# CITY OF AUSTIN
# AUSTIN WATER UTILITY

C.I.P. NO. 2231.304
WATER ID NO.
IFB NO.
FDU NO. 3960-2207-6601
FDU NO. 4570-2307-4958
S-2021-0020
W-2021-0020

# BEVERLY ROAD WATER AND WASTEWATER PIPELINE RENEWAL

## NOTES:

1. CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS DEPARTMENT 24 HOURS PRIOR TO STARTING CONSTRUCTION OR CLEARING OPERATIONS.
2. CONTRACTOR SHALL CALL "ONE CALL" AT 1-800-344-8377 FOR UTILITY LOCATIONS AT LEAST 48 HOURS PRIOR TO ANY WORK IN CITY EASEMENTS OR STREET RIGHT OF WAYS.
3. THIS PROJECT IS LOCATED WITHIN THE JOHNSON WATERSHED (CLASSIFIED AS URBAN) AND SHALL BE DEVELOPED, CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH CHAPTER 25 OF THE CODE OF THE CITY OF AUSTIN.
4. NO PORTION OF THIS SITE IS LOCATED WITHIN PARKLAND OR LAND USED FOR PARK PURPOSES. (IF SUCH LAND IS INCLUDED, DOCUMENTATION OF PARKS AND RECREATION DEPT APPROVAL IS REQUIRED AT THE TIME OF SUBMITTAL FOR GENERAL PERMIT PROGRAM APPROVAL.)
5. NO PORTION OF THIS SITE IS LOCATED WITHIN THE 100-YEAR FLOODPLAIN, PER CITY OF AUSTIN AND FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS.
6. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS DEFINED BY THE CITY OF AUSTIN. THIS PROJECT IS NOT WITHIN THE EDWARDS AQUIFER RECHARGE ZONE AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
7. THERE ARE NO CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT. A FIELD INVESTIGATION HAS NOT BEEN PERFORMED AS A PART OF THIS PROJECT AND IS NOT REQUIRED.
8. THE STANDARD SHEETS INCLUDED IN THIS PLAN SET WERE PROVIDED BY THE GENERAL PERMIT PROGRAM OFFICE FOR USE ON GENERAL PERMIT PROJECTS ONLY. IF ANY MODIFICATIONS TO THE SHEETS WERE MADE, THEY ARE CLEARLY INDICATED ON THE SHEET ITSELF AND IN THE COVER SHEET INDEX.
9. ADDITIONAL TRENCH E/S CONTROL: TRIANGULAR SEDIMENT FILTER DIKE WILL BE INSTALLED ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.
10. PROJECT SCHEDULE MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM (GPP) COORDINATOR. INSTALLATION AND REMOVAL OF TEMPORARY AND PERMANENT EROSION/SEDIMENTATION CONTROLS MUST BE REFLECTED IN THE SCHEDULE, BY STATION NUMBER. GPP INSPECTOR MUST BE NOTIFIED A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.
11. APPROPRIATE EASEMENTS/APPROVALS MUST BE SECURED AND DOCUMENTED FOR PROJECT AREAS LOCATED OUTSIDE OF RIGHT OF WAYS. NO WORK SHALL BE PERFORMED WITHIN THESE AREAS UNTIL ASSOCIATED RIGHT OF ENTRY HAS BEEN SECURED. ADDITIONALLY, PROJECT PORTIONS IMPACTED BY LACK OF RECORDED DOCUMENT NUMBERS WILLO NOT BE CONSIDERED FOR FORMAL GPP REVIEW.
12. CONTRACTOR SHALL STAKE ALL PROPOSED SERVICE CONNECTIONS LOCATED WITHIN THE CRITICAL ROOT ZONE OF TREES 8" IN CALIPER AND LARGER AT LEAST 21 CALENDAR DAYS PRIOR TO CONSTRUCTION OF SUCH SERVICES. STAKING SHALL CONSIST OF A LATH WITH NAIL AND PAINT MARKINGS. IN CASES WHERE A STAKE CANNOT BE PLACED WITHOUT DAMAGING PROPERTY, CONTRACTOR MAY USE PAINT ONLY. ONCE STAKING IS COMPLETED, IT IS THE CONTRACTOR'S RESPONSIBILITY TO INFORM THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WITHIN TWENTY-FOUR HOURS. THE CITY OF AUSTIN'S CONSTRUCTION INSPECTOR WILL THEN COORDINATE A FIELD REVIEW OF THE SERVICE LOCATIONS WITH THE GENERAL PERMIT PROGRAM COORDINATOR AND PROPERTY OWNERS. SERVICE LINE LOCATIONS MAY BE ADJUSTED BASED ON THE REVIEW AND WILL BE RESTAKED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL SERVICE LINE STAKING SHALL BE MAINTAINED UNTIL THE SERVICE IS INSTALLED.

### GENERAL PERMIT PROGRAM CORRECTIONS RECORD

| No. | DESCRIPTION | BY | CORRECT (C) ADD (A) VOID (V) SHEET Nos. | TOTAL No. SHEETS IN CORRECTION PLAN SET | CITY OF AUSTIN APPROVAL/DATE | DATE IMAGED |
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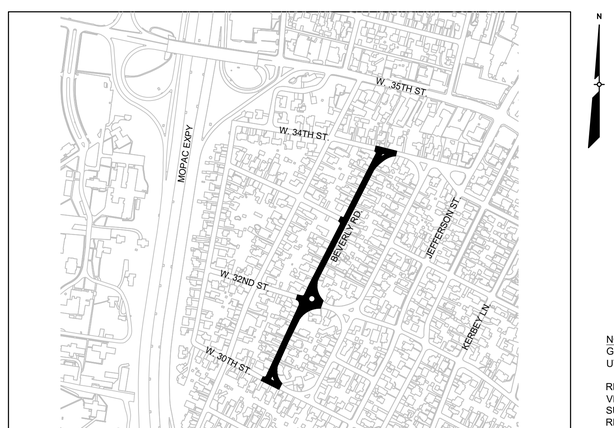


LOCATION MAP N.T.S.

GRID: H25
WATER PRESSURE ZONE: CENTRAL PRESSURE ZONE
MAX STATIC PRESSURE: 67 PSI
MIN STATIC PRESSURE: 60 PSI

NOTES:
GENERAL PERMIT PROGRAM APPROVAL DOES NOT CONSTITUTE UTILITY ALIGNMENT/ASSIGNMENT APPROVAL.

RELEASE OF THIS APPLICATION DOES NOT CONSTITUTE A VERIFICATION OF ALL DATA, INFORMATION AND CALCULATIONS SUPPLIED BY THE APPLICANT. THE ENGINEER OF RECORD IS SOLELY RESPONSIBLE FOR THE COMPLETENESS, ACCURACY AND ADEQUACY OF HIS/HER SUBMITTAL, WHETHER OR NOT THE APPLICATION IS REVIEWED FOR CODE COMPLIANCE BY CITY ENGINEERS.

## PROJECT INFORMATION:

STREET ADDRESS:
3000 BEVERLY ROAD - 3313 BEVERLY ROAD
AUSTIN, TEXAS

OWNER:
AUSTIN WATER

CONTACT:
MR. TANVEER ANJUM
AUSTIN WATER UTILITY
625 E. 10TH ST., SUITE 400
AUSTIN, TX 78701
(512) 972-0156

## SUBMITTAL PREPARED BY:


**RILEY MOUNTAIN ENGINEERING**
CONSULTING ENGINEERS
Civil, Transportation, Environmental, CM
13740 Research Blvd., Unit O-3
Austin, TX 78750

CONTACT:
MR. KEN FOWLER, P.E.
PHONE:
(512) 327-7795


STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
REG NUM.: 16223

SUBMITTED FOR APPROVAL BY:

ENGINEER OF RECORD DATE

## APPROVED BY GENERAL PERMIT HOLDER:

FOR GENERAL PERMIT HOLDER DATE

ANNUAL GENERAL PERMIT NUMBER

## REVIEWED BY:

FOR TRAVIS COUNTY DATE

TRAVIS COUNTY PERMIT NUMBER

TxDOT PERMIT NUMBER DATE

FOR AUSTIN WATER UTILITY DATE

CITY OF AUSTIN PARKS AND RECREATION DEPARTMENT MoU NUMBER DATE

## APPROVAL FOR SITE DEVELOPMENT PERMIT:

GENERAL PERMIT PROGRAM COORDINATOR DATE
PLANNING AND DEVELOPMENT REVIEW DEPARTMENT

DEVELOPMENT PERMIT NUMBER

SUBMITTAL DATE:

GENERAL PERMIT PROGRAM

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## EXISTING LEGEND

BM BENCHMARK FOUND
BM BENCHMARK SET
PROPERTY PIN FOUND
MONUMENT FOUND (DESCRIBED)
CONTROL POINT FOUND
CONTROL POINT SET
CONCRETE IMPROVEMENTS
BRICK IMPROVEMENTS
ROCK IMPROVEMENTS
ASPHALT PAVING
GRAVEL AND DIRT
X X X CHAINLINK FENCE
WOOD PRIVACY FENCE
OO OO OO WIRE FENCE
I I I IRON FENCE
GUARD RAIL
E U/G ELECTRIC–RED PAINT
T U/G TELEPHONE–WHITE PAINT
FO U/G FIBER OPTICS CABLE–ORANGE PAINT
G GAS–YELLOW PAINT
W WATER–BLUE PAINT
WW WASTEWATER–GREEN PAINT
OVERHEAD ELECTRIC/TELEPHONE LINE POWER POLE WITH GUY WIRE AND ANCHOR
WV WATER VALVE
W WATER METER
CO CLEAN OUT
GV GAS VALVE
G GAS METER
E ELECTRIC METER
E ELECTRIC JUNCTION BOX
TEL TELEPHONE PEDESTAL
TV TV CABLE JUNCTION BOX
FO FIBER OPTIC JUNCTION BOX
FO FIBER OPTIC LINE MARKER
FH FIRE HYDRANT
SP SPRINKLER HEAD
SV SPRINKLER CONTROL VALVE
MB MAILBOX
STREET LIGHT POLE
STREET SIGN
PROPERTY LIGHT
BOLLARD
TSP TRAFFIC SIGNAL POLE
TCB TRAFFIC CONTROL BOX
PB TRAFFIC PULL BOX
PM TRAFFIC PARKING METER
EMH ELECTRICAL MANHOLE
TMH TELEPHONE MANHOLE
WMH WATER MANHOLE
SSMH STORM SEWER MANHOLE
WWMH WASTEWATER MANHOLE
TREE DRIP LINE, TRUNK KNOWN, & TAG NUMBER
ROW RIGHT–OF–WAY
ASPHALT
RCP REINFORCED CONCRETE PIPE
PVC POLYVINYL CHLORIDE PIPE
× SPOT ELEVATION
( ) RECORD INFORMATION
P.R.T.C.T. PLAT RECORDS TRAVIS COUNTY, TEXAS
O.P.R.T.C.T. OFFICIAL PUBLIC RECORDS TRAVIS COUNTY, TEXAS
R.P.R.T.C.T. REAL PROPERTY RECORDS TRAVIS COUNTY, TEXAS
D.R.T.C.T. DEED RECORDS TRAVIS COUNTY, TEXAS
COA CITY OF AUSTIN

## PROPOSED LEGEND

W PROP. WATER MAIN
WW PROP. WASTEWATER MAIN
PROP. SERVICE LINE
W RELOCATED WATER METER
PROP. WATER VALVE
PROP. FIRE HYDRANT
PROP. WATER VALVE (PROFILE)
PROP. FIRE HYDRANT (PROFILE)

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

SHEET INDEX & LEGEND

| | | |
|---|---|---|
| DESIGNED BY: | KF | SCALE: NO SCALE |
| DRAWN BY: | JN | |
| CHECKED BY: | JF | SHEET NUMBER 2 / 48 |

GENERAL NOTES:

1. THIS PROJECT CONSISTS OF, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING: WATER LINE AND WASTEWATER INSTALLATION.
2. THE CITY OF AUSTIN STANDARD SPECIFICATIONS CURRENT AT THE TIME OF ADVERTISEMENT FOR BIDS SHALL GOVERN MATERIALS AND METHODS USED TO PERFORM THIS WORK. 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 REFERENCES MATERIAL MAY BE OBTAINED FROM O.S.H.A. AT 611 EAST 6TH STREET, ROOM 303, AUSTIN, TX.
3. THE CONTRACTOR MUST BE LICENSED AND MUST OBTAIN A STREET CUT PERMIT FROM THE OFFICE OF RIGHT-OF-WAY MANAGEMENT 512-974-7180 PRIOR TO THE START OF CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.
4. THE ESTIMATED QUANTITIES PUBLISHED WITH THESE CONSTRUCTION DOCUMENTS ARE FURNISHED AS AN AID IN THE BIDDING PROCESS AND ARE NOT TO BE SUBSTITUTED FOR THE CONTRACTOR'S QUANTITY TAKEOFFS.
5. GEOTECHNICAL INFORMATION (I.E. SOIL BORINGS) WAS PREPARED FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THIS PROJECT. GEOTECHNICAL INFORMATION INCLUDED IN THESE DOCUMENTS IS FOR INFORMATIONAL PURPOSES ONLY, AND IS NOT TO BE CONSTRUED AS BEING AN ACCURATE REPRESENTATION OF SUB SOIL CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL SUBSURFACE CONDITIONS.
6. THE BIDDER (CONTRACTOR) SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY OBSTACLES THAT MAY IMPEDE OR PREVENT THE PROPER CONSTRUCTION OF THE PROJECT.
7. THE CONTRACTOR SHALL ARRANGE THE OPERATION IN SUCH A MANNER AS TO AVOID UNNECESSARY INCONVENIENCE TO THE PUBLIC IN CONSTRUCTION AREAS.
8. ACCESS TO ALL SIDE STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES AT THE SOLE EXPENSE OF THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER'S REPRESENTATIVE.
9. PORTIONS OF THE CONSTRUCTION OF THIS PROJECT AUTHORIZED BY PERMIT OF LICENSE AGREEMENT WILL BE SUBJECT TO SUCH INSPECTION AND TESTS AS MAY BE DEEMED NECESSARY BY THE PERMIT GRANTING AUTHORITIES. CONTRACTOR SHALL FURNISH INFORMATION TO AUTHORITIES AS REQUIRED. CONTRACTOR SHALL ALSO FURNISH INCIDENTAL LABOR AND EQUIPMENT TO ALLOW TESTING PERSONNEL TO ACCESS THE WORK AND COOPERATE FULLY WITH THESE AUTHORITIES IN CONDUCTING THE TESTING AND INSPECTION PROGRAM. UNLESS STATED OTHERWISE IN THE PLANS OR PROJECT MANUAL, COSTS OF TESTING WILL BE AS SPECIFIED IN SECTION 00700 OF THE STANDARD SPECIFICATIONS.
10. THE CONSTRUCTION INSPECTION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS SHALL ARRANGE A PRE-CONSTRUCTION MEETING NOT LESS THAN FOURTEEN (14) DAYS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY INSPECTOR FORTY-EIGHT (48) HOURS IN ADVANCE OF BEGINNING ANY CONSTRUCTION IN THE R.O.W. OR IN EASEMENTS. CONTRACTOR SHALL NOTIFY INSPECTOR TWENTY-FOUR (24) HOURS IN ADVANCE OF MAKING ANY SUPPLEMENTARY CONNECTION OR CLOSING OFF ANY WATER OR WASTEWATER SERVICES TO PROPERTY OWNERS.
11. CONTRACTOR SHALL NOTIFY PRINCIPALS OF EACH OF THE FOLLOWING ENTITIES OF THE CONSTRUCTION SCHEDULES AT LEAST TWO WEEKS IN ADVANCE OF PROPOSED CONSTRUCTION OPERATIONS. CONTRACTOR SHALL PROVIDE PERTINENT INFORMATION ABOUT LANE CLOSURES AND DETOURS AND ANY OTHER CONSTRUCTION RELATED ACTIVITY WHICH MAY INTERFERE WITH NORMAL SERVICES.

| | | |
|---|---|---|
| A. | AUSTIN FIRE DEPARTMENT | 512-476-1050 |
| B. | AUSTIN POLICE DEPARTMENT | 512-974-5283 |
| C. | EMERGENCY MEDICAL SERVICES (EMS) | 512-469-2046 |
| D. | AUSTIN INDEPENDENT SCHOOL DISTRICT (HECTOR HINOJOSA) | 512-414-3191 |
| E. | CAPITAL METRO DISPATCHER (STEVE HERRERA) | 512-389-7418 |
| F. | U.S. POSTAL SERVICE | 512-342-1236 |
| G. | COA TRANSPORTATION DIVISION | 512-974-7024 |
| H. | UNIVERSITY OF TEXAS (PHYSICAL PLANT DIRECTOR) | 512-471-1422 |
| I. | OFFICE OF RIGHT-OF-WAY MANAGEMENT | 512-974-7180 |

12. CONTRACTOR SHALL MAINTAIN THE JOB SITE IN A SAFE, NEAT, AND WORKMAN-LIKE MANNER AT ALL TIMES. JOB SITE SAFETY SHALL NOT BE COMPROMISED. ANY UNATTRACTIVE NUISANCE SHALL BE REMOVED OR CAMOUFLAGED BY CONTRACTOR WHEN DIRECTED BY THE OWNER OR ENGINEER. CONTRACTOR SHALL REMOVE OR CAMOUFLAGE ANY CHILD ATTRACTIVE NUISANCE.
13. THE ATTENTION OF ALL PROSPECTIVE BIDDERS IS DIRECTED TO SECTION 00700, PARAGRAPHS 6.1, 6.7 AND 6.11 OF THE GENERAL CONDITIONS OF THE AGREEMENT, CITY OF AUSTIN STANDARD SPECIFICATIONS, THE STATE LAW (VERNON'S ANNOTATED TEXAS STATUTES, ARTICLE 1436 (C)), AND THE NEED FOR EFFECTIVE PRECAUTIONARY MEASURES WHEN OPERATING IN THE VICINITY OF ELECTRICAL LINES. IF THE CONTRACTOR CHOOSES TO USE EQUIPMENT WITH THE POTENTIAL OF COMING WITHIN THE DISTANCES PRESCRIBED BY STATUTE, THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE WORK WITH THE APPROPRIATE ELECTRIC/UTILITY COMPANY.
14. ALL CONSTRUCTION EQUIPMENT INVOLVED IN ROADWAY WORK SHALL BE EQUIPPED WITH A PERMANENTLY-MOUNTED, 360-DEGREE REVOLVING OR STROBE WARNING LIGHT WITH AMBER LENS IN WORKING ORDER. THIS LIGHT SHALL HAVE A MINIMUM LENS HEIGHT OF 5" AND A DIAMETER OF 5". THIS LIGHT SHALL HAVE A MOUNTING HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE ROADWAY SURFACE AND SHALL BE VISIBLE FROM ALL SIDES. THIS EQUIPMENT SHALL ALSO HAVE ATTACHED AT EACH SIDE OF THE REAR END OF THE VEHICLE AN APPROVED ORANGE WARNING FLAG MOUNTED NO LESS THAN 6 FEET ABOVE THE ROADWAY SURFACE.
15. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE OR SUBSURFACE OUTSIDE OF THE PAVEMENT CUT AREA SHALL BE REGARDED AS A PART OF THE STREET CUT REPAIR. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, CRACKING, DEPRESSIONS, AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE AREAS WILL BE INCLUDED IN THE TOTAL AREA OF THE REPAIR. THE AREAS OF REPAIR NEAR UTILITY TRENCHES SHALL BE SAW CUT IN STRAIGHT, NEAT LINES PARALLEL TO THE UTILITY TRENCH.
16. ALL EXISTING SIDEWALKS, CURB AND GUTTER, DRIVEWAYS, LANDSCAPING, OR DRAINAGE FACILITIES DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE REMOVED AND RESTORED WITH MATERIALS EQUAL TO OR BETTER THAN THE ORIGINAL AND SUCH REMOVAL AND/OR RESTORATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
17. BLASTING WITHIN THE PROJECT AREA WILL NOT BE ALLOWED.
18. CONTRACTOR WILL MINIMIZE USE OF STREET PARKING BY HIS/HER EMPLOYEES IN THE VICINITY OF THE CONSTRUCTION AREA.
19. CONTRACTOR WILL PROVIDE, INSTALL, AND MAINTAIN "LOCAL BUSINESS ACCESS" SIGNS AT EACH BUSINESS WHEN LANE CLOSURES ARE IN PLACE.
20. CONTRACTOR SHALL MAINTAIN PEDESTRIAN ACCESS ACROSS ALL INTERSECTIONS WITH EXISTING PEDESTRIAN ACCESS.
21. CONTRACTOR SHALL PROVIDE AND MAINTAIN SAFETY FENCING ALONG THE RIGHT OF WAY LINE BETWEEN ALL DRIVEWAYS ADJACENT TO THE CONSTRUCTION AREA. SAFETY FENCING IS REQUIRED ALONG ANY EXCAVATION AREAS, ANY CONSTRUCTION AREAS SPECIFICALLY IDENTIFIED ON THE PLANS, AND AREAS IDENTIFIED BY THE ENGINEER BASED ON SITE SPECIFIC CONDITIONS. IF SIDEWALK IS PRESENT IN AN AREA REQUIRING SAFETY FENCING, A TEMPORARY FENCE MOUNTING SYSTEM SHALL BE USED TO PLACE SAFETY FENCING BETWEEN THE CONSTRUCTION AREA AND THE PEDESTRIAN PATHWAY ON THE SIDEWALK.
22. THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT ALL LOCATIONS USED FOR STORING CONSTRUCTION EQUIPMENT, MATERIALS, AND STOCKPILES OF ANY TYPE WITHIN THE CONSTRUCTION LIMITS SHALL BE APPROVED, IN ADVANCE, BY THE OWNER'S REPRESENTATIVE. USE OF THE AREA WITHIN THE CONSTRUCTION LIMITS FOR THESE PURPOSES WILL BE RESTRICTED TO THOSE LOCATIONS WHERE DRIVER SIGHT DISTANCE TO BUSINESSES AND SIDE STREET INTERSECTIONS IS NOT OBSTRUCTED AND AT OTHER LOCATIONS WHERE AN UNSIGHTLY APPEARANCE, AS DETERMINED BY THE OWNER'S REPRESENTATIVE, WILL NOT EXIST. THE CONTRACTOR SHALL NOT STAGE OR STORE EQUIPMENT AND MATERIAL WITHIN THE 100-YEAR FLOOD PLAIN.
23. THE CONTRACT SHALL FURNISH, INSTALL, AND MAINTAIN BARRICADES, WARNING SIGNS, FLASHERS AND OTHER DEVICES OF THE TYPE AND SIZE AS INDICATED IN THE LATEST EDITION OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" OR AS DIRECTED BY THE ENGINEER.
24. IF CULTURAL RESOURCES ARE ENCOUNTERED DURING CONSTRUCTION (ARCHEOLOGICAL FINDINGS UNEARTHED) CONTRACTOR SHALL STOP WORK IN THAT AREA AND IMMEDIATELY CONTACT THE TEXAS HISTORICAL COMMISSION AT (512)463-6100.

UTILITIES

1. UTILITIES SHOWN REFLECT THE BEST INFORMATION AVAILABLE AT THE TIME THAT THE PROJECT WAS DESIGNED/SURVEYED. THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "DIG TESS" SYSTEM AT 1-800-344-8377 (DIG TESS) 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS.
2. THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING TYPE AND LOCATION OF UNDERGROUND, SURFACE AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT TYPE AND LOCATION OF ALL UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES. THE CONTRACTOR SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES; AND THE CONTRACTOR SHALL PAY FOR SUCH REPAIRS.
3. UTILITY RELOCATION WORK HAS BEEN OR WILL BE ACCOMPLISHED TO CLEAR THE WORKSPACE. THESE RELOCATIONS ARE NOT REFLECTED ON THESE DRAWINGS.
4. CASTINGS SPECIFIED FOR ADJUSTMENT BY THE CONTRACTOR ARE TO BE ADJUSTED AFTER THE OVERLAY OR RESURFACING IS IN PLACE. IF THE OWNER'S REPRESENTATIVE DESIGNATES THAT ANY CASTINGS ARE TO BE ADJUSTED PRIOR TO OVERLAY, THEY SHALL BE ADJUSTED TO MATCH THE PROPOSED PAVEMENT SURFACE. THOSE THAT ARE NOT ADJUSTED SHALL BE LOCATED AND NOTED ON THE AS-BUILT PLANS AND OVERLAID. SOUTHWESTERN BELL MANHOLES SHALL BE ADJUSTED BY OTHERS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION BETWEEN HIMSELF AND OTHER CONTRACTORS AND UTILITIES IN THE VICINITY OF THIS PROJECT. THIS INCLUDES, BUT IS NOT LIMITED TO GAS, WATER, WASTEWATER, ELECTRICAL, TELEPHONE, COMMUNICATIONS NETWORKS, CABLE TELEVISION, THE UNIVERSITY OF TEXAS SYSTEM FACILITIES, PETROLEUM PIPELINES, AND STREET AND DRAINAGE WORK. ONCE THE CONTRACTOR BECOMES AWARE OF A POSSIBLE CONFLICT, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE CONSTRUCTION INSPECTOR WITHIN TWENTY-FOUR (24) HOURS.
6. WHEN AN EXISTING WATERLINE MAIN SHUTOUT IS NECESSARY OR POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR, WHO WILL THEN NOTIFY THE WATER UTILITY. THE UTILITY REQUIRES A MINIMUM OF SEVENTY-TWO (72) HOURS ADVANCE NOTICE FOR ALL SHUTOUTS.
7. BEFORE DISCONNECTION OF ANY WASTEWATER AND/OR WASTEWATER SERVICE LINE, CONTRACTOR MUST PROVIDE AN ALTERNATE MEANS OF WASTEWATER CONVEYANCE FOR THE INTERRUPTED SECTION AT THE CONTRACTOR'S EXPENSE.
8. THE EXACT LOCATIONS OF ANY GAS SERVICE LINES ARE NOT SHOWN ON THE CONSTRUCTION PLANS. TEXAS GAS SERVICE WILL LOCATE THEIR SERVICE LINES DURING THE "ONE CALL" PROCESS. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO THE GAS SERVICE LINES DURING CONSTRUCTION.
9. DEBRIS CAPS SHALL BE PLACED AS REQUIRED AFTER CONTRACTOR HAS SET UP BARRICADES. FOR NEW WATER LINE, DEBRIS CAPS SHALL BE PLACED UPON COMPLETION OF WATER LINE. DEBRIS CAPS MUST BE INSTALLED IN EXISTING VALVES PRIOR TO BEGINNING WORK AND IN NEW VALVES IMMEDIATELY FOLLOWING THEIR CONSTRUCTION.

CONSTRUCTION

1. ALL EXISTING TRAFFIC BUTTONS SHALL BE REMOVED PRIOR TO OPERATIONS.
2. WHERE REMOVAL OF BASE AND PAVEMENT IS NECESSARY FOR THIS PROJECT, ALL BASE AND PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS, CITY OF AUSTIN STANDARD SPECIFICATIONS AND STANDARD DETAILS FOR CUTS IN PUBLIC RIGHT OF WAY, ALL PAVEMENT CUTS SHALL BE SAW-CUT PRIOR TO PLACEMENT OF HMAC.
3. ALL FULL OR PARTIAL DEPTH PATCHES SHALL BE CONSTRUCTED PRIOR TO UNDERSEAL OR OVERLAY. TYPE A OR B HMAC REPAIRS SHALL BE ALLOWED TO CURE 24 HOURS PRIOR TO EDGE MILLING. UNDERSEAL WILL NOT BE ALLOWED TO BEGIN UNTIL DENSITY RESULTS HAVE BEEN RECEIVED BY THE INSPECTOR AND HE HAS AUTHORIZED THE CONTRACTOR TO PROCEED.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REMOVE, PRESERVE AND RESET STREET MARKERS AND TRAFFIC CONTROL SIGNS THAT ARE WITHIN THE CONSTRUCTION LIMITS TO THE LINE AND HEIGHT AS DESCRIBED IN THE LATEST EDITION OF TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES BEFORE ANY SIDEWALKS OR STREET EXCAVATION IS BEGUN. SIGNS SHALL NOT BE LAID ON THE GROUND. THE "TRAFFIC SIGN ACTIVITY SECTION" OF THE URBAN TRANSPORTATION DIVISION (512-974-0170, EXT. 7024) SHALL BE NOTIFIED A MINIMUM OF TWO WORKING DAYS PRIOR TO THE COMPLETION OF THE PROJECT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING AND MAINTAINING TEMPORARY COLD MIX TRANSITIONS FOR ALL MILLED AREAS, BUS PADS, CASTING ADJUSTMENTS, AND ANY OTHER SIMILAR ABRUPT CHANGES IN THE ROADWAY PROFILE WITHIN THE SCOPE OF THIS PROJECT. THESE TRANSITIONS SHALL BE REMOVED PRIOR TO OVERLAY OPERATIONS. TRANSITIONS SHALL BE THREE (3) FEET FOR EVERY (1) INCH OF DIFFERENTIAL PAVEMENT HEIGHT (I.E. 6' TRANSITION FOR A 2" MILLED AREA).
6. IN AREAS WHERE EXISTING CURBS AND GUTTERS ARE TO REMAIN, THE OLD PAVING AND BASE MUST BE REMOVED AND THE NEW BASE AND PAVING PLACED AND COMPACTED SO AS NOT TO DISTURB THE EXISTING CURBS AND GUTTERS.
7. TACK COAT SHALL MEET THE REQUIREMENTS FOR CUTBACK ASPHALT OR EMULSIFIED ASPHALT AND SHALL COMPLY WITH CITY OF AUSTIN STANDARD SPECIFICATIONS.

AUSTIN WATER GENERAL CONSTRUCTION NOTES November 23, 2017

1. **THE CITY STANDARD CONSTRUCTION SPECIFICATIONS CURRENT AT THE TIME OF BIDDING SHALL COVER MATERIALS AND METHODS USED TO DO THIS WORK.**
2. **CONTACTOR MUST OBTAIN A STREET CUT PERMIT FROM AUSTIN TRANSPORTATION DEPARTMENT, RIGHT OF WAY MANAGEMENT DIVISION BEFORE BEGINNING CONSTRUCTION WITHIN THE RIGHT-OF-WAY OF A PUBLIC STREET OR ALLEY.**
3. **AT LEAST 48 HOURS BEFORE BEGINNING ANY WATER AND WASTEWATER CONSTRUCTION IN PUBLIC R.O.W. OR PUBLIC EASEMENT, THE CONTRACTOR SHALL NOTIFY AUSTIN TRANSPORTATION INSPECTION OR DEVELOPMENT SERVICES DEPARTMENT (DSD) INSPECTIONS AT THE NUMBER INDICATED ON THE PLANS BY THE AW PLAN REVIEWER.**
4. **THE CONTRACTOR SHALL CONTACT THE AUSTIN AREA "ONE CALL" SYSTEM AT 1-800-344-8377 FOR EXISTING UTILITY LOCATIONS PRIOR TO ANY EXCAVATION IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES TO BE EXTENDED, TIED TO, OR ALTERED, OR SUBJECT TO DAMAGE/INCONVENIENCE BY THE CONSTRUCTION OPERATIONS. THE CITY OF AUSTIN WATER AND WASTEWATER MAINTENANCE RESPONSIBILITY ENDS AT R.O.W./EASEMENT LINES.**
5. **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 WASTEWATER SERVICES.**
6. **THE CITY SPECIFICATION ITEM 509S WILL BE REQUIRED AS A MINIMUM TRENCH SAFETY MEASURE.**
7. **ALL MATERIALS TESTS ORDERED BY THE OWNER FOR QUALITY ASSURANCE PURPOSES, SHALL BE CONDUCTED BY AN INDEPENDENT LABORATORY AND FUNDED BY THE OWNER IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 1804S.04.**
8. **PRESSURE TAPS SHALL BE ALLOWED ON A CASE BY CASE BASIS, AS DETERMINED BY THE DIRECTOR'S DESIGNEE. NORMALLY PRESSURE TAPS WILL BE ALLOWED ONLY IN THE FOLLOWING CASES: A) A TEST SHUT OUT INDICATES AN ADEQUATE SHUT OUT TO PERFORM THE WORK IS NOT FEASIBLE B) MORE THAN 30 CUSTOMERS OR A SINGLE CRITICAL CUSTOMER (AS DEFINED BY AUSTIN WATER) WOULD BE IMPACTED BY THE SHUT OUT OR C) THE EXISTING WATER LINE WARRANTS IT.**
9. **THRUST RESTRAINT SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 510.3(22) AND SPL WW 27-A and WW 27-F.**
10. **FIRE HYDRANTS SHALL BE SET IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEM 511S.4 AND SHALL BE PAINTED FLYNT ALUMINUM OR EQUAL. FIRE HYDRANTS AND ASSOCIATED VALVES, TEN (10) YEARS AND OLDER WILL BE REQUIRED TO BE REPLACED WITH A NEW FIRE HYDRANT AND APPERTENUNANCES.**
11. **WATER LINE TESTING AND STERILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARD SPECIFICATION ITEMS 510.3 (27)-(29). FORCE MAIN PRESSURE TESTING SHALL BE CONDUCTED AND FALL UNDER THE SPECIFICATIONS AS WATER LINES (PRESSURE PIPE) OR AT THE PRESSURES SHOWN ON THE APPROVED PLANS.**
12. **ALL MATERIAL USED ON THIS PROJECT MUST BE LISTED ON THE STANDARD PRODUCTS LISTING. ANY MATERIAL NOT LISTED HAS TO GO THROUGH THE REVIEW OF THE STANDARDS COMMITTEE FOR REVIEW AND APPROVAL PRIOR TO START OF PROJECT. TESTING AND EVALUATION OF PRODUCTS ARE REQUIRED BEFORE APPROVAL WILL BE GIVEN ANY CONSIDERATION.**
13. **WHEN WATER SERVICES ARE DAMAGED AND THE SERVICE MATERIAL IS PE, THE LINE SHALL BE REPAIRED ONLY BY HEAT FUSION WELD OR REPLACED THE FULL LENGTH WITH TYPE K COPPER MATERIAL. ANY TIME PB IS DAMAGED OR TAMPERED WITH IN ANY WAY, THE SERVICE LINE SHALL BE REPLACED FULL LENGTH WITH TYPE K COPPER MATERIAL. NOTE: FULL LENGTH IS FROM CORPORATION STOP TO METER.**
14. **WHEN AN EXISTING WATERLINE SHUT OUT IS NECESSARY AND POSSIBLE, THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR WHO WILL THEN NOTIFY AUSTIN WATER DISPATCH AND THE AFFECTED CUSTOMERS A MINIMUM OF SEVENTY-TWO (72) HOURS IN ADVANCE.**
15. **THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTOR SO THAT HE CAN NOTIFY THE AUSTIN WATER AT 972-0000 AT A MINIMUM OF 72 HOURS PRIOR TO RELOCATING ANY DOMESTIC OR FIRE DEMAND WATER METERS. THE CONTRACTOR SHALL CAREFULLY REMOVE ALL METERS AND METERS BOXES THAT ARE INDICATED TO BE RELOCATED OR SALVAGED. THE CONTRACTOR SHALL INSTALL THE REMOVED METER OR CITY PROVIDED METER AT THE NEW LOCATION INDICATED ON THE CONSTRUCTION PLANS.**
16. **WATER AND WASTE WATER SERVICES WILL NEED TO BE REPLACED UP TO THE MAIN. REPAIR COUPLINGS ARE NOT ALLOWED ON NEW INSTALLTIONS.**
17. **ALL MANHOLES IN UNPAVED AREAS PROVIDING DIRECT ACCESS TO A WASTEWATER LINE SHALL BE WATERTIGHT AND BEAR THE WORDING AND INSIGNIA FOR THE CITY OF AUSTIN.**
18. **THE CONTRACTOR SHALL VERIFY ALL VERTICAL AND HORIZONTAL LOCATIONS OF EXISTING UTILITIES, BELOW GROUND AND OVERHEAD, PRIOR TO STARTING ONSITE UTILITY WORK.**
19. **ALL WATER AND WASTEWATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE SEPARATION DISTANCES INDICATED IN CHAPTER 290 - DRINKING WATER STANDARDS, CHAPTER 217 - DESIGN CRITERIA FOR SEWERAGE SYSTEMS AMD CHAPTER 210 - DESIGN CRIERIA FOR RECLAIMED SYSTEMS OF TCEQ RULES.**
20. **CONTRACTOR'S PERSONNEL THAT PERFORM BUTT FUSION AND ELECTROFUSION ON OR TO HDPE PIPE AND FITTINGS MUST HAVE CURRENT QUALIFICATION TRAINING CERTIFICATE ISSUED BY MCELROY OR COMPARABLE TRAINING PROGRAM.**
21. **SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL STRUCTURAL ENGINEER, REGISTERED IN THE STATE OF TEXAS, SHALL BE SUBMITTED FOR AUSTIN WATER APPROVAL FOR LARGE DIAMETER PRE-CAST MANHOLES, JUNCTION BOXES, WET WELLS, AND SIMILAR STRUCTURES. THE SHOP DRAWINGS SHALL INCLUDE FLOWLINE ELEVATIONS OF ALL INCOMING AND OUTGOING PIPES, ELEVATION OF TRANSITION FROM LARGE DIAMETER SECTIONS TO 48" ID SECTION, TOP OF MANHOLE ELEVATION, SURROUNDING GROUND ELEVATION, AS WELL AS SPECIAL CONSTRUCTION CONSIDERATIONS THAT ARE SPECIFIED IN THE CONTRACT DRAWINGS.**
22. **VALVE STEM EXTENSIONS SHALL CONSIST OF A SINGLE PIECE OF IRON ROD OF THE REQUIRED LENGTH WITH A SOCKET ON ONE END AND NUT ON THE OTHER.**
23. **ALL POTABLE WATER SYSTEM COMPONENTS INSTALLED AFTER JANUARY 4, 2014, SHALL BE ESSENTIALLY "LEAD FREE" ACCORDING TO THE US 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 ON THE PACKAGING SHALL NOT BE INSTALLED.**
24. **ALL FIRE HYDRANTS AND VALVES THAT ARE TO BE ABANDONED SHALL BE REMOVED, SALVAGED AND RETURNED TO AUSTIN WATER. NOTICE SHOULD BE GIVEN 48 HOURS PRIOR TO RETURN TO: PIPELINE OPERATIONS DISTRIBUTION SYSTEM MAINTENANCE, VALVES AND HYDRANT SERVICES, SUPERVISING AW PIPELINE TECHNICIAN AT 512-972-1133**
25. **ALL EXISTING WATER METERS IDENTIFIED TO BE RELOCATED OR ABANDONED AT THE DEVELOPMENT, SHALL BE REMOVED FROM THE METER BOX PRIOR TO CONSTRUCTION AND GIVEN IMMEDIATELY TO THE DSD INSPECTOR.**
26. **THE ENGINEER SHALL CALL OUT THE SIZE, TYPE AND USE (DOMESTIC OR IRRIGATION) OF ALL EXISTING WATER METERS TO BE RELOCATED OR REPURPOSED. WATER METER NUMBERS WILL NOT BE REQUIRED TO BE PLACED ON THE PLAN SHEET. A SEPARATE AUSTIN WATER TAPS OFFICE FORM WILL BE USED TO PROVIDE RELEVANT INFORMATION FOR THE EXISTING INFORMATION ON EXISTING METERS TO RECEIVE APPROPRIATE CREDITS. THIS FORM SHALL BE DIRECTLY SUBMITTED TO AUSTIN WATER TAPS OFFICE FOR REVIEW AND PROCESSING.**
27. **NO CONNECTION MAY BE MADE BETWEEN THE PRIVATE PLUMBING AND AUSTIN WATER INFRASTRUCTURE UNTIL A CITY APPROVED WATER METER HAS BEEN INSTALLED.**
28. **ALL GRAVITY LINES SHALL BE INSTALLED DOWNSTREAM TO UPSTREAM.**
29. **METER BOXES AND CLEAN OUTS SHALL NOT BE LOCATED WITHIN PAVED AREAS SUCH AS DRIVEWAYS AND SIDEWALKS.**
30. **PROTECTED STREET STATUS IS SUBJECT TO CHANGE OVER TIME. IT IS THE OWNER'S RESPONSIBILITY TO CONFIRM THE STREET STATUS PRIOR TO CONSTRUCTION AS PROTECTED STREET STATUS WILL DIRECTLY IMPACT THE CONSTRUCTION COSTS. IF PROTECTED STREETS ARE PROPOSED TO BE DISTURBED, APPROVAL FROM THE STREET AND BRIDGE DIVISION OF THE TRANSPORTATION DEPARTMENT IS REQUIRED.**

**UC TRACKING # UCC-180906-08-03**
**ROW ID # 12018299**

**AW INFRASTRUCTURE INFORMATION**

| PROPOSED PRODUCT TYPE (TO BE INSTALLED) | LENGTH OF PIPE (LF) | SIZE OF PIPE (INCH) | NO. OF SERVICES |
|---|---|---|---|
| WATER MAIN | 1622 | 8 | NA |
| WASTEWATER MAIN | 1305 | 8 | NA |
| WATER SERVICE | NA | 2 | 39 |
| WASTEWATER SERVICE | NA | 6 | 37 |

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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

GENERAL NOTES

| | | | |
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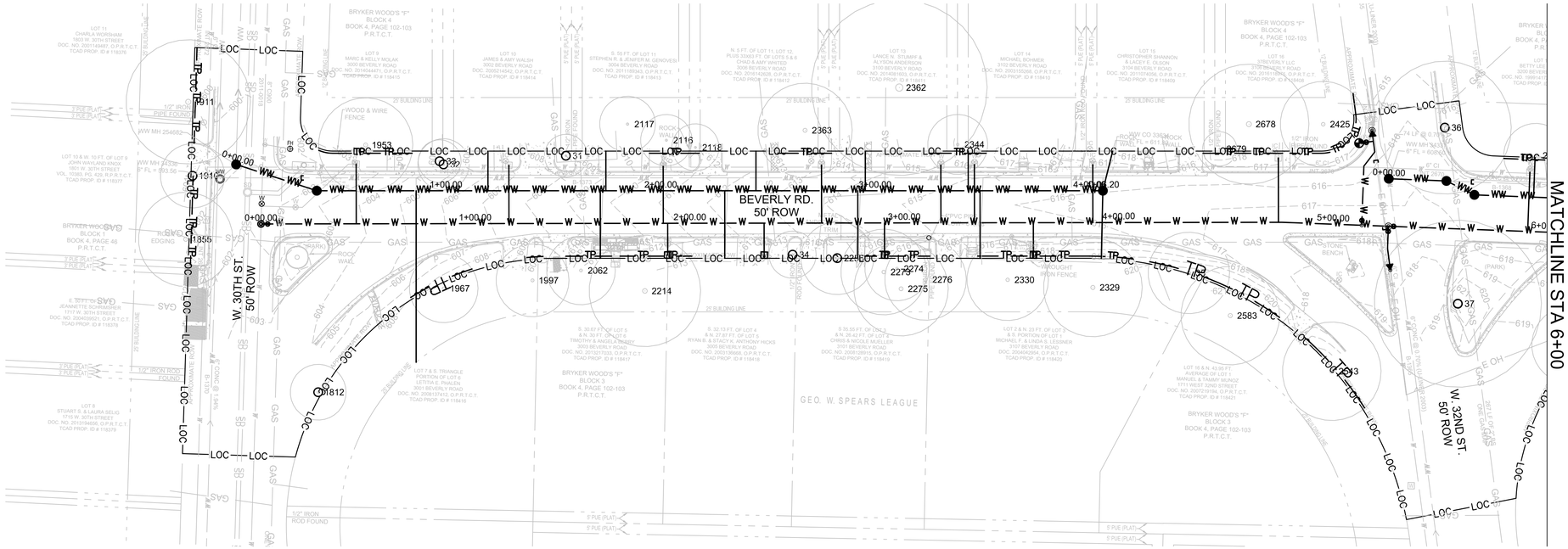
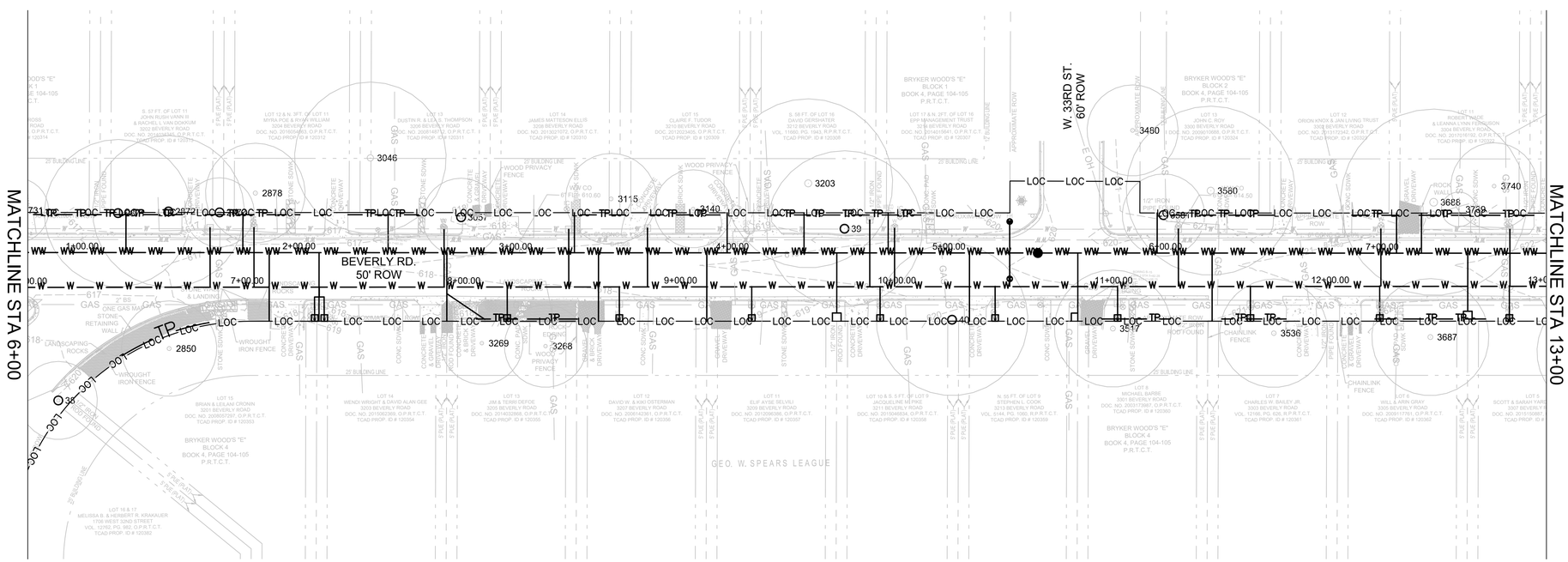
| DESIGNED BY: | KF | SCALE: | NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER | |
| CHECKED BY: | JF | 3 / 48 | |




LEGEND

- PROP. WATER MAIN
- PROP. WASTEWATER MAIN
- TREE PROTECTION FENCE
- PLANKING AROUND TREE

NOTES

1. ALL MATERIAL, EQUIPMENT, AND STAGING AND TEMPORARY SPOILS STORAGE SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION ON THE APPROVED PLANS.
2. NO STAGING/STORAGE OF ANY KIND IS ALLOWED WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
3. ALL PROPOSED AREAS FOR STAGING/STORAGE WITHIN THE ROW MUST BE APPROVED PRIOR TO USE BY THE ROW MANAGEMENT DIVISION OF THE DEPARTMENT OF PUBLIC WORKS.
4. NO TREES ARE REMOVED IN THIS SEGMENT.
5. TRIANGULAR SEDIMENT FILTER DIKE (STANDARD DETAIL 628S) WILL BE INSTALLED ACROSS FULL WIDTH OF TRAFFIC CLOSURE PERPENDICULAR TO CURB, AND PARALLEL TO CURB ADJACENT TO CONSTRUCTION AREA ON BOTH SIDES OF TRENCH. TRIANGULAR SEDIMENT FILTER DIKE SHOULD FORM A CLOSED LOOP AROUND THE CONSTRUCTION AREA EXCEPT (DURING CONSTRUCTION HOURS) FOR OPENINGS FOR CONSTRUCTION VEHICLES TO ENTER AND EXIT. FOR THIS PURPOSE, CONSTRUCTION AREA IS CONSIDERED ANY AREA BETWEEN THE CURBS WITH EXPOSED SOIL, BASE OR SUBBASE MATERIAL, INCLUDING SPOILS PILES AWAITING USE AS BACKFILL. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION AREA. THE COST OF REMOVING AND RE-SETTING TRIANGULAR SEDIMENT FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.
6. TRIANGLE SEDIMENT FILTER DIKE WILL BE PLACED ACROSS ALL CONSTRUCTION ENTRANCE(S) AT THE END OF THE DAY TO FORM A CONTINUOUS PERIMETER SEDIMENTATION CONTROL IN CONJUNCTION WITH OTHER APPROVED PERIMETER CONTROLS.

0 30 60 FEET

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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

EROSION CONTROL AND SEDIMENTATION SHEET
SHEET 1 OF 2

| | | | |
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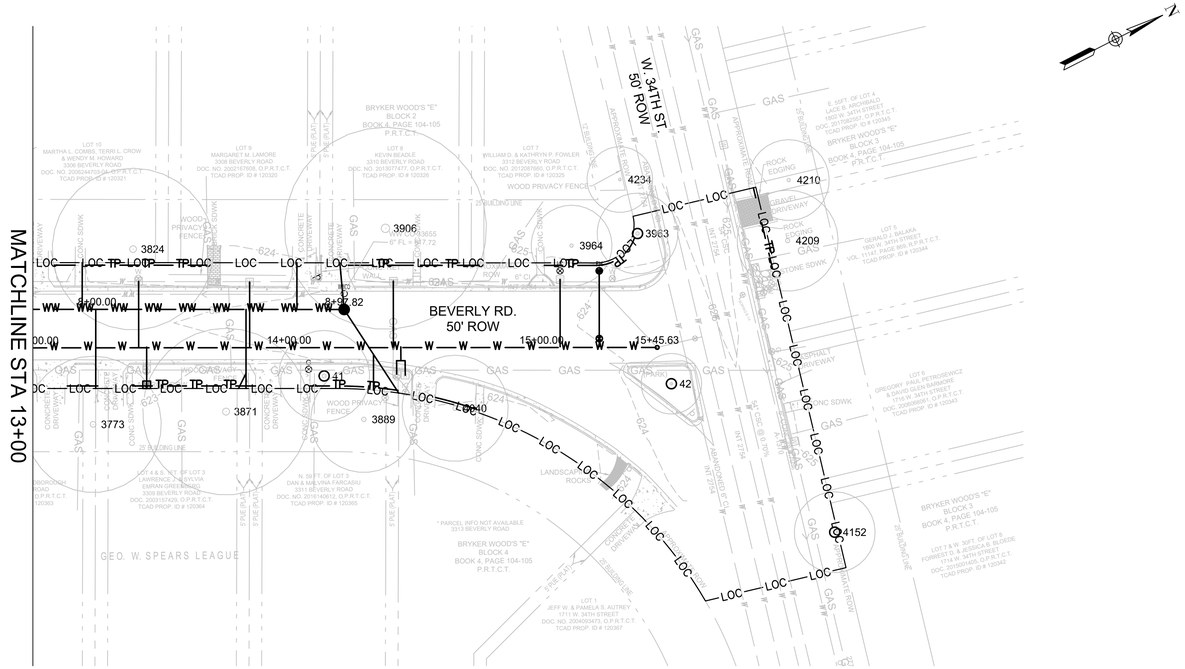
| DESIGNED BY: | KF | SCALE: | 1"=30' |
| DRAWN BY: | JN | SHEET NUMBER | 4 / 48 |
| CHECKED BY: | JF | | |




LEGEND

| | |
|---|---|
| W | PROP. WATER MAIN |
| WW | PROP. WASTEWATER MAIN |
| TP | TREE PROTECTION FENCE |
| O | PLANKING AROUND TREE |

NOTES

1. ALL MATERIAL, EQUIPMENT, AND STAGING AND TEMPORARY SPOILS STORAGE SHALL REMAIN WITHIN THE LIMITS OF CONSTRUCTION ON THE APPROVED PLANS.
2. NO STAGING/STORAGE OF ANY KIND IS ALLOWED WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
3. ALL PROPOSED AREAS FOR STAGING/STORAGE WITHIN THE ROW MUST BE APPROVED PRIOR TO USE BY THE ROW MANAGEMENT DIVISION OF THE DEPARTMENT OF PUBLIC WORKS.
4. NO TREES ARE REMOVED IN THIS SEGMENT.
5. TRIANGULAR SEDIMENT FILTER DIKE (STANDARD DETAIL 628S) WILL BE INSTALLED ACROSS FULL WIDTH OF TRAFFIC CLOSURE PERPENDICULAR TO CURB, AND PARALLEL TO CURB ADJACENT TO CONSTRUCTION AREA ON BOTH SIDES OF TRENCH. TRIANGULAR SEDIMENT FILTER DIKE SHOULD FORM A CLOSED LOOP AROUND THE CONSTRUCTION AREA EXCEPT (DURING CONSTRUCTION HOURS) FOR OPENINGS FOR CONSTRUCTION VEHICLES TO ENTER AND EXIT. FOR THIS PURPOSE, CONSTRUCTION AREA IS CONSIDERED ANY AREA BETWEEN THE CURBS WITH EXPOSED SOIL, BASE OR SUBBASE MATERIAL, INCLUDING SPOILS PILES AWAITING USE AS BACKFILL. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION AREA. THE COST OF REMOVING AND RE-SETTING TRIANGULAR SEDIMENT FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.
6. TRIANGLE SEDIMENT FILTER DIKE WILL BE PLACED ACROSS ALL CONSTRUCTION ENTRANCE(S) AT THE END OF THE DAY TO FORM A CONTINUOUS PERIMETER SEDIMENTATION CONTROL IN CONJUNCTION WITH OTHER APPROVED PERIMETER CONTROLS.

TREE LIST

EXAMPLE: 8"R=8' CRITICAL ROOT ZONE
(MS = MULTI-STEM)
*EST.=ESTIMATED LOCATION

| TREE TAG NO. | DESCRIPTION | TREE TAG NO. | DESCRIPTION |
|---|---|---|---|
| 31 | 10" UNKNOWN | 2583 | 23" PECAN |
| 32 | 12" HACKBERRY | 2678 | 28" PECAN |
| 33 | 10" UNKNOWN | 2679 | 8" HACKBERRY |
| 34 | 11" HACKBERRY (MS8-5) | 2731 | 15" LIVE OAK |
| 35 | 19" CEDAR ELM | 2850 | 22" SYCAMORE *EST. |
| 36 | 31" POST OAK | 2871 | 34" CEDAR ELM |
| 37 | 39" LIVE OAK | 2872 | 35" AMERICAN ELM |
| 38 | 18" RED OAK | 2873 | 16" CREPE MYRTLE (MS7-5-4-4-4) |
| 39 | 36" LIVE OAK | 2878 | 23" MAGNOLIA |
| 40 | 35" ASH | 3046 | 35" LIVE OAK |
| 41 | 18" ASH (MS12-12) | 3057 | 18" RED OAK |
| 42 | 12" WHITE OAK | 3115 | 21" MAGNOLIA |
| 1812 | 13" PECAN | 3140 | 18" CREPE MYRTLE (MS8-8-6-6) |
| 1855 | 22" CEDAR ELM | 3203 | 39" RED OAK |
| 1910 | 15" CEDAR ELM | 3268 | 19" SYCAMORE *EST. |
| 1911 | 29" ASH | 3269 | 19" SYCAMORE *EST. |
| 1953 | 22" RED OAK *EST. (MS15-13) | 3480 | 21" PECAN |
| 1967 | 16" PINE | 3517 | 27" POST OAK |
| 1997 | 17" PECAN | 3536 | 25" BIRCH (MS18-13) |
| 2062 | 16" PECAN | 3580 | 39" LIVE OAK (MS31-15) |
| 2116 | 12" MAPLE | 3581 | 19" LIVE OAK |
| 2117 | 13" RED OAK | 3687 | 27" ASH |
| 2118 | 11" HUISACHE (MS8-5) | 3688 | 43" AMERICAN ELM |
| 2214 | 26" PECAN | 3739 | 8" BUR OAK |
| 2256 | 17" PECAN (MS11-11) | 3740 | 20" BIRCH |
| 2273 | 20" RED OAK | 3773 | 27" BIRCH |
| 2274 | 15" RED OAK | 3824 | 32" RED OAK |
| 2275 | 22" RED OAK | 3871 | 33" LIVE OAK |
| 2276 | 19" RED OAK | 3889 | 21" SYCAMORE |
| 2329 | 23" PECAN *EST. | 3906 | 40" PECAN |
| 2330 | 19" RED OAK *EST. | 3963 | 16" PECAN |
| 2344 | 14" PECAN | 3964 | 16" RED OAK |
| 2362 | 41" LIVE OAK | 4040 | 21" SYCAMORE |
| 2363 | 22" PECAN | 4152 | 16" BIRCH |
| 2425 | 20" PECAN | 4209 | 20" RED OAK |
| 2543 | 23" SYCAMORE | 4210 | 16" RED OAK |
| | | 4234 | 13" PECAN |

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STATE OF TEXAS
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3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

EROSION CONTROL AND
SEDIMENTATION SHEET
SHEET 2 OF 2

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| DESIGNED BY: | KF | SCALE: | 1"=30' |
| DRAWN BY: | JN | SHEET NUMBER | 5 / 48 |
| CHECKED BY: | JF | | |

# CITY OF AUSTIN – STANDARD NOTES EROSION AND SEDIMENTATION CONTROL (MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

1. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROLS AND TREE/NATURAL AREA PROTECTIVE FENCING 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.

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 GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF THE EROSION/SEDIMENTATION CONTROLS AND THE TREE/NATURAL AREA PROTECTION MEASURES AND PRIOR TO BEGINNING ANY SITE PREPARATION WORK. THE CONTRACTOR SHALL NOTIFY THE GENERAL PERMIT PROGRAM OFFICE AT 512/974–6330, AT LEAST 3 DAYS PRIOR TO THE MEETING DATE.

5. ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THOSE SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE REVIEWING ENGINEER AND THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

6. THE CONTRACTOR IS REQUIRED TO INSPECT THE CONTROLS AND FENCES AT DAILY INTERVALS AND AFTER SIGNIFICANT 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. SILT ACCUMULATION AT INLET DEVICES SHOULD BE REMOVED WHEN THE DEPTH REACHES TWO (2) INCHES.

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 OR LARGER 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 THE GENERAL PERMIT PROGRAM REPRESENTATIVE FOR FURTHER INVESTIGATION.

9. FIELD REVISIONS TO THE EROSION/SEDIMENTATION CONTROL PLAN MAY BE REQUIRED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE DURING THE COURSE OF CONSTRUCTION TO CORRECT CONTROL INADEQUACIES. ANY REVISIONS TO THE PERMITTED PLAN MUST BE APPROVED BY THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.

10. PERMANENT EROSION/SEDIMENTATION CONTROL: ALL DISTURBED AREAS SHALL BE RESTORED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. WHERE THE CRITERIA MANUAL AND CONTRACT DOCUMENTS DIFFER THE MOST ENVIRONMENTALLY BENEFICIAL MATERIALS/METHOD SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

11. DEVELOPER INFORMATION:

OWNER:

| | |
|---|---|
| COMPANY: | AUSTIN WATER |
| CONTACT: | TANVEER ANJUM |
| ADDRESS: | 625 E. 10TH ST. SUITE 400 |
| | AUSTIN, TX 78701 |
| PHONE: | 512–972–0156 |
| E–MAIL: | TANVEER.ANJUM@AUSTINTEXAS.GOV |

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:

| | |
|---|---|
| COMPANY: | RILEY MOUNTAIN ENGINEERING |
| CONTACT: | KEN FOWLER |
| ADDRESS: | 13740 RESEARCH BLVD., SUITE 0–3 |
| | AUSTIN, TX 78750 |
| PHONE: | 512–327–7795 |
| E–MAIL: | KEN.FOWLER@RILEYMOUNTAIN.ENGINEERING |

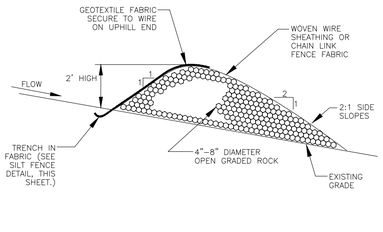
PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
COMPANY: CONTRACTOR

PARTY RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
COMPANY: CONTRACTOR

12. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE GENERAL PERMIT PROGRAM REPRESENTATIVE, AT 974–6330, AT LEAST 48 HOURS PRIOR TO THE SPOILS REMOVAL. THIS NOTIFICATION SHALL INCLUDE THE DISPOSAL LOCATION AND A COPY OF THE PERMIT ISSUED TO RECEIVE THE MATERIAL.

13. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY PRIOR TO STREET WORK, AND WILL BE REMOVED AS SOON AS THE GENERAL PERMIT PROGRAM REPRESENTATIVE AGREES THAT THERE IS NO POTENTIAL FOR SEDIMENTATION.

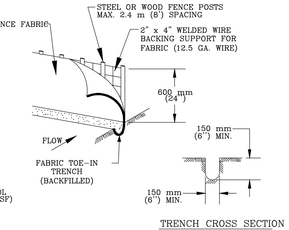
REV. DATE: DESCRIPTION: APPROVED BY WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT




NOTES:

1. USE ONLY OPEN GRADED ROCK, 4–8 INCH DIAMETER, FOR STREAM FLOW CONDITION. USE OPEN GRADED ROCK, 3–5 INCH DIAMETER, FOR OTHER CONDITIONS.
2. ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 1 INCH OPENING AND MINIMUM WIRE DIAMETER OF 20 GAUGE.
3. ROCK BERM SHALL BE INSPECTED WEEKLY OR AFTER EACH RAIN, AND THE STONE AND/OR FABRIC CORE–WOVEN WIRE SHEATHING SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED, DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
4. WHEN SILT REACHES A DEPTH EQUAL TO ONE–THIRD THE HEIGHT OF THE BERM OR ONE FOOT, WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AND IN A MANNER AS TO NOT CREATE A SILTATION PROBLEM.
5. DAILY INSPECTION SHALL BE MADE ON SEVERE SERVICE ROCK BERMS; SILT SHALL BE REMOVED WHEN ACCUMULATION REACHES 6 INCHES.
6. WHEN SITE IS COMPLETELY STABILIZED, THE BERM AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

| FABRIC COVERED (SEVERE SERVICE) ROCK BERM | | |
|---|---|---|
| CITY OF AUSTIN | | |
| GENERAL PERMIT PROGRAM | ADOPTED: | STANDARD NO. |
| APPROVED | SCALE: N.T.S. | N/A |
| | INITIAL: | |




TRENCH CROSS SECTION

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 SPADE 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.

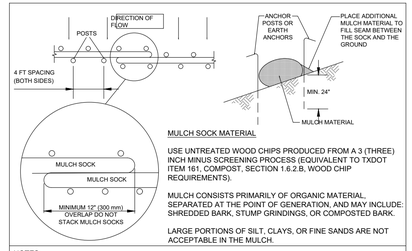
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY 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 | |
|---|---|---|---|
| RECORD COPY SIGNED BY MORGAN BYARS | 09/01/2011 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 642S-1 |




MULCH SOCK MATERIAL

USE UNTREATED WOOD CHIPS PRODUCED FROM A 3 (THREE) INCH MINUS SCREENING PROCESS (EQUIVALENT TO TXDOT ITEM 161, COMPOST, SECTION 1.6.2.B, WOOD CHIP REQUIREMENTS).

MULCH CONSISTS PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, OR COMPOSTED BARK.

LARGE PORTIONS OF SILT, CLAYS, OR FINE SANDS ARE NOT ACCEPTABLE IN THE MULCH.

NOTES:

1. STEEL OR WOOD POSTS WHICH SUPPORT THE MULCH SOCK SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 600mm (24 inches). IF WOOD POSTS CANNOT ACHIEVE 600mm (24 inches) DEPTH, USE STEEL POSTS. EARTH ANCHORS ARE ALSO ACCEPTABLE.

2. THE TOE OF THE MULCH SOCK SHALL BE PLACED SO THAT THE MULCH SOCK IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. IN ORDER TO PREVENT WATER FROM FLOWING BETWEEN THE JOINTS OF ADJACENT ENDS OFMULCH SOCKS, LAP THE ENDS OF ADJACENT MULCH SOCKS A MINIMUM OF 300mm (12 inches).

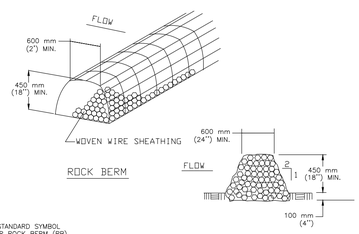
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.

4. SOCK MATERIAL WILL BE 100% BIODEGRADABLE, PHOTODEGRADABLE, OR RECYCLABLE SUCH AS BURLAP, TWINE, UV PHOTOBIODEGRADABLE PLASTIC, POLYESTER, OR ANY OTHER ACCEPTABLE MATERIAL.

5. MULCH SOCKS SHOULD BE USED AT THE BASE OF SLOPES NO STEEPER THAN 2:1 AND SHOULD NOT EXCEED THE MAXIMUM SPACING CRITERIA PROVIDED IN CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL TABLE 1.4.5.F.1 FOR A GIVEN SLOPE CATEGORY.

6. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150mm (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 | | MULCH SOCK | |
|---|---|---|---|
| RECORD COPY SIGNED BY MORGAN BYARS | 08/24/2010 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 648S-1 |

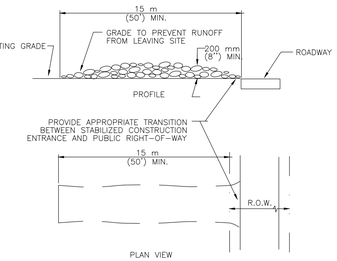



CROSS SECTION

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.

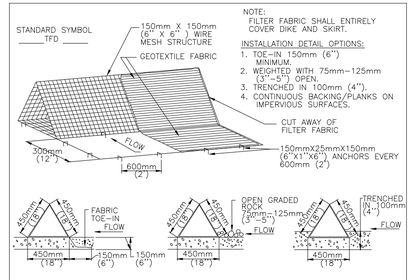
| CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT | | ROCK BERM | |
|---|---|---|---|
| RECORD COPY SIGNED BY MORGAN BYARS | 8/24/2010 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 639S-1 |




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 ROADWAY. 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: STABILIZED CONSTRUCTION ENTRANCE SHALL 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 | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 5/23/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 641S-1 |

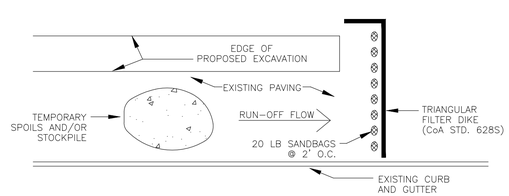



NOTE:
FILTER FABRIC SHALL ENTIRELY COVER DIKE AND SKIRT.

INSTALLATION DETAIL OPTIONS:
1. TOE–IN 150mm (6") MINIMUM.
2. WEIGHTED WITH 75mm–125mm (3"–5") OPEN.
3. TRENCHED IN 100mm (4").
4. CONTINUOUS BACKING/PLANKS ON IMPERVIOUS SURFACES.

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 75–125mm (3–5") OPEN GRADED ROCK OR TOED–IN 150mm (6") WITH MECHANICALLY COMPACTED MATERIAL. OTHERWISE, THE ENTIRE STRUCTURE SHALL BE TRENCHED IN 100mm (4").
4. DIKES AND SKIRT SHALL BE SECURELY ANCHORED IN PLACE USING 150mm (6") WIRE STAPLES ON 600mm (2') CENTERS ON BOTH EDGES AND SKIRT, OR STAKE USING 10M ( 3/8 ") DIAMETER RE–BAR WITH TEE ENDS.
5. FILTER MATERIAL SHALL BE LAPPED OVER ENDS 150mm (6") TO COVER DIKE TO DIKE JOINTS. JOINTS SHALL BE FASTENED WITH GALVANIZED SHOAT RINGS.
6. THE DIKE STRUCTURE SHALL BE MW40–150mmX150mm (6 GA. 6"X6") WIRE MESH, 450mm (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 150mm (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 | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 3/27/00 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 628S |




NOTES:

1. THE TEMPORARY SPOILS/STOCKPILE STORAGE AREA AND STAGING AREA MAY BE LOCATED DIRECTLY ADJACENT TO THE EXCAVATION AND ON THE PAVEMENT.
2. ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROVED OR PERMITTED DISPOSAL SITE DAILY.
3. INSTALL TRIANGULAR SEDIMENT FILTER DIKE (DETAIL 628S) ACROSS FULL WIDTH OF TRAFFIC CLOSURE AND DOWNSTREAM OF CONSTRUCTION AREA, PERPENDICULAR TO CURB AND PLACED TO EFFECTIVELY CATCH AND CONTAIN SEDIMENT LADEN RUNOFF FROM THE EXCAVATED AREA. FILTER DIKE TO FOLLOW ACTIVE CONSTRUCTION. REMOVING AND RE–SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING.

ADDITIONAL EROSION/SEDIMENTATION CONTROL FOR WORK IN PAVED AREAS FOR GENERAL PERMIT PROGRAM PROJECTS

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
REG NUM.: 16223

| NO. | BY | DATE | REVISIONS | REMARKS |
|---|---|---|---|---|

SHEET INFORMATION
DATE OCTOBER 2012
SHEET 6 OF 48
CAD REF. NO. E-S.DWG

GENERAL PERMIT OFFICE
EROSION/SEDIMENTATION CONTROL
CITY OF AUSTIN STANDARD NOTES AND DETAILS

GENERAL PERMIT PROGRAM

C112
12 OF 12

## GENERAL PERMIT PROGRAM (GPP)
## STANDARD ENVIRONMENTAL NOTES:

ADDITIONAL AREAS:

1. ANY ADDITIONAL AREAS REQUIRED FOR CONSTRUCTION OF THIS PROJECT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED ADDITIONAL AREAS PRIOR TO USE. APPROVAL OF "CORRECTION REQUEST" MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.

2. ALL ASSOCIATED PERMITS AND FEES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

3. IN ORDER TO SECURE APPROVAL FOR USE OF ADDITIONAL AREAS, CONTRACTOR MUST PROVIDE COMPLETE "CORRECTION REQUEST" SUBMITTAL TO GENERAL PERMIT PROGRAM OFFICE AND ALLOW A ONE WEEK COMMENT PERIOD FOR EACH REVIEW. CONTRACTOR SHOULD REQUEST INFORMATION ON THE ELEMENTS REQUIRED TO BE INCLUDED IN THE SUBMITTAL FROM THE OWNER'S REPRESENTATIVE OR THE GENERAL PERMIT PROGRAM OFFICE.

4. CONTRACTOR MUST INSTALL AND MAINTAIN EROSION/SEDIMENTATION CONTROLS AND TREE PROTECTION FOR ALL SUCH AREAS IN ACCORDANCE WITH THE CITY OF AUSTIN ENVIRONMENTAL CRITERIA MANUAL AND AS INCLUDED IN THE APPROVED SUBMITTAL OR DIRECTED IN THE FIELD BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

5. A SIGNED COPY OF THE PLANS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM MUST BE KEPT ON SITE AND ACCESSIBLE AT ALL TIMES DURING PROJECT CONSTRUCTION.

DEWATERING:

CONTRACTOR IS RESPONSIBLE FOR DEWATERING OF WORK AREA. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. APPROVAL MUST BE SECURED FROM THE GENERAL PERMIT PROGRAM (GPP) OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL TO GPP OFFICE AND ALLOW AN ONE WEEK (MIN.) COMMENT PERIOD FOR EACH REVIEW. CONTACT THE GPP OFFICE FOR SUBMITTAL REQUIREMENTS.

FUEL STORAGE:

FUEL STORAGE IS PROHIBITED ON THIS PROJECT. ADDITIONALLY, THE CONTRACTOR IS REQUIRED TO NOTIFY THE GENERAL PERMIT PROGRAM OFFICE IMMEDIATELY FOLLOWING ANY SPILL OF FUEL OR OTHER TOXIC MATERIAL. CONTRACTOR IS REQUIRED TO FOLLOW-UP WITH WRITTEN DOCUMENTATION, INCLUDING A COMPLETE DESCRIPTION OF THE INCIDENT, MATERIAL SPILLED, AND ACTIONS TAKEN TO CONTAIN AND CLEAN-UP MATERIAL.

FUGITIVE DUST CONTROL:

ALL PROJECTS APPROVED THROUGH THE GENERAL PERMIT PROGRAM (GPP) MUST COMPLY WITH THE CODE OF THE CITY OF AUSTIN AND THE ENVIRONMENTAL CRITERIA MANUAL REQUIREMENTS TO CONTROL AIRBORNE DUST. COMPLIANCE IS REQUIRED FOR ENTIRE PROJECT SITE AS WELL AS ASSOCIATED OPERATIONS. CONTACT THE GPP OFFICE FOR RECOMMENDED CONTROL METHODS.

SPOILS STORAGE:

NO SPOILS STORAGE IS ALLOWED WITHIN A CRITICAL WATER QUALITY ZONE, A 100-YEAR FLOODPLAIN, OR ON A SLOPE WITH A GRADIENT OF MORE THAN 15 PERCENT.

E/S CONTROLS FOR BORE / RECEIVING PIT LOCATIONS:

TEMPORARY E/S CONTROLS MUST SURROUND THE ENTIRETY OF BORING OPERATIONS, INCLUDING PIT, EQUIPMENT, ETC. FOR LOCATIONS WITHIN IMPERVIOUS AREAS, TEMPORARY CONTROL WILL BE TRIANGULAR FILTER DIKE (COA STANDARD DETAIL #628S). DIKE FLAP WILL BE CONTINUOUSLY WEIGHTED DOWN THROUGH THE USE OF 1" BY 4" WOOD STRIPS NAILED TO THE PAVEMENT, EXCEPT FOR THE ACCESS POINT. PLACEMENT OF TEMPORARY E/S CONTROLS ACROSS ACCESS POINT WILL BE REQUIRED WHENEVER THE SITE IS NOT ACTIVELY USED. FOR LOCATIONS WITHIN PERVIOUS AREAS, TEMPORARY CONTROL WILL BE SILT FENCE (COA STANDARD DETAIL #642S-1) OR MULCH SOCKS (COA STANDARD DETAIL #648S-1), AS INDICATED ON APPROVED PLANS.

SOIL RETENTION BLANKET:

UNLESS OTHERWISE INDICATED IN THE PROJECT DOCUMENTS, INSTALLATION OF SOIL RETENTION BLANKET WILL BE REQUIRED FOR ALL IMPACTED SLOPES GREATER THAN 3:1 AND ALL IMPACTED AREAS WITHIN DRAINAGE CONVEYANCES. (CITY OF AUSTIN STANDARD SPECIFICATION ITEM 605S) SOIL RETENTION BLANKET SUBMITTAL MUST BE APPROVED BY PROJECT ENGINEER AND GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO USE AND MUST INCLUDE PRODUCT AND INSTALLATION DETAILS PROVIDED BY MANUFACTURER. FINISH GRADING MUST BE INSPECTED AND APPROVED BY GPP INSPECTOR PRIOR TO BLANKET INSTALLATION. INSTALLATION MUST BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND MUST BE INSPECTED AND APPROVED BY GPP REPRESENTATIVE PRIOR TO ACCEPTANCE.

SOD INSTALLATION:

REVEGETATION WITHIN MANAGED TURF AREAS MUST BE ACCOMPLISHED THROUGH THE INSTALLATION OF SOLID BLOCK GRASS SOD. SOD TYPE MUST MATCH ADJACENT GRASS TYPE. QUESTIONS REGARDING SOD TYPE WILL BE RESOLVED BY THE GENERAL PROGRAM PERMIT REPRESENTATIVE. REFER TO CITY OF AUSTIN STANDARD SPECIFICATION ITEM NO. 602S: SODDING FOR EROSION CONTROL, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.

TxDOT RIGHTS-OF-WAY:

TOPSOIL (TxDOT ITEM NO. 160), SOIL RETENTION BLANKET (TxDOT ITEM NO. 169), AND REVEGETATION (TxDOT ITEM NO. 164) INSTALLED WITHIN TEXAS DEPARTMENT OF TRANSPORTATION (TxDOT) RIGHT-OF-WAY SHALL COMPLY WITH "REQUIREMENTS FOR INSTALLATION OF UTILITIES WITHIN THE STATE RIGHT-OF-WAY, AUSTIN DISTRICT".

PROJECT SEQUENCE:
(REFER TO FULL PLAN SET FOR PROJECT-SPECIFIC ADDITIONS, IF APPLICABLE.)

PRIOR TO CONSTRUCTION:

1. SECURE APPLICABLE COA PERMITS, INCLUDING APPROVAL UNDER GENERAL PERMIT PROGRAM AND RIGHT-OF-WAY EXCAVATION PERMIT.

2. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PLACEMENT OF E/S CONTROLS AND TREE PROTECTION FENCING. ALL PROPOSED PHASING OF CONTROLS MUST BE SUBMITTED TO AND APPROVED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO THE FIELD PRE-CONSTRUCTION CONFERENCE.

3. NOTIFY COA TEMPORARY TRAFFIC CONTROL REPRESENTATIVE PRIOR TO PLACEMENT OF TEMPORARY TRAFFIC CONTROLS. ALL PROPOSED PHASING OF CONTROLS MUST BE INDICATED ON APPROVED TEMPORARY TRAFFIC CONTROL PLAN AND SEALED BY PROFESSIONAL ENGINEER.

4. PLACE TEMPORARY E/S CONTROLS AND TREE PROTECTION FENCING PRIOR TO BEGINNING ANY EXCAVATION. INSTALL C.I.P. SIGN, IF APPLICABLE.

5. HOLD ENVIRONMENTAL PRE-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE AFTER INSTALLATION OF E/S CONTROLS AND TREE PROTECTION FENCING AND PRIOR TO ANY TRENCHING OPERATIONS.

6. PLACE TEMPORARY TRAFFIC CONTROL DEVICES.

PROJECT CONSTRUCTION:

1. BEGIN CONSTRUCTION. NOTIFY GENERAL PERMIT PROGRAM REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE OF TRANSITION BETWEEN PHASES.

2. CONTACT GENERAL PERMIT OFFICE TO SCHEDULE FIELD INSPECTION PRIOR TO BEGINNING INSTALLATION OF PERMANENT E/S CONTROLS.

3. COMPLETE RESTORATION OF ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES FOR THIS PROJECT. (PERMANENT E/S CONTROLS)

4. REMOVE TEMPORARY TRAFFIC CONTROL DEVICES RELATED TO WORK AREAS OUTSIDE OF THE STREET.

5. HOLD ENVIRONMENTAL POST-CONSTRUCTION CONFERENCE ON SITE WITH THE CONTRACTOR, OWNER'S REPRESENTATIVE, AND GENERAL PERMIT PROGRAM REPRESENTATIVE. ALL PERMANENT E/S CONTROLS MUST BE ACCEPTED BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE. PERMANENT CONTROLS SHALL CONSIST OF REVEGETATION PER DETAILS 602, 604S, AND 609S AS INDICATED ON APPROVED PLANS.

6. FOLLOWING FINAL ACCEPTANCE OF PERMANENT E/S CONTROLS BY THE GENERAL PERMIT PROGRAM REPRESENTATIVE, REMOVE TEMPORARY E/S CONTROLS. CLEAN EXISTING STORM DRAINAGE SYSTEMS AS NECESSARY DUE TO CONSTRUCTION OPERATIONS.

7. DRESS-UP AND RESTORE ANY AREAS DISTURBED BY REMOVAL OF TEMPORARY E/S CONTROLS DESCRIBED ABOVE.

REQUIRED SUBMITTALS:

SUBMITTALS REQUIRED TO BE APPROVED BY GENERAL PERMIT PROGRAM REPRESENTATIVE INCLUDE: SUBMITTALS TRIGGERED BY CITY OF AUSTIN SERIES 600 SPECIFICATIONS AND RELATED SPECIAL PROVISIONS/SPECIFICATIONS, CONSTRUCTION SCHEDULE, TREE PROTECTION, P-6 AND OTHER ROOT ZONE PROTECTION/MITIGATION MEASURES, DEWATERING PLAN, WATERING SCHEDULE FOR REVEGETATION AREAS, AND ANY VEGETATIVE REPLACEMENT PROPOSALS, IF NOT ALREADY PART OF THE PERMITTED PLAN SET.

## CITY OF AUSTIN – STANDARD NOTES TREE AND NATURAL AREA PROTECTION (MODIFIED FOR USE ON GENERAL PERMIT PROJECTS)

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY MEASURES.

2. PROTECTIVE MEASURES SHALL BE INSTALLED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.

3. PROTECTIVE MEASURES 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 PROJECT.

4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD-UP, COMPACTION OR CUTTING OF CRITICAL ROOT ZONE WITHIN TREE DRIP LINES.

5. TREE PROTECTION SHALL COMPLETELY SURROUND THE TREES OR GROUP OF TREES AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE). FOR NATURAL AREAS, PROTECTIVE MEASURES 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 GENERAL PERMIT PROGRAM OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT;

   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 PROTECTIVE FENCES AT CRITICAL ROOT ZONES 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 FEET BEYOND THE AREA DISTURBED;

   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA

   C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE NO CLOSER THAN 6 FEET TO THE BUILDING

   D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE GENERAL PERMIT PROGRAM OFFICE AT 974-6330 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.

WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE 5 FEET OR CLOSER TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED-ON PLANKING TO A HEIGHT OF 8 FEET (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING.

7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN AREAS OF UNPROTECTED ROOT ZONES, THOSE AREAS SHOULD BE COVERED WITH 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION DURING CONSTRUCTION. FILTER FABRIC UNDERLAYMENT MAY BE REQUIRED AT DIRECTION OF GENERAL PERMIT PROGRAM REPRESENTATIVE BASED ON SITE CONDITIONS AND CONSTRUCTION ACTIVITIES. MAXIMUM FOUR (4) INCHES DEPTH MAY BE LEFT IN PLACE AFTER CONSTRUCTION WITH APPROVAL FROM THE GENERAL PERMIT PROGRAM REPRESENTATIVE.

8. ALL GRADING WITHIN PROTECTED ROOT ZONE AREAS SHALL BE DONE BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE. PRIOR TO GRADING, RELOCATE PROTECTIVE FENCES TO 2 FEET BEHIND THE GRADE CHANGE AREA.

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. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE DAMAGE TO REMAINING ROOTS.

11. TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES SHOULD BE WATERED DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. TREE CROWNS SHOULD BE SPRAYED WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.

12. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF LANDSCAPE IRRIGATION SHALL BE PLACED AS FAR FROM EXISTING TREE TRUNKS AS POSSIBLE.

13. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN 4 INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OF TREES. NO SOIL IS PERMITTED ON THE ROOT FLARE OF ANY TREE.

14. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC AND EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. SEE NOTE FOUR (4) OF SUPPLEMENTAL TREE PROTECTION NOTES FOR ADDITIONAL REQUIREMENTS.

15. ALL FINISHED PRUNING MUST 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 GENERAL PERMIT PROGRAM OFFICE).

16. DEVIATIONS FROM THE ABOVE NOTES MAY BE CONSIDERED ORDINANCE VIOLATIONS IF THERE IS SUBSTANTIAL NONCOMPLIANCE OR IF A TREE SUSTAINS DAMAGE AS A RESULT.

17. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER WHICH DOES NOT IMPACT TREES TO BE PRESERVED.

## SUPPLEMENTAL TREE PROTECTION NOTES

1. ALL TREE PROTECTION MUST COMPLY WITH CITY OF AUSTIN REQUIREMENTS AS OUTLINED IN THE ENVIRONMENTAL CRITERIA MANUAL AND AS INDICATED BY STANDARD COA NOTES AND DETAILS INCLUDED WITHIN THIS DOCUMENT SET. CONTRACTOR SHALL INSTALL PROTECTION PRIOR TO PRE-CONSTRUCTION CONFERENCE, MAKE ADJUSTMENTS TO PROTECTION AS DIRECTED BY THE GPP REPRESENTATIVE, AND MAINTAIN PROTECTION UNTIL PROJECT IS COMPLETE.

2. TYPE AND LOCATION OF ALL TREE PROTECTION MUST BE APPROVED IN THE FIELD BY THE GENERAL PERMIT PROGRAM (GPP) REPRESENTATIVE PRIOR TO CONSTRUCTION.

3. WALK-THROUGH: CONTRACTOR SHALL CONDUCT WALK-THROUGH MEETING WITH GENERAL PERMIT PROGRAM REPRESENTATIVE PRIOR TO PERFORMING ANY PRUNING ACTIVITIES ON TREES IN PROJECT AREA. PURPOSE OF WALK-THROUGH WILL BE TWOFOLD. ONE PURPOSE WILL BE TO DETERMINE THE MINIMUM AMOUNT OF PRUNING NECESSARY TO ALLOW CONSTRUCTION WORK TO BE COMPLETED. SECOND PURPOSE WILL BE TO DETERMINE AREAS OF PROJECT IN WHICH EXHAUST DIVERTERS WILL BE REQUIRED ON CONSTRUCTION EQUIPMENT TO PREVENT SCORCHING OF EXISTING TREES.

4. ALL PRUNING MUST BE PERFORMED IN ACCORDANCE WITH ANSI A300 (PART 1) – 2001 AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS (PRUNING), OR LATEST APPROVED VERSION. THIS DOCUMENT MAY BE OBTAINED ONLINE FOR A FEE AT WWW.ANSI.ORG.

5. PRUNING SHALL BE DONE WITH CLEAN, SHARP TOOLS. TO PREVENT BARK TEARS, THE WEIGHT OF THE BRANCH SHALL BE REMOVED BEFORE MAKING FINAL PRUNING CUT.

6. ALL PRUNING SHALL PRESERVE THE NATURAL CHARACTER OF THE TREE.

7. ONLY COLLAR CUTS ARE ACCEPTABLE. NO FLUSH CUTS OR STUB CUTS WILL BE ALLOWED.

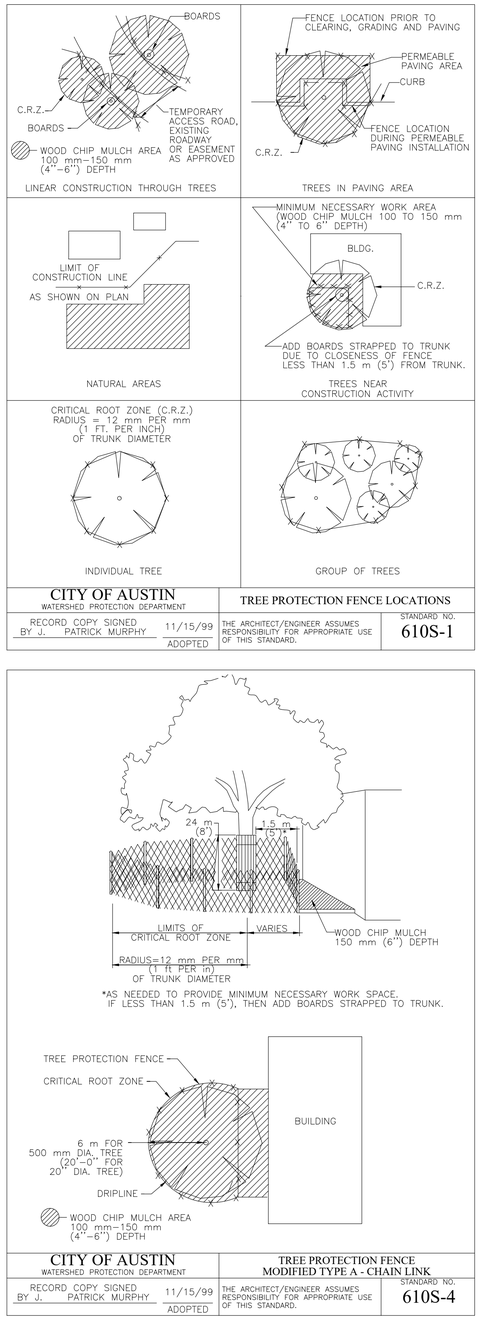
8. ALL BRANCHES THAT ARE BROKEN OR DAMAGED DURING CONSTRUCTION SHALL BE REMOVED.

9. PRUNING CUTS OR DAMAGED AREAS ON AN OAK TREE SHALL BE PAINTED WITHIN FIVE MINUTES WITH A STANDARD TREE WOUND DRESSING. TREE WOUND DRESSING SHALL BE EITHER TREEKOTE AEROSOL OR TANGLEFOOT PRUNING SEALER (OR APPROVED EQUAL). THIS ALSO APPLIES TO WOUNDS CREATED BY CONSTRUCTION VEHICLES OR EQUIPMENT. ALL PRUNING MUST BE IN ACCORDANCE WITH COA OAK WILT PREVENTION POLICY.

10. ANY TREE ROOTS THAT ARE EXPOSED, CUT, OR TORN DURING CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SURROUNDING SOIL. (REFER ALSO TO NUMBER 9 OF THE TREE AND NATURAL AREA PROTECTION NOTES INCLUDED IN THIS PLAN SET.)

11. ALL TRENCHING WITHIN THE CRITICAL ROOT ZONE OF A TREE TO BE PRESERVED WILL BE SAW CUT OR EXCAVATED BY HAND, AS APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST.

12. REFER TO ENVIRONMENTAL CRITERIA MANUAL APPENDIX P-6 FOR FURTHER REMEDIAL TREE CARE REQUIREMENTS. P-6 REMEDIAL TREE CARE WILL BE COORDINATED WITH AND APPROVED BY THE GENERAL PERMIT PROGRAM ARBORIST FOR PROJECTS PERMITTED THROUGH THE GENERAL PERMIT PROGRAM.




| CITY OF AUSTIN<br>WATERSHED PROTECTION DEPARTMENT | | TREE PROTECTION FENCE LOCATIONS | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 11/15/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>610S-1 |




| CITY OF AUSTIN<br>WATERSHED PROTECTION DEPARTMENT | | TREE PROTECTION FENCE<br>MODIFIED TYPE A - CHAIN LINK | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 11/15/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>610S-4 |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
REG NUM.: 16223

CITY OF AUSTIN
GENERAL PERMIT OFFICE
TREE PROTECTION
AND ENVIRONMENTAL NOTES
CITY OF AUSTIN STANDARD NOTES AND DETAILS

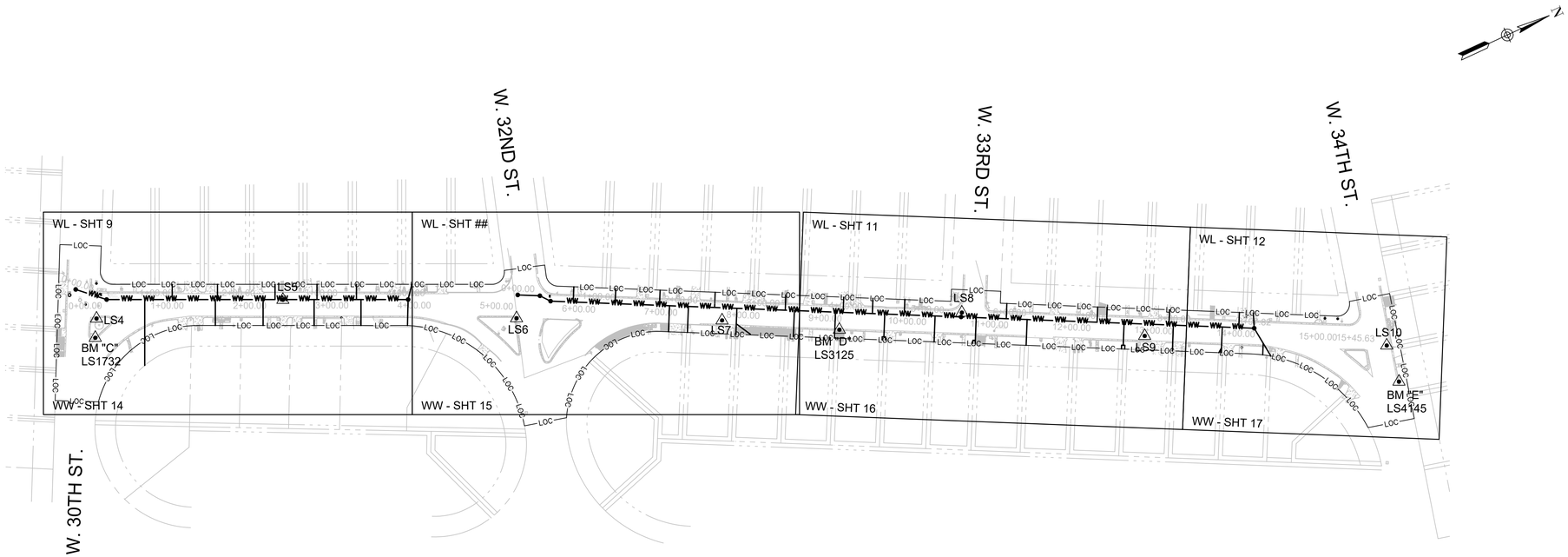
REVISIONS

| NO. | BY | DATE | REMARKS |
|---|---|---|---|
| | | | |

SHEET INFORMATION
DATE AUGUST 2012
SHEET 7 OF 48
CAD REF. NO. TP-ENVIRO.DWG

# GENERAL PERMIT PROGRAM

C110
11 OF 12




LEGEND

LS10 — CONTROL POINT
— W — PROP WATER LINE
— WW — PROP WASTEWATER LINE

WL - SHT 9
WW - SHT 14
SHEET NUMBERS

## *HORIZONTAL DATUM*

TEXAS COORDINATE SYSTEM OF 1983,
(CENTRAL ZONE-4203) NAD 83, (CORS) U.S. SURVEY FEET
GEOID MODEL 12A (CONUS)
COMBINED SCALE FACTOR 0.99992948683
SURFACE ADJUSTMENT FACTOR 1.000070518142
PROJECT CONTROL POINTS WERE ESTABLISHED USING THE LEICA SMARTNET NETWORK.
THE DISTANCES SHOWN HEREON ARE SURFACE.
PROJECT CONTROL SCALED FROM LANDMARK'S(LS) POINT NUMBER 7

*LANDMARK SURVEYING CONTROL POINTS (MAP COORDINATES)*

| PT. NO. | NORTHING | EASTING | ELEVATION | DESCRIPTION |
|---|---|---|---|---|
| LS#4, | 10083509.1284 | 3109787.8569 | 602.72 | CPS SET1/2" IRON ROD WITH RED PLASTIC CAP STAMPED "LANDMARK CONTROL" |
| LS#5, | 10083724.4621 | 3109862.1739 | 613.06 | CPS COTTON SPINDLE SET |
| LS#6, | 10083973.1387 | 3110001.5620 | 617.30 | CPS COTTON SPINDLE SET |
| LS#7, | 10084198.9631 | 3110108.6413 | 617.76 | CPS COTTON SPINDLE SET |
| LS#8, | 10084467.7195 | 3110222.2349 | 620.01 | CPS COTTON SPINDLE SET |
| LS#9, | 10084657.7222 | 3110341.1620 | 622.25 | CPS COTTON SPINDLE SET |
| LS#10, | 10084920.1749 | 3110475.1045 | 624.93 | CPS COTTON SPINDLE SET |

*PROJECT BENCH MARKS*

BENCH MARK "C" SET - TRIANGLE CUT SET IN MID-POINT OF CURB LINE OF AN ISLAND LOCATED AT MIDDLE OF WEST 30TH AND BEVERLY ROAD. APPROXIMATELY 400 FT WEST OF BRYKER DRIVE AND W. 30TH STREET. APPROXIMATELY 10 FT EAST OF FLAGPOLE IN SAID ISLAND ACROSS FROM ADDRESS #3001 BEVERLY ROAD.
LS# 1732 - NORTH=10083497.97', EAST=3109808.44', ELEVATION=603.55'

BENCH MARK "D" SET - "X" CUT SET ON THE TOP OF CURB-LINE ON EAST-SIDE OF BEVERLY ROAD IN FRONT OF HOUSE ADDRESS #3207 BEVERLY RD. ACROSS FROM ADDRESS #3210 BEVERLY ROAD, APPROXIMATELY 200FT SOUTH OF WEST 33RD STREET AND BEVERLY ROAD INTERSECTION, APPROXIMATELY 20 FT EAST OF ROAD CENTERLINE, APPROXIMATELY 23.5 FT NORTH OF WATER METER OF HOUSE ADDRESS #3207 BEVERLY ROAD.
LS# 3125 - NORTH=10084303.44', EAST=3110169.35', ELEVATION=618.58'

BENCH MARK "E" SET - "X" CUT SET ON THE TOP OF CURB-LINE LOCATED ON NORTH-SIDE OF WEST 34TH STREET AND BEVERLY ROAD INTERSECTION, IN FRONT OF HOUSE ADDRESS #1716 WEST 34TH STREET, APPROXIMATELY 38.5 FT NORTHEAST OF ISLAND / MEDIAN IN SAID INTERSECTION, APPROXIMATELY 20 FT NORTH OF ROAD CENTERLINE, APPROXIMATELY 350 FT WEST OF 34TH STREET AND BRYKER DRIVE.
LS# 4145 - NORHT=10084915.26', EAST=3110521.17', ELEVATION=624.60'

0 80 160 FEET

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

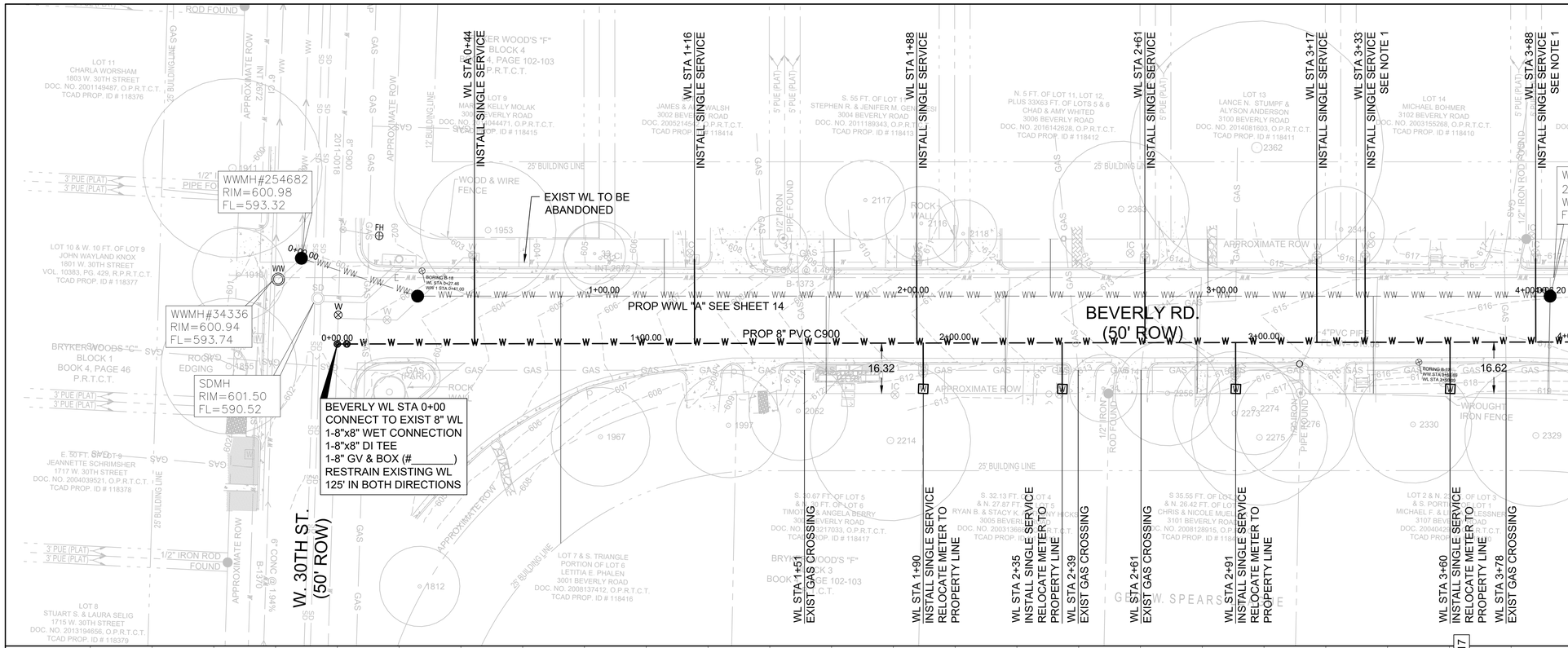
RILEY MOUNTAIN ENGINEERING

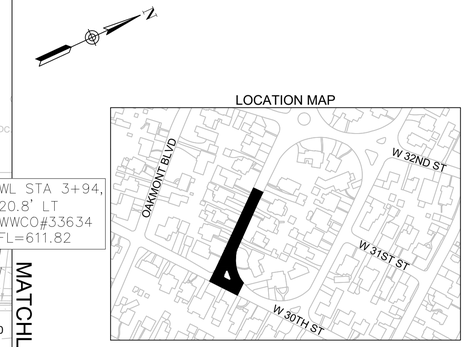
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

SURVEY CONTROL &
SHEET LAYOUT

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=80' |
| DRAWN BY: | JN | SHEET NUMBER | 8 / 48 |
| CHECKED BY: | JF | | |



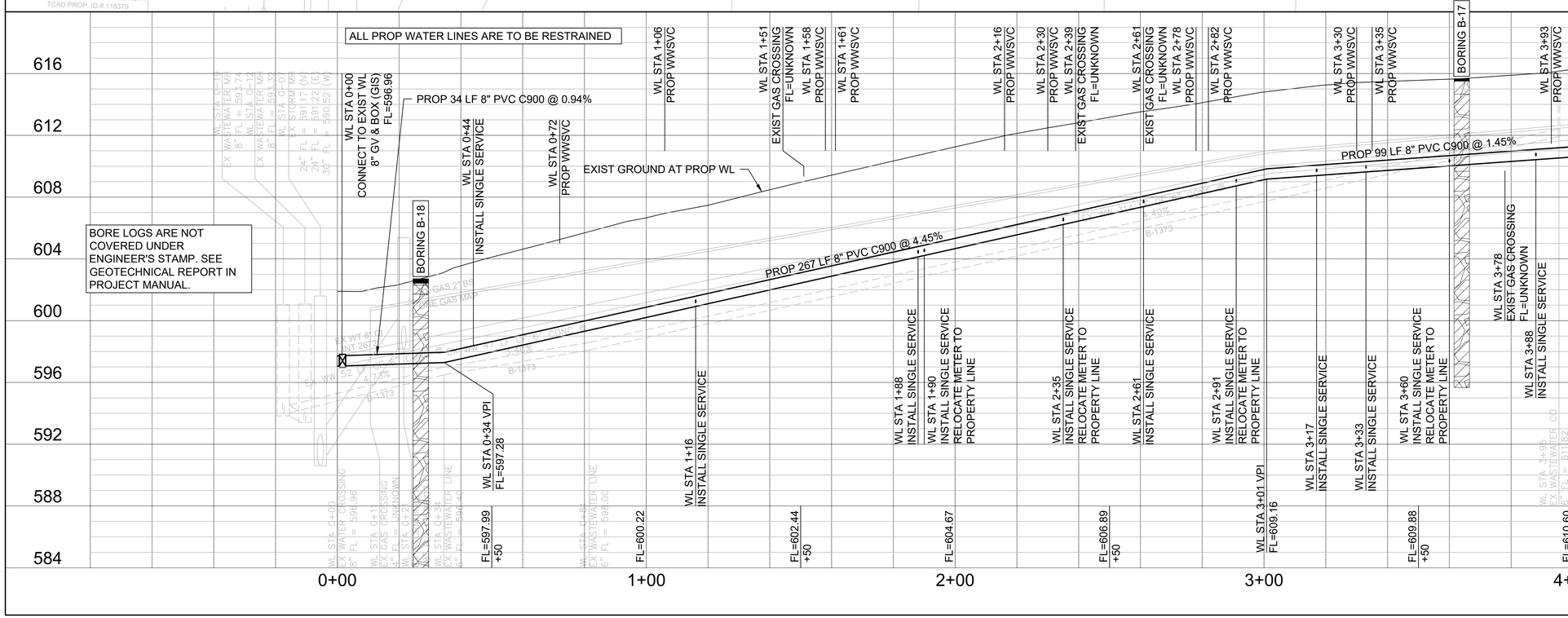




NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

## SUMMARY OF SOIL CONDITIONS

| | |
|---|---|
| **Boring B-17** | |
| Asphalt (inches) | 2 |
| Base Material (inches): light brown silt w/ limestone rock | 10 |
| Stratum II:<br>LEAN CLAY (CL), reddish brown, w/ few scattered small to large gravel w/ calcarous deposits, form (Qucr)<br>CLAYEY SAND w/ GRAVEL (SC), tan w/ small to medium gravel, dense to very dense (Qucr) | 1.0' - 20.0' |
| **Boring B-18** | |
| Asphalt (inches) | 3 1/2 |
| Base Material (inches): tan silt w/ limestone rock | 1 1/2 |
| Stratum I:<br>FAT CLAY (CH), dark brown, silty w/ small to medium gravel | 5.0" - 1.0' |
| Stratum IV:<br>FAT CLAY (CH), greenish tan & gray, w/small to medium gravel, firm (Kdr) | 1.0' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.




0 20 40 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
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3/16/2021

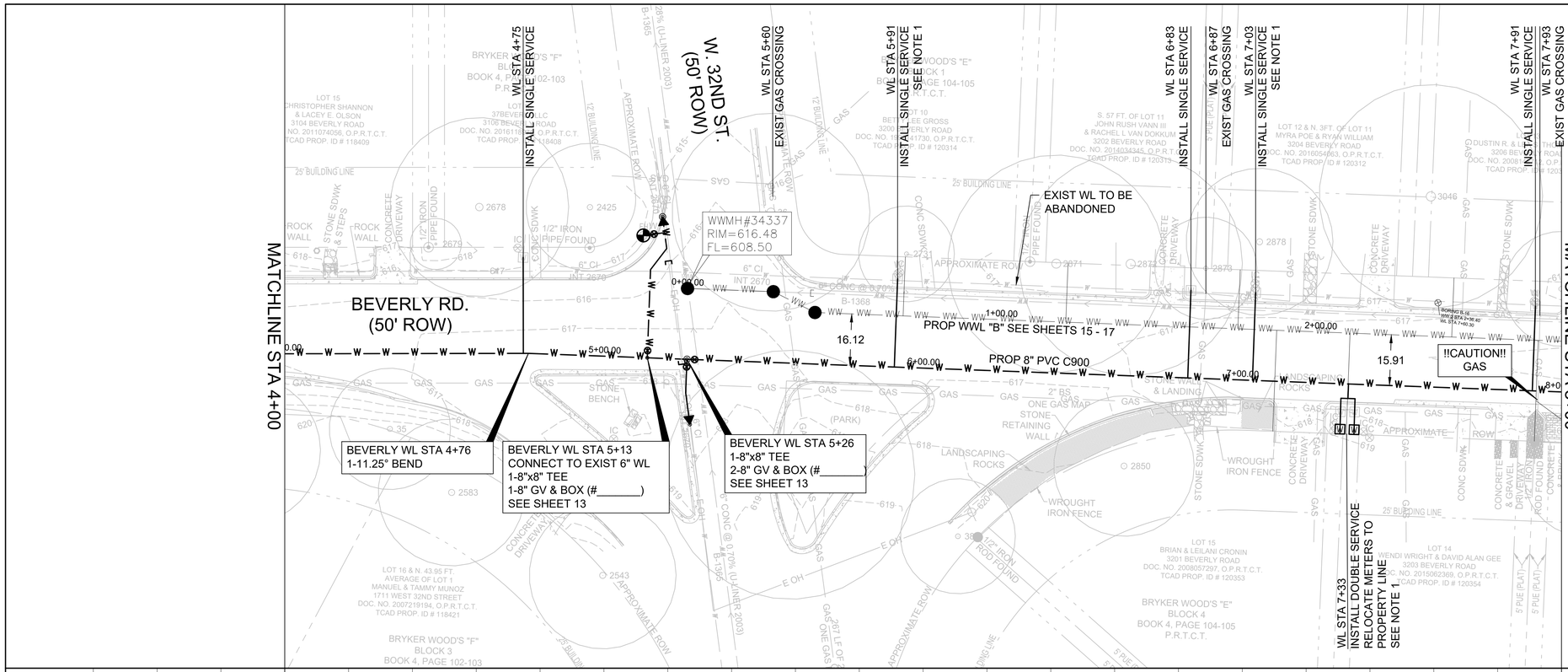
RILEY MOUNTAIN ENGINEERING

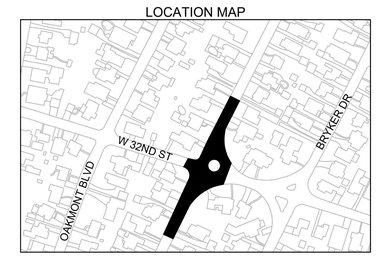
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WATER LINE
PLAN & PROFILE SHEET
SHEET 1 OF 5

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 9 / 48 |
| CHECKED BY: | JF | | |



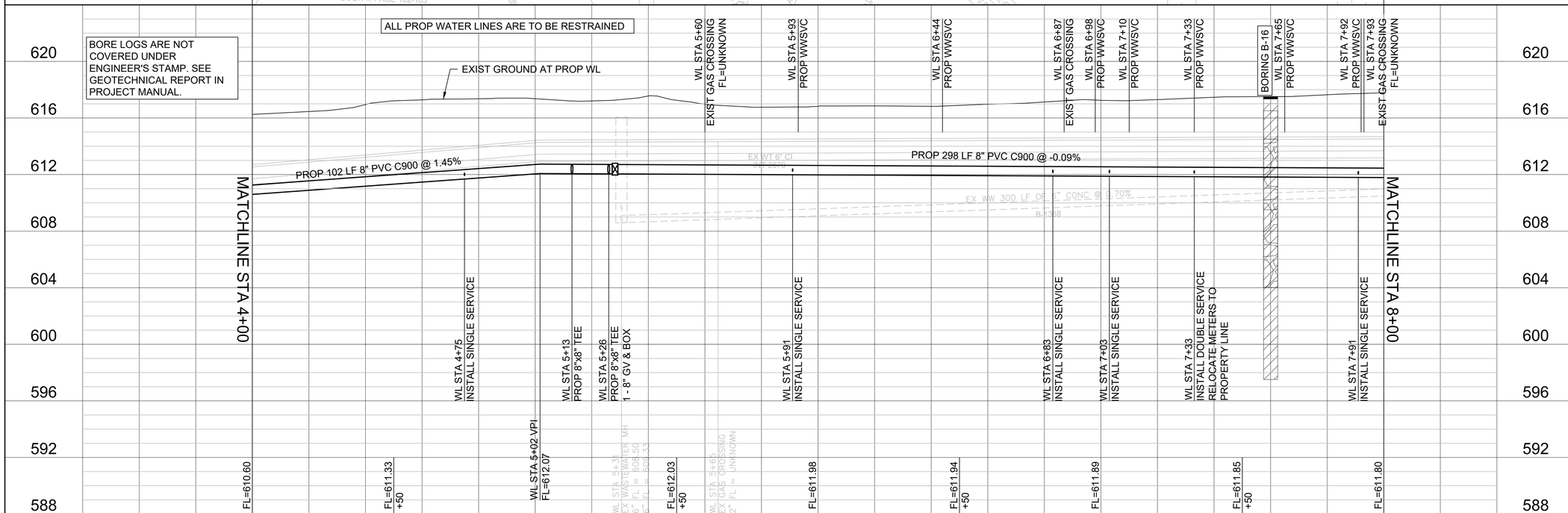




NOTES:

1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

| SUMMARY OF SOIL CONDITIONS | |
|---|---|
| Boring B-16 | |
| Asphalt (inches) | 2 |
| Base Material (inches): Tan silt w/ limestone rock | 10 |
| Stratum I: FAT CLAY (CH), dark brown, becoming lighter w/ depth | 6.0" - 3.0' |
| Stratum II:<br>CLAYEY SAND w/ GRAVEL (SC), reddish brown, silty (Qucr)<br>CLAYEY SAND w/ GRAVEL (SC), light brown, silty, slightly clayey, medium dense (Qucr) | 3.0' - 13.5' |
| Stratum IV:<br>FAT CLAY (CH), greenish tan & gray, silty w/ ferrous deposits, stiff (Kdr) | 13.5' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.




0 20 40 FEET

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WATER LINE
PLAN & PROFILE SHEET
SHEET 2 OF 5

| | | | |
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| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
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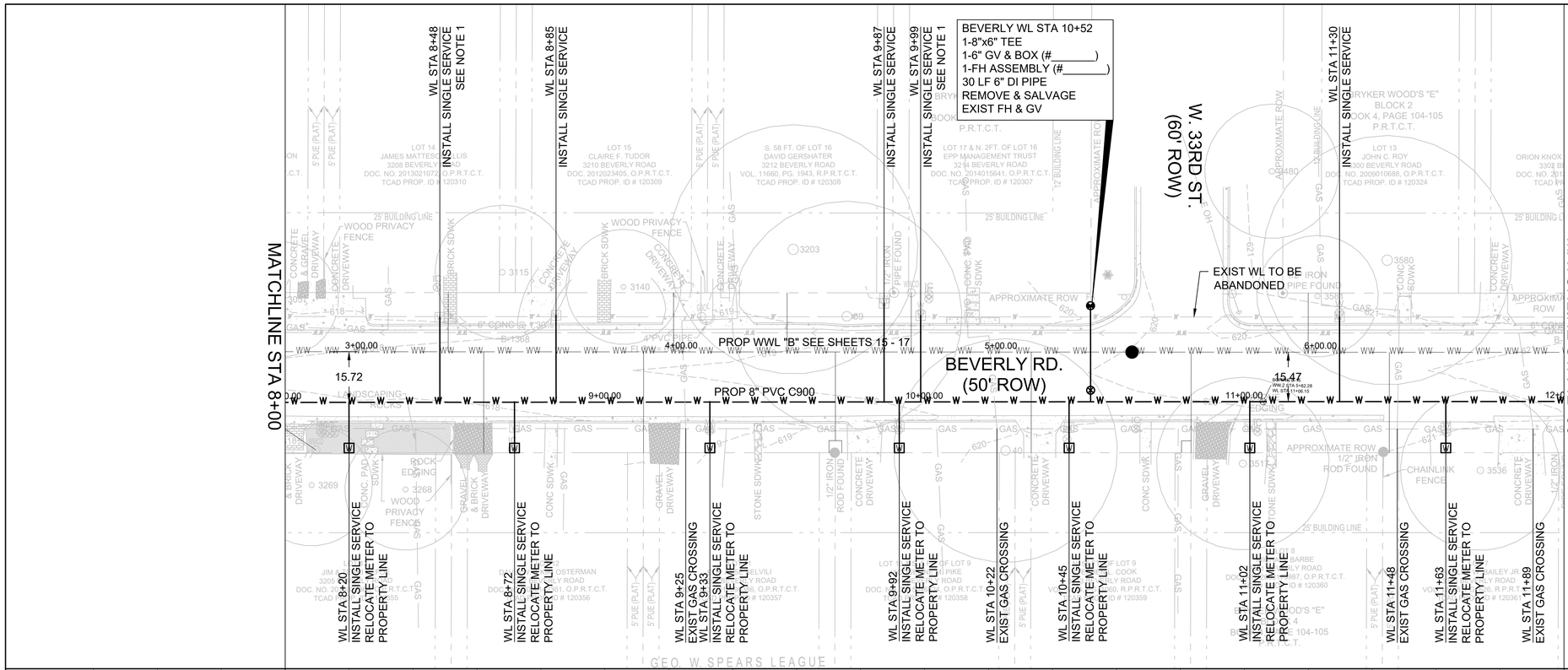
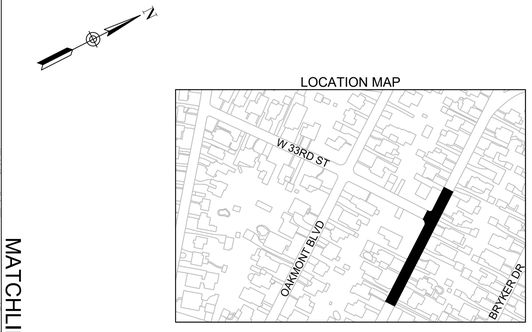
| CHECKED BY: | JF | 10 / 48 | |




NOTES:

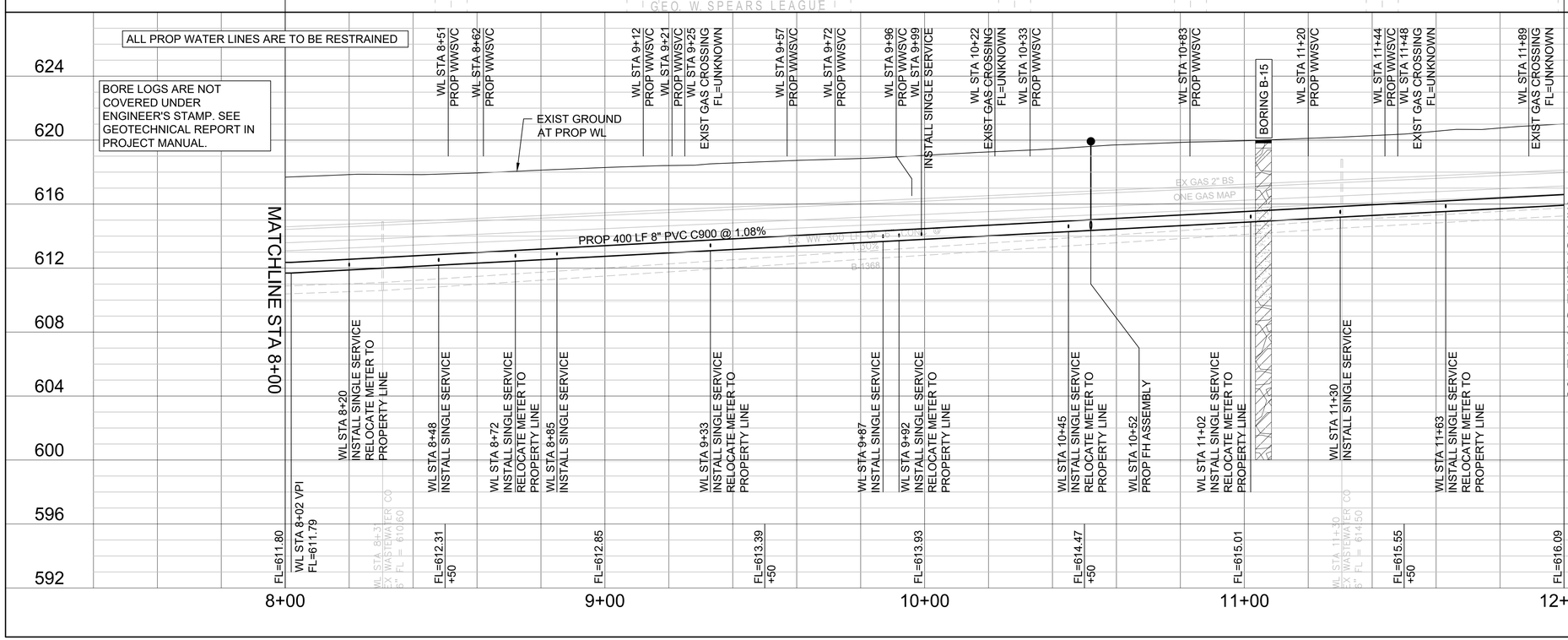
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

| SUMMARY OF SOIL CONDITIONS | |
|---|---|
| Boring B-15 | |
| Asphalt (inches) | 2 1/4 |
| Base Material (inches): Tan silt w/ limestone rock | 3 3/4 |
| Stratum I:<br>FAT CLAY (CH), dark brown w/ scattered small to medium limestone rock, becoming lighter w/ depth | 6.0" - 4.0' |
| Stratum II:<br>CLAYEY SAND w/ GRAVEL (SC), tan, very dense (Qucr)<br>CLAYEY SAND w/ GRAVEL (SC), light brown, dense (Qucr)<br>CLAYEY SAND w/ GRAVEL (SC), tan, sandy w/ small to large gravel, very dense (Qucr) | 4.0' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.

ALL PROP WATER LINES ARE TO BE RESTRAINED

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.




0 20 40 FEET

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

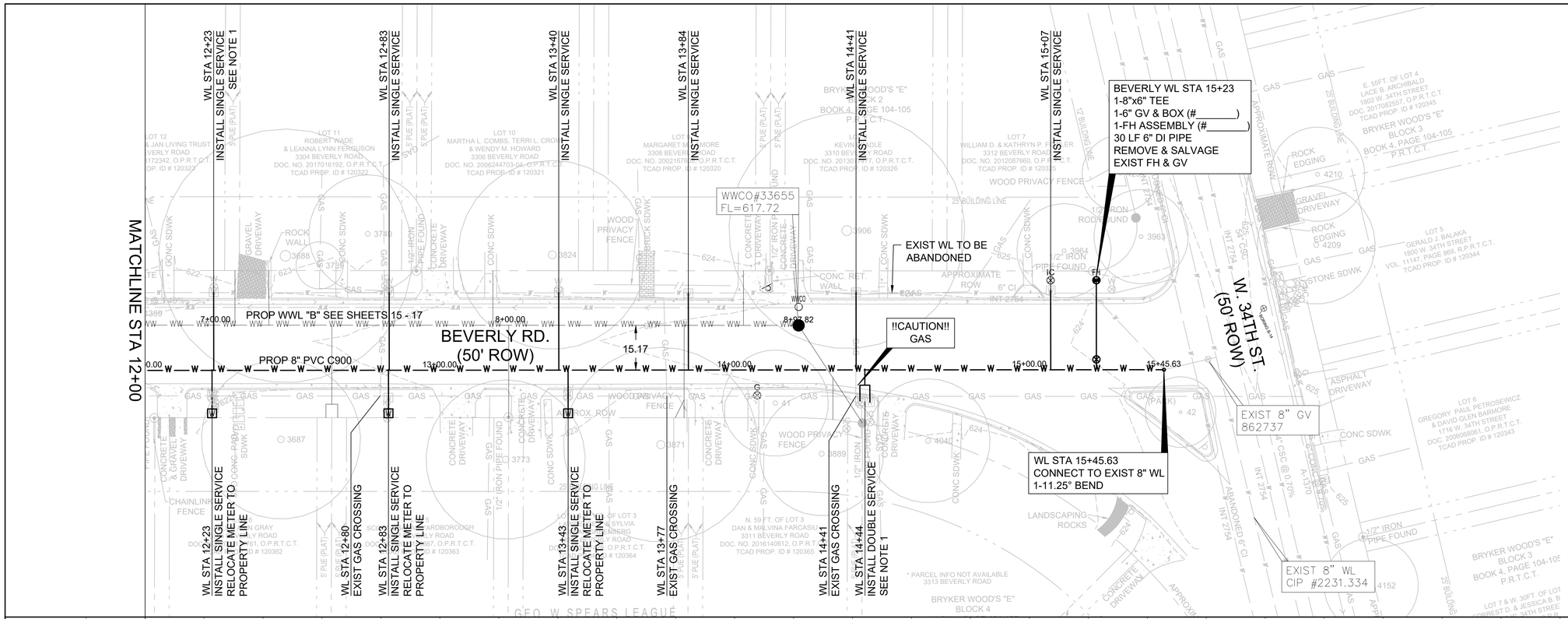
RILEY MOUNTAIN ENGINEERING

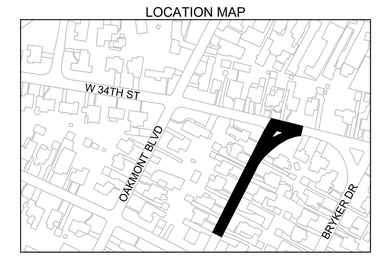
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WATER LINE
PLAN & PROFILE SHEET
SHEET 3 OF 5

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 11 / 48 |
| CHECKED BY: | JF | | |




NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

0 20 40 FEET

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WATER LINE
PLAN & PROFILE SHEET
SHEET 4 OF 5

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
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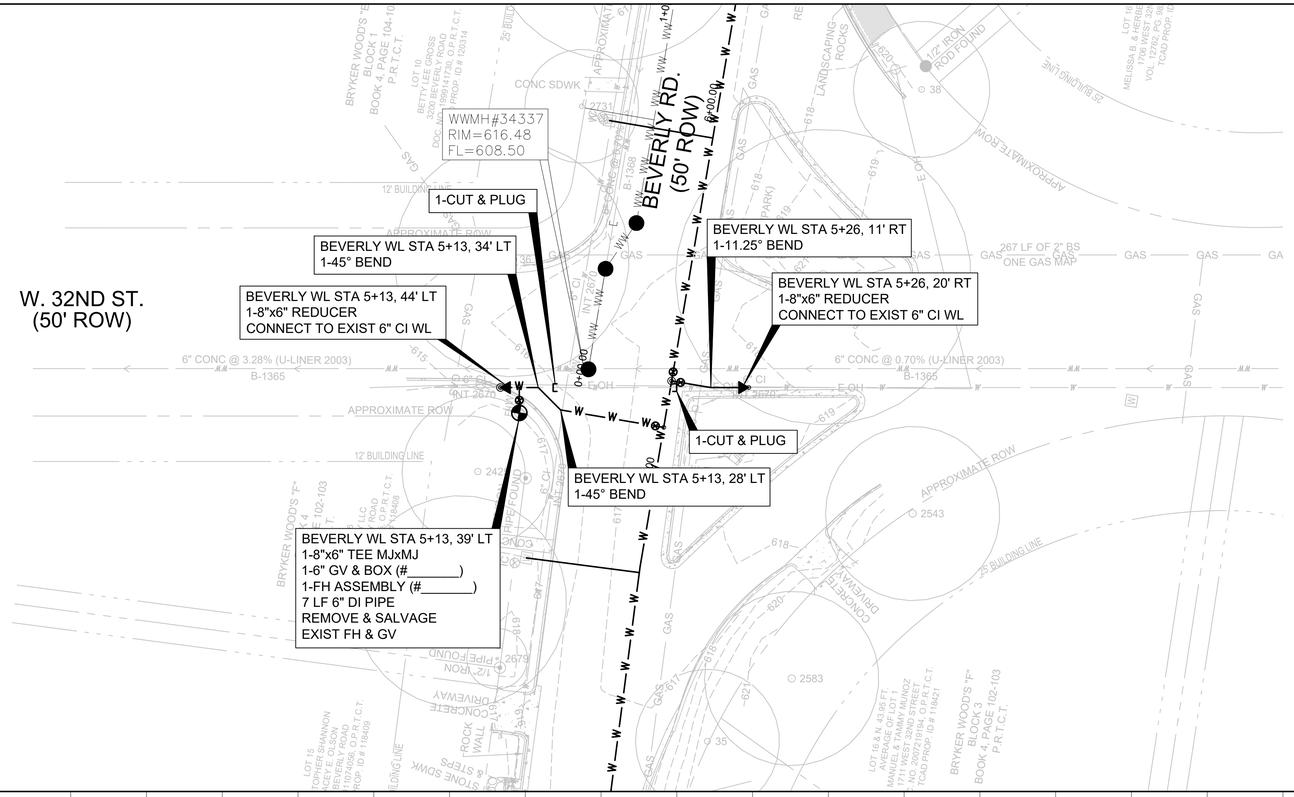
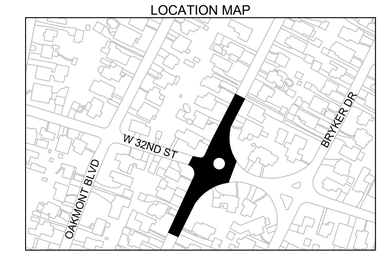
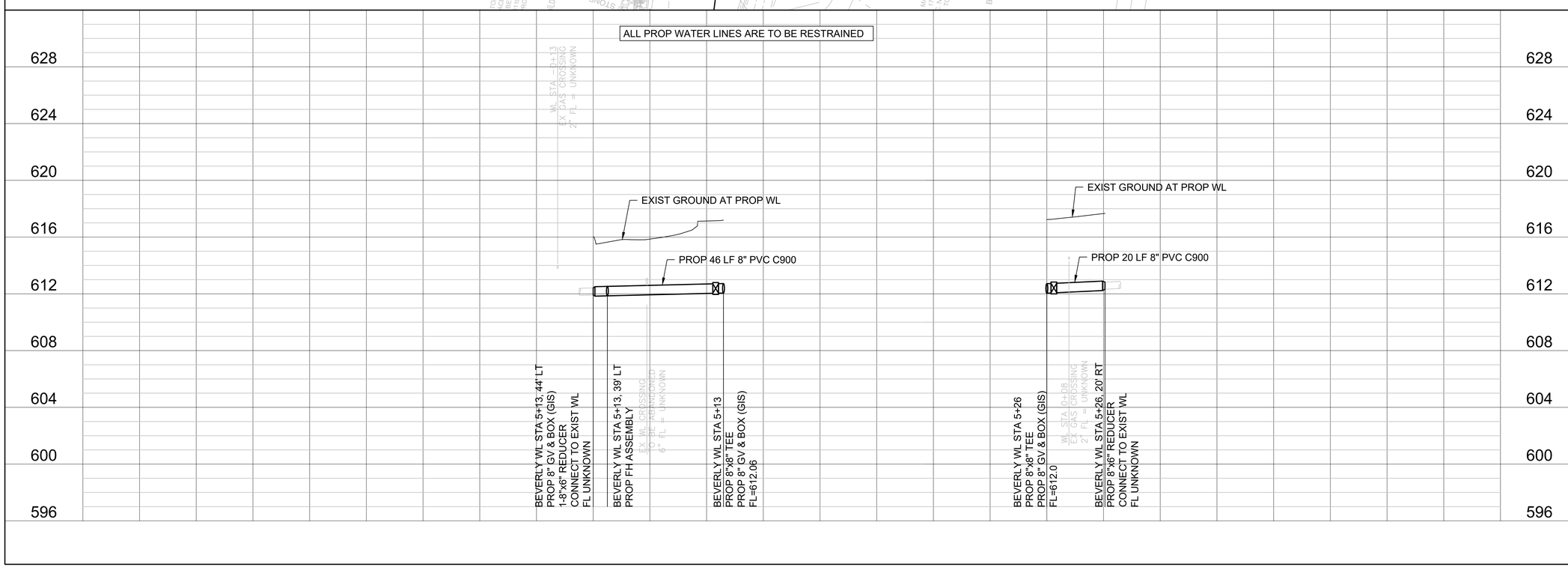
| CHECKED BY: | JF | | |




NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.




0 20 40 FEET

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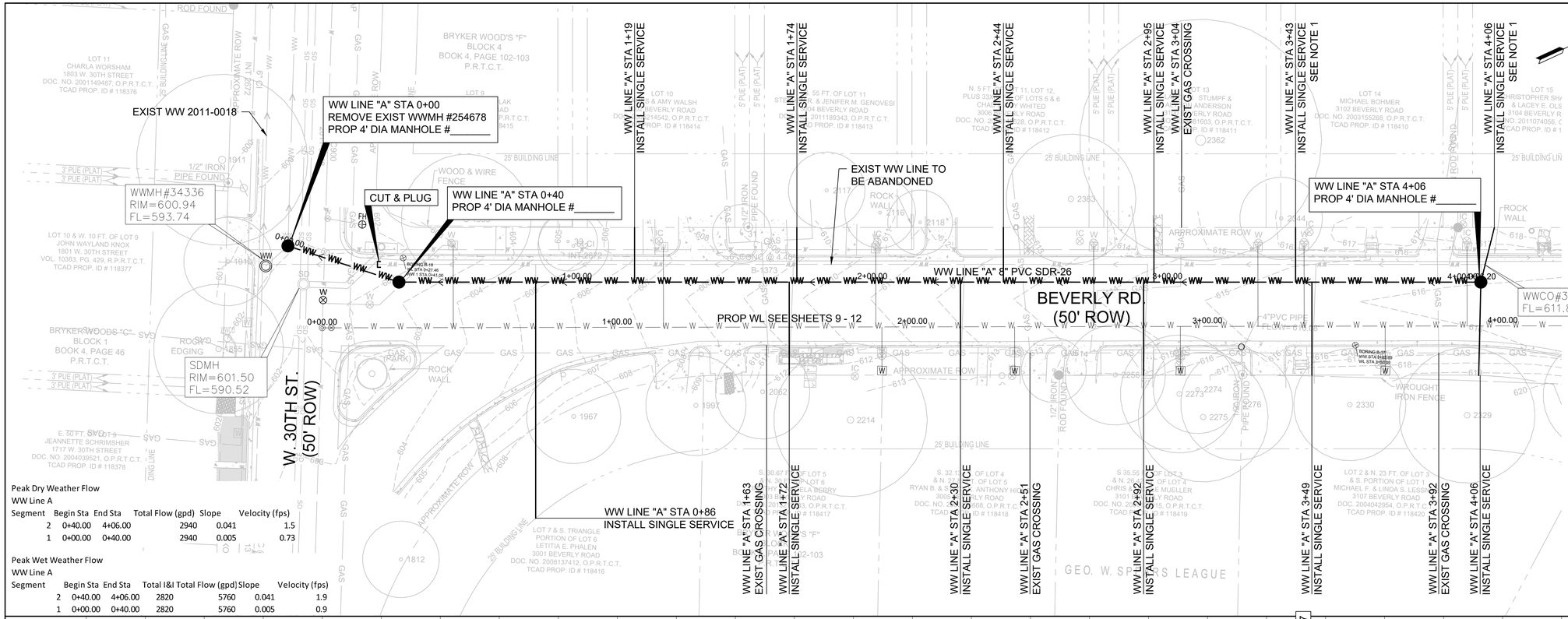
STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WATER LINE
PLAN & PROFILE SHEET
SHEET 5 OF 5

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 13 / 48 |
| CHECKED BY: | JF | | |




Peak Dry Weather Flow
WW Line A

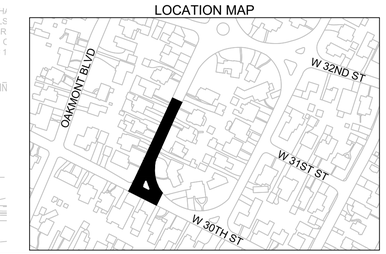
| Segment | Begin Sta | End Sta | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|
| 2 | 0+40.00 | 4+06.00 | 2940 | 0.041 | 1.5 |
| 1 | 0+00.00 | 0+40.00 | 2940 | 0.005 | 0.73 |

Peak Wet Weather Flow
WW Line A

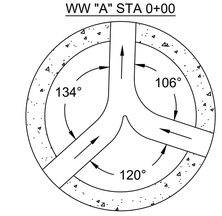
| Segment | Begin Sta | End Sta | Total I&I Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|
| 2 | 0+40.00 | 4+06.00 | 2820 5760 | 0.041 | 1.9 |
| 1 | 0+00.00 | 0+40.00 | 2820 5760 | 0.005 | 0.9 |

NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

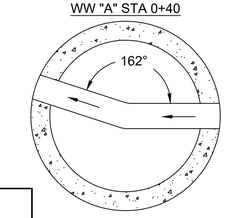
LOCATION MAP



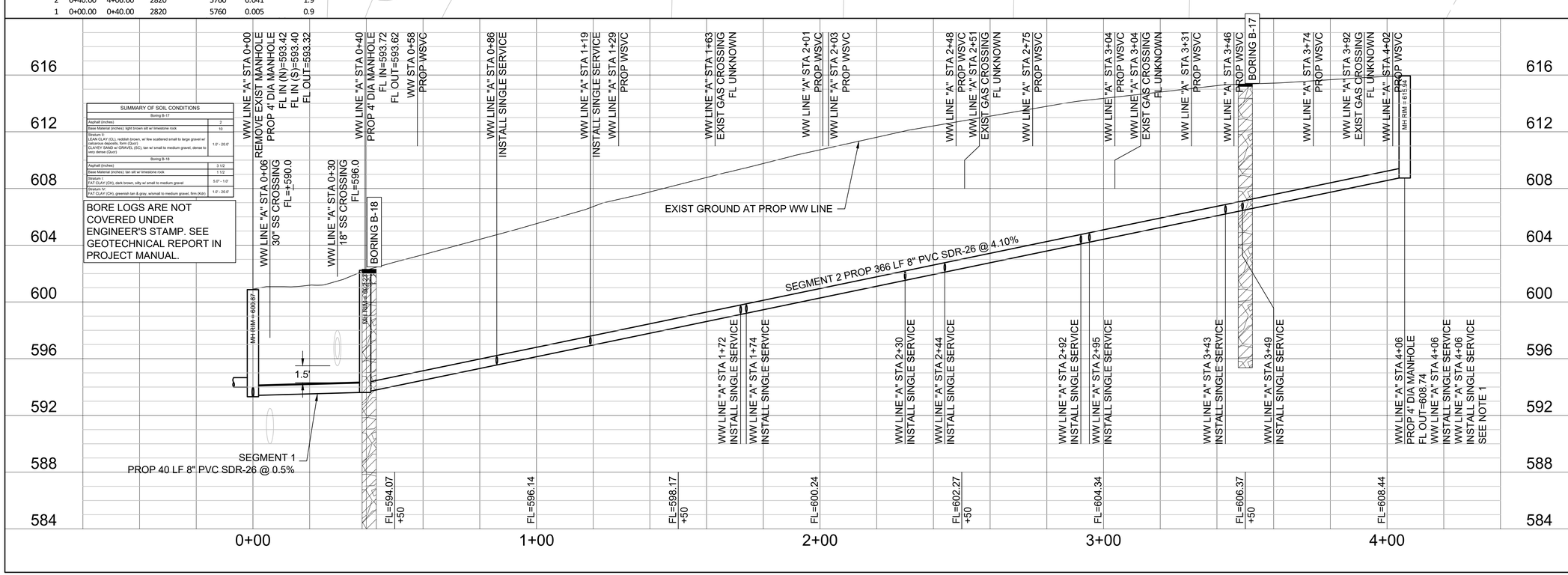

WW "A" STA 0+00




WW "A" STA 0+40




0 20 40 FEET




| SUMMARY OF SOIL CONDITIONS | |
|---|---|
| Boring B-17 | |
| Asphalt (inches) | 2 |
| Base Material (inches): light brown silt w/ limestone rock | 10 |
| Stratum 3: LEAN CLAY (CL), reddish brown, w/ few scattered small to large gravel w/ calcareous deposits, firm (Qvsr) CLAYEY SAND w/ GRAVEL (SC), tan w/ small to medium gravel, dense to very dense (Qvsr) | 1.0' - 20.0' |
| Boring B-18 | |
| Asphalt (inches) | 3 1/2 |
| Base Material (inches): tan silt w/ limestone rock | 1 1/2 |
| Stratum 1: FAT CLAY (CH), dark brown, silty w/ small to medium gravel | 5.0' - 1.0' |
| Stratum 2: FAT CLAY (CH), greenish tan & gray, w/small to medium gravel, firm (Kdr) | 1.0' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

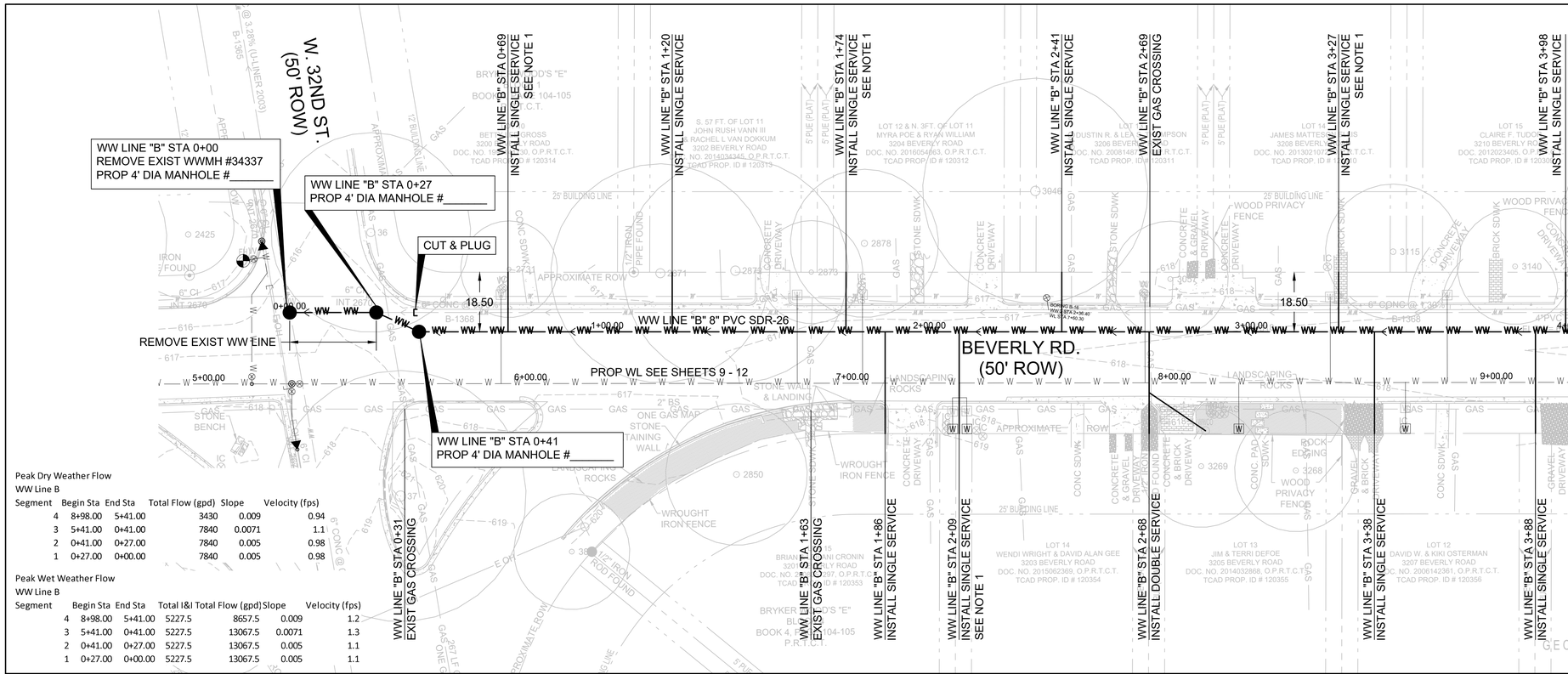
STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER LINE "A"
PLAN & PROFILE SHEET
SHEET 1 OF 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 14 / 48 |
| CHECKED BY: | JF | | |




Peak Dry Weather Flow
WW Line B

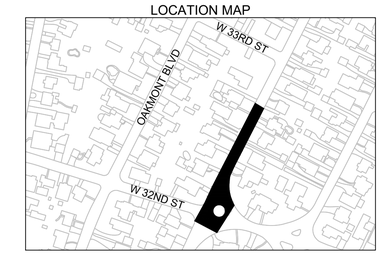
| Segment | Begin Sta | End Sta | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 3430 | 0.009 | 0.94 |
| 3 | 5+41.00 | 0+41.00 | 7840 | 0.0071 | 1.1 |
| 2 | 0+41.00 | 0+27.00 | 7840 | 0.005 | 0.98 |
| 1 | 0+27.00 | 0+00.00 | 7840 | 0.005 | 0.98 |

Peak Wet Weather Flow
WW Line B

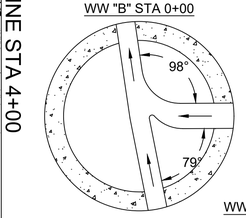
| Segment | Begin Sta | End Sta | Total I&I | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 5227.5 | 8657.5 | 0.009 | 1.2 |
| 3 | 5+41.00 | 0+41.00 | 5227.5 | 13067.5 | 0.0071 | 1.3 |
| 2 | 0+41.00 | 0+27.00 | 5227.5 | 13067.5 | 0.005 | 1.1 |
| 1 | 0+27.00 | 0+00.00 | 5227.5 | 13067.5 | 0.005 | 1.1 |

NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

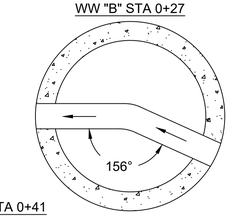
LOCATION MAP



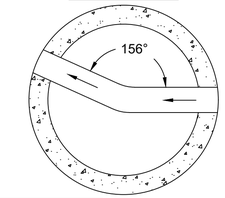

WW "B" STA 0+00

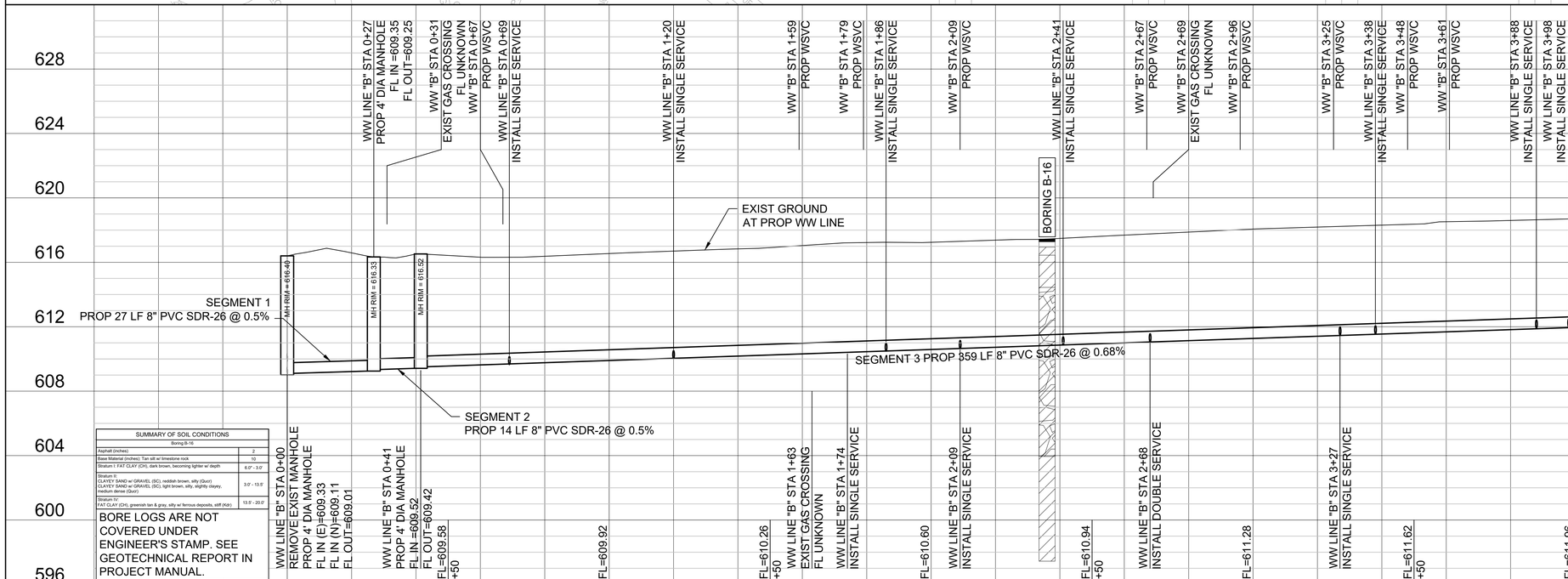



WW "B" STA 0+27




WW "B" STA 0+41




SUMMARY OF SOIL CONDITIONS

| Boring B-16 | |
|---|---|
| Asphalt (inches) | 2 |
| Base Material (inches): Tan silt w/ limestone rock | 10 |
| Stratum I: FAT CLAY (CH), dark brown, becoming lighter w/ depth | 6.0' - 3.0' |
| Stratum II: CLAYEY SAND w/ GRAVEL (SC), reddish brown, silty (Quor) CLAYEY SAND w/ GRAVEL (SC), light brown, silty, slightly clayey, medium dense (Quor) | 3.0' - 13.5' |
| Stratum III: FAT CLAY (CH), greenish tan & gray, silty w/ ferrous deposits, stiff (Kdr) | 13.5' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.

0 20 40 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |

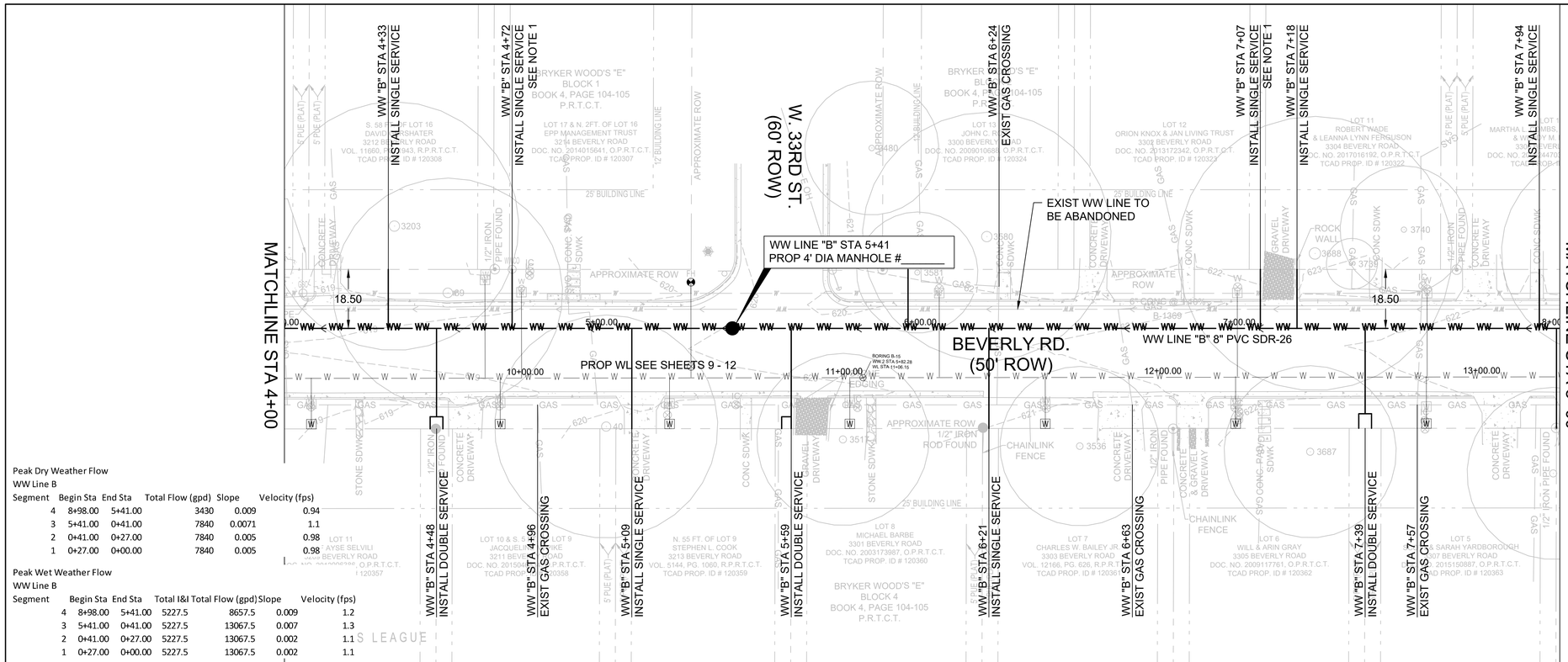
STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER LINE "B"
PLAN & PROFILE SHEET
SHEET 1 OF 3

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 15 / 48 |
| CHECKED BY: | JF | | |




Peak Dry Weather Flow

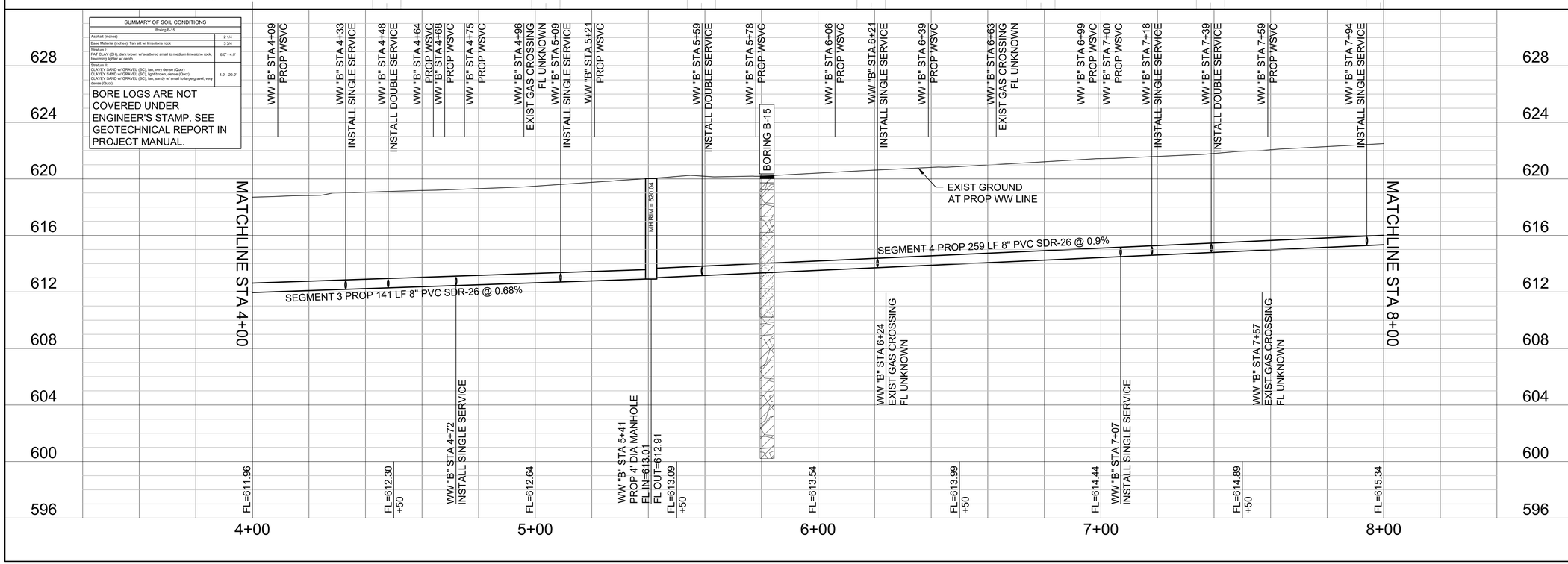
WW Line B

| Segment | Begin Sta | End Sta | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 3430 | 0.009 | 0.94 |
| 3 | 5+41.00 | 0+41.00 | 7840 | 0.0071 | 1.1 |
| 2 | 0+41.00 | 0+27.00 | 7840 | 0.005 | 0.98 |
| 1 | 0+27.00 | 0+00.00 | 7840 | 0.005 | 0.98 |

Peak Wet Weather Flow

WW Line B

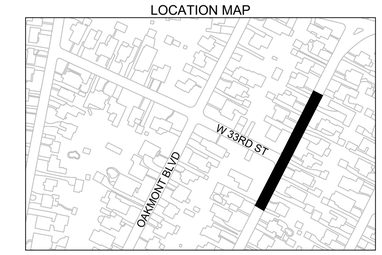
| Segment | Begin Sta | End Sta | Total I&I | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 5227.5 | 8657.5 | 0.009 | 1.2 |
| 3 | 5+41.00 | 0+41.00 | 5227.5 | 13067.5 | 0.007 | 1.3 |
| 2 | 0+41.00 | 0+27.00 | 5227.5 | 13067.5 | 0.002 | 1.1 |
| 1 | 0+27.00 | 0+00.00 | 5227.5 | 13067.5 | 0.002 | 1.1 |



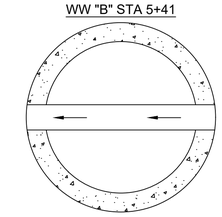

| SUMMARY OF SOIL CONDITIONS | |
|---|---|
| Boring B-15 | |
| Asphalt (inches): | 2 1/4 |
| Base Material (inches): Tan silt w/ limestone rock | 3 3/4 |
| Stratum I:<br>FAT CLAY (CH), dark brown w/ scattered small to medium limestone rock, becoming lighter w/ depth | 6.0" - 4.0' |
| Stratum II:<br>CLAYEY SAND w/ GRAVEL (SC), tan, very dense (Qusr)<br>CLAYEY SAND w/ GRAVEL (SC), light brown, dense (Qusr)<br>CLAYEY SAND w/ GRAVEL (SC), tan, sandy w/ small to large gravel, very dense (Qusr) | 4.0' - 20.0' |

BORE LOGS ARE NOT COVERED UNDER ENGINEER'S STAMP. SEE GEOTECHNICAL REPORT IN PROJECT MANUAL.

LOCATION MAP




WW "B" STA 5+41



NOTES:

1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.

0 20 40 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

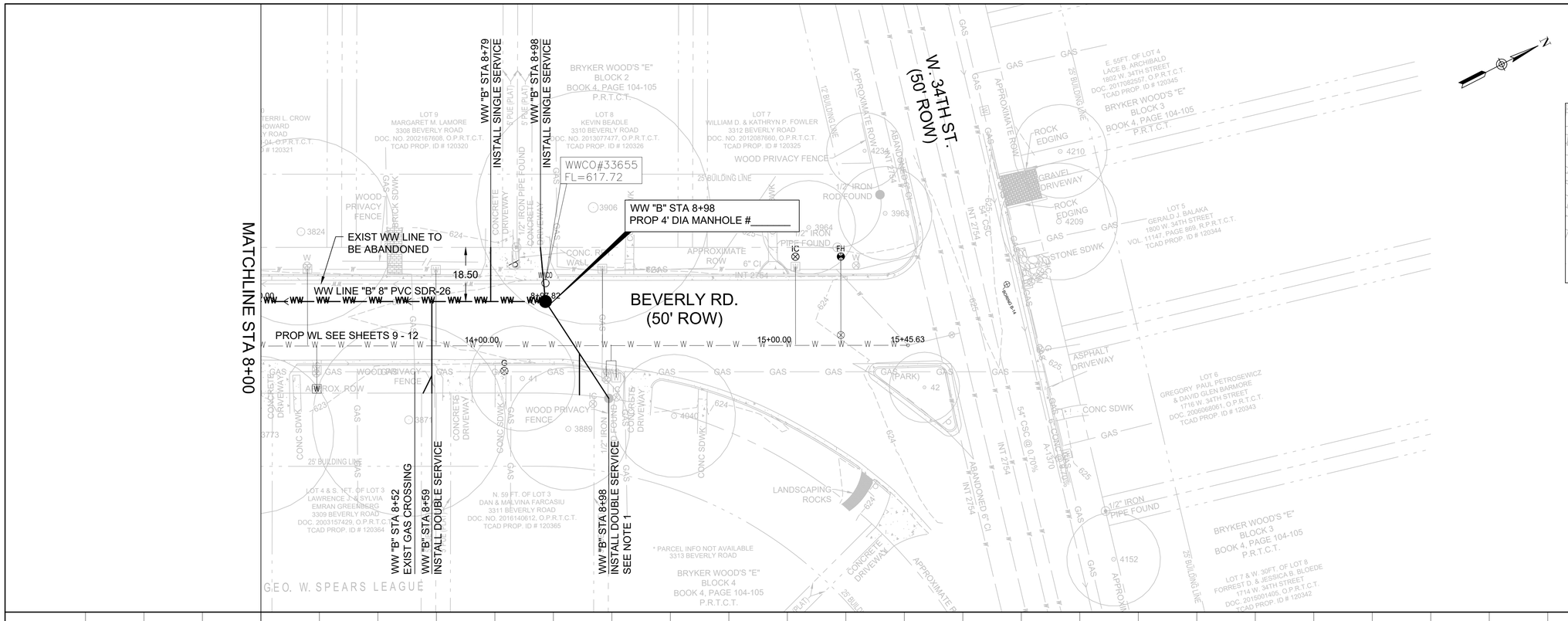
RILEY MOUNTAIN ENGINEERING

16223

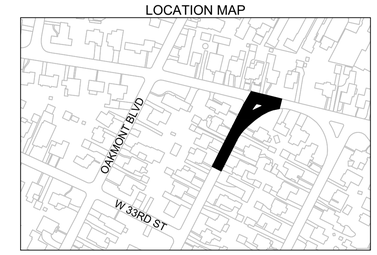
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER LINE "B"
PLAN & PROFILE SHEET
SHEET 2 OF 3

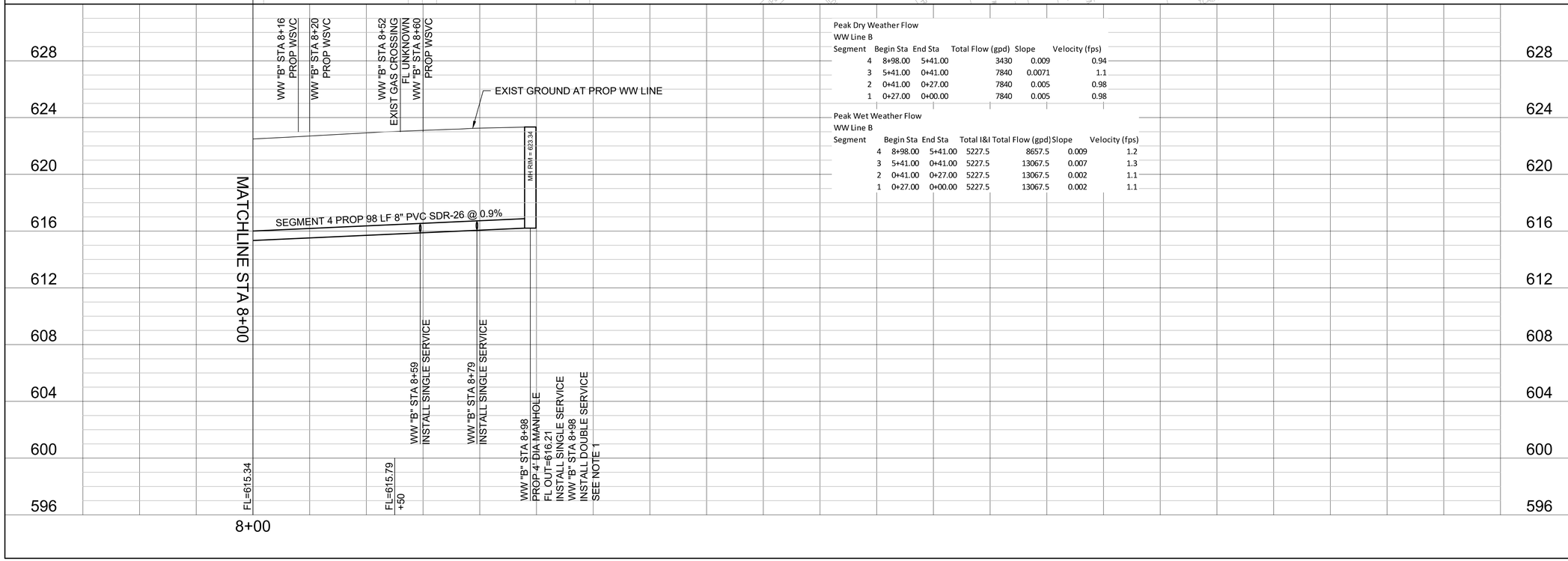
| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | 16 / 48 |
| CHECKED BY: | JF | | |




LOCATION MAP




NOTES:
1. SEPARATION BETWEEN WATER SERVICE AND WASTEWATER SERVICE IS LESS THAN 9'. SEE SHEET 32.




Peak Dry Weather Flow
WW Line B

| Segment | Begin Sta | End Sta | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 3430 | 0.009 | 0.94 |
| 3 | 5+41.00 | 0+41.00 | 7840 | 0.0071 | 1.1 |
| 2 | 0+41.00 | 0+27.00 | 7840 | 0.005 | 0.98 |
| 1 | 0+27.00 | 0+00.00 | 7840 | 0.005 | 0.98 |

Peak Wet Weather Flow
WW Line B

| Segment | Begin Sta | End Sta | Total I&I | Total Flow (gpd) | Slope | Velocity (fps) |
|---|---|---|---|---|---|---|
| 4 | 8+98.00 | 5+41.00 | 5227.5 | 8657.5 | 0.009 | 1.2 |
| 3 | 5+41.00 | 0+41.00 | 5227.5 | 13067.5 | 0.007 | 1.3 |
| 2 | 0+41.00 | 0+27.00 | 5227.5 | 13067.5 | 0.002 | 1.1 |
| 1 | 0+27.00 | 0+00.00 | 5227.5 | 13067.5 | 0.002 | 1.1 |

0 20 40 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

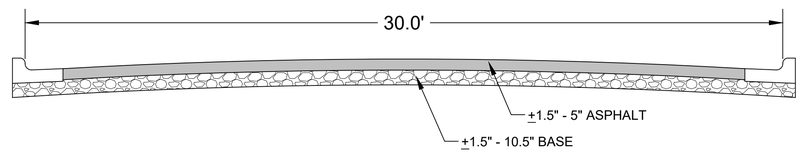
STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING
16223

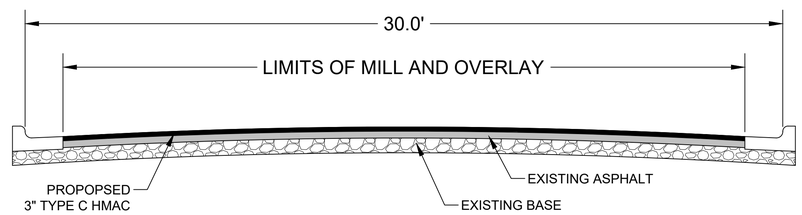
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER LINE "B"
PLAN & PROFILE SHEET
SHEET 3 OF 3

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | H:1"=20' V:1"=4' |
| DRAWN BY: | JN | SHEET NUMBER | |
| CHECKED BY: | JF | 17 / 48 | |




BEVERLY RD.
EXIST TYPICAL SECTION




BEVERLY RD.
PROPOSED TYPICAL SECTION

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

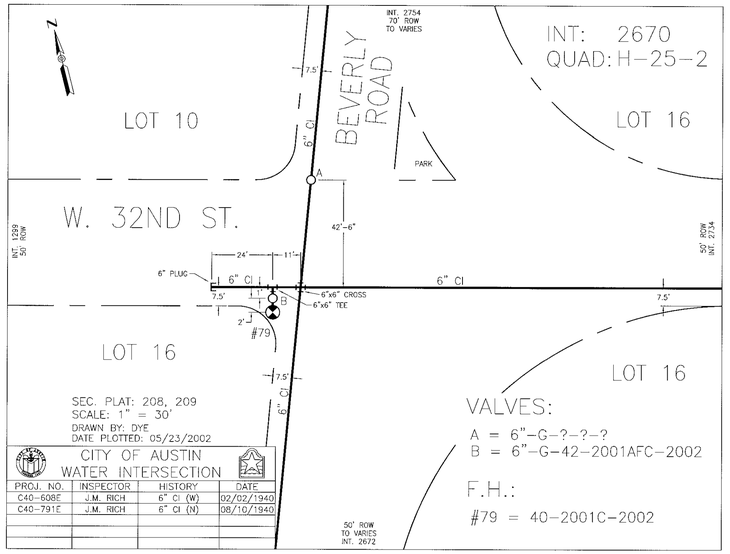
RILEY MOUNTAIN ENGINEERING

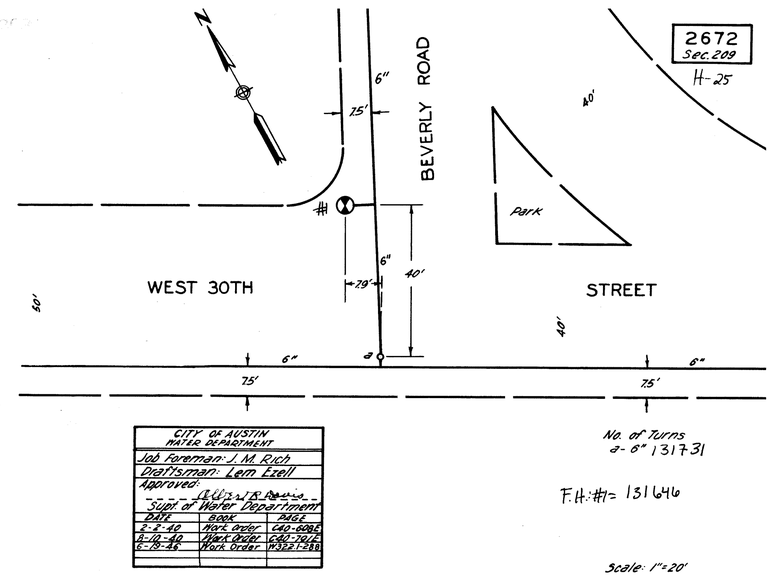
16223

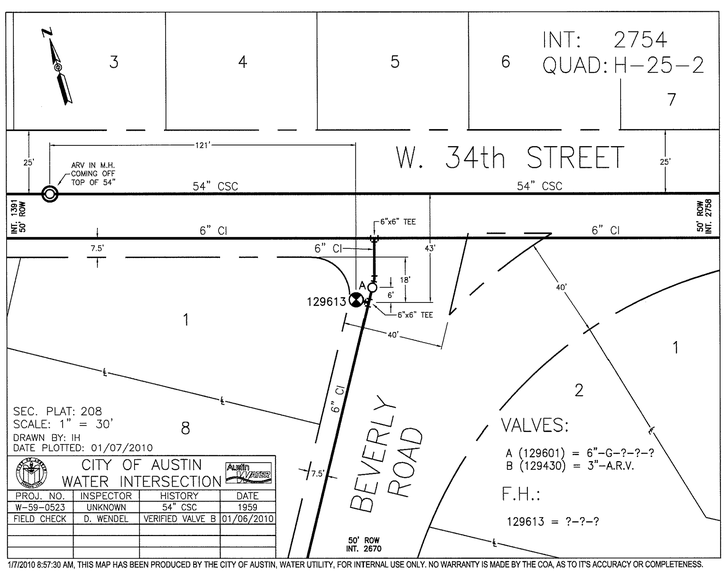
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TYPICAL SECTIONS
SHEET 1 OF 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER | 18 / 48 |
| CHECKED BY: | JF | | |




1/7/2010 8:57:30 AM, THIS MAP HAS BEEN PRODUCED BY THE CITY OF AUSTIN, WATER UTILITY, FOR INTERNAL USE ONLY. NO WARRANTY IS MADE BY THE COA, AS TO IT'S ACCURACY OR COMPLETENESS.

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

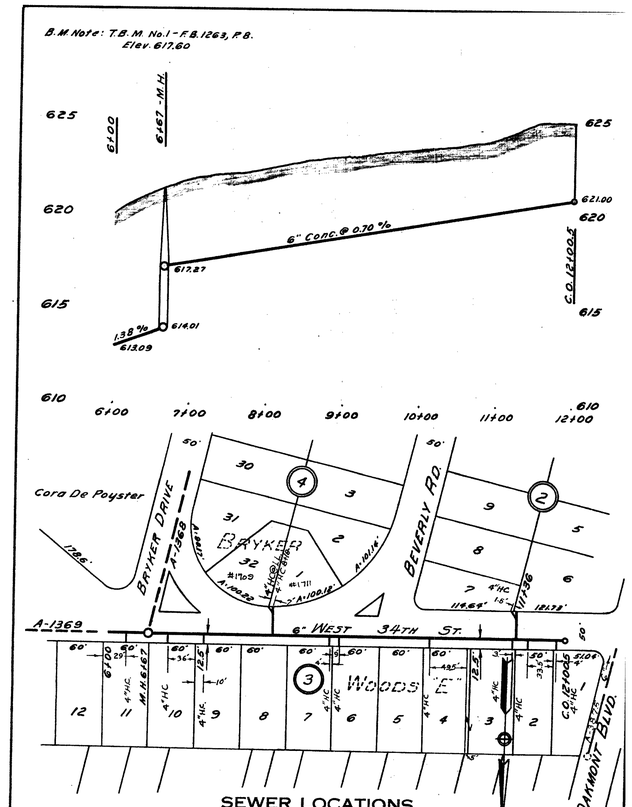
16223

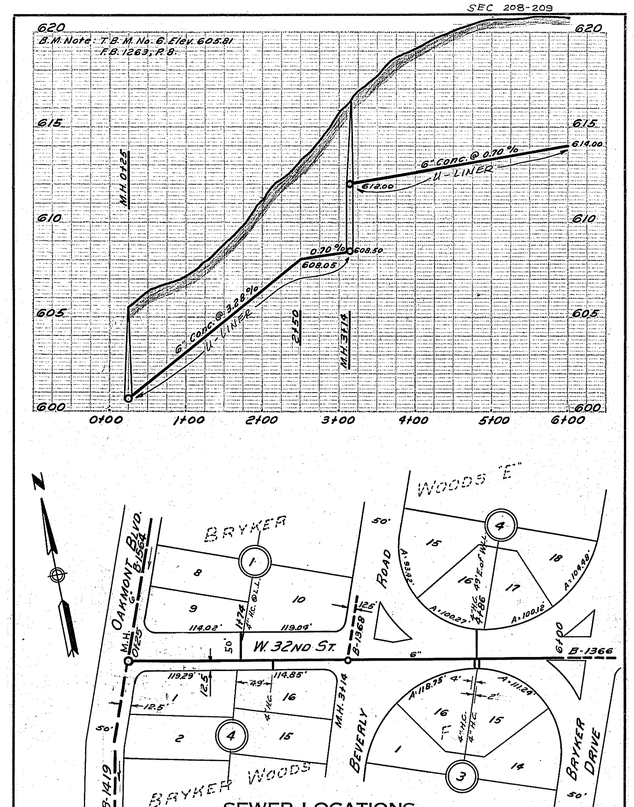
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

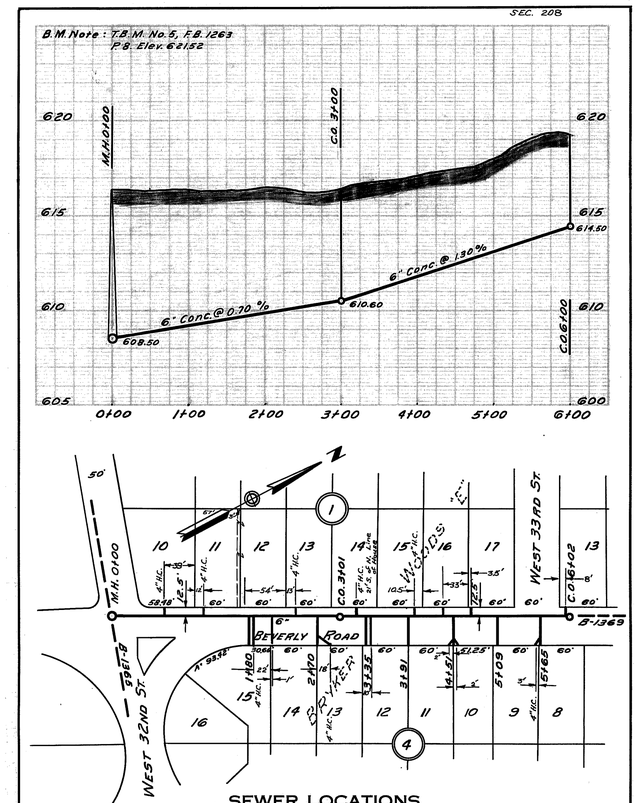
WATER LINE INTERSECTION MAPS

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER | 19 / 48 |
| CHECKED BY: | JF | | |

UPDATED:
FEB. 2003
U-LINER
6+29 to 3+14
3+14 to 0+25




| No. | DATE | REVISIONS | APP |
|---|---|---|---|
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| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

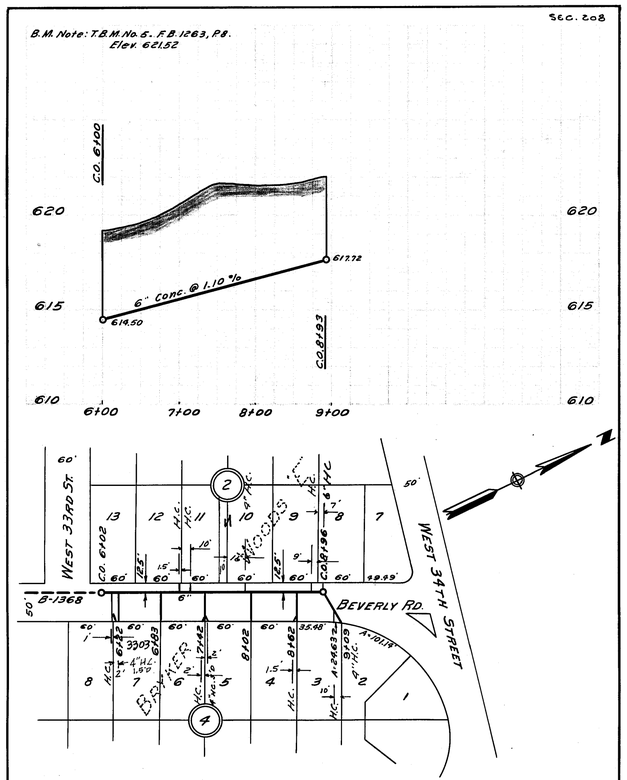
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

WASTEWATER PROFILE MAPS

| | | |
|---|---|---|
| DESIGNED BY: | KF | SCALE: NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER |
| CHECKED BY: | JF | 20 / 48 |

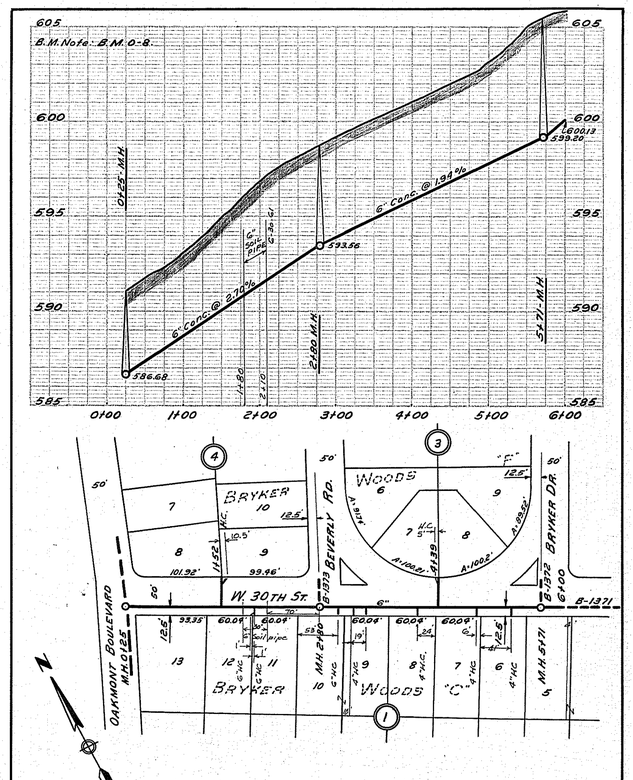



## SEWER LOCATIONS

AUSTIN, TEXAS

BUILT BY CITY FORCES DATE 4-15-40 SAN SEWER: JOB NO. D4045E
FIELD BOOK 1215, P28-29 DATE 3-12-40 LOCATION BEVERLY ROAD
DRAWN BY B.F. PRIEST DATE 5-22-40 FROM WEST 32 ND STREET
REVISED BY _____ DATE 4-73 TO WEST 34TH STREET
CHECKED BY C.G. LEVANDER DATE 10-11-40 BOOK NO. B SHEET NO. 1369

A & E CO., N.Y.

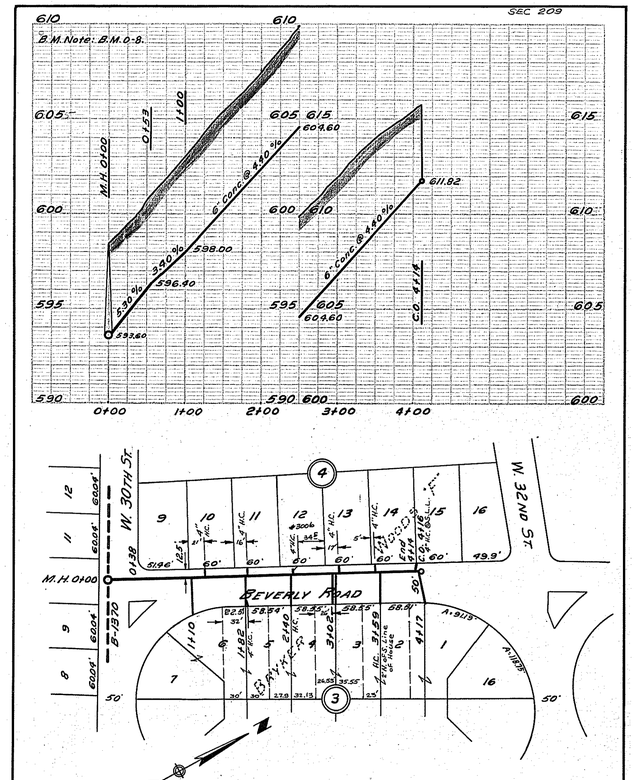



## SEWER LOCATIONS

AUSTIN, TEXAS

BUILT BY CITY FORCES DATE 4-4-40 SAN SEWER: JOB NO. D4028E
FIELD BOOK 1215, P32-33 DATE 3-12-40 LOCATION WEST 30TH STREET
DRAWN BY B.F. PRIEST DATE 5-14-40 FROM OAKMONT BOULEVARD
REVISED BY _____ DATE _____ TO JEFFERSON STREET
CHECKED BY C.G. LEVANDER DATE 10-11-40 BOOK NO. B SHEET NO. 1370

A & E CO., N.Y.




## SEWER LOCATIONS

AUSTIN, TEXAS

3-21-67 NO. 834-74300

BUILT BY CITY FORCES DATE 4-4-40 5-7-40 SAN SEWER: JOB NO. D4028E D4055E
FIELD BOOK 1215, P32-33 P.38 DATE 3-12-40 4-13-40 LOCATION BEVERLY ROAD
DRAWN BY B.F. PRIEST DATE 5-15-40 6-10-40
REVISED BY J.D.W. DATE 9-16-65 6-67 FROM WEST 30TH STREET
CHECKED BY C.G. LEVANDER DATE 10-11-40 TO NORTHERLY
BOOK NO. B SHEET NO. 1373

A & E CO., N.Y.

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
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| | | | |
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

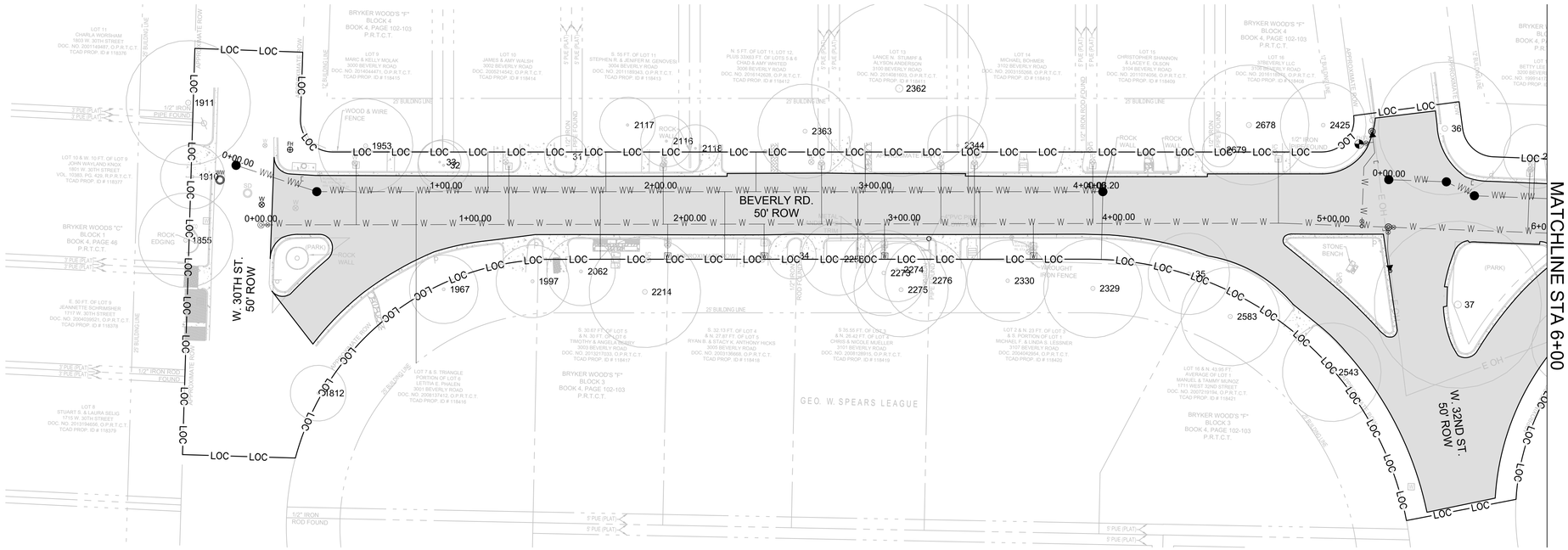
# RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

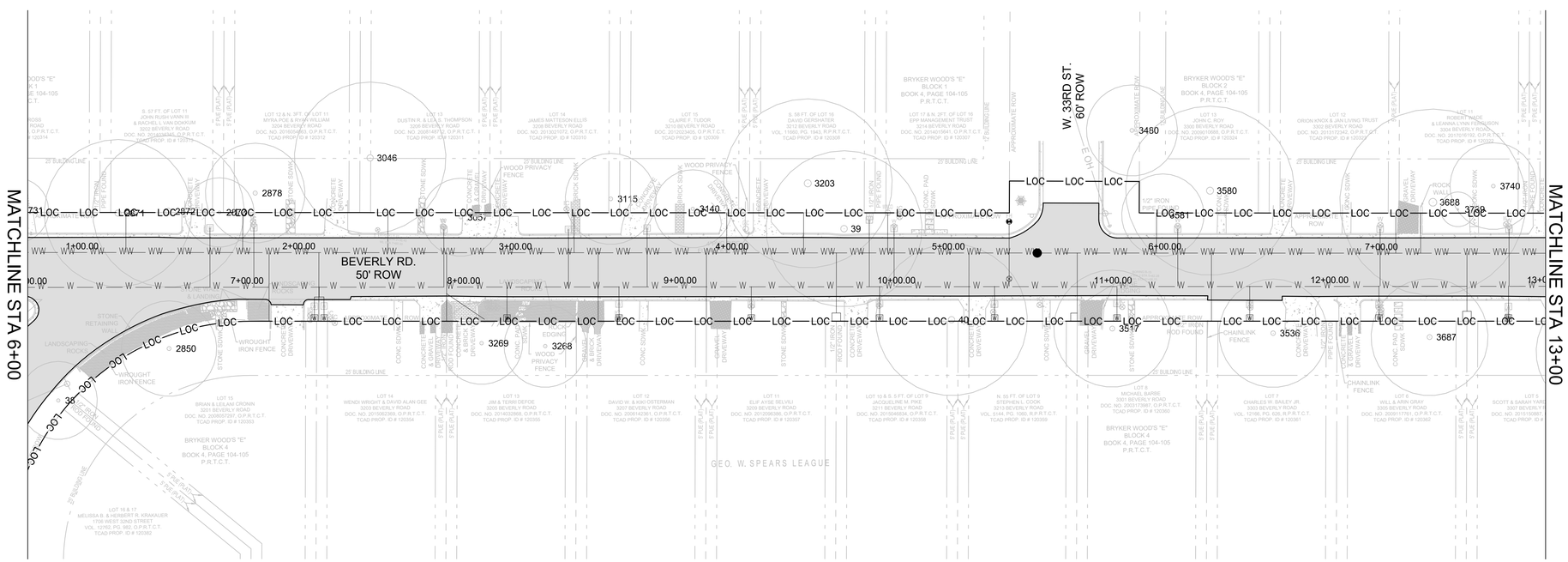
WASTEWATER PROFILE MAPS

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER | 21 / 48 |
| CHECKED BY: | JF | | |




NOTES:

1. ROADWAY GEOMETRICS CONTROLLED BY PARABOLIC SECTION. REFER TO PROPOSED TYPICAL SECTION SHEET FOR DETAILS.
2. TREE INDEX IS LOCATED ON EROSION & SEDIMENTATION CONTROL AND TREE PROTECTION ON SHEET 5.
3. CONTRACTOR SHALL SCHEDULE ON-SITE MEETING WITH THE GENERAL PERMIT PROGRAM ARBORIST TO EVALUATE ALL PROPOSED OVERHEAD CLEARANCE PRUNING OF TREES PRIOR TO WORK BEING PERFORMED. PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST.
4. AS PART OF SURFACE PREPARATION FOR THE HMAC OVERLAY, CONTRACTOR WILL REMOVE ALL EXISTING PAVEMENT MARKINGS AND MARKERS IN AREAS TO RECEIVE HMAC OVERLAY.
5. REFER TO SHEETS 9 - 13 FOR PROPOSED WATER LINE.
6. REFER TO SHEETS 14-17 FOR PROPOSED WASTEWATER LINE.




LIMITS OF MILL & OVERLAY

0 30 60 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

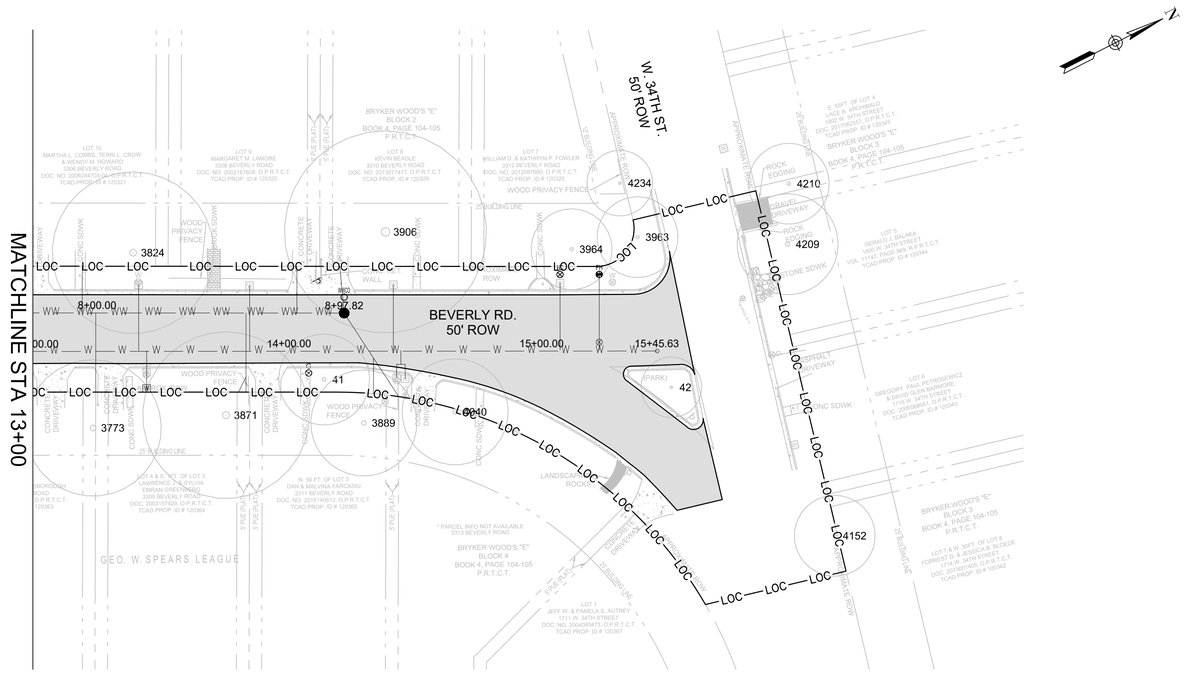
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

PAVING PLAN
SHEET 1 OF 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=30' |
| DRAWN BY: | JN | SHEET NUMBER | 22 / 48 |
| CHECKED BY: | JF | | |




NOTES:

1. ROADWAY GEOMETRICS CONTROLLED BY PARABOLIC SECTION. REFER TO PROPOSED TYPICAL SECTION SHEET FOR DETAILS.
2. TREE INDEX IS LOCATED ON EROSION & SEDIMENTATION CONTROL AND TREE PROTECTION ON SHEET 5.
3. CONTRACTOR SHALL SCHEDULE ON-SITE MEETING WITH THE GENERAL PERMIT PROGRAM ARBORIST TO EVALUATE ALL PROPOSED OVERHEAD CLEARANCE PRUNING OF TREES PRIOR TO WORK BEING PERFORMED. PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST.
4. AS PART OF SURFACE PREPARATION FOR THE HMAC OVERLAY, CONTRACTOR WILL REMOVE ALL EXISTING PAVEMENT MARKINGS AND MARKERS IN AREAS TO RECEIVE HMAC OVERLAY.
5. REFER TO SHEETS 9 - 13 FOR PROPOSED WATER LINE.
6. REFER TO SHEETS 14-17 FOR PROPOSED WASTEWATER LINE.

LIMITS OF MILL & OVERLAY

0 30 60 FEET

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
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3/16/2021

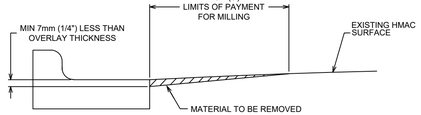
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

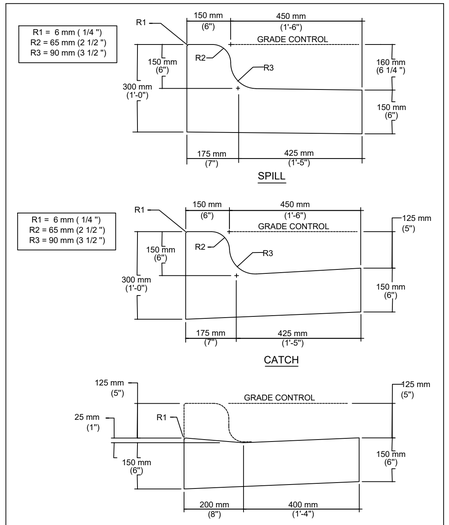
PAVING PLAN
SHEET 2 OF 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=30' |
| DRAWN BY: | JN | SHEET NUMBER | 23 / 48 |
| CHECKED BY: | JF | | |

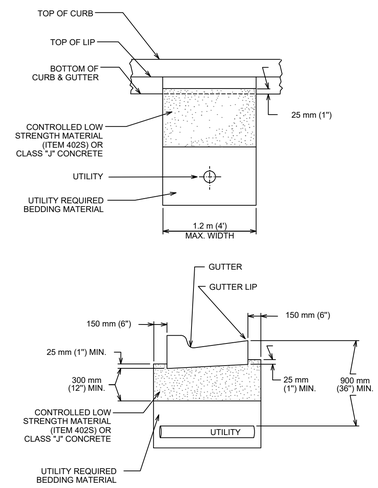



EDGE MILLING DETAIL

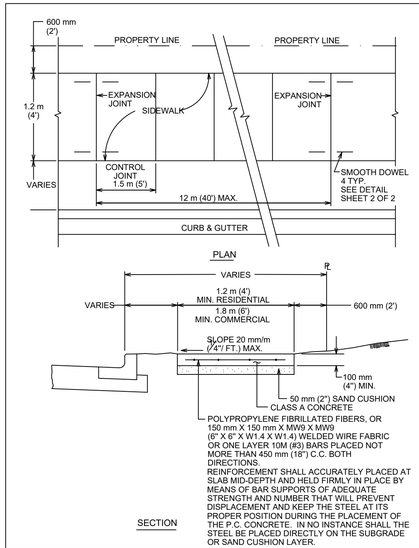
| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | HMAC PAVEMENT EDGE MILLING DETAIL | |
|---|---|---|
| *RECORD COPY SIGNED BY SAM ANGOORI* *07/01/09*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>315S-1 |



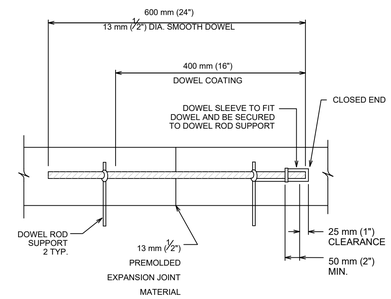

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION | CURB AND GUTTER SECTION | |
|---|---|---|
| RECORD COPY SIGNED BY LINO RIVERA 9/29/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>430S-1 |




| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION | CONCRETE BACKFILL<br>UNDER CURB & GUTTER | |
|---|---|---|
| RECORD COPY SIGNED BY LINO RIVERA 9/29/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>430S-4 |

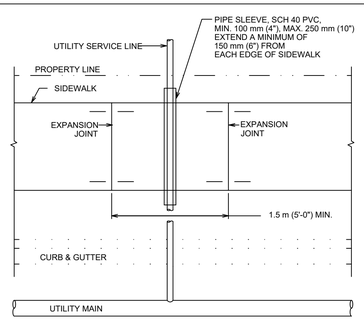



| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | SIDEWALK | |
|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER 03/26/08<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>432S-1<br>1 OF 3 |

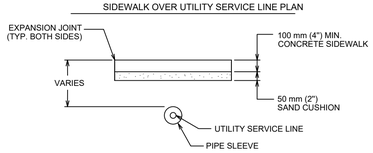



DOWEL DETAIL

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | SIDEWALK | |
|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER 03/26/08<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>432S-1<br>2 OF 3 |




SIDEWALK OVER UTILITY SERVICE LINE PLAN




SECTION OF SIDEWALK OVER
UTILITY SERVICE LINES

NOTES:
1. THIS STANDARD APPLIES TO THE INSTALLATION OF NEW UTILITIES OR UTILITIES BEING REPLACED BY A NEW LINE.
2. NO JOINTS IN UTILITY SERVICE PIPE TO BE LOCATED INSIDE PVC PIPE SLEEVE.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | SIDEWALK | |
|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER 03/26/08<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>432S-1<br>3 OF 3 |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

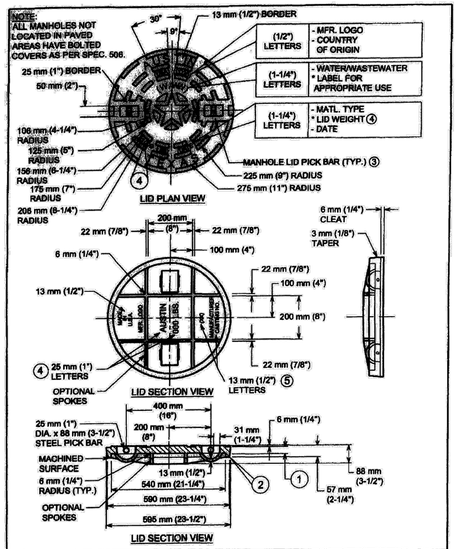
RILEY MOUNTAIN ENGINEERING

16223

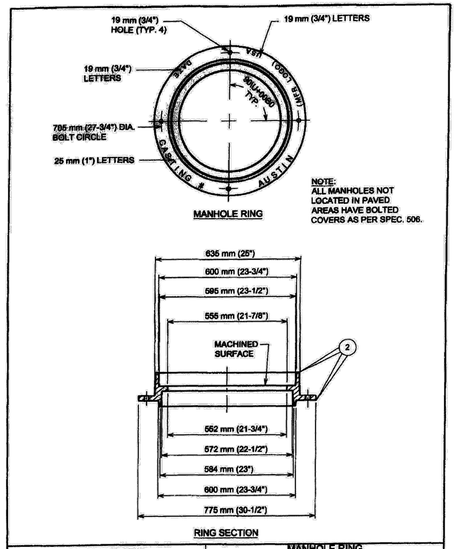
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 1 OF 9

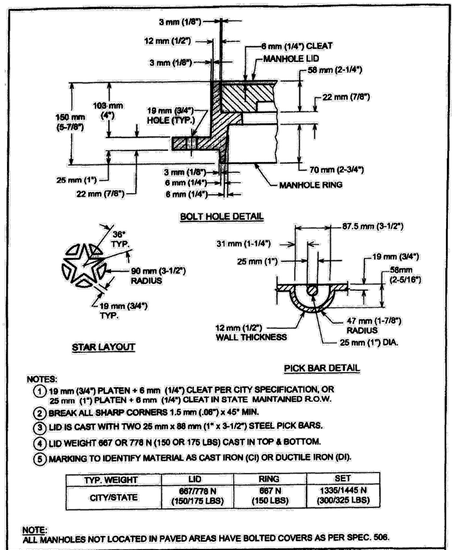
| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 24 / 48 |
| CHECKED BY: | JF | | |




| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MANHOLE RING<br>AND 610 mm (24") COVER | |
|---|---|---|
| Kathi L Flowers 9/23/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-2W<br>1 OF 3 |




| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MANHOLE RING<br>AND 610 mm (24") COVER | |
|---|---|---|
| Kathi L Flowers 9/23/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-2W<br>2 OF 3 |

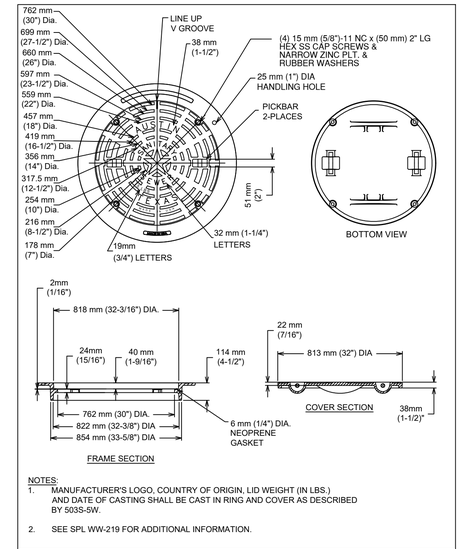



NOTES:
1. 19 mm (3/4") PLATEN + 6 mm (1/4") CLEAT PER CITY SPECIFICATION, OR 25 mm (1") PLATEN + 6 mm (1/4") CLEAT IN STATE MAINTAINED R.O.W.
2. BREAK ALL SHARP CORNERS 1.5 mm (.06") x 45° MIN.
3. LID IS CAST WITH TWO 25 mm x 88 mm (1" x 3-1/2") STEEL PICK BARS.
4. LID WEIGHT 667 OR 776 N (150 OR 175 LBS) CAST IN TOP & BOTTOM.
5. MARKING TO IDENTIFY MATERIAL AS CAST IRON (CI) OR DUCTILE IRON (DI).

| TYP. WEIGHT | LID | RING | SET |
|---|---|---|---|
| CITY/STATE | 667/776 N (150/175 LBS) | 667 N (150 LBS) | 1335/1445 N (300/325 LBS) |

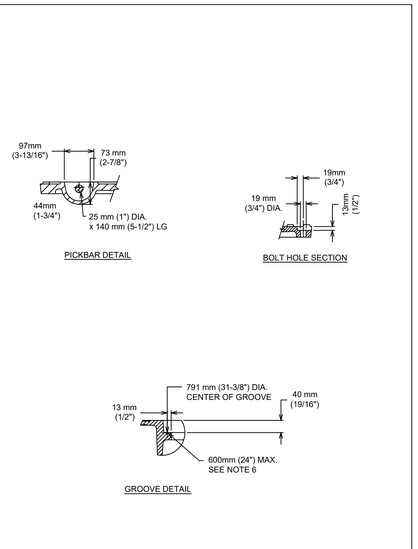
NOTE:
ALL MANHOLES NOT LOCATED IN PAVED AREAS HAVE BOLTED COVERS AS PER SPEC. 506.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MANHOLE RING<br>AND 610 mm (24") COVER | |
|---|---|---|
| Kathi L Flowers 9/23/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-2W<br>3 OF 3 |

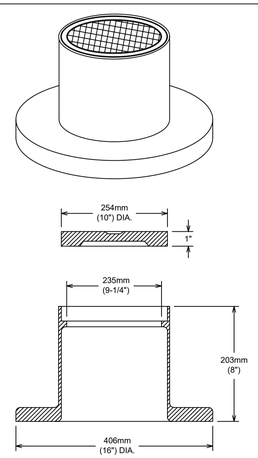



NOTES:
1. MANUFACTURER'S LOGO, COUNTRY OF ORIGIN, LID WEIGHT (IN LBS.) AND DATE OF CASTING SHALL BE CAST IN RING AND COVER AS DESCRIBED BY 503S-5W.
2. SEE SPL WW-219 FOR ADDITIONAL INFORMATION.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | WATERTIGHT MANHOLE<br>RING AND 813 mm 32" COVER | |
|---|---|---|
| RECORD COPY SIGNED BY KATHI L FLOWERS 06/01/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-6W<br>1 OF 2 |

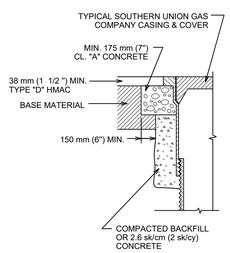



| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | WATERTIGHT MANHOLE<br>RING AND 813 mm 32" COVER | |
|---|---|---|
| RECORD COPY SIGNED BY KATHI L FLOWERS 06/01/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-6W<br>2 OF 2 |




NOTES:
1. HEAVY DUTY.
2. SEE SPL WW-622 FOR MORE INFORMATION.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | CLEANOUT RING AND COVER | |
|---|---|---|
| RECORD COPY SIGNED BY KATHI L. FLOWERS 06/01/10 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>503S-7W |

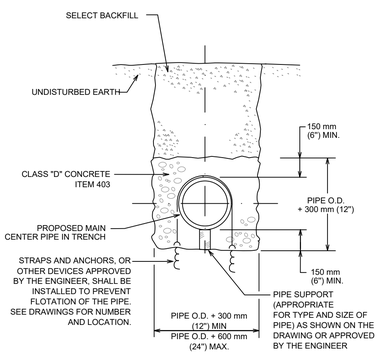



GAS VALVE SCREW CASING

NOTES:

1. SUBGRADE AND BASE MATERIALS SHALL BE COMPACTED ACCORDING TO ITEMS 201S AND 210S, RESPECTIVELY; OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
2. THE CASINGS SHALL BE CLEANED OF ALL DEBRIS DOWN TO THE BASE OF THE VALVE.
3. THE VALVE SHALL BE CENTERED IN THE CASING.
4. A GAS VALVE CASING IN POOR CONDITION, AS DETERMINED BY THE INSPECTOR, SHALL BE COMPLETELY REMOVED AND REPLACED. THE NEW CASING SHALL BE FURNISHED BY THE SOUTHERN UNION GAS COMPANY.
5. FOR REPAVING PROJECTS ONLY, THE CONCRETE SURFACE SHALL BE BROUGHT TO 38 mm (1 1/2 ") FROM THE PROPOSED ROADWAY SURFACE. COLD MIX SHALL BE USED TO TEMPORARILY BRING THE SURFACE TO GRADE.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION | GAS VALVE CASING ADJUSTMENT | |
|---|---|---|
| RECORD COPY SIGNED BY LINO RIVERA 2/17/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>504S-3 |




| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | CONCRETE ENCASEMENT | |
|---|---|---|
| RECORD COPY SIGNED BY LEON BARBA 8/18/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>505S-1 |

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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

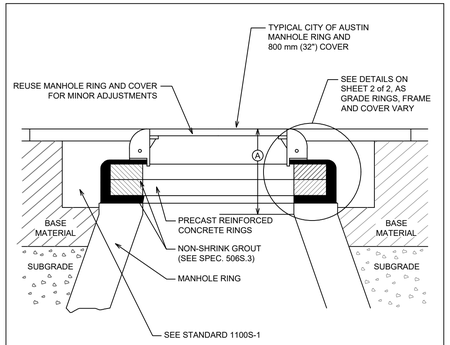
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 2 OF 9

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 25 / 48 |
| CHECKED BY: | JF | | |

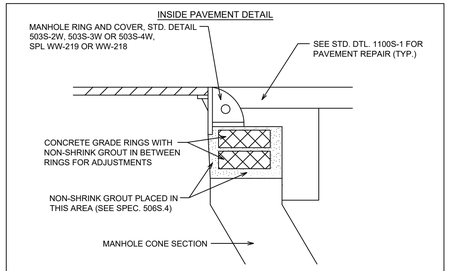



(A) VERTICAL FACE = ALLOWABLE THROAT OR CHIMNEY HEIGHT
= NEW CONSTRUCTION = 525mm = (21") Max.
= EXISTING CONSTRUCTION = 675mm (27") Max.

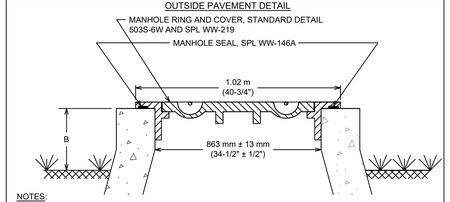
NOTES:
1. NON-SHRINK GROUT SHALL NOT EXCEED 25 mm (1") IN ANY DIMENSION.
2. SUB-GRADE AND BASE MATERIALS SHALL BE COMPACTED ACCORDING TO ITEMS 201S AND 210S, RESPECTIVELY, OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS.
3. REFER TO STANDARD 1100S-1 FOR REPAIRS AROUND MANHOLES.
4. SEE STANDARD 506S-4A FOR HDPE RING INSTALLATION (FOR USE IN PAVED AREAS ONLY).

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MINOR MANHOLE ADJUSTMENT & NEW MANHOLE CONSTRUCTION | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-4<br>1 OF 2 |

INSIDE PAVEMENT DETAIL

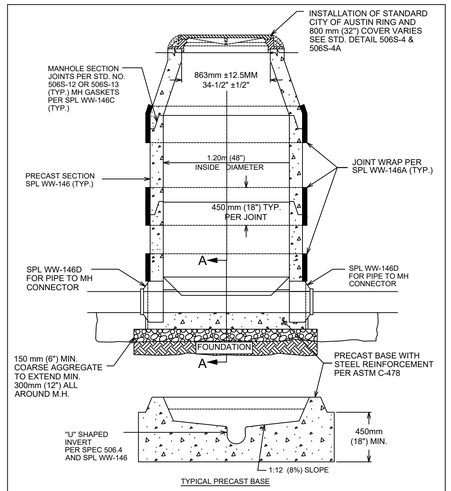



OUTSIDE PAVEMENT DETAIL




NOTES:
1. FOR USE IN UNPAVED AREAS ONLY
2. WHEN USED WITHIN 100-YEAR FLOODPLAIN, SEE DTL. 506S-6 FOR ADDITIONAL M.H. REQUIREMENTS.
3. DIMENSION B=150-300 mm (6"-12") FOR M.H. LOCATED IN 100-YR FLOOD PLAN. =50-300 mm (2"-12") FOR M.H. OUTSIDE 100-YR FLOOD PLAN.

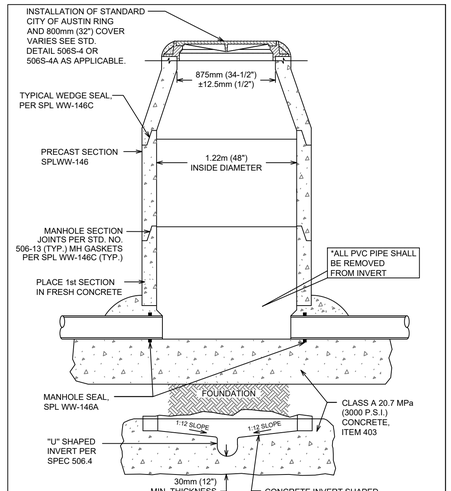
| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MINOR MANHOLE ADJUSTMENT & NEW MANHOLE CONSTRUCTION | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-4<br>2 OF 2 |




TYPICAL PRECAST BASE

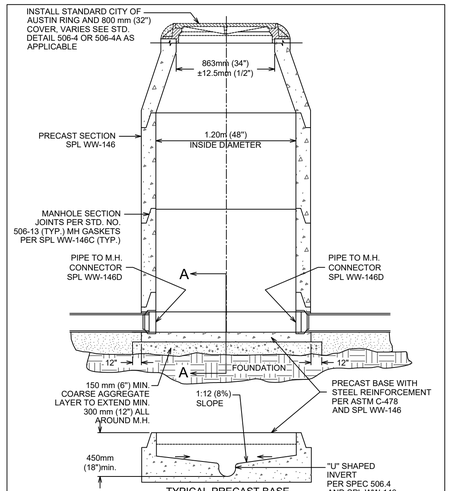
NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MANHOLE FOUNDATION SHALL MEET OR EXCEED SPEC. 506.5B.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | WATER TIGHT WASTEWATER MANHOLE ON PRECAST BASE | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-6 |




NOTES:
1. FOR EXISTING WW LINES ONLY.
2. MANHOLE FOUNDATION SHALL MEET OR EXCEED STD. SPEC 506.5B
3. FIRST RISER SECTION SHALL BE PLACED PLUMB & LEVEL PRIOR TO SETTING ANY ADDITIONAL SECTIONS.

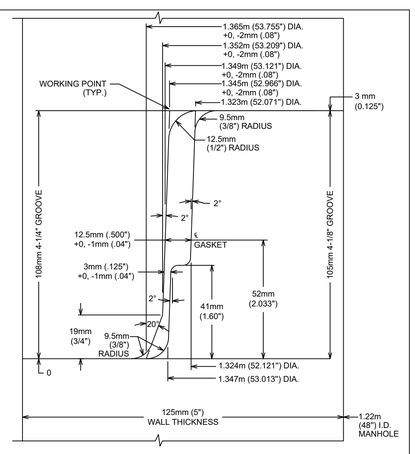
| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | PRECAST MANHOLE ON. CAST IN PLACE BASE | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-9 |




TYPICAL PRECAST BASE

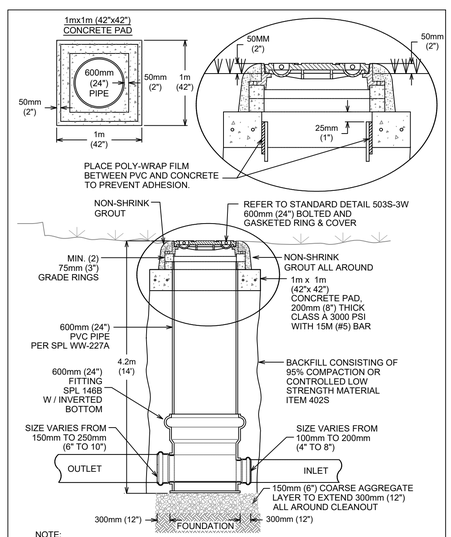
NOTE:
1. THE MANHOLE BASE SHALL BE BEDDED ON 150 mm (6") COARSE AGGREGATE. THE CONTRACTOR SHALL LEVEL AND PLUMB THE BASE PRIOR TO SETTING THE PRECAST MANHOLE RISER SECTIONS ON THE PRECAST CONCRETE BASE.
2. MH FOUNDATION SHALL MEET OR EXCEED STD. SPEC. 506.5B.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | WASTEWATER MANHOLE ON PRECAST BASE | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD | STANDARD NO.<br>506S-10 |



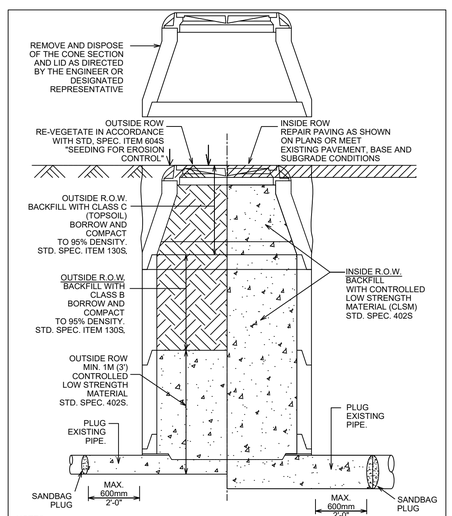

NOTES:
1. DRAWING NOT TO SCALE FOR CLARIFICATION OF DIMENSIONS.
2. GASKET STRETCH; MIN.10, MAX 15%.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | WEDGE - SEAL JOINT DETAIL PRECAST MANHOLE SECTION | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 06/01/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-13 |



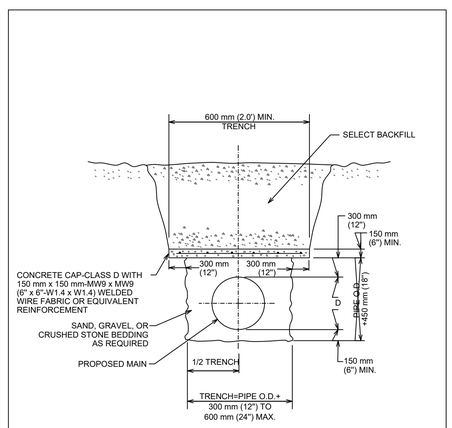

NOTE:
1. CLEAN OUT FOUNDATION SHALL MEET OR EXCEED STD, SPEC 506.5B.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | LARGE DIAMETER CLEANOUT | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-14 |




NOTES:
1. THE PLUG SHOULD BE COMPOSED OF A SANDBAG OR SIMILAR TYPE PLUG TO HOLD CLSM UNTIL SET. CLSM IS CONTROLLED LOW STRENGTH MATERIAL, STD. SPEC 402S.
2. CLSM SHALL COMPLETELY FILL VOID TO SANDBAG OR SIMILAR TYPE PLUG.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | MANHOLE ABANDONMENT | |
|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS 06/01/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>506S-15 |




| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | CONCRETE TRENCH CAP | |
|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI F. PAYNE 2/17/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>510S-1 |

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
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| | | | |
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

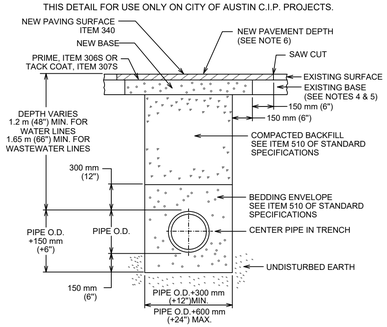
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 3 OF 9

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 26 / 48 |
| CHECKED BY: | JF | | |

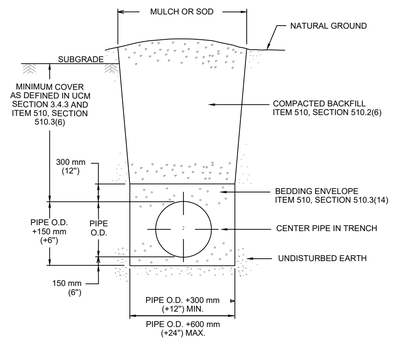
THIS DETAIL FOR USE ONLY ON CITY OF AUSTIN C.I.P. PROJECTS.




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.

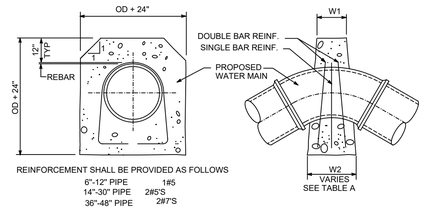
| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | TYPICAL TRENCH WITH PAVED SURFACE | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI L. FLOWERS | 8/19/02<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>510S-3 |




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<br>DEPARTMENT OF PUBLIC WORKS | | TYPICAL TRENCH DETAIL WITH UNFINISHED SURFACE | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>510S-5 |




REINFORCEMENT SHALL BE PROVIDED AS FOLLOWS

| | |
|---|---|
| 6"-12" PIPE | 1#5 |
| 14"-30" PIPE | 2#5'S |
| 36"-48" PIPE | 2#7'S |

VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

| PIPE DIA. | MIN. TOP WIDTH W1 | ANGLE (degrees) | BOTTOM WIDTH-W2 (in) |
|---|---|---|---|
| 6" | 6" | 0-5 | NOTE 2 |
| | | 5-15 | 24 |
| | | 15-25 | 48 |
| | | ► 25 | NOTE 1 |
| 8" | 6" | 0-5 | NOTE 2 |
| | | 5-9 | 30 |
| | | 9-15 | 36 |
| | | ► 15 | NOTE 1 |
| 12" | 6" | 0-5 | NOTE 2 |
| | | 5-15 | 48 |
| | | ► 15 | NOTE 1 |
| 16" | 12" | 0-5 | NOTE 2 |
| | | 5-10 | 60 |
| | | 10-15 | 96 |
| | | ► 15 | NOTE 1 |
| 24" THRU 36" DIA. | | ► 5.0 | NOTE 1 |
| 42" THRU 48" DIA. | | ► 3.0 | NOTE 1 |

NOTES:

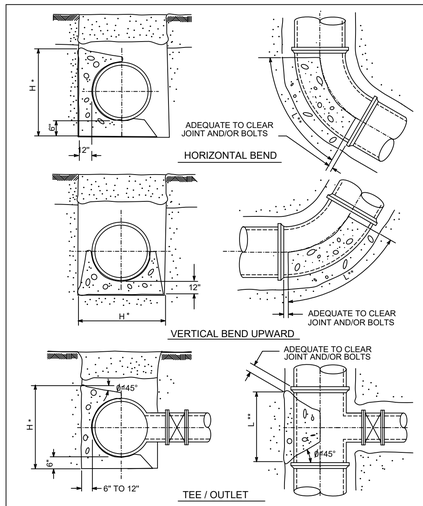
1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED

2- FOR JOINT DEFLECTIONS LESS THAN 5 DEGREES,NO HORIZONTAL OR VERTICAL THRUST RESTRAINT IS REQUIRED FOR PIPES LESS THAN 42" IN DIAMETER.

THRUST BLOCK DESIGN AS FOLLOWS
A. PRESSURE OF 150 P.S.I. (ACTUAL IF HIGHER) + 50 % SURGE ALLOWANCE
B. MAXIMIM SOIL BEARING SEE TABLE BELOW

| SOIL TYPES | PRESSURE |
|---|---|
| LOOSE OR SPONGY SOIL | 1500 Lb/Sq.Ft. |
| UNDISTURBED SOIL, CALICHE | 2000 Lb/Sq.Ft. |
| LIMESTONE ROCK | 4000 Lb/Sq.Ft. |

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | CONCRETE THRUST BLOCKING | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY JAMES E. THOMPSON | 2/11/86 | ADOPTED: 2/11/86<br>SCALE: N.T.S. | STANDARD NO.<br>510-6 |
| APPROVED | DATE | INITIAL: | 1 OF 2 |

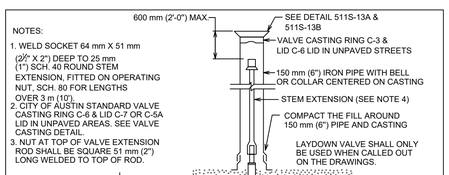



* THE DIMENSION FOR "H" MUST BE GREATER THAN DIAMETER OF THE PIPE
** LENGTH "L" ALONG THE BEND MUST BE GREATER THAN "H" AND LESS THAN 2 TIMES "H"

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | CONCRETE THRUST BLOCKING | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY JAMES E. THOMPSON | 2/11/86 | ADOPTED: 2/11/86<br>SCALE: N.T.S. | STANDARD NO.<br>510-6 |
| APPROVED | DATE | INITIAL: | 2 OF 2 |

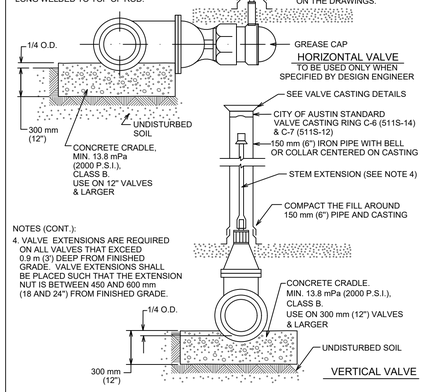
NOTES:

1. SEE DETAIL 511S-13A & 511S-13B
2. CITY OF AUSTIN STANDARD VALVE CASTING RING C-6 & LID C-7 OR C-5A LID IN UNPAVED AREAS. SEE VALVE CASTING DETAIL.
3. NUT AT TOP OF VALVE EXTENSION ROD SHALL BE SQUARE 51 mm (2") LONG WELDED TO TOP OF ROD.

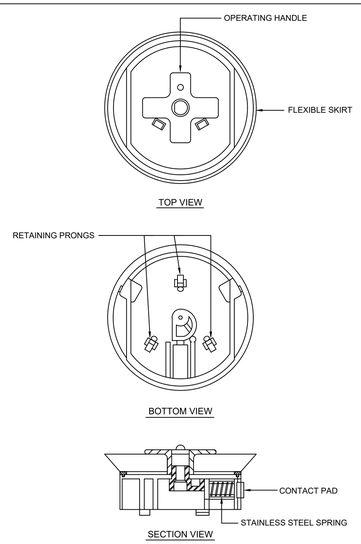



NOTES (CONT.):

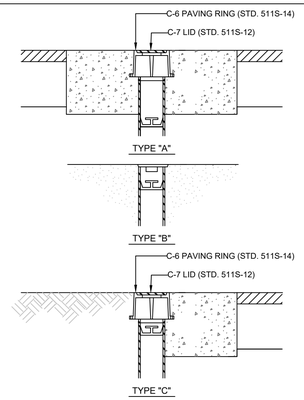
4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED 0.9 m (3') DEEP FROM FINISHED GRADE. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE EXTENSION NUT IS BETWEEN 450 AND 600 mm (18 AND 24") FROM FINISHED GRADE.




| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | | TYPICAL GATE VALVE 100 mm-600 mm (4"-24") | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI L. FLOWERS | 3/9/04<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-7 |



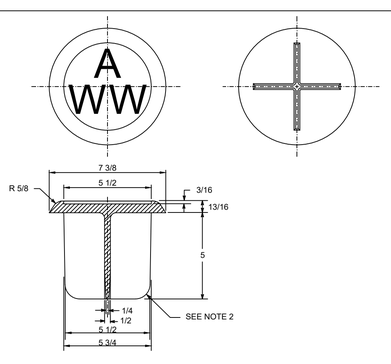

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | DEBRIS CAP INSTALLATION | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI L. FLOWERS | 12/23/02<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-10<br>1 OF 2 |




NOTES:

1. DEBRIS CAP SHALL BE INSTALLED AS CLOSE UNDER THE CAST IRON COVER WITHOUT INTERFERING WITH COVER OPERATION.
2. FLEXIBLE SKIRT SHALL BE TRIMMED TO PROVIDE A SMOOTH CONTACT WITH THE INTERIOR DIAMETER OF THE PIPE.
3. THE DEBRIS CAP SHALL BE MANUFACTURED BY SW SERVICES, INC., PHOENIX, ARIZONA OR EQUAL.
4. THE DEBRIS CAP SHALL BE COMPRISED OF A HOLLOW MEMBER HAVING A CYLINDRICAL OUTER SURFACE. A CLOSURE FOR ONE END AND THREE POINT RESILIENT CONTACT PADS PROJECTING FROM THE OUTER SURFACE. THE CAP SHALL HAVE A FLEXIBLE SKIRT PROVIDING AN OUTWARD SEAL PREVENTING DEBRIS FROM GETTING PAST THE CAP. THE CAP MUST WITHSTAND, WITHOUT SLIPPAGE, A MINIMUM VERTICAL FORCE OF 23 kg (50 lbs), AT A LOADING RATE OF 25 mm (1.0 in) PER MINUTE. THE CAP SHALL BE MOLDED USING GENERAL ELECTRIC ABS #HIM 4500. THE CAP SHALL HAVE RETAINING PRONGS TO RETAIN A STANDRAD LOCATION COIL.

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | DEBRIS CAP INSTALLATION | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI L. FLOWERS | 12/23/02<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-10<br>2 OF 2 |




NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 3/16" RADIUS
3. LETTERING SHALL BE 1 1/2" HEIGHT AND LOCATED AS SHOWN.
4. THIS LID FITS INSIDE 6" I.D. PIPE.
5. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING.
8. WEIGHT: APPROXIMATELY 13 LBS.
9. ALL DIMENSIONS IN INCHES.

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | VALVE BOX CASTING C-3 LID | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY G. L. MARTIN | 4/22/97 | ADOPTED: 9/16/88<br>SCALE: N.T.S. | STANDARD NO.<br>511-11 |
| APPROVED | DATE | INITIAL: RAM | |

DESCRIPTION: STANDARD MANUAL
REV. DATE: 2-27-97
REV. DATE: 2-10-97

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

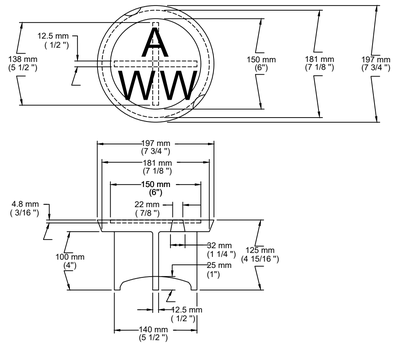
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 4 OF 9

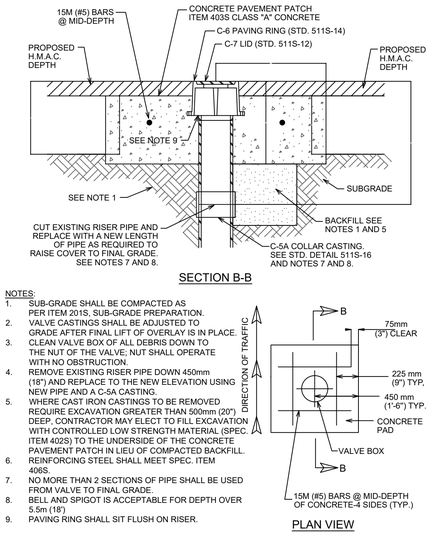
| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 27 / 48 |
| CHECKED BY: | JF | | |




NOTES:

1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. TYPICAL FILLET IS 4.8 mm ( 3/16 ") RADIUS
3. LETTERING SHALL BE 38 mm (1 1/2 ") HEIGHT AND LOCATED AS SHOWN.
4. THIS LID REQUIRES TWO (2) PICK SLOTS.
5. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID.
6. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
7. FINISH BY REMOVING FINS AND FLASHING; PAINT WITH BLACK ASPHALT COATING,
8. WEIGHT: APPROXIMATELY 6 kg (13 lbs).

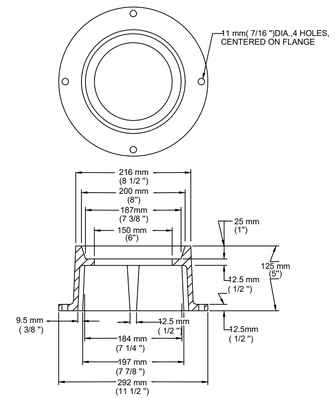
| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | VALVE BOX CASTING<br>C-7 LID | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI F. PAYNE | 4/5/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-12 |




NOTES:

1. SUB-GRADE SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. VALVE CASTINGS SHALL BE ADJUSTED TO GRADE AFTER FINAL LIFT OF OVERLAY IS IN PLACE.
3. CLEAN VALVE BOX OF ALL DEBRIS DOWN TO THE NUT OF THE VALVE; NUT SHALL OPERATE WITH NO OBSTRUCTION.
4. REMOVE EXISTING RISER PIPE DOWN 450mm (18") AND REPLACE TO THE NEW ELEVATION USING NEW PIPE AND A C-5A CASTING.
5. WHERE CAST IRON CASTINGS TO BE REMOVED REQUIRE EXCAVATION GREATER THAN 500mm (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.
6. REINFORCING STEEL SHALL MEET SPEC. ITEM 406S.
7. NO MORE THAN 2 SECTIONS OF PIPE SHALL BE USED FROM VALVE TO FINAL GRADE.
8. BELL AND SPIGOT IS ACCEPTABLE FOR DEPTH OVER 5.5m (18')
9. PAVING RING SHALL SIT FLUSH ON RISER.

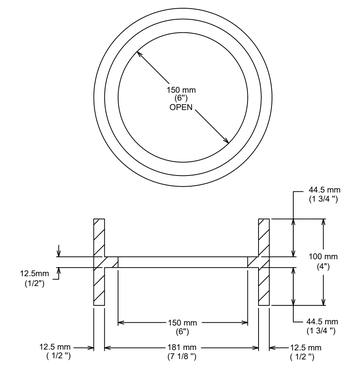
| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | | WATER VALVE BOX ADJUSTMENT TO GRADE<br>W/CONCRETE AND H.M.A.C. | |
|---|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS | 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-13B |




NOTES:

1. MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION & CASTING NUMBER & THE COUNTRY WHERE CAST SHALL BE DISTINCTLY CAST ONTO EACH RING.
3. DRAFT & SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
4. FINISH BY REMOVING FINS & FLASHING; PAINT WITH BLACK ASPHALT COATING.
5. WEIGHT: APPROXIMATELY 10.5 kg (23 lbs).

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | VALVE BOX CASTING<br>C-6 PAVING RING | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI. F. PAYNE | 4/5/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-14 |

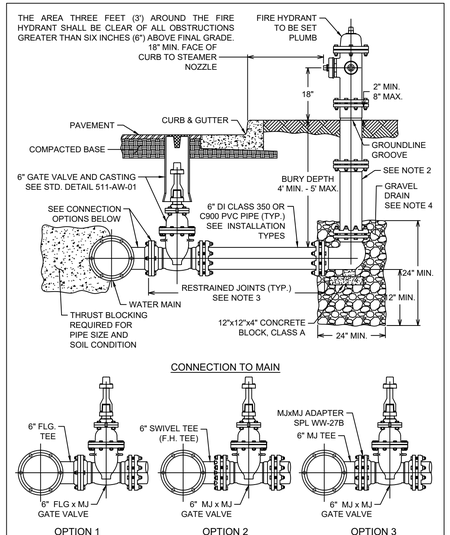



NOTES:

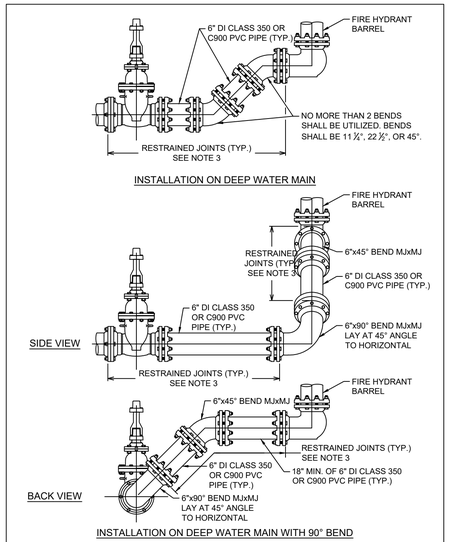
1. MATERIALS SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THIS COLLAR REQUIRED ONLY WITH BOOTS SUPPLIED PRIOR 1988
3. THE MANUFACTURER'S IDENTIFICATION & CASTING NUMBER & THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH COLLAR.
4. DRAFT & SHRINKAGE ALLOWANCE SHALL BE IN ACCORD WITH NORMAL FOUNDRY PRACTICE.
5. FINISH BY REMOVING FINS & FLASHING; PAINT WITH BLACK ASPHALT COATING.
6. WEIGHT: APPROXIMATELY 8 kg (17 lbs).

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | VALVE BOX CASTING<br>C-5A COLLAR | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KATHI F. PAYNE | 4/5/99<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511S-16 |

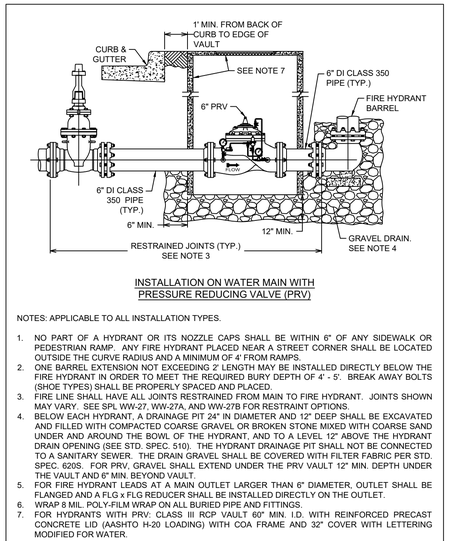
THE AREA THREE FEET (3') AROUND THE FIRE HYDRANT SHALL BE CLEAR OF ALL OBSTRUCTIONS GREATER THAN SIX INCHES (6") ABOVE FINAL GRADE.




| CITY OF AUSTIN<br>AUSTIN WATER | | FIRE HYDRANT | |
|---|---|---|---|
| *RECORD COPY SIGNED BY KATHI L FLOWERS* | *05/18/2016*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511-AW-02<br>1 OF 3 |




| CITY OF AUSTIN<br>AUSTIN WATER | | FIRE HYDRANT | |
|---|---|---|---|
| *RECORD COPY SIGNED BY KATHI L FLOWERS* | *05/18/2016*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511-AW-02<br>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. JOINTS SHOWN MAY VARY. SEE SPL WW-27, WW-27A, 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. 620S. FOR PRV, GRAVEL SHALL EXTEND UNDER THE PRV VAULT 12" MIN. DEPTH UNDER THE VAULT AND 6" MIN. BEYOND VAULT.
5. FOR FIRE HYDRANT LEADS AT A MAIN OUTLET LARGER THAN 6" DIAMETER, OUTLET SHALL BE FLANGED AND A FLG x FLG REDUCER SHALL BE INSTALLED DIRECTLY ON THE OUTLET.
6. WRAP 8 MIL. POLY-FILM WRAP ON ALL BURIED PIPE AND FITTINGS.
7. FOR HYDRANTS WITH PRV: CLASS III RCP VAULT 60" MIN. I.D. WITH REINFORCED PRECAST CONCRETE LID (AASHTO H-20 LOADING) WITH COA FRAME AND 32" COVER WITH LETTERING MODIFIED FOR WATER.

| CITY OF AUSTIN<br>AUSTIN WATER | | FIRE HYDRANT | |
|---|---|---|---|
| *RECORD COPY SIGNED BY KATHI L FLOWERS* | *05/18/2016*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511-AW-02<br>3 OF 3 |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

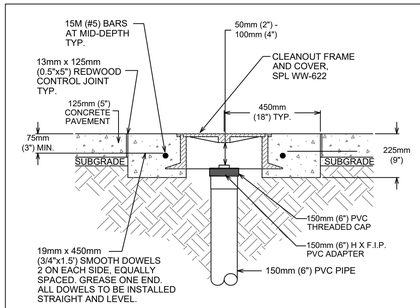
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 5 OF 9

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 28 / 48 |
| CHECKED BY: | JF | | |




PLAN VIEW

NOTES:

1. SERVICES SHALL BE DESIGNED TO AVOID CLEAN-OUT LOCATION WITHIN DRIVEWAYS.
2. THIS STANDARD DETAIL IS ONLY FOR EXISTING CLEANOUTS THAT ARE LOCATED WITHIN EXISTING DRIVEWAYS.
3. SUB-GRADE SHALL BE COMPACTED AS PER STD. SPEC. 201S, SUB-GRADE PREPARATION.
4. REINFORCING STEEL SHALL MEET ITEM 406S, REINFORCING STEEL.
5. PC CONCRETE SHALL MEET ITEM 403S CLASS "A".
6. TRAFFIC BEARING FRAME AND COVER ONLY, HEAVY DUTY.
7. PLACE CASTING IN CONCRETE, FINISH CONCRETE SMOOTH.
8. LOCATE CASTING SO WATER WILL NOT ACCUMULATE AT CASTING.
9. PVC PIPE SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-35. CLEANOUTS INSTALLED ON SDR-26 SERVICES SHALL BE A MINIMUM WALL THICKNESS AS REQUIRED BY SDR-26.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | | WASTEWATER CLEAN-OUT ADJUSTMENT<br>TO GRADE IN DRIVEWAYS | |
|---|---|---|---|
| RECORD COPY SIGNED BY<br>KATHI L FLOWERS | 06/01/10<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520S-4 |

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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

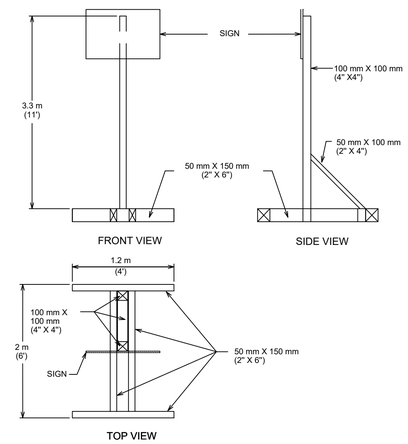
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 6 OF 9

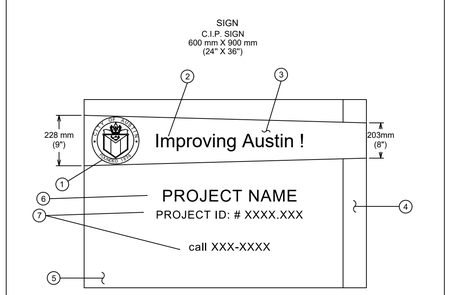
| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 29 / 48 |
| CHECKED BY: | JF | | |




NOTES:

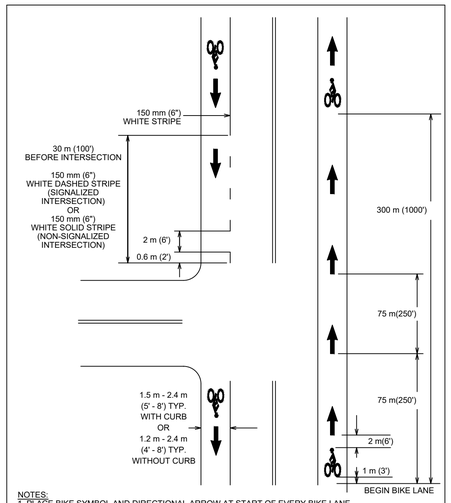
1. ALL MATERIALS SHALL BE FURNISHED BY THE CONTRACTOR.
2. LUMBER DIMENSIONS ARE NOMINAL.
3. SIGN MUST BE IN COLOR.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | 600mmx900mm (24"x36")<br>C. I. P.MOVABLE SIGN TYPE II | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KERI JUAREZ | 01/04/11<br>DATE | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>802S-2<br>1 OF 2 |



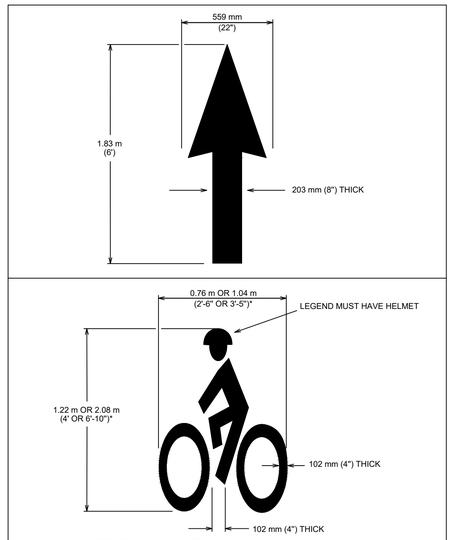

1. 225 mm (9") CITY SEAL (4 COLOR PROCESS)
2. 50 mm (2")- WHITE LETTERS
3. TRANSPARENT BLUE PAINT
4. 75 mm (3") WIDE- TRANSPARENT YELLOW PAINT STRIPE
5. HIGH INTENSITY WHITE REFLECTIVE SHEETING, .080 ALUMINUM 2290, 3M CO. OR EQUAL
6. 63 mm (2 1#2")- BLUE LETTERS
7. 25 mm (1")-BLUE LETTERS

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | 600mmx900mm (24"x36")<br>C. I. P.MOVABLE SIGN TYPE II | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>802S-2<br>2 OF 2 |



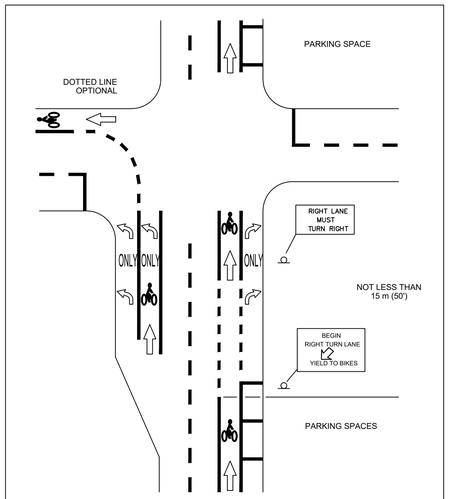

NOTES:
1. PLACE BIKE SYMBOL AND DIRECTIONAL ARROW AT START OF EVERY BIKE LANE.
2. PLACE BIKE SYMBOL AND DIRECTIONAL ARROW EVERY 300 m (1000') AND AFTER EACH INTERSECTION
3. PLACE DIRECTIONAL ARROW AT 75 m (250') INTERVALS BETWEEN BIKE SYMBOL/ARROW GROUPS.
4. LANE WIDTHS ARE MEASURED FROM CENTER OF BIKE LANE STRIPE TO THE FACE OF CURB OR EDGE OF PAVEMENT AT THE SHOULDER FOR A ROAD WITHOUT A CURB

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | BICYCLE LANE MARKINGS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY COUNG TRAN | 09/26/12<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>829S-1A<br>1 OF 2 |



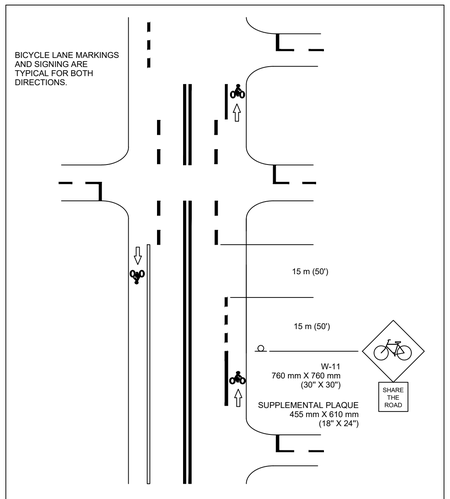

* DIMENSION IS DEPENDENT ON LANE WIDTH

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | BICYCLE LANE MARKINGS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY COUNG TRAN | 09/26/12<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>829S-1A<br>2 OF 2 |




INTERSECTION PAVEMENT MARKINGS-DESIGNATED BICYCLE LANE WITH LEFT TURN AREA, HEAVY VOLUME, PARKING, ONE-WAY TRAFFIC OR DIVIDED ROADWAY.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | BICYCLE LANE MARKINGS AND SIGNING<br>AT INTERSECTIONS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 11/13/07<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>829S-1B<br>1 OF 2 |




DESIGNATED BICYCLE LANES, HEAVY TURN MOVEMENTS SUCH AS AT INTERSECTIONS WITH FOUR-WAY STOP SIGNS OR TRAFFIC SIGNALS

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | BICYCLE LANE MARKINGS AND SIGNING<br>AT INTERSECTIONS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 11/13/07<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>829S-1B<br>2 OF 2 |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
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3/16/2021

RILEY MOUNTAIN ENGINEERING

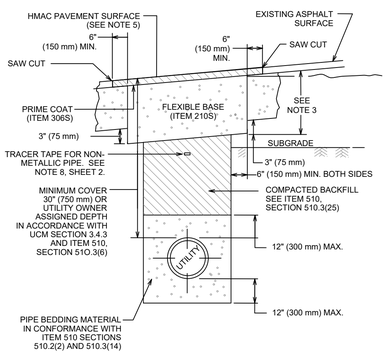
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 7 OF 9

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 30 / 48 |
| CHECKED BY: | JF | | |

## TRENCH REPAIR IN ASPHALTIC SURFACE OVER FLEXIBLE BASE (UCM SECTION 5.8.0)



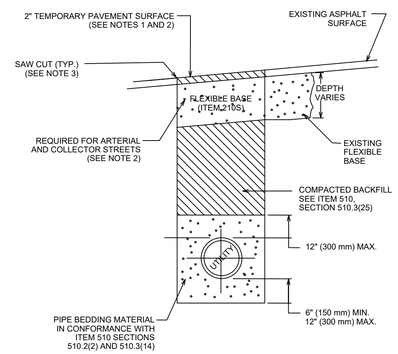

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | FLEXIBLE BASE WITH ASPHALT SURFACE<br>TRENCH REPAIR-EXISTING PAVEMENT | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KERI JUAREZ | 01/04/11 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-2<br>1 OF 2 |
| | ADOPTED | | |

NOTES:

1. THE EXISTING PAVING SURFACE SHALL BE SAW CUT IN A STRAIGHT LINE, A MINIMUM OF 12" (300 mm) WIDER THAN UNDISTURBED SIDES OF THE TRENCH AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE WITH COLD MIX AC OR TEMPORARY HMAC. TEMPORARY MIX SHALL BE PLACED OVER FLEXIBLE BASE.
3. ROAD BASE SHALL BE REPLACED IN KIND WITH BASE THICKNESS EQUAL TO EXISTING BASE THICKNESS PLUS 3" (75 mm), BUT IN NO CASE LESS THAN 12" (300 mm).
4. DAMAGED PAVEMENT OUTSIDE THE TRENCH CUT SHALL BE REMOVED AND REPLACED WITH A BASE THICKNESS OF 10" (250 mm) OR A THICKNESS MATCHING EXISTING, WHICHEVER IS GREATER.
5. REPLACEMENT AC SURFACE LAYER SHALL BE OF THE TYPE AND THICKNESS BASED ON FUNCTIONAL CLASSIFICATION.
   a) MIN. 2" (50 mm) HMAC TYPE "D" FOR TRENCH REPAIR IN LOCAL/RESIDENTIAL STREETS.
   b) MIN. 3" (75 mm) HMAC TYPE "C" FOR TRENCH REPAIR IN COLLECTOR/ARTERIAL STREETS.
   SEE ITEM 340S, SECTION 340S.4.
6. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
7. TACK COAT ALL EXPOSED EDGES AND SURFACES (SPEC ITEM 307S).
8. AS PER CITY OF AUSTIN STANDARD SPECIFICATION 510, SECTION 510.2(8)(K)5, FOR ALL NON-METALLIC PIPE, DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND A MINIMUM OF 12" (300 mm) BELOW THE SUBGRADE, OR A MINIMUM OF 18" (450 mm) BELOW FINISHED GRADE ON AREAS OUTSIDE THE LIMITS OF PAVEMENT, SHALL BE PLACED INDUCTIVE TRACER TAPE IN ACCORDANCE WITH THE MANUFACTURER'S RE-QUIREMENTS. THE TAPE SHALL BE ENCASED IN A PROTECTIVE, INERT, PLASTIC JACKET AND COLOR CODED IN ACCORDANCE WITH APWA UNIFORM COLOR CODE.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | FLEXIBLE BASE WITH ASPHALT SURFACE<br>TRENCH REPAIR-EXISTING PAVEMENT | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY KERI JUAREZ | 01/04/11 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-2<br>2 OF 2 |
| | ADOPTED | | |

## TEMPORARY TRENCH REPAIR IN ASPHALTIC SURFACE ITEM 510 SECTION 510.3 (25)(h)



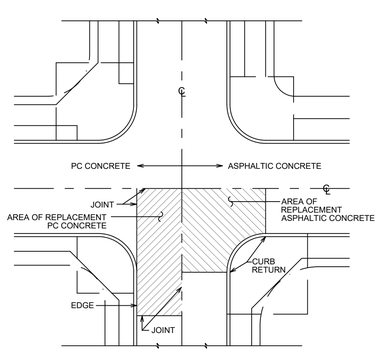

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | TEMPORARY TRENCH REPAIR-<br>ASPHALT SURFACE | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 12/09/08 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-4<br>1 OF 2 |
| | ADOPTED | | |

1. TEMPORARY PAVEMENT REPAIRS SHALL BE ALLOWED NO LONGER THAN 90 DAYS AFTER PASSING THE WATER PRESSURE AND/OR WASTEWATER MANDREL TESTS. IF TEMPORARY PAVEMENT REPAIRS ARE TO REMAIN IN PLACE FOR A PERIOD EXCEEDING 90 DAYS, ON ANY SINGLE TRENCH LINE OR INDIVIDUAL STREET, SUCH TEMPORARY PAVEMENT SHALL BE HMAC, PLACED AND COMPACTED SUFFICENTLY TO WITHSTAND THE ANTICIPATED TRAFFIC LOADS OVER THE DURATION OF THE TEMPORARY REPAIR.
2. IF EXCAVATION AREA IS OPEN FOR TEMPORARY PUBLIC USE, THE SURFACE SHALL BE MAINTAINED LEVEL WITH ADJACENT RIDING SURFACE USING COLD MIX AC IN ACCORDANCE WITH TxDOT "DMS-9203, RAPID CURING ASPHALT CONCRETE PATCHING MATERIAL" OR TEMPORARY HMAC PER COA ITEM "340S HOT MIX ASPHALTIC CONCRETE PAVEMENT". A MINIMUM OF TWO INCHES (2") OF TEMPORARY COLD MIX OR HMAC SHALL BE PLACED OVER COMPACTED BACKFILL. FLEXIBLE BASE SHALL ALSO BE REQUIRED, FOR ALL COLLECTOR OR ARTERIAL STREETS.
3. THE EXISTING CONCRETE OR ASPHALT PAVING SURFACE SHALL BE SAW CUT. SAW CUTS SHALL BE IN A STRAIGHT LINE, ALONG THE SIDES OF THE TRENCH (OR MANHOLE EXCAVATION) AND SYMMETRICAL ABOUT THE CENTER LINE OF THE EXCAVATION. ANY DAMAGED EDGES SHALL BE RE-SAW CUT IF REQUIRED BY THE OWNER.
4. HMAC OR COLD MIX SHALL BE FREE OF CONTAMINATION, AS DETERMINED BY A VISUAL INSPECTION BY THE OWNER'S REPRESENTATIVE. REFERENCE ITEM 340S SECTION 340S.10 A.
5. TEMPORARY PAVING MATERIAL MUST BE COMPACTED WITH A SMOOTH DRUM VIBRATORY ROLLER.
6. THE FINISHED SURFACE SHALL BE MAINTAINED DUST FREE AND PROVIDE A SMOOTH AND SAFE RIDING SURFACE FOR ALL VEHICLES ALONG THE ROUTE, INCLUDING, BUT NOT LIMITED TO SMALL CARS, MOTORCYCLES, MOPEDS AND BICYCLES. THE TEMPORARY SURFACE SHALL BE MAINTAINED BY THE CONTRACTOR THE ENTIRE TIME THE TEMPORARY SURFACE IS IN PLACE. DAILY MAINTENANCE SHALL BE PERFORMED BASED ON FIELD CONDITIONS AND AT THE DIRECTION OF THE OWNER'S REPRESENTATIVE, UNTIL THE FINAL PAVEMENT SURFACE IS PLACED.
7. THE TEMPORARY PAVEMENT SURFACE SHALL HAVE A MAXIMUM ALLOWABLE DEVIATION OF ½" ABOVE OR BELOW THE EXISTING PAVEMENT SURFACE DIRECTLY ADJACENT TO THE PATCH.
8. ANY PORTIONS OF THE TEMPORARY PAVEMENT SURFACE THAT HAVE SETTLED, BECOME DAMAGED, OR DETERIORATED MUST BE REPAIRED BY REMOVING THE EXISTING TEMPORARY SURFACE MATERIAL TO A MINIMUM DEPTH OF 2" BELOW THE SURFACE ELEVATION PRIOR TO REPLACING AND RECOMPACTING NEW COLD MIX/HOT MIX IN THE EXCAVATION AREA.
9. IF IT IS DETERMINED DURING CORRECTIVE ACTION THAT SOFT, SATURATED AND/OR UNSTABLE SUBSURFACE SOILS ARE CONTRIBUTING TO THE FAILURE OF THE TEMPORARY PAVEMENT SECTION, THE UNSUITABLE MATERIALS MUST BE REMOVED AND REPLACED WITH BACKFILL SOILS FREE OF ORGANICS, STONES OR ROCKS OVER 8 INCHES, AND HAVING A PLASTICITY INDEX OF 20 OR LESS, AND SHALL HAVE A MC WITHIN 2% OF OPTIMUM, PRIOR TO REPLACING THE TEMPORARY PAVEMENT SURFACE.
10. CLASS "J" PC CONCRETE (ITEM 403S) OR CONTROLLED LOW STRENGTH MATERIAL (CLSM) MAY BE SUBSTITUTED IN THESE REPAIRS FOR THE FLEXIBLE BASE AND COMPACTED BACKFILL. PC CONCRETE GREATER THAN A 2 SACK MIX WILL NOT BE ALLOWED.
11. ALL EXISTING ROADWAY STRIPING AND PAVEMENT MARKINGS REMOVED OR DAMAGED BY THE CONTRACTOR'S WORK SHALL BE RESTORED PRIOR TO OPENING THE STREET TO TRAFFIC.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | TEMPORARY TRENCH REPAIR-<br>ASPHALT SURFACE | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 12/09/08 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-4<br>2 OF 2 |
| | ADOPTED | | |

## REPAIR OF NEW STREETS and ARTERIAL STREETS in GOOD CONDITION (UCM SECTION 5.3.3 and 5.3.4)

### TYPICAL RESTORATION FOR EXCAVATION IN INTERSECTIONS




TYPICAL PLAN

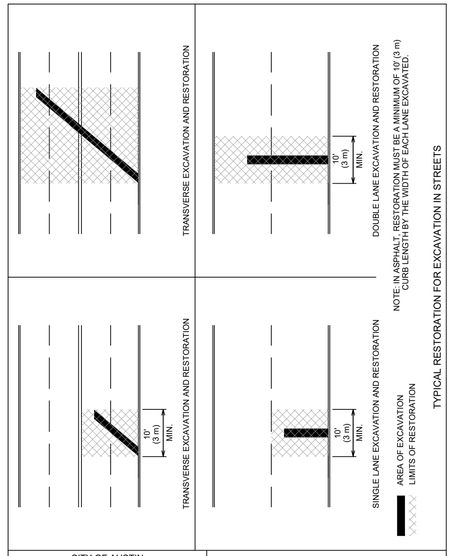
TRENCH REPAIRS WITHIN PORTLAND CEMENT CONCRETE PAVEMENTS NOTE:

IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, THEN THE ENTIRE CONCRETE SLAB FROM JOINT TO JOINT AND JOINT TO EDGE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE DIRECTOR.

TRENCH REPAIRS WITHIN ASPHALTIC CONCRETE PAVEMENTS NOTES:

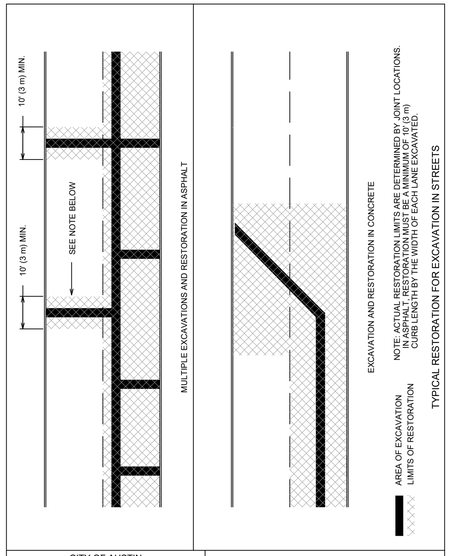
1. IF ANY PART OF THE TRENCH REPAIR FALLS WITHIN AN INTERSECTION, DEFINED FROM CURB RETURN TO CURB RETURN, THE ENTIRE QUADRANT OF THE EXISTING SURFACE SHALL BE REPLACED, UNLESS OTHERWISE DIRECTED IN WRITING BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. A QUADRANT IS DEFINED AS THE CROSS-HATCHED AREA IN THE ABOVE DETAIL.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | STREET REPAIR REQUIREMENTS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 9/14/05 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-7<br>1 OF 3 |
| | ADOPTED | | |




TYPICAL RESTORATION FOR EXCAVATION IN STREETS

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | STREET REPAIR REQUIREMENTS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 9/14/05 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-7<br>2 OF 3 |
| | ADOPTED | | |




TYPICAL RESTORATION FOR EXCAVATION IN STREETS

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | STREET REPAIR REQUIREMENTS | |
|---|---|---|---|
| RECORD COPY SIGNED<br>BY BILL GARDNER | 9/14/05 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>1100S-7<br>3 OF 3 |
| | ADOPTED | | |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

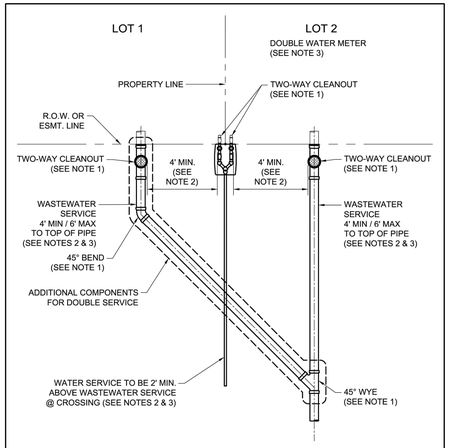
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 8 OF 9

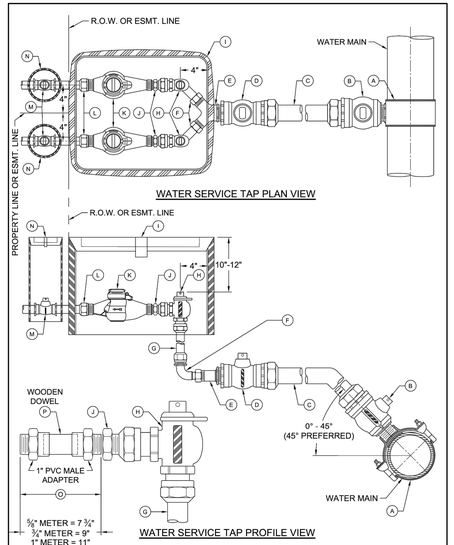
| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NTS |
| DRAWN BY: | JN | SHEET NUMBER | 31 / 48 |
| CHECKED BY: | JF | | |




NOTES:

1. WASTEWATER SERVICE FITTINGS SHALL BE APPROVED FOR USE WITH THIS DETAIL AS LISTED ON SPL WW-227B-1.
2. UTILIZE EXISTING ALIGNMENT FOR REPAIR OR REPLACEMENT OF EXISTING WATER AND WASTEWATER SERVICES. WATER SERVICE SHALL BE INSTALLED AT A SHALLOWER GRADE THAN WASTEWATER SERVICE.
3. SEE STANDARD DETAIL 520-AW-01B FOR WATER SERVICE INSTALLATION AND 520-AW-01C FOR WASTEWATER SERVICE INSTALLATION.

| CITY OF AUSTIN<br>AUSTIN WATER | WATER / WASTEWATER SERVICE ON COMMON LOT LINE | |
|---|---|---|
| *RECORD COPY SIGNED*<br>*JEFF A. KYLE* *11/07/2018*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01A<br>1 OF 1 |




| CITY OF AUSTIN<br>AUSTIN WATER | WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS | |
|---|---|---|
| *JEFF A. KYLE* *08/16/2019*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01B<br>1 OF 2 |

MATERIALS LIST:

A. 2" SERVICE CLAMP, SPL WW-264
B. 2" CORPORATION STOP, SPL WW-68
C. 2" HDPE WATER SERVICE TUBING, SPL WW-65
D. 2" BALL VALVE, SPL WW-68
E. SINGLE SERVICE: 2" MIP X 1" COPPER FLARE FITTING, SPL WW-68 OR
DOUBLE SERVICE: 2" MIP X 1" COPPER FLARE WYE, SPL WW-68
F. 1" SWIVEL NUT x 1" COMPRESSION 90° BEND, SPL WW-68
G. 1" HDPE WATER SERVICE TUBING, SPL WW-65
H. 1" ANGLE METER STOP, SPL WW-68
I. METER BOX AND LID, SPL WW-145A;
FOR DUAL 1" METERS: USE TWO SINGLE METER BOXES

MATERIALS TO BE INSTALLED BY PLUMBER:

J. BRASS METER BUSHING - SIZE AS NEEDED TO CONNECT ANGLE METER STOP TO METER
K. WATER METER PURCHASED FROM AUSTIN WATER
L. BRASS WATER METER COUPLING MALE IPT x SWIVEL COUPLING NUT:
⅝" AND ¾" METERS: 8 ½" LONG x ¾" DIA.
1" METERS: 8 ½" LONG x 1" DIA.
M. PROPERTY OWNER'S CUT OFF VALVE, SPL WW-276
N. PROPERTY OWNER'S CUT OFF VALVE BOX AND LID
O. TEMPORARY METER SPACER (REQUIRED TO ASSURE METER WILL FIT APPROPRIATELY)
P. 1" WOODEN DOWEL (SHOW ADDRESS ON DOWEL USING WATERPROOF MARKER)

NOTES:

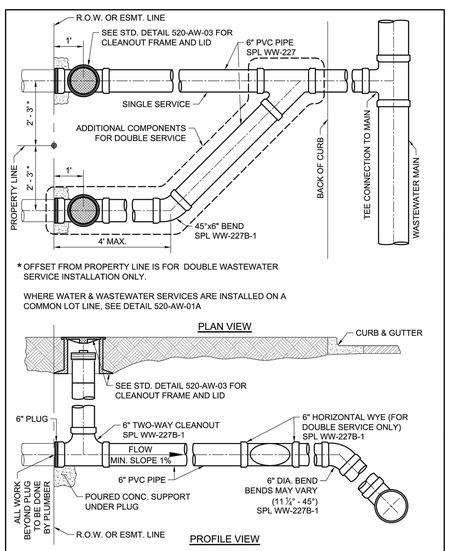
1. SERVICE CLAMP SHALL BE WRAPPED COMPLETELY WITH 8 MIL. POLYETHYLENE FILM, SPL WW-27D.
2. BRANCH CONNECTIONS AND ALL ANGLE METER STOPS MUST BE INSTALLED PRIOR TO ANY METER INSTALLATION.
3. TOP OF METER BOXES SHOULD BE 4" ABOVE GROUND.
4. PIPING AND TUBING IN STREET RIGHT-OF-WAY SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY SECTION 510.3 (14) OF THE CITY OF AUSTIN STANDARD SPECIFICATIONS; BACKFILL ABOVE GRANULAR BEDDING AS REQUIRED BY SECTION 510.3 (25).
5. METER BOX MUST BE BEHIND CURB NEXT TO PROPERTY LINE OR EASEMENT AND OUT OF VEHICULAR TRAFFIC AREA AND SIDEWALK.
6. BALL VALVE "D" SHALL NOT BE LOCATED UNDER SIDEWALK, CURB, OR PAVEMENT, AND NOT BE LOCATED MORE THAN 36" BELOW FINAL GRADE.
7. METER SIZES TO BE SHOWN ON PLANS.
8. METER BOX CUT OUTS SHALL NOT EXCEED TWO TIMES THE PIPE DIAMETER.
9. INSTALL METALLIC TRACER TAPE, SPL WW-597, MINIMUM 1' ABOVE TUBING FROM SERVICE CLAMP "A" TO BALL VALVE "D".
10. TUBING SHALL BE PLACED IN A STRAIGHT ALIGNMENT AND ALLOWED TO RELAX AND "SNAKE" LOOSELY IN THE TRENCH. TUBING BEHIND CURB AND GUTTER SHALL BE INSTALLED WITH A MINIMUM 2' DEPTH OF COVER.
11. 1" TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN 3'. 2" TUBING, WHEN BENT, SHALL HAVE A RADIUS NO SMALLER THAN 5'. BRASS FITTINGS SHALL NOT BE CONNECTED TO A BENT SECTION OF TUBING.
12. SOLID, TUBULAR STAINLESS STEEL INSERT STIFFENERS FOR HDPE TUBING SHALL BE USED AT ALL COMPRESSION FITTINGS. INSERT STIFFENERS SHALL BE FROM THE SAME MANUFACTURER AS THE COMPRESSION FITTING USED.
13. FOR RECLAIMED WATER SERVICES AND METERS, ALL RECLAIMED TUBING SHALL BE MANUFACTURED SOLID PURPLE, SPL WW-65A. ALL APPURTENANCES SHALL BE MANUFACTURED PURPLE IF AVAILABLE. ALL FITTINGS THAT ARE NOT AVAILABLE FROM THE MANUFACTURER IN PURPLE SHALL BE PAINTED PURPLE PER SPL WW-3C. ALL METER BOX LIDS SHALL BE PURPLE AND HAVE **"RECLAIMED WATER"** CAST INTO THEM, SPL WW-145A.

| CITY OF AUSTIN<br>AUSTIN WATER | WATER SERVICE & METER INSTALLATION - 1" & SMALLER METERS | |
|---|---|---|
| *JEFF A. KYLE* *08/16/2019*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01B<br>2 OF 2 |

| Water & Wastewater Service Separation less than 9' | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| STREET | ADDRESS | | | | | | | | | |
| BEVERLY | 3102 | 3104 | 3200 | 3201 | 3203 | 3204 | 3208 | 3214 | 3302 | 3311 | 3313 |

AW GENERAL NOTES:

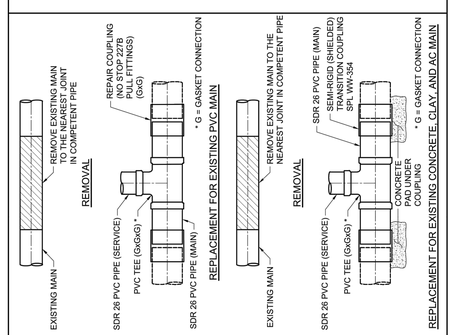
1. FOR ANY INSTALLATION, REPAIR AND/OR REPLACEMENT OF WATER SERVICES, MATERIALS AS CURRENTLY LISTED BY AW'S STANDARD PRODUCTS LISTS (SPL'S) SHALL BE USED, AND AW'S CURRENT STANDARDS FOR WATER SERVICE INSTALLATIONS SHALL BE FOLLOWED. IF IT IS DETERMINED DURING A WATER SERVICE INSTALLATION, REPAIR OR REPLACEMENT THAT AN ADJACENT WASTEWATER SERVICE IS DAMAGED OR LEAKING AND IS WITHIN 2'V / 4'H OF THE WATER SERVICE, THEN THE WASTEWATER SERVICE SHALL BE COMPLETELY REPLACED FROM THE WASTEWATER MAIN TO THE CLEANOUT AS DETERMINED BY NOTES 2 AND 3 BELOW.
2. FOR ANY INSTALLATION, REPAIR AND/OR REPLACEMENT OF WASTEWATER SERVICES, MATERIALS AS CURRENTLY LISTED BY AW'S SPL'S SHALL BE USED, AND AW'S CURRENT STANDARDS FOR WASTEWATER SERVICE INSTALLATIONS SHALL BE FOLLOWED. IF IT IS DETERMINED DURING A WASTEWATER SERVICE REPAIR THAT A WATER SERVICES EXISTS WITHIN 2'V / 4' FOR THE WASTEWATER SERVICE, THEN THE WASTEWATER SERVICE SHALL BE COMPLETELY REPLACED FROM THE WASTEWATER MAIN TO THE CLEANOUT, INCLUDING PROVISIONS DEFINED WITHIN NOTE 3 BELOW. IF IT IS DETERMINED DURING A WASTEWATER SERVICE REPLACEMENT THAT AN ADJACENT WATER SERVICE IS DAMAGED OR LEAKING, THE WATER SERVICE SHALL ALSO BE COMPLETELY REPLACED FROM THE CORPORATION STOP TO THE METER AS DEFINED BY NOTE 1 ABOVE.
3. ALL PVC FITTINGS (TEES, WYES, BENDS AND CLEANOUTS) USED FOR WASTEWATER SERVICE INSTALLATIONS THAT ARE WITHIN 2'V / 4'H OF AN ADJACENT WATER SERVICE SHALL BE LISTED ON SPL-WW-227B AND SHALL BE CERTIFIED BY NSF TO MEET ASTM D3212 FOR 200 PSI.



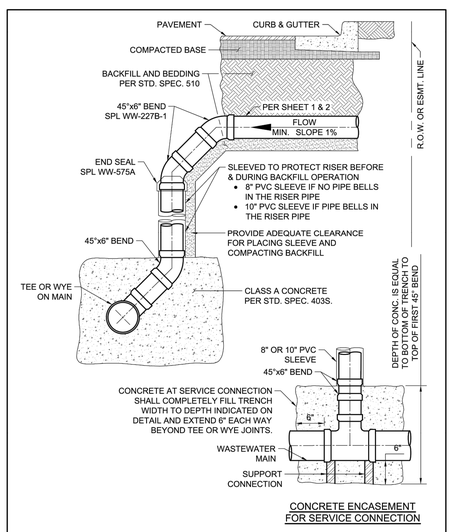

| CITY OF AUSTIN<br>AUSTIN WATER | SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION | |
|---|---|---|
| *RECORD COPY SIGNED*<br>*JEFF A. KYLE* *11/07/2018*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01C<br>1 OF 4 |

NOTES:

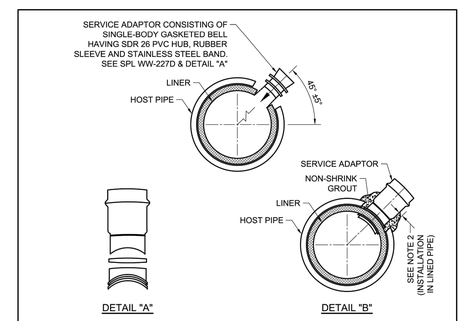
1. DURING SUBDIVISION CONSTRUCTION, UTILITY CONTRACTOR INSTALLS WASTEWATER TEE CONNECTION TO MAIN, 6" STUB, HORIZONTAL WYE FOR DOUBLE SERVICES, 6" SERVICE BRANCH WITH TWO-WAY CLEANOUT(S) AND RISER, FRAME, AND COVER. CLEANOUT(S) TO BE PLUGGED AT PROPERTY LINE OR EASEMENT LINE END. ALL WASTEWATER PIPING SHALL HAVE ELASTOMERIC GASKET TYPE JOINTS AND SLOPE DOWNWARD TO MAIN 1% MIN. TO 45° MAX. DEPTH OF SERVICE AT PROPERTY LINE WILL BE SHOWN ON PLANS BY ENGINEER IF GREATER THAN 4', OTHERWISE THE INSTALLED DEPTH WILL BE 4' MIN. AND 6' MAX. AT PROPERTY LINE. IF WASTEWATER SERVICE LINE TO MAIN REQUIRES DEFLECTION EXCEEDING 45°, SEE SHEET 3 OF 4.
2. PIPING IN STREET RIGHT-OF-WAY AND IN EASEMENT AREA SHALL BE BEDDED IN GRANULAR MATERIALS AS REQUIRED BY CITY OF AUSTIN STANDARD SPECIFICATION 510.3 (14); MATERIALS SHALL BE AS SPECIFIED IN 510.2 (2)(A) AND (3)(B); BACKFILL ABOVE THE GRANULAR BEDDING SHALL BE AS REQUIRED BY SECTION 510.3 (25). SERVICE LINES IN THESE AREAS SHALL HAVE A MIN. COVER BELOW FINAL STREET GRADE OF 42".
3. PLUMBER SHALL REMOVE PLUG AND CONNECT TO TWO-WAY CLEANOUT. NO CONNECTION TO CLEANOUT STACK IS ALLOWED.




| CITY OF AUSTIN<br>AUSTIN WATER | SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION | |
|---|---|---|
| *RECORD COPY SIGNED*<br>*JEFF A. KYLE* *11/07/2018*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01C<br>2 OF 4 |




| CITY OF AUSTIN<br>AUSTIN WATER | SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION | |
|---|---|---|
| *RECORD COPY SIGNED*<br>*JEFF A. KYLE* *11/07/2018*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01C<br>3 OF 4 |




INSTALLATION IN LINED PIPE:

1. MARK LOCATION OF TAP.
2. BREAK & REMOVE HOST PIPE SO THAT OPENING IS AT LEAST 2" BUT NO MORE THAN 3" WIDER THAN DIAMETER OF THE SERVICE ADAPTOR.
3. DO NOT DAMAGE LINER.
4. CORE HOLE THROUGH LINER USING ADAPTOR MANUFACTURER RECOMMENDED BIT.
5. INSTALL SERVICE ADAPTOR.
6. HOLES CUT IN HOST PIPE SHALL BE PACKED WITH NON-SHRINK GROUT (ASTM C1107 GRADE). SEE DETAIL "B"

NOTES:

1. USE ONLY TO TAP EXISTING LINED PIPE.
2. SEE APPROPRIATE STD. FOR SERVICE LINE INFORMATION.
3. THE EDGE OF THE CORE HOLE MUST BE AT LEAST 3" FROM THE ENDS OF THE PIPE, ANY OTHER CORE SERVICE CONNECTIONS, AND ANY FITTINGS.
4. FOR DEEP SERVICE APPLICATIONS SEE SHEET 3 OF 4, EXCEPT SUBSTITUTE A CORED HOLE, AND SERVICE ADAPTOR FOR THE TEE OR WYE.
5. SERVICE CONNECTIONS TO MANHOLES MUST BE MADE USING A PIPE-TO-MANHOLE CONNECTOR WHICH LIMITS THE PIPE SLOPE INTO THE MANHOLE TO 12% MAX.

6" WASTEWATER CONNECTION TO EXISTING LINED MAIN

| CITY OF AUSTIN<br>AUSTIN WATER | SINGLE AND DOUBLE WASTEWATER SERVICE CONNECTION | |
|---|---|---|
| *RECORD COPY SIGNED*<br>*JEFF A. KYLE* *11/07/2018*<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>520-AW-01C<br>4 OF 4 |

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| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

STANDARD DETAILS
SHEET 9 OF 9

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | |
| DRAWN BY: | JN | NTS | |
| CHECKED BY: | JF | SHEET NUMBER | 32 / 48 |

## RIGHT OF WAY MANAGEMENT STANDARD NOTES

1. Contractor shall have an approved right of way (ROW) permit and traffic control plan (TCP) in electronic or paper formats on site at all times when working in the ROW.
2. Contractor shall provide notification, as per the latest Mobility Guidelines (MG-04).
3. Unless otherwise approved by the ROW Division of Austin Transportation Department (ATD): a.) Only one phase of a TCP may be set at any one time, and b.) Initial setup and phase changes of long-term work zones shall be installed on weekends.
4. Once traffic control has been set, the authorized and competent representative from the project team/barricade company will complete and upload the "Contractor's Self-Inspection Checklist" form. See form and detailed instructions here: https://www.austintexas.gov/page/rightway-traffic-control
5. For ROW violations, an investigation fee will be assessed for each offense until the violation is corrected. See current fee schedule here: https://www.austintexas.gov/sites/default/files/files/Transportation/Right_of_Way/Approved_ROW_Fees.pdf
6. Excavations shall be backfilled or plated when required to open to traffic. Temporary paving shall be done according to City of Austin Standard Detail 1100S-4 (for HMAC or PCC pavements). For excavations exceeding a transverse width of 5 feet, the contractor shall provide an engineered plating plan for review by the City.
7. Pedestrian routes in and around the work zone, including construction entrances, temporary walking paths, bypasses, covered walkways, and detours, must remain accessible and ADA compliant throughout the project.
8. All applicable safeguards shall be in place per Chapter 33 of the International Building Code, to include pedestrian protections per Section 3306.
9. "Construction Entrance Ahead" signs must be placed at all approaches to construction entrances, unless otherwise shown on the approved TCP.
10. Existing driveways shall not be closed except with advance notice to the affected businesses/residences and approval from the ROW Division of ATD.
11. All traffic control devices including protective barriers must be crashworthy and installed according to the manufacturer's guidelines. Crashworthiness shall be determined per MASH testing requirements.
12. Overnight protection of work zones and storage of material/equipment shall be according to COA Standard Detail 804S-4.
13. The name of the barricade contractor shall be shown on the non-reflective surface of all traffic control devices in accordance with COA Standard Detail 804S-5.
14. The City's traffic engineer or inspector may make or require field adjustments to address issues of safety and mobility.
15. If existing Capital Metro bus stops are within the temporary traffic control or detour area, the contractor shall contact Capital Metro (Laurie Michel at 512-621-5713 (Mobile)/ 512-369-7701 (Work), Laurie.Michel@capmetro.org), or ~service.impacts@capmetro.org, two (2) weeks prior to setting up the traffic control devices in order to coordinate potential bus-stop relocation or any other related issues.
16. If existing signalized intersections are within the temporary traffic control area, the contractor shall contact ATD – Signals Division at 974-4075, one week prior to setting traffic control devices.
17. The right of way shall be returned to full use at the end of the approved work hours.
18. Contractors shall adhere to all ROW special event activity restrictions, as per the latest Mobility Guidelines (MG-08).
19. Projects that are routed through the DAPCZ process are required to coordinate with the Office of Special Events (512-9741000 or TransportationSpecialEvents@austintexas.gov), in conjunction with the ROW Division of ATD. Visit City Stage for scheduled events for all of Austin.
20. Pursuant to City Code 9-2-3, ROW work must not make noise audible to an adjacent business or residence between 10:30pm and 7:00am or operate a machine that separates, gathers, grades, loads, or unloads sand, rock, or gravel within 600 feet of a residence, church, hospital, hotel, or motel between 7:00pm and 6:00am, except for installation of concrete authorized by a separate non-peak hour concrete pour permit issued under City Code section 9-2-21.

## SUPPLEMENTAL TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. WHERE ACTIVITIES OCCUPY AN ARTERIAL ROADWAY FOR THREE OR MORE DAYS, ONE WEEK ADVANCE PUBLIC NOTIFICATION MUST BE PROVIDED IN THE FORMS DESCRIBED BELOW. CLOSURES THAT CHANGE IN SCOPE OR NATURE MUST ALLOW A FULL WEEK TO PROVIDE RE-NOTICE OF THE PLANNED ACTIVITY, PRIOR TO STARTING WORK.
   A. ELECTRONIC CHANGEABLE MESSAGE BOARDS.
   B. WRITTEN NOTICE TO AFFECTED PARTIES (RESIDENTS AND BUSINESSES) WITHIN THE CLOSURE.
   C. NOTIFICATION SENT TO THE MEDIA DESCRIBING THE ACTIVITY AND ITS' DURATION, ALONG WITH A VISUAL MAP OF THE CLOSURE AREA. CONDUCT MEDIA AVAILABILITY AS NEEDED.
   D. NOTIFICATION SENT TO THE DOWNTOWN AUSTIN ALLIANCE TRANSPORTATION AND AUSTIN CHAMBER OF COMMERCE REPRESENTATIVES FOR CLOSURES IN THE DOWNTOWN AUSTIN PROJECT COORDINATION AREA.
   E. NOTIFICATION TO THE CITY'S CPIO OFFICE AND 311 SYSTEM (FRANCES HARGROVE) OF UP COMING CONSTRUCTION WORK IN PUBLIC RIGHT OF WAY.
3. CONTRACTOR SHALL ABIDE BY CITY OF AUSTIN NOISE ORDINANCE AT ALL TIMES.
4. THERE ARE SEVERAL CAPITAL METRO BUS STOPS ON EXPOSITION BLVD AND CONTRACTOR SHALL COORDINATE WORK IMPACTING THESE BUS STOPS WITH CAPITAL METRO. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO LANE CLOSURES ADJACENT TO BUS STOPS.
5. FOR TEMPORARY LANE CLOSURES WHEN PAVING AND WHEN WORKING IN INTERSECTIONS, THE CONTRACTOR SHALL PROVIDE ONE (1) FULL-TIME OFF-DUTY, UNIFORMED CERTIFIED PEACE OFFICER AND ONE (1) VEHICLE OF THE TYPE APPROVED BY OWNER'S REPRESENTATIVE AS PART OF THE TRAFFIC CONTROL OPERATIONS. THE PEACE OFFICER SHALL BE ABLE TO SHOW PROOF OF CERTIFICATION BY THE TEXAS COMMISSION ON LAW ENFORCEMENT OFFICER STANDARDS
6. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO INFORM DRIVERS OF THE LOCATIONS OF ALL BUSINESS DRIVEWAYS.
7. WHERE REQUIRED, "NO PARKING, TOW AWAY" SIGNS SHALL BE PLACED 48 HOURS IN ADVANCE OF ASSOCIATED LANE OR ROAD CLOSURES.
8. PEDESTRIAN FENCING, AS PER COA STANDARD 804S-4 1 AND 2 OF 8, SHALL BE USED ALONG ALL WORK AREAS TO SEPARATE PEDESTRIANS FROM THE WORK AREAS.
9. WHERE SIDEWALKS OR WELL DEFINED PATHWAYS ARE PRESENT, ADA COMPLIANT SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS DEPENDING ON WORK DURATIONS SHALL BE PROVIDED ANYTIME THESE SIDEWALKS OR PATHWAYS ARE OBSTRUCTED BY WORK ACTIVITIES.
10. SIDEWALK AND CROSSWALK CLOSURES SHALL BE INSTALLED AS PER COA STANDARD 804S-1 4 OF 9 WHEN CONSTRUCTION ACTIVITIES AND TEMPORARY PEDESTRIAN FENCING BLOCK ACCESS, LIMITED TO ONE BLOCK AT A TIME.
11. MINIMUM 3:1 SAFETY SLOPE SHALL BE MAINTAINED AS PER COA STANDARD 804S-4 4 OF 9. FOR EXCAVATIONS EXCEEDING 6 FEET THE CONTRACTOR SHALL REFER TO STANDARD SPECIFICATION SECTIONS 803S .1, .2, .4, .5, AND .7 BEFORE STARTING ANY WORK IN THE ROW. IF ROADWAY WILL BE OPENED TO TRAFFIC (ADJACENT TO OR OVER EXCAVATED AREA) EXCAVATION SHALL BE BACKFILLED AND COLD MIXED AS CONSTRUCTION PROGRESSES WITH LAST 30 FEET PLATED (COA STANDARD 804S-4 5, 6, AND 7 OF 9) TO MEET COA SAFETY SLOPE REQUIREMENTS. ALL TEMPORARY EXCAVATION REPAIRS SHALL BE IN ACCORDANCE WITH PLANS AND CONTRACT DOCUMENTS.
12. THE FIVE CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION SHALL BE:
   A. LONG-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN 3 DAYS.
   B. INTERMEDIATE-TERM STATIONARY IS WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 DAYS OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.
   C. SHORT-TERM STATIONARY IS DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR, BUT LESS THAN 12 HOURS.
   D. SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
   E. MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.
13. FOR LONG-TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED AND APPROPRIATE TEMPORARY PAVEMENT MARKING PUT IN THEIR PLACE. SEE 804S-3 FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS
14. SINCE LONG-TERM OPERATIONS EXTEND INTO NIGHTTIME, RETRO REFLECTIVE AND/OR ILLUMINATED DEVICES, AND DRUMS OR EDGE LINE CHANNELIZERS SHALL BE USED IN LONG-TERM STATIONARY TEMPORARY TRAFFIC CONTROL ZONES.
15. FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZING SHALL BE MADE DOMINATE BY USING VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTER LINE STRIPE. IN SUCH SITUATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 10 FT. SHALL BE MAINTAINED.
16. SINCE INTERMEDIATE-TERM OPERATIONS EXTEND INTO NIGHTTIME, RETRO REFLECTIVE AND/OR ILLUMINATED DEVICES SHALL BE USED IN INTERMEDIATE TERM STATIONARY TEMPORARY TRAFFIC CONTROL ZONES.
17. THE CITY'S GENERAL CONTRACTOR SHALL MAINTAIN BARRICADES FOR USE BY OTHERS TO INSTALL THIRD PARTY UTILITY CONDUIT WITHIN EXPOSITION BLVD CONCURRENT WITH OR FOLLOWING THE CONTRACTOR'S WORK. THE THIRD PARTY UTILITY INSTALLATION BY OTHERS SHALL BE COORDINATED WITH THE CONTRACTOR'S WORK BY THE OWNER'S REPRESENTATIVE AND THE THIRD PARTY UTILITY SHALL NOT IMPEDE OR DELAY THE WORK OF THE GENERAL CONTRACTOR. THE THIRD PARTY UTILITY WILL BE RESPONSIBLE FOR THEIR TRENCH REPAIR. THE CITY'S GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRENCH REPAIR. THE CITY'S GENERAL CONTRACTOR SHALL NOT BE PAID DIRECTLY FOR THIS WORK; IT SHALL BE SUBSIDIARY TO SECTION 510.

### STREET

| STREET | CLASSIFICATION | STREET FROM | STREET TO | POSTED SPEED LIMIT | PLANNED IMPROVEMENTS | TRAFFIC CONTROL PLAN SHEET | ALLOWED BARRICADING HOURS | DURATION | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| Beverly | Urban | W. 30th Street | W. 32nd Street | 25 | Waterline Construction | 42 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |
| Beverly | Urban | W. 32nd Street | W. 33rd Street | 25 | Waterline Construction | 42-43 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |
| Beverly | Urban | W. 33rd Street | W. 34th Street | 25 | Waterline Construction | 43 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |
| Beverly | Urban | W. 30th Street | W. 32nd Street | 25 | Wastewater Construction | 44 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |
| Beverly | Urban | W. 32nd Street | W. 33rd Street | 25 | Wastewater Construction | 44-45 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |
| Beverly | Urban | W. 33rd Street | W. 34th Street | 25 | Wastewater Construction | 45 | Long Term Stationary, 24/hrs/day, 7/days/week | 2-3 weeks | |

### INTERSECTIONS

| STREET INTERSECTION | INTERSECTING STREET SPEED LIMIT | PLANNED IMPROVEMENTS | TRAFFIC CONTROL PLAN SHEET | ALLOWED BARRICADING HOURS | COMMENTS |
|---|---|---|---|---|---|
| Beverly/W. 30th Street | 25 | Water/Wastewater Construction | 38 | Intermediate Term Stationary; weekends only 7pm Friday to 5am Monday | |
| Beverly/W. 32nd Street | 25 | Water/Wastewater Construction | 36 | Intermediate Term Stationary; weekends only 7pm Friday to 5am Monday | |
| Beverly/W. 33rd Street | 25 | Water/Wastewater Construction | 37 | Intermediate Term Stationary; weekends only 7pm Friday to 5am Monday | |
| Beverly/W. 34th Street | 25 | Water/Wastewater Construction | 35 | Intermediate Term Stationary; weekends only 7pm Friday to 5am Monday | |

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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

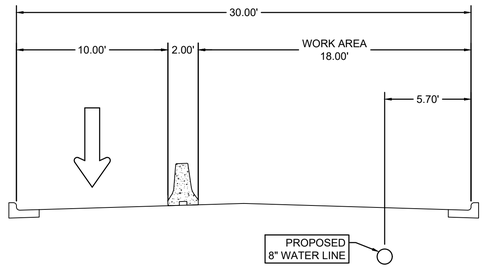
RILEY MOUNTAIN ENGINEERING

16223

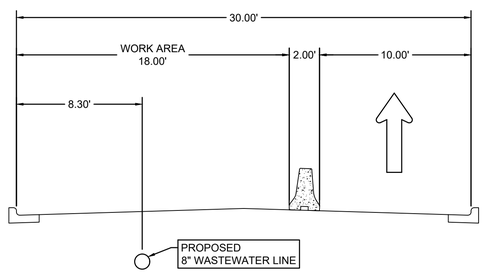
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL PLAN NOTES

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER | 33 / 48 |
| CHECKED BY: | JF | | |




WATER LINE CONSTRUCTION
TYPICAL SECTION
BEVERLY DR




WASTEWATER LINE CONSTRUCTION
TYPICAL SECTION
BEVERLY DR

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

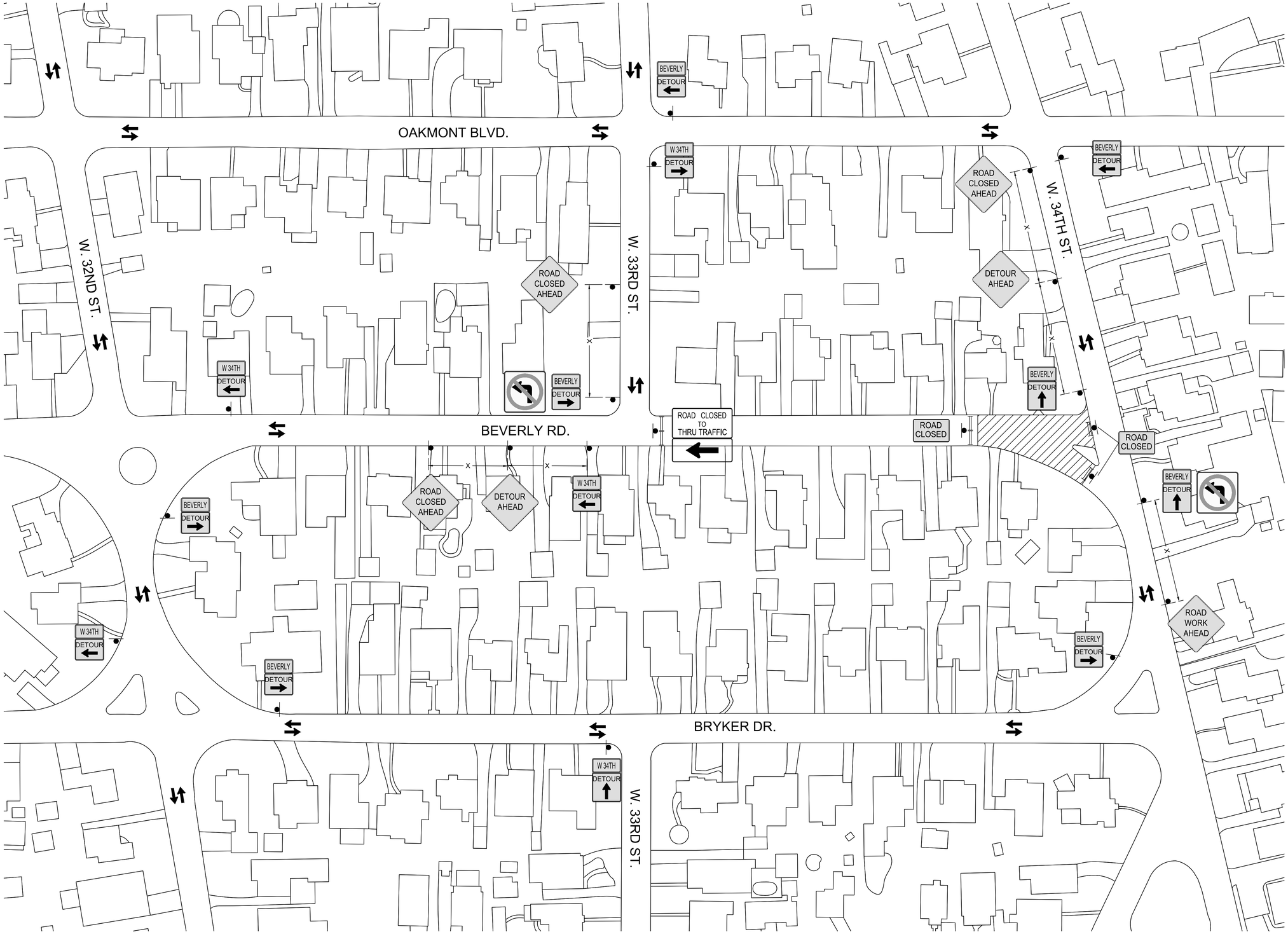
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL TYPICAL SECTIONS

| | | |
|---|---|---|
| DESIGNED BY: | KF | SCALE: NO SCALE |
| DRAWN BY: | JN | SHEET NUMBER |
| CHECKED BY: | JF | 34 / 48 |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

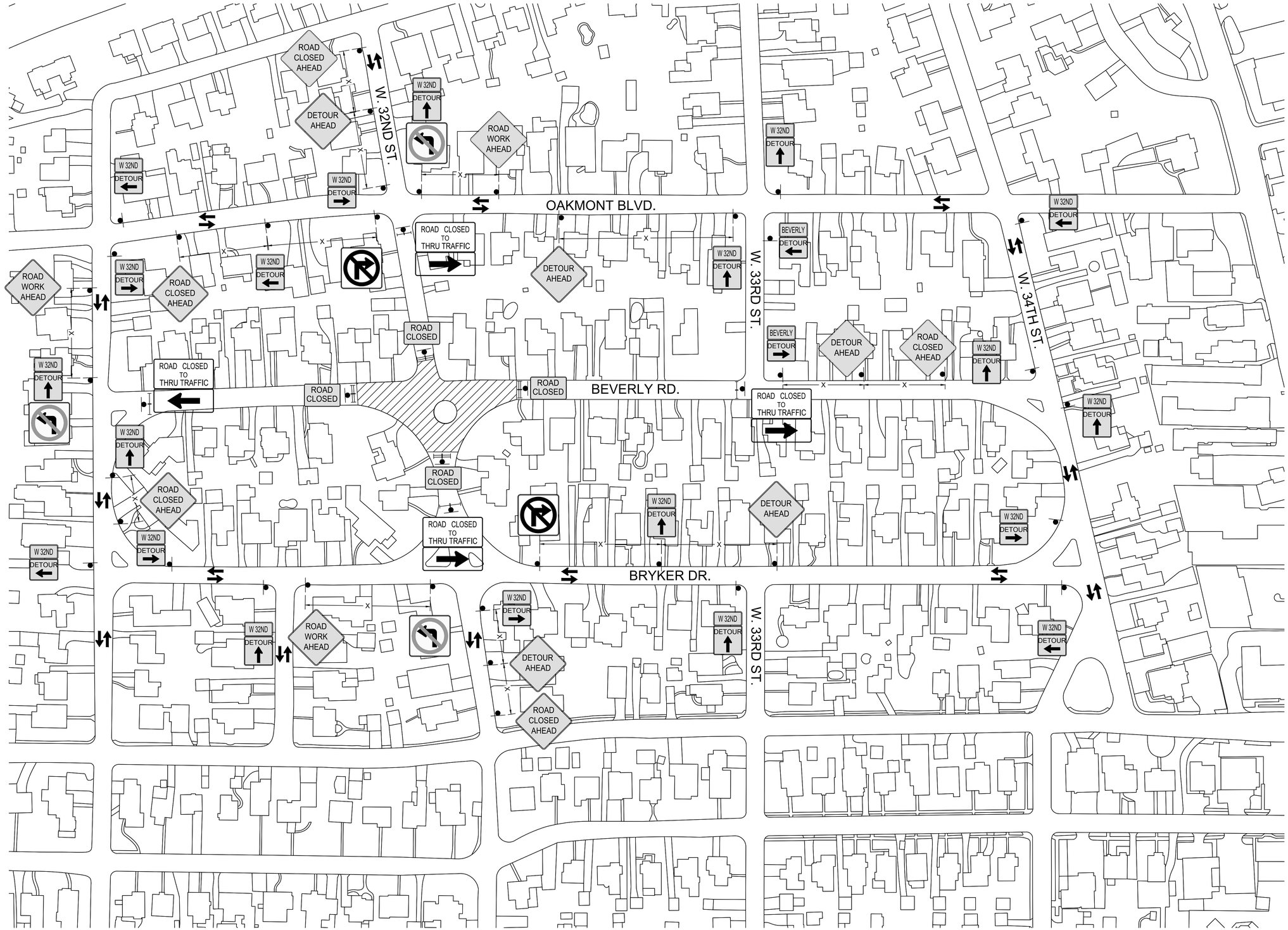
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

W. 34TH ST. DETOUR

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=50' |
| DRAWN BY: | JN | SHEET NUMBER | 35 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

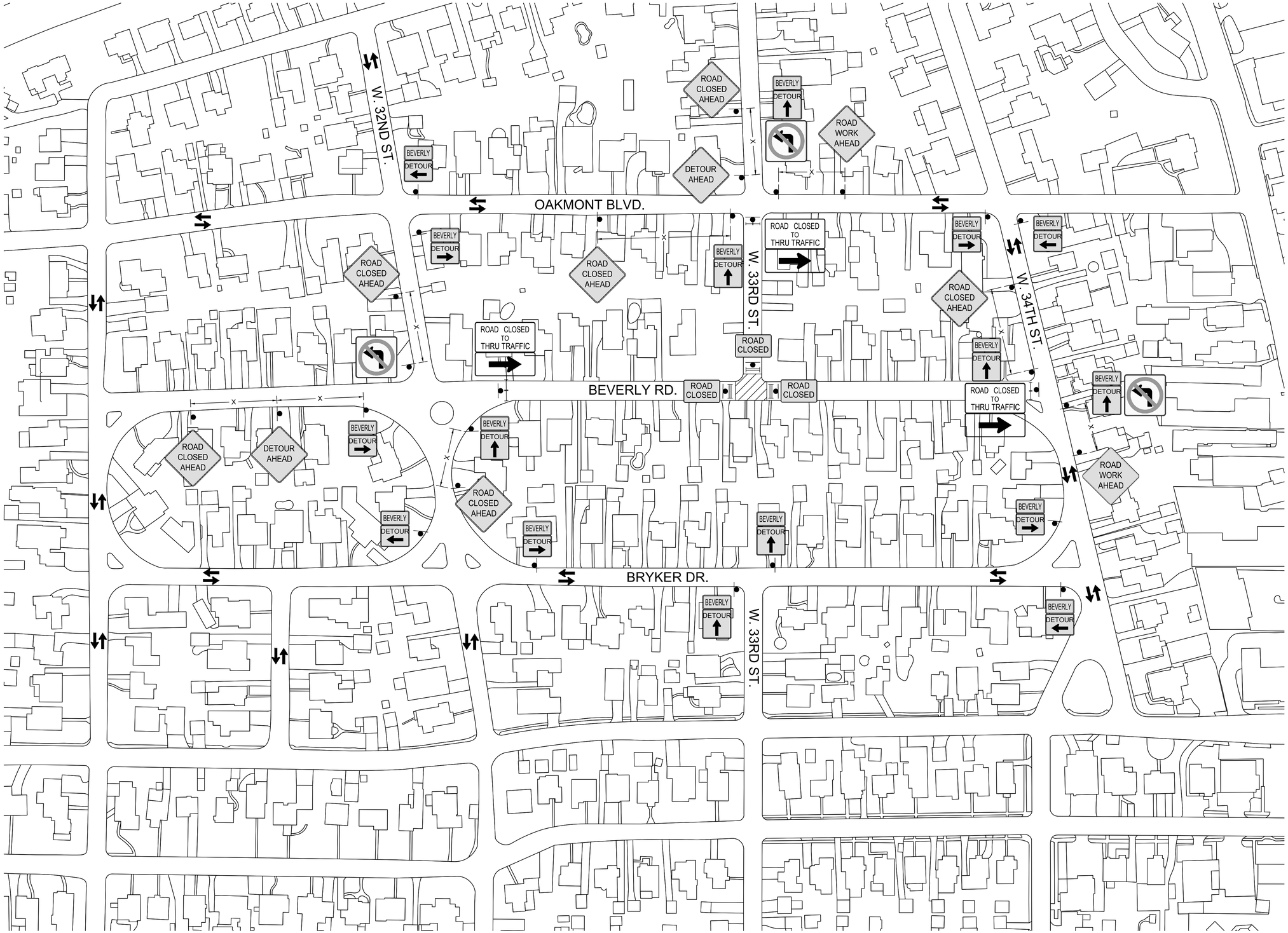
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

W. 34TH ST. DETOUR

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=80' |
| DRAWN BY: | JN | SHEET NUMBER | 36 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

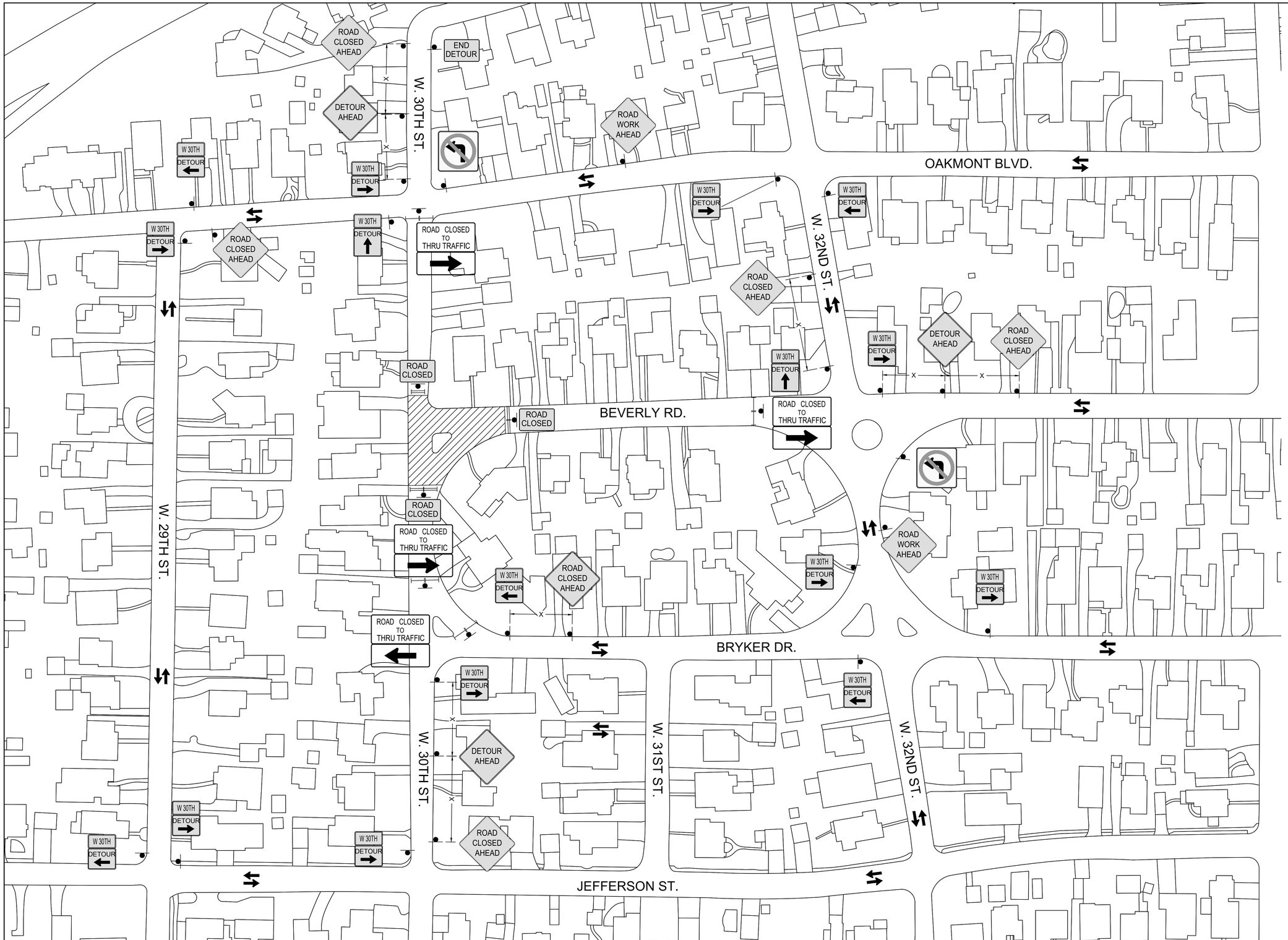
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

BEVERLY DETOUR (W. 33RD INTERSECTION)

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=80' |
| DRAWN BY: | JN | SHEET NUMBER | 37 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

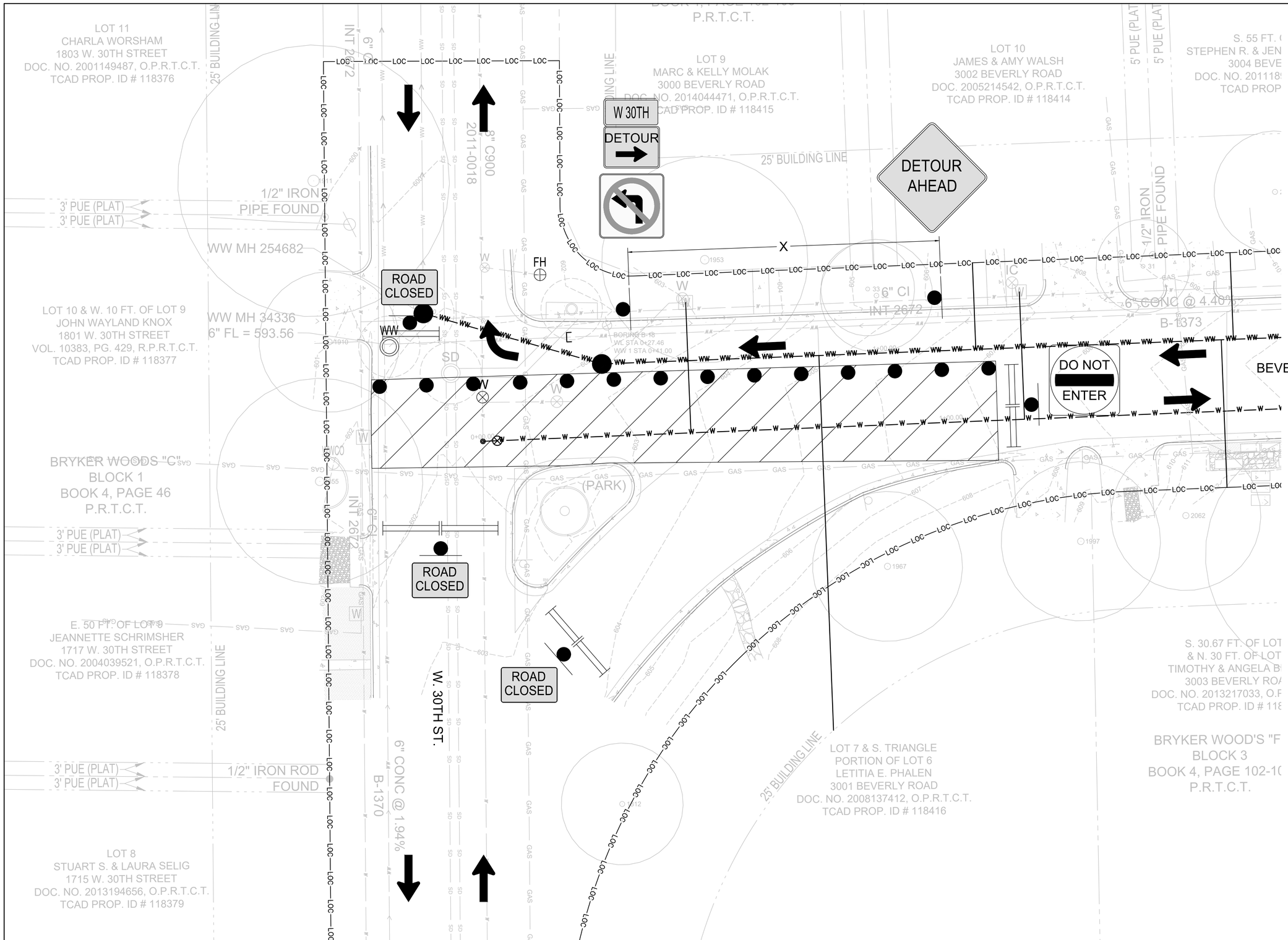
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

W. 30TH ST. DETOUR

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=60' |
| DRAWN BY: | JN | SHEET NUMBER | 38 / 48 |
| CHECKED BY: | JF | | |




NOTES:
TO BE IMPLEMENTED ONLY WHEN W. 30TH STREET DETOUR IS FULLY IN PLACE.

LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
|---|---|---|---|
| | | | |

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

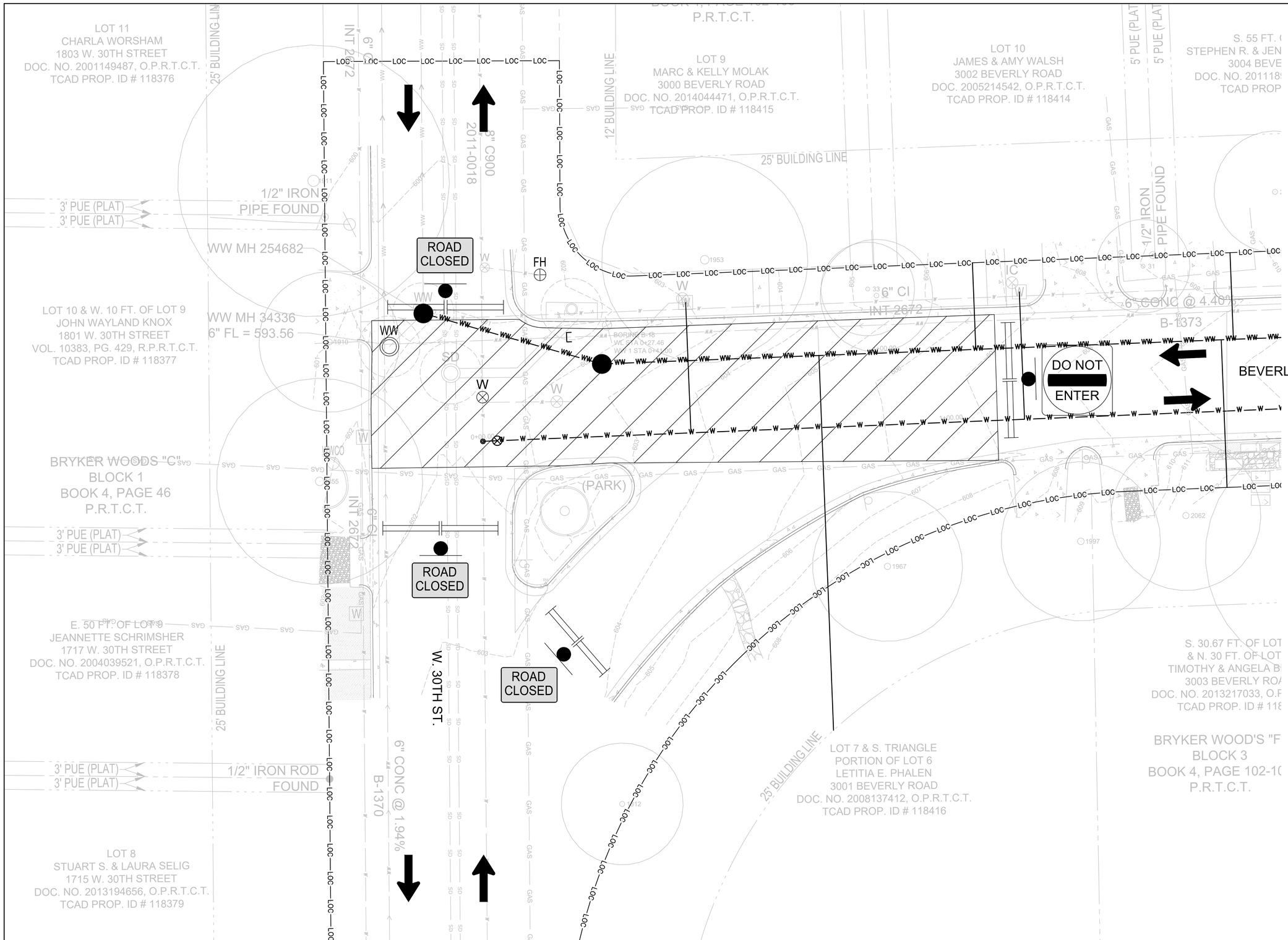
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=10' |
| DRAWN BY: | JN | SHEET NUMBER | 39 / 48 |
| CHECKED BY: | JF | | |




NOTES:
TO BE IMPLEMENTED ONLY WHEN W. 30TH STREET DETOUR IS FULLY IN PLACE.

LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

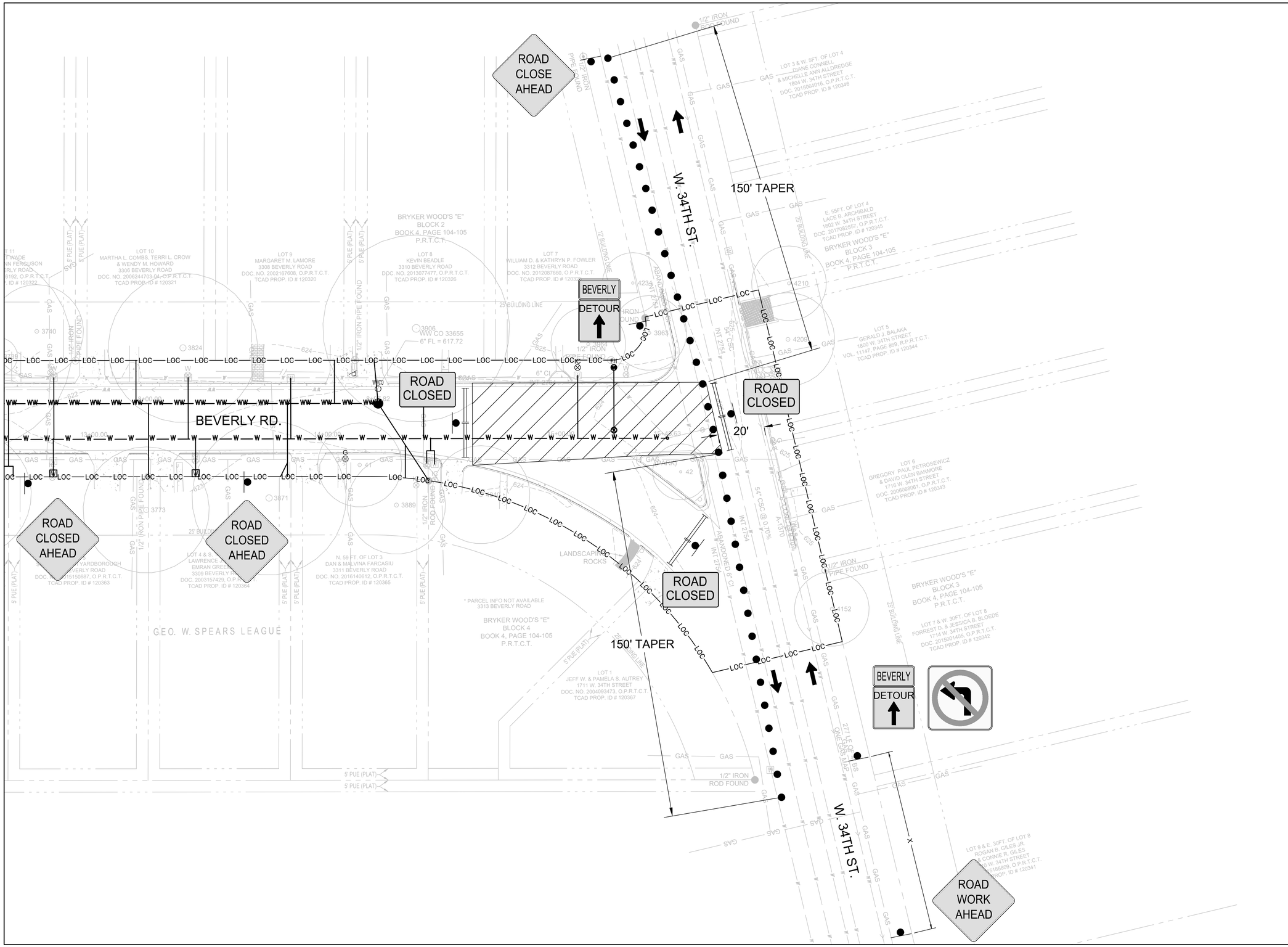
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=10' |
| DRAWN BY: | JN | SHEET NUMBER | 40 / 48 |
| CHECKED BY: | JF | | |




NOTES:
TO BE IMPLEMENTED ONLY WHEN BEVERLY ROAD DETOUR IS FULLY IN PLACE.

LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED PROFESSIONAL ENGINEER
3/16/2021

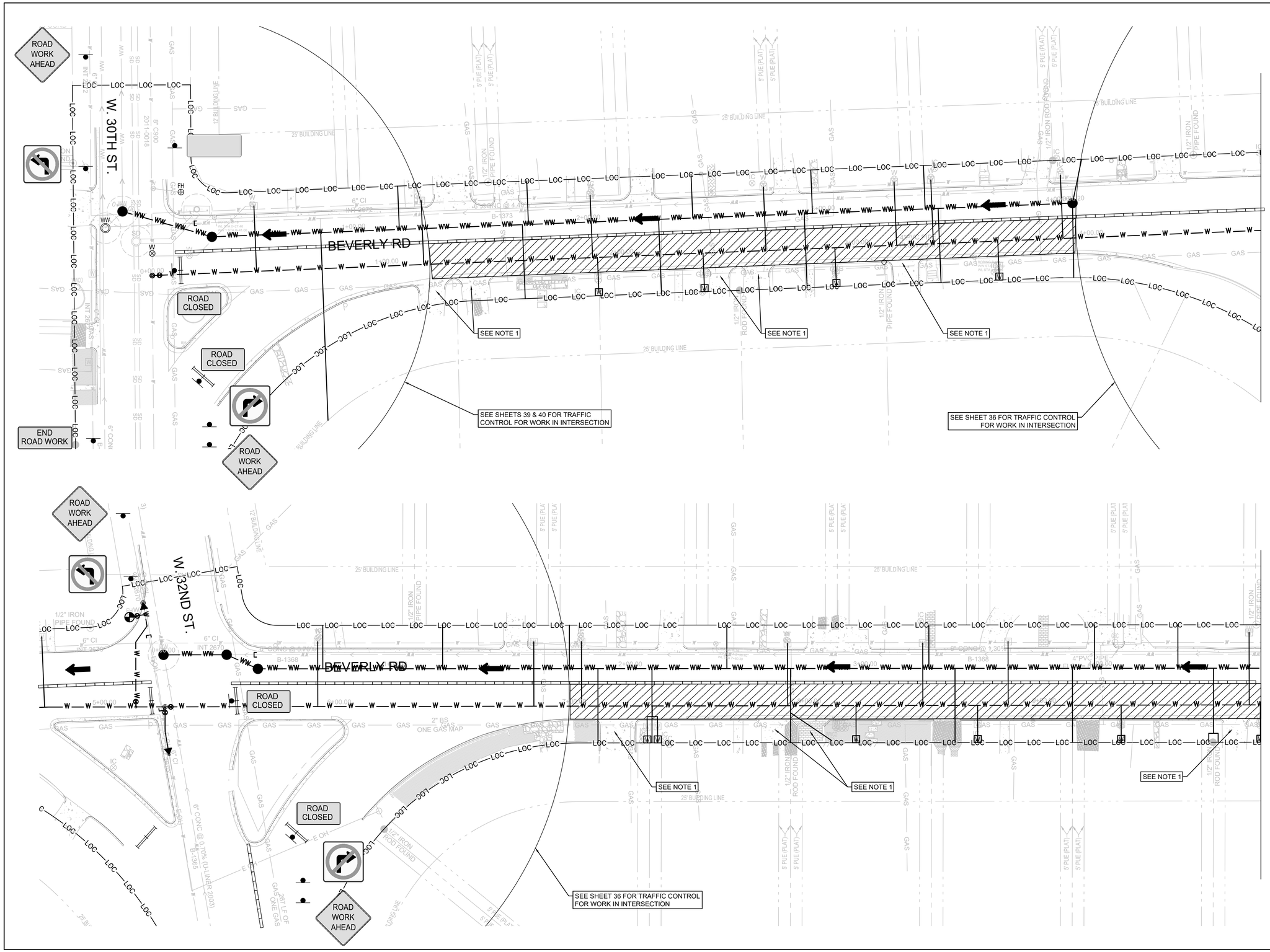
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL 3

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 41 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

NOTES:

1. WITHIN ALL WORK AREAS, ACCESS TO LOCAL DRIVEWAYS SHALL BE PROVIDED IMMEDIATELY UPON REQUEST.

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

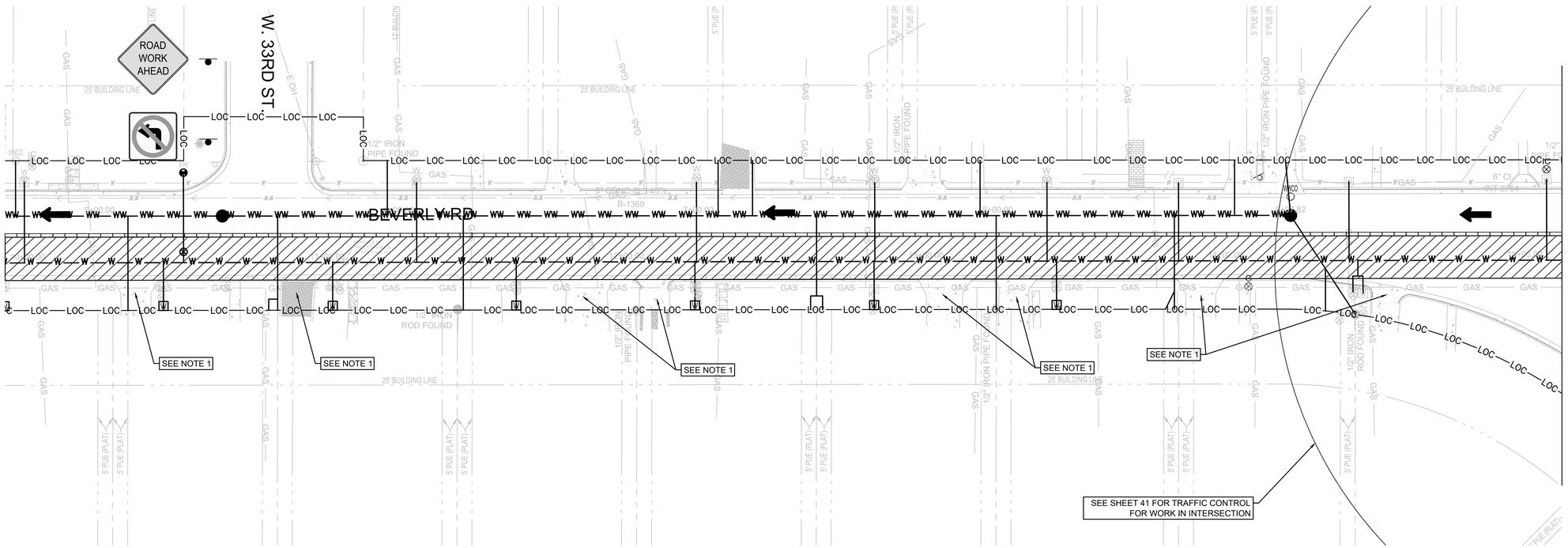
RILEY MOUNTAIN ENGINEERING

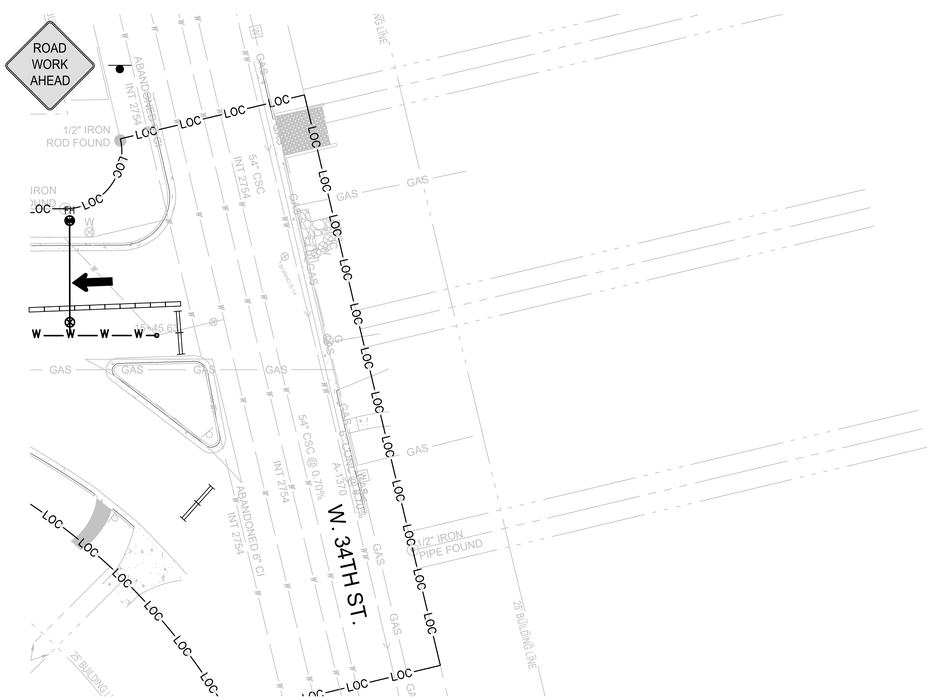
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL
WATER LINE 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 42 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

NOTES:

1. WITHIN ALL WORK AREAS, ACCESS TO LOCAL DRIVEWAYS SHALL BE PROVIDED IMMEDIATELY UPON REQUEST.

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED PROFESSIONAL ENGINEER

3/16/2021

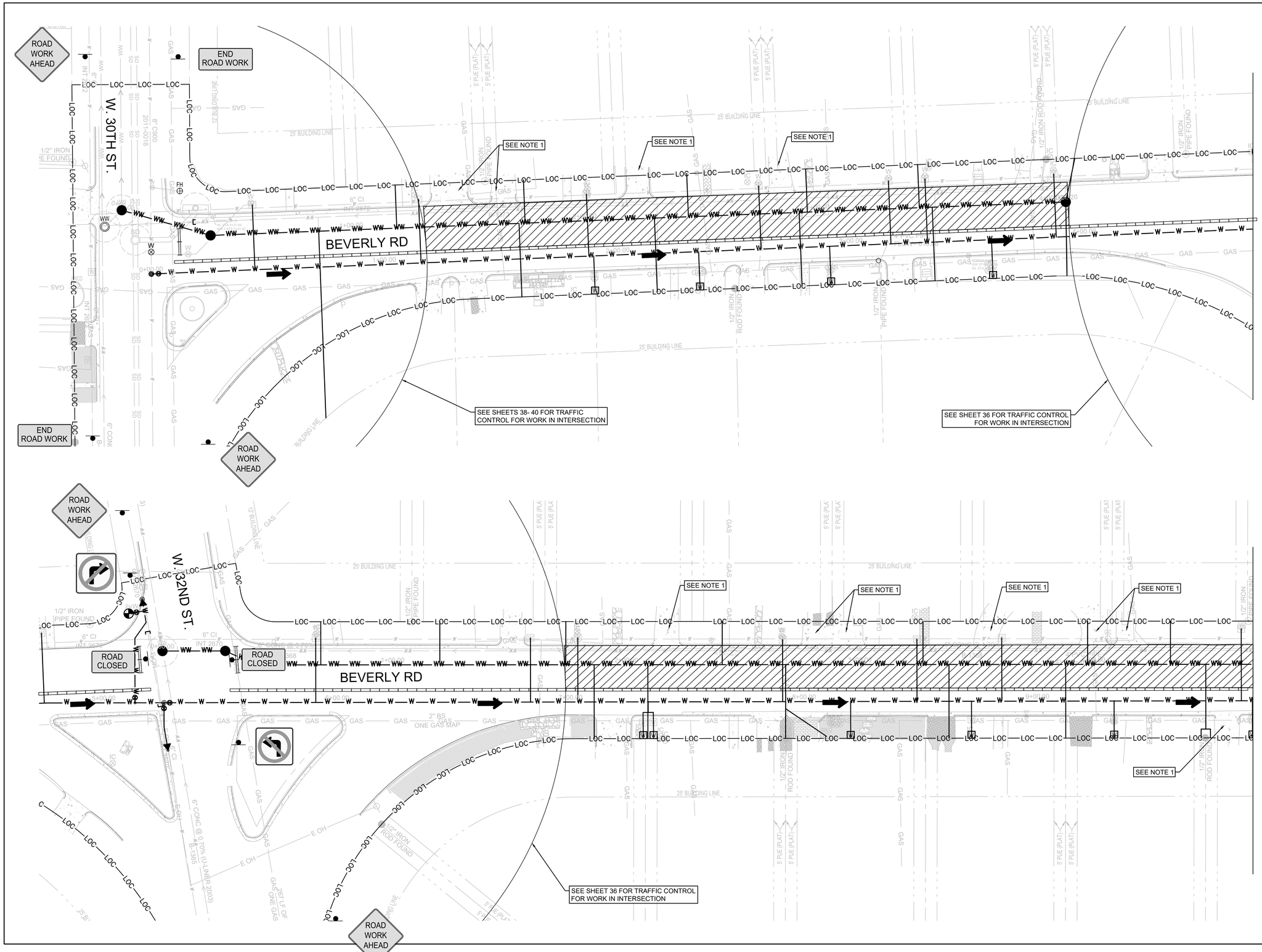
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL
WATER LINE 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 43 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB MESSAGE BOARD

NOTES:

1. WITHIN ALL WORK AREAS, ACCESS TO LOCAL DRIVEWAYS SHALL BE PROVIDED IMMEDIATELY UPON REQUEST.

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER

3/16/2021

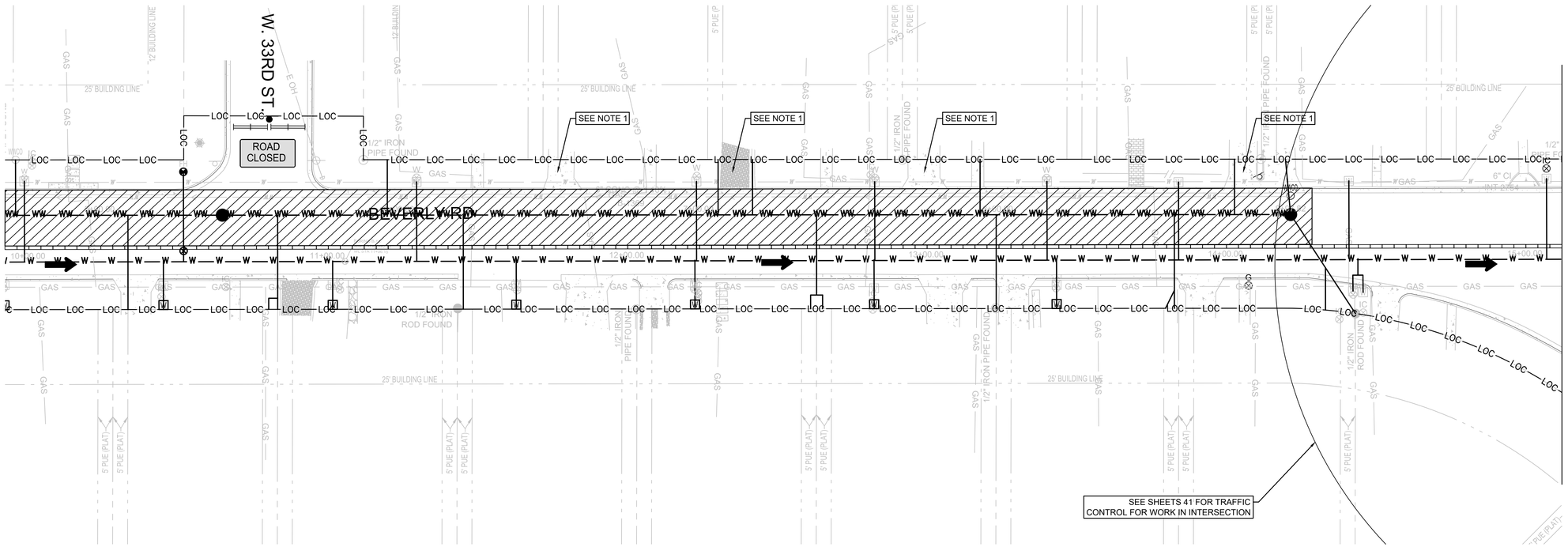
RILEY MOUNTAIN ENGINEERING

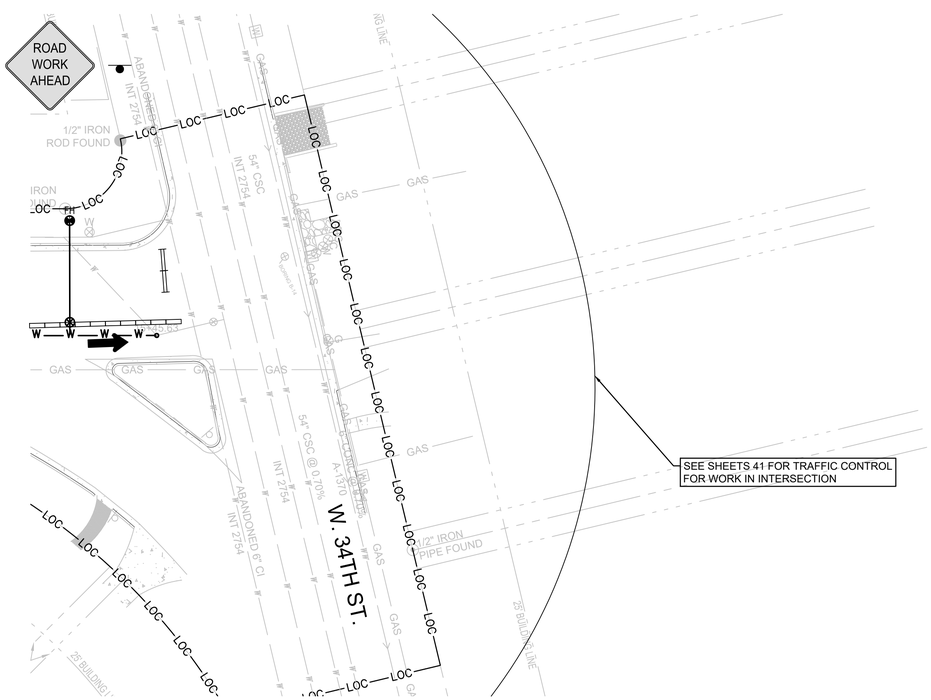
16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL
WASTEWATER LINE 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 44 / 48 |
| CHECKED BY: | JF | | |




LEGEND

- WORK AREA
- SIGN POST
- TYPE I BARRICADE
- TYPE III BARRICADE
- CHANNELIZING DEVICES
- TRAFFIC BARRIER
- TRAFFIC DIRECTION
- ARROW BOARD
- MB — MESSAGE BOARD

NOTES:

1. WITHIN ALL WORK AREAS, ACCESS TO LOCAL DRIVEWAYS SHALL BE PROVIDED IMMEDIATELY UPON REQUEST.

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED PROFESSIONAL ENGINEER

3/16/2021

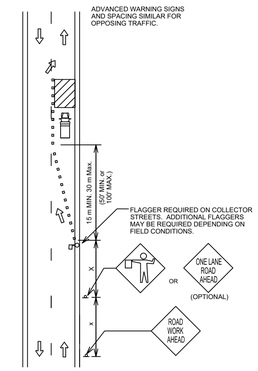
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL DETAIL
WASTEWATER LINE 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 45 / 48 |
| CHECKED BY: | JF | | |




SEE SHEET 8 OF 9 FOR GENERAL NOTES AND SHEET 9 OF 9 FOR DEVICE SPACING.

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | COLLECTOR/RESIDENTIAL LANE CLOSURES | |
|---|---|---|---|
| RECORD COPY SIGNED BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-1<br>5 OF 9 |

1. ALL SETUPS SHALL BE IN ACCORDANCE WITH THE CURRENT ADDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
2. TO DETERMINE APPROPRIATE DEVICES AND SIGN SIZES TO BE USED, REFER TO STANDARD 804S-5. SHEETS 5, 6 AND 7 OF 11.
3. FOR INTERMEDIATE-TERM SITUATIONS, WHEN IT IS NOT FEASIBLE TO REMOVE AND RESTORE PAVEMENT MARKINGS, THE CHANNELIZATION MUST BE MADE DOMINANT BY USING A VERY CLOSE DEVICE SPACING. THIS IS ESPECIALLY IMPORTANT IN LOCATIONS OF CONFLICTING INFORMATION, SUCH AS WHERE TRAFFIC IS DIRECTED OVER A DOUBLE YELLOW CENTERLINE. IN SUCH LOCATIONS, A MAXIMUM CHANNELIZING DEVICE SPACING OF 3 m (10') IS REQUIRED.
4. FOR LONG TERM STATIONARY WORK, ALL CONFLICTING PAVEMENT MARKINGS MUST BE REMOVED AND CENTERLINE STRIPING PROVIDED WHERE TWO WAY TRAFFIC IS IN ADJACENT LANES.
5. FOR TEMPORARY PAVEMENT MARKING REQUIREMENTS SEE STANDARD 804S-3.
6. FOR ONE-WAY AND MULTI-LANE ROADWAYS THE "LANE BLOCKED" SIGN MAY BE USED IN LIEU OF THE "LANE CLOSED AHEAD" SIGN. THE NUMBER OF DIGITS ON THE SIGN SHALL NOT BE GREATER THAN THE NUMBER OF LANES PRESENT ON THE ROADWAY. THE "X" SHALL BE PLACED UNDER THE NUMBER OF LANE(S) BLOCKED.
7. FOR FLAGGING OPERATION REQUIREMENTS SEE STANDARD 804S-2.
8. CONTRACTOR SHALL PROVIDE SIDEWALK CLOSURES, CROSSWALK CLOSURES OR WALKWAY BYPASS WHEREVER PEDESTRIAN MOVEMENTS ARE AFFECTED BY CONSTRUCTION ACTIVITIES. ALL SIDEWALKS AND CROSSWALKS SHALL BE ACCESSIBLE WHEN CONTRACTOR IS NOT WORKING UNLESS APPROVED BY THE TRANSPORTATION DIVISION.
9. FOR EXCAVATION PROTECTION AND SAFETY FENCE REQUIREMENTS SEE STANDARD 804S-4.
10. THE USE OF ARROW DISPLAYS ARE REQUIRED ON ALL LANE CLOSURES. THE CONTRACTOR SHALL PROVIDE ONE (1) STAND-BY UNIT IN GOOD WORKING CONDITION AT THE JOB SITE, READY FOR USE IF THE OPERATION REQUIRES 24-HOUR A DAY LANE CLOSURE SET-UPS.

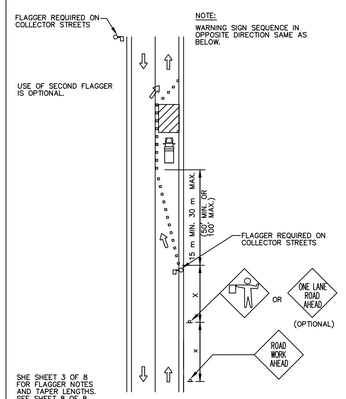
| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | GENERAL NOTES | |
|---|---|---|---|
| RECORD COPY SIGNED BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-1<br>8 OF 9 |

Typical Transition Lengths and Suggested Maximum Spacing of Devices

| Speed KMPH | Posted Speed MPH | Formula | Minimum Desirable Taper Lengths (L) Meters (Feet) 3.0(10) Offset Meters (feet) | 3.3(11) Offset Meters (feet) | 3.6(12) Offset Meters (feet) | Suggested Max. Device Spacing: On a taper Meters (feet) | On a tangent Meters (feet) | Suggested Sign Spacing Meters (Feet) "X" Dimension |
|---|---|---|---|---|---|---|---|---|
| 50 | 30 | L=WS²/60 | 45 (150) | 50 (165) | 55 (180) | 9 (30) | 15-20 (60-75) | 40 (120) |
| 55 | 35 | | 65 (205) | 70 (225) | 75 (245) | 10 (35) | 25-25 (70-90) | 50 (160) |
| 65 | 40 | | 80 (265) | 90 (295) | 100 (320) | 12 (40) | 25-30 (80-100) | 75 (240) |
| 70 | 45 | L=WS | 135 (450) | 150 (495) | 165 (540) | 13 (45) | 25-30 (90-110) | 100 (320) |
| 80 | 50 | | 150 (500) | 165 (550) | 180 (600) | 15 (50) | 30-35 (100-125) | 120 (400) |
| 90 | 55 | | 165 (550) | 185 (605) | 200 (660) | 16 (55) | 35-40 (110-140) | 150 (500) |
| 95 | 60 | | 180 (600) | 200 (660) | 220 (720) | 18 (60) | 40-45 (120-150) | 180 (600) |
| 105 | 65 | | 195 (650) | 215 (715) | 235 (780) | 19 (65) | 40-50 (130-165) | 210 (700) |
| 115 | 70 | | 215 (700) | 235 (770) | 255 (840) | 21 (70) | 45-55 (140-175) | 240 (800) |

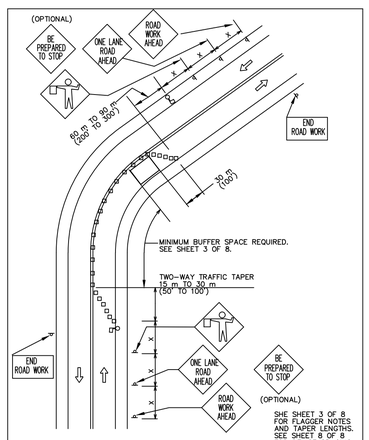
LEGEND
- Channelizing devices
- Trailer mounted flashing arrow board
- Flagger

| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | DEVICE SPACING | |
|---|---|---|---|
| RECORD COPY SIGNED BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-1<br>9 OF 9 |




SHE SHEET 3 OF 8 FOR FLAGGER NOTES AND TAPER LENGTHS. SEE SHEET 8 OF 8 FOR DEVICE SPACING.

| DEPARTMENT OF PUBLIC WORKS | | COLLECTOR / RESIDENTIAL STREET FLAGGING OPERATIONS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>1 OF 8 |




SHE SHEET 3 OF 8 FOR FLAGGER NOTES AND TAPER LENGTHS. SEE SHEET 8 OF 8 FOR DEVICE SPACING.

| DEPARTMENT OF PUBLIC WORKS | | FLAGGER SETUP FOR 2 LANE ROADWAY | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>2 OF 8 |

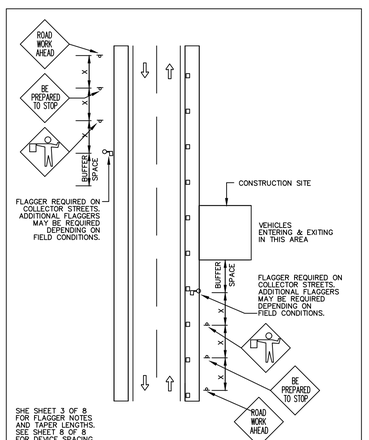
1. FOR DAYTIME WORK, THE FLAGGER SHALL WEAR AN APPROVED BRIGHTLY COLORED VEST. FOR NIGHTTIME WORK, THE VEST SHALL BE RETROFLECTIVE. THE RETRO-REFLECTIVE MATERIAL SHALL BE ORANGE, YELLOW, WHITE, SILVER, STRONG YELLOW-GREEN OR A FLOURESCENT VERSION OF THESE COLORS AND SHALL BE VISIBLE AT A MINIMUM DISTANCE OF 305 m (1,000').
2. FOR LOW-VOLUME APPLICATIONS, A SINGLE FLAGGER MAY BE ADEQUATE. WHERE ONE FLAGGER CAN BE USED, SUCH AS FOR SHORT WORK AREAS ON STRAIGHT ROADWAYS, THE FLAGGER MUST BE VISIBLE TO APPROACHING TRAFFIC FROM BOTH DIRECTIONS.
3. FLAGGERS SHALL USE ONLY STOP/SLOW PADDLE TO DIRECT TRAFFIC UNLESS WORKING IN A SIGNALIZED INTERSECTION WHERE DRIVERS MAY BE CONFUSED BY THE SIGN PADDLE. HAND SIGNAL MAY BE USED IN THESE SITUATIONS.
4. FLAGGERS SHALL ENSURE THAT ALL REQUIRED SIGNING IS IN PLACE PRIOR TO BEGINNING FLAGGING OPERATIONS.
5. FLAGGERS SHALL NOT PERFORM WORK THAT IS NOT RELATED TO FLAGGING WHILE ON DUTY.
6. FLAGGERS MAY CARRY AIR HORNS OR WHISTLES TO WARN WORKERS OF AN EMERGENCY CONDITION.
7. FLAGGERS SHALL BE REQUIRED TO USE TWO-WAY RADIOS WHEN OUT OF CLEAR VIEW OF EACH OTHER.
8. FLOODLIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.

TAPER LENGTHS

| SPEED (kmph) | SPEED* (mph) | LENGTH (meters) | LENGTH (feet) |
|---|---|---|---|
| 30 | 20 | 11 | 35 |
| 40 | 25 | 17 | 55 |
| 50 | 30 | 26 | 85 |
| 55 | 35 | 36 | 120 |
| 65 | 40 | 51 | 170 |
| 70 | 45 | 66 | 220 |
| 80 | 50 | 84 | 280 |
| 90 | 55 | 101 | 335 |
| 95 | 60 | 125 | 415 |
| 105 | 65 | 146 | 485 |

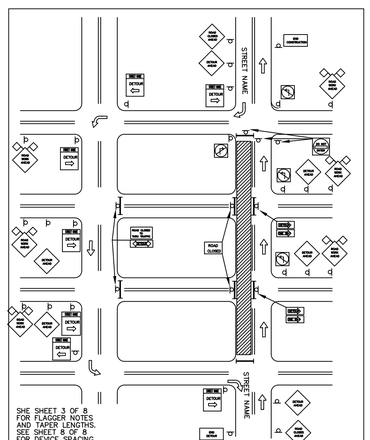
*POSTED SPEED

| DEPARTMENT OF PUBLIC WORKS | | FLAGGER SETUP FOR 2 LANE ROADWAY | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>3 OF 8 |



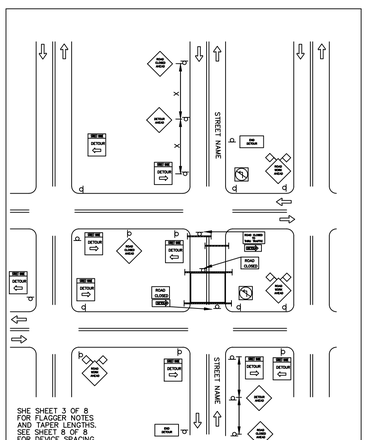

SHE SHEET 3 OF 8 FOR FLAGGER NOTES AND TAPER LENGTHS. SEE SHEET 8 OF 8 FOR DEVICE SPACING.

| DEPARTMENT OF PUBLIC WORKS | | FLAGGER SETUP FOR VEHICLES ENTERING AND EXITING WORK SITE | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>4 OF 8 |




SHE SHEET 3 OF 8 FOR FLAGGER NOTES AND TAPER LENGTHS. SEE SHEET 8 OF 8 FOR DEVICE SPACING.

| DEPARTMENT OF PUBLIC WORKS | | STREET DETOUR SINGLE DIRECTION | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>5 OF 8 |




SHE SHEET 3 OF 8 FOR FLAGGER NOTES AND TAPER LENGTHS. SEE SHEET 8 OF 8 FOR DEVICE SPACING.

| DEPARTMENT OF PUBLIC WORKS | | STREET DETOUR BOTH DIRECTIONS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>804S-2<br>6 OF 8 |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

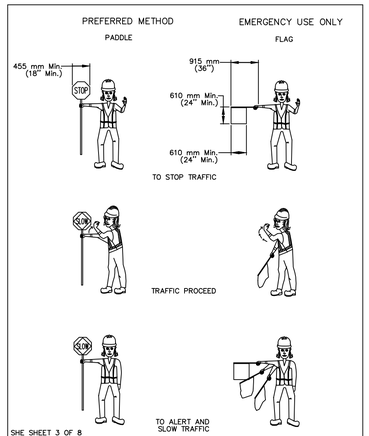
RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL PLAN DETAIL 1

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 46 / 48 |
| CHECKED BY: | JF | | |




SHE SHEET 3 OF 8 FOR FLAGGER NOTES.

| DEPARTMENT OF PUBLIC WORKS | | USE OF HAND SIGNALING DEVICES | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–2 |
| ADOPTED | | | 7 OF 8 |

## Typical Transition Lengths and Suggested Maximum Spacing of Devices

| Speed KMPH | Posted Speed MPH | Formula | Minimum Desirable Taper Lengths (L) Meters (Feet) 3.0(10) Offset Meters (feet) | 3.3(11) Offset Meters (feet) | 3.6(12) Offset Meters (feet) | Suggested Max. Device Spacing On a taper Meters (feet) | On a tangent Meters (feet) | Suggested Sign Spacing Meters (Feet) "X" Dimension |
|---|---|---|---|---|---|---|---|---|
| 50 | 30 | L=WS 60 | 45 (150) | 50 (165) | 52 (180) | 9 (30) | 15–20 (60–75) | 40 (120) |
| 55 | 35 | | 65 (205) | 70 (225) | 75 (245) | 10 (35) | 25–25 (70–90) | 50 (160) |
| 65 | 40 | | 80 (265) | 90 (295) | 100 (320) | 12 (40) | 25–30 (80–100) | 75 (240) |
| 70 | 45 | | 135 (450) | 150 (495) | 165 (540) | 13 (45) | 25–30 (90–110) | 100 (320) |
| 80 | 50 | | 150 (500) | 165 (550) | 180 (600) | 15 (50) | 30–35 (100–125) | 120 (400) |
| 90 | 55 | | 165 (550) | 185 (605) | 200 (660) | 16 (55) | 35–40 (110–140) | 150 (500) |
| 95 | 60 | L=WS | 180 (600) | 200 (660) | 220 (720) | 18 (60) | 40–45 (120–150) | 180 (600) |
| 105 | 65 | | 195 (650) | 215 (715) | 235 (780) | 19 (65) | 40–50 (130–165) | 210 (700) |
| 115 | 70 | | 215 (700) | 235 (770) | 255 (840) | 21 (70) | 45–55 (140–175) | 240 (800) |

LEGEND
- Channelizing devices
- Trailer mounted flashing arrow board
- Flagger

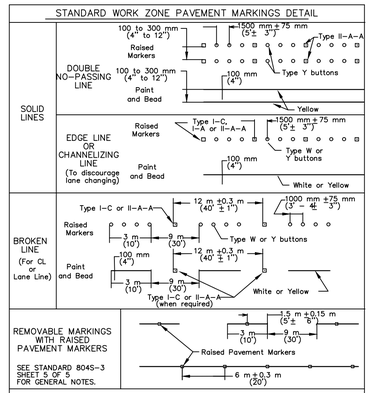
TRAFFIC DETOUR NOTES:

1. "STREET CLOSED" AND "STREET CLOSED TO THRU TRAFFIC" MAY BE USED IN PLACE OF "ROAD CLOSED" AND "ROAD CLOSED TO THRU TRAFFIC".
2. THE USE OF A STREET SIGN NAME NAME MOUNTED WITH THE M4–9 DETOUR SIGN** IS REQUIRED. THE STREET NAME PLATE SHOULD BE PLACED ABOVE THE DETOUR SIGN. THE PLATE MAY HAVE EITHER A WHITE–ON–GREEN OR A BLACK–ON–ORANGE LEGEND.
3. ADDITIONAL "DO NOT ENTER SIGNS" MAY BE DESIRABLE AT INTERSECTIONS WITH INTERVENING STREETS.
4. A M4–9 DETOUR SIGN** WITH AN ADVANCE TURN ARROW MAY BE USED IN ADVANCE OF A TURN. ON MULTI–LANE STREETS, SUCH SIGNS SHOULD BE USED.
5. M4–9 DETOUR SIGNS** MAY BE LOCATED ON THE FAR SIDE OF INTERSECTIONS.

** TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

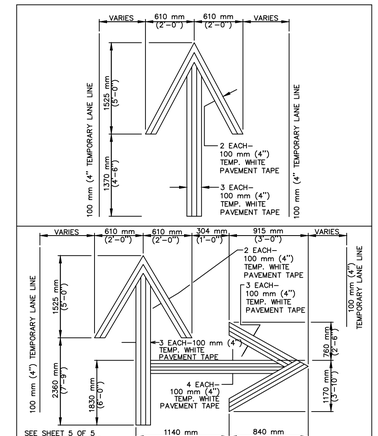
| DEPARTMENT OF PUBLIC WORKS | | TYPICAL LENGTHS & SPACING OF DEVICES, LEGEND and GENERAL NOTES | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–2 |
| ADOPTED | | | 8 OF 8 |

## STANDARD WORK ZONE PAVEMENT MARKINGS DETAIL



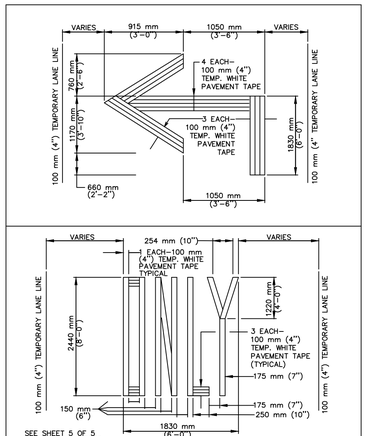

NOTE: IF RAISED PAVEMENT MARKERS ARE USED TO SUPPLEMENT REMOVABLE MARKINGS, THE MARKERS SHALL BE APPLIED TO THE TOP OF THE TAPE AT THE APPROXIMATE MID–LENGTH OF TAPE BROKEN LINES AND AT APPROXIMATE 6 m (20') SPACING FOR SOLID LINES. THIS ALLOWS AN EASIER REMOVAL OF RAISED MARKERS AND TAPE.

| DEPARTMENT OF PUBLIC WORKS | | TEMPORARY TRAFFIC CONTROL PAVEMENT MARKINGS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–3 |
| ADOPTED | | | 1 OF 5 |




SEE SHEET 5 OF 5 FOR GENERAL NOTES.

| DEPARTMENT OF PUBLIC WORKS | | TEMPORARY REMOVABLE TAPE, ARROWS AND LEGENDS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–3 |
| ADOPTED | | | 2 OF 5 |

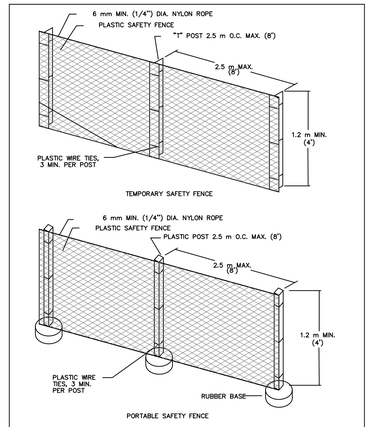



SEE SHEET 5 OF 5 FOR GENERAL NOTES.

| DEPARTMENT OF PUBLIC WORKS | | TEMPORARY REMOVABLE TAPE, ARROWS AND LEGENDS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–3 |
| ADOPTED | | | 3 OF 5 |

1. ALL PAVEMENT MARKINGS USED SHALL CONFORM TO THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES ( TMUTCD) AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TEMPORARY AND EXISTING PAVEMENT MARKINGS ON ALL ROADWAYS WITHIN THE CONSTRUCTION LIMITS AND ON ANY ROADWAY OUTSIDE THE CONSTRUCTION LIMITS THAT REQUIRES THE REROUTING OF TRAFFIC FOR HIS WORK.
3. ALL ROADWAYS TO BE OPENED TO TRAFFIC SHALL HAVE TEMPORARY OR STANDARD PAVEMENT MARKINGS INSTALLED AS SHOWN IN THE DRAWINGS, AT THE END OF EACH DAY'S OPERATION.
4. MARKINGS SHALL PROVIDE A VISIBLE REFERENCE FOR A MINIMUM DISTANCE OF 91.5 m (300') DURING NORMAL DAYLIGHT HOURS AND 49 m (160') WHEN ILLUMINATED BY AUTOMOBILE LOW–BEAM HEADLIGHTS AT NIGHT, UNLESS SIGHT DISTANCE IS RESTRICTED BY ROADWAY GEOMETRICS.
5. ALL TEMPORARY REMOVABLE PAVEMENT MARKINGS SHALL BE SUPPLEMENTED WITH RAISED PAVEMENT MARKERS.
6. TEMPORARY REMOVABLE PAVEMENT MARKING TAPE IS THE PREFERRED PAVEMENT MARKING; HOWEVER, THE CONTRACTOR MAY, WITH APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE, USE RAISED PAVEMENT MARKINGS, PAINT AND BEADS OR THERMOPLASTIC IF THE ROADWAY IS TO BE COMPLETELY RESURFACED.
7. PAVEMENT MARKINGS THAT ARE NO LONGER APPLICABLE AND WHICH MAY CREATE CONFUSION OR DIRECT A MOTORIST TOWARD OR INTO THE CLOSED PORTION OF THE ROADWAY, SHALL BE REMOVED OR OBLITERATED BEFORE THE ROADWAY IS OPENED TO TRAFFIC. THE ABOVE DOES NOT APPLY TO SHORT–DURATION, SHORT TERM STATIONARY OR INTERMEDIATE TERM STATIONARY WORK.
8. REMOVAL OR OBLITERATION OF PAVEMENT MARKINGS INCLUDES CENTERLINES, CHANNELIZING LINES, LANE LINES, EDGE LINES, WORDS, ARROWS, SYMBOLS AND RAISED PAVEMENT MARKINGS.
9. PAVEMENT MARKINGS SHALL BE REMOVED OR OBLITERATED TO THE FULLEST EXTENT POSSIBLE, SO AS NOT TO LEAVE A DISCERNIBLE MARK. GRINDING OF PAVEMENT MARKINGS WILL ONLY BE ALLOWED ON PAVEMENT THAT IS TO BE COMPLETELY REPLACED.
10. TEMPORARY FLEXIBLE–REFLECTIVE TABS MAY BE USED FOR TEMPORARY PAVEMENT MARKINGS ON NEW PAVEMENT, PROVIDED THEY ARE PLACED ON 1.5 m (5') CENTERS.
11. THE CONTRACTOR SHALL PLACE TEMPORARY FLEXIBLE–REFLECTIVE TABS IMMEDIATELY AFTER THE FINAL HMAC OVERLAY AS EACH LANE IS COMPLETED AND READY FOR TRAFFIC. NO DIRECT PAYMENT WILL BE MADE FOR THIS OPERATION, BUT WILL BE CONSIDERED SUBSIDIARY TO THE OTHER BID ITEMS. FINAL STRIPING SHOULD BE COMPLETED WITHIN FOURTEEN (14) DAYS OF THE FINAL PAVING.

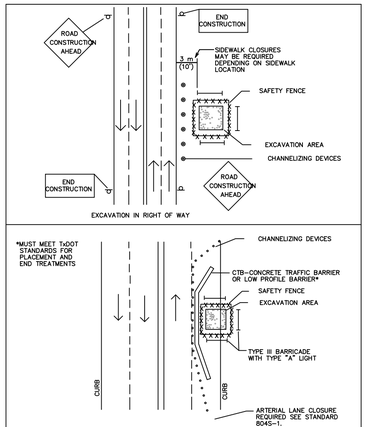
| DEPARTMENT OF PUBLIC WORKS | | GENERAL NOTES | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 03/13/06 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–3 |
| ADOPTED | | | 5 OF 5 |



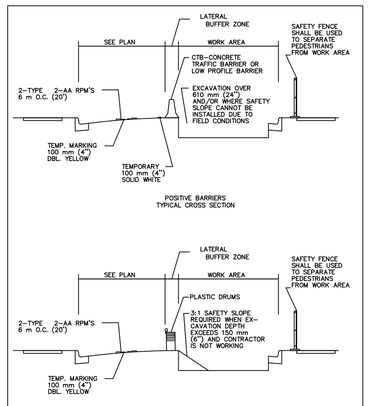

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | SAFETY FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 1 OF 9 |

1. SAFETY FENCE SHALL BE USED TO PROTECT ALL EXCAVATIONS IN THE RIGHT–OF–WAY.
2. SAFETY FENCES SHALL BE USED TO SEPARATE CONSTRUCTION ACTIVITIES FROM PEDESTRIAN.
3. ALL SAFETY FENCING SHALL BE PLASTIC, 1,200 mm (48") MINIMUM HEIGHT AND ORANGE IN COLOR.
4. SAFETY FENCE USED WITHIN THE ROADWAY SHALL BE REFLECTORIZED WITH A MINIMUM OF TWO (2) STRIPS OF RETROREFLECTIVE MATERIAL, A MINIMUM OF 25 mm (1") WIDE. THE LENGTH OF THE FENCE OR DELINEATED BY CHANNELIZING DEVICES.
5. SAFETY FENCE USED TO SEPARATE SIDEWALKS FROM CONSTRUCTION ACTIVITIES SHALL HAVE MINIMUM ENCROACHMENT TO THE SIDEWALK.
6. AS A MINIMUM, SAFETY FENCING IS REQUIRED IN AREAS ADJACENT TO EXCAVATIONS GREATER THAN OR EQUAL TO 150 mm (6").
7. SAFETY FENCING SHALL BE PAID FOR UNDER ITEM 8035, "BARRICADES, SIGNS AND TRAFFIC HANDLING", PAY ITEM NO. 8035–SF.
8. PORTABLE SAFETY FENCE MOUNTS SHALL BE APPROVED BY THE TRANSPORTATION DIVISION PRIOR TO CONSTRUCTION.

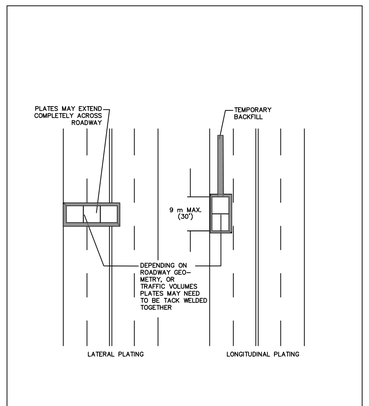
| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | SAFETY FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 2 OF 9 |



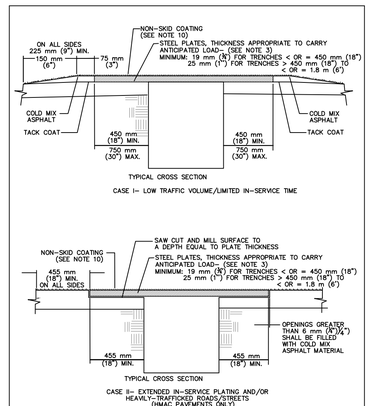

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | LARGE EXCAVATION | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 3 OF 9 |




| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | WORK AREA PROTECTION | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 4 OF 9 |




| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | STEEL PLATING | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 5 OF 9 |

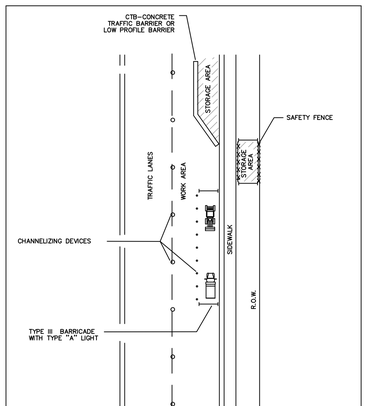



| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | STEEL PLATING | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 6 OF 9 |

NOTES:

1. WHERE TRAFFIC MUST CROSS TRENCHES, THE CONTRACTOR SHALL PROVIDE SUITABLE BRIDGES.
2. THE USE OF STEEL PLATES SHALL BE APPROVED BY THE RIGHT OF WAY MANAGEMENT DIVISION OF WATERSHED PROTECTION AND DEVELOPMENT DEPARTMENT PRIOR TO INITIATION OF CONSTRUCTION.
3. THE THICKNESS OF PLATES FOR TRENCH WIDTHS EXCEEDING 1.8 m (6') SHALL BE ESTABLISHED IN AN ANALYSIS COMPLETED BY A LICENSED PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF TEXAS. THE ANALYSIS SHALL BE BASED ON HS–20 TRAFFIC LOADING WITH A MAXIMUM PLATE DEFLECTION OF 50 mm (X") WHEN EXPERIENCING SAID LOADING. FOR SITUATIONS WHERE MULTIPLE LAYERS OF PLATES (OR STACKED PLATES) ARE TO BE EMPLOYED, THE SEAMS (IE. THE INTER–FACE BETWEEN PLACED SIDE–BY–SIDE) OF THE UPPER LAYER SHALL BE PLACED PERPENDICULAR TO THE SEAMS OF THE UNDERLYING PLATES.
4. WHEN APPROVED, THE TYPE OF PLATE INSTALLATION SHALL BE BASED ON THE ANTICIPATED LENGTH OF TIME THE PLATE WILL BE IN SERVICE:
   CASE I: A CASE I INSTALLATION SHALL APPLY FOR NO LONGER THAN A 2 WEEK PERIOD.
   CASE II: A CASE II INSTALLATION SHALL APPLY FOR NO LONGER THAN 2 WEEK PERIOD.
5. THE TOPSIDE OF THE STEEL PLATE SHALL BE FLAT AND FREE OF ANY CLIPS, CHAINS, ATTACHMENTS, WELDMENTS OR SURFACE IRREGULARITIES.
6. PLATES WITH A PERMANENT DISPLACEMENT (I.E. DISPLACEMENT ANYWHERE ON THE SURFACE OF THE PLATE WITH RESPECT TO A PLANE FORMED BY THE OUTSIDE EDGES) THAT EXCEEDS 12 mm (X") SHALL NOT BE USED FOR PLATING PURPOSES. PLATES THAT DEVELOP A PERMANENT DISPLACEMENT EXCEEDING 12 mm (X") DURING SERVICE SHALL BE REMOVED AND REPLACED.
7. THE PLATES SHALL BE PROVIDED WITH APPROPRIATE NUMBER OF KEYHOLE SLOTS OR CIRCULAR HOLES FOR HANDLING, LIFTING, INSTALLATION AND REMOVAL PURPOSES.
8. THE CONTRACTOR SHOULD AVOID USING A LONG SERIES OF PLATES THAT RUN PARALLEL TO VEHICULAR TRAFFIC WHEELS PATHS.
9. ADDITIONAL METHODS OF SECURING PLATES MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS.
10. FOR PLATES 1.8 M (6') OR GREATER IN DIRECTION OF TRAFFIC, A NON–SKID COATING SHOULD BE APPLIED TO THE ENTIRE SURFACE AREA OF ALL PLATES, AS WELL AS ADJACENT AREAS. THE NON–SKID COATING SHALL BE TCA (TEXTURED COATING OF AMERICA, INC.) STRATA–GRIP DECK COATING SYSTEM; SLIPTIX, INC. SPS (SLIP PROTECTION SURFACE) OR AN EQUIVALENT PRODUCT APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | STEEL PLATING | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 7 OF 9 |




| CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS | | MATERIAL AND EQUIPMENT STORAGE | |
|---|---|---|---|
| RECORD COPY SIGNED BY SAM ANGOORI | 04/03/09 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S–4 |
| ADOPTED | | | 8 OF 9 |

| No. | DATE | REVISIONS | APP |
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STATE OF TEXAS
JOHN KENNETH FOWLER
85453
LICENSED
PROFESSIONAL ENGINEER
3/16/2021

RILEY MOUNTAIN ENGINEERING

16223

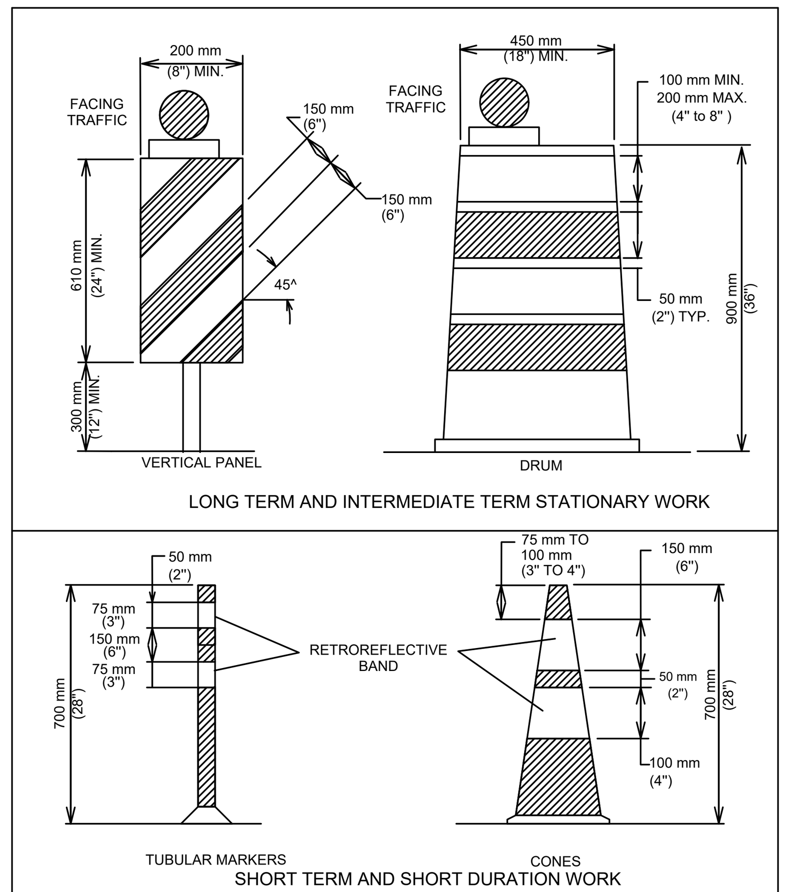
BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL PLAN DETAIL 2

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 47 / 48 |
| CHECKED BY: | JF | | |

1. STORAGE OF EQUIPMENT AND MATERIALS SHALL BE RESTRICTED TO LOCATIONS WHERE DRIVER SIGHT DISTANCES TO TRAFFIC, PEDESTRIANS, BUSINESSES AND SIDE STREET INTERSECTIONS ARE NOT OBSTRUCTED OR WHERE AN UNSIGHTLY APPEARANCE. AS DETERMINED BY THE ENGINEER, WILL NOT EXIST.
2. EQUIPMENT MUST BE PARKED AS FAR AWAY FROM THE TRAVELWAYS AS PRACTICAL.
3. TOTAL AREA USED FOR EQUIPMENT STORAGE SHALL BE KEPT TO A MINIMUM.
4. ALL MATERIALS STORED IN THE RIGHT-OF-WAY MUST BE MAINTAINED IN A NEAT AND ORGANIZED MANNER.
5. MATERIALS STORED MAY NOT BE MORE THAN 915 mm (36") IN HEIGHT.
6. ALL MATERIALS STORED MUST BE USED WITHIN THREE (3) DAYS.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | MATERIAL AND EQUIPMENT STORAGE | RECORD COPY SIGNED BY SAM ANGOORI 04/03/09 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-4, 9 OF 9




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 | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 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 LETTERS 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 POSTITIONED 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 ON IMPACT. FOR NIGHT TIME USE, CONES SHALL BE RETROREFLECTIVE OR EQUIPPED WITH LIGHTING DEVICES FOR MAXIMUM VISIBLITY. RETROREFLECTION OF CONES SHALL BE PROVIDED BY A WHITE BOND 150 mm (6") WIDE, NO MORE 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, TUBLULAR 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.

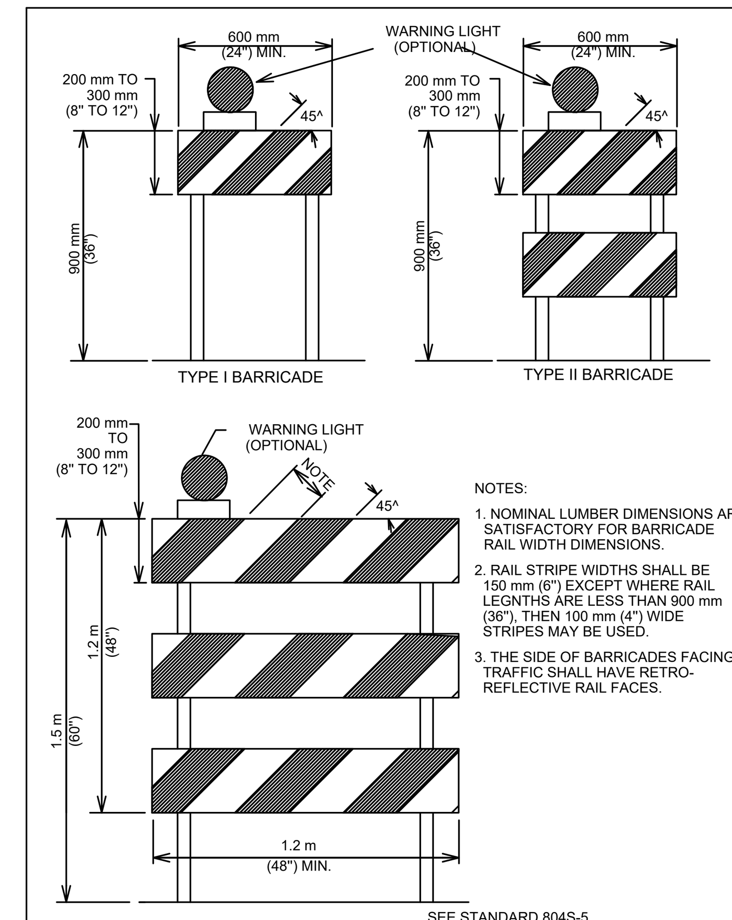
## VERTICAL PANELS

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 OREINTATION. STEEL DRUMS SHALL NOT BE USED. THE MARKINGS ON DRUMS SHALL BE HORIZONTAL, CIRCUNFERENTIAL, 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 ROADWORK 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 | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 2 OF 13



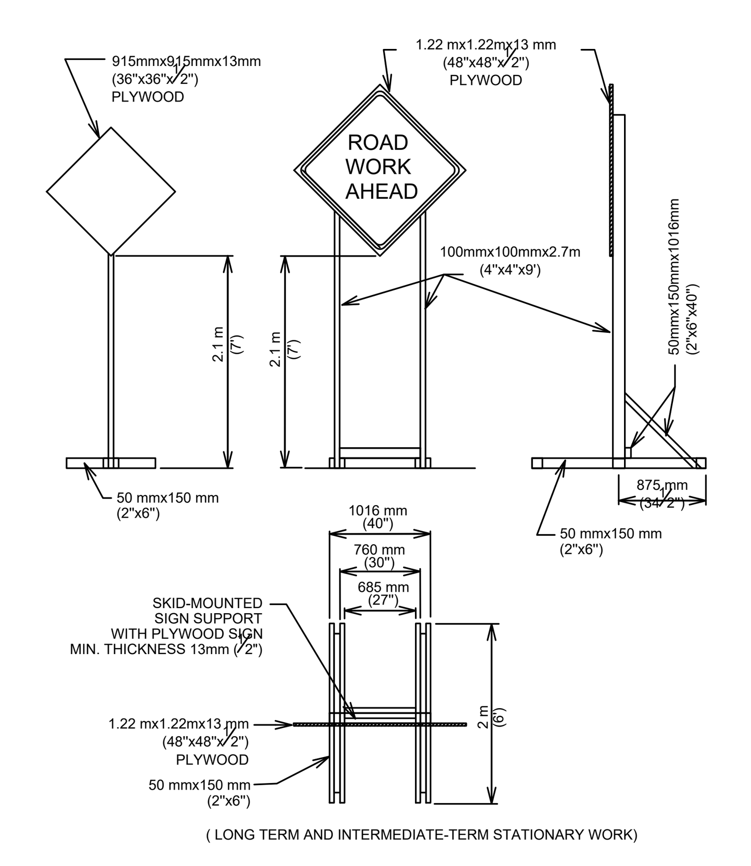

SEE STANDARD 804S-5 SHEET 12 OF 13 AND SHEET 13 OF 13 FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | BARRICADES | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 3 OF 13

## BARRICADES

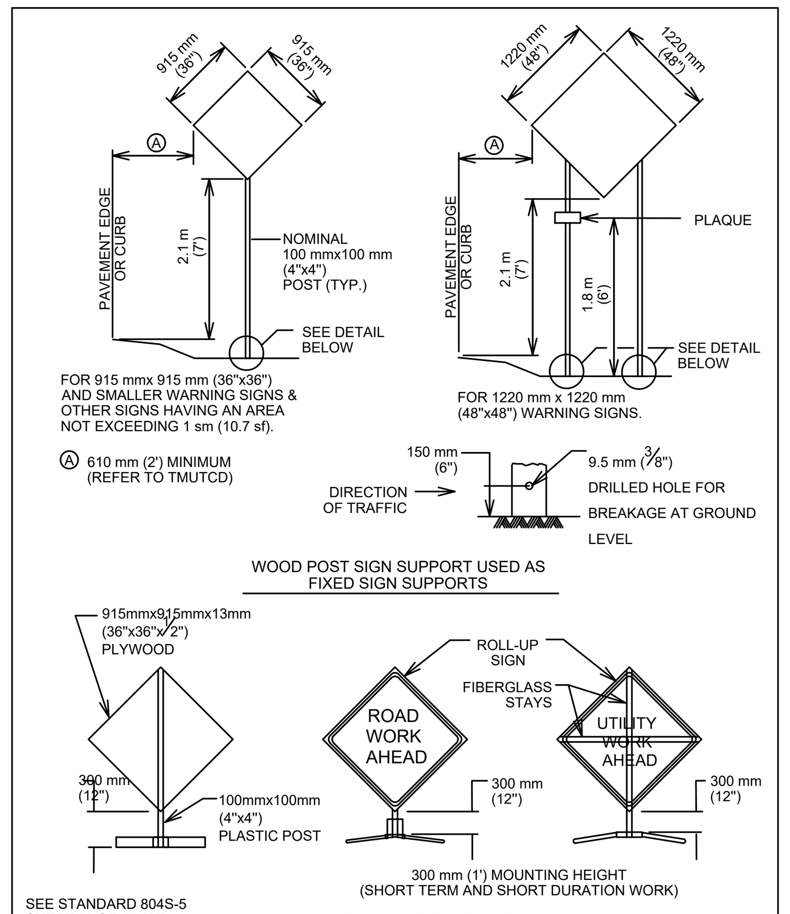
1. BARRICADES SHALL BE OF THREE TYPES: TYPE I, TYPE II OR TYPE III.
2. STRIPES ON BARRICADE RAILS SHALL BE ALTERNATING ORANGE AND WHITE RETRO-REFLECTIVE STRIPES (SLOPING DOWNWARD AT AN ANGLE OF 45 DEGREES IN THE DIRECTION TRAFFIC IS TO PASS). THE STRIPES SHALL BE 150 mm (6") WIDE, EXCEPT WHERE RAIL LENGTHS 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 OVERTURING 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 | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 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 | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 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 | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 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, ESPECIALLY DURING TWILGHT. 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 O.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.

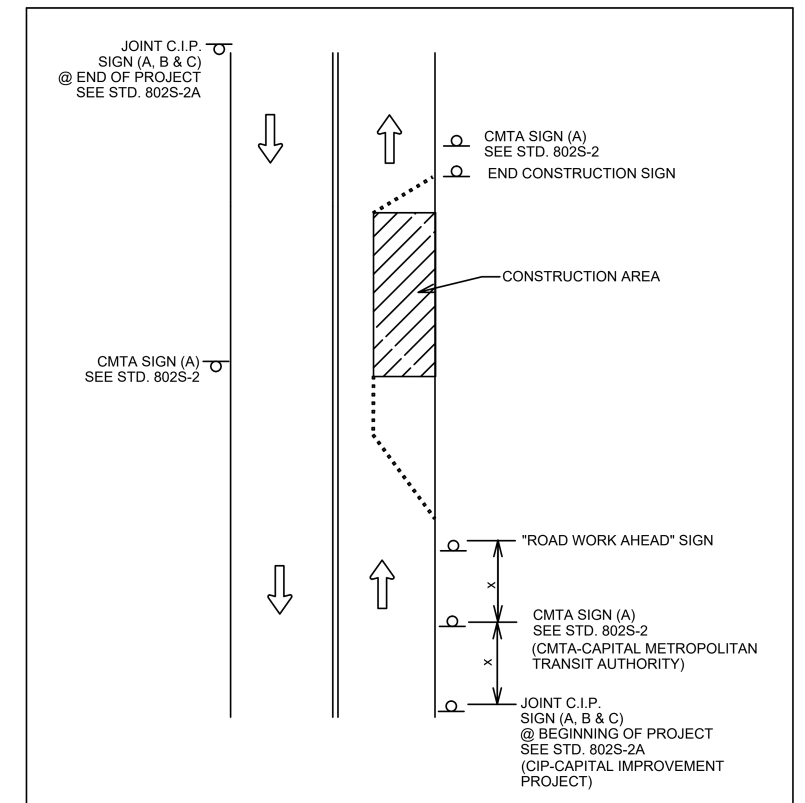
TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

| Roadway Classification | Posted Speed | Sign Spacing ★ | Long-term Stationary Or Intermediate-term Stationary Approaching Warning Signs CW20 Series And CW22-1 Sign | | Short-term Stationary Or Short Duration Approach Warning Signs CW22 Series | | Other Warning Signs |
|---|---|---|---|---|---|---|---|
| | | | Standard | Minimum[4] | Standard | Minimum[4] | Standard |
| Conven. | KPH (MPH) | meter (feet) | mm (inches) | mm (inches) | mm (inches) | mm (inches) | mm (inches) |
| | 50 (30) | 40 (120) | 1220x1220 (48x48) | 915x915 (36x36) | | | |
| | 55 (35) | 50 (160) | | | 915x915 (36x36) | | 915x915 (36x36) |
| | 65 (40) | 75 (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. or Fwy | ★★ | ★★ 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.

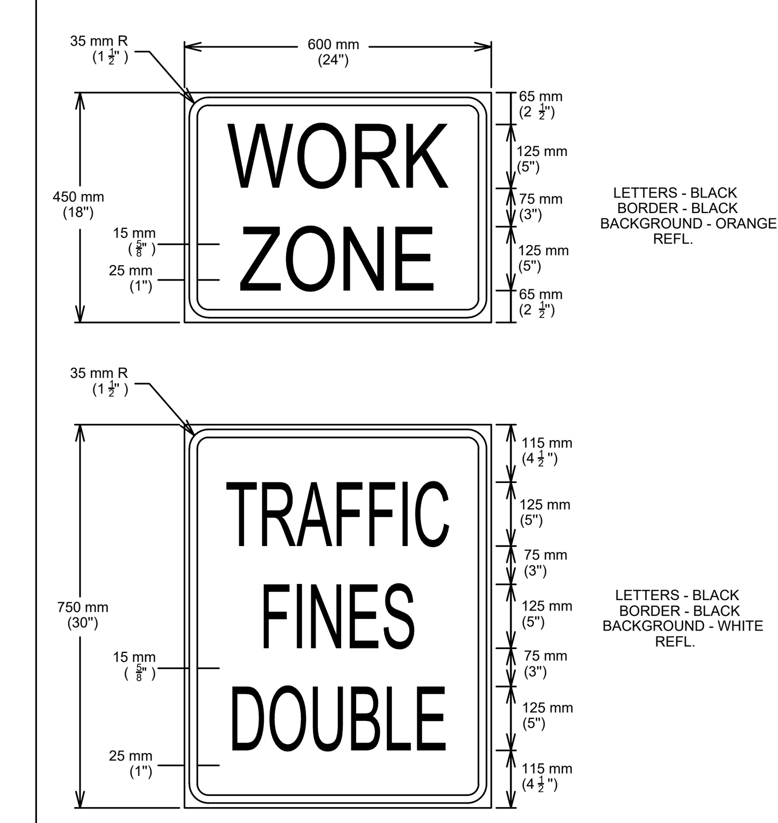
CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | TRAFFIC CONTROL SIGNS | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 7 OF 13




NOTES:
1. OTHER REQUIRED SIGNS NOT SHOWN FOR CLARITY.
2. "X" DISTANCES SAME AS STANDARD TABLE SHOWN ON SHEET 13 OF 13.

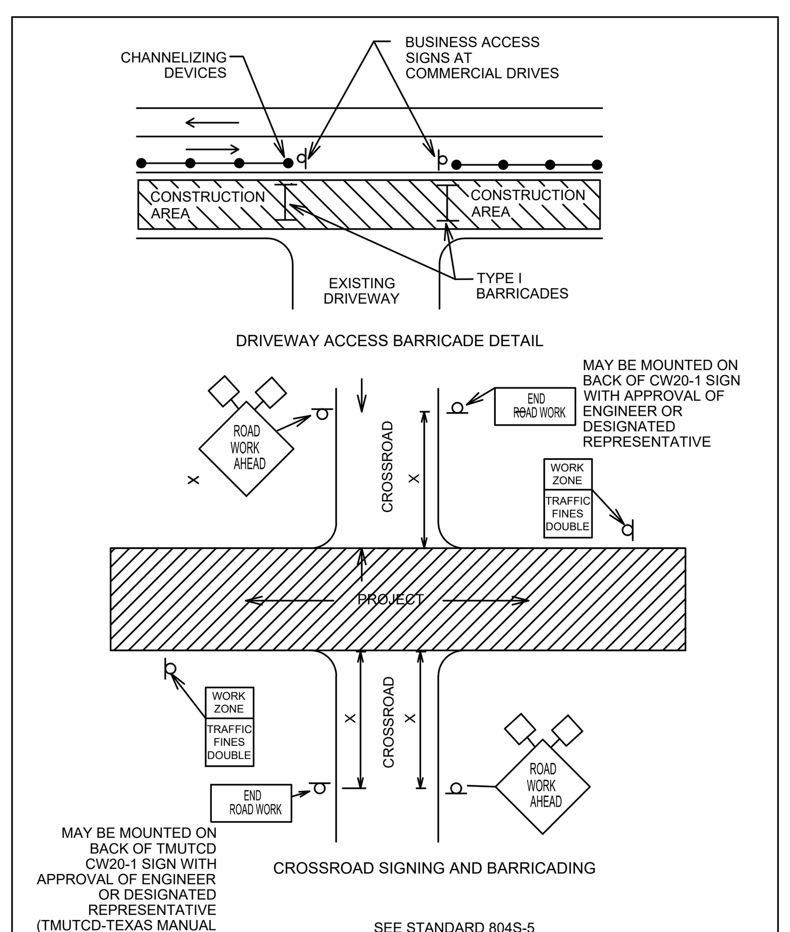
SEE STANDARD 804S-5 SHEET 12 OF 13 AND SHEET 13 OF 13 FOR GENERAL NOTES AND DEVICE SPACING.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | TYPICAL CMTA/C.I.P. SIGN LOCATIONS | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 8 OF 13




SEE STANDARD DETAIL 804S-5 SHEET 5 OF 13 FOR SKID-MOUNTED SIGN SUPPORT.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | SPECIAL WORK ZONE SIGNS | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 9 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 | SIGNING AND BARRICADING CROSSROAD & DRIVEWAY | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 11 OF 13

1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES AND SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN STANDARD SPECIFICATIONS SERIES 800 AND THE CITY OF AUSTIN TRANS-PORTATION CRITERIA MANUAL, OR AS DIRECTED BY THE ENGINEER OR DESIGNATED RE-PRESENTATIVE. IF A CONFLICT ARISES THEN THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL SHALL CONTROL UNLESS OTHERWISE INSTRUCTED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
2. THE CONTRACTOR SHALL NOTIFY THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024 NO LATER THAN THE MONDAY OF THE WEEK DURING WHICH THE CONTRACTOR INTENDS TO SET UP BARRICADES TO START CONSTRUCTION.
3. PROPOSED CONSTRUCTION TRAFFIC MOVEMENTS MAY REQUIRE EXISTING SIGNAL HEADS TO BE RELOCATED. THE CITY OF AUSTIN WILL REVIEW SIGNAL HEAD LOCATIONS DURING CONSTRUCTION AND PERFORM THE REQUIRED ADJUSTMENTS. THE CONTRACTOR SHALL CONTACT THE TRANSPORTATION DIVISION OF THE DEPARTMENT OF PUBLIC WORKS AT 974-7024, THREE (3) DAYS PRIOR TO PLACMENT ANY TRAFFIC CONTROLS WHICH MAY REQUIRE SIGNAL HEAD ADJUSTMENTS/RELOCATION.
4. THE CONTRACTOR SHALL PROVIDE ONE (1) FULL-TIME OFF-DUTY, UNIFORMED AUSTIN POLICE DEPARTMENT CERTIFIED PEACE OFFICER AND ONE (1) VEHICLE OF THE TYPE APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE FOR TEMPORARY LANE CLOSURES WHEN UNDERSEALING, MILLING, PAVING AND WHEN WORKING IN INTERSECTIONS AS PART OF THE TRAFFIC CONTROL OPERATIONS. THE PEACE OFFICER SHALL BE ABLE TO SHOW PROOF OF CERTIFICATION BY THE TEXAS COMMISSION ON LAW ENFORCEMENT OFFICER STANDARDS.
5. THE CONTRACTOR SHALL NOTIFY ALL OTHER GOVERNMENTAL AGENCIES WHOSE RIGHTS-OF-WAY ARE AFFECTED BY HIS WORK ACTIVITIES. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL TRAFFIC CONTROL DEVICES THAT THEY MAY NEED.
6. THE CONTRACTOR SHALL MAINTAIN ONE (1) DUST-FREE LANE OF TRAFFIC IN EACH DIRECTION AT ALL TIMES, UNLESS OTHERWISE NOTED IN THE DRAWINGS OR APPROVED THE ENGINEER OR DESIGNATED REPRESENTATIVE.
7. THERE SHALL BE A MINIMUM OF THREE (3) METERS (10 FEET) CLEAR WIDTH FOR EACH LANE OF TRAFFIC IN CHANNELIZED AREAS, UNLESS OTHERWISE NOTED ON THE DRAWINGS OR APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.
8. THE CONTRACTOR SHALL MAINTAIN DRIVEWAY ACCESS AT ALL TIMES. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER OR DESIGNATED REPRESENTATIVE SHALL PROVIDE AT LEAST 24 HOUR WRITTEN NOTICE OF LIMITED ACCESS TO AFFECTED PROPERTY OWNERS. THE CONTRACTOR SHALL PROVIDE BUSINESS ACCESS SIGNS AS NEEDED TO NFORM DRIVERS OF THE LOCATIONS OF ALL DRIVEWAYS.
9. TEMPORARY LANE CLOSURES IN THE CENTRAL BUSINESS DISTRICT (CBD) OR ON ARTERIAL STREETS SHALL NOT BE PERMITTED DURING THE HOURS OF 7 AM TO 9 AM AND 4 PM TO 6PM MONDAY THROUGH FRIDAY UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE TRANSPORTATION DIVISION.
10. TRAFFIC CONTROL SHOWN ON STANDARD DETAILS IS TYPICAL. ADDITIONAL SIGNING AND/OR BARRICADING, AS WELL AS TEMPORARY PAVEMENT MARKINGS AND OBLITERATION/RESTORATION OF EXISTING PAVEMENT MARKINGS, MAY BE REQUIRED DEPENDING ON FIELD CONDITIONS. FIELD ADJUSTMENTS TO TRAFFIC CONTROLS WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO ITEM NO. 803S "BARRICADES, SIGNS AND TRAFFIC HANDLING".
11. THE CONTRACTOR SHALL DESIGNATE A COMPETENT PERSON FOR TRAFFIC CONTROL. THE COMPETENT PERSON SHALL MAKE INSPECTIONS OF THE TRAFFIC CONTROL DEVICES AT LEAST TWO (2) TIMES A DAY (ONCE AT THE BEGINNING OF THE DAY AND ONCE AT THE END OF THE DAY), INCLUDING NON-WORKING DAYS, ENSURING THAT ALL DEVICES ARE IN THEIR PROPER PLACE AND ARE IN WORKING ORDER.
12. ALL DEVICES SHALL BE MADE USING MATERIALS LISTED ON THE TxDOT APPROVED PRODUCTS LIST.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | GENERAL TRAFFIC CONTROL NOTES | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 12 OF 13

13. ALL PERSONS WORKING WITHIN THE RIGHT-OF-WAY SHALL WEAR A BRIGHTLY COLORED SAFETY VEST. FOR NIGHTTIME WORK THE VEST SHALL BE RETROREFLECTIVE,
14. WHEN AN INTERSECTION IS CLOSED FOR CONSTRUCTION, THE CONTRACTOR SHALL PROCEED WITH CONSTRUCTION IN SUCH A MANNER THAT THE CLOSURE TIME IS MINIMIZED.
15. THE CONTRACTOR SHALL NOTIFY THE CAPITAL METRO DISPATCHER AT 385-4295 ONE (1) WEEK PRIOR TO LANE CLOSURES ADJACENT TO BUS STOPS.

## DURATION OF WORK

WORK DURATION IS A MAJOR FACTOR IN DETERMINING THE NUMBER AND TYPES OF DEVICES USED IN TEMPORARY TRAFFIC ZONES. THE FIVE (5) CATEGORIES OF WORK DURATION AND THEIR TIME AT A LOCATION ARE AS FOLLOWS:

- LONG-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FOR MORE THAN 3 DAYS.
- INTERMEDIATE-TERM STATIONARY-WORK THAT OCCUPIES A LOCATION FROM OVERNIGHT TO 3 DAYS.
- SHORT-TERM STATIONARY-DAYTIME WORK THAT OCCUPIES A LOCATION FROM 1 TO 12 HOURS.
- SHORT-DURATION WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.
- MOBILE-WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

Typical Transition Lengths and Suggested Maximum Spacing of Devices

| | | Minimum Desirable Taper Lengths (L) Meters (Feet) | | | Suggested Max. Device Spacing | | Suggested Sign Spacing Meters (Feet) |
|---|---|---|---|---|---|---|---|
| Posted Speed KPH (MPH) | Formula | 3.0(10) Offset Meters (feet) | 3.3(11) Offset Meters (feet) | 3.6(12) Offset Meters (feet) | On a taper Meters (feet) | On a tangent Meters (feet) | "X" Dimension |
| 50 (30) | $L=\frac{WS^2}{60}$ | 45 (150) | 50 (165) | 55 (180) | 9 (30) | 15-20 (60-75) | 40 (120) |
| 55 (35) | | 65 (205) | 70 (225) | 75 (245) | 10 (35) | 25-25 (70-90) | 50 (160) |
| 65 (40) | | 80 (265) | 90 (295) | 100 (320) | 12 (40) | 25-30 (80-100) | 75 (240) |
| 70 (45) | L=WS | 135 (450) | (495) | 165 (540) | 13 (45) | 25-30 (90-110) | 100 (320) |
| 80 (50) | | 150 (500) | 165 (550) | 180 (600) | 15 (50) | 30-35 (100-125) | 120 (400) |
| 90 (55) | | 165 (550) | 185 (605) | 200 (660) | 16 (55) | 35-40 (110-140) | 150 (500) |
| 100 (60) | | 180 (600) | 200 (660) | 220 (720) | 18 (60) | 40-45 (120-150) | 180 (600) |
| 105 (65) | | 195 (650) | 215 (715) | 235 (780) | 19 (65) | 40-50 (130-165) | 210 (700) |
| 115 (70) | | 215 (700) | 235 (770) | 255 (840) | 21 (70) | 45-55 (140-175) | 240 (800) |

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS | GENERAL TRAFFIC CONTROL NOTES | RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 804S-5, 13 OF 13

| No. | DATE | REVISIONS | APP |
|---|---|---|---|

STATE OF TEXAS — JOHN KENNETH FOWLER — 85453 — LICENSED PROFESSIONAL ENGINEER

3/16/2021

# RILEY MOUNTAIN ENGINEERING

16223

BEVERLY ROAD
WATER & WASTEWATER PIPELINE RENEWAL

TRAFFIC CONTROL PLAN DETAIL 3

| | | | |
|---|---|---|---|
| DESIGNED BY: | KF | SCALE: | 1"=20' |
| DRAWN BY: | JN | SHEET NUMBER | 48 / 48 |
| CHECKED BY: | JF | | |