HOLES IN THE BOTTOM SO WATER WILL NOT ACCUMULATE AND FREEZE,CAUSING A HAZARD IF STRUCK BY A MOTORIST. BALLAST SHALL NOT BE PLACED ON TOP OF THE DRUM.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	CHANNELIZING DEVICES
11/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 2 OF 13



NOTES:
1. NOMINAL LUMBER DIMENSIONS ARE SATISFACTORY FOR BARRICADE RAIL WIDTH DIMENSIONS.
2. RAIL STRIPE WIDTHS SHALL BE 150 mm (6") EXCEPT WHERE RAIL LEGNTHS ARE LESS THAN 900 mm (36"), THEN 100 mm (4") WIDE STRIPES MAY BE USED.
3. THE SIDE OF BARRICADES FACING TRAFFIC SHALL HAVE RETRO-REFLECTIVE RAIL FACES.

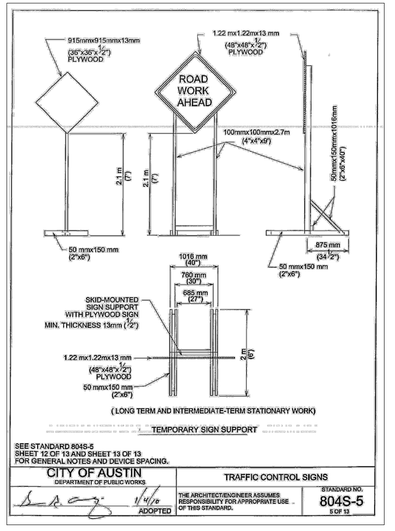
SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	BARRICADES
11/4/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 3 OF 13

BARRICADES

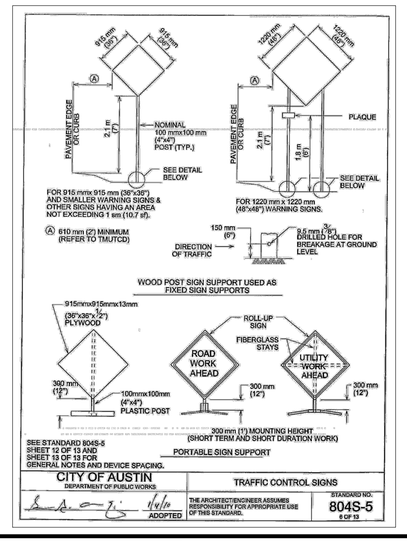
1. BARRICADES SHALL BE OF THREE TYPES: TYPE I, TYPE II OR TYPE III.
2. STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 150 mm (6") WIDE, EXCEPT WHERE RAIL LENGTHS ARE LESS THAN 900 mm (36"), WHEN 100 mm (4") WIDE STRIPES MAY BE USED.
3. WHERE A BARRICADE EXTENDS ENTIRELY ACROSS A ROADWAY, THE SURFACE STRIPES SHOULD SLOPE DOWNWARD IN THE DIRECTION TOWARD WHICH TRAFFIC MUST TURN. WHERE BOTH RIGHT AND LEFT TURNS ARE PROVIDED, THE STRIPES MAY SLOPE DOWN-WARD IN BOTH DIRECTIONS FROM THE CENTER OF THE BARRICADE OR BARRICADES. WHERE NO TURNS ARE INTENDED, THE STRIPES SHOULD SLOPE DOWNWARD TOWARD THE CENTER OF THE BARRICADE OR BARRICADES.
4. BARRICADE RAILS SHOULD BE SUPPORTED IN A MANNER THAT WILL ALLOW THEM TO BE SEEN BY THE MOTORIST AND PROVIDE A STABLE SUPPORT NOT EASILY BLOWN OVER BY THE WIND OR TRAFFIC. FOR TYPE I BARRICADES, THE SUPPORT MAY INCLUDE OTHER UNSTRIPED HORIZONTAL PANELS NECESSARY TO PROVIDE STABILITY.
5. BARRICADES ARE LOCATED ADJACENT TO TRAFFIC AND ARE THEREFORE SUBJECT TO IMPACT WITH ERRANT VEHICLES. BECAUSE OF THEIR VULNERABLE POSITION AND THE HAZARD THEY COULD CREATE, THEY SHOULD BE CONSTRUCTED OF LIGHTWEIGHT MATERIALS AND HAVE NO RIGID STAY BRACING FOR A-FRAME DESIGNS. ALL BARRICADE SYSTEMS SHOULD BE CRASHWORTHY.
6. ON HIGH-SPEED EXPRESSWAYS OR IN OTHER SITUATION WHERE BARRICADES MAY BE SUSCEPTIBLE TO OVERTURNING IN THE WIND, SANDBAGS SHOULD BE USED FOR BALLASTING. SANDBAGS MAY BE PLACED ON PARTS OF THE FRAME OR STAYS TO PROVIDE THE REQUIRED BALLAST BUT SHALL NOT BE PLACED ON TOP OF ANY STRIPED RAIL. BARRICADES SHALL NOT BE BALLASTED BY HEAVY OBJECTS SUCH AS ROCKS OR CHUNKS OF CONCRETE.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	BARRICADES
11/4/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 4 OF 13



SEE STANDARD 804S-5
SHEET 12 OF 13 AND SHEET 13 OF 13
FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS
11/4/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 5 OF 13



SEE STANDARD 804S-5
SHEET 12 OF 13 AND
SHEET 13 OF 13 FOR
GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS
11/4/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 6 OF 13

1. WARNING SIGNS SHALL BE ORANGE, FLUORESCENT RED-ORANGE OR FLUORESCENT YELLOW-ORANGE IN COLOR. THE FLUORESCENT VERSIONS OF ORANGE PROVIDE HIGHER CONSPICUITY THAN STANDARD ORANGE. STEEL OR METAL SIGNS SHALL NOT BE USED. ALL SIGNS USED AT NIGHT SHALL BE EITHER RETRORE-FLECTIVE, WITH A MATERIAL THAT HAS A SMOOTH, SEALED OUTER SURFACE, OR ILLUMINATED TO SHOW SIMILAR SHAPE AND COLOR BOTH DAY AND NIGHT. SIGN ILLUMINATION MAY BE EITHER IN-TERNAL OR EXTERNAL. ROADWAY LIGHTING DOES NOT MEET THE REQUIREMENTS FOR SIGN ILLUMINATION.
2. TYPE A FLASHING WARNING LIGHTS MAY BE USED IN CONJUNCTION WITH SIGNS AT NIGHT. STANDARD ORANGE FLAGS MAY BE USED FOR DAY TIME OPERATIONS. HOWEVER, NEITHER LIGHTS NOR FLAGS MAY BLOCK THE SIGN LEGEND.
3. SIGNS SHOULD BE LOCATED ON THE RIGHT-HAND SIDE OF THE ROADWAY. WHEN SPECIAL EMPHASIS IS NEEDED, SIGNS MAY BE PLACE ON BOTH THE LEFT AND RIGHT SIDES OF ROADWAY. SIGNS SHALL BE PLACED ON BOTH THE LEFT AND RIGHT SIDES OF ONE-WAY OR DIVIDED ROADWAYS. SIGNS USED FOR LONG-TERM STATIONARY AND INTERMEDIATE-TERM STATIONARY WORK SHALL BE MOUNTED AT A HEIGHT OF AT LEAST 2.1 m (7'), MEASURED FROM THE BOTTOM OF THE SIGN. THE HEIGHT TO THE BOTTOM OF A SECONDARY SIGN MOUNTED BELOW ANOTHER SIGN MAY BE 0.3 m (1') LESS THAN THE APPROPRIATE HEIGHT ABOVE.
4. SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, MOBILE CON-DITIONS AND EMERGENCIES. SIGNS MOUNTED ON PORTABLE SUPPORTS SHALL BE AT A HEIGHT OF AT LEAST 0.3 m (1'), MEASURED FROM THE BOTTOM OF THE SIGN.
5. ALL SIGN SYSTEMS SHOULD BE CRASHWORTHY. NO SIGN MOUNTS SHALL BLOCK OR IMPEDE SIDEALKS UNLESS NO OTHER OPTION IS AVAILABLE. ONLY SANDBAGS SHOULD BE USED FOR BALLASTING SIGN MOUNTS.

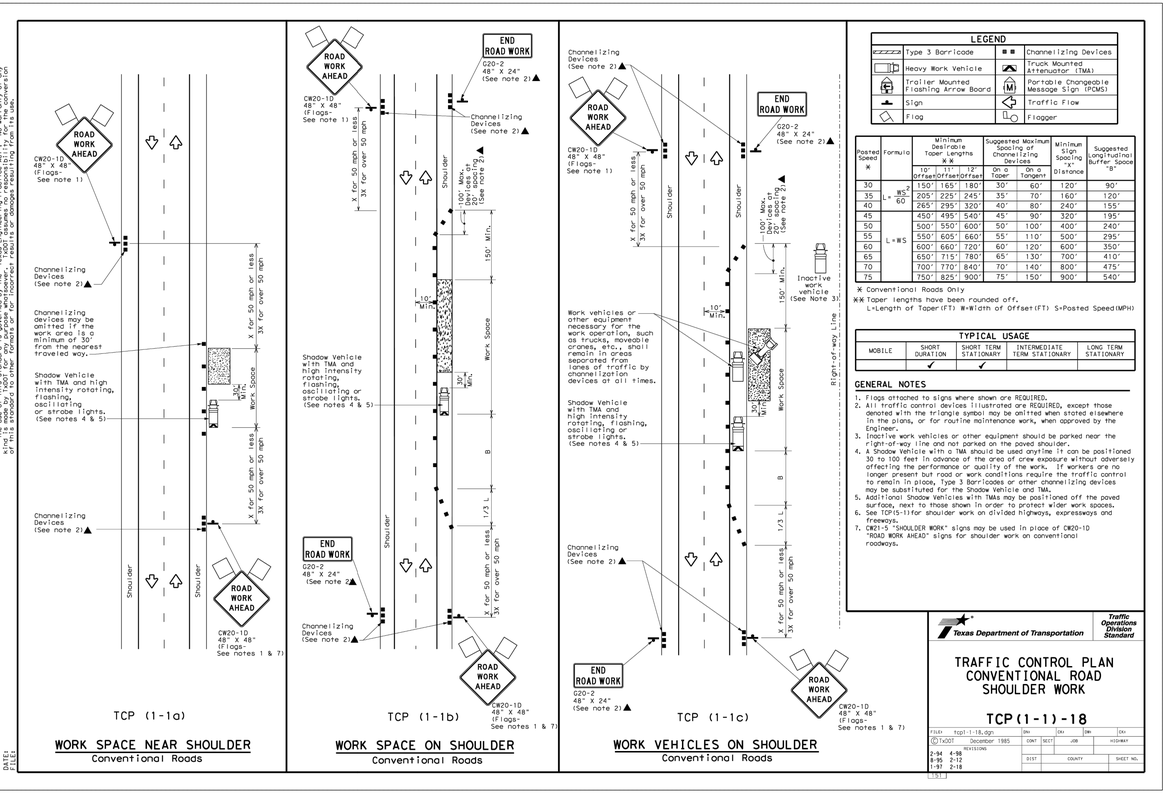
TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

Roadway Classi-fication	Posted Speed	Sign Spacing *	Long-term Stationary or Short-term Stationary Approaching/Warning Signs: CW20 Series And CW22-5 Sign		Short-term Stationary Approach Warning Signs: CW22 Series		Other Warning Signs
			Standard	Minimum	Standard	Minimum	Standard
Conven.	KPH (MPH)	meter (feet)	915 (inches)	610 (inches)	610 (inches)	305 (inches)	610 (inches)
	50 (30)	40 (120)	1220x1220 (48x48)	915x915 (36x36)			
	55 (35)	50 (160)			915x915 (36x36)		915x915 (36x36)
	60 (40)	70 (240)					
	70 (45)	100 (320)		Use Standard Size		Use Standard Size	
	80 (50)	120 (400)					
	90 (55)	150 (500)	2				
	100 (60)	180 (600)	2		1220x1220 (48x48)		1220x1220 (48x48)
	105 (65)	210 (700)	2				
	115 (70)	240 (800)	2				
Exp. w/ Cur.	**	** 3			***	***	***

* MINIMUM DISTANCE FROM WORK TO 1st ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.
** FOR TYPICAL SIGN SPACINGS ON EXPRESSWAYS AND FREEWAYS, REFER TO THE CURRENT ADDITION OF TMUTCD.
*** SMALLER SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE "STANDARD HIGHWAY SIGNS DESIGN MANUAL".

1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS NECESSARY.
2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 450 m (1500') OR MORE ADVANCE WARNING.
3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 km (½ MILE) OR MORE ADVANCE WARNING.
4. FOR USE ONLY ON SECONDARY ROADS OR CITY STREETS WHERE SPEEDS ARE LOW.

CITY OF AUSTIN, DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS
11/4/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. STANDARD NO. 804S-5 7 OF 13



DISCLAIMER:
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the standard hereby for any purpose whatsoever. The City of Austin disclaims responsibility for any person's misuse or modification of this standard.

DATE:
FILE:

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board	M	Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** K			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "A" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	WS² / 60	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper(FT) W=Width of Offset(FT) S=Posted Speed(MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

GENERAL NOTES

1. Flags attached to signs where shown are REQUIRED.
2. All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
3. Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
4. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
5. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
6. See TCP(5-1)for shoulder work on divided highways, expressways and freeways.
7. CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.

Texas Department of Transportation | Traffic Operations Division Standard

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP(1-1)-18

FILE:	tcp1-1-18.dgn	DN:	CK:	DW:	CK:
©TxDOT	December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS					
2-94 4-98		DIST	COUNTY		SHEET NO.
8-95 2-12					
1-97 2-18					

8834 N. Capital of Texas Hwy.
Suite 140
Austin, Texas 78759
(512)452-0371
FAX(512)454-9933
TBPELS FIRM #2946

GRAY ENGINEERING

NO.	BY	DATE	REVISION DESCRIPTION

ORCHARD RANCH
SUBDIVISION
CONSTRUCTION PLANS

TRAFFIC CONTROL DETAILS

PROJECT NO: 1636-11741

DESIGNED BY: CLO

DRAWN BY: TAM

CHECKED BY: CLO

NOTICE:
ALTERATION OF A SEALED DRAWING WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS A VIOLATION OF THE TEXAS ENGINEERING PRACTICE ACT.

2/24/25
STATE OF TEXAS
CHRISTOPHER R. RAWLS
124994
LICENSED PROFESSIONAL ENGINEER
CHRIS RAWLS

SHEET 14 OF 14

H:\PROJECTS\1636 - BROHN HOMES\11741 - ORCHARD RANCH\CAD\SHEETS\WATERLINE\11741-C-DTLS.DWG DATE: 2/24/2025 4:26:09 PM BY: TMARSHALL