# CITY OF AUSTIN, TEXAS
# AUSTIN WATER

# PILAND TRIANGLE INTERCONNECT

**C.I.P. NO. 695.061**

**I.F.B. - CLMC844**

SHEET INDEX:

SEE SHEET G1

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 DRY CREEK EAST WATERSHED (CLASSIFIED AS SUBURBAN) 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. A 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 EDWARD'S AQUIFER RECHARGE ZONE AS DEFINED BY THE CITY OF AUSTIN. THIS PROJECT IS NOT WITHIN THE EDWARD'S AQUIFER RECHARGE ZONE AS REGULATED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ).
7. THERE ARE CRITICAL ENVIRONMENTAL FEATURES WITHIN 150' OF ANY PORTION OF THIS PROJECT. A FIELD INVESTIGATION HAS BEEN PERFORMED AS A PART OF THIS PROJECT.
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. APPROPRIATE EASEMENTS/APPROVALS MUST BE SECURED AND DOCUMENTED FOR PROJECT.
11. 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 WILL 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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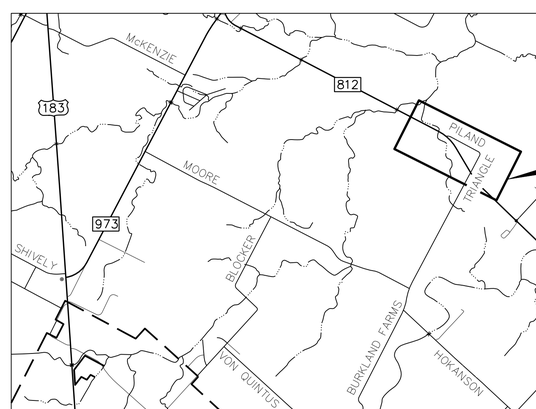
MAYOR
STEVE ADLER

COUNCIL MEMBERS

NATASHA HARPER-MADISON, DISTRICT 1
DELIA GARZA, DISTRICT 2
SABIO "PIO" RENTERIA, DISTRICT 3
GREGORIO "GREG" CASAR, DISTRICT 4
ANN KITCHEN, DISTRICT 5
JIMMY FLANNIGAN, DISTRICT 6
LESLIE POOL, DISTRICT 7
PAIGE ELLIS, DISTRICT 8
KATHIE TOVO, DISTRICT 9
ALISON ALTER, DISTRICT 10

CITY MANAGER
SPENCER CRONK




PROJECT LIMITS

LOCATION MAP
COA GRID: N10, P10
CURRENT PRESSURE ZONE: CENTRAL
WASTEWATER BASIN: DRY SOUTH (DRY)
MAPSCO NO. 707T, 707U, 707Y

N.T.S.

WAIVER:

COA AUSTIN WATER APPROVES WAIVER TO UTILITY CRITERIA MANUAL SECTIONS 2.5.2.A.8., & 2.5.2.A.9. FOR THE UTILITY RELOCATION/ADJUSTMENTS SPECIFIC TO THE SCOPE OF THIS PROJECT UNDER THE AUTHORITY OF ROVERTO CHAPA, P.E., OF UTILITY DEVELOPMENT SERVICES DIVISION, PIPELINE ENGINEERING.

SIGNATURE: Rob Chapa P.E. DATE: April 09, 2021

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:
FM 812 - CIRCUIT OF THE AMERICAS BLVD.
TO PILAND TRIANGLE RD.
PILAND TRIANGLE RD. - FM 812
TO BURKLAND FARMS RD.

OWNER:
AUSTIN WATER UTILITY DEPARTMENT
MR. RON CRANE, P.E., SPONSOR
3907 S. INDUSTRIAL DR., 2ND FLOOR
AUSTIN, TX 78744
(512) 972-0260

CONTACT:
MS. DEMIRA WYATT, PROJECT MANAGER
505 BARTON SPRINGS ROAD
SUITE 900
AUSTIN, TX 78704
(512) 974-7213

SUBMITTAL PREPARED BY:

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
LICENSED
PROFESSIONAL ENGINEER
10/25/2020 10:16:44 PM

FREESE AND NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Fax - (512) 617-3101

10/25/2020 10:17:02 PM — October 25, 2020
ENGINEER OF RECORD — DATE

APPROVED BY GENERAL PERMIT HOLDER:

Rob Chapa P.E. — April 09, 2021
FOR GENERAL PERMIT HOLDER — DATE

ANNUAL GENERAL PERMIT NUMBER

APPROVALS:

FOR TRAVIS COUNTY — DATE

19-23757
TRAVIS COUNTY PERMIT NUMBER

AW APPROVAL EXPIRES 4/12/24 — 4/12/2021
FOR AUSTIN WATER UTILITY — DATE

APPROVAL FOR SITE DEVELOPMENT PERMIT:

11/10/20
GENERAL PERMIT PROGRAM COORDINATOR
PLANNING AND DEVELOPMENT REVIEW DEPARTMENT — DATE

GP-2020-0294.AWU
DEVELOPMENT PERMIT NUMBER

SUBMITTAL DATE:

UCC-180913-03-02
AULCC TRACKING #

12006145
AULCC ROW ID #

GENERAL PERMIT PROGRAM

## EXISTING LEGEND

| | |
|---|---|
| | SURVEY CONTROL POINT |
| | IRON PIPE FOUND |
| | IRON ROD FOUND |
| | IRON ROD W/ PLASTIC CAP FOUND |
| | 'X' CUT IN CONCRETE FOUND/SET |
| | BOLLARD/POST |
| | SIGN |
| | MAIL BOX |
| | PIN FLAG |
| 001 | TREE WITH TAG NO. |
| CV | IRRIGATION CONTROL VALVE |
| W | WATER METER |
| WV | WATER VALVE |
| FH | FIRE HYDRANT |
| WMH | WATER MANHOLE |
| —W— | WATER LINE |
| WWCO | WASTEWATER CLEANOUT |
| WWMH | WASTEWATER MANHOLE |
| —WW— | WASTEWATER LINE |
| SSMH | STORM SEWER MANHOLE |
| —S— | STORM SEWER LINE |
| | LIGHT |
| | LIGHT POLE |
| | POWER POLE |
| | GUY WIRE |
| E | ELECTRIC METER |
| E | ELECTRIC JUNCTION BOX |
| PB | ELECTRIC PULL BOX |
| EMH | ELECTRIC MANHOLE |
| —E— | ELECTRIC LINE (UNDERGROUND) |
| —OHE— | ELECTRIC LINE (OVERHEAD) |
| | EDGE OF PAVEMENT |
| TEL | TELEPHONE RISER |
| TMH | TELEPHONE MANHOLE |
| FO | FIBER OPTICS MARKER |
| —W— | PROPOSED WATER LINE |
| —WW— | PROPOSED WASTEWATER LINE |

| | |
|---|---|
| | SIGNAL CONTROL BOX |
| TSP | TRAFFIC SIGNAL POLE |
| G | GAS METER |
| | GAS VALVE |
| G | GAS MARKER |
| —GAS— | GAS LINE |
| —PL— | PROPERTY LINE |
| — — — — | EASEMENT LINE |
| —100Y— | 100 YEAR ZONE AE |
| — C — | UPM–ORANGE |
| — X — | WIRE FENCE |
| —SF— | SILT FENCE |
| —o— | CHAIN LINK FENCE |
| CI | CAST IRON |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| LP | LOW PRESSURE |
| HP | HIGH PRESSURE |
| BRSTL | BARE STEEL |
| WRSTL | WRAPPED STEEL |
| AC | ASBESTOS CONCRETE |
| ASPH. | ASPHALT |
| SWK. | SIDEWALK |
| CONC. | CONCRETE |
| R.O.W. | RIGHT–OF–WAY |
| P.U.E. | PUBLIC UTILITY EASEMENT |
| VOL. PG. | VOLUME, PAGE |
| DOC. NO. | DOCUMENT NUMBER |
| ( ) | RECORD INFORMATION |
| T.C.A.D. | TRAVIS COUNTY APPRAISAL DISTRICT |
| D.R.T.C.Tx. | DEED RECORDS OF TRAVIS COUNTY, TEXAS |
| P.R.T.C.Tx. | PLAT RECORDS OF TRAVIS COUNTY, TEXAS |
| R.P.R.T.C.Tx. | REAL PROPERTY RECORDS OF TRAVIS COUNTY, TEXAS |
| O.P.R.T.C.Tx. | OFFICIAL PUBLIC RECORDS OF TRAVIS COUNTY, TEXAS |
| —T U/G— | TELEPHONE LINE (UNDERGROUND) |
| —T O/H— | TELEPHONE LINE (OVERHEAD) |
| —ROW— | RIGHT OF WAY |

## PROPOSED LEGEND

N NORTH ARROW

SECTION INDICATOR (BY LETTER)
DETAIL TITLE
A
C–2
SECTION TITLE
SCALE: 1"=10'
SECTION SCALE
SHEET WHERE SECTION IS SHOWN

SECTION OR DETAIL MARK
DETAIL TITLE
1
C–2
DETAIL TITLE
SCALE: 1"=10'
DETAIL SCALE
SHEET WHERE DETAIL IS SHOWN

SECTION CUT INDICATOR IS SHOWN
SECTION CUT DIRECTION
A
C–2
SHEET WHERE CUT

| | |
|---|---|
| | PROPOSED DRAIN VALVE |
| | PROPOSED THRUST BLOCK |
| | PROPOSED GATE VALVE |
| | PROPOSED FIRE HYDRANT |
| EXIST. | EXISTING |
| PROP. | PROPOSED |
| ℄ | CENTER LINE |
| TH–X | TEST HOLE |
| BH–X | BORE HOLE |
| | REDUCER |
| | COMBINATION AIR RELEASE AND VACUUM VALVE |
| —LOC— | LIMITS OF CONSTRUCTION |
| | W/WW TO BE ABANDONED |

## BORING LOG LEGEND

| | | | |
|---|---|---|---|
| Silt | Clay | Sand | Silty Clay or Clayey Silt |
| Silty Sand | Clayey Sand | Gravel | Shale |
| Limestone | Rock/Fragments | Crushed limestone base | Tan Limestone w/Interbedded Silt Layers |
| Silty clay w/Gravel | Asphalt | Sandstone | Concrete |

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REVIEWED
April 12, 2021
Austin Water
George R.


Freese and Nichols, Inc.
Texas Registered Engineering Firm F–2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
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CITY OF AUSTIN, TEXAS
TRIANGLE INTERCONNECT
PILAND TRIANGLE
GENERAL
SHEET INDEX, LEGEND & STANDARD ABBREVIATIONS

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SHEET G1
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Date: Oct 18, 2020 – 1:37pm User: 07155 File: N:\STANDARD\GN–INDEX.dwg

# 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. CONTRACTOR 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 4 INCHES AND LARGER SHALL 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 AUSTIN WATER AT 972-0000 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 WASTEWATER SERVICES WILL NEED TO BE REPLACED UP TO THE MAIN. REPAIR COUPLINGS ARE NOT ALLOWED ON NEW INSTALLATIONS.

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 CRITERIA 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.

# DEWATERING NOTES (GROUNDWATER AND SURFACE WATER):

1. 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 GENERAL PERMIT PROGRAM COORDINATOR AND ENGINEER PRIOR TO USE. CONTRACTOR MUST PROVIDE COMPLETE SUBMITTAL AND ALLOW ONE WEEK COMMENT PERIOD FOR EACH REVIEW.

2. DEWATERING OF THE SITE IS THE RESPONSIBILITY OF THE CONTRACTOR. SPECIFICATIONS ARE INTENDED TO PROVIDE THE MINIMUM REQUIREMENTS FOR THE DEWATERING OF THE SITE DURING CONSTRUCTION. ANY ADJUSTMENTS AND ADDITIONAL MEASURES THAT MAY BE REQUIRED BY THE CONTRACTOR DURING CONSTRUCTION TO FACILITATE THE RATE OF DEWATERING AND PREVENT SILTING OF WATERWAYS OR FLOODING DAMAGE TO THE PROPERTY AND ADJACENT PROPERTY REMAIN THE CONTRACTOR'S RESPONSIBILITY.

3. CONTRACTOR TO SUBMIT DEWATERING PLAN WHICH WILL INCLUDE TEMPORARY DIVERSION CHANNEL(S), DIVERSION PIPE(S), PUMP(S), COFFER DAM(S) OR OTHER APPROVED METHODS. CONTRACTOR MUST SECURE CITY OF AUSTIN APPROVAL OF PROPOSED DEWATERING PROCEDURES PRIOR TO INSTALLATION OR USE. APPROVAL MUST BE SECURED FROM GENERAL PERMIT PROGRAM COORDINATOR AND ENGINEER PRIOR TO USE. EARTHEN DIVERSION BERMS, SANDBAGS, OR OTHER EASILY ERODIBLE MATERIALS ARE NOT ACCEPTABLE.

4. PUMP DISCHARGES REQUIRED FOR TRENCH DEWATERING AND BYPASSING CREEK FLOWS DURING CONSTRUCTION SHALL BE DISCHARGED INTO A SILT FENCE RING (OR OTHER MEASURES APPROVED BY THE ENGINEER AND GENERAL PERMIT PROGRAM COORDINATOR) PRIOR TO LEAVING THE SITE. PUMP RATE SHALL NOT EXCEED CAPACITY OF SILT FENCE RING. SILT FENCE RING(S) TO BE ADJUSTED AS NEEDED AND LOCATED AS APPROPRIATE BY THE CONTRACTOR. REMOVAL OF SEDIMENT RESULTING FROM DEWATERING OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR.

5. IF ANY PORTION OF THE PROPOSED TRENCH DEWATERING OR CHANNEL DEWATERING/DIVERSION SYSTEMS IS INTENDED TO BE PLACED OUTSIDE THE LIMITS OF CONSTRUCTION SHOWN WITHIN THE PERMITTED PLAN SET, A CITY OF AUSTIN PERMIT CORRECTION WILL BE REQUIRED. THE PERMIT CORRECTION MUST BE SUBMITTED AND APPROVED PRIOR TO PLACEMENT OF THE DEWATERING SYSTEM.


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CITY OF AUSTIN, TEXAS
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## PAVEMENT OR ROADWAY CONSTRUCTION OR REHABILITATION NOTES:

1. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE STREET SURFACE OR SUBSURFACE OUTSIDE THE PAVEMENT SAW CUT AREA SHALL BE REGARDED AS A PART OF THE STREET REPAIR. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, TRAFFIC SIGNS, MARKINGS AND/OR ANY OTHER DAMAGE CAUSED BY THE CONTRACTOR, SUB-CONTRACTORS AND/OR THEIR EQUIPMENT. THESE AREAS WILL BE INCLUDED IN THE TOTAL AREA OF REPAIR. ALL REPAIRS OUTSIDE OF THE SAW CUT SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS.

2. THE CONTRACTOR SHALL SHAPE AND SEAL COAT ANY EXPOSED UNDERLYING FLEX-BASE OR SUBGRADE MATERIALS EXPOSED AFTER EXCAVATION OR SURFACE MILLING.

3. ALL FULL OR PARTIAL DEPTH PATCHES SHALL BE CONSTRUCTED PRIOR TO EDGE/SURFACE MILLING, UNDERSEAL, OR OVERLAY. HMAC BASE REPAIRS SHALL BE ALLOWED TO CURE 24 HOURS PRIOR TO EDGE/SURFACE MILLING. MILLING WILL NOT BE ALLOWED TO BEGIN UNTIL DENSITY RESULTS HAVE BEEN RECEIVED/REVIEWED BY THE INSPECTOR AND HAS AUTHORIZED THE CONTRACTOR TO PROCEED.

4. RESHAPING, UNDERSEAL, PRIMECOAT, AND OVERLAY SHALL BE PLACED IMMEDIATELY UPON COMPLETION OF MILLING OPERATION IN ORDER TO MINIMIZE EXPOSURE OF THE WEAKENED SECTION TO RAIN AND TRAFFIC.

5. ALL RECONSTRUCTION, PREPARATION WORK AND PAVING SHALL BE COMPLETED IN A MANNER SO AS TO PROVIDE A SMOOTH RIDING SURFACE FREE OF BUMPS, DIPS, AND RIPPLES AND A SMOOTH UNIFORM APPEARANCE.

6. TACK COAT SHALL MEET THE REQUIREMENTS FOR CUTBACK ASPHALT OR EMULSIFIED ASPHALT AND SHALL COMPLY WITH CITY OF AUSTIN STANDARD SPECIFICATIONS. TACK COAT, SEAL COAT UNDERSEAL AND PRIMECOAT ARE NOT A SEPARATE PAY ITEM BUT SHALL BE CONSIDERED SUBSIDIARY TO THE HMAC BID ITEM.

7. ALL OVERLAY HMAC MUST BE PLACED WITH A LAYDOWN MACHINE.

8. WHERE TYPE "C" HMAC IS SPECIFIED, THE MAXIMUM LIFT THICKNESS IS 3 INCHES. THE MINIMUM LIFT THICKNESS SHALL BE NO LESS THAN 1-3/4 INCHES.

9. THE CONTRACTOR SHALL COMPLETE HMAC BASE LAYING OPERATIONS OR CONCRETE PAVEMENT PATCH OPERATIONS THE SAME DAY AS PAVEMENT REMOVAL TO SUBGRADE WAS ACCOMPLISHED FOR ANY PATCH AREA.

10. TRUCKS DELIVERING CONCRETE OR HMAC TO THE PROJECT SHALL BE OF SUFFICIENT NUMBERS TO ENSURE A CONTINUOUS OPERATION.

11. IF THE SURFACE COURSE IS NOT COMPLETED WITHIN THE SPECIFIED WORK TIME, HOT OR COLD MIX TRANSITIONS SHALL BE PLACED AT THE END OF PAVING PRIOR TO OPENING TO TRAFFIC. THE TRANSITION SHALL BE CUT BACK TO FULL SURFACE COURSE DEPTH AND WIDTH ON A STRAIGHT TRANSVERSE LINE TO EXPOSE A VERTICAL FACE IN ORDER TO FORM THE TRANSVERSE CONSTRUCTION JOINT. TRANSITIONS SHALL BE PAPER JOINTS PLACED IN ACCORDANCE WITH STANDARD DETAIL 340S-1, HMAC TRANSVERSE CONSTRUCTION JOINT. LONGITUDINAL JOINTS WHICH ARE IRREGULAR, DAMAGED, OR OTHERWISE DEFECTIVE SHALL BE CUT BACK TO EXPOSE A CLEAN, SOUND SURFACE FOR THE FULL DEPTH OF THE OVERLAY COURSE PRIOR TO RECOMMENCING PAVING OPERATIONS. ALL CONTACT SURFACES SHALL BE GIVEN A TACK COAT OF BITUMINOUS MATERIAL PRIOR TO PLACING ANY FRESH MIXTURE AGAINST THE JOINT.

12. 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 ONE (1) INCH OF DIFFERENTIAL PAVEMENT HEIGHT (I.E. 6' TRANSITION FOR A 2" MILLED AREA). THIS ITEM WILL NOT BE PAID FOR DIRECTLY, BUT IT WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

13. THE FINISHED PAVEMENT SURFACE SHALL APPROXIMATE THE EXISTING PROFILE, UNLESS OTHERWISE NOTED ON THE PLANS. THE OVERLAY THICKNESS SHALL BE CONSTRUCTED AS SHOWN ON PLAN LAYOUT SHEET. ANY EXCEPTIONS SHALL BE SPECIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION.

14. AT INTERSECTIONS THAT HAVE VALLEY DRAINAGE, THE CROWN OF THE INTERSECTION STREET SHALL CULMINATE AT A DISTANCE OF 40 FEET FROM THE INTERSECTION CURB LINE UNLESS OTHERWISE NOTED.

15. ALL LOOSE MATERIALS SHALL BE COMPLETELY REMOVED FROM THE ROADWAY BY MECHANICAL SWEEPER AND/OR MANUAL BROOMING PRIOR TO OPENING TO TRAFFIC AND FOR THE DURATION OF THE PROJECT. ALL LOOSE MATERIAL SHALL BE COMPLETELY REMOVED FROM THE ADJACENT SIDEWALK AREAS FOR THE DURATION OF THE PROJECT AND SIDEWALKS SHALL BE COMPLETELY CLEAR OF ANY CONSTRUCTION DEBRIS PRIOR TO FINAL COMPLETION OF THE PROJECT. LOOSE AND SURPLUS AGGREGATE SHALL BE BROOMED OFF THE SURFACE AS DIRECTED BY THE PROJECT MANAGER. BROOMING WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

16. THE CONTRACTOR SHALL SHAPE THE UNDERLYING FLEXIBLE BASE OR SUBGRADE MATERIALS EXPOSED AFTER EXCAVATION OR MILLING AND PROOF ROLL ACCORDING TO ITEM 236S ROLLING (PROOF). ANY SOFT AREAS REVEALED BY PROOF ROLLING WILL BE CORRECTED AND PROOF ROLLED AGAIN UNTIL APPROVED BY THE ENGINEER. CORRECTIVE MEASURES TAKEN SHALL BE APPROVED BY THE ENGINEER AND WILL BE PAID BY THE CITY PER ITEM NO. 201S-R REWORK SUBGRADE. PROOF ROLLING WILL NOT BE PAID FOR DIRECTLY, BUT WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

17. LAYDOWN OPERATIONS SHALL BE PERFORMED IN A SEQUENCE SUCH THAT THE LONGITUDINAL JOINT WILL BE CARRIED ALONG WITHOUT EXCESS DISTANCE OF LAP BACK, NOT TO EXCEED ONE DAY'S OPERATION, UNLESS OTHERWISE AUTHORIZED BY THE PROJECT MANAGER. PLACEMENT WIDTHS SHALL BE A MAXIMUM OF 12 FEET. THE LONGITUDINAL JOINTS SHALL BE LOCATED UNDER THE LANE LINES WHENEVER POSSIBLE.

18. FOR THE SURFACE COURSE, AN AUTOMATIC SCREED SHALL BE USED WITH OUTRIGGERS. DENSITY TESTS SHALL BE TAKEN PRIOR TO OPENING TO TRAFFIC.

19. ALL EXISTING TRAFFIC BUTTONS SHALL BE REMOVED PRIOR TO UNDERSEAL/OVERLAY OPERATION. THIS ITEM WILL NOT BE PAID FOR DIRECTLY, BUT IT WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

20. 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.

21. 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.

22. WHERE NEW OR REPLACEMENT CURB & GUTTER IS PROPOSED, SET GRADES AS SHOWN ON THE PLANS OR MATCH EXISTING CURB & GUTTER GRADES AT EACH END OF THE NEW OR REPLACED SEGMENT. IF THERE ARE NO PROPOSED CURB & GUTTER GRADES SHOWN ON THE PLANS, CONTRACTOR SHALL SURVEY EXISTING CURB & GUTTER PRIOR TO ITS REMOVAL, AS REQUIRED TO ESTABLISH EXISTING GRADES TO ALLOW THE NEW CURB & GUTTER TO MATCH THE EXISTING. PRIOR TO PLACING NEW CURB & GUTTER TO THE GRADES AS SURVEYED THE CONTRACTOR SHALL SUBMIT A RESTORATION PLAN FOR APPROVAL.

23. CONTRACTOR SHALL SAW-CUT OR USE ENGINEER APPROVED ALTERNATIVE METHOD TO REMOVE CONCRETE PAVEMENTS, TO RECONSTRUCT CURBS, TO DELINEATE MILLING EDGES, AND TO TIE TO EXISTING PAVEMENT. WHERE CUTTING INTO BASE MATERIALS, SAW-CUT OR APPROVED ALTERNATIVE METHOD SHALL BE OF SUFFICIENT DEPTH TO ACHIEVE A SMOOTH, VERTICAL FACE DURING EXCAVATION IN THE BASE. THIS ITEM WILL NOT BE PAID FOR DIRECTLY, BUT IT WILL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS.

24. CONTRACTOR SHALL REPAIR/REPLACE EXISTING CURB & GUTTER ALONG WITH DRIVEWAYS PRIOR TO OVERLAY. IN ADDITION, CONTRACTOR SHALL COMPLETE THE BACKFILL BEHIND THE CURB PRIOR TO THE OVERLAY.

## CONSTRUCTION NOTES:

1. ALL RESPONSIBILITY FOR THE ADEQUACY OF THESE PLANS REMAINS WITH THE ENGINEER WHO PREPARED THEM. IN REVIEWING THESE PLANS, THE CITY OF AUSTIN MUST RELY UPON THE ADEQUACY OF THE WORK OF THE DESIGN ENGINEER.

2. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DEPARTMENT AT 512-974-8780 AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF ANY WATER LINE WITHIN RIGHTS-OF-WAY. THE METHOD OF PLACEMENT AND COMPACTION OF BACKFILL IN THE CITY'S RIGHT-OF-WAY MUST BE APPROVED PRIOR TO THE START OF BACKFILL OPERATIONS.

3. CONTRACTOR TO GIVE NOTICE TO ALL AUTHORIZED INSPECTORS, SUPERINTENDENTS, OR PERSONS IN CHARGE OF PRIVATE OR PUBLIC UTILITIES AFFECTED BY HIS OPERATIONS PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION PERMITS HAVE BEEN OBTAINED PRIOR TO THE START OF WORK. REQUIRED PERMITS THAT CAN BE ISSUED SHALL BE OBTAINED AT HIS EXPENSE.

4. CONTRACTOR TO COORDINATE INTERRUPTIONS OF ALL UTILITIES AND SERVICES. ALL WORK TO BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE UTILITY.

5. CONTRACTOR TO LOCATE, PROTECT AND MAINTAIN BENCHMARKS, MONUMENTS, CONTROL POINTS, AND ENGINEERING REFERENCE POINTS. CONTRACTOR SHALL RE-ESTABLISH DISTURBED ITEMS BY A REGISTERED PUBLIC SURVEYOR IN THE STATE OF TEXAS. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.

6. CONTRACTOR TO CONTROL DUST CAUSED BY THE WORK AND COMPLY WITH POLLUTION CONTROL REGULATIONS OF GOVERNING AUTHORITIES. DUST CONTROL SHALL BE ACHIEVED BY THE APPLICATION OF WATER BY AN APPROVED SPRINKLER IN THE AMOUNTS SUFFICIENT TO CONTROL THE DUST TO THE SATISFACTION OF THE OWNER/ENGINEER. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.

7. BURNING IS NOT ALLOWED ON THIS PROJECT.

8. THE CONTRACTOR IS TO OBTAIN PERMIT PRIOR TO BLOCKING ANY PORTION OF THE ROADWAY.

9. CONTRACTOR SHALL REPAIR ALL STREET CROSSINGS, DRIVEWAYS AND DITCHES TO THEIR ORIGINAL CONDITION OR BETTER. STREET CROSSINGS SHALL BE REPAIRED WITHIN 10 WORKING DAYS AFTER THE CROSSING IS MADE, UNLESS PRIOR APPROVAL TO THE CONTRARY IS OBTAINED.

10. ALL DAMAGE CAUSED DIRECTLY OR INDIRECTLY TO THE SURFACE OR SUBSURFACE OUTSIDE THE ORIGINAL PAVEMENT CUT AREA SHALL BE REPAIRED. THIS INCLUDES ANY SCRAPES, GOUGES, CUTS, CRACKING, DEPRESSIONS, AND/OR ANY OTHER DAMAGED CAUSED BY THE CONTRACTOR DURING THE EXECUTION OF THE WORK. THESE AREAS WILL BE INCLUDED IN THE REPAIR. THE AREAS OF REPAIR SHALL BE SAW CUT IN A STRAIGHT, NEAT, LINE PARALLEL TO THE UTILITY TRENCH. ALL ADDITIONAL REPAIRS SHALL BE AT THE CONTRACTORS EXPENSE AND SHALL MEET ALL CITY TESTING REQUIREMENTS AND SPECIFICATIONS.

11. FOR SLOPES OR TRENCHES, "ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE UNITED STATES OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION." (OSHA STANDARDS MAY BE PURCHASED FROM THE GOVERNMENT PRINTING OFFICE: INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 611 EAST SIXTH STREET, AUSTIN, TEXAS).

12. ALL SITE WORK MUST COMPLY WITH THE ENVIRONMENTAL REQUIREMENTS.

13. THROUGHOUT THE CONSTRUCTION AND AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL ENSURE THAT DRAINAGE OF STORM WATER RUNOFF IS NOT BLOCKED.

14. ALL EXCESS EXCAVATED MATERIAL AND SOIL NOT WANTED BY THE OWNER SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK.

15. ALL CULVERTS REMOVED AND/OR DISTURBED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL GRADE. ROAD DITCH SHALL BE GRADED TO PROVIDE FOR AN EVEN GRADE AND SECTION BETWEEN EXISTING CULVERTS. ALL CULVERTS SHALL BE CLEAN AND FREE OF DEBRIS DURING AND AFTER CONSTRUCTION.

16. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES AT LEAST 500' FEET IN FRONT OF THE EXCAVATION WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CONTRACTOR IS RESPONSIBLE FOR ALL COST OF RELOCATION OR DAMAGE TO UTILITIES.

17. THE USE OF "ONE-CALL" UTILITY SERVICE IS FOR INFORMATIONAL PURPOSE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES A MINIMUM OF 500' IN-FRONT OF EXCAVATION WORK TO ENSURE NO CONFLICTS EXIST. CONTRACTOR SHALL NOTIFY OWNER/ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COSTS INCURRED AS A RESULT OF UTILITY RELOCATIONS PERFORMED FOR CONTRACTOR'S CONVENIENCE.

19. WATER/WASTEWATER SERVICES DAMAGED OR RELOCATED SHALL BE REPLACED FROM THE METER/PROPERTY LINE TO THE MAIN LINE. NO PERMANENT REPAIRS OR PATCHES WILL BE ALLOWED ON SERVICES. WATER SERVICES SHALL BE REPLACED WITH 1-1/2" TYPE K COPPER TUBING WITH ALL ITEMS INSTALLED PER COA SERVICE DETAIL. NO ADDITIONAL COMPENSATION WILL BE PROVIDED FOR THIS WORK BUT SHALL BE CONSIDERED SUBSIDIARY TO THE PIPE INSTALLATION.

20. 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.

21. THE CONTRACTOR SHALL ARRANGE THE OPERATION IN SUCH A MANNER AS TO AVOID UNNECESSARY INCONVENIENCE TO THE PUBLIC IN CONSTRUCTION AREAS. 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.

22. WORK SHOWN, DESCRIBED OR REFERENCED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS WHICH DOES NOT HAVE A SPECIFIC BID OR PAY ITEM, SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS LISTED IN THE BID FORM OR AS INDICATED IN THE SPECIFICATIONS.

## SIDEWALK CONSTRUCTION OR REHABILITATION NOTES:

1. CONCRETE FOR SIDEWALK AND RAMPS SHALL BE PLACED NO LATER THAN 4 WORKING DAYS AFTER EXCAVATION AT ANY SITE.

2. EXPANSION JOINTS SHALL BE PROVIDED AT THE TIE-IN OF NEW CURB AND GUTTER, TO EXISTING CURB AND GUTTER, AND AT OTHER LOCATIONS TO BE DETERMINED BY THE ENGINEER.

3. EXPANSION JOINT MATERIALS SHALL BE AS PER ITEM 408 AND EXTEND THE FULL DEPTH OF THE CONCRETE FOR WET JOINTS AND ½" BITUMEN FILLED FIBER FOR COLD JOINTS OR AS DIRECTED BY THE ENGINEER.

4. ALL FILL AREAS SHALL BE COMPACTED TO A UNIFORM DENSITY OF NOT LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AT NOT LESS THAN OPTIMUM MOISTURE AS DETERMINED BY THE TEST METHOD TEX-113-E.

5. ALL FLAT CONCRETE SHALL BE BROOM FINISHED.

REVIEWED
April 12, 2021
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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
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# CONSTRUCTION SEQUENCING

1. BEGIN PROPOSED 24" DI WATER LINE (PRESSURE CLASS 250): INSTALL PROPOSED (PROP.) 24" DI WATER LINE (WL) BETWEEN STA 1+00 AND STA 15+73.59 AS SHOWN ON SHEETS W1 THROUGH W4.
   - A. INSTALLATION SHALL BEGIN AT STA 1+00 BY CONNECTING TO THE EXISTING (EXIST.) 24" WL WITH A 24"X24" TEE. 10 LF OF THE EXIST. WL SHALL BE REPLACED WITH 24" DIP SOUTH OF THE PROP. TEE. THE 24" GATE VALVE (GV) NORTH OF THE TEE SHALL REMAIN IN PLACE AND SHALL BE CONNECTED TO THE PROP. TEE WITH A RETAINER GLAND.
   - B. PROP. 24" WL SHALL BE INSTALLED BRANCHING EAST FROM THE PROP. TEE AT STA 1+00.
   - C. APPROXIMATELY 35 LF OF PVC PIPE ENCASEMENT SHALL BE INSTALLED WHERE PROP. 24" WL CROSSES AND GAS LINE (STA 1+39.87)
   - D. APPROXIMATELY 81 LF OF PVC PIPE ENCASEMENT SHALL BE INSTALLED WHERE PROP. 24" WL CROSSES AND GAS LINE (STA 15+23.50).
   - E. END PROP. 24" WL AT STA 15+73.59. A PROP. 24" GV SHALL BE INSTALLED AT STA 15+73.59 AND REMAIN CLOSED UNTIL FURTHER INSTRUCTION.

2. INSTALL PROP. 24" DI WATER LINE (PRESSURE CLASS 250) BETWEEN STA 17+60.44 AND STA 34+34.82: ALIGNMENT SHALL FOLLOW THAT SHOWN ON SHEETS W5 THROUGH W9.
   - A. BEGIN PROP. 24" WL SEGMENT AT PI STA 17+60.44. 24" 45-DEGREE BEND SHALL BE CAPPED OFF.
   - B. PROP. 24" WL SHALL BE INSTALLED SOUTHEAST OF THE 45-DEGREE BEND AT STA 17+60.44 UNTIL STA 34+34.82.
   - C. PROP. 24" WL SEGMENT ENDS AT STA 34+34.82 WITH A 24" 45-DEGREE BEND. BEND AT STA 34+34.82 SHALL BE CAPPED OFF UNTIL FURTHER INSTRUCTION.
   - D. EXISTING (EXIST.) 8" CI WATER LINE SHALL STAY IN PLACE. WATER SERVICE IS NOT TO INTERRUPTED DURING STEP 1 AND STEP 2.
   - E. THIS SEGMENT OF PROP. 24" WL SHALL NOT ENTER THE RIGHT OF WAY. PAVEMENT REPAIR WILL BE REQUIRED WHERE PROP. 24" WL CROSSES DRIVEWAYS.

3. INSTALL PROPOSED WATER LINE A1: INSTALL PROP. 8" DI WL A1 AS SEEN ON SHEET W4 AND CONNECTION DETAIL 1 ON SHEET W11.
   - A. EXIST. 8" WL WILL UNDERGO TEMPORARY SHUTDOWN UNTIL INSTRUCTED IN STEP 4.D. SHUT DOWN SHALL NOT EXCEED 4 HOURS.
   - B. INSTALL PROP. 24"X8" TEE AT WL A1 STA 0+00 (STA 15+79.14). TEMPORARILY CAP OFF THE SOUTHERN END OF THE PROP. 24"X8" TEE.
   - C. INSTALL 8" DI WL A1 AND CONNECT IT TO EXIST. 8" CI WL AT WL A1 STA 0+20.09. REMOVE EXIST. 8" CI WL AS NEEDED.
   - D. KEEP PROP. 8" GV #844674 CLOSED UNTIL FURTHER INSTRUCTION.

4. INSTALL PROPOSED WATER LINE A2: INSTALL PROP. DI WL BETWEEN WL A2 STA 0+00 (STA 17+34.63) AND WL A2 STA 0+27 PER CONNECTION DETAIL 2 ON SHEET W11.
   - A. COMPLETE INSTALLATION OF PROP. WL A2 DURING STEP 3 TEMPORARY SHUTDOWN OF EXIST. 8" CI WL.
   - B. BEGIN WL A2 BY CONNECTING TO EXIST. 8" CI WL AT STA 0+27. INSTALL 5 LF OF 8" DI PIPE WEST OF THE CONNECTION POINT.
   - C. INSTALL 8" GV #XXXXX ON WL A2 AT STA 0+21 AND KEEP CLOSED UNTIL FURTHER INSTRUCTION.
   - D. END TEMPORARY SHUTDOWN, PLACING EXIST. 8" CI WL WEST OF PROP. WL A1 AND EAST OF PROP. WL A2 BACK IN SERVICE.
   - E. EXIST. FIRE HYDRANT (FH) ON EXIST. 8" CI WL (EXIST. FH #241246) SHALL PROVIDE TEMPORARY WATER SERVICE TO THE EXXON GAS STATION. WATER SERVICE LINE AT STA 16+70, WHICH SERVES EXXON, WILL BE OUT OF SERVICE UNTIL SPECIFIED IN STEP 5.E.
   - F. INSTALL REMAINING PORTION OF PROP. WL A2. INSTALL 5 LF OF 8" DIP WEST OF PROP. 8" GV. INSTALL 12"X8" REDUCER THEN 5 LF OF 12" DIP. INSTALL 24"X12" REDUCER THEN 5 LF OF 24" DIP.
   - G. END PROP. WL A2 BY INSTALLING 24"X24" PROP. TEE AT WL A2 STA 0+00 (STA 17+34.63). TEE SHALL BE CAPPED OFF ON THE WEST AND SOUTH ENDS UNTIL FURTHER INSTRUCTION.

5. INSTALL PROP. 24" DI WATER LINE (PRESSURE CLASS 250) BETWEEN STA 15+79.14 AND STA 17+34.63: ALIGNMENT SHALL FOLLOW THAT SHOWN ON SHEETS W4 THROUGH W5.
   - A. REMOVE APPROXIMATELY 196 LF OF EXIST. 8" CI WL BETWEEN STA 15+79.14 AND STA 17+34.63
   - B. BEGIN PROP. 24" WL SEGMENT AT STA 15+79.14 BY CONNECTING TO SOUTH END OF 24"X8" TEE. SEE STEP 3.B.
   - C. INSTALL PROP. 24" WL SOUTH OF THE TEE AT STA 15+79.14, THEN SOUTHEAST AFTER THE 45-DEGREE BEND AT STA 15+85.61.
   - D. END PROP. 24" WL AT STA 17+34.63 BY CONNECTING TO WEST END OF 24"X24" TEE (SEE STEP 4.G).
   - E. INSTALL 2" HDPE WATER SERVICE AT STA 16+70.
   - F. DISINFECT AND FLUSH PROP. 24" WL SEGMENT (STA 1+00 TO STA 17+34.63) BEFORE PLACING IN SERVICE. OPEN 8" GV ON WL A1 AND 8" GV ON WL A2, PLACING PROP. 24" WL IN SERVICE.
   - G. DISINFECT AND FLUSH PROP. 2" HDPE SERVICE LINE AT STA 16+70 BEFORE PLACING IN SERVICE. PLACE IN SERVICE, ENDING TEMPORARY WATER SERVICE TO EXXON VIA FH #241246.
   - H. REPAIR PAVEMENT PER DETAIL 1100S-2 AND DETAIL 1100S-7. REPAIR EXXON PARKING LOT PER DETAIL 1100S-2. REPAIR 2" HDPE WATER SERVICE TRENCH PER DETAIL 1100S-2 AND 1100S-7.

6. INSTALL PROP. 24" DI WATER LINE (PRESSURE CLASS 250) BETWEEN STA 17+34.63 AND STA 17+60.44: ALIGNMENT SHALL FOLLOW THAT SHOWN ON SHEET W5.
   - A. TRENCH ACROSS PILAND TRIANGLE BETWEEN STA 17+34.63 AND STA 17+60.44 AND BETWEEN STA 34+34.82 AND 34+59.56.
   - B. CLOSE EXIST. 16" GV #681910 AND EXIST. 16" GV #681915.
   - C. EXIST. 8" WL WILL UNDERGO TEMPORARY SHUTDOWN UNTIL INSTRUCTED IN STEP 7.D. SHUT DOWN SHALL NOT EXCEED 4 HOURS. GATE VALVES SHALL BE UTILIZED TO MINIMIZE IMPACT OF SHUT DOWN.
   - D. BEGIN PROP. 24" WL BY CONNECTING TO SOUTH SIDE OF 24"X24" TEE AT STA 17+34.63 (SEE STEP 4.G).
   - E. END PROP. 24" WL BY CONNECTING TO 45-DEGREE BEND AT STA 17+60.44 (SEE STEP 2.A)
   - F. ENSURE PROP. 24" GV #XXXXX AT STA 33+05 IS CLOSED UNTIL FURTHER INSTRUCTION.
   - G. REPAIR TRENCH PER DETAIL 1100S-2 AND 1100S-7.

7. INSTALL PROPOSED WATER LINE A3: INSTALL PROP. DI WL BETWEEN WL A3 STA 0+00 (STA 34+59.56) AND WL A3 STA 0+27 PER CONNECTION DETAIL 3 ON SHEET W11.
   - A. COMPLETE INSTALLATION OF PROP. WL A3 DURING STEP 6 TEMPORARY SHUTDOWN OF EXIST. 8" CI WL.
   - B. BEGIN WL A3 BY CONNECTING TO EXIST. 8" CI WL AT STA 0+27. INSTALL 5 LF OF 8" DI PIPE SOUTH OF THE CONNECTION POINT.
   - C. INSTALL 8" GV ON WL A3 AT STA 0+21 AND KEEP CLOSED UNTIL FURTHER INSTRUCTION.
   - D. END TEMPORARY SHUTDOWN, PLACING EXIST. 8" WL NORTH OF PROP. WL A3 BACK IN SERVICE.
   - E. DISINFECT AND FLUSH PROP. 24" WL SEGMENT (STA 17+34.63 TO STA 33+05) BEFORE PLACING IN SERVICE.
   - F. PROP. FH #844582 ON PROP. 24" WL SHALL PROVIDE TEMPORARY WATER SERVICE TO THE SEGMENT OF EXIST. LINE THAT IS OUT OF SERVICE (BETWEEN 8" GV ON WL A3 AND 16" GV #681915). EXIST. WATER SERVICE LINE AT STA 36+07.51, WHICH SERVES A RESIDENCE, WILL BE OUT OF SERVICE UNTIL SPECIFIED IN STEP 8.H.
   - G. INSTALL REMAINING SEGMENT OF PROP. WL A3. REMOVE EXIST. 8" CI WL AS NECESSARY. END PROP. WL A3 BY INSTALLING A 24"X24" TEE AT STA 0+00 (STA 34+59.56). WEST AND SOUTH ENDS OF TEE SHALL BE CAPPED OFF UNTIL FURTHER INSTRUCTED.

8. INSTALL PROP. 24" DI WATER LINE (PRESSURE CLASS 250) BETWEEN STA 34+34.82 AND STA 34+59.56: ALIGNMENT SHALL FOLLOW THAT SHOWN ON SHEET W9.
   - A. BEGIN PROP. 24" WL BY CONNECTING TO 45-DEGREE BEND AT STA 34+34.82 (SEE STEP 2.C)
   - B. END PROP. 24" WL BY CONNECTING TO WEST SIDE OF 24"X24" TEE AT STA 34+59.56 (SEE STEP 7.G).
   - C. REPAIR TRENCH PER DETAIL 1100S-2 AND 1100S-7.

9. INSTALL PROP. 24" DI WATER LINE (PRESSURE CLASS 250) BETWEEN STA 34+59.56 AND STA 37+96.46:
   - A. REMOVE APPROXIMATELY 140 LF OF EXIST. WL BETWEEN STA 34+59.56 AND STA 37+96.46.
   - B. BEGIN PROP. 24" WL BY CONNECTING TO SOUTH SIDE OF PROP. 24" TEE AT STA 34+59.56 (SEE STEP 7.G).
   - C. INSTALL PROP. 24" WL BRANCHING SOUTH FROM PROP. 24" TEE UNTIL STA 36+04.38.
   - D. INSTALL PROP. 8" WL A4 AT STA 36+04.38 PER CONNECTION DETAIL 4 ON SHEET W11.
   - E. INSTALL PROP. 2" HDPE WATER SERVICE LINE AT STA 36+07.51. REMOVE EXIST. 1" SERVICE LINE AS NECESSARY. REPAIR TRENCH PER DETAIL 1100S-2.
   - F. INSTALL REMAINING SEGMENT OF PROP. 24" WL. END PROP. WL BY CONNECTING TO EXIST. 16"X16" TEE AT STA 37+96.46.
   - G. DISINFECT AND FLUSH PROP. 24" WL SEGMENT (STA 33+05 TO STA 37+96.46) BEFORE PLACING IN SERVICE. OPEN 24" GV AT STA 33+05, 8" GV ON WL A3, AND BOTH 16" GV'S AT STA 37+96.46.
   - H. END TEMPORARY WATER SERVICE AT STA 36+07.51 VIA PROP. FH #844582


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CITY OF AUSTIN, TEXAS

PILAND TRIANGLE INTERCONNECT

GENERAL

CONSTRUCTION SEQUENCING

| NO. | ISSUE | BY | DATE |
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F&N JOB NO. AU118116
DATE 10/18/20
DESIGNED DS
DRAWN CJG
REVISED CJG
CHECKED RJ
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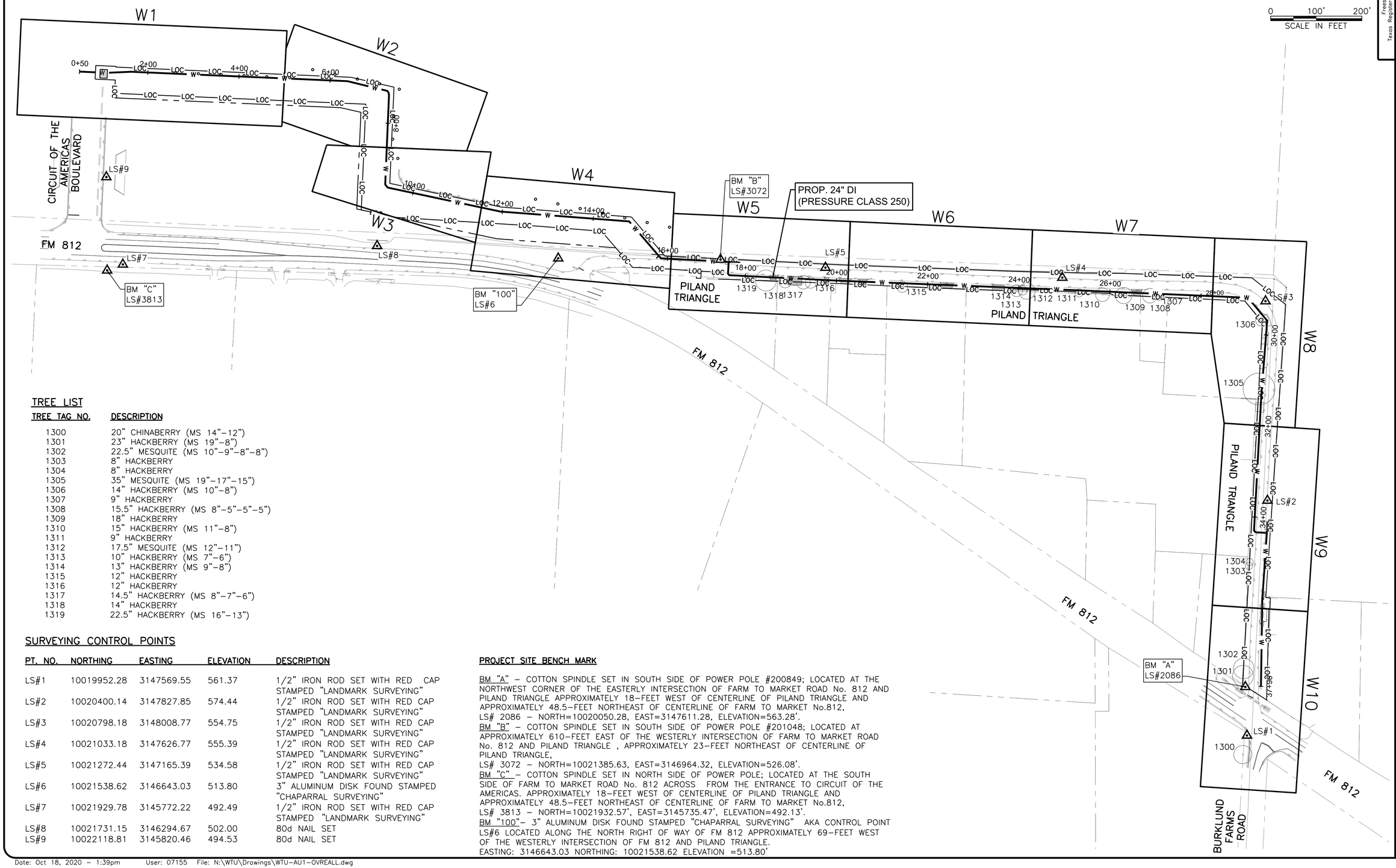
SHEET G4

SEQ. 5




## TREE LIST

| TREE TAG NO. | DESCRIPTION |
|---|---|
| 1300 | 20" CHINABERRY (MS 14"-12") |
| 1301 | 23" HACKBERRY (MS 19"-8") |
| 1302 | 22.5" MESQUITE (MS 10"-9"-8"-8") |
| 1303 | 8" HACKBERRY |
| 1304 | 8" HACKBERRY |
| 1305 | 35" MESQUITE (MS 19"-17"-15") |
| 1306 | 14" HACKBERRY (MS 10"-8") |
| 1307 | 9" HACKBERRY |
| 1308 | 15.5" HACKBERRY (MS 8"-5"-5"-5") |
| 1309 | 18" HACKBERRY |
| 1310 | 15" HACKBERRY (MS 11"-8") |
| 1311 | 9" HACKBERRY |
| 1312 | 17.5" MESQUITE (MS 12"-11") |
| 1313 | 10" HACKBERRY (MS 7"-6") |
| 1314 | 13" HACKBERRY (MS 9"-8") |
| 1315 | 12" HACKBERRY |
| 1316 | 12" HACKBERRY |
| 1317 | 14.5" HACKBERRY (MS 8"-7"-6") |
| 1318 | 14" HACKBERRY |
| 1319 | 22.5" HACKBERRY (MS 16"-13") |

## SURVEYING CONTROL POINTS

| PT. NO. | NORTHING | EASTING | ELEVATION | DESCRIPTION |
|---|---|---|---|---|
| LS#1 | 10019952.28 | 3147569.55 | 561.37 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#2 | 10020400.14 | 3147827.85 | 574.44 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#3 | 10020798.18 | 3148008.77 | 554.75 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#4 | 10021033.18 | 3147626.77 | 555.39 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#5 | 10021272.44 | 3147165.39 | 534.58 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#6 | 10021538.62 | 3146643.03 | 513.80 | 3" ALUMINUM DISK FOUND STAMPED "CHAPARRAL SURVEYING" |
| LS#7 | 10021929.78 | 3145772.22 | 492.49 | 1/2" IRON ROD SET WITH RED CAP STAMPED "LANDMARK SURVEYING" |
| LS#8 | 10021731.15 | 3146294.67 | 502.00 | 80d NAIL SET |
| LS#9 | 10022118.81 | 3145820.46 | 494.53 | 80d NAIL SET |

## PROJECT SITE BENCH MARK

BM "A" – COTTON SPINDLE SET IN SOUTH SIDE OF POWER POLE #200849; LOCATED AT THE NORTHWEST CORNER OF THE EASTERLY INTERSECTION OF FARM TO MARKET ROAD No. 812 AND PILAND TRIANGLE APPROXIMATELY 18-FEET WEST OF CENTERLINE OF PILAND TRIANGLE AND APPROXIMATELY 48.5-FEET NORTHEAST OF CENTERLINE OF FARM TO MARKET No.812,
LS# 2086 – NORTH=10020050.28, EAST=3147611.28, ELEVATION=563.28'.

BM "B" – COTTON SPINDLE SET IN SOUTH SIDE OF POWER POLE #201048; LOCATED AT APPROXIMATELY 610-FEET EAST OF THE WESTERLY INTERSECTION OF FARM TO MARKET ROAD No. 812 AND PILAND TRIANGLE , APPROXIMATELY 23-FEET NORTHEAST OF CENTERLINE OF PILAND TRIANGLE,
LS# 3072 – NORTH=10021385.63, EAST=3146964.32, ELEVATION=526.08'.

BM "C" – COTTON SPINDLE SET IN NORTH SIDE OF POWER POLE; LOCATED AT THE SOUTH SIDE OF FARM TO MARKET ROAD No. 812 ACROSS FROM THE ENTRANCE TO CIRCUIT OF THE AMERICAS. APPROXIMATELY 18-FEET WEST OF CENTERLINE OF PILAND TRIANGLE AND APPROXIMATELY 48.5-FEET NORTHEAST OF CENTERLINE OF FARM TO MARKET No.812,
LS# 3813 – NORTH=10021932.57', EAST=3145735.47', ELEVATION=492.13'.

BM "100"– 3" ALUMINUM DISK FOUND STAMPED "CHAPARRAL SURVEYING" AKA CONTROL POINT LS#6 LOCATED ALONG THE NORTH RIGHT OF WAY OF FM 812 APPROXIMATELY 69-FEET WEST OF THE WESTERLY INTERSECTION OF FM 812 AND PILAND TRIANGLE.
EASTING: 3146643.03 NORTHING: 10021538.62 ELEVATION =513.80'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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

GENERAL

# OVERALL SITE LAYOUT

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| F&N JOB NO. | AU118116 |
| DATE | 10/18/20 |
| DESIGNED | DS |
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| FILE NAME | WTU-AU1-OVREALL.dwg |

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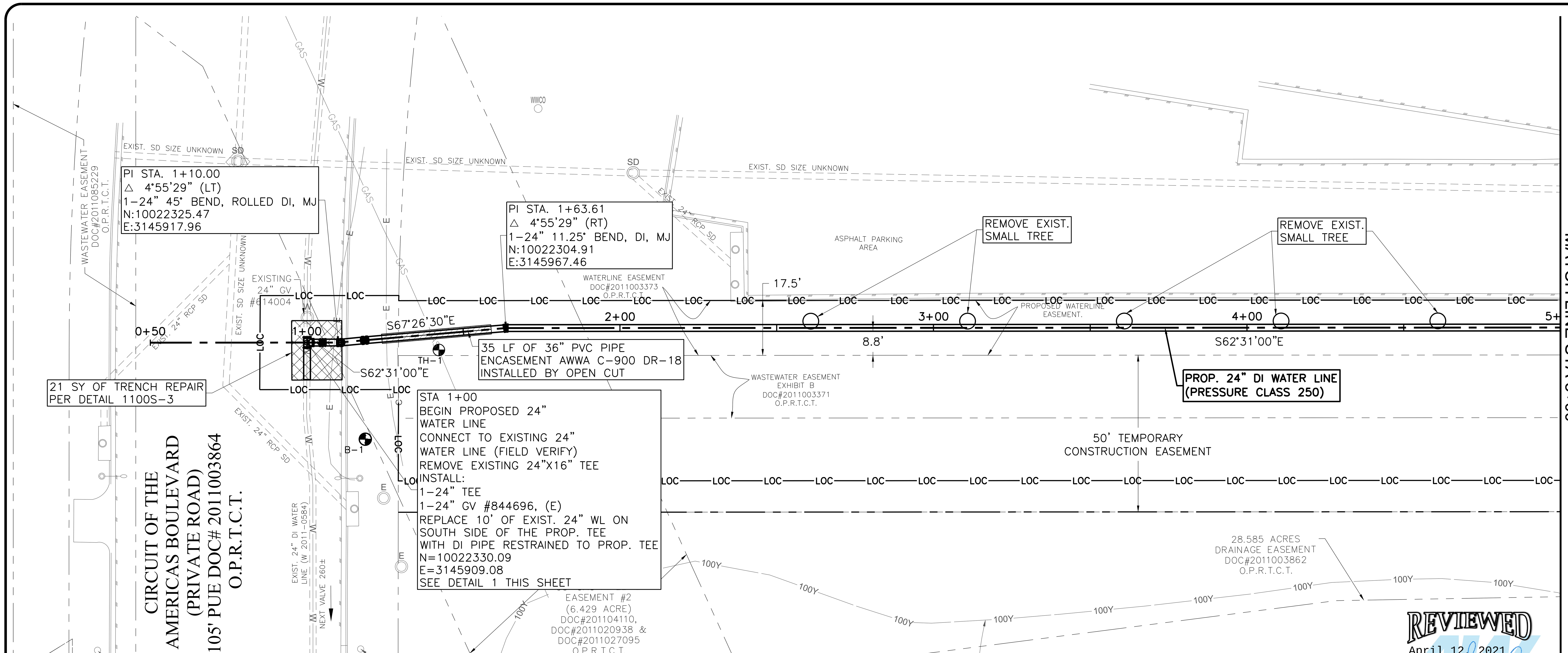


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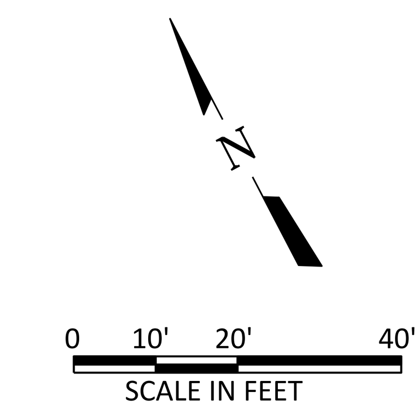


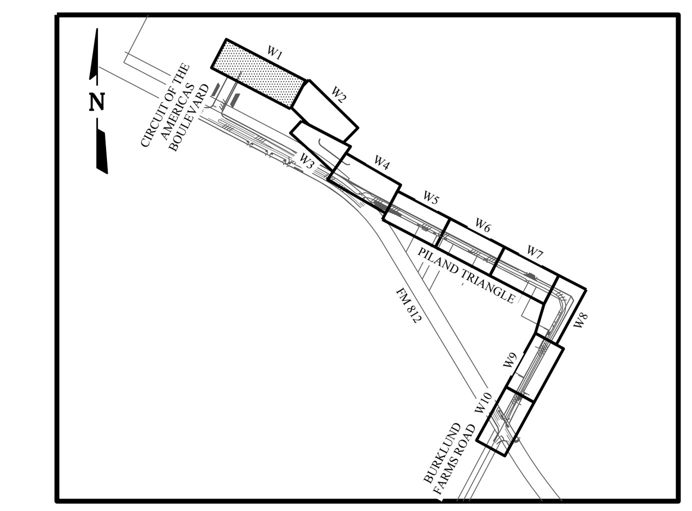

LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP | WATER | MAPSCO |
|---|---|---|
| N10 & P10 NUMBER | 12041 INTERSECTION | 707U NUMBER |

## CAUTION!!

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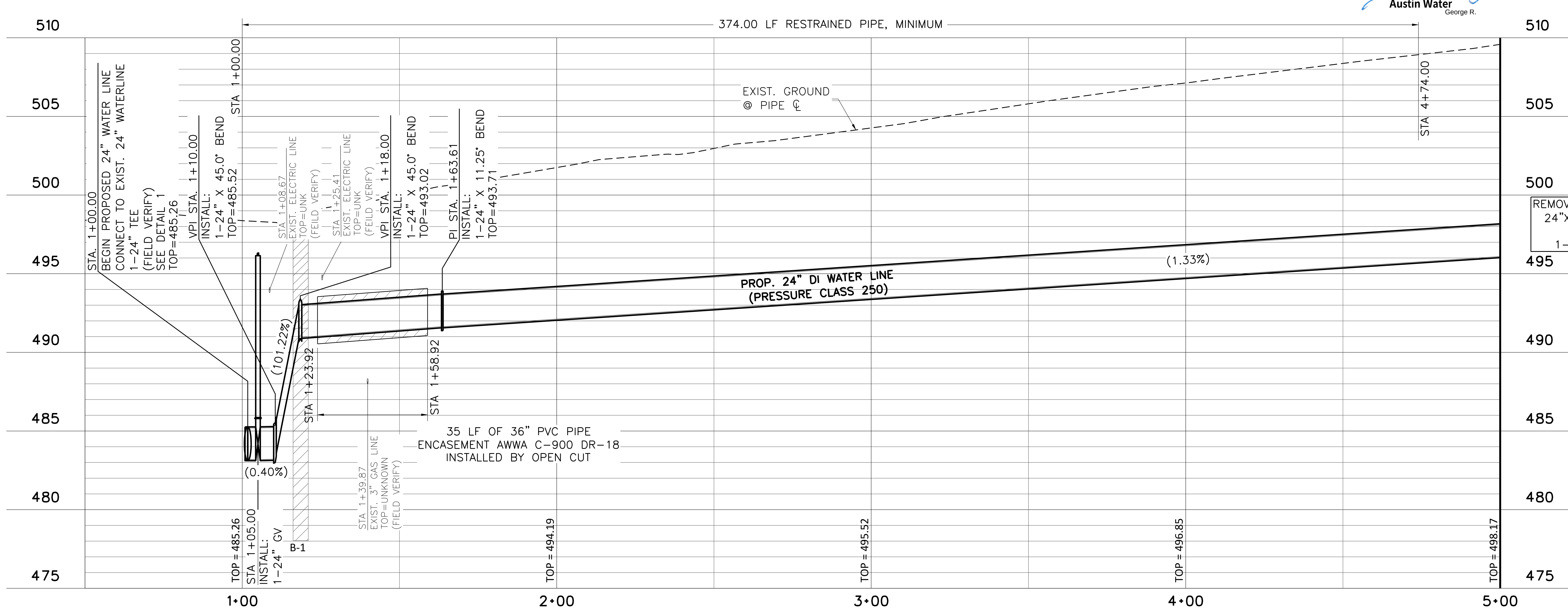


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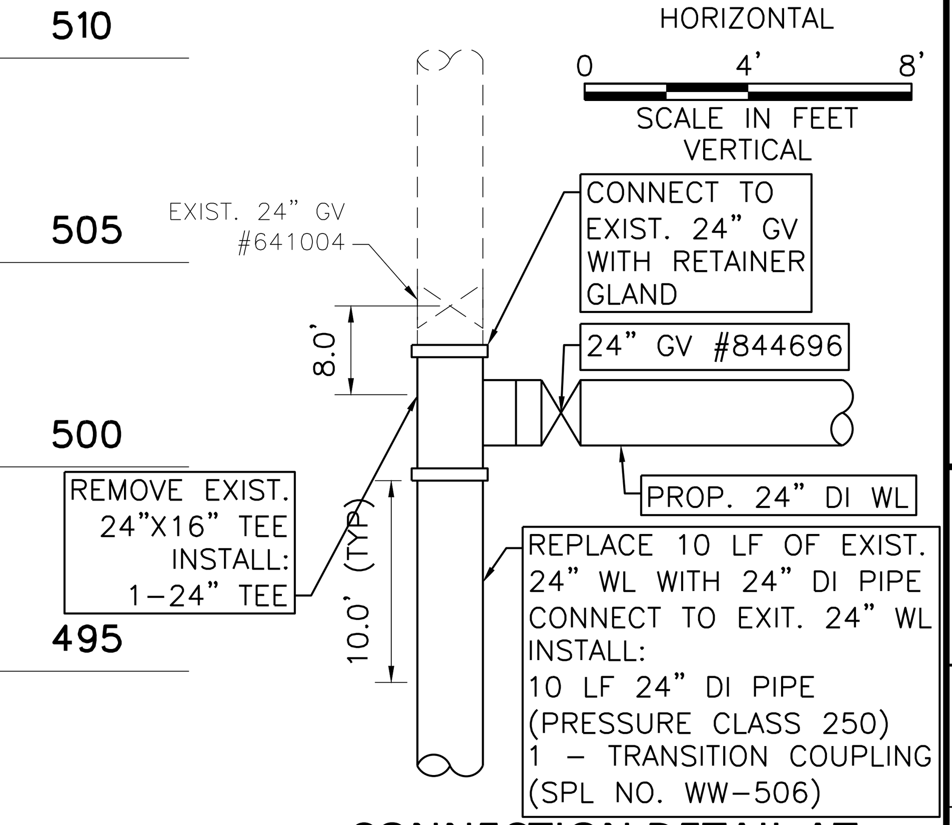


1 / W1 CONNECTION DETAIL AT STATION 1+00
NOT TO SCALE

## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.
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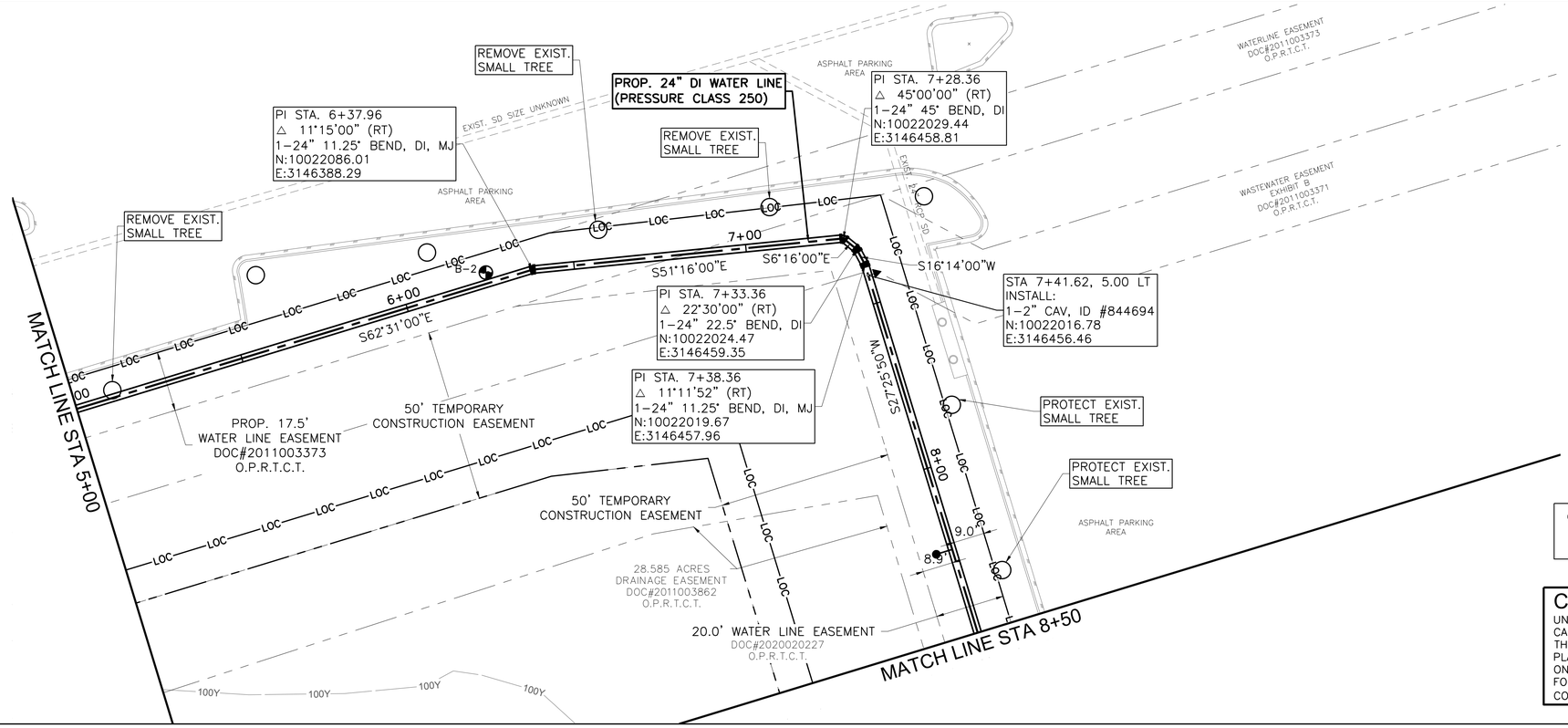


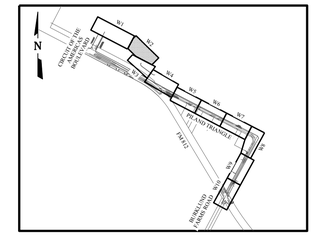


LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | WATER 12042 INTERSECTION | MAPSCO 707U NUMBER |
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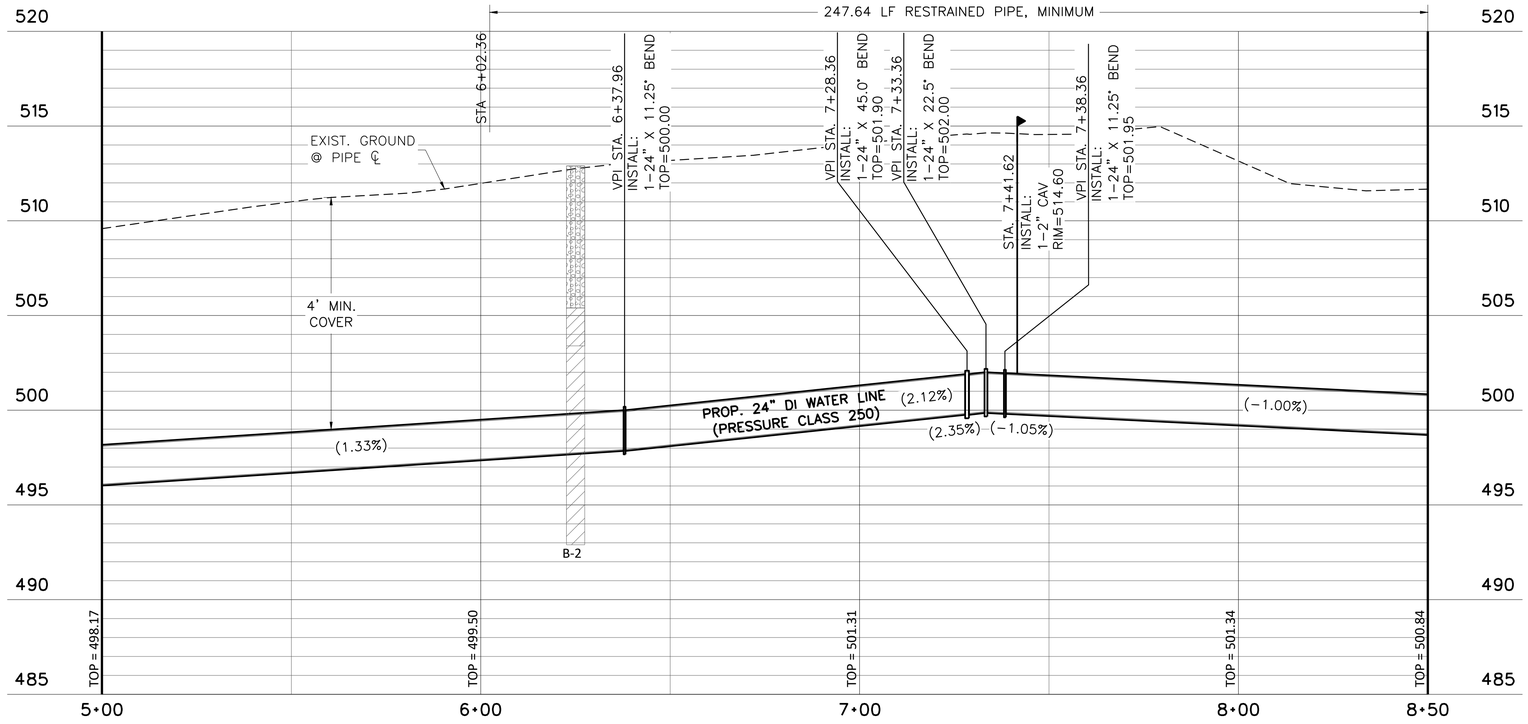


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VERTICAL

## NOTES:

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REVIEWED
April 12, 2021
Austin Water
George R.

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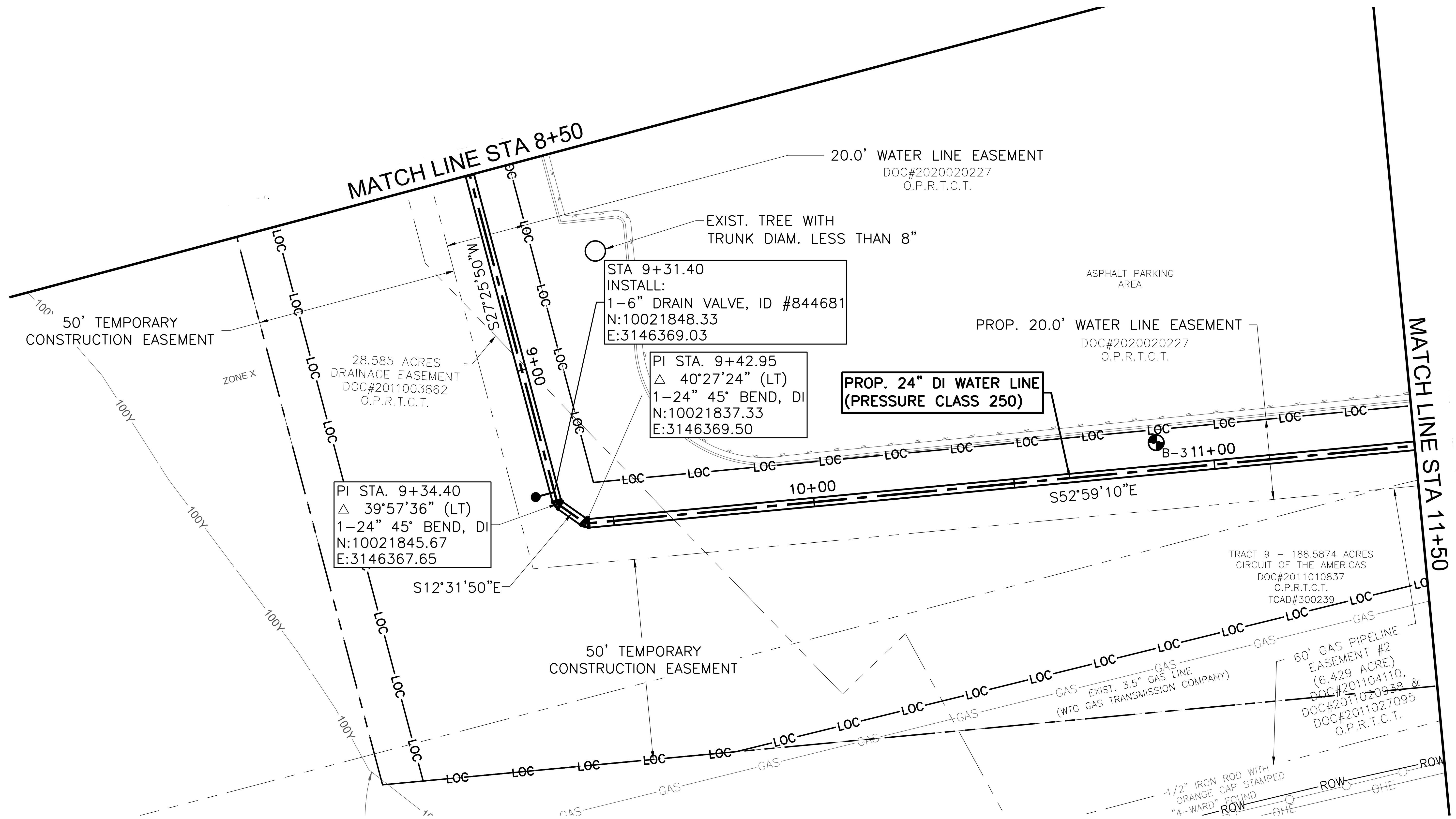


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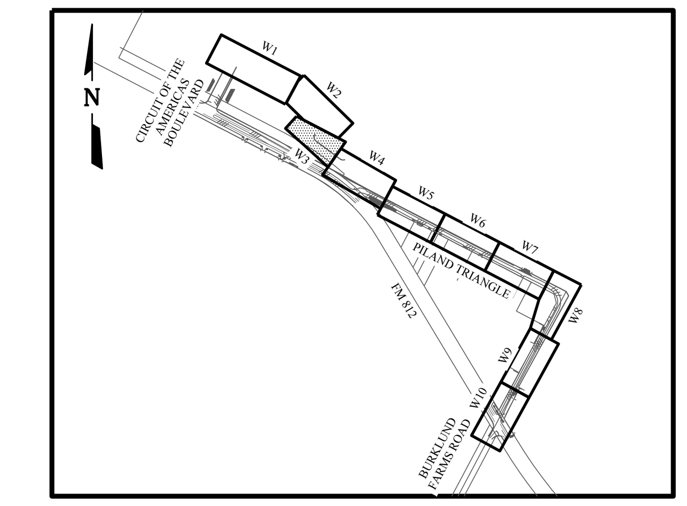

LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | WATER 12042 & 12043 INTERSECTION | MAPSCO 707U NUMBER |
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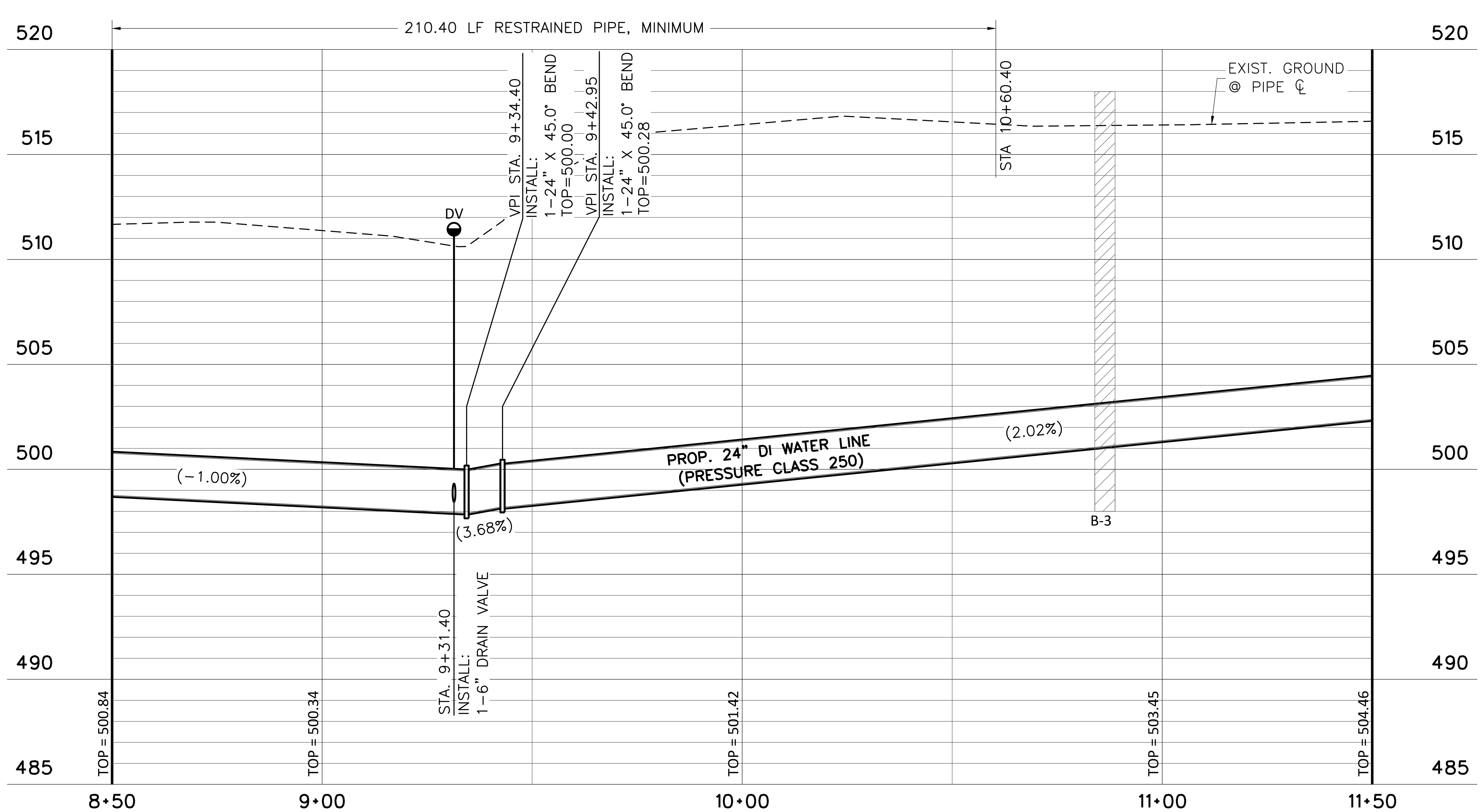


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VERTICAL

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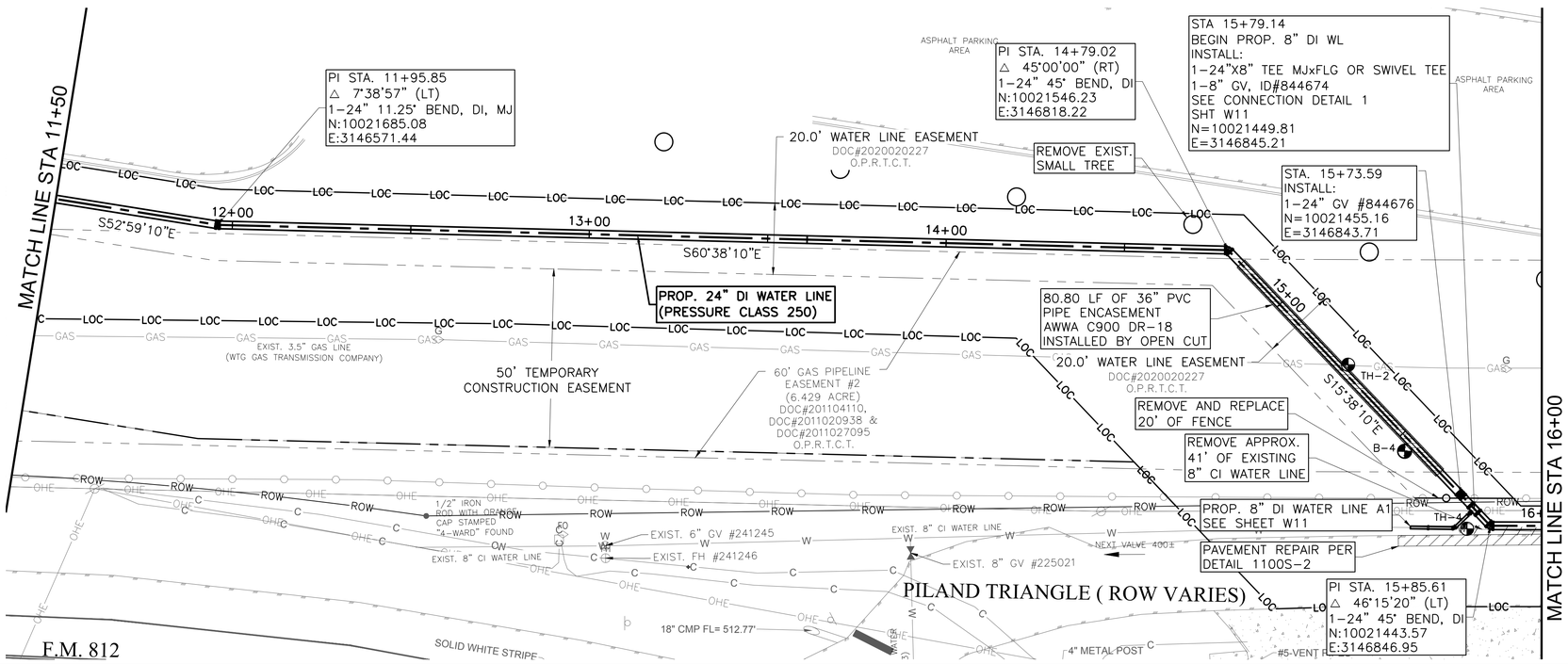


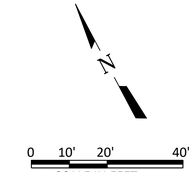


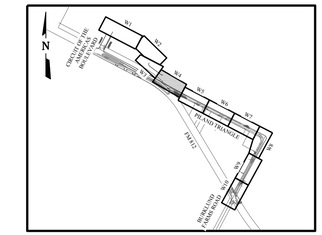


LOCATION MAP
N.T.S.

## RECORD REFERENCES

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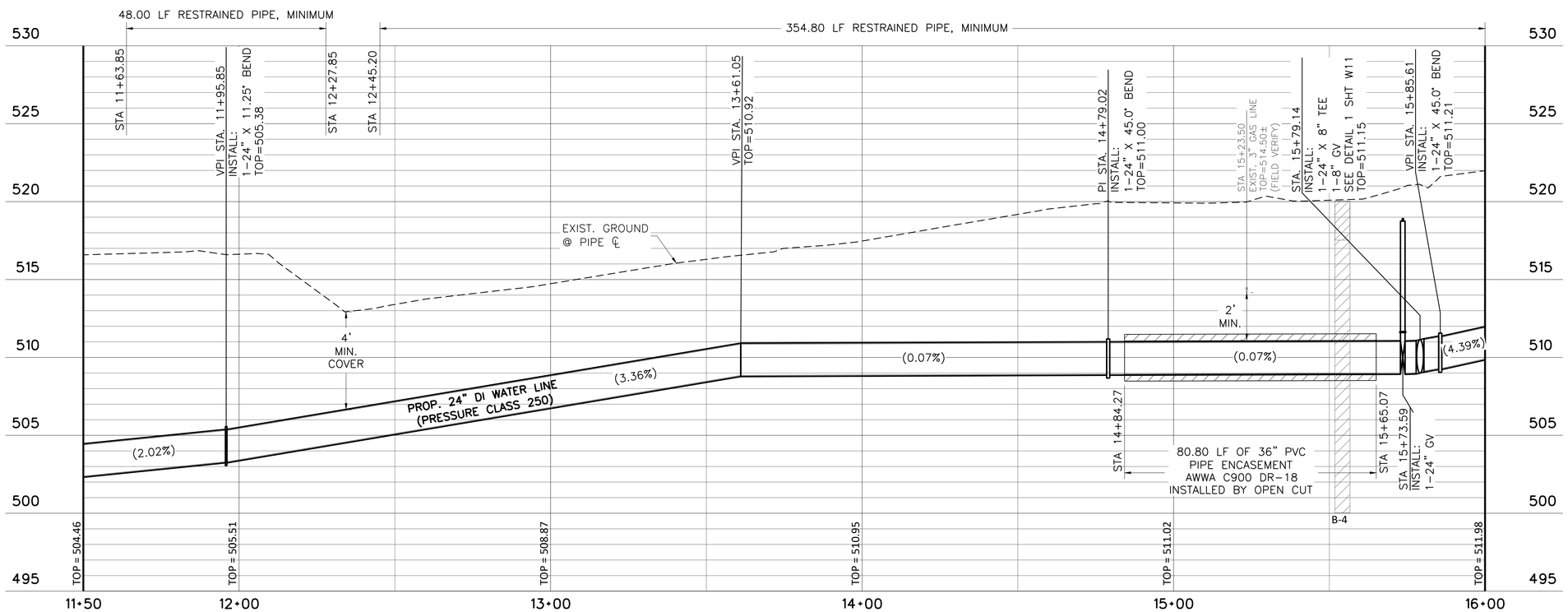


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VERTICAL

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| DATE | 10/26/20 |
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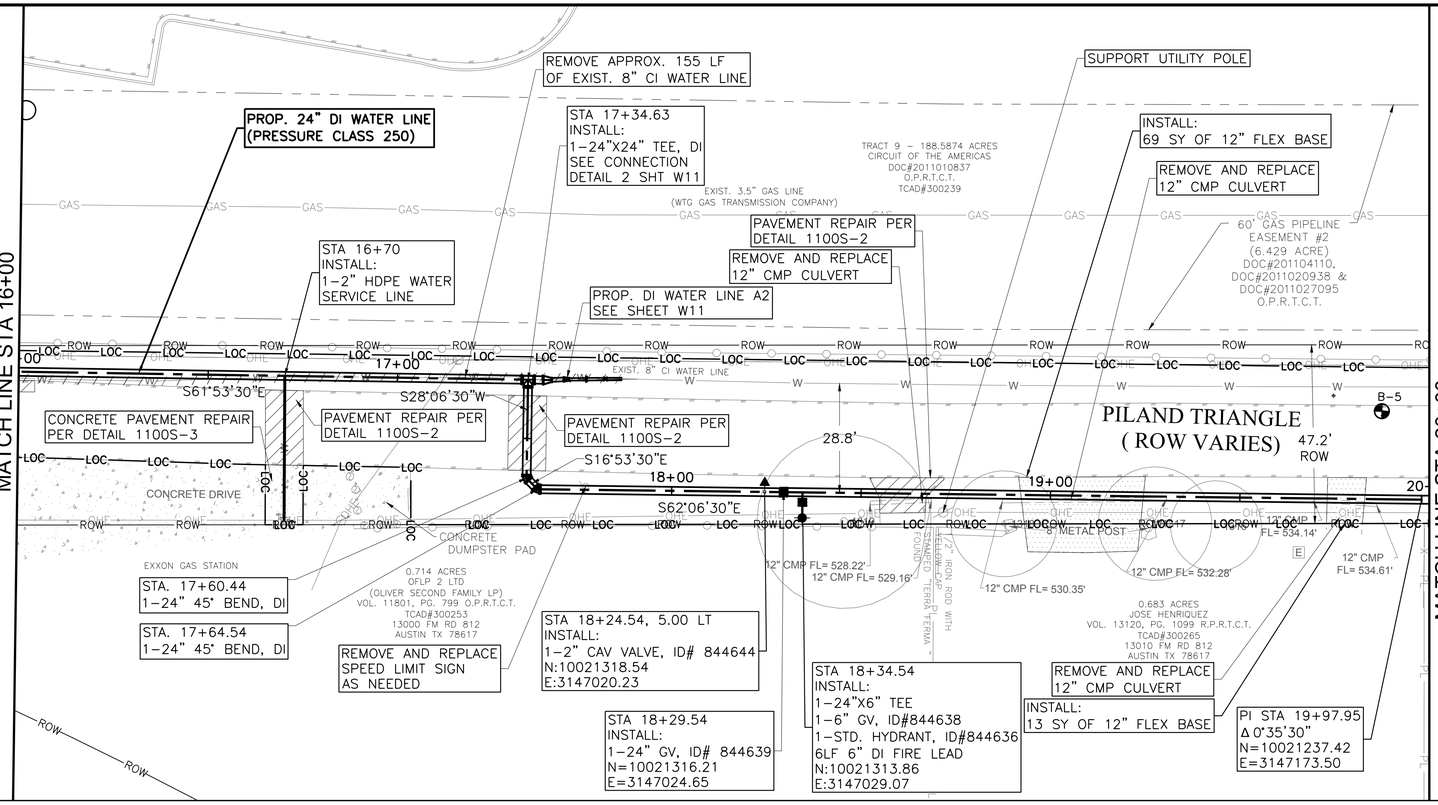
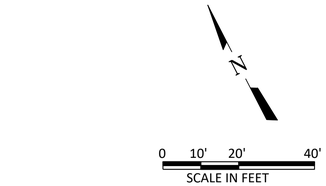
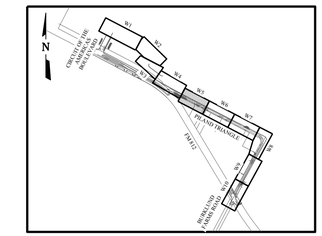


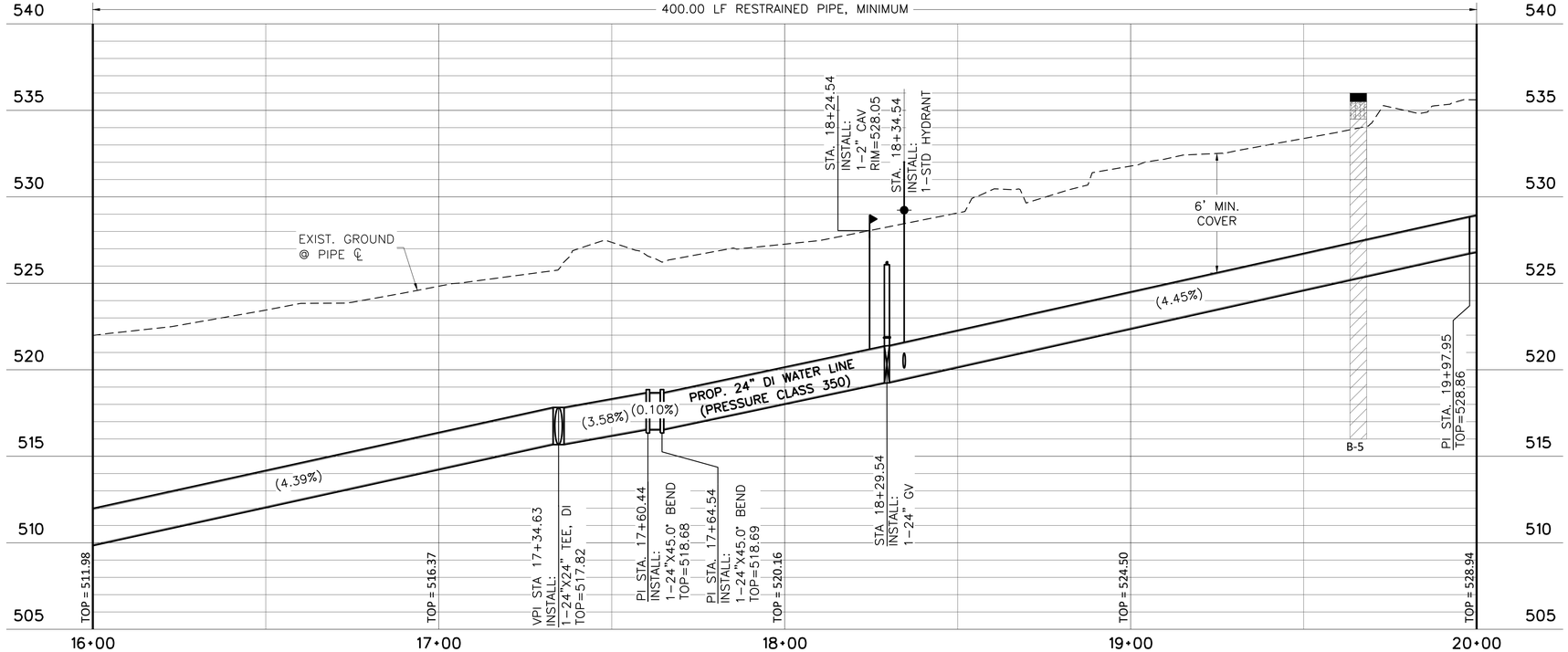




LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | WATER 18924 INTERSECTION | MAPSCO 707U NUMBER |
|---|---|---|

**CAUTION!!**
UNDERGROUND GAS, WATER, ELECTRIC, TELEPHONE, CABLE TV AND OTHER UTILITIES MAY EXIST WITHIN THE WORK AREA. THE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE UTILITIES CAUSED BY THE CONTRACTOR'S OPERATION.




REVIEWED
April 12, 2021
Austin Water
George R.

0 20' 40'
SCALE IN FEET
HORIZONTAL

0 4' 8'
SCALE IN FEET
VERTICAL

## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.
2. PROPOSED FIRE HYDRANTS MUST LIE WITHIN THE LOC FENCE LINE. MINIMUM REQUIRED DISTANCE BETWEEN LOC FENCE AND A PROP. FH IS 2 LF.
3. FOR A 24" GATE VALVE, OPERATIONS NUT SHOULD BE 24" BELOW GROUND. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL GATE VALVES THAT EXCEED 4.5' DEEP

WORK IN TREE CRITICAL ROOT ZONE (CRZ):

1. CALL ENVIRONMENTAL INSPECTOR 48 HOURS BEFORE ANY WORK DONE INSIDE TREE CRZ
2. ANY TRENCH OR EARTH DISTURBANCE INSIDE TREE CRZ NEEDS TO BE DONE BY HAND (NOT TRENCHING MACHINES)
3. ANY STAGING AREA OR HEAVY EQUIPMENT KEPT INSIDE THE TREE CRZ NEEDS TO HAVE 18" OF MULCH UNDERNEATH EQUIPMENT TO PROTECT ROOT SYSTEMS
4. ANY TREE TRIMMING OR CROWN DAMAGE SHOULD HAVE AN ENVIRONMENTAL INSPECTOR TO REVIEW PRIOR TO ANY WORK BEING DONE.


Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
LICENSED
PROFESSIONAL ENGINEER
10/26/2020 9:55:55 PM

FREESE AND NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
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Fax - (512) 617-3101


CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
CIVIL
24 IN WATER MAIN
PLAN & PROFILE STA. 16+00-20+00

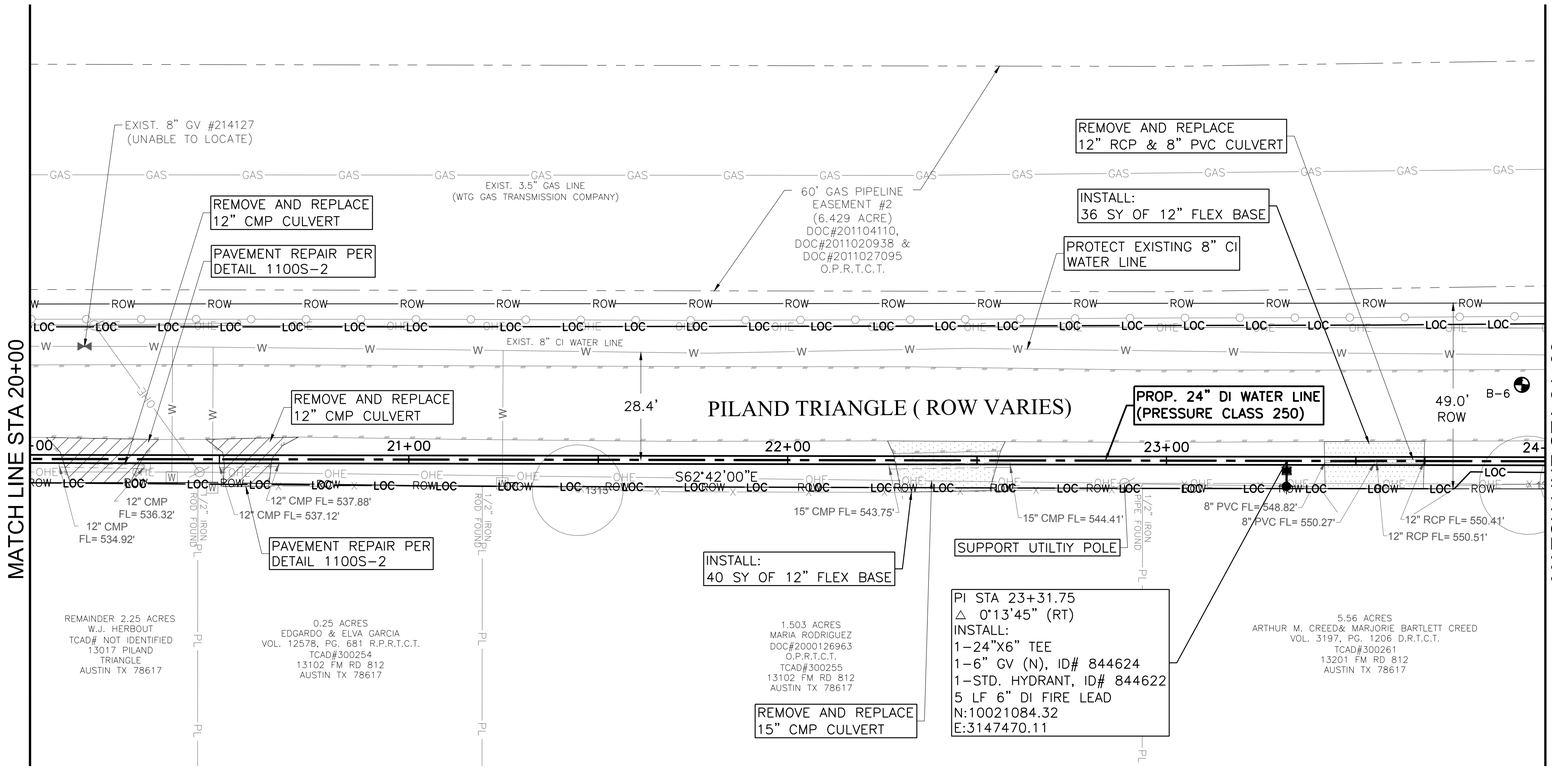
| NO. | ISSUE | BY | DATE |
|---|---|---|---|

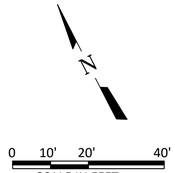
| | |
|---|---|
| F&N JOB NO. | AU118116 |
| DATE | 10/26/20 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

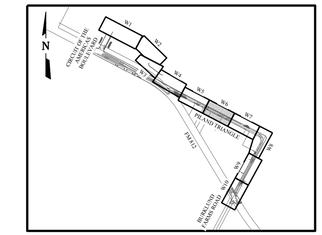
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET W5
SEQ. 11

Date: Oct 26, 2020 - 9:27pm User: 07155 File: N:\WTU\Drawings\WTU-AU1-WTR01.dwg




LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | MAPSCO 707U NUMBER |
|---|---|

**CAUTION!!**
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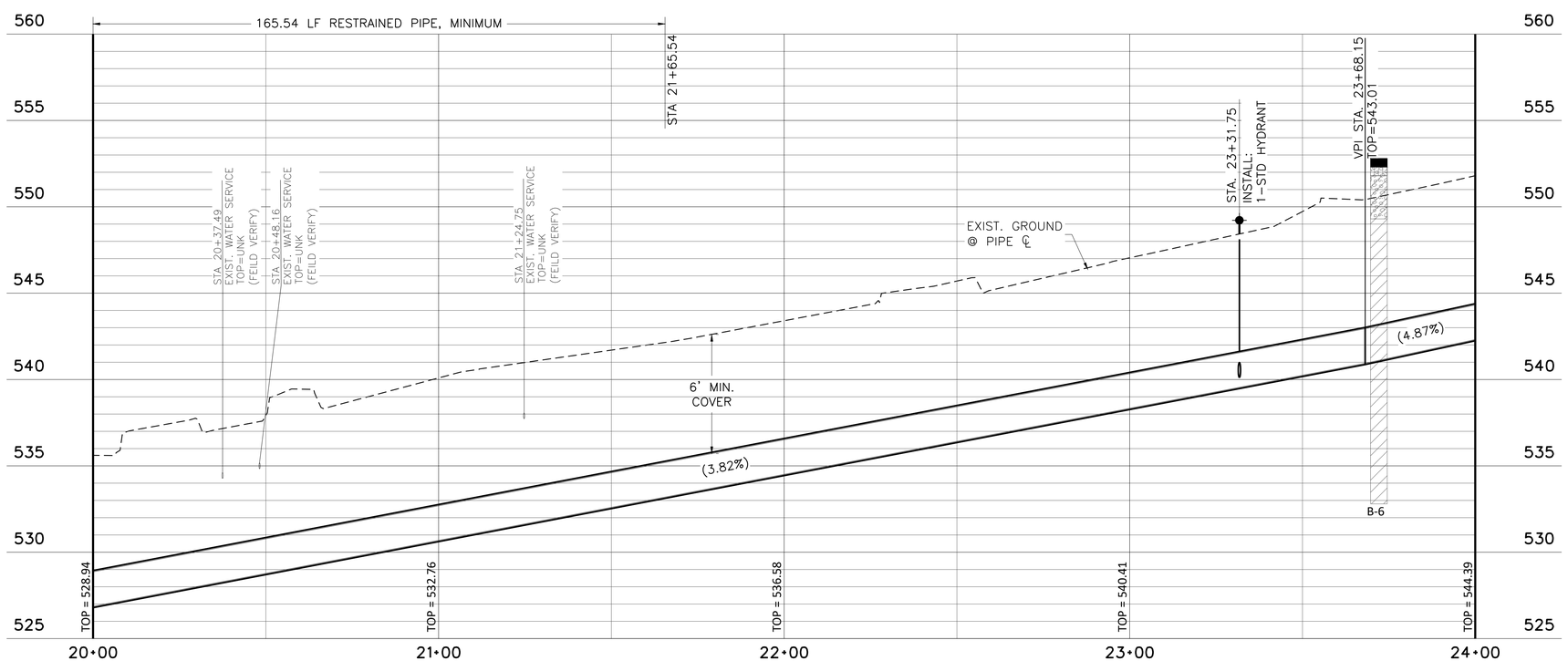


0 20' 40'
SCALE IN FEET
HORIZONTAL

0 4' 8'
SCALE IN FEET
VERTICAL

## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.
2. PROPOSED FIRE HYDRANTS MUST LIE WITHIN THE LOC FENCE LINE. MINIMUM REQUIRED DISTANCE BETWEEN LOC FENCE AND A PROP. FH IS 2 LF.

REVIEWED
April 12, 2021
Austin Water
George R.

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
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PROFESSIONAL ENGINEER
10/22/2020

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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
CIVIL
24 IN WATER MAIN
PLAN & PROFILE STA. 20+00-24+00

| | |
|---|---|
| F&N JOB NO. | AU118116 |
| DATE | 10/18/20 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
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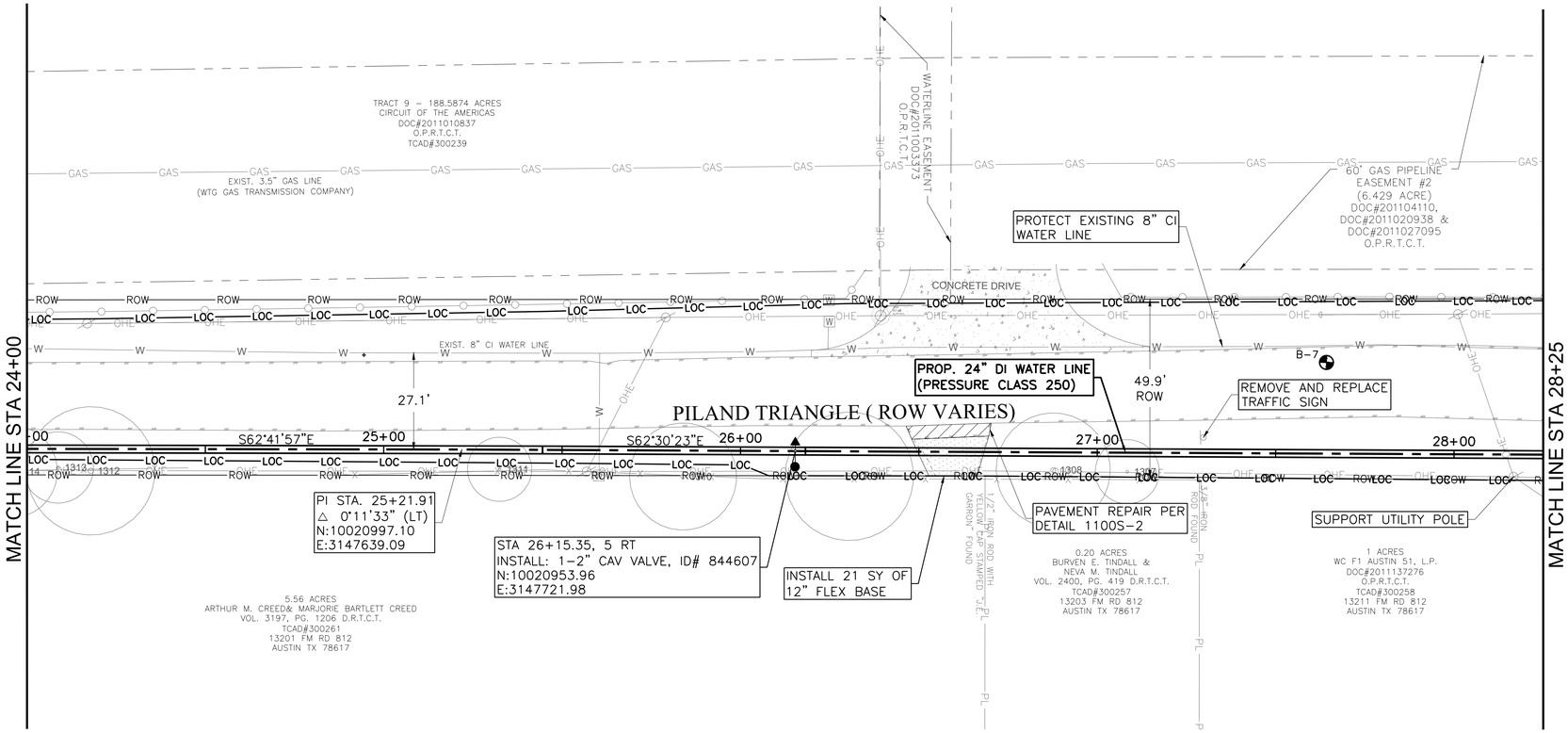
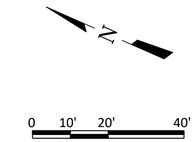
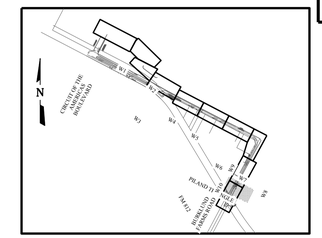
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET W6
SEQ. 12

Date: Oct 18, 2020 – 1:41pm User: 07155 File: N:\WTU\Drawings\WTU-AU1-WTR01.dwg



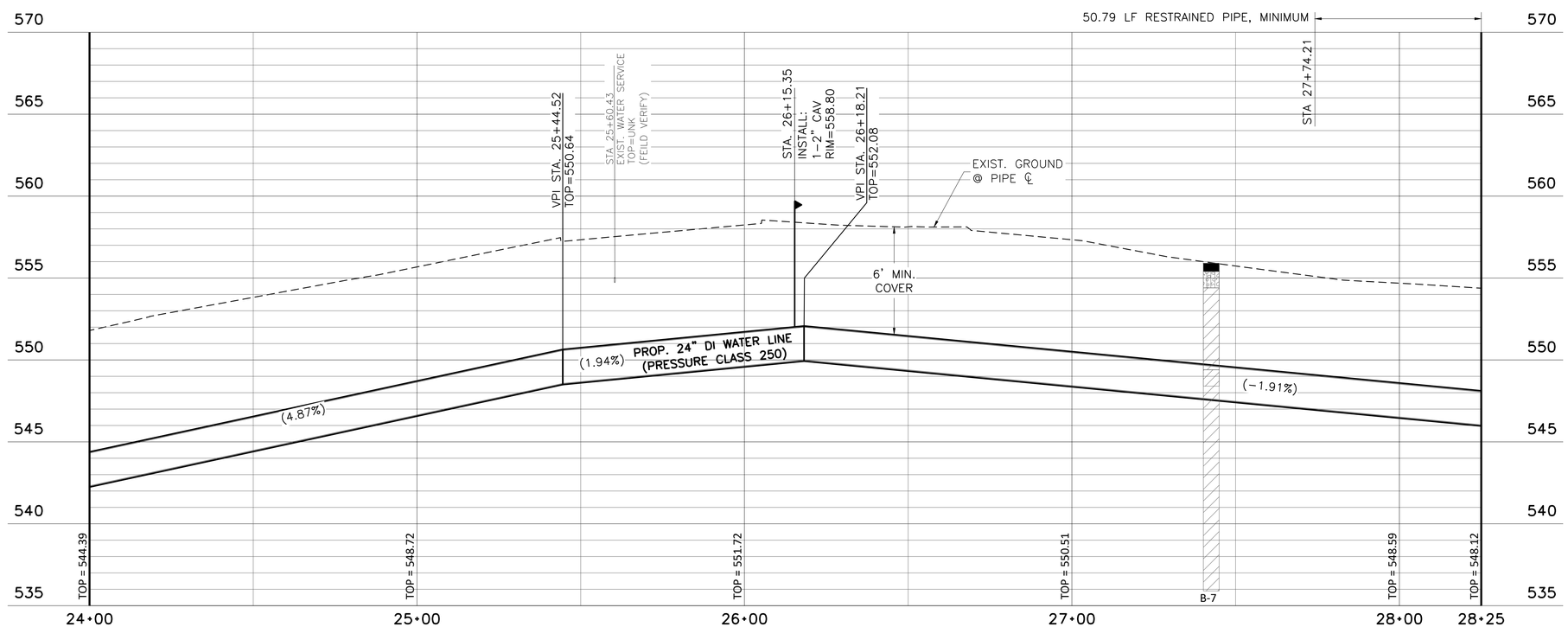



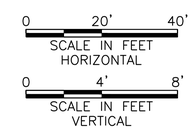
LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | MAPSCO 707U NUMBER |
|---|---|

**CAUTION!!**
UNDERGROUND GAS, WATER, ELECTRIC, TELEPHONE, CABLE TV AND OTHER UTILITIES MAY EXIST WITHIN THE WORK AREA. THE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE UTILITIES CAUSED BY THE CONTRACTOR'S OPERATION.




## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.

REVIEWED
April 12, 2021
Austin Water
George R.

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
LICENSED
PROFESSIONAL ENGINEER
10/20/2020

FREESE AND NICHOLS
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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

CIVIL
24 IN WATER MAIN
PLAN & PROFILE STA. 24+00-28+25

| NO. | ISSUE | BY | DATE |
|---|---|---|---|

| | |
|---|---|
| F&N JOB NO. | AU118116 |
| DATE | 10/18/20 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
0 1

SHEET W7
SEQ. 13

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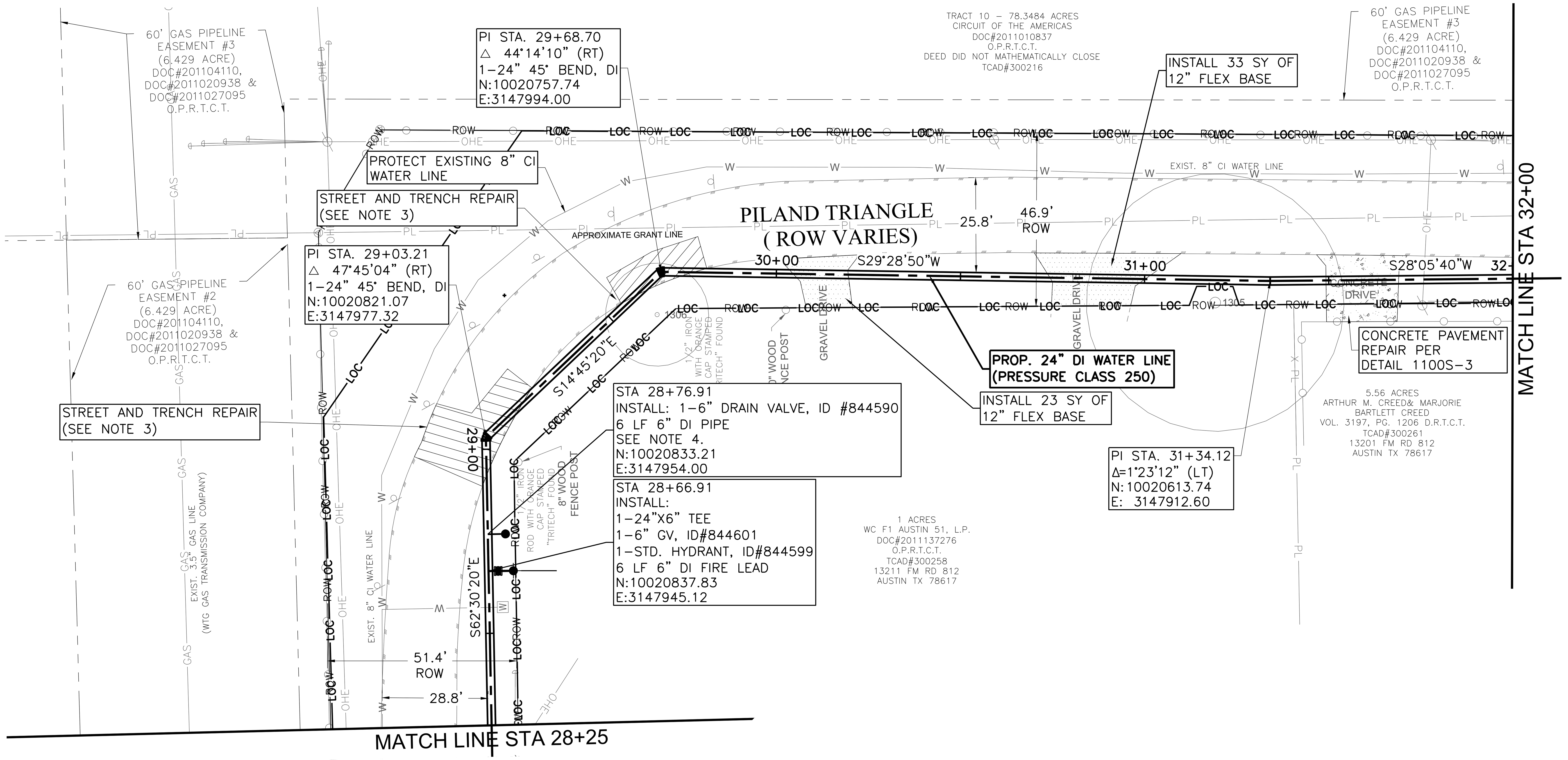


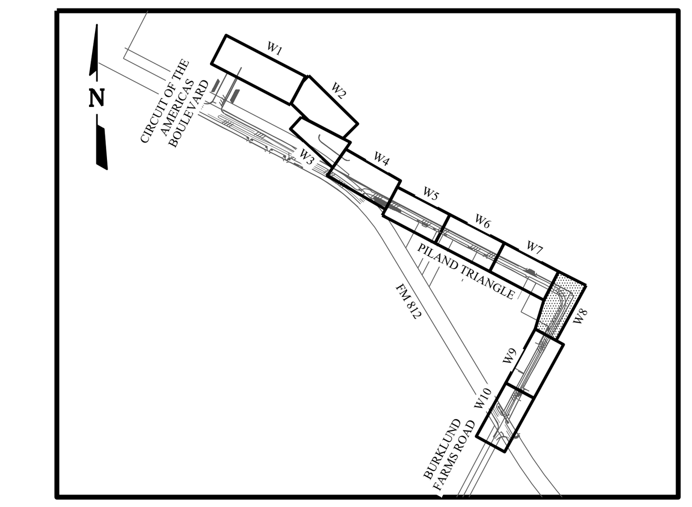


## RECORD REFERENCES

| QUAD MAP P10 NUMBER | MAPSCO 707U NUMBER |
| --- | --- |

## CAUTION!!

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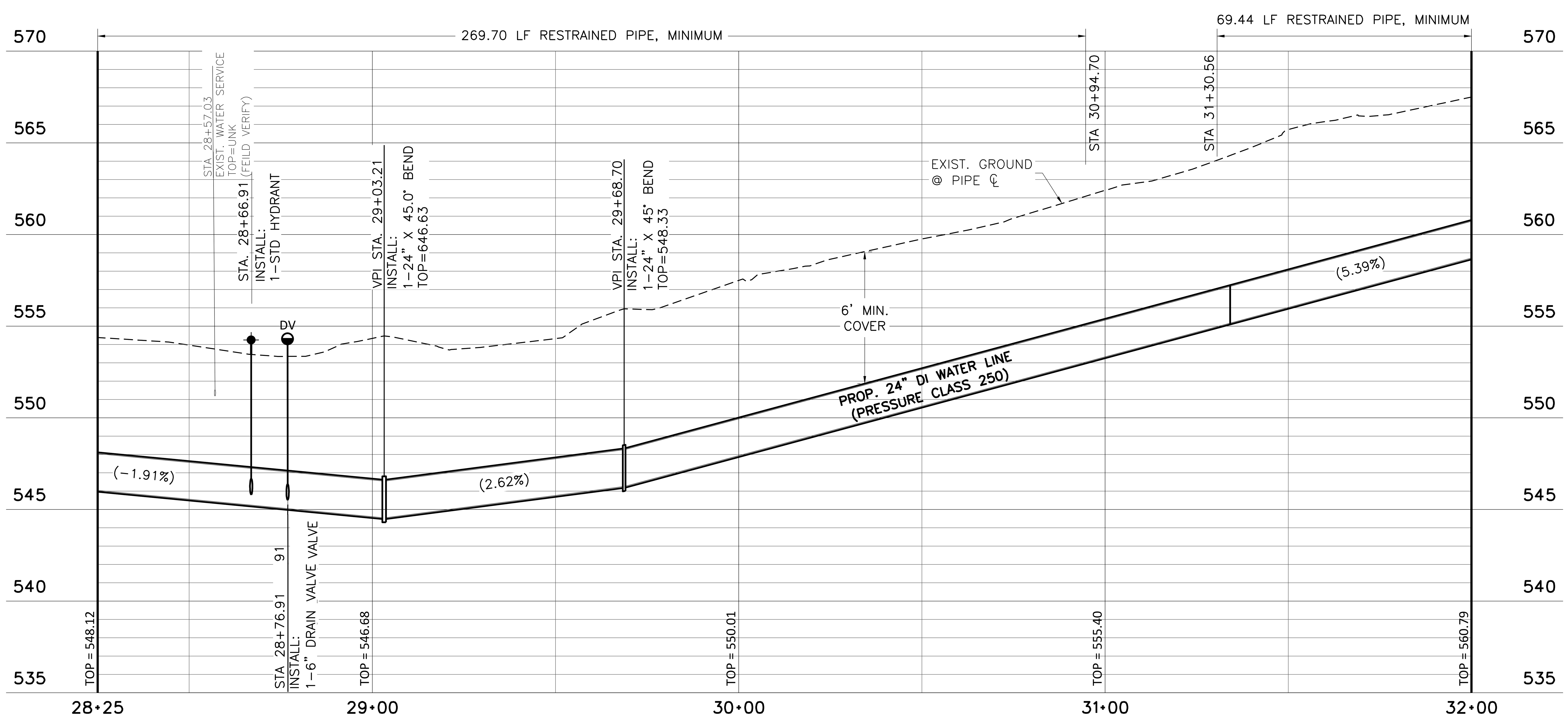


## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.
2. PROPOSED FIRE HYDRANTS MUST LIE WITHIN THE LOC FENCE LINE. MINIMUM REQUIRED DISTANCE BETWEEN LOC FENCE AND A PROP. FH IS 2 LF.
3. FOR TRANSVERSE EXCAVATION, STREET REPAIR MUST FOLLOW DETAIL 1100S-7 AND TRENCH REPAIR MUST BE IN ACCORDANCE WITH DETAIL 1100S-6D
4. PLACE DRAIN VALVE AT LEAST 7 FEET FROM THE EDGE OF PAVEMENT AND AS CLOSE TO THE FENCE AS POSSIBLE.

REVIEWED April 12, 2021 Austin Water George R.

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144
STATE OF TEXAS DANIEL STOUTENBURG JR. 99271 LICENSED PROFESSIONAL ENGINEER
FREESE NICHOLS
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Austin, Texas 78759
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Fax - (512) 617-3101

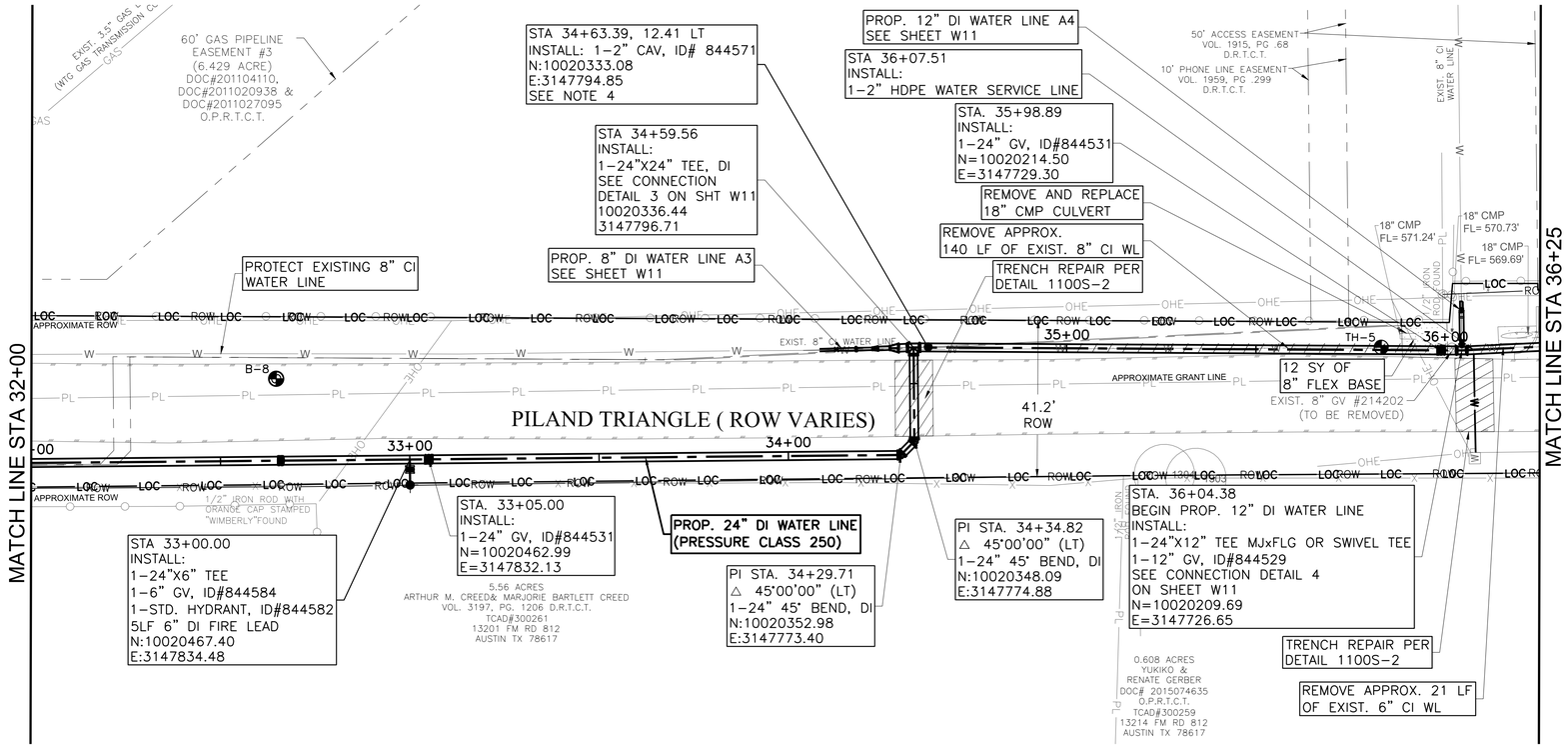
CITY OF AUSTIN, TEXAS
# PILAND TRIANGLE INTERCONNECT
CIVIL
# 24 IN WATER MAIN
## PLAN & PROFILE STA. 28+25-32+00

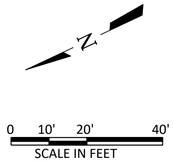
| F&N JOB NO. | AU118116 |
| --- | --- |
| DATE | 02/01/21 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

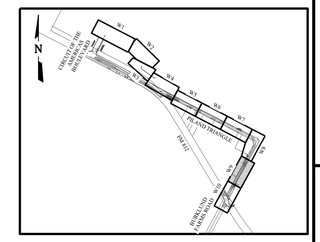
| NO. | ISSUE | BY | DATE |
| --- | --- | --- | --- |

VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET W8
SEQ. 14




LOCATION MAP
N.T.S.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | WATER 18925 & 18927 INTERSECTION |
|---|---|
| MAPSCO 707U & 707Y NUMBER | |

**CAUTION!!**
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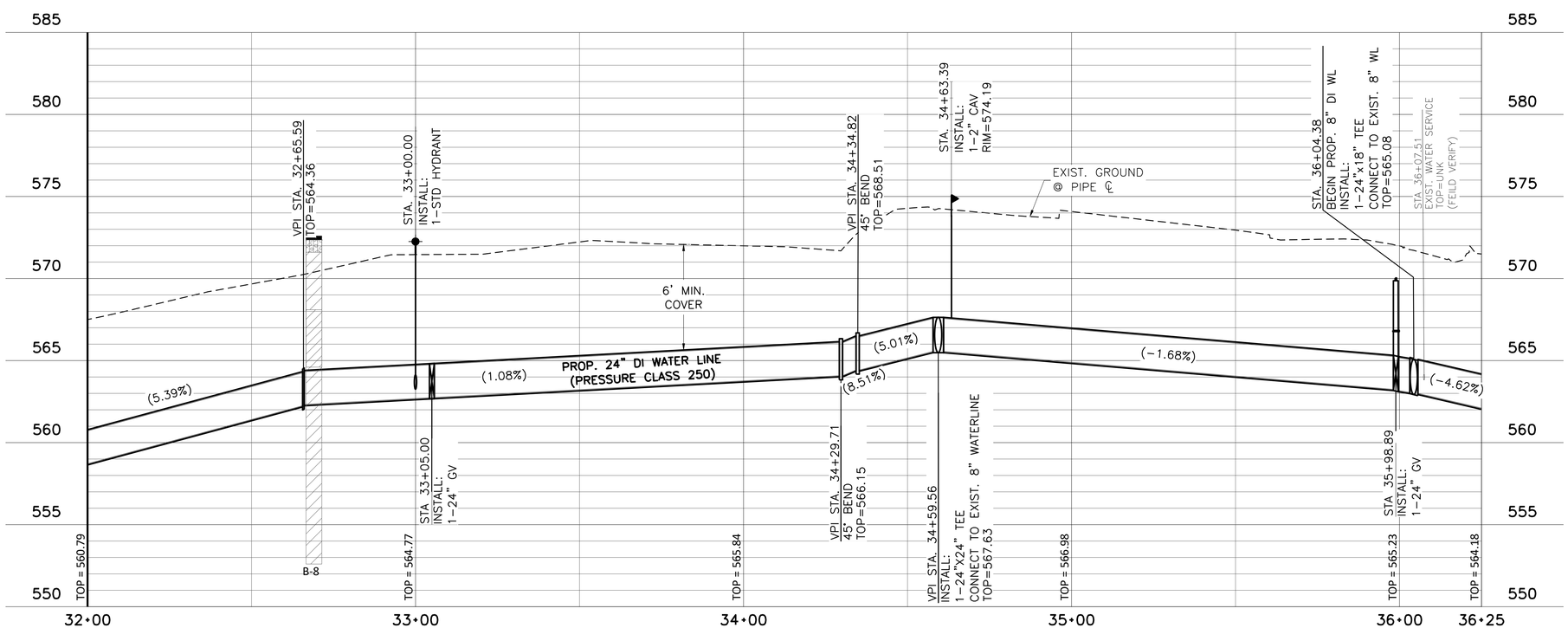


0 20' 40'
SCALE IN FEET
HORIZONTAL

0 4' 8'
SCALE IN FEET
VERTICAL

## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.
2. PROPOSED FIRE HYDRANTS MUST LIE WITHIN THE LOC FENCE LINE. MINIMUM REQUIRED DISTANCE BETWEEN LOC FENCE AND PROP. FH IS 2 LF.
3. FOR A 24" GATE VALVE, OPERATIONS NUT SHOULD BE 24" BELOW GROUND. VALVE STEM EXTENSIONS ARE REQUIRED ON ALL GATE VALVES THAT EXCEED 4.5' DEEP
4. PLACE CAV AT LEAST 7 FEET FROM THE EDGE OF PAVEMENT AND AS CLOSE TO THE FENCE AS POSSIBLE.

REVIEWED
April 12, 2021
Austin Water
George R.


Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144
STATE OF TEXAS
DANIEL STOUTENBURG JR.
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10/08/2021
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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
CIVIL
24 IN WATER MAIN
PLAN & PROFILE STA. 32+00-36+25

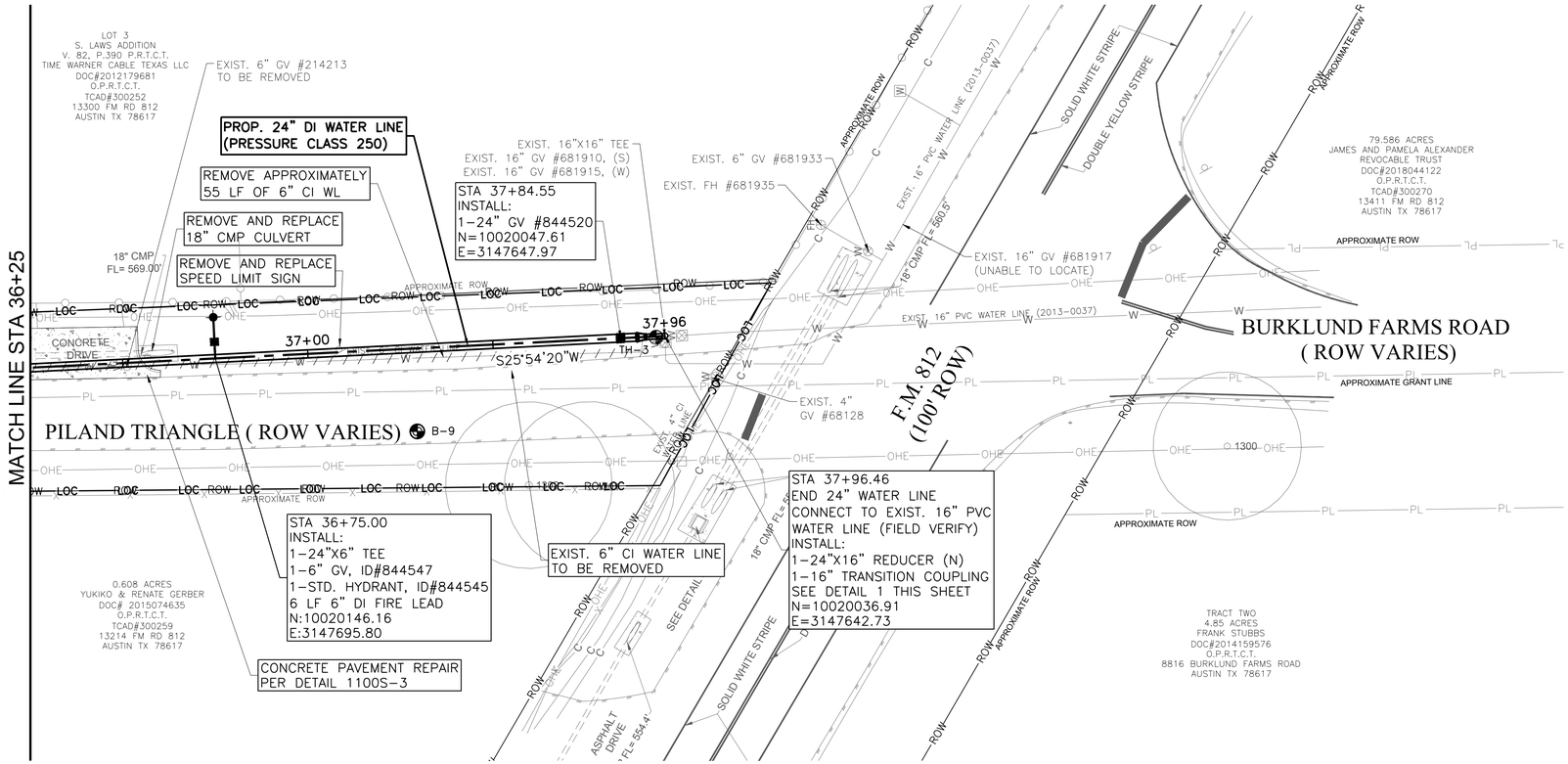
| NO. | ISSUE | BY | DATE |
|---|---|---|---|

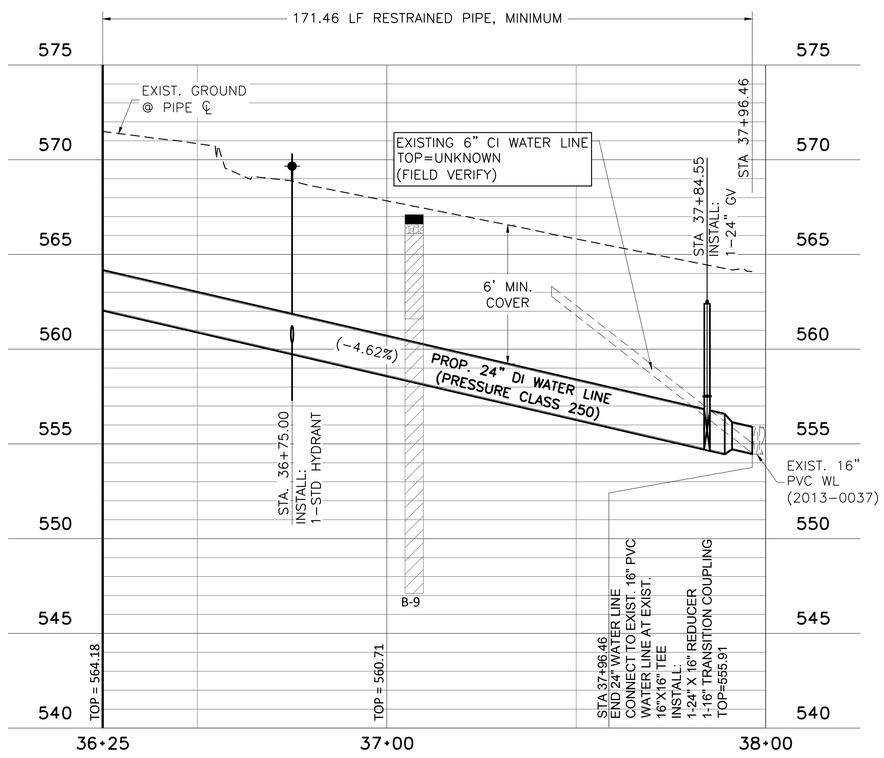
| | |
|---|---|
| F&N JOB NO. | AU118116 |
| DATE | 02/04/21 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

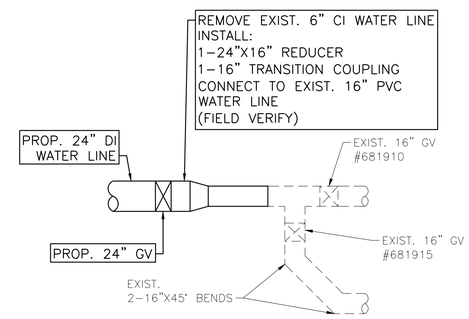
VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. 0 1

SHEET W9
SEQ. 15

Date: Feb 04, 2021 - 9:47am User: 03704 File: N:\WTU\Drawings\WTU-AU1-WTR01.dwg




1 / W10 CONNECTION DETAIL AT STATION 37+96.46

NOT TO SCALE

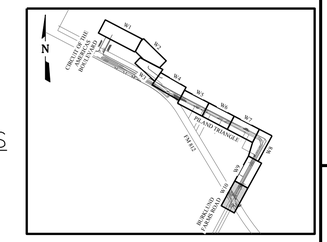
## NOTES:

1. DEFLECT JOINTS AS REQUIRED TO ACHIEVE ALIGNMENT AND GRADES AS SHOWN. ALLOWABLE JOINT DEFLECTION SHALL BE NO GREATER THAN 50% OF PIPE MANUFACTURER'S RECOMMENDED MAXIMUM.

REVIEWED
April 12, 2021
Austin Water
George R.

## RECORD REFERENCES

| QUAD MAP P10 NUMBER | WATER 18925 & 18927 INTERSECTION |
|---|---|
| MAPSCO 707U & 707Y NUMBER | |




LOCATION MAP
N.T.S.

## CAUTION!!

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0 10' 20' 40'
SCALE IN FEET

0 20' 40'
SCALE IN FEET
HORIZONTAL

0 4' 8'
SCALE IN FEET
VERTICAL


Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144
STATE OF TEXAS
DANIEL STOUTENBURG JR.
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UPDATED 01/22/2021
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Austin, TX 78759
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Fax - (512) 617-3101


CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
CIVIL
24 IN WATER MAIN
PLAN & PROFILE STA. 36+25-37+96.46

| F&N JOB NO. | AU118116 |
|---|---|
| DATE | 10/18/20 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | WTU-AU1-WTR01.dwg |

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
| | | | |

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
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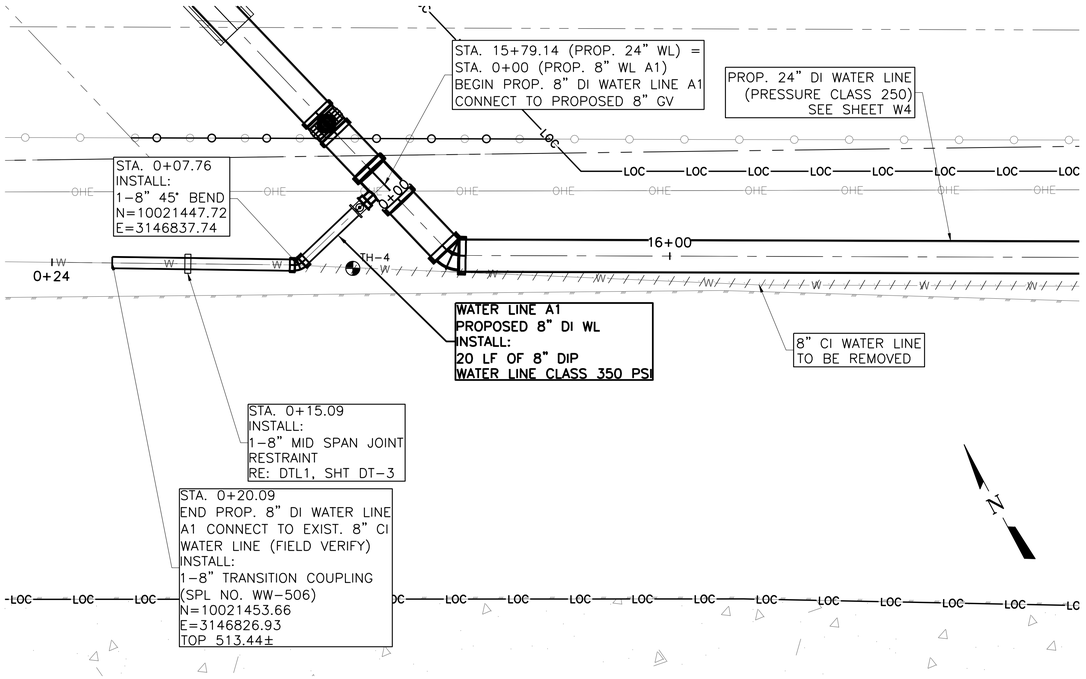
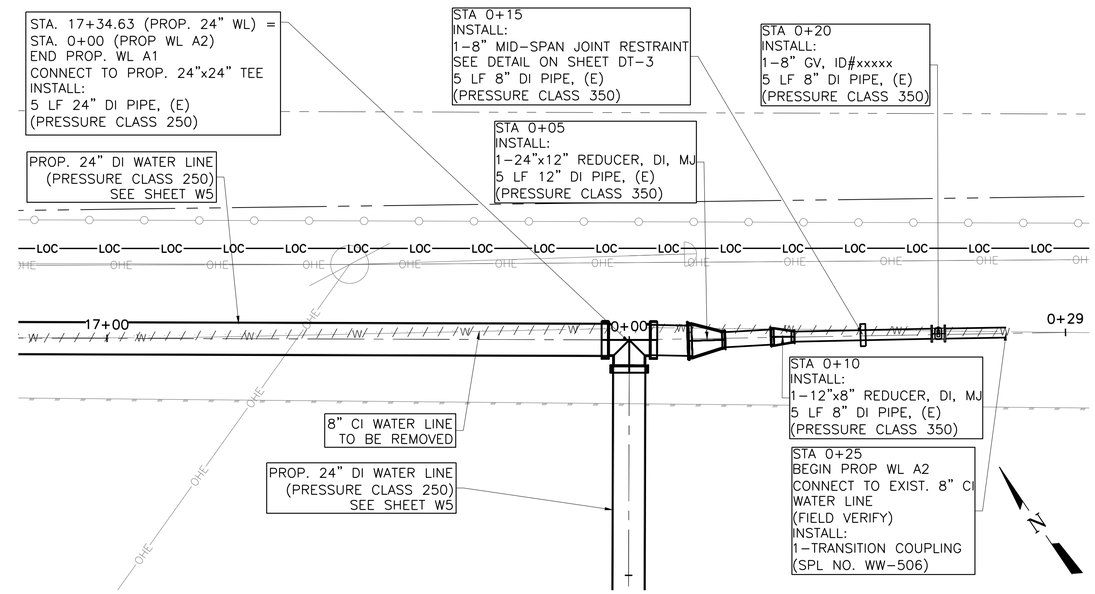
SHEET W10
SEQ. 16

Date: Oct 18, 2020 - 1:41pm User: 07155 File: N:\WTU\Drawings\WTU-AU1-WTR01.dwg



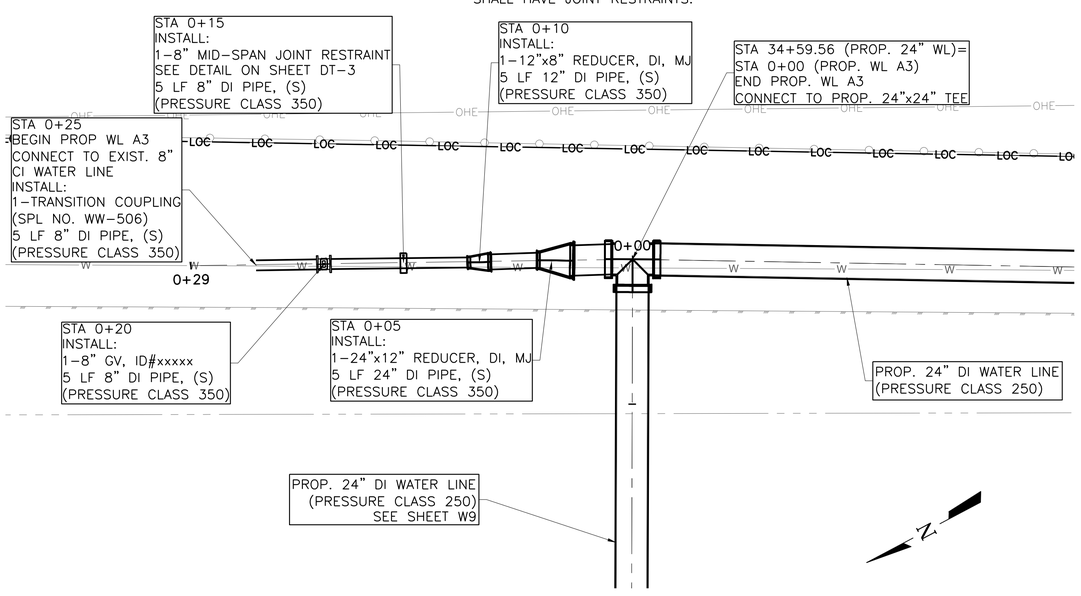

1 / W4 CONNECTION DETAIL STA. 15+79.14

1"=5' NOTE: ALL PIPE JOINTS SHOWN IN THIS DETAIL SHALL HAVE JOINT RESTRAINTS.



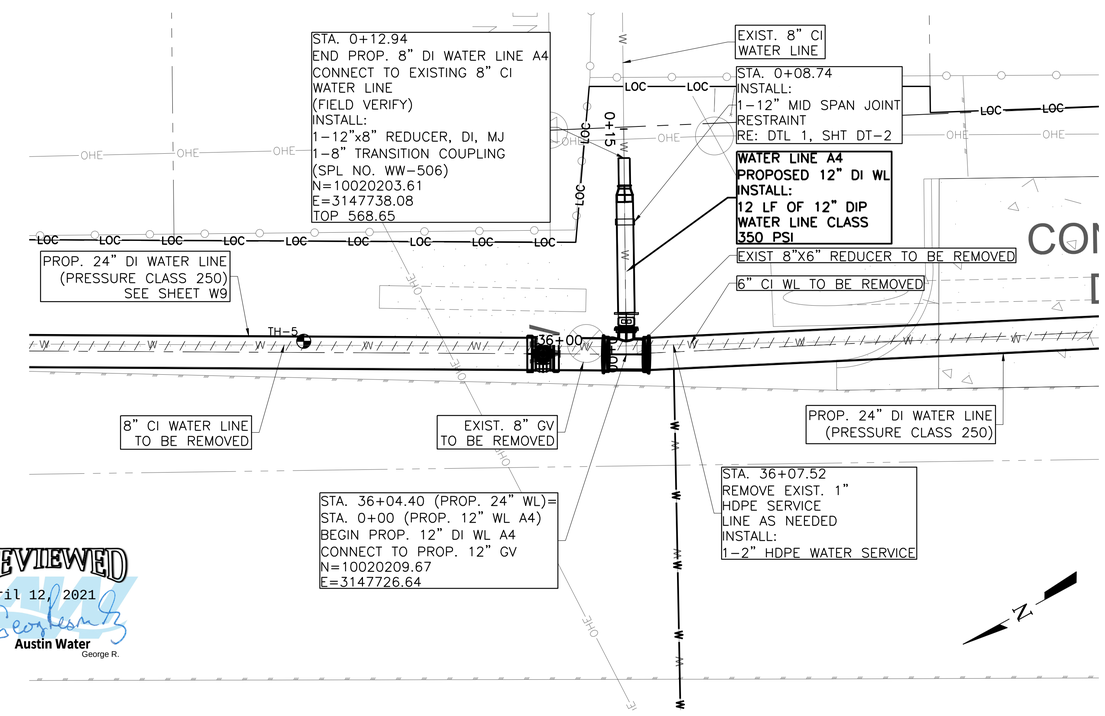

2 / W5 CONNECTION DETAIL STA. 17+34.63

1"=5' NOTE: ALL PIPE JOINTS SHOWN IN THIS DETAIL SHALL HAVE JOINT RESTRAINTS.




3 / W9 CONNECTION DETAIL STA. 34+59.56

1"=5' NOTE: ALL PIPE JOINTS SHOWN IN THIS DETAIL SHALL HAVE JOINT RESTRAINTS.




4 / W9 CONNECTION DETAIL STA. 36+04.38

1"=5' NOTE: ALL PIPE JOINTS SHOWN IN THIS DETAIL SHALL HAVE JOINT RESTRAINTS.

REVIEWED
April 12, 2021
Austin Water
George R.

**CAUTION!!**

UNDERGROUND GAS, WATER, ELECTRIC, TELEPHONE, CABLE TV AND OTHER UTILITIES MAY EXIST WITHIN THE WORK AREA. THE UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND FOR INFORMATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO THE UTILITIES CAUSED BY THE CONTRACTOR'S OPERATION.

0 5' 10'
SCALE IN FEET

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
LICENSED
PROFESSIONAL ENGINEER

Daniel Stoutenburg Jr.
10/26/2020


FREESE AND NICHOLS
10431 Morado Circle, Suite 300
Austin, Texas 78759
Phone - (512) 617-3100
Fax - (512) 617-3101


CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

24 IN WATER MAIN
CONNECTION DETAILS

| NO. | ISSUE | BY | DATE |
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F&N JOB NO. AU118116
DATE 10/26/20
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VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
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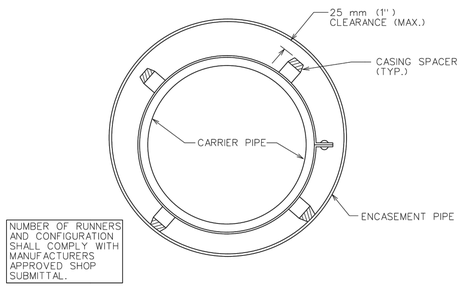
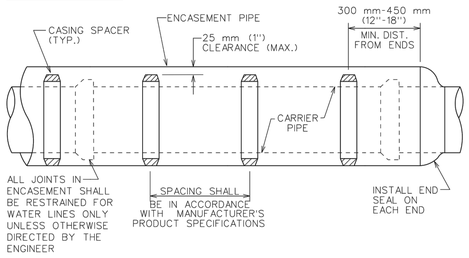
SHEET W11
SEQ. 17

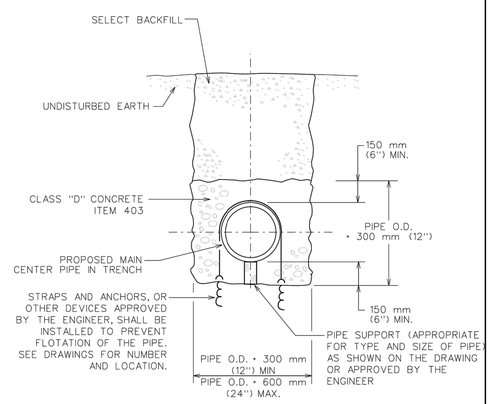


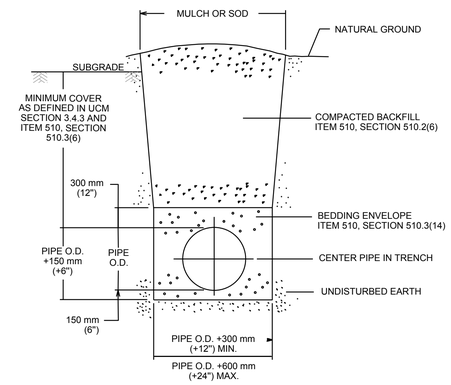

APPLICABLE REFERENCES

STANDARD SPECIFICATION: ITEM 510S.3 (19) W/WW STANDARD PRODUCTS LIST: SPLWW-575 FOR CASING SPACER AND SPLWW-575A FOR END SEAL.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | | ENCASEMENT DETAIL W/ CASING SPACERS | |
|---|---|---|---|
| RECORD COPY SIGNED BY KATHI L FLOWERS | 2/28/05<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>501S-1 |



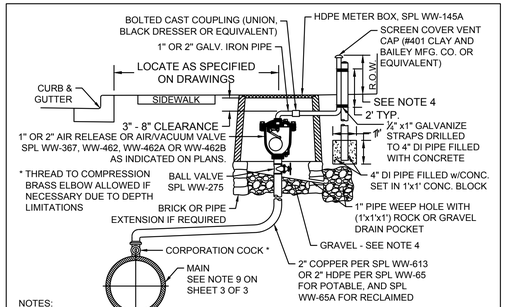

| CITY OF AUSTIN<br>WATER AND WASTEWATER UTILITY | | CONCRETE ENCASEMENT | |
|---|---|---|---|
| RECORD COPY SIGNED BY LEON BARBA | 8/18/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>505S-1 |




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 BY BILL GARDNER | 03/13/06<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>510S-5 |



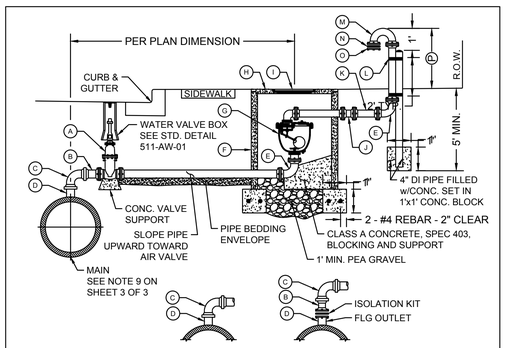

NOTES:

1. EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND DI SUPPORT PIPE SHALL BE PAINTED PER SPL WW-3C. POTABLE WATER PIPE SHALL BE PAINTED SAFETY BLUE.
2. AIR VENT PIPE INSTALLATION SHALL BE AS NEAR AS PRACTICAL TO RIGHT-OF-WAY LINE WITH MINIMUM CLEARANCE OF 18" FROM ANY OBSTACLE.
3. HDPE METER BOX PENETRATION SHALL BE CORE BIT DRILLED. VOID SHALL BE FILLED WITH LINKSEAL LS 300 OR APPROVED EQUAL.
4. COMPACTED COARSE GRAVEL OR BROKEN STONE MIXED WITH SAND SLOPED TO DRAIN.
5. IN UNDEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 4' MIN. IN HEIGHT SUPPORTED BY A 4" DIA. DI PIPE WHICH HAS BEEN FILLED WITH CONCRETE (SUPPORT PIPE SHALL BE 6' LONG, BURIED IN CLASS A CONCRETE OR CLSM 3' BELOW FINAL GRADE AND EXTENDING 3' ABOVE FINAL GRADE). INSTALL ONE DELINEATOR STAKE WITHIN 3' OF THE VAULT ON THE VEHICULAR ACCESS SIDE OF VAULT OR AS DIRECTED BY AUSTIN WATER. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES. IN DEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 8" - 12" IN HEIGHT AND LOCATED NOT TO CONFLICT WITH SIDEWALK, DRIVEWAY, OR OTHER PEDESTRIAN TRAFFIC.
6. THE AIR VALVE AND ASSOCIATED PIPING SHALL BE INSTALLED ABOVE THE HIGHEST ELEVATION OF THE WATER MAIN. AIR VALVE PIPING, FROM THE WATER MAIN TO THE AIR VALVE, SHALL MAINTAIN A CONSTANT RISE, WITH NO DIPS, TO THE TOP OF THE GROUND.

1" - 2" AIR RELEASE OR AIR/VACUUM VALVE INSTALLATION - TYPE I

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

| CITY OF AUSTIN<br>AUSTIN WATER | | AIR RELEASE AND AIR/VACUUM VALVE | |
|---|---|---|---|
| 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-04<br>1 OF 3 |




A. GATE VALVE (FLG x FLG). GATE VALVE SHALL NOT BE INSTALLED DIRECTLY ABOVE WATER MAIN.
B. PIPE FLG x FACTORY RESTRAINED JOINT SPIGOT END.
C. 90° BEND w/FACTORY RESTRAINED JOINT BELL ENDS, SPL WW-27F.
D. FOR DI MAIN: WELDED-ON OUTLET w/FACTORY RESTRAINED JOINT SPIGOT END.
   FOR STEEL/CSC MAIN: WELDED-ON FLANGED OUTLET w/ISOLATION KIT AND FLG x FACTORY RESTRAINED SPIGOT END.
E. 90° BEND (FLG x FLG).
F. CLASS III RCP VAULT 60" MIN. I.D.
G. AIR RELEASE VALVE w/GOOSENECK PER AIR RELEASE VALVES FOR WATER SPL WW-367 OR AIR RELEASE/VACUUM RELIEF VALVES FOR POTABLE WATER SPL WW-462A OR AIR RELEASE/VACUUM RELIEF VALVES FOR RECLAIMED WATER SPL WW-462B OR AIR RELEASE/AIR VACUUM VALVE FOR WASTEWATER SPL WW-462B.
H. REINFORCED PRECAST CONCRETE LID (AASHTO H-20 LOADING).
I. COA FRAME AND 32" COVER WITH LETTERING MODIFIED FOR WATER.
J. BOLTED CAST COUPLING (SMITH-BLAIR 441 OMNI CAST COUPLING OR APPROVED EQUAL).
K. AIR VENT PIPE, 3" PIPE - GALVANIZED IRON, 4" AND LARGER PIPE - DI ONLY.
L. ½" x1" GALVANIZE STRAPS DRILLED TO 4" DI PIPE FILLED w/CONCRETE (SEE NOTE 7).
M. RETURN BEND (FLG x FLG).
N. No. 16 MESH BRASS CLOTH
O. COMPANION FLANGE (SEE NOTE 5).
P. 4' MIN. - UNDEVELOPED AREAS.

3" OR LARGER AIR/VACUUM VALVE INSTALLATION - TYPE II

| CITY OF AUSTIN<br>AUSTIN WATER | | AIR RELEASE AND AIR/VACUUM VALVE | |
|---|---|---|---|
| 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-04<br>2 OF 3 |

NOTES:

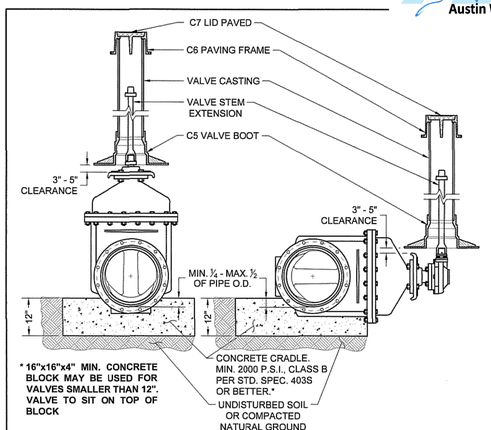
1. ON 10" AND LARGER TWO PIECE COMBINATION AIR VALVES, THE OUTLET PIPING OF THE SMALL VALVE SHALL BE VENTED WITHIN THE VAULT INTO THE LARGER VENT PIPE
2. AIR VENT PIPE 6" AND LARGER SHALL BE DI (CLASS 350 MIN.) PIPE FLANGE FITTINGS AND EXTERIOR SURFACES OF ALL EXPOSED PIPE SHALL BE PAINTED PER SPL WW-3C. POTABLE WATER PIPE SHALL BE PAINTED SAFETY BLUE. SURFACE PREPARATION SHALL BE PER PAINT MANUFACTURER'S REQUIREMENTS.
3. ENTIRE AIR VENT ASSEMBLY SHALL BE LOCATED WITHIN EASEMENT OR R.O.W.
4. CONCRETE PIPE PENETRATIONS SHALL BE CORE BIT DRILLED. VOID SHALL BE SEALED w/LINKSEAL LS 300 OR APPROVED EQUAL.
5. CROSS SECTIONAL AREA OF OPENING TO BE EQUAL TO OR GREATER THAN CROSS SECTIONAL AREA OF AIR VENT PIPE.
6. AIR/VACUUM VALVE SHALL BE INSTALLED IN A MANNER WHICH WILL ALLOW REMOVAL OF ASSEMBLY WITHOUT REMOVAL OF PRECAST CONCRETE LID.
7. IN UNDEVELOPED AREAS, THE AIR VENT PIPE SHALL BE 4' MIN. IN HEIGHT SUPPORTED BY A 4" DIA. DI PIPE WHICH HAS BEEN FILLED WITH CONCRETE (SUPPORT PIPE SHALL BE 6' LONG, BURIED IN CLASS A CONCRETE OR CLSM 3' BELOW FINAL GRADE AND EXTENDING 3' ABOVE FINAL GRADE). INSTALL ONE DELINEATOR STAKE WITHIN 3' OF THE VAULT ON THE VEHICULAR ACCESS SIDE OF VAULT OR AS DIRECTED BY AUSTIN WATER. DELINEATOR SHALL BE BLUE FOR POTABLE WATER AND SHALL EXTEND AT LEAST 60" ABOVE GROUND. DELINEATORS SHALL HAVE 2" WIDE, WHITE IN COLOR, TYPE I REFLECTIVE TAPE MOUNTED DIAGONALLY AT 12" SPACING ON BOTH SIDES. IN DEVELOPED AREAS, THE AIR VENT PIPE SHALL BE LOCATED NOT TO CONFLICT WITH SIDEWALK, DRIVEWAY, OR OTHER PEDESTRIAN TRAFFIC.
8. GATE VALVE, PIPE, AND FITTINGS FROM MAIN TO ARV SHALL BE OF EQUAL DIAMETER AS THE AIR VALVE EXCEPT 3" ARV SHALL HAVE 4" FITTINGS AND A 4"x3" REDUCER AT THE ARV, AND ALL PIPE AND FITTINGS ON THE OUTLET SIDE OF THE ARV SHALL BE EQUAL TO THE SIZE OF THE OUTLET OF THE ARV. VAULTS SHALL BE 5' DIAMETER FOR 3" VALVE; 6' DIAMETER FOR 4", 6", AND 8" VALVES; AND 7' DIAMETER FOR 10" AND 12" VALVES.
9. FOR 24" AND LARGER MAINS, AN 18" OUTLET WITH BLIND FLANGE SHALL BE INSTALLED AT CONNECTION OF ARV.

3" OR LARGER AIR/VACUUM VALVE INSTALLATION - TYPE II

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

| CITY OF AUSTIN<br>AUSTIN WATER | | AIR RELEASE AND AIR/VACUUM VALVE | |
|---|---|---|---|
| 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-04<br>3 OF 3 |

REVIEWED
April 12, 2021
Austin Water
George R.

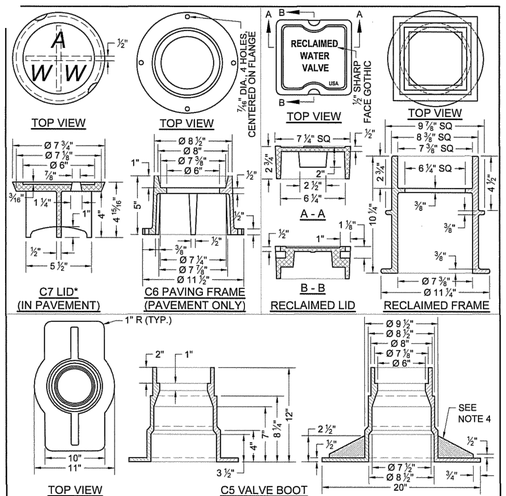



NOTES:

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

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

| CITY OF AUSTIN<br>AUSTIN WATER | | TYPICAL GATE VALVE 4" - 16" | |
|---|---|---|---|
| Kathi L. Flowers | 05/18/2016<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511-AW-01<br>1 OF 4 |




NOTES:

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

WEIGHTS:

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

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

| CITY OF AUSTIN<br>AUSTIN WATER | | TYPICAL GATE VALVE 4" - 16" | |
|---|---|---|---|
| Kathi L. Flowers | 05/18/2016<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>511-AW-01<br>2 OF 4 |

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

STATE OF TEXAS
DANIEL STOUTENBURG JR.
99271
PROFESSIONAL ENGINEER
10/29/2020 10:22:13 PM

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Austin, Texas 78759
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Fax – (512) 617-3101

CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
WATER AND WASTEWATER DETAILS
STANDARD DETAILS I

| NO. | ISSUE | BY | DATE |
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| DATE | 10/18/20 |
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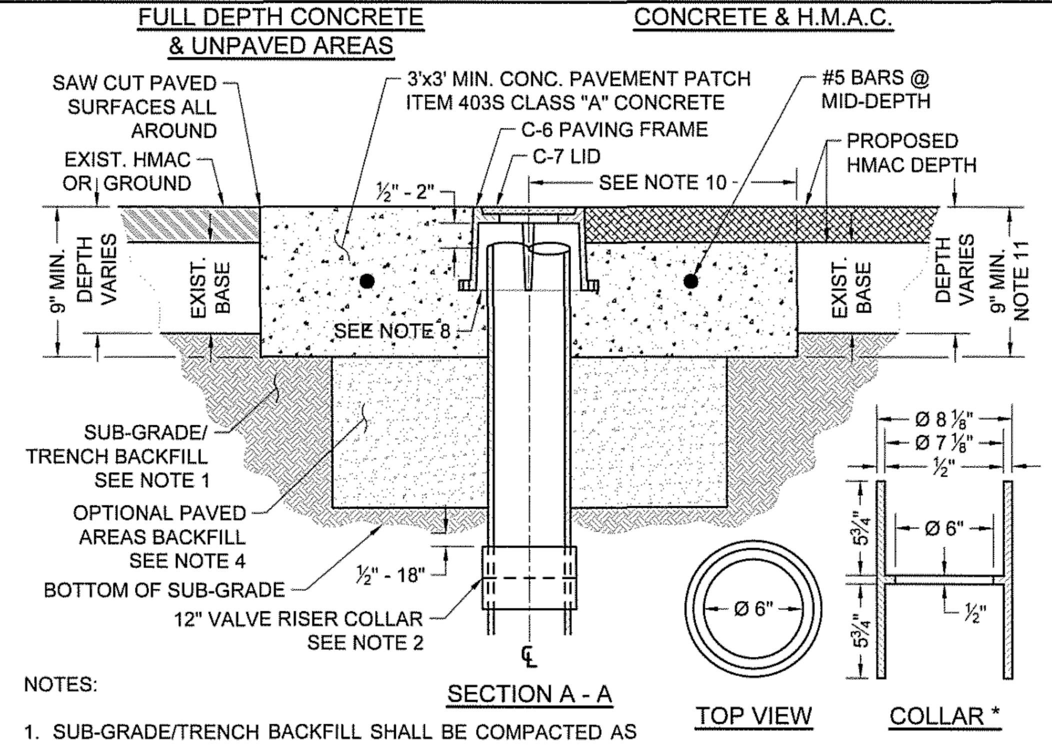
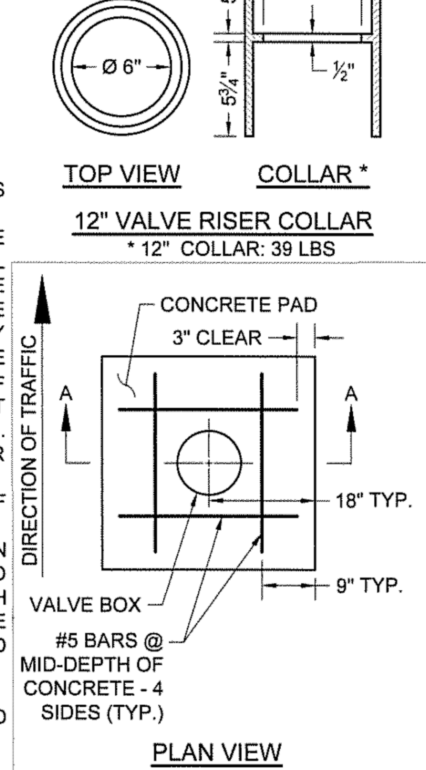


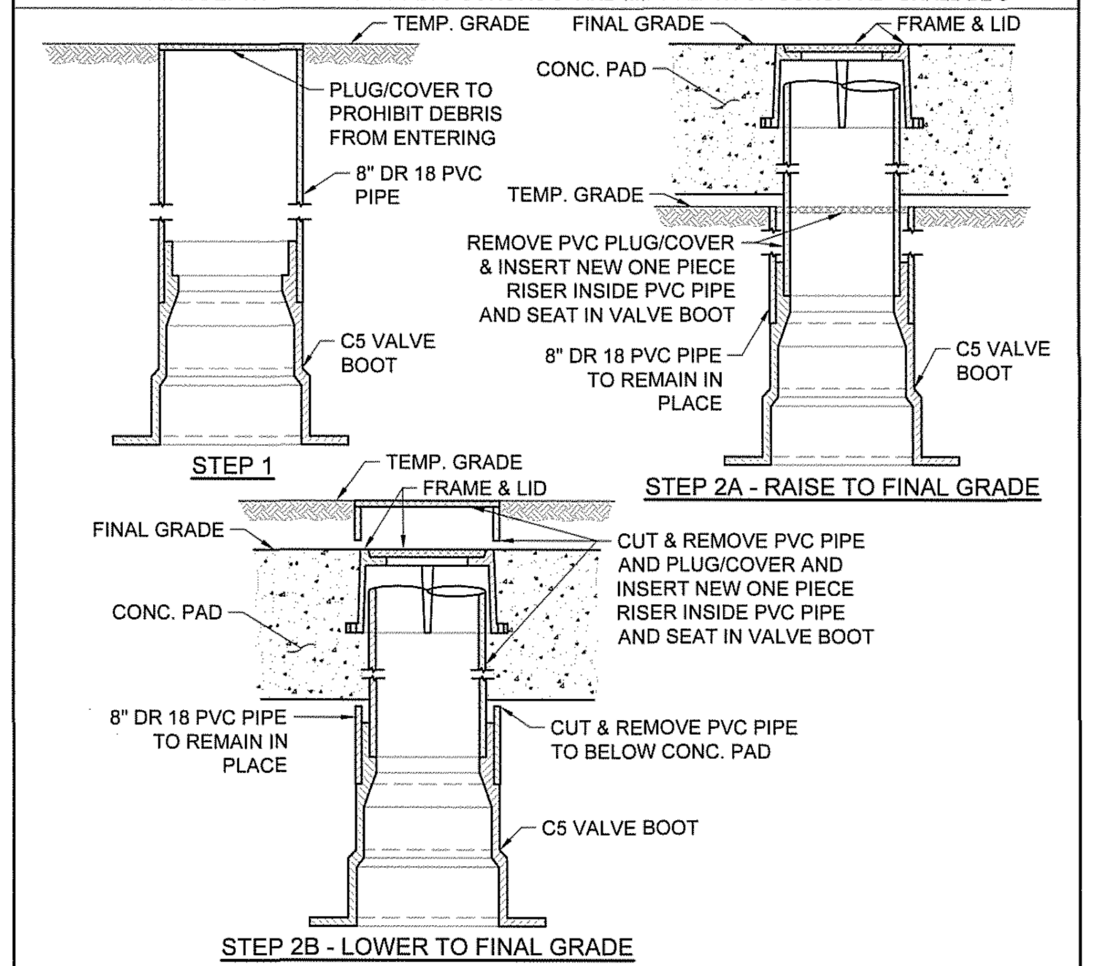

NOTES:

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

| CITY OF AUSTIN<br>AUSTIN WATER | TYPICAL GATE VALVE 4" - 16" | |
|---|---|---|
| Kathi L. Flowers 05/18/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511-AW-01 3 OF 4 |

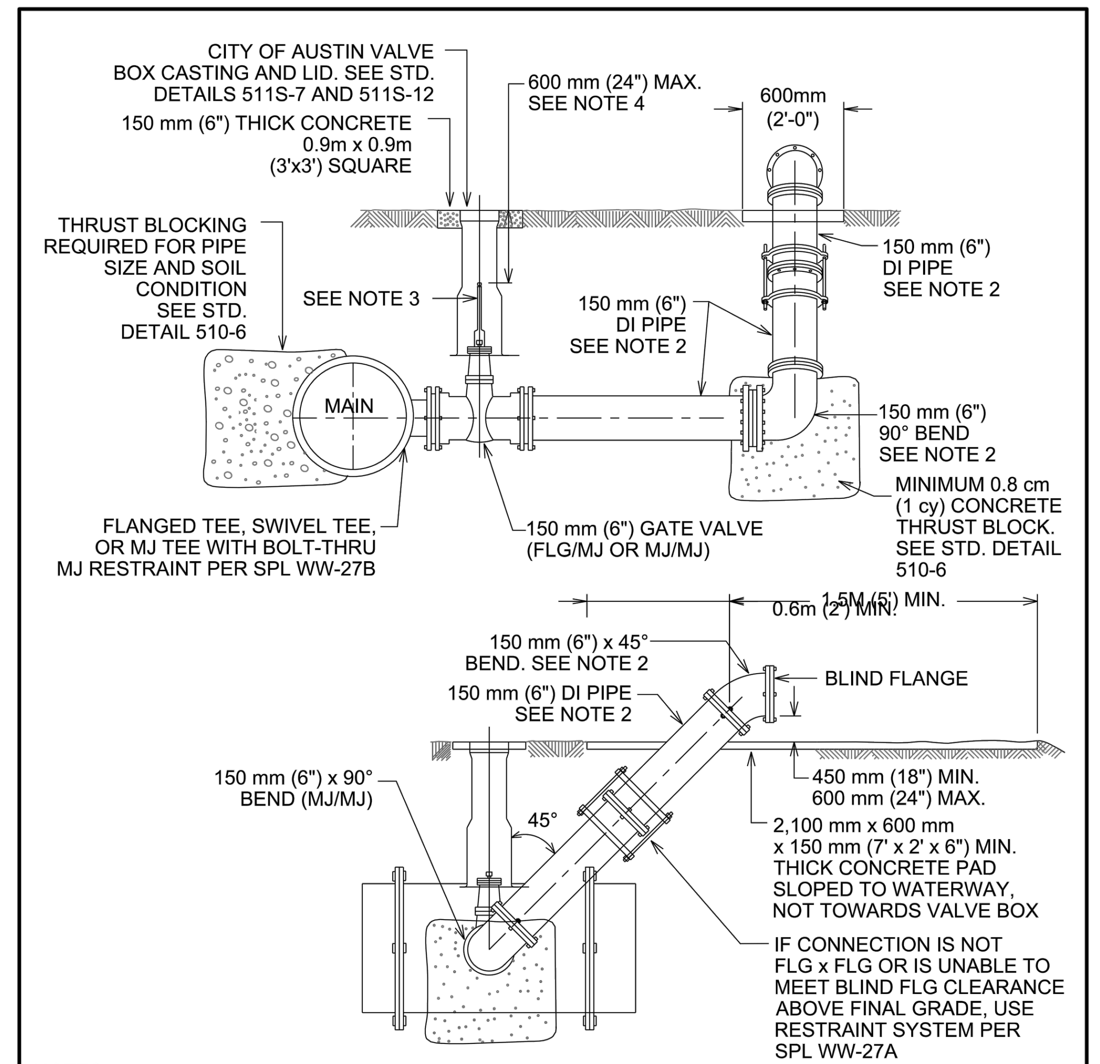
NOTES (CON'T):

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



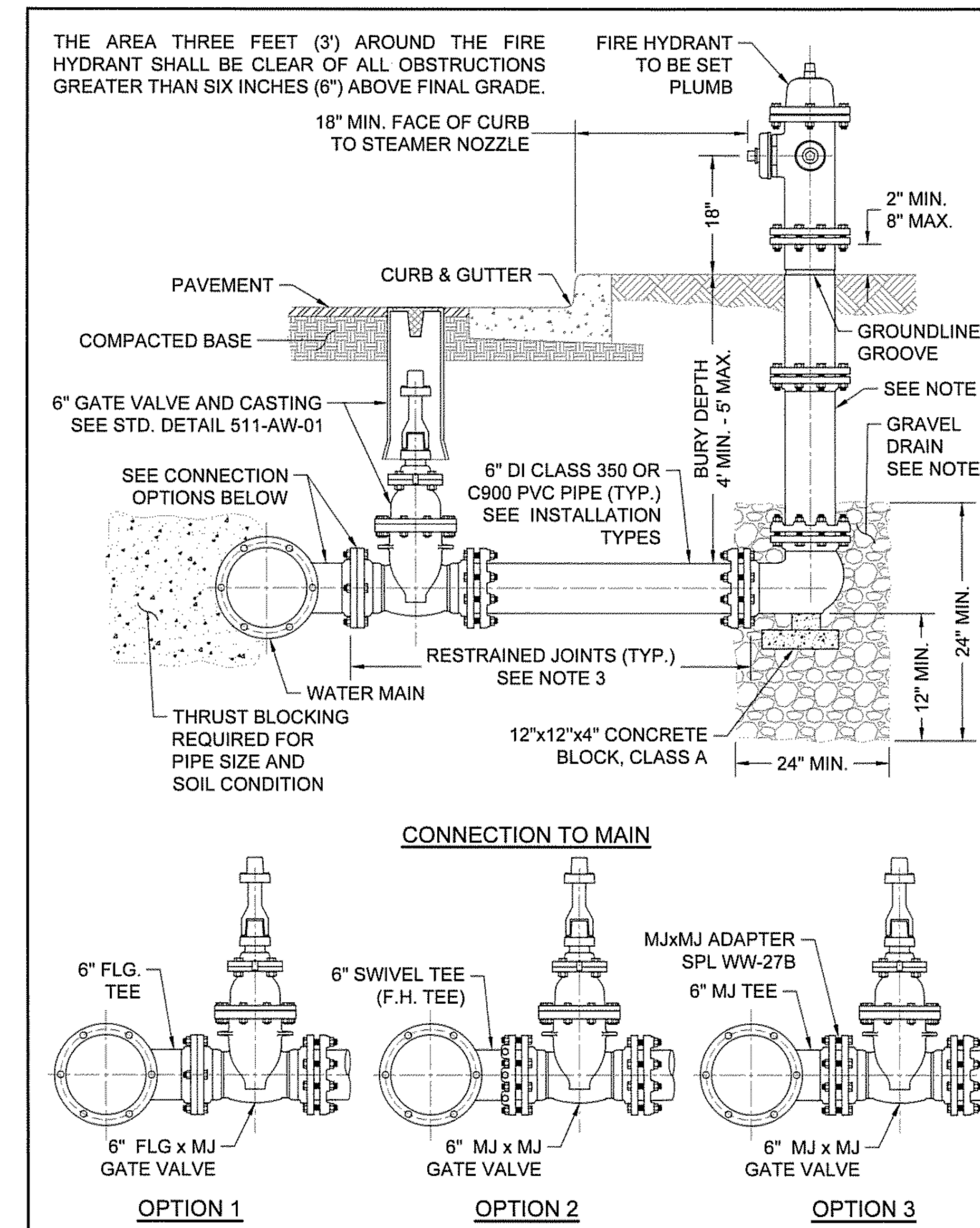

OPTIONAL ONE PIECE VALVE CASTING INSTALLATION

| CITY OF AUSTIN<br>AUSTIN WATER | TYPICAL GATE VALVE 4" - 16" | |
|---|---|---|
| Kathi L. Flowers 05/18/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511-AW-01 4 OF 4 |

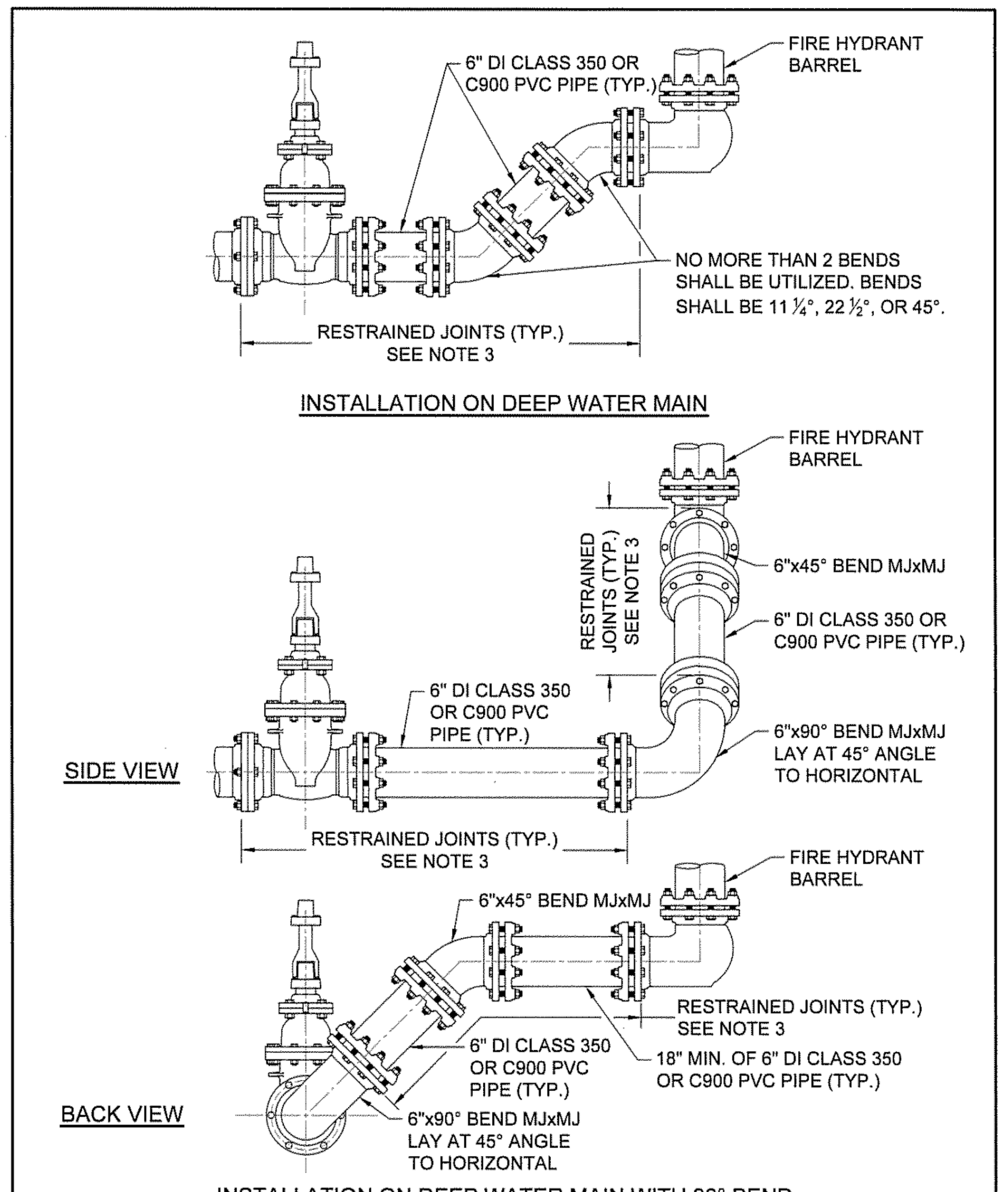



NOTES:
1. WRAP 8 MIL POLY FILM WRAP ON ALL BURIED PIPE AND FITTINGS.
2. PROVIDE RESTRAINED JOINTS FOR ALL JOINTS PER SPL WW-27A. FLG X FLG JOINTS ARE ACCEPTABLE FROM 90° BEND TO BLIND FLANGE.
3. WELD SOCKET 64mm x 51mm (2-1/2" x 2") TO 25mm (1") SCH. 40 ROUND STEM EXTENSION, FITTED ON OPERATING NUT. USE SCH. 80 ROUND STEM EXTENSION FOR LENGTHS OVER 3m (10').
4. VALVE EXTENSIONS ARE REQUIRED ON ALL VALVES THAT EXCEED .9m (3') DEEP FROM FINISHED GRADE TO VALVE NUT. VALVE EXTENSIONS SHALL BE PLACED SUCH THAT THE NUT IS BETWEEN 450mm AND 600mm (18" AND 24") FROM FINISHED GRADE.
5. ABOVE-GROUND EXPOSED PIPE SURFACES SHALL BE PAINTED PER SPL WW-3C, POTABLE WATER PIPE SHALL BE SAFETY BLUE.

| CITY OF AUSTIN<br>AUSTIN WATER UTILITY | DRAIN VALVE INSTALLATION | |
|---|---|---|
| RECORD COPY SIGNED BY KATHI L FLOWERS 08/31/2011 | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511S-9A |




| CITY OF AUSTIN<br>AUSTIN WATER | FIRE HYDRANT | |
|---|---|---|
| Kathi L. Flowers 05/18/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511-AW-02 1 OF 3 |




| CITY OF AUSTIN<br>AUSTIN WATER | FIRE HYDRANT | |
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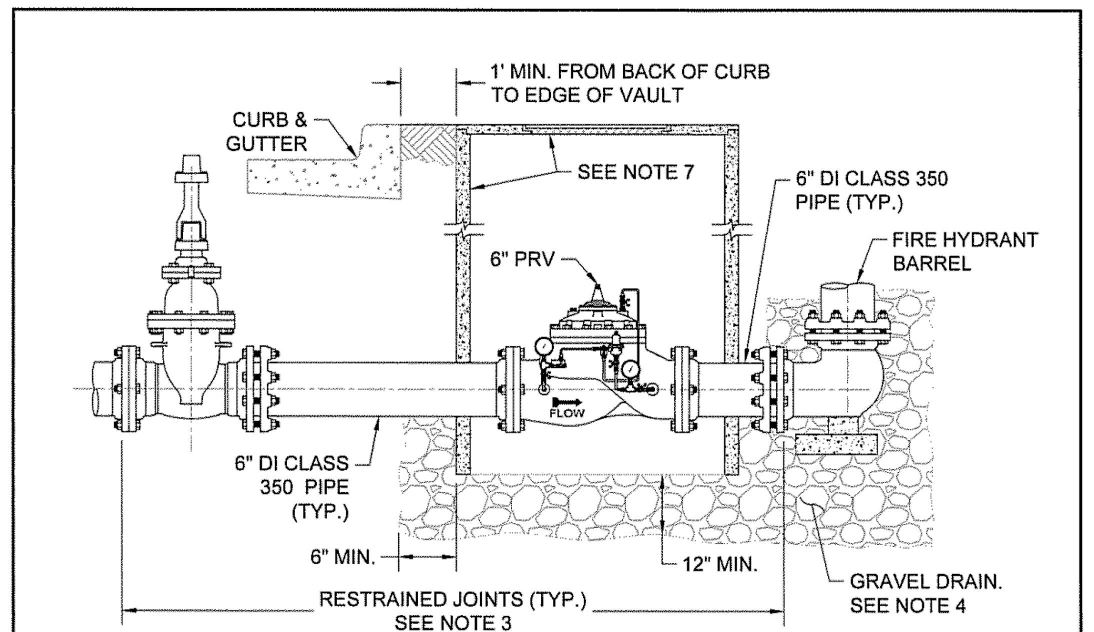
| Kathi L. Flowers 05/18/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511-AW-02 2 OF 3 |



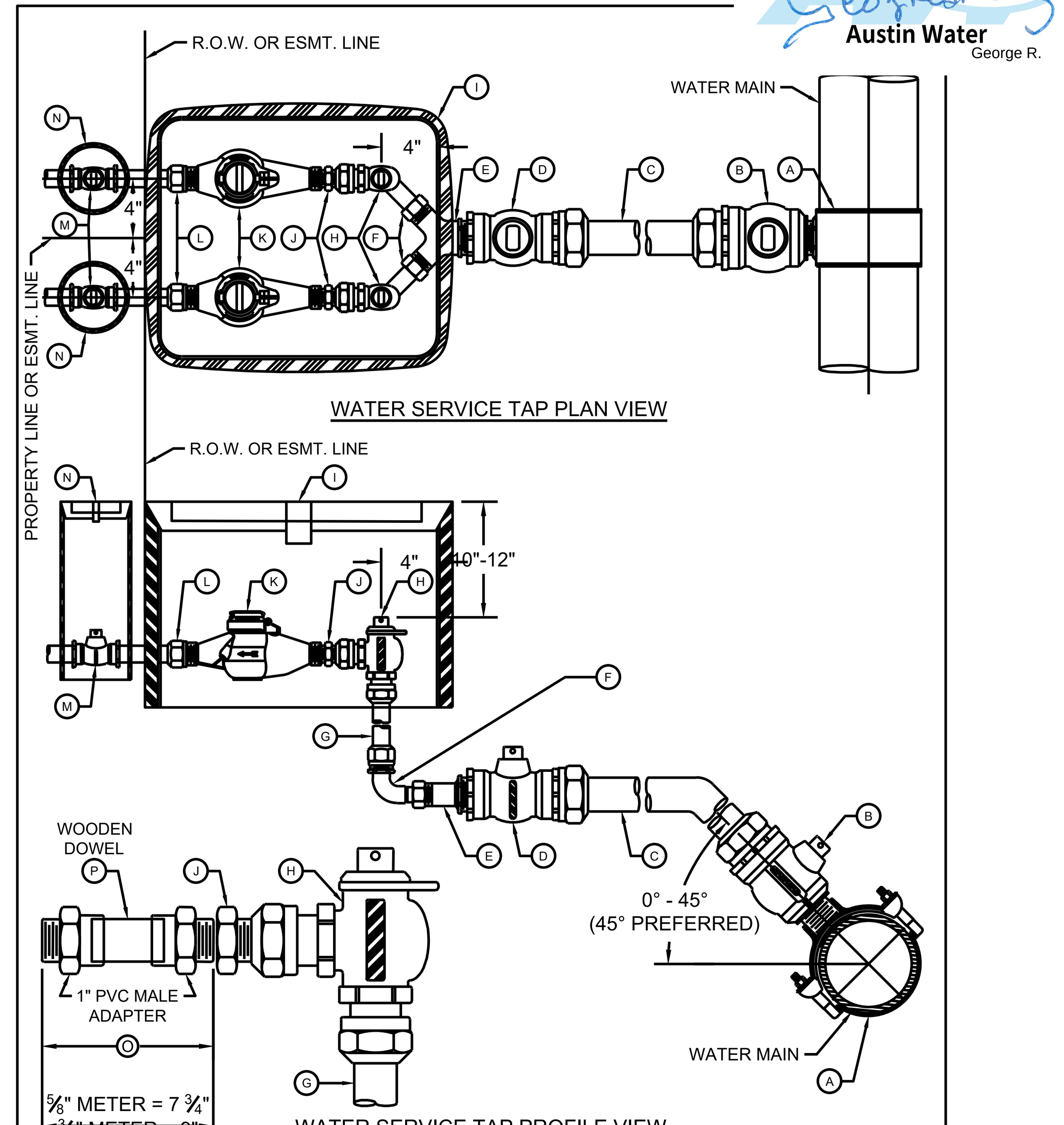

INSTALLATION ON WATER MAIN WITH PRESSURE REDUCING VALVE (PRV)

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 | |
|---|---|---|
| Kathi L. Flowers 05/18/2016 ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 511-AW-02 3 OF 3 |

REVIEWED
April 12, 2021
Austin Water
George R.




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

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Texas Registered Engineering Firm F-2144
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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
WATER AND WASTEWATER DETAILS
STANDARD DETAILS II

| F&N JOB NO. | AU18116 |
|---|---|
| DATE | 03/05/21 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | UT-AU2-DETL01.dwg |

| NO. | ISSUE | BY | DATE |
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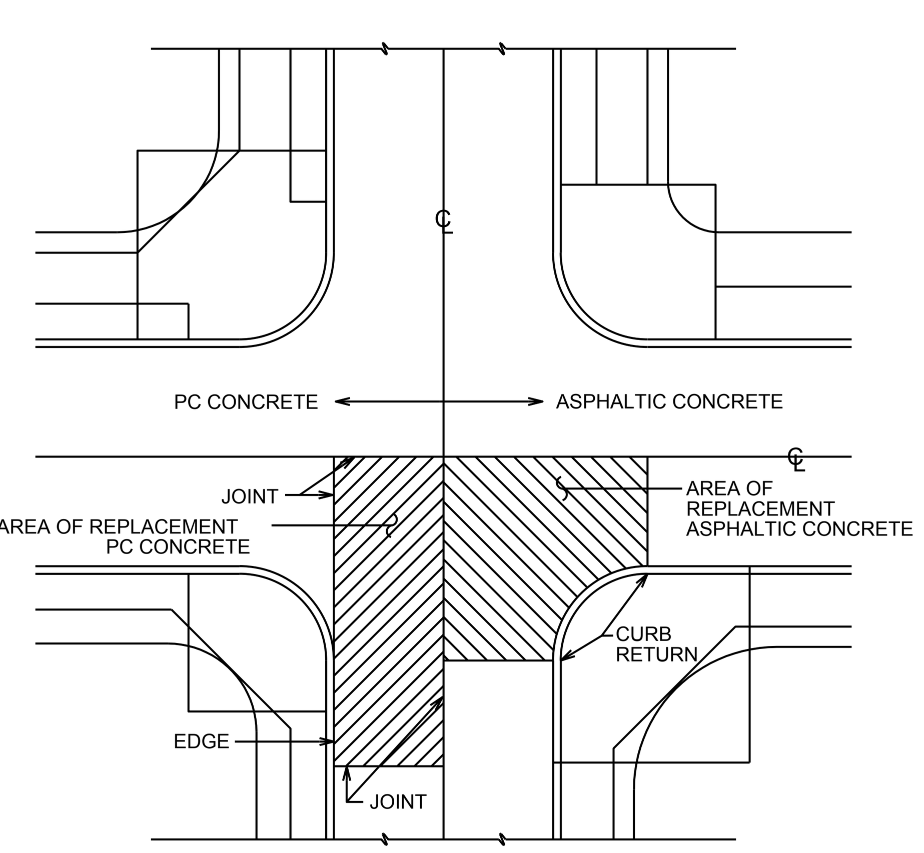
VERIFY SCALE 0 1 Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-2
SEQ. 19

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

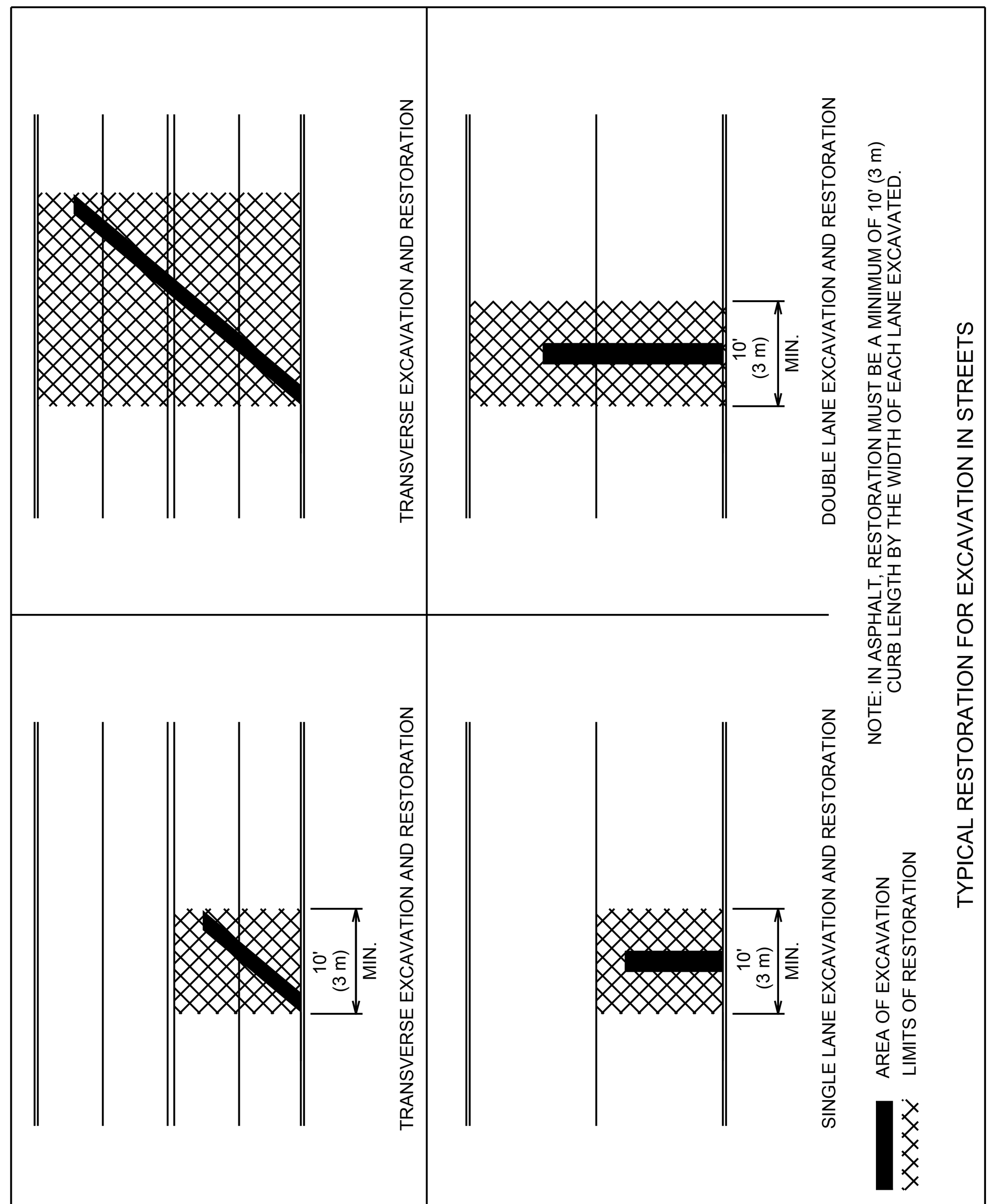
TRENCH REPAIRS WITHIN PORTLAND CEMENT CONCRETE PAVEMENTS NOTE:

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.

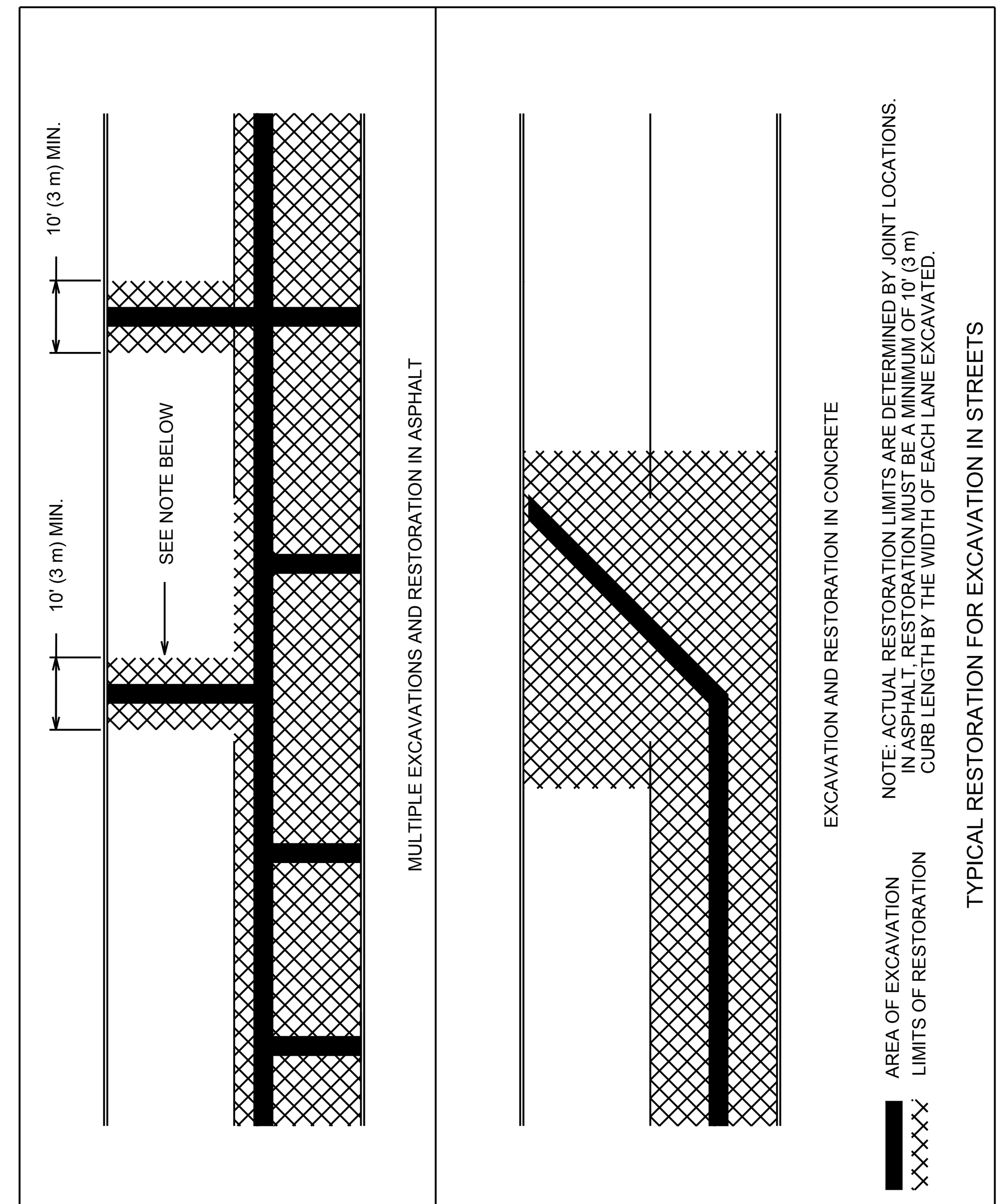
TRENCH REPAIRS WITHIN ASPHALTIC CONCRETE PAVEMENTS NOTES:

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 BY BILL GARDNER | 9/14/05<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-7<br>1 OF 3 |

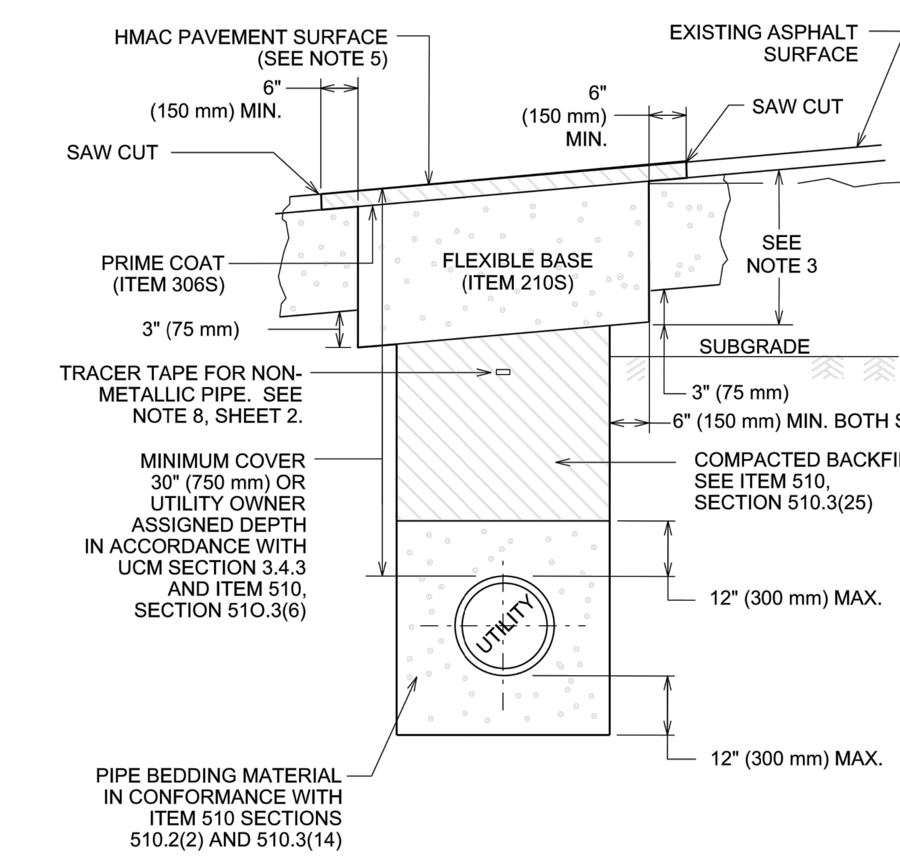



| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | STREET REPAIR REQUIREMENTS | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 9/14/05<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-7<br>2 OF 3 |




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

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

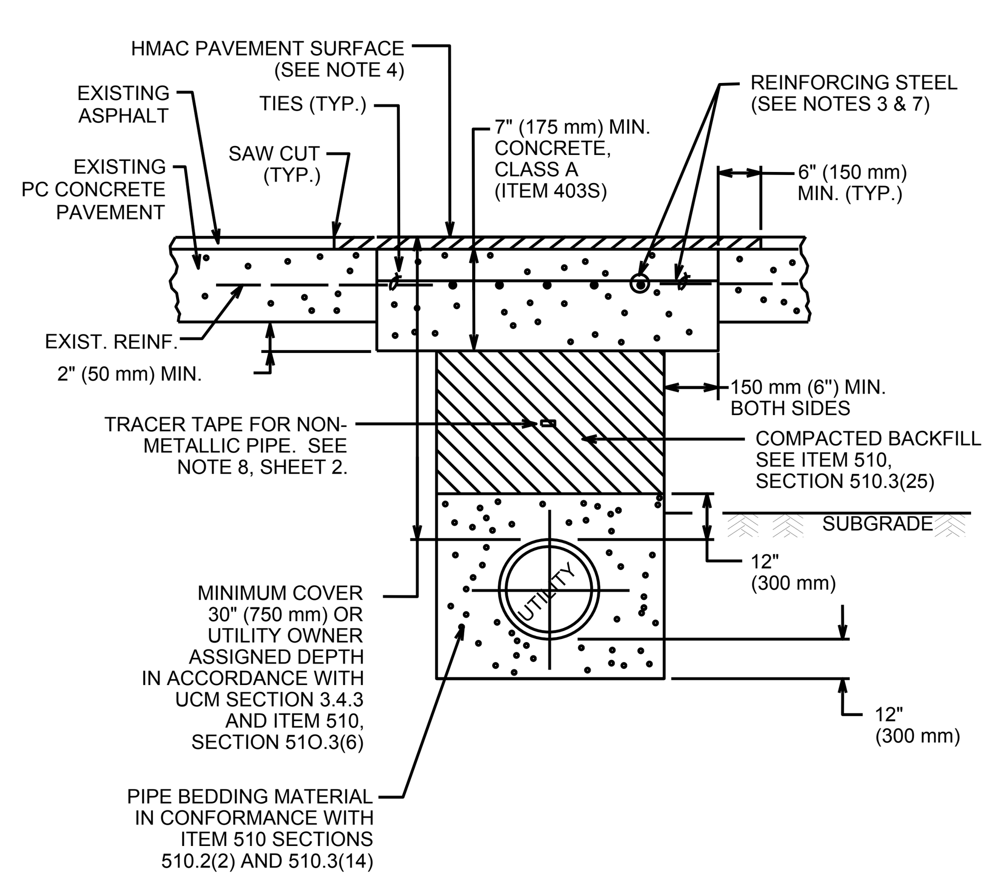



| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT | |
|---|---|---|---|
| RECORD COPY SIGNED BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-2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

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 REQUIREMENTS. 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 TRENCH REPAIR-EXISTING PAVEMENT | |
|---|---|---|---|
| RECORD COPY SIGNED BY KERI JUAREZ | 01/04/11<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-2<br>2 OF 2 |

TRENCH REPAIR IN EXISTING PAVEMENTS
(UCM SECTION 5.5.10, 5.5.11, & 5.5.12)

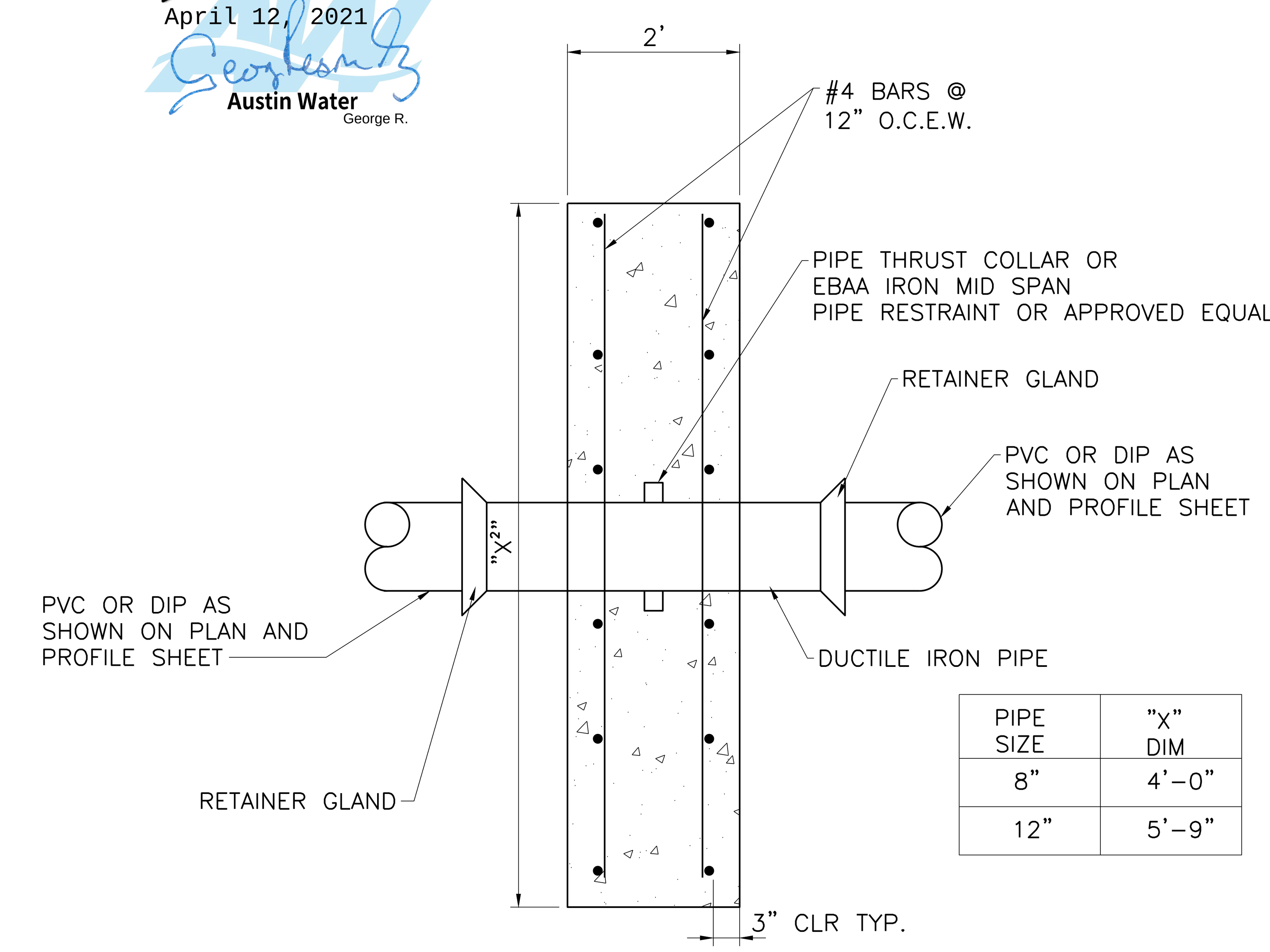



| CITY OF AUSTIN<br>DEPARTMENT OF PUBLIC WORKS | | ASPHALT OVERLAY OF REINFORCED AND NON-REINFORCED PC PVT.-TRENCH REPAIR | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 9/14/05<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-3<br>1 OF 2 |

NOTES:
1. EXISTING REINFORCED CONCRETE SHALL BE SAW CUT TO A MINIMUM DEPTH OF 1½" (40 mm) AT A MINIMUM DISTANCE OF 6" (150 mm) BACK OF THE VERTICAL WALL OF THE UTILITY TRENCH.
2. REPLACEMENT REINFORCED CONCRETE SHALL BE CLASS A AND SHALL MATCH EXISTING FINISH AND THICKNESS, BUT THE THICKNESS SHALL NOT BE LESS THAN 7" (175 mm).
3. REINFORCING STEEL IN THE REPLACEMENT SLAB SHALL BE AT LEAST #5 (15M) BARS. REINFORCING STEEL SHALL BE LAP SPLICED ACCORDING TO ITEM NO. 406S. IF LENGTH OF LAP CAN NOT BE ACHIEVED, BARS SHALL BE OVERLAPPED AND WELDED A MINIMUM LENGTH OF 6" (150 mm).
4. IF EXISTING PAVEMENT SECTION HAS AN ASPHALT SURFACE THE FOLLOWING APPLIES: 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.
5. 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.
6. TACK COAT (ITEM 307S) ALL EXPOSED EDGES AND SURFACES.
7. ON EXISTING PC CONCRETE PAVEMENT WITHOUT REINFORCING STEEL, USE 4" TO 6" (100 mm TO 150 mm), #5 (15M) DOWELS AT 12" (300 mm) ON CENTER FOR PAVEMENT THICKNESS 6" (150 mm) OR GREATER.
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 REQUIREMENTS. 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 | | ASPHALT OVERLAY OF REINFORCED AND NON-REINFORCED PC PVT.-TRENCH REPAIR | |
|---|---|---|---|
| RECORD COPY SIGNED BY BILL GARDNER | 9/14/05<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO. 1100S-3<br>2 OF 2 |

REVIEWED
April 12, 2021
Austin Water
George R.




| PIPE SIZE | "X" DIM |
|---|---|
| 8" | 4'-0" |
| 12" | 5'-9" |

1
—
MID-SPAN JOINT RESTRAINT DETAIL
NOT TO SCALE


Freese and Nichols, Inc.
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Fax - (512) 617-3101


CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
WATER AND WASTEWATER DETAILS
STANDARD DETAILS III

| FN JOB NO. | AU18116 |
|---|---|
| DATE | 10/18/20 |
| DESIGNED | DS |
| DRAWN | CJG |
| REVISED | CJG |
| CHECKED | RJ |
| FILE NAME | UT-AU2-DETL01.dwg |

| NO. | ISSUE | BY | DATE |
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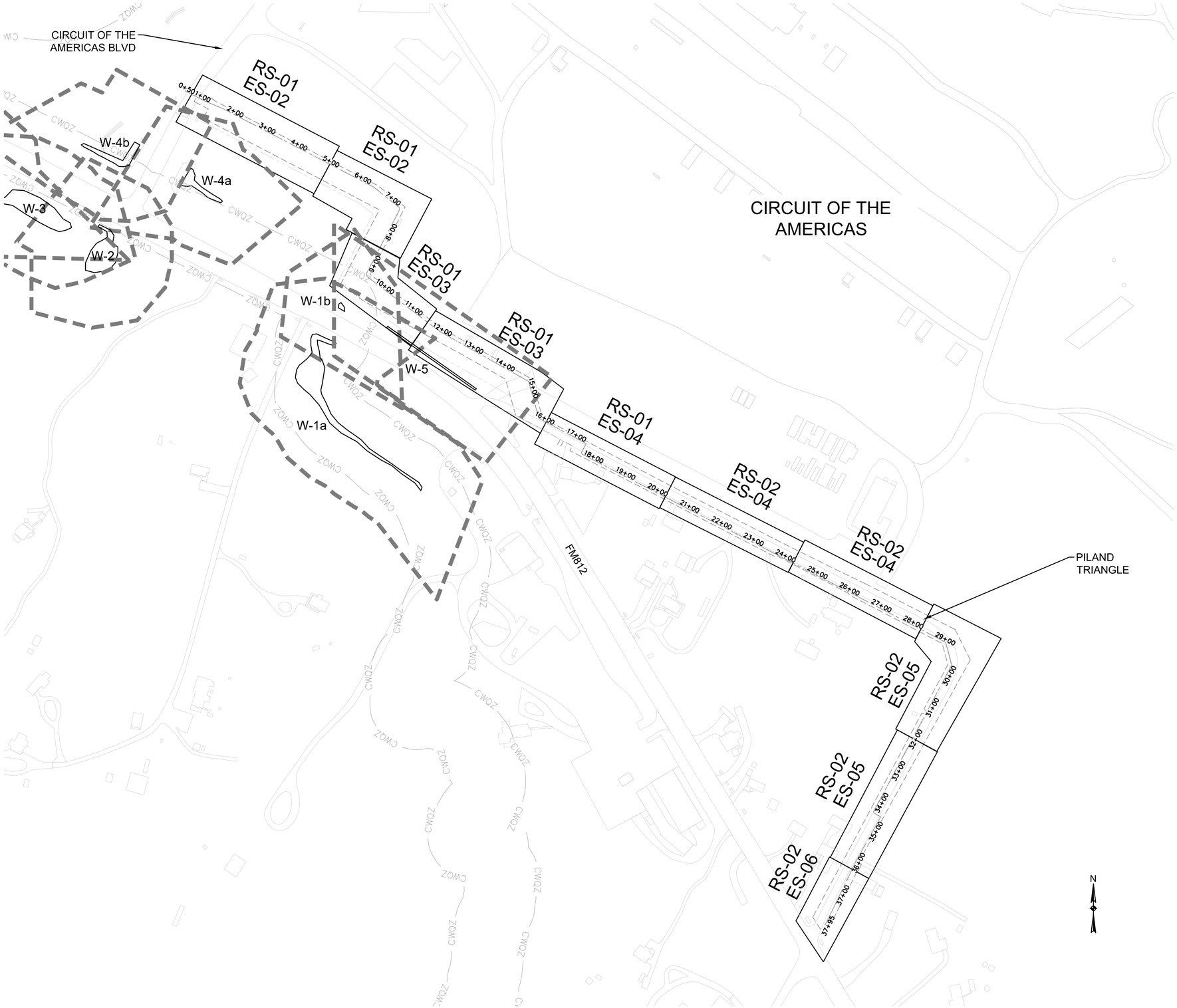
VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET DT-3

SEQ. 20




## LEGEND

| | |
|---|---|
| - - - - - - | LIMITS OF CONSTRUCTION |
| ▬ ▬ ▬ | 150-FT CEF BUFFER |
| — CWQZ — | COA CWQZ |
| W-xx | WETLAND IDENTIFIER |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www.baerengi.com info@baerengi.com
T.B.P.E. Firm Registration No. F-2181


CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Lueckemeyer
No. 6923

10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

KEYMAP

# EROSION AND SEDIMENTATION CONTROL PLAN

| | |
|---|---|
| FAN JOB NO. | AU118116 |
| DATE | 10/22/2020 |
| DESIGNED | DS |
| DRAWN | SS |
| REVISED | |
| CHECKED | JL |
| FILE NAME | PILAND_ESC_KEYMAP.dwg |

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
| | | | |

VERIFY SCALE Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.
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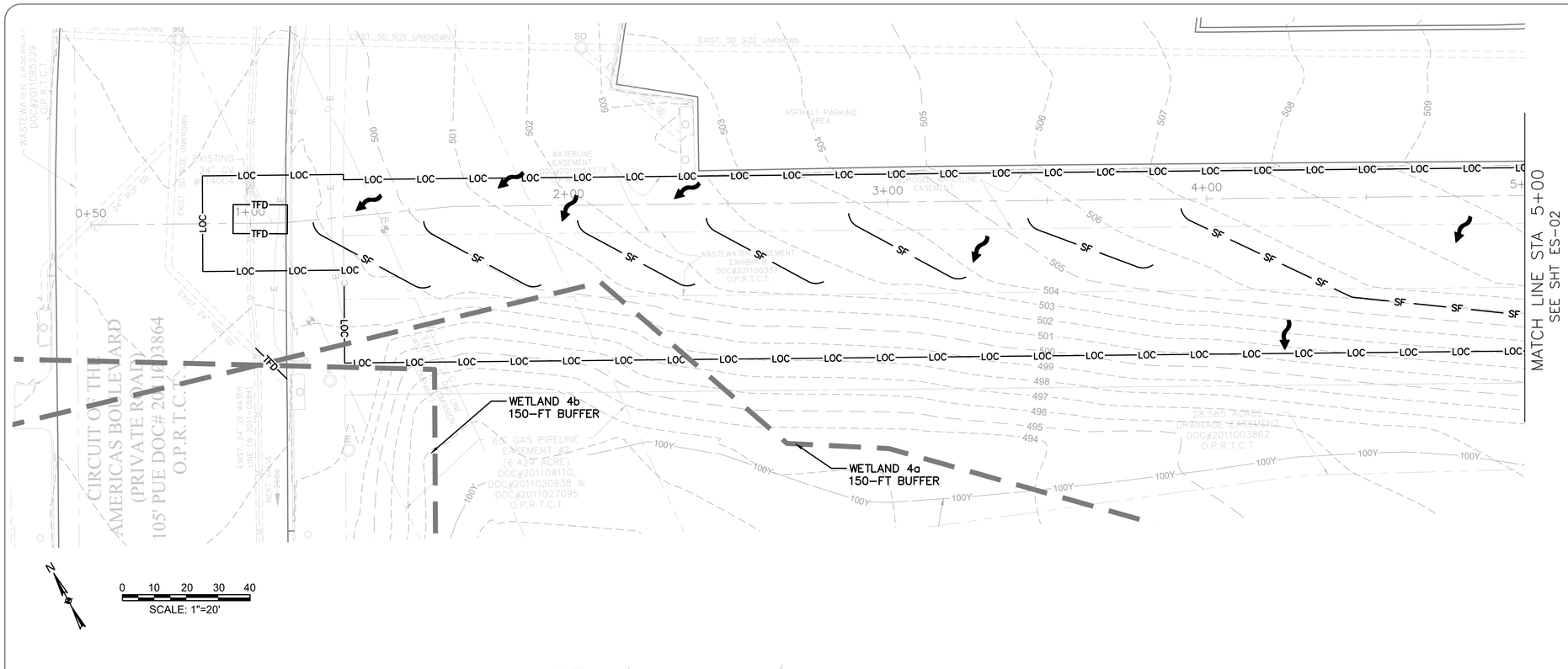
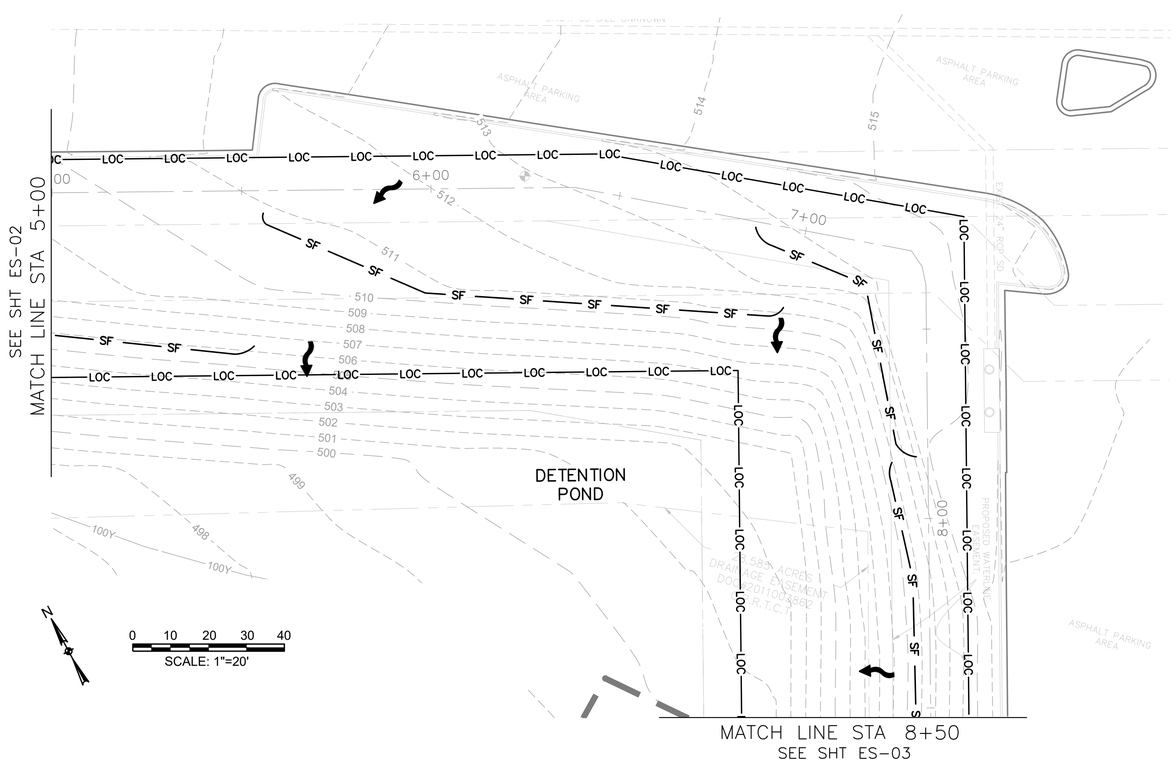
SHEET ES-01

SEQ. 21

Date: Oct 22, 2020 – 11:07am User: fifst File: D:\Dropbox\Baer\Freese and Nichols\172083.01 Piland Triangle Interconnect\CAD\PILAND_ESC_KEYMAP.dwg




## LEGEND

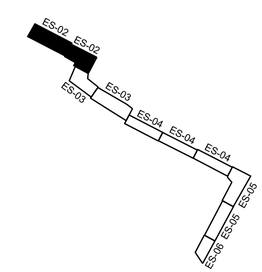
- TREES TO REMAIN
- FLOW DIRECTION
- 650 — EXISTING CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
- FEMA 100-YR FLOODPLAIN
- 150-FT WETLAND CEF BUFFER
- SF — SILT FENCE (SEE SHEET ES-08, DETAIL 642S-1)
- TFD — TRIANGULAR FILTER DIKE (SEE SHEET ES-08, DETAIL 628S)
- TP — TREE PROTECTION (SEE SHEET ES-09, DETAIL 610S)
- RB — ROCK BERM (SEE SHEET ES-08)
- LOC — LIMITS OF CONSTRUCTION
- OHWM — ORDINARY HIGH WATER MARK
- CWQZ — COA CWQZ
- POTENTIAL TEMPORARY SPOILS LOCATION
- POTENTIAL STABILIZED CONSTRUCTION ENTRANCE LOCATION

## SPECIAL EROSION CONTROL NOTES

1. CONTRACTOR MAY STORE SPOILS IN TEMPORARY SPOILS STORAGE AREA ONLY DURING PERIODS OF TIME WHEN RAINFALL IS NOT FORECASTED WITHIN 24 HOURS. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO DIRECT REMOVAL OF SPOILS FROM SITE.
2. CONTRACTOR SHALL INSTALL TRIANGULAR SEDIMENT FILTER DIKE 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 AND TEMPORARY SPOILS. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING. FILTER DIKES SHOULD BE PRESENT IN THE AREAS OF WORK ACTIVITY AND RELOCATED AS THE AREAS OF ACTIVITY TRANSITION ALONG THE ALIGNMENT.
3. TWO LINES OF TRIANGULAR FILTER DIKES SHALL BE PLACED UPGRADIENT OF CURB INLETS TO MINIMIZE SEDIMENT ENTERING THE INLET.
4. AFTER TEMPORARY SPOILS ARE REMOVED FROM THE STREET, ALL REMAINING DEBRIS SHALL BE SWEPT IMMEDIATELY.
5. TRACKING DEBRIS MUST BE SWEPT FROM THE STREET UPON DISCOVERY.
6. IF DISTURBED AREAS ARE NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREAS NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR MATTING PER ECM 1.4.4.
7. NO FUEL STORAGE ALLOWED ON SITE.
8. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION AND SEDIMENTATION CONTROLS ONSITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
9. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING CONSTRUCTION SUCH AS MULCHING, VEGETATIVE COVER, SPRAY-ON ADHESIVES, TILLAGE, IRRIGATION OR BARRIERS AS PER CITY OF AUSTIN ECM 1.4.8 (C).
10. REFERENCE GENERAL NOTES SHEET FOR SEQUENCE OF CONSTRUCTION.
11. IF FENCING CANNOT BE INSTALLED AROUND THE FULL CRZ, PLACE THE FENCING AT THE 1⁄2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1⁄2 CRZ TO THE FULL CRZ. IF FENCING CANNOT BE INSTALLED AROUND THE 1⁄2 CRZ, 2X4X6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ.

## SPECIAL TREE PROTECTION NOTES

1. CALL ENVIRONMENTAL INSPECTOR 48 HOURS BEFORE ANY WORK DONE INSIDE THE TREE CRITICAL ROOT ZONE.
2. ANY TRENCH OR EARTH DISTURBANCE INSIDE TREE CRITICAL ROOT ZONE NEEDS TO BE DONE BY HAND (NOT TRENCHING MACHINES).
3. ANY STAGING AREA OR HEAVY EQUIPMENT KEPT INSIDE THE TREE CRITICAL ROOT ZONE NEEDS TO HAVE 18" OF MULCH UNDERNEATH EQUIPMENT TO PROTECT ROOT SYSTEMS.
4. ANY TREE TRIMMING OR CROWN DAMAGE SHOULD HAVE AN ENVIRONMENTAL INSPECTOR TO REVIEW PRIOR TO ANY WORK DONE.





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T.B.P.E. Firm Registration No. F-3181


CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Luckemeyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 0+00 – 5+00 / STA 5+00 – 8+50

## EROSION AND SEDIMENTATION CONTROL PLAN

| | |
|---|---|
| FAN JOB NO. | AU118116 |
| DATE | 10/22/2020 |
| DESIGNED | DS |
| DRAWN | SS |
| REVISED | |
| CHECKED | JL |
| FILE NAME | PILAND_ESC.dwg |

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
| | | | |

VERIFY SCALE Bar is one inch on original drawing. If not, one inch on this sheet, adjust scale.
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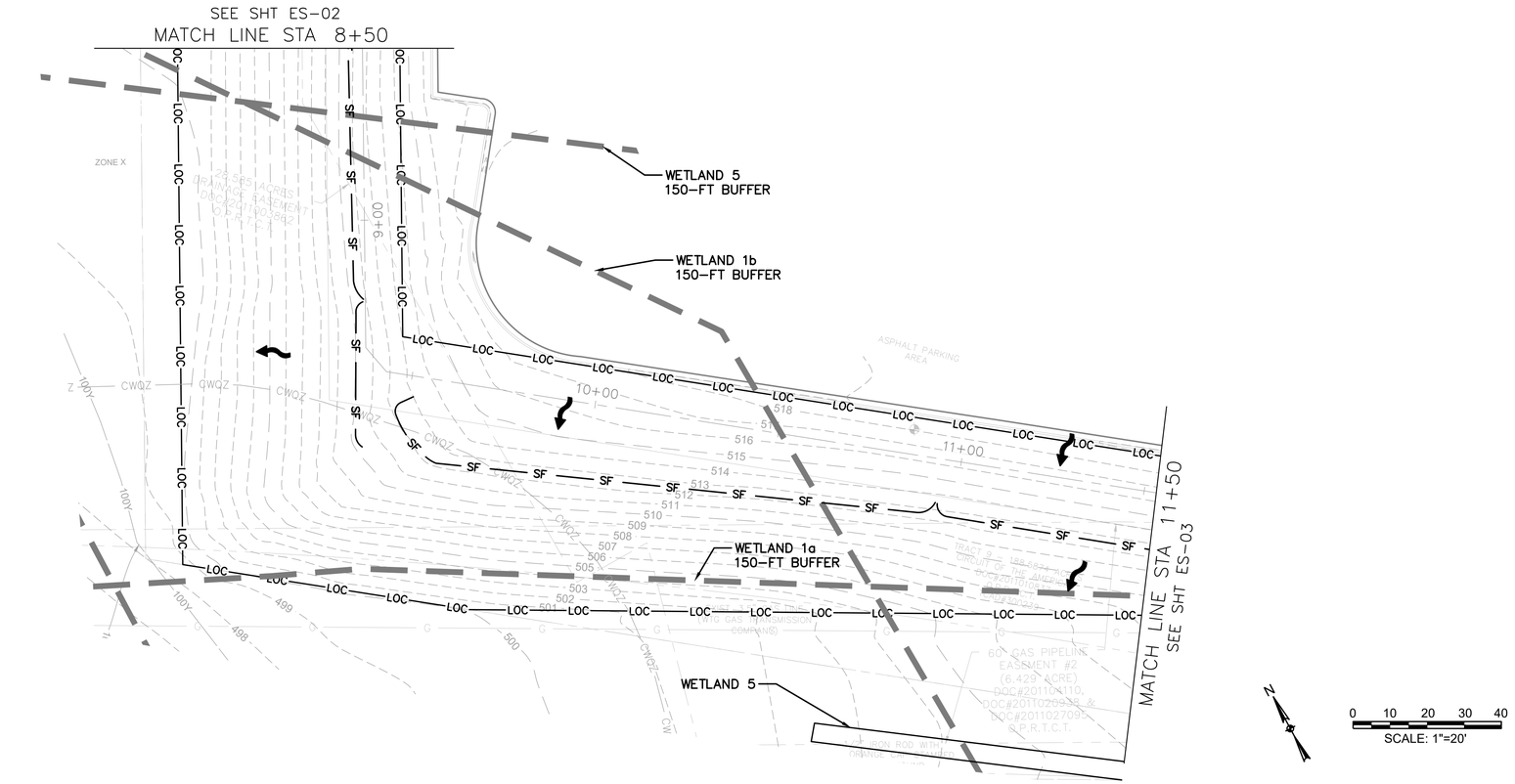
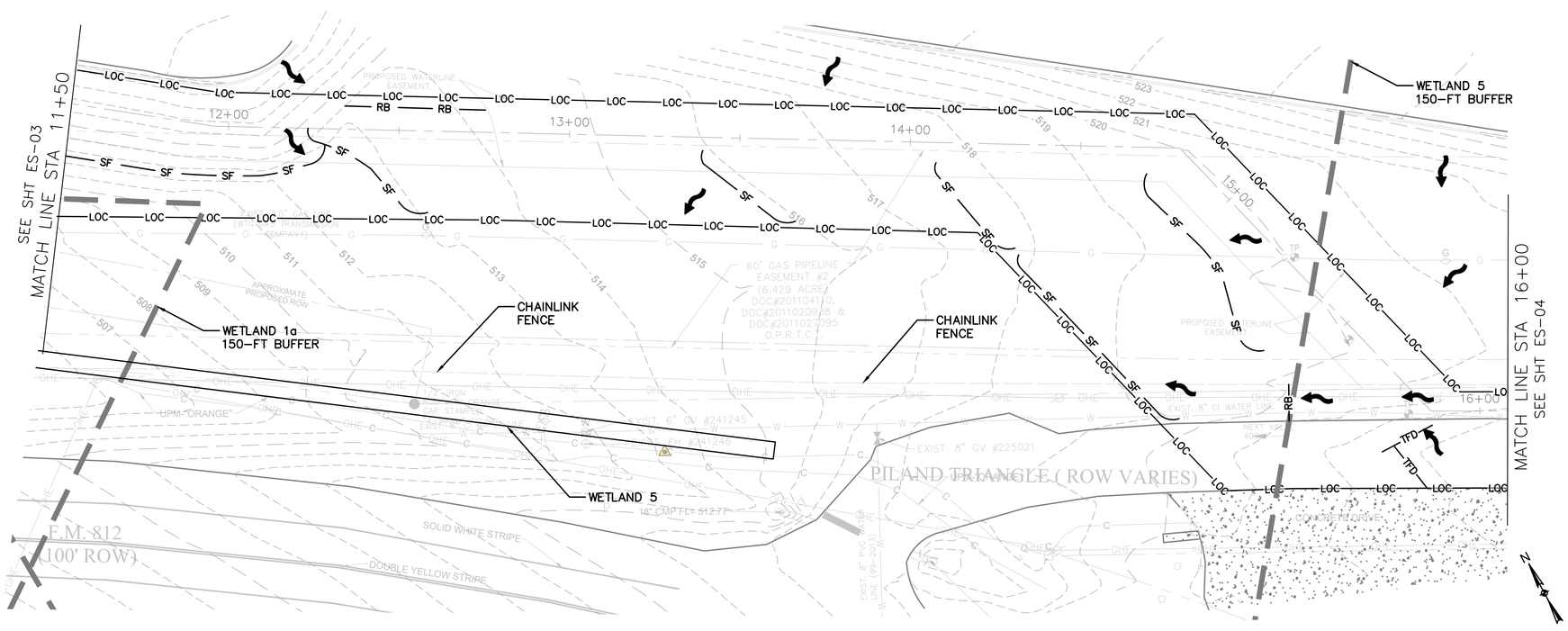
SHEET ES-02

SEQ. 22

Date: Oct 22, 2020 – 11:08am User: fifst File: D:\Dropbox\Baer\Freese and Nichols\172083.01 Piland Triangle Interconnect\CAD\PILAND_ESC.dwg




## LEGEND

- TREES TO REMAIN
- FLOW DIRECTION
- 650 — EXISTING CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
- FEMA 100-YR FLOODPLAIN
- 150-FT WETLAND CEF BUFFER
- SF — SILT FENCE (SEE SHEET ES-08, DETAIL 642S-1)
- TFD — TRIANGULAR FILTER DIKE (SEE SHEET ES-08, DETAIL 628S)
- TP — TREE PROTECTION (SEE SHEET ES-09, DETAIL 610S)
- RB — ROCK BERM (SEE SHEET ES-08)
- LOC — LIMITS OF CONSTRUCTION
- OHWM — ORDINARY HIGH WATER MARK
- CWQZ — COA CWQZ
- POTENTIAL TEMPORARY SPOILS LOCATION
- POTENTIAL STABILIZED CONSTRUCTION ENTRANCE LOCATION

## SPECIAL EROSION CONTROL NOTES

1. CONTRACTOR MAY STORE SPOILS IN TEMPORARY SPOILS STORAGE AREA ONLY DURING PERIODS OF TIME WHEN RAINFALL IS NOT FORECASTED WITHIN 24 HOURS. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO DIRECT REMOVAL OF SPOILS FROM SITE.
2. CONTRACTOR SHALL INSTALL TRIANGULAR SEDIMENT FILTER DIKE 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 AND TEMPORARY SPOILS. REMOVING AND RE-SETTING FILTER DIKE IS CONSIDERED SUBSIDIARY TO BARRICADES AND TRAFFIC HANDLING. FILTER DIKES SHOULD BE PRESENT IN THE AREAS OF WORK ACTIVITY AND RELOCATED AS THE AREAS OF ACTIVITY TRANSITION ALONG THE ALIGNMENT.
3. TWO LINES OF TRIANGULAR FILTER DIKES SHALL BE PLACED UPGRADIENT OF CURB INLETS TO MINIMIZE SEDIMENT ENTERING THE INLET.
4. AFTER TEMPORARY SPOILS ARE REMOVED FROM THE STREET, ALL REMAINING DEBRIS SHALL BE SWEPT IMMEDIATELY.
5. TRACKING DEBRIS MUST BE SWEPT FROM THE STREET UPON DISCOVERY.
6. IF DISTURBED AREAS ARE NOT WORKED ON FOR MORE THAN 14 DAYS, DISTURBED AREAS NEED TO BE STABILIZED BY REVEGETATION, MULCH, TARP, OR MATTING PER ECM 1.4.4.
7. NO FUEL STORAGE ALLOWED ON SITE.
8. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION AND SEDIMENTATION CONTROLS ONSITE TO KEEP PROJECT IN COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS.
9. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING CONSTRUCTION SUCH AS MULCHING, VEGETATIVE COVER, SPRAY-ON ADHESIVES, TILLAGE, IRRIGATION OR BARRIERS AS PER CITY OF AUSTIN ECM 1.4.8 (C).
10. REFERENCE GENERAL NOTES SHEET FOR SEQUENCE OF CONSTRUCTION.
11. IF FENCING CANNOT BE INSTALLED AROUND THE FULL CRZ, PLACE THE FENCING AT THE 1⁄2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1⁄2 CRZ TO THE FULL CRZ. IF FENCING CANNOT BE INSTALLED AROUND THE 1⁄2 CRZ, 2X4X6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ.

## SPECIAL TREE PROTECTION NOTES

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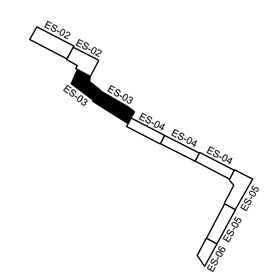


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CPESC
Jennifer Luecke meyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

## STA 8+50 – 11+50 / STA 11+50 – 16+00 EROSION AND SEDIMENTATION CONTROL PLAN

| | |
|---|---|
| FAN JOB NO. | AU118116 |
| DATE | 10/22/2020 |
| DESIGNED | DS |
| DRAWN | SS |
| REVISED | |
| CHECKED | JL |
| FILE NAME | PILAND_ESC.dwg |

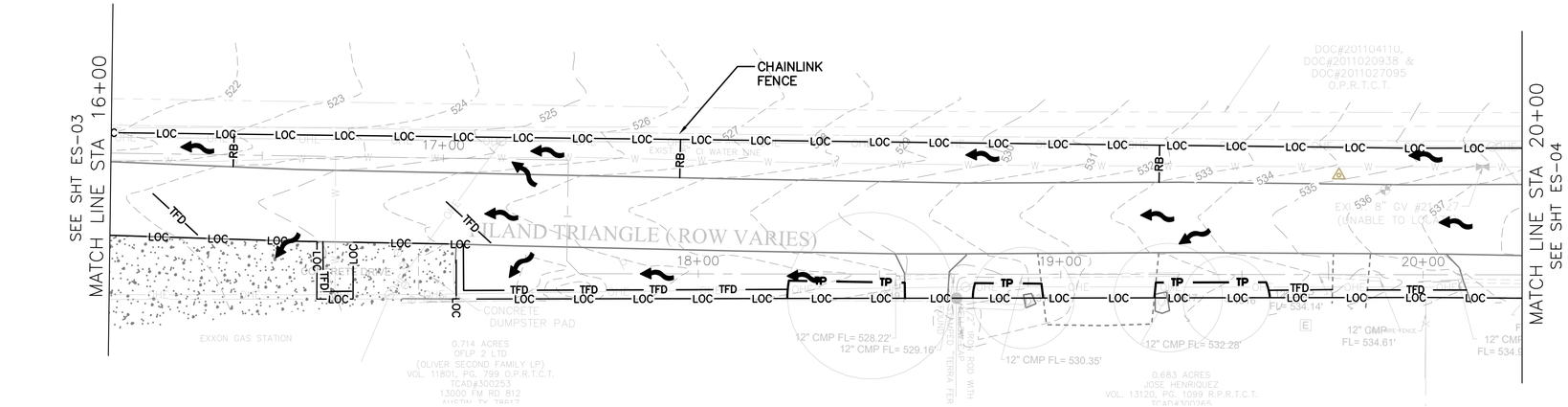
| NO. | ISSUE | DATE | BY |
|---|---|---|---|

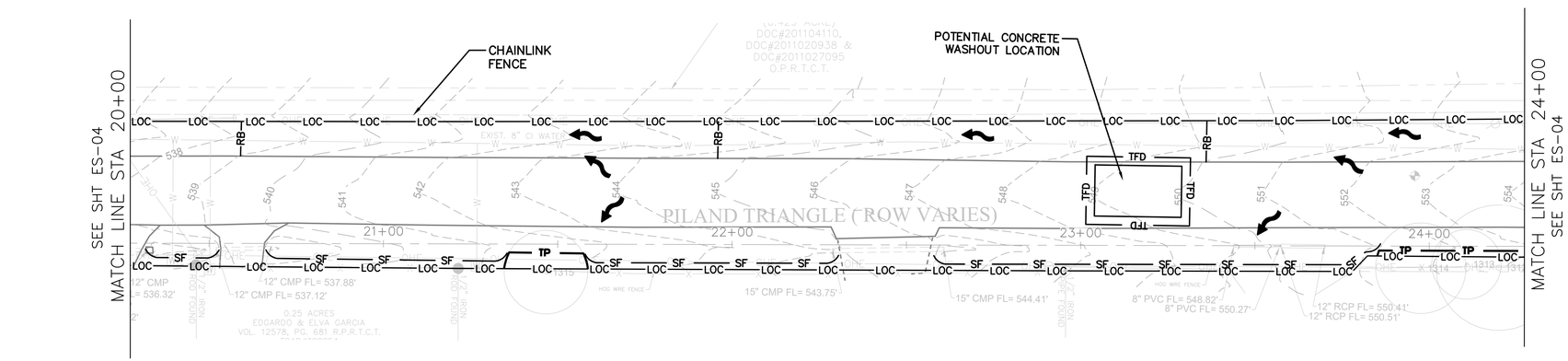
VERIFY SCALE Bar is one inch on original drawing. If not, one inch on this sheet, adjust scale.

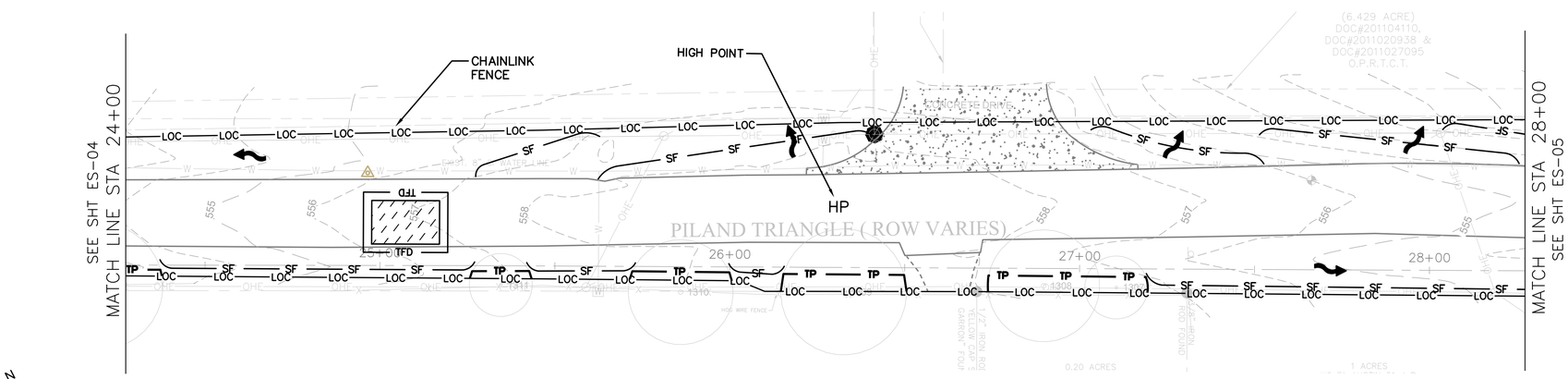
SHEET ES-03

SEQ. 23

Date: Oct 22, 2020 – 11:08am User: fifst File: D:\Dropbox\Baer\Freese and Nichols\172083.01 Piland Triangle Interconnect\CAD\PILAND_ESC.dwg




## LEGEND

- TREES TO REMAIN
- FLOW DIRECTION
- 650 — EXISTING CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
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- SF — SILT FENCE (SEE SHEET ES-08, DETAIL 642S-1)
- TFD — TRIANGULAR FILTER DIKE (SEE SHEET ES-08, DETAIL 628S)
- TP — TREE PROTECTION (SEE SHEET ES-09, DETAIL 610S)
- RB — ROCK BERM (SEE SHEET ES-08)
- LOC — LIMITS OF CONSTRUCTION
- OHWM — ORDINARY HIGH WATER MARK
- CWQZ — COA CWQZ
- POTENTIAL TEMPORARY SPOILS LOCATION
- POTENTIAL STABILIZED CONSTRUCTION ENTRANCE LOCATION

## SPECIAL EROSION CONTROL NOTES

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7. NO FUEL STORAGE ALLOWED ON SITE.
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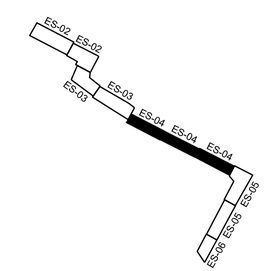



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CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL — CPESC — Jennifer Luecke Meyer — No. 6923

10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 20+00 – 24+00 / STA 24+00 – 28+00

# EROSION AND SEDIMENTATION CONTROL PLAN

STA 16+00 – 20+00

| | |
|---|---|
| F&N JOB NO. | AU118116 |
| DATE | 10/22/2020 |
| DESIGNED | DS |
| DRAWN | SS |
| REVISED | |
| CHECKED | JL |
| FILE NAME | PILAND_ESC.dwg |

| NO. | ISSUE | BY | DATE |
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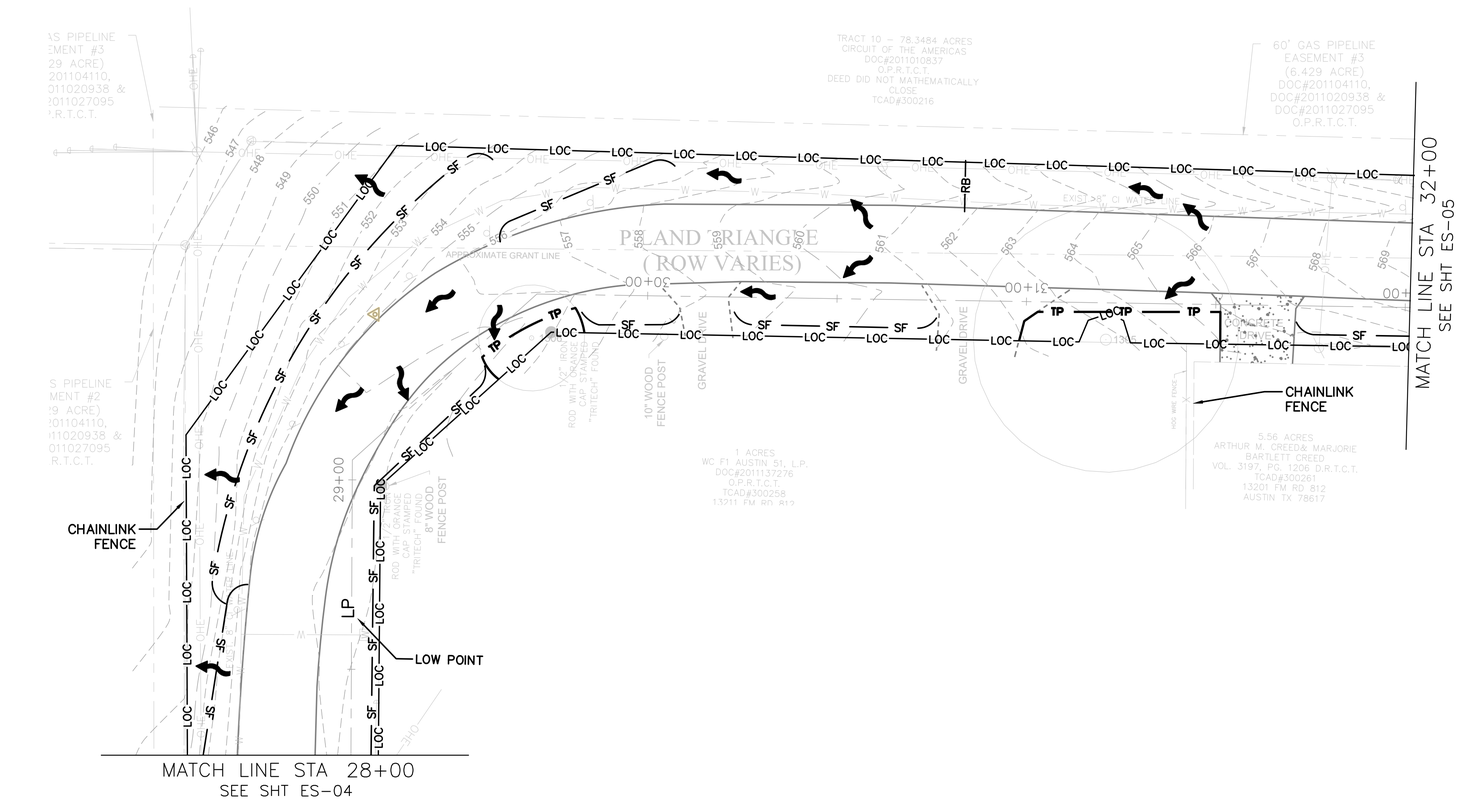
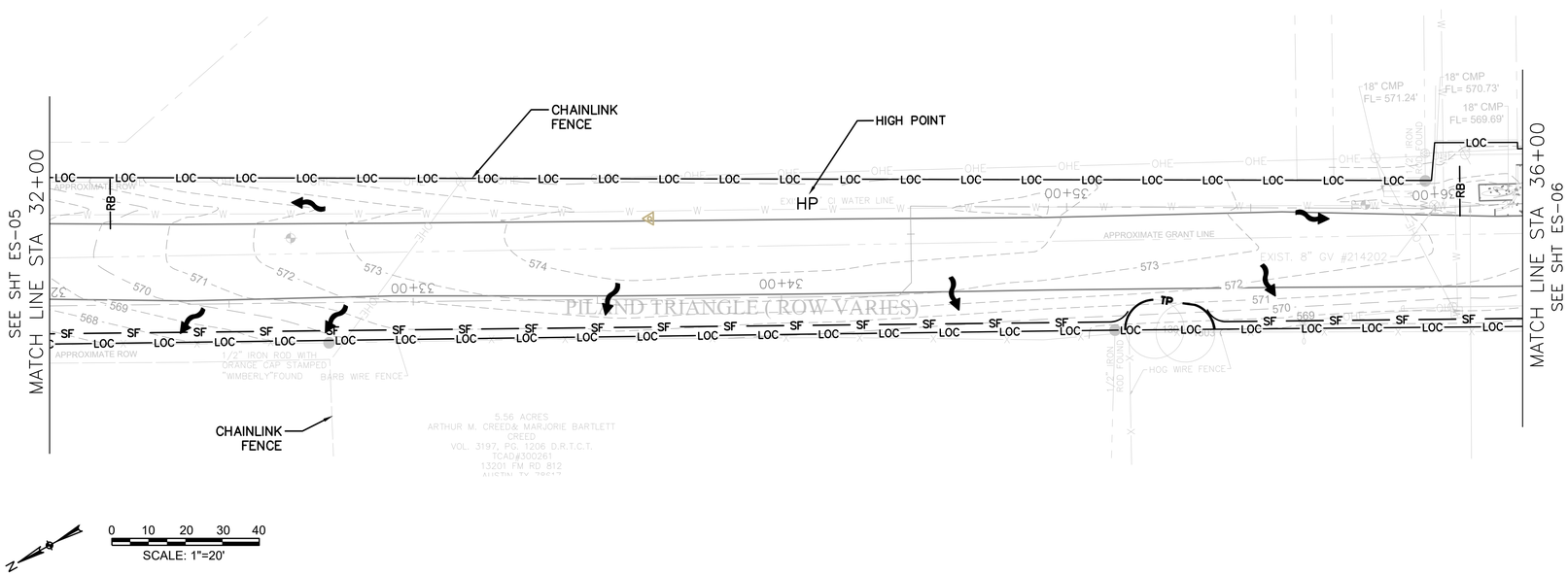
VERIFY SCALE 0 1 — Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET ES-04

SEQ. 24




## LEGEND

- TREES TO REMAIN
- FLOW DIRECTION
- 650 — EXISTING CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
- FEMA 100-YR FLOODPLAIN
- 150-FT WETLAND CEF BUFFER
- SF — SILT FENCE (SEE SHEET ES-08, DETAIL 642S-1)
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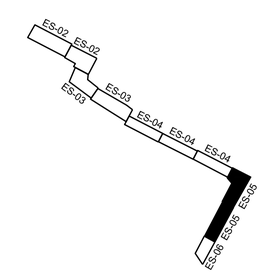



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CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Lueckemeyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 28+00 – 32+00 / STA 32+00 – 36+00

## EROSION AND SEDIMENTATION CONTROL PLAN

| | |
|---|---|
| FAN JOB NO. | AU118116 |
| DATE | 10/22/2020 |
| DESIGNED | DS |
| DRAWN | SS |
| REVISED | |
| CHECKED | JL |
| FILE NAME | PILAND_ESC.dwg |

| NO. | ISSUE | DATE | BY |
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VERIFY SCALE Bar is one inch on original drawing. If not, one inch on this sheet, adjust scale.
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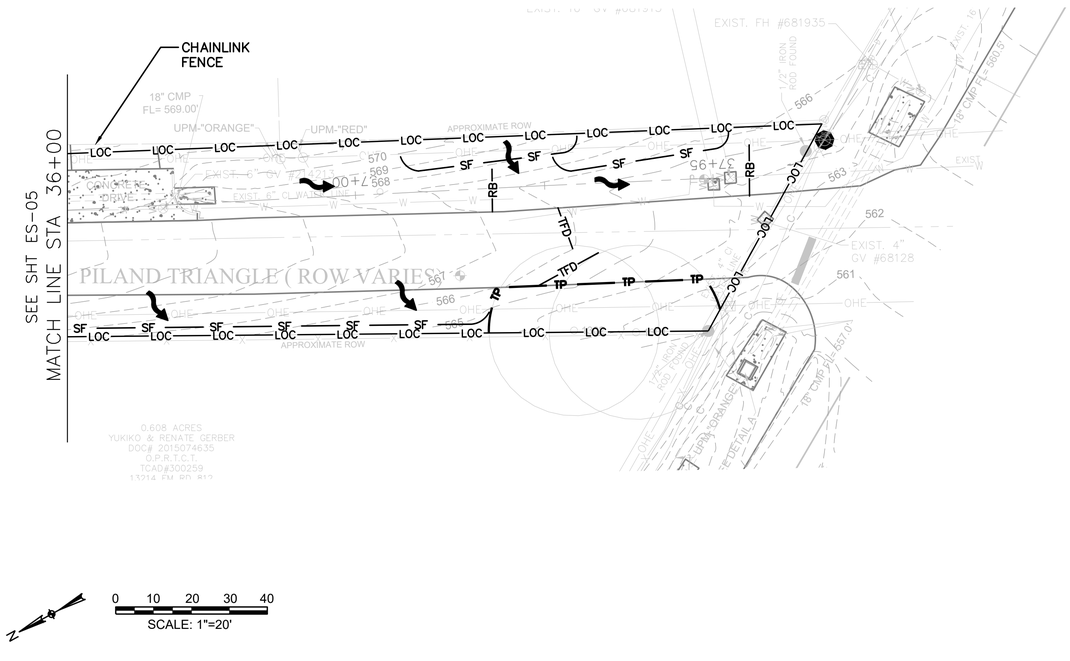
SHEET ES–05

SEQ. 25




## LEGEND

| | |
|---|---|
| | TREES TO REMAIN |
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| 650 | EXISTING CONTOURS |
| 25Y | COA 25-YR FULLY DEVELOPED FLOODPLAIN |
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| TP | TREE PROTECTION (SEE SHEET ES-09, DETAIL 610S) |
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| LOC | LIMITS OF CONSTRUCTION |
| OHWM | ORDINARY HIGH WATER MARK |
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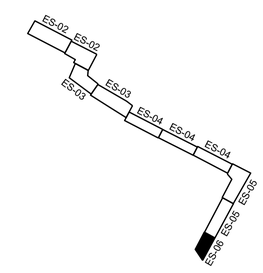
3. ANY STAGING AREA OR HEAVY EQUIPMENT KEPT INSIDE THE TREE CRITICAL ROOT ZONE NEEDS TO HAVE 18" OF MULCH UNDERNEATH EQUIPMENT TO PROTECT ROOT SYSTEMS.
4. ANY TREE TRIMMING OR CROWN DAMAGE SHOULD HAVE AN ENVIRONMENTAL INSPECTOR TO REVIEW PRIOR TO ANY WORK DONE.

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info@baereng.com
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T.B.P.E. Firm Registration No. F-2181

CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Lueckemeyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 36+00 – 37+78

# EROSION AND SEDIMENTATION CONTROL PLAN

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## 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 UTILITY DEPARTMENT |
| CONTACT: | MR. JOE HOEPKEN, P.E. SPONSOR |
| ADDRESS: | 3907 S. INDUSTRIAL DR., 2ND FLOOR |
| | AUSTIN, TX 78744 |
| PHONE: | |
| E-MAIL: | |

OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:

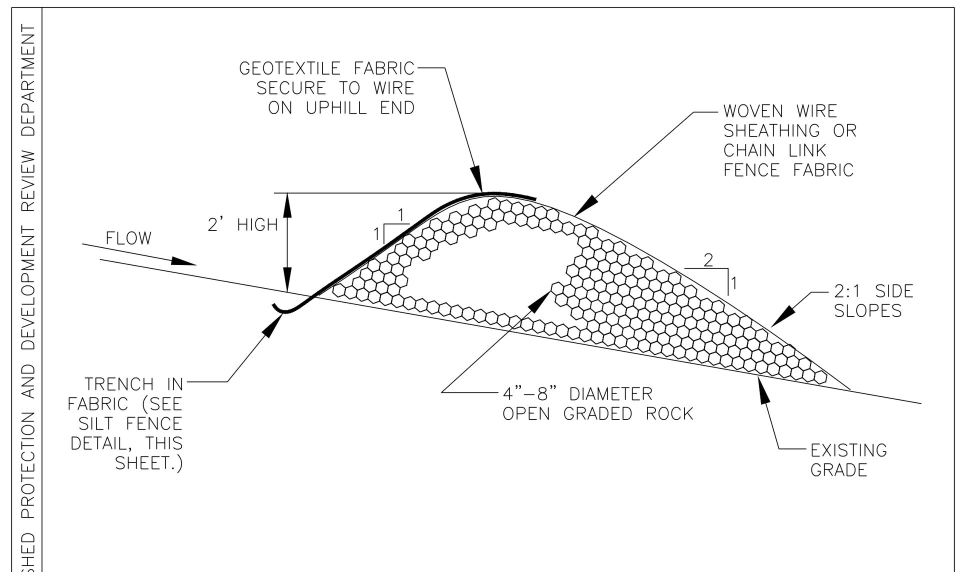
| | |
|---|---|
| COMPANY: | CITY OF AUSTIN |
| CONTACT: | MS. BRENDA BAKER, PROJECT MANAGER |
| ADDRESS: | 505 BARTON SPRINGS ROAD, SUITE 900 |
| | AUSTIN, TX 78704 |
| PHONE: | 512-974-9711 |
| E-MAIL: | |

PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
COMPANY: BAER ENGINEERING

PARTY RESPONSIBLE FOR TREE/NATURAL AREA PROTECTION MAINTENANCE:
COMPANY: BAER ENGINEERING

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.



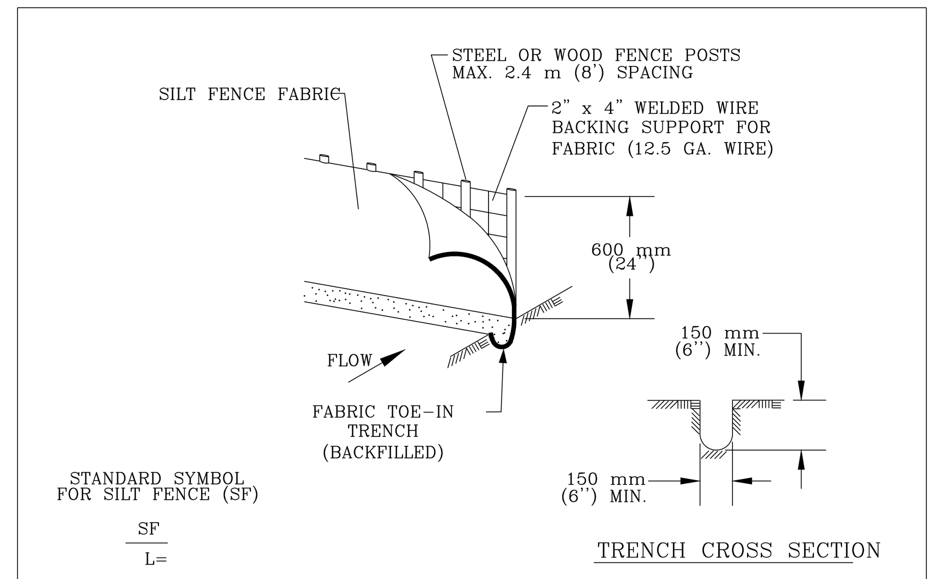

DESCRIPTION: APPROVED BY WATERSHED PROTECTION AND DEVELOPMENT REVIEW DEPARTMENT
REV. DATE:

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: | |




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.

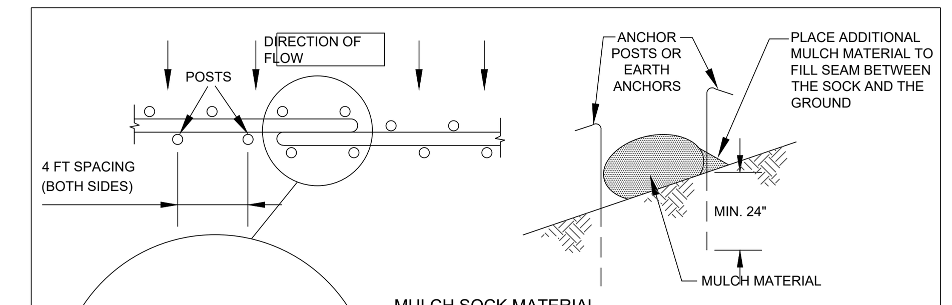
4. SILT FENCE FABRIC SHOULD BE SECURELY FASTENED TO EACH STEEL OR WOOD SUPPORT POST OR TO WOVEN WIRE , WHICH IS IN TURN ATTACHED TO THE STEEL OR WOOD FENCE POST.

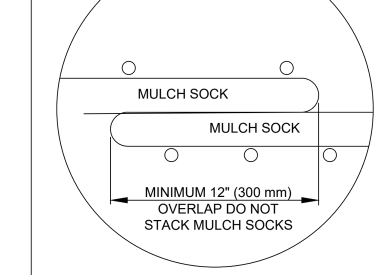
5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTY AS NEEDED.

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<br>WATERSHED PROTECTION DEPARTMENT | | SILT FENCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY MORGAN BYARS | 09/01/2011<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>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).

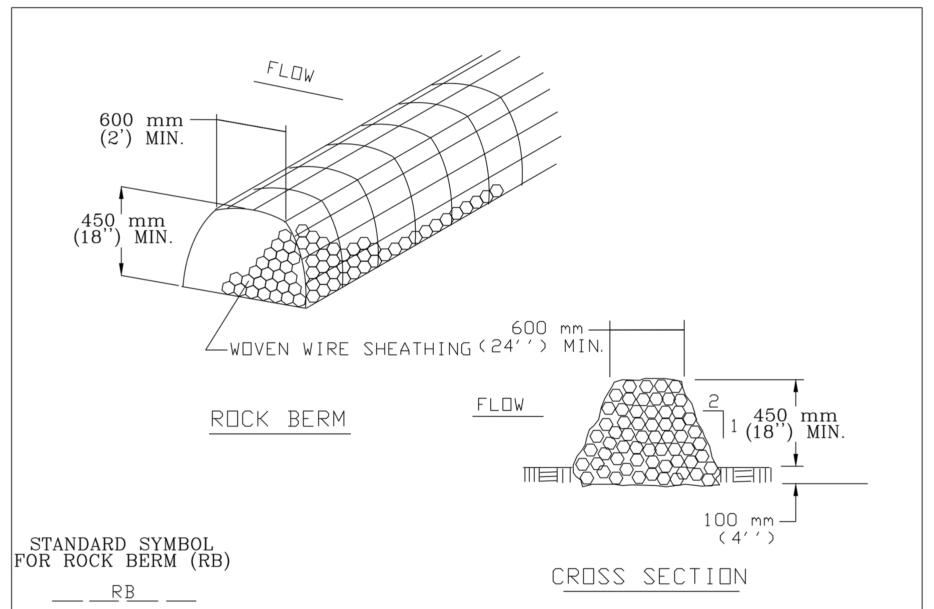
3. MULCH MATERIAL MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH; IT IS NOT ACCEPTABLE FOR THE MULCH MATERIAL TO CONTAIN GROUND CONSTRUCTION DEBRIS, BIOSOLIDS, OR MANURE.

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<br>WATERSHED PROTECTION DEPARTMENT | | MULCH SOCK | |
|---|---|---|---|
| RECORD COPY SIGNED BY MORGAN BYARS | 08/24/2010<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>648S-1 |




STANDARD SYMBOL FOR ROCK BERM (RB)

RB

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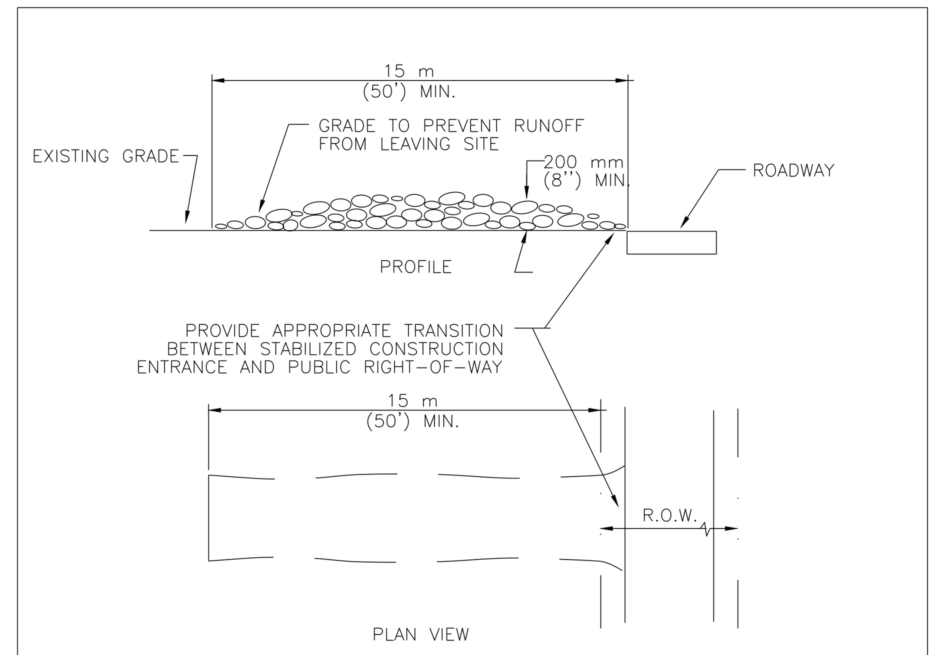
| RECORD COPY SIGNED BY MORGAN BYARS | 8/24/2010<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>639S-1 |

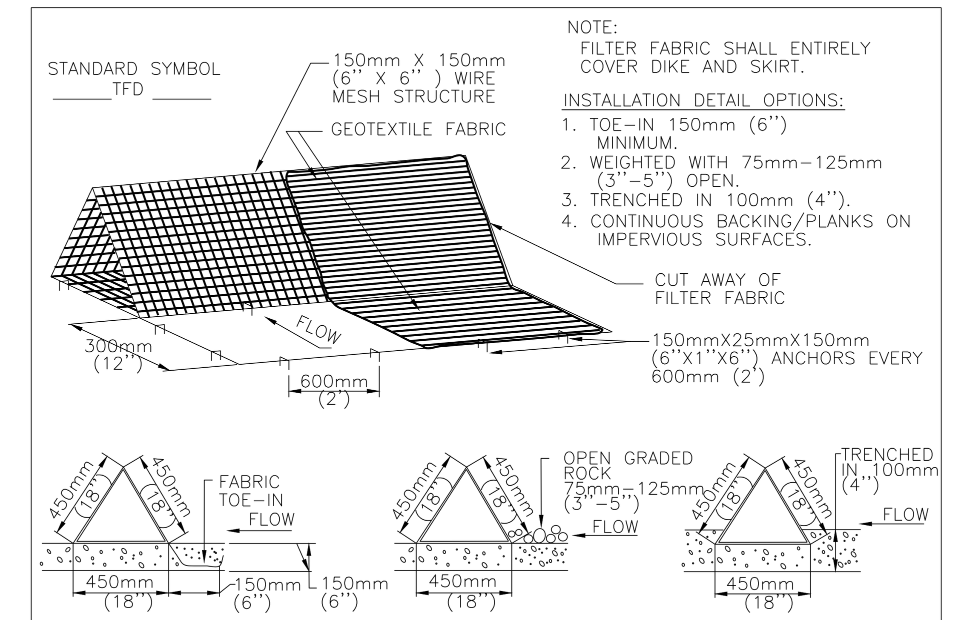



NOTES:

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: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

| CITY OF AUSTIN<br>WATERSHED PROTECTION DEPARTMENT | | STABILIZED CONSTRUCTION ENTRANCE | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 5/23/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>641S-1 |

STANDARD SYMBOL
TFD

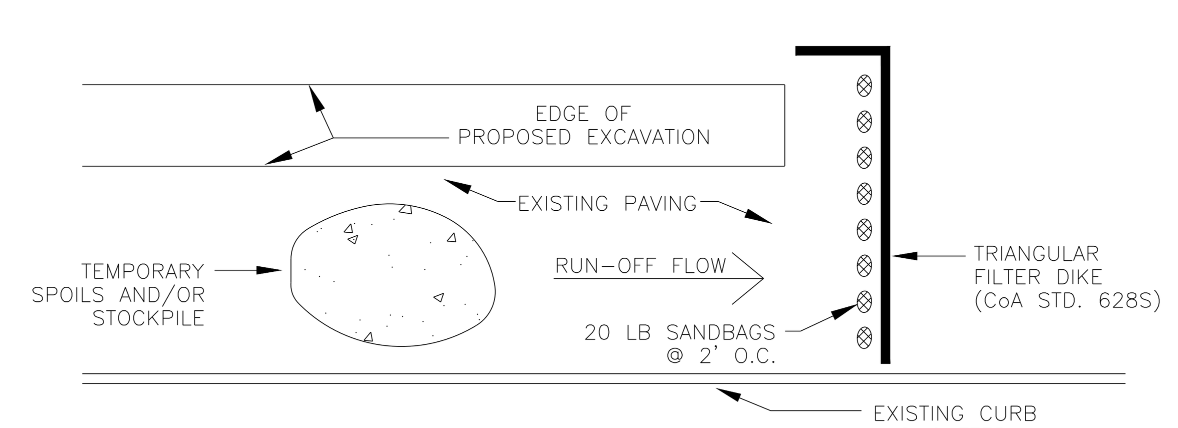



NOTE:
FILTER FABRIC SHALL ENTIRELY COVER DIKE AND SKIRT.
INSTALLATION DETAIL OPTIONS:
1. TOE-IN 150mm (6") MINIMUM.
2. WEIGHTED WITH 75mm-125mm (3"-5") OPEN.
3. TRENCHED IN 100mm (4").
4. CONTINUOUS BACKING/PLANKS ON IMPERVIOUS SURFACES.

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<br>WATERSHED PROTECTION DEPARTMENT | | TRIANGULAR SEDIMENT FILTER DIKE | |
|---|---|---|---|
| RECORD COPY SIGNED BY J. PATRICK MURPHY | 3/27/00<br>ADOPTED | THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. | STANDARD NO.<br>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 682S) 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**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www.baereng.com info@baereng.com
T.B.P.E. Firm Registration No. F-3181


CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Lueckemeyer
No. 6923

10/22/2020

CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

# EROSION AND SEDIMENTATION CONTROL PLAN NOTES

| NO. | ISSUE | BY | DATE |
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FAN JOB NO. AU118116
DATE 10/22/2020
DESIGNED DS
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FILE NAME PILAND_ESC_NOTES_DETAILS.dwg

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## 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.

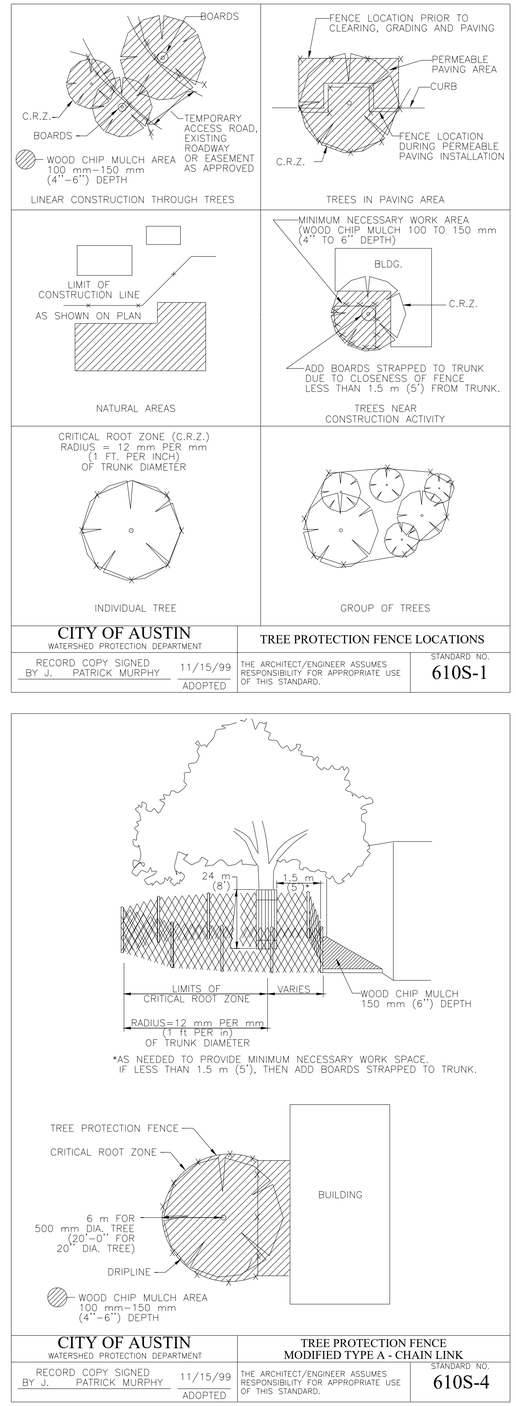
SPECIAL NOTE: FOR THE PROTECTION OF NATURAL AREAS, NO EXCEPTIONS TO INSTALLING FENCES AT THE LIMIT OF CONSTRUCTION LINE WILL BE PERMITTED.

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 THREE (3) 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 |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No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
TREE PROTECTION
NOTES AND DETAILS

| NO. | ISSUE | BY | DATE |
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F&N JOB NO. AU118116
DATE 10/22/2020
DESIGNED DS
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## APPENDIX P-6: CITY OF AUSTIN REMEDIAL TREE CARE NOTES. AERATION AND SUPPLEMENTAL NUTRIENT REQUIREMENTS FOR TREES WITHIN CONSTRUCTION AREAS

AS A COMPONENT OF AN EFFECTIVE REMEDIAL TREE CARE PROGRAM PER ENVIRONMENTAL CRITERIA MANUAL SECTION 3.5.4, PRESERVED TREES WITHIN THE LIMITS OF CONSTRUCTION MAY REQUIRE SOIL AERATION AND SUPPLEMENTAL NUTRIENTS. SOIL AND/OR FOLIAR ANALYSIS SHOULD BE USED TO DETERMINE THE NEED FOR SUPPLEMENTAL NUTRIENTS. THE CITY ARBORIST MAY REQUIRE THESE ANALYSES AS PART OF A COMPREHENSIVE TREE CARE PLAN. SOIL PH SHALL BE CONSIDERED WHEN DETERMINING THE FERTILIZATION COMPOSITION AS SOIL PH INFLUENCES THE TREE'S ABILITY TO UPTAKE NUTRIENTS FROM THE SOIL. IF ANALYSES INDICATE THE NEED FOR SUPPLEMENTAL NUTRIENTS, THEN HUMATE/NUTRIENT SOLUTIONS WITH MYCORRHIZAE COMPONENTS ARE HIGHLY RECOMMENDED. IN ADDITION, SOIL ANALYSIS MAY BE NEEDED TO DETERMINE IF ORGANIC MATERIAL OR BENEFICIAL MICROORGANISMS ARE NEEDED TO IMPROVE SOIL HEALTH. MATERIALS AND METHODS ARE TO BE APPROVED BY THE CITY ARBORIST (512-974-1876) PRIOR TO APPLICATION. THE OWNER OR GENERAL CONTRACTOR SHALL SELECT A FERTILIZATION CONTRACTOR AND IENSURE COORDINATION WITH THE CITY ARBORIST.

PRE-CONSTRUCTION TREATMENT SHOULD BE APPLIED IN THE APPROPRIATE SEASON, IDEALLY THE SEASON PRECEDING THE PROPOSED CONSTRUCTION. MINIMALLY, AREAS TO BE TREATED INCLUDE THE ENTIRE CRITICAL ROOT ZONE OF TREES AS DEPICTED ON THE CITY APPROVED PLANS. TREATMENT SHOULD INCLUDE, BUT NOT LIMITED TO, FERTILIZATION, SOIL TREATMENT, MULCHING, AND PROPER PRUNING.

POST-CONSTRUCTION TREATMENT SHOULD OCCUR DURING FINAL REVEGETATION OR AS DETERMINED BY A QUALIFIED ARBORIST AFTER CONSTRUCTION. CONSTRUCTION ACTIVITIES OFTEN RESULT IN A REDUCTION IN SOIL MACRO AND MICRO PORES AND AN INCREASE IN SOIL BULK DENSITY. TO AMELIORATE THE DEGRADED SOIL CONDITIONS, AERATION VIA WATER AND/OR AIR INJECTED INTO THE SOIL IS NEEDED OR BY OTHER METHODS AS APPROVED BY THE CITY ARBORIST. THE PROPOSED NUTRIENT MIX SPECIFICATIONS AND SOIL AND/OR FOLIAR ANALYSIS RESULTS NEED TO BE PROVIDED TO AND APPROVED BY THE CITY ARBORIST PRIOR TO APPLICATION (FAX # 512-974-3010). CONSTRUCTION WHICH WILL BE COMPLETED IN LESS THAN 90 DAYS MAY USE MATERIALS AT ½ RECOMMENDED RATES. ALTERNATIVE ORGANIC FERTILIZER MATERIALS ARE ACCEPTABLE WHEN APPROVED BY THE CITY ARBORIST. WITHIN 7 DAYS AFTER FERTILIZATION IS PERFORMED, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION OF THE WORK PERFORMED TO THE CITY ARBORIST, PLANNING AND DEVELOPMENT REVIEW DEPARTMENT. P.O. BOX 1088, AUSTIN, TX 78767. THIS NOTE SHOULD BE REFERENCED AS ITEM #1 IN THE SEQUENCE OF CONSTRUCTION.

## CITY OF AUSTIN STANDARD NOTES FOR SPECIAL CONSTRUCTION TECHNIQUES AROUND TREES

1. PRIOR TO EXCAVATION WITHIN TREE DRIPLINES OR THE REMOVAL OF TREES ADJACENT TO OTHER TREES THAT ARE TO REMAIN, MAKE A CLEAN CUT BETWEEN THE DISTURBED AND UNDISTURBED ROOT ZONES WITH A ROCK SAW OR SIMILAR EQUIPMENT TO MINIMIZE ROOT DAMAGE.

2. IN CRITICAL ROOT ZONE AREAS THAT CANNOT BE PROTECTED DURING CONSTRUCTION WITH FENCING AND WHERE HEAVY VEHICULAR TRAFFIC IS ANTICIPATED, COVER THOSE AREAS WITH A MINIMUM OF 12 INCHES OF ORGANIC MULCH TO MINIMIZE SOIL COMPACTION. IN AREAS WITH HIGH SOIL PLASTICITY GEOTEXTILE FABRIC, PER STANDARD SPECIFICATION 620S, SHOULD BE PLACED UNDER THE MULCH TO PREVENT EXCESSIVE MIXING OF THE SOIL AND MULCH. ADDITIONALLY, MATERIAL SUCH AS PLYWOOD AND METAL SHEETS, COULD BE REQUIRED BY THE CITY ARBORIST TO MINIMIZE ROOT IMPACTS FROM HEAVY EQUIPMENT. ONCE THE PROJECT IS COMPLETED, ALL MATERIALS SHOULD BE REMOVED, AND THE MULCH SHOULD BE REDUCED TO A DEPTH OF 3 INCHES.

3. PERFORM ALL GRADING WITHIN CRITICAL ROOT ZONE AREAS BY HAND OR WITH SMALL EQUIPMENT TO MINIMIZE ROOT DAMAGE.

4. WATER ALL TREES MOST HEAVILY IMPACTED BY CONSTRUCTION ACTIVITIES DEEPLY ONCE A WEEK DURING PERIODS OF HOT, DRY WEATHER. SPRAY TREE CROWNS WITH WATER PERIODICALLY TO REDUCE DUST ACCUMULATION ON THE LEAVES.

5. WHEN INSTALLING CONCRETE ADJACENT TO THE ROOT ZONE OF A TREE, USE A PLASTIC VAPOR BARRIER BEHIND THE CONCRETE TO PROHIBIT LEACHING OF LIME INTO THE SOIL.

### TREE LIST

(100) APPROXIMATE TREE CRITICAL ROOT ZONE
100 TREE DIAMETER & TAG NUMBER
EXAMPLE: 8"R=8' CRITICAL ROOT ZONE
MS = MULTI-STEM

| TREE TAG NO. | DESCRIPTION |
|---|---|
| 1300 | 20" CHINABERRY (MS 14"-12") |
| 1301 | 23" HACKBERRY (MS 19"-8") |
| 1302 | 22.5" MESQUITE (MS 10"-9"-8"-8") |
| 1303 | 8" HACKBERRY |
| 1304 | 8" HACKBERRY |
| 1305 | 35" MESQUITE (MS 19"-17"-15") |
| 1306 | 14" HACKBERRY (MS 10"-8") |
| 1307 | 9" HACKBERRY |
| 1308 | 15.5" HACKBERRY (MS 8"-5"-5"-5") |
| 1309 | 18" HACKBERRY |
| 1310 | 15" HACKBERRY (MS 11"-8") |
| 1311 | 9" HACKBERRY |
| 1312 | 17.5" MESQUITE (MS 12"-11") |
| 1313 | 10" HACKBERRY (MS 7"-6") |
| 1314 | 13" HACKBERRY (MS 9"-8") |
| 1315 | 12" HACKBERRY |
| 1316 | 12" HACKBERRY |
| 1317 | 14.5" HACKBERRY (MS 8"-7"-6") |
| 1318 | 14" HACKBERRY |
| 1319 | 22.5" HACKBERRY (MS 16"-13") |

### TREE MITIGATION INFORMATION

| | |
|---|---|
| TOTAL APPENDIX F TREE INCHES SURVEYED: | 293 |
| TOTAL APPENDIX F TREE INCHES REMOVED: | 0 |
| TOTAL NON-APPENDIX F AND INVASIVE TREES REMOVED: | 0 |
| TOTAL MITIGATION INCHES PLANTED ON SITE: | 0 |


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Jennifer Lueckemeyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT
TREE LIST AND MITIGATION CALCULATIONS

| NO. | ISSUE | BY | DATE |
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F&N JOB NO. AU118116
DATE 10/22/2020
DESIGNED DS
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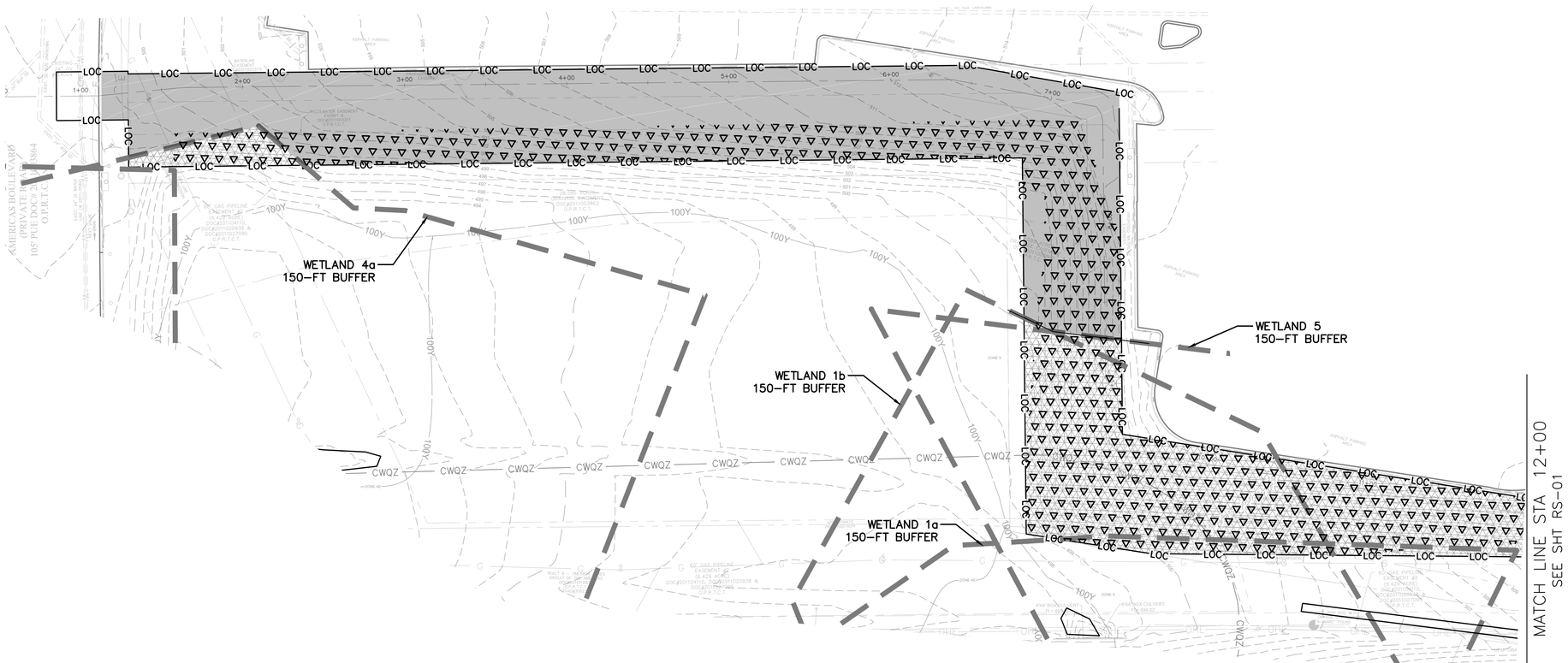


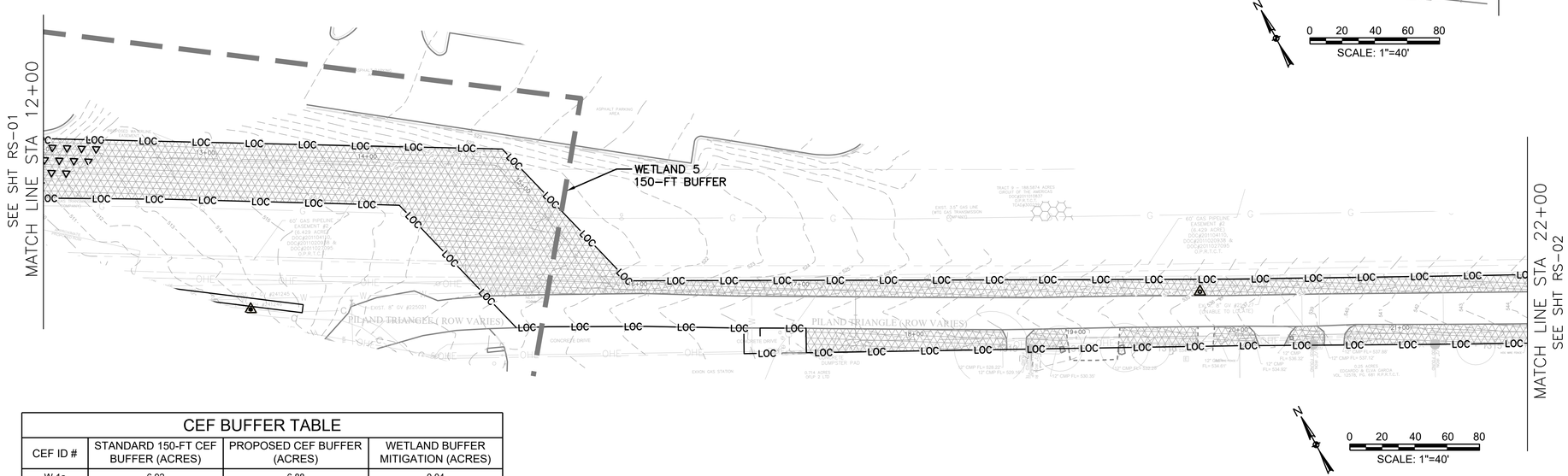


## LEGEND

- TREES TO REMAIN
- FLOW DIRECTION
- 650 — FINAL CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
- FEMA 100-YR FLOODPLAIN
- 150-FT WETLAND CEF BUFFER
- LOC — LIMITS OF CONSTRUCTION
- OHWM — ORDINARY HIGH WATER MARK
- CWQZ — COA CWQZ
- BIODEGRADABLE SOIL RETENTION BLANKET (TXDOT CLASS 1 TYPE A)
- REVEGETATE WITH COA SPEC 604S-A
- REVEGETATE WITH COA SPEC 604S-D

## REVEGETATION NOTES

1. AREAS WITHIN THE CRITICAL WATER QUALITY ZONE AND AREAS WITHIN THE 150-FT CEF BUFFERS SHALL BE RESTORED WITH COA SPECIFICATION 604S.
2. PLACE BIODEGRADABLE SOIL RETENTION BLANKET ON SLOPES 4:1 OR STEEPER.
3. REVEGETATE WET SITES (DITCHES, FLOODPLAIN, OR WETLAND AREAS) WITH COA SPEC 604S-D, TABLE 5: WET SITES. REVEGETATE THE REMAINING AREAS WITH COA SPEC 604S-D, TABLE 4: DRY SITES.

### CEF BUFFER TABLE

| CEF ID # | STANDARD 150-FT CEF BUFFER (ACRES) | PROPOSED CEF BUFFER (ACRES) | WETLAND BUFFER MITIGATION (ACRES) |
|---|---|---|---|
| W-1a | 6.92 | 6.88 | 0.04 |
| W-1b | 2.40 | 2.06 | 0.34 |
| W-2 | 3.29 | 3.29 | 0.00 |
| W-3 | 4.36 | 4.36 | 0.00 |
| W-4a | 3.31 | 3.28 | 0.03 |
| W-4b | 3.58 | 3.58 | 0.00 |
| W-5 | 4.34 | 3.49 | 0.85 |


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T.B.P.E. Firm Registration No. F-381


CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL
CPESC
Jennifer Lueckemeyer
No. 6923
10/22/2020

CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 0+00 – 22+00

# REVEGETATION AND RESTORATION PLAN CONTROL PLAN

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
| | | | |

F&N JOB NO. AU118116
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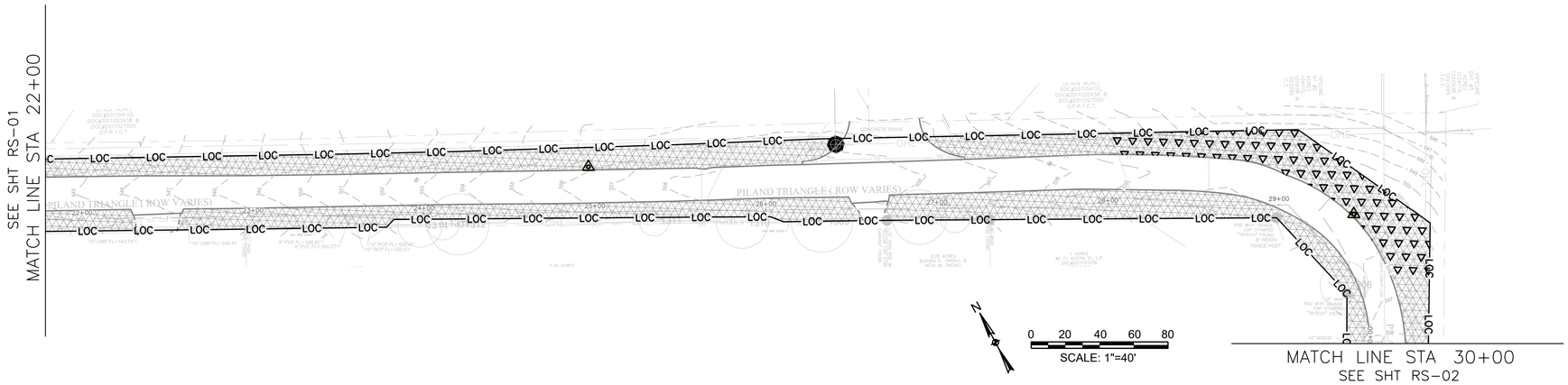


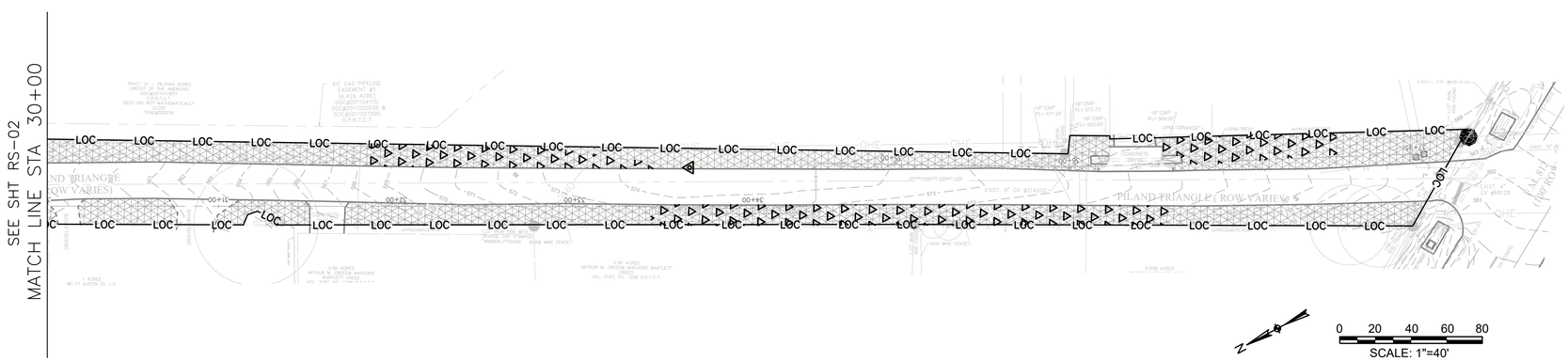


## LEGEND

- TREES TO REMAIN
- FLOW DIRECTION
- 650 — FINAL CONTOURS
- 25Y — COA 25-YR FULLY DEVELOPED FLOODPLAIN
- 100Y — COA 100-YR FULLY DEVELOPED FLOODPLAIN
- FEMA 100-YR FLOODPLAIN
- 150-FT WETLAND CEF BUFFER
- LOC — LIMITS OF CONSTRUCTION
- OHWM — ORDINARY HIGH WATER MARK
- CWQZ — COA CWQZ
- BIODEGRADABLE SOIL RETENTION BLANKET (TXDOT CLASS 1 TYPE A)
- REVEGETATE WITH COA SPEC 604S-A
- REVEGETATE WITH COA SPEC 604S-D

## REVEGETATION NOTES

1. AREAS WITHIN THE CRITICAL WATER QUALITY ZONE AND AREAS WITHIN THE 150-FT CEF BUFFERS SHALL BE RESTORED WITH COA SPECIFICATION 604S.
2. PLACE BIODEGRADABLE SOIL RETENTION BLANKET ON SLOPES 4:1 OR STEEPER.
3. REVEGETATE WET SITES (DITCHES, FLOODPLAIN, OR WETLAND AREAS) WITH COA SPEC 604S-D, TABLE 5: WET SITES. REVEGETATE THE REMAINING AREAS WITH COA SPEC 604S-D, TABLE 4: DRY SITES.


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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

STA 22+00 – 37+95

# REVEGETATION AND RESTORATION PLAN
# CONTROL PLAN

| NO. | ISSUE | BY | DATE |
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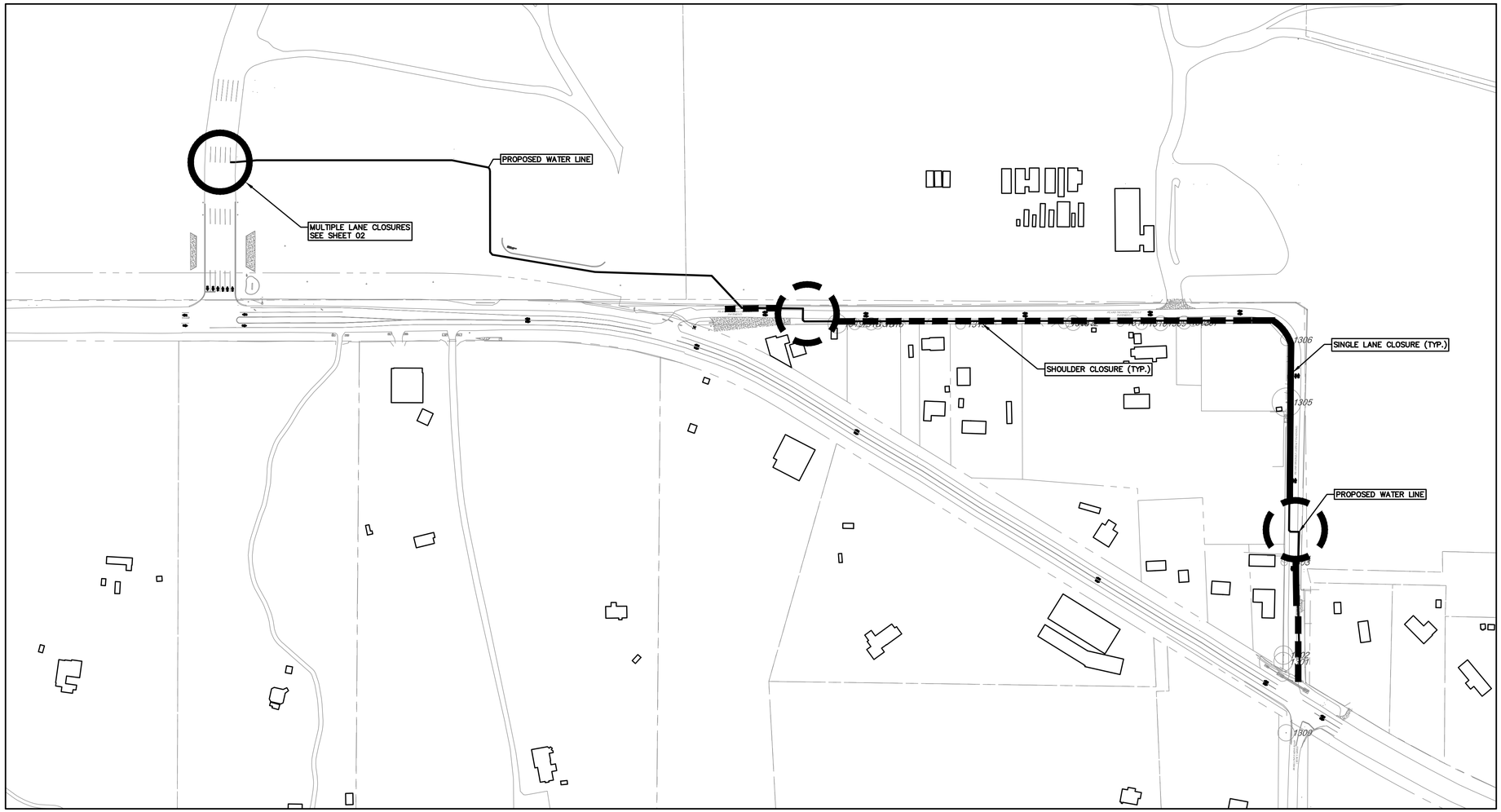


150 0 75 150 300
1" = 150

## MASTER TRAFFIC CONTROL PLAN LEGEND

| | | DETOUR REQUIRED? |
|---|---|---|
| | SINGLE LANE CLOSURE – USE COLLECTOR/RESIDENTIAL STREET FLAGGING OPERATIONS PER STD. DETAIL 804S-2 (1 OF 8) | NO |
| | SHOULDER CLOSURE | NO |
| | HALF-ROAD CLOSURE – USE COLLECTOR/RESIDENTIAL STREET FLAGGING OPERATIONS PER STD. DETAIL 804S-2 (1 OF 8) | NO |

## RIGHT OF WAY MANAGEMENT STANDARD NOTES FOR TRAFFIC CONTROL PLANS

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/right- way-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 (COA) 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 (512) 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.

# BARRICADING SUMMARY TABLES

## STREETS

| STREET | CLASSIFICATION | PROTECTION | STREET FROM | STREET TO | PLANNED IMPROVEMENTS | TRAFFIC CONTROL PLAN SHEET / DETAIL | ALLOWED BARRICADING HOURS | DURATION | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| CIRCUIT OF THE AMERICAS BLVD | PRIVATE | NOT PROTECTED | FM 812 | N/A | NEW WATER MAIN | SEE SHEET ##### | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | WEST HALF OF STREET CLOSURE - FLAGGER |
| CIRCUIT OF THE AMERICAS BLVD | PRIVATE | NOT PROTECTED | FM 812 | N/A | NEW WATER MAIN | SEE SHEET 02 | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | EAST HALF OF STREET CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 03 | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | SHOULDER WORK - NO CLOSURE |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 04 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | NORTH HALF OF STREET CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 05 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | SOUTH HALF OF STREET CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 06 | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | SHOULD WORK - NO CLOSURE |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 07 / 804S-2 (2 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | ONE LANE CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 08 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | ONE LANE CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 09 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | WEST HALF OF STREET CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 10 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | EAST HALF OF STREET CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 11 / 804S-2 (1 OF 8) | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | ONE LANE CLOSURE - FLAGGER |
| PILAND TRIANGLE | COLLECTOR | NOT PROTECTED | FM 812 | FM 812 | NEW WATER MAIN | SEE SHEET 12 | M-F: 7AM-7PM, SAT-SUN: 7AM-7PM | | SHOULDER WORK - NO CLOSURE |

## STREET REPAIR NOTES:

TRENCH REPAIR: USE THE APPROPRIATE 1100S SERIES DETAILS FOR TRENCH REPAIRS: 1100S-2 (FLEXIBLE BASE AND AN ASPHALT SURFACE), 1100S-3 (CONCRETE OR ASPHALT OVERLAID CONCRETE), AND 1100S-5 (FULL DEPTH ASPHALT STREETS). CLSM SHALL BE SUBSTITUTED FOR BACKFILL AND FLEXIBLE BASE REPLACEMENT PER THE DETAIL NOTES.

SURFACE RESTORATION: SURFACE PAVEMENT RESTORATION IS REQUIRED WHEN CUTS 1) ARE OVER 300 LINEAR FEET IN LENGTH, 2) OCCUR WITH THE DAPCZ AREA, OR 3) OCCUR WITHIN PROTECTED STREET SEGMENTS. USE DETAIL 1100S-7 FOR DETERMINING AREAS REQUIRING SURFACE REMOVAL AND REPLACEMENT. THE REPLACEMENT ASPHALTIC CONCRETE SURFACE LAYER THICKNESS SHALL BE A MINIMUM 2 INCHES HMAC TYPE D FOR LOCAL OR RESIDENTIAL STREETS AND A MINIMUM 3 INCHES HMAC TYPE C FOR COLLECTOR OR ARTERIAL STREETS (SEE ITEM 340S, SECTION 340S.4).

CONCRETE AND COMPOSITE PAVEMENTS: IN CONCRETE STREETS, ACTUAL RESTORATION LIMITS ARE DETERMINED BY JOINT LOCATIONS. FOR COMPOSITE PAVEMENTS CONSTRUCTED OF CONCRETE WITH A HMAC OVERLAY, USE 1100S-3 FOR TRENCH REPAIR (USING CLASS 360S CONCRETE) AND 1100S-7 FOR DETERMINATION OF ASPHALT SURFACE RESTORATION AREAS.

## PARKING NOTES:

1. POST "NO PARKING" SIGNS ON BOTH SIDES OF STREET TO BE CLOSED 48 HOURS PRIOR TO CONSTRUCTION WORK ON A BLOCK BY BLOCK BASIS.

## SPEED LIMITS:

20 MPH - CIRCUIT OF THE AMERICAS BOULEVARD
30 MPH - PILAND TRIANGLE
55 MPH - FM 812

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10/15/2020

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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

MASTER TRAFFIC CONTROL PLAN & NOTES

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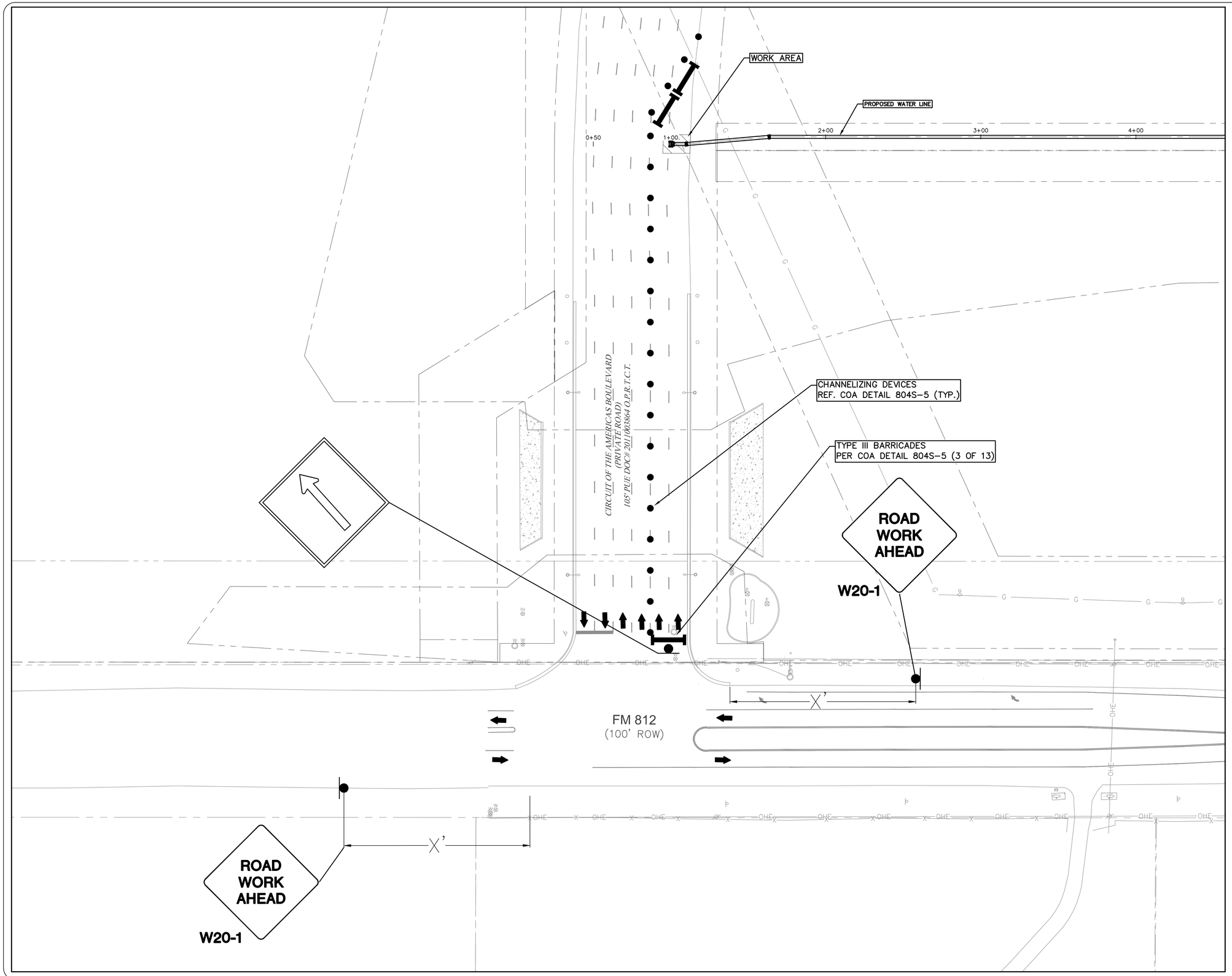


30 0 15 30 60

1" = 30'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL PROPERTIES FRONTING PILAND TRIANGLE RIGHT-OF-WAY AT ALL TIMES.
2. CONTRACTOR TO PLATE WATERLINE TRENCH AND REMOVE TRAFFIC CONTROL MEASURES TO OPEN PILAND TRIANGLE TWO (2) HOURS PRIOR TO EVENTS AT THE CIRCUIT OF AMERICAS (COTA). CONTRACTOR TO COORDINATE WITH COTA TO CONFIRM EVENT SCHEDULE REQUIRING OPENING OF ROAD & REMOVAL OF TRAFFIC CONTROL MEASURES.
3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

# CIRCUIT OF THE AMERICAS TCP

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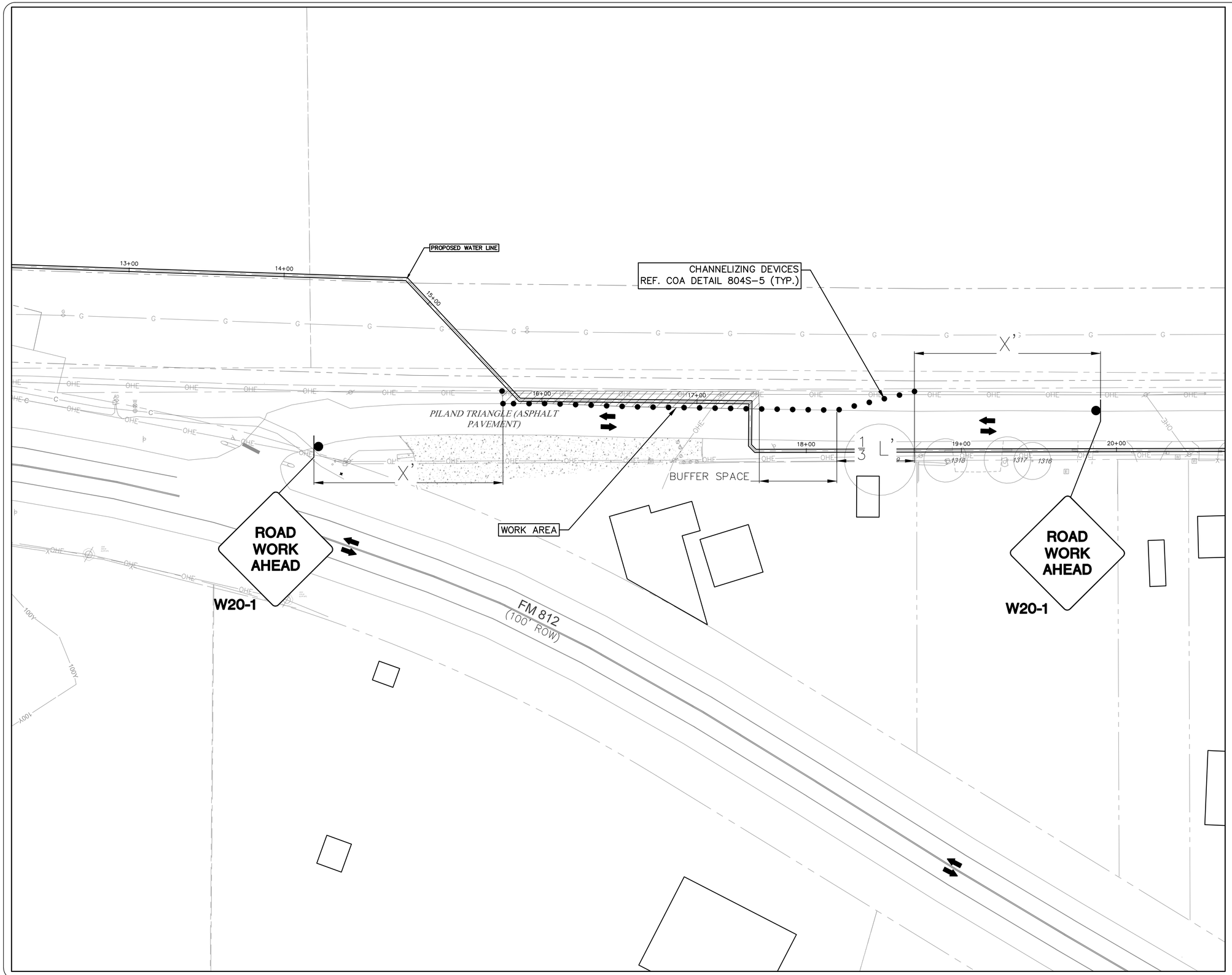


30 0 15 30 60

1" = 30'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

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2. CONTRACTOR TO PLATE WATERLINE TRENCH AND REMOVE TRAFFIC CONTROL MEASURES TO OPEN PILAND TRIANGLE TWO (2) HOURS PRIOR TO EVENTS AT THE CIRCUIT OF AMERICAS (COTA). CONTRACTOR TO COORDINATE WITH COTA TO CONFIRM EVENT SCHEDULE REQUIRING OPENING OF ROAD & REMOVAL OF TRAFFIC CONTROL MEASURES.
3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

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PILAND TRIANGLE TCP 1

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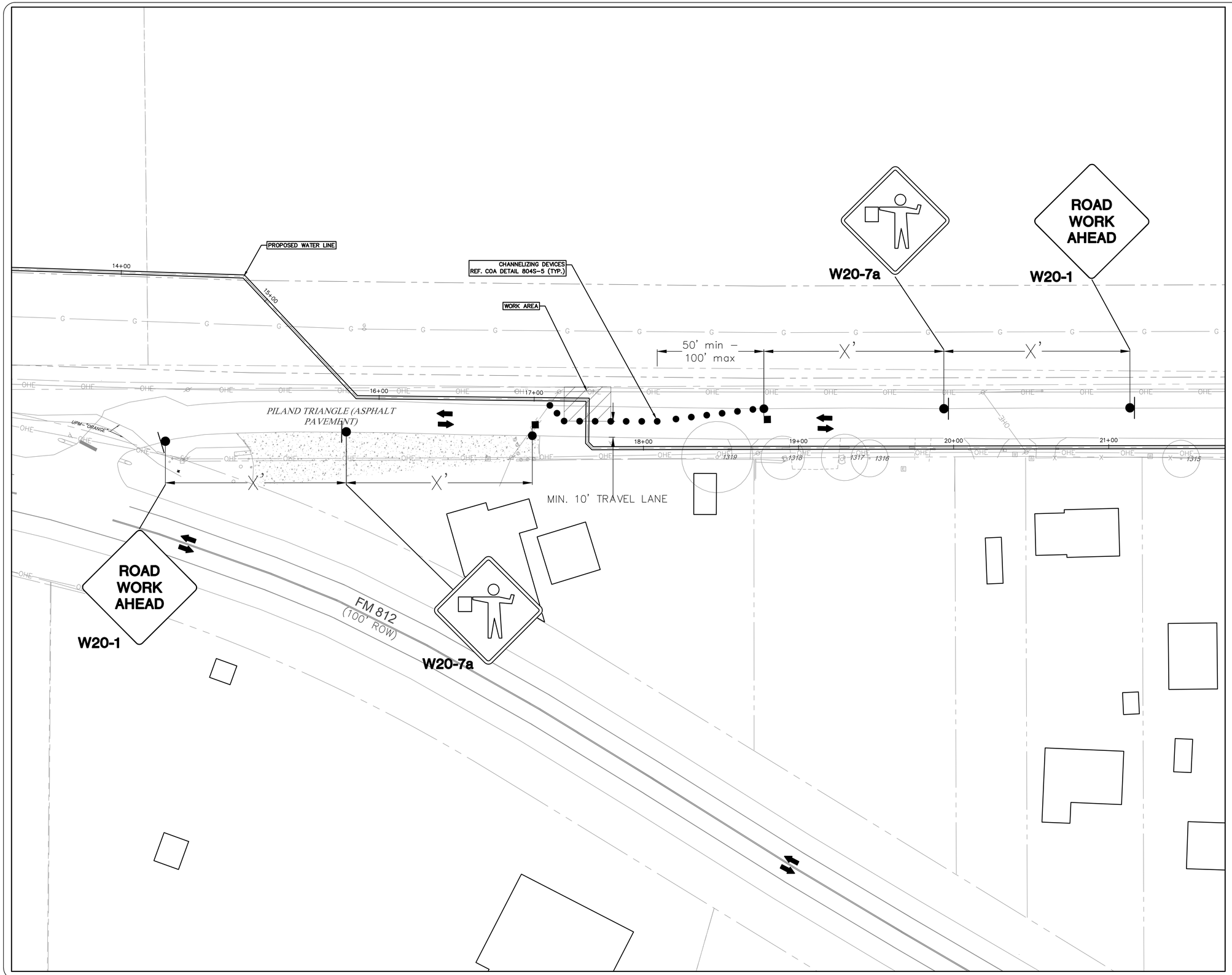


30 0 15 30 60

1" = 30'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
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| | | TRAFFIC DIRECTION |
| | | WORK AREA |
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| | | FLAGGER |
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## GENERAL NOTES

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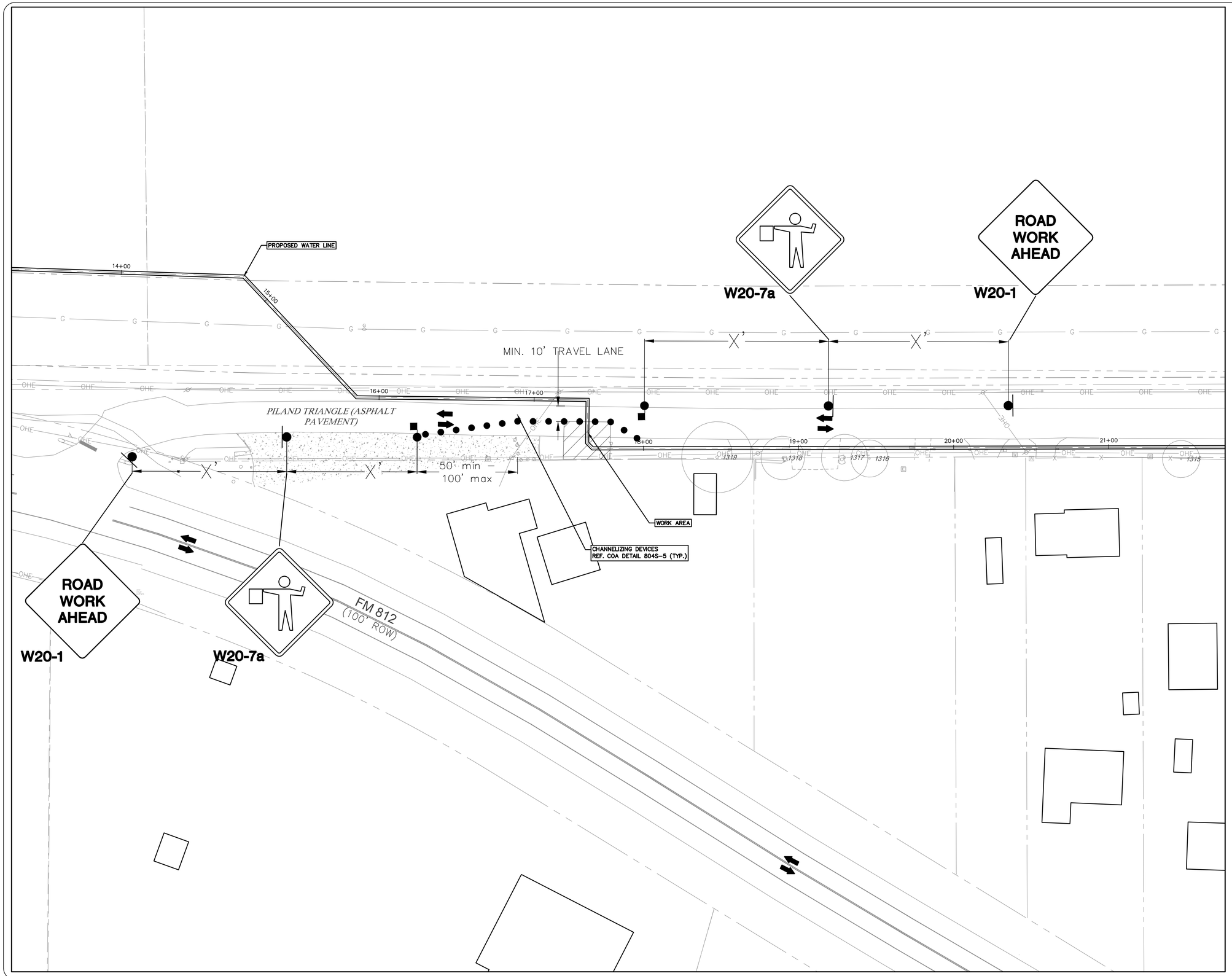


30 0 15 30 60

1" = 30'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
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## GENERAL NOTES

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3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

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CITY OF AUSTIN, TEXAS

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VERIFY SCALE 0 1
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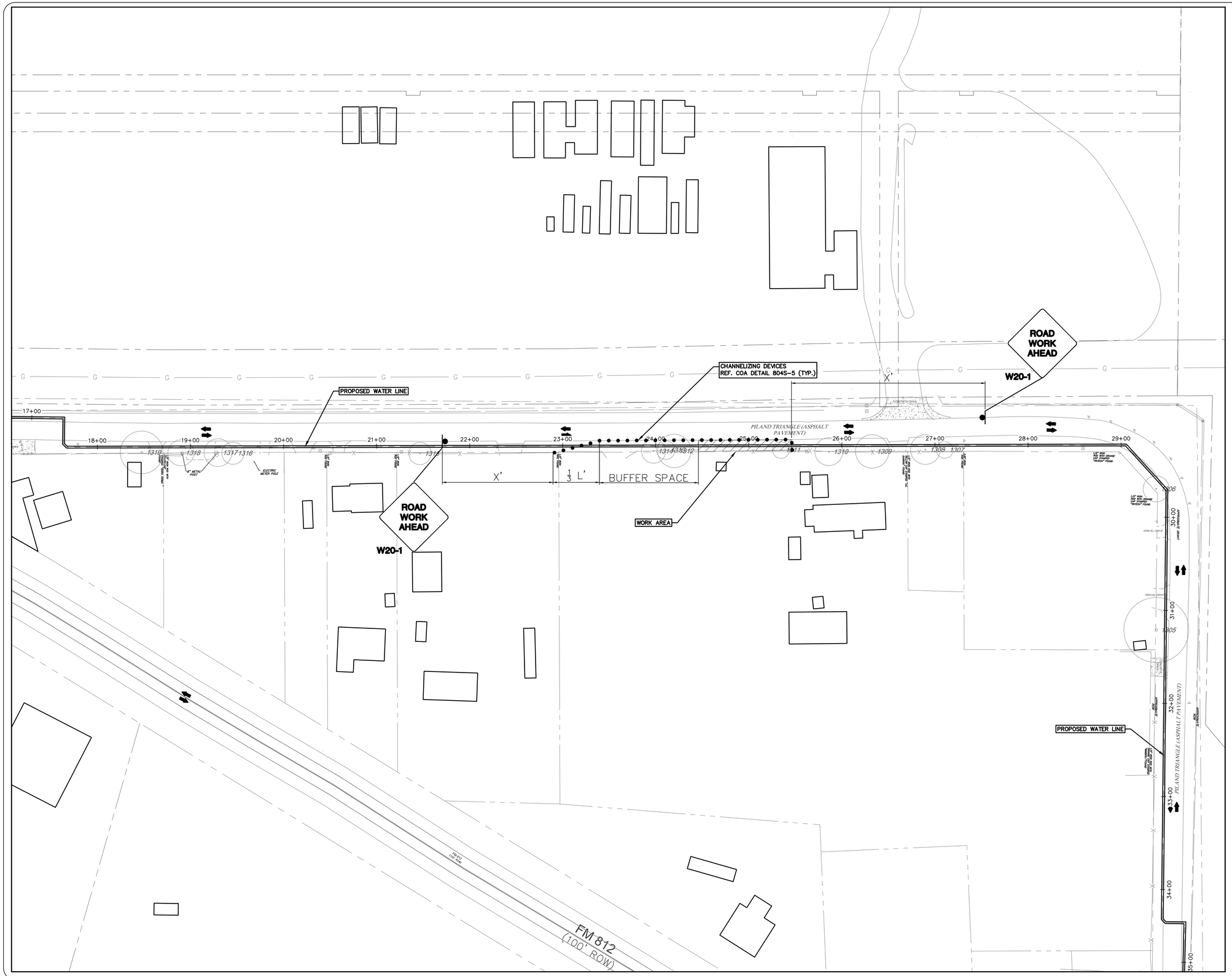
SHEET TC-05

SEQ. 36

Date: Jul 01, 2020 – 10:38am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-5.dwg




50 0 25 50 100

1" = 50'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL PROPERTIES FRONTING PILAND TRIANGLE RIGHT-OF-WAY AT ALL TIMES.
2. CONTRACTOR TO PLATE WATERLINE TRENCH AND REMOVE TRAFFIC CONTROL MEASURES TO OPEN PILAND TRIANGLE TWO (2) HOURS PRIOR TO EVENTS AT THE CIRCUIT OF AMERICAS (COTA). CONTRACTOR TO COORDINATE WITH COTA TO CONFIRM EVENT SCHEDULE REQUIRING OPENING OF ROAD & REMOVAL OF TRAFFIC CONTROL MEASURES.
3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
108583
LICENSED
PROFESSIONAL ENGINEER
10/15/2020


Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

# PILAND TRIANGLE TCP 4

| NO. | ISSUE | BY | DATE |
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F&N JOB NO. AU118116
DATE 07/01/20
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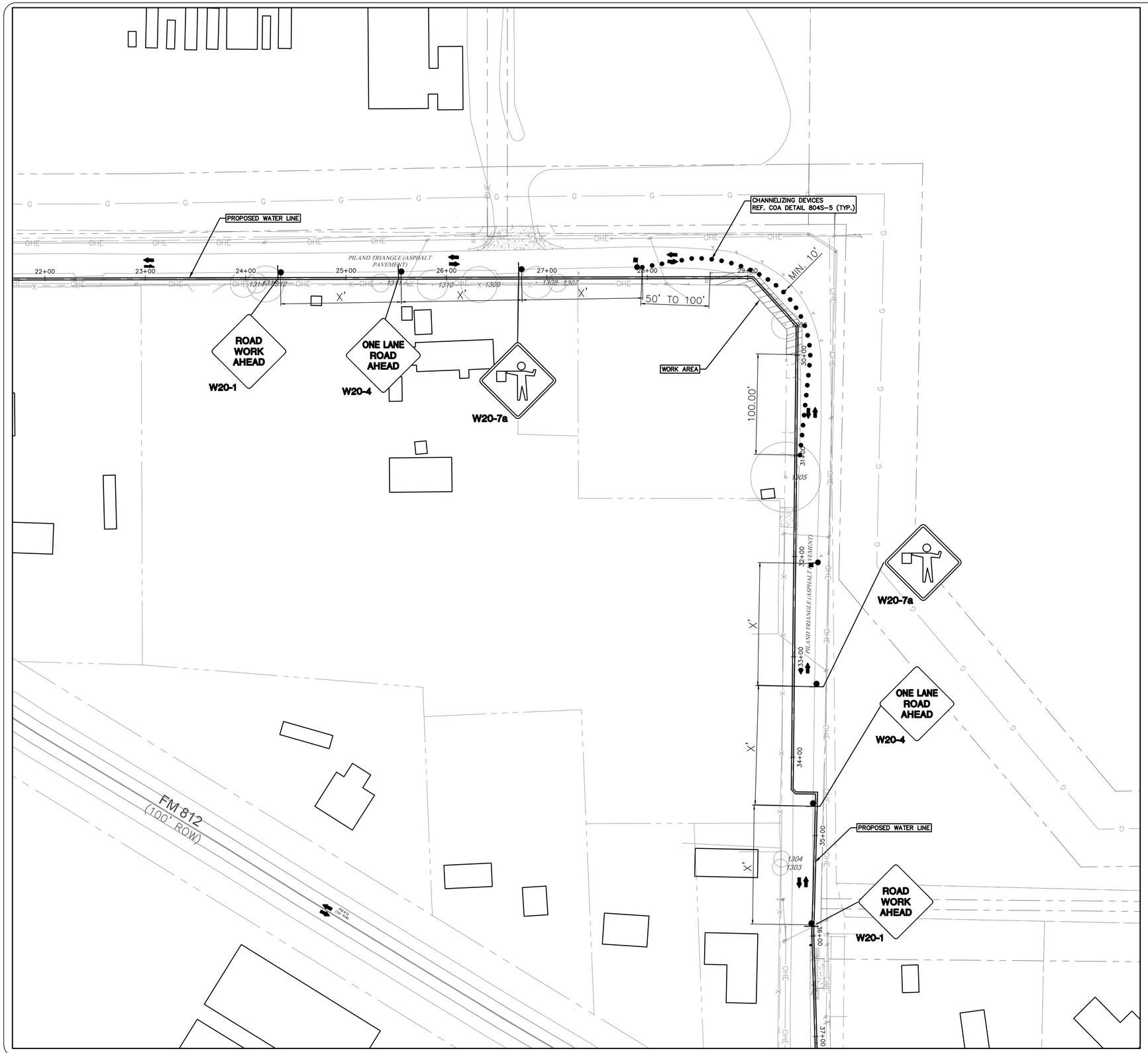
FILE NAME 107920-00004-PHASE-6.dwg

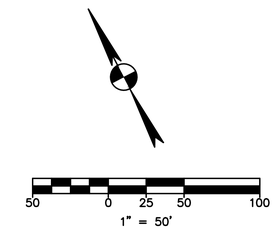
VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET TC-06

SEQ. 37

Date: Jul 01, 2020 – 11:23am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-6.dwg




## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL PROPERTIES FRONTING PILAND TRIANGLE RIGHT-OF-WAY AT ALL TIMES.
2. CONTRACTOR TO PLATE WATERLINE TRENCH AND REMOVE TRAFFIC CONTROL MEASURES TO OPEN PILAND TRIANGLE TWO (2) HOURS PRIOR TO EVENTS AT THE CIRCUIT OF AMERICAS (COTA). CONTRACTOR TO COORDINATE WITH COTA TO CONFIRM EVENT SCHEDULE REQUIRING OPENING OF ROAD & REMOVAL OF TRAFFIC CONTROL MEASURES.
3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
108583
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10/15/2020


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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

PILAND TRIANGLE TCP 5

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DATE 07/01/20
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DRAWN ESL
REVISED
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FILE NAME 107920-00004-PHASE-7.dwg

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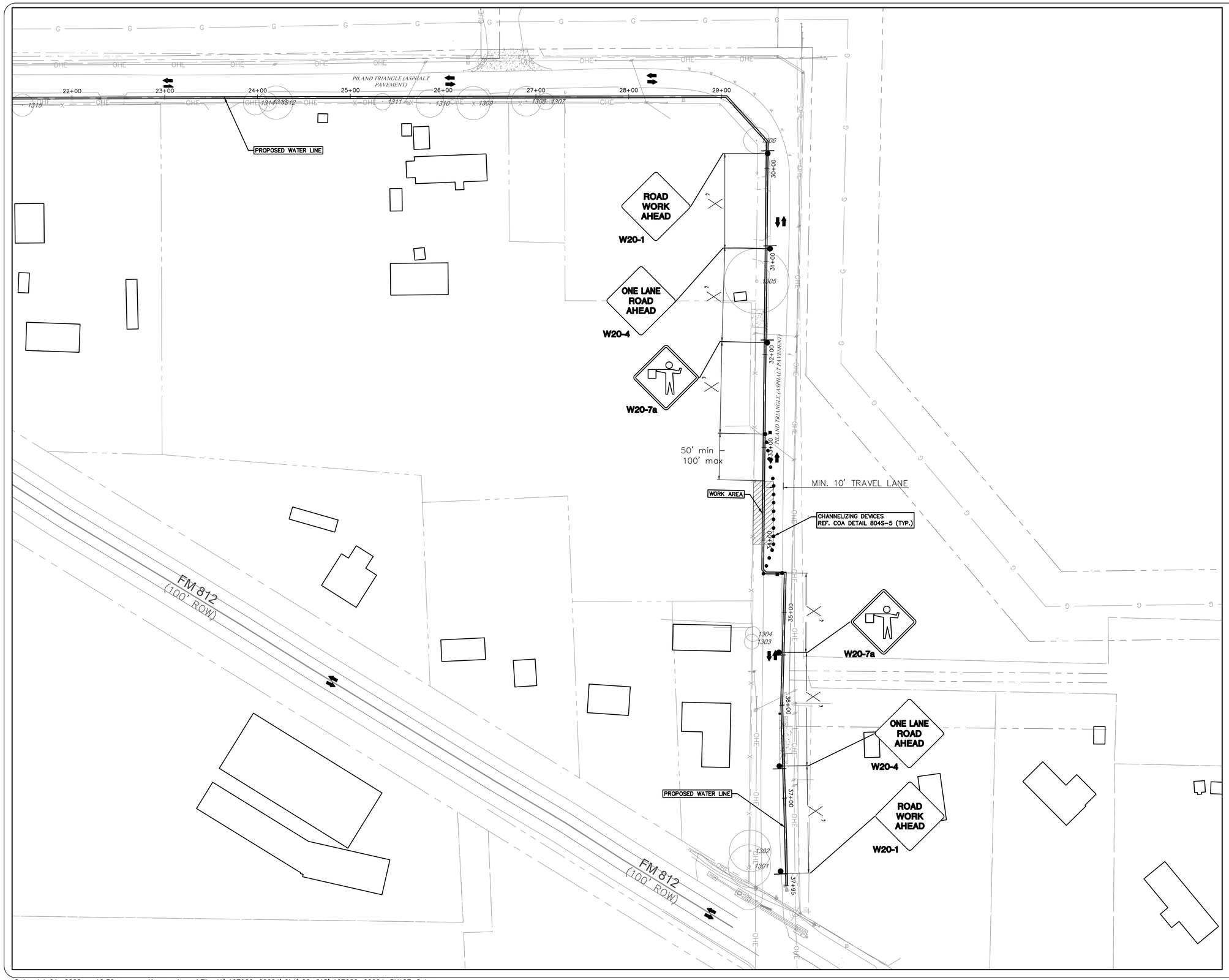
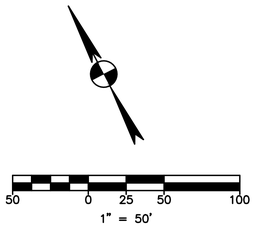
SHEET TC-07
SEQ. 38

Date: Jul 01, 2020 – 11:24am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-7.dwg




## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

1. CONTRACTOR TO MAINTAIN ACCESS TO ALL PROPERTIES FRONTING PILAND TRIANGLE RIGHT-OF-WAY AT ALL TIMES.
2. CONTRACTOR TO PLATE WATERLINE TRENCH AND REMOVE TRAFFIC CONTROL MEASURES TO OPEN PILAND TRIANGLE TWO (2) HOURS PRIOR TO EVENTS AT THE CIRCUIT OF AMERICAS (COTA). CONTRACTOR TO COORDINATE WITH COTA TO CONFIRM EVENT SCHEDULE REQUIRING OPENING OF ROAD & REMOVAL OF TRAFFIC CONTROL MEASURES.
3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

# PILAND TRIANGLE TCP 6

| NO. | ISSUE | BY | DATE |
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FILE NAME 107920-00004-PHASE-8.dwg

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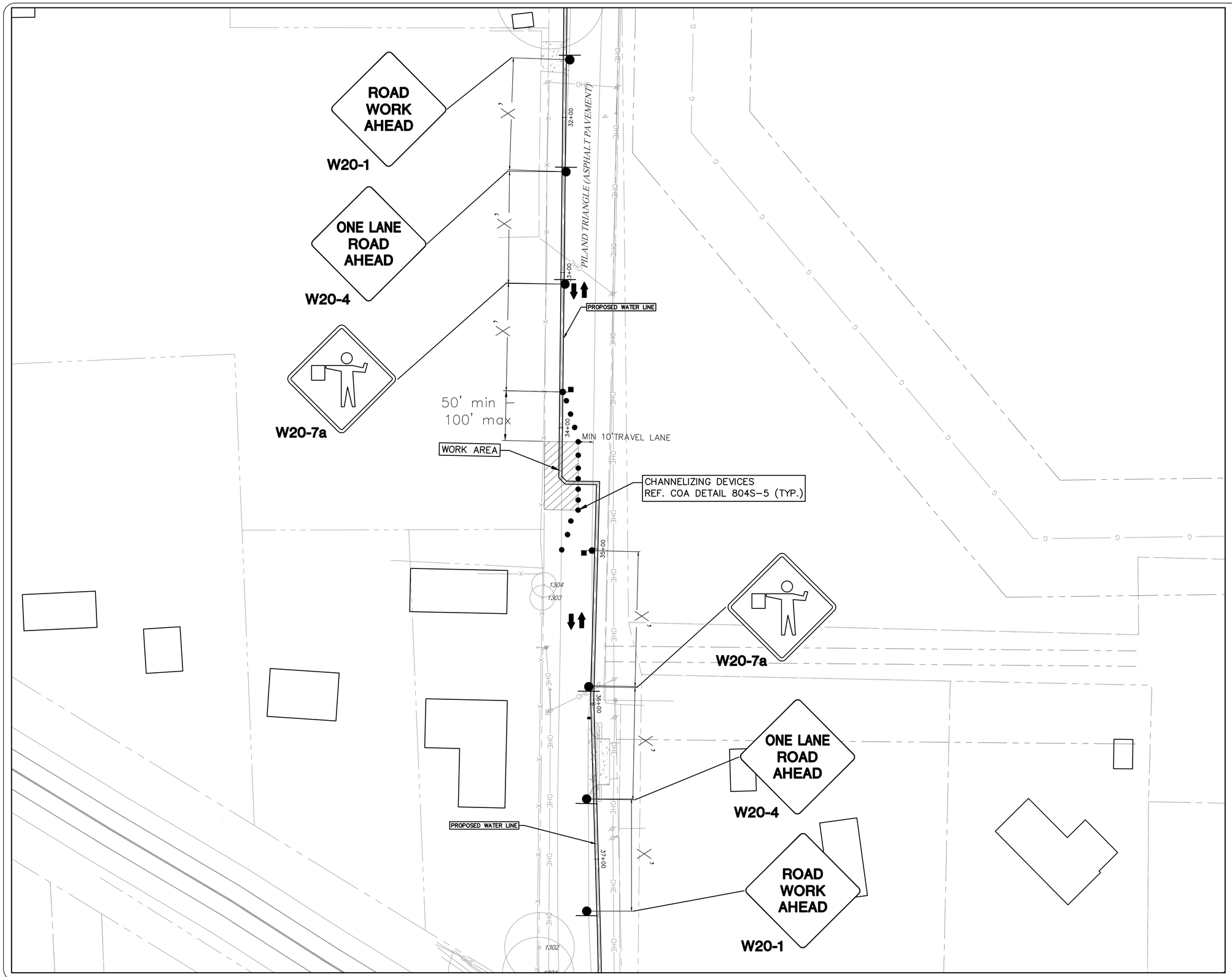
STATE OF TEXAS
KELLEY W. FOWLER
108583
LICENSED
PROFESSIONAL ENGINEER
10/15/2020

SHEET TC-08
SEQ. 39

Date: Jul 01, 2020 – 10:39am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-8.dwg




30 0 15 30 60

1" = 30'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

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3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
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10/15/2020


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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

PILAND TRIANGLE TCP 7

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FILE NAME 107920-00004-PHASE-9.dwg

VERIFY SCALE 0 1
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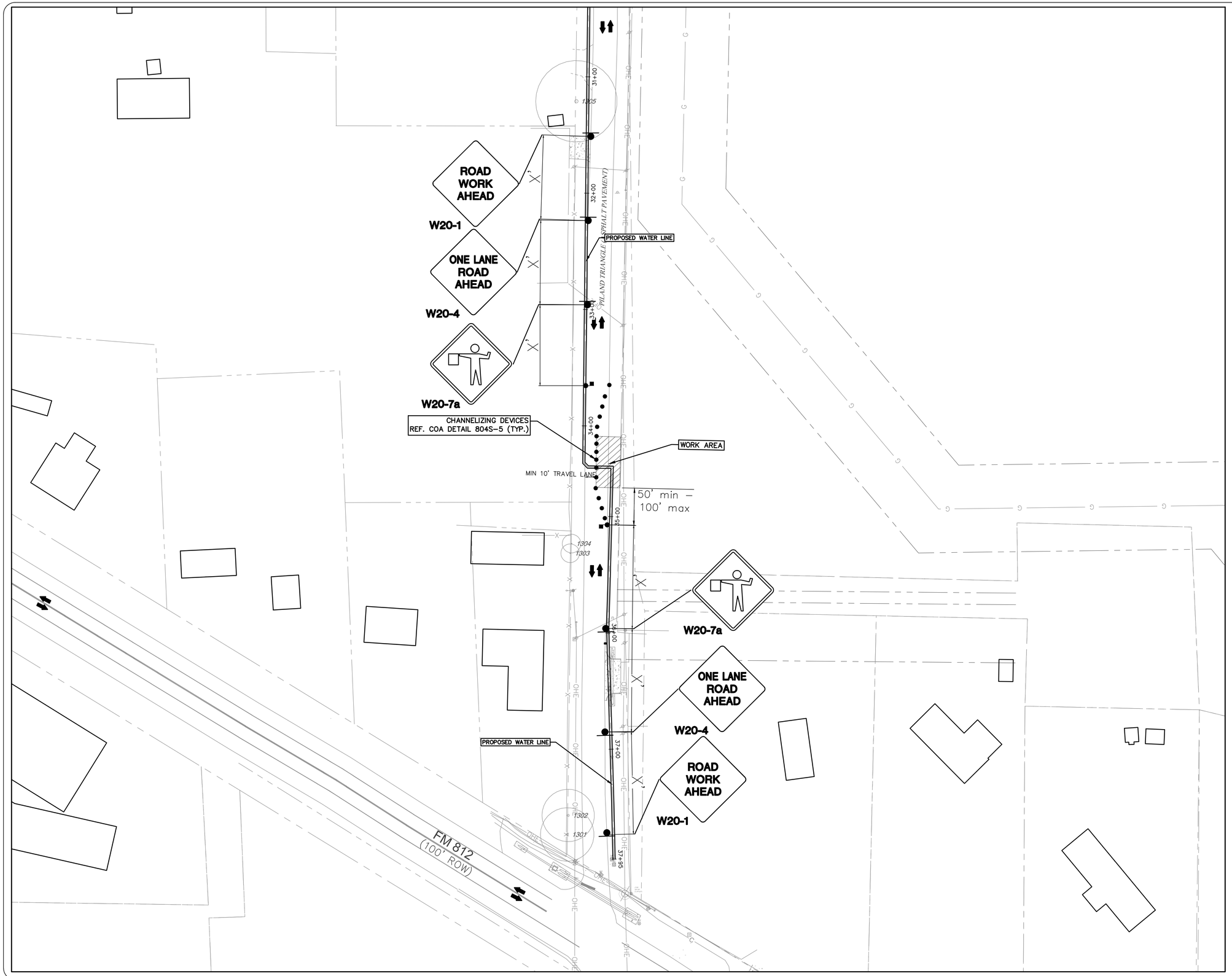
SHEET TC-09
SEQ. 40

Date: Jul 01, 2020 – 10:39am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-9.dwg




40 0 20 40 80

1" = 40'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

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3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

# PILAND TRIANGLE TCP 8

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DATE 07/01/20
DESIGNED DGS
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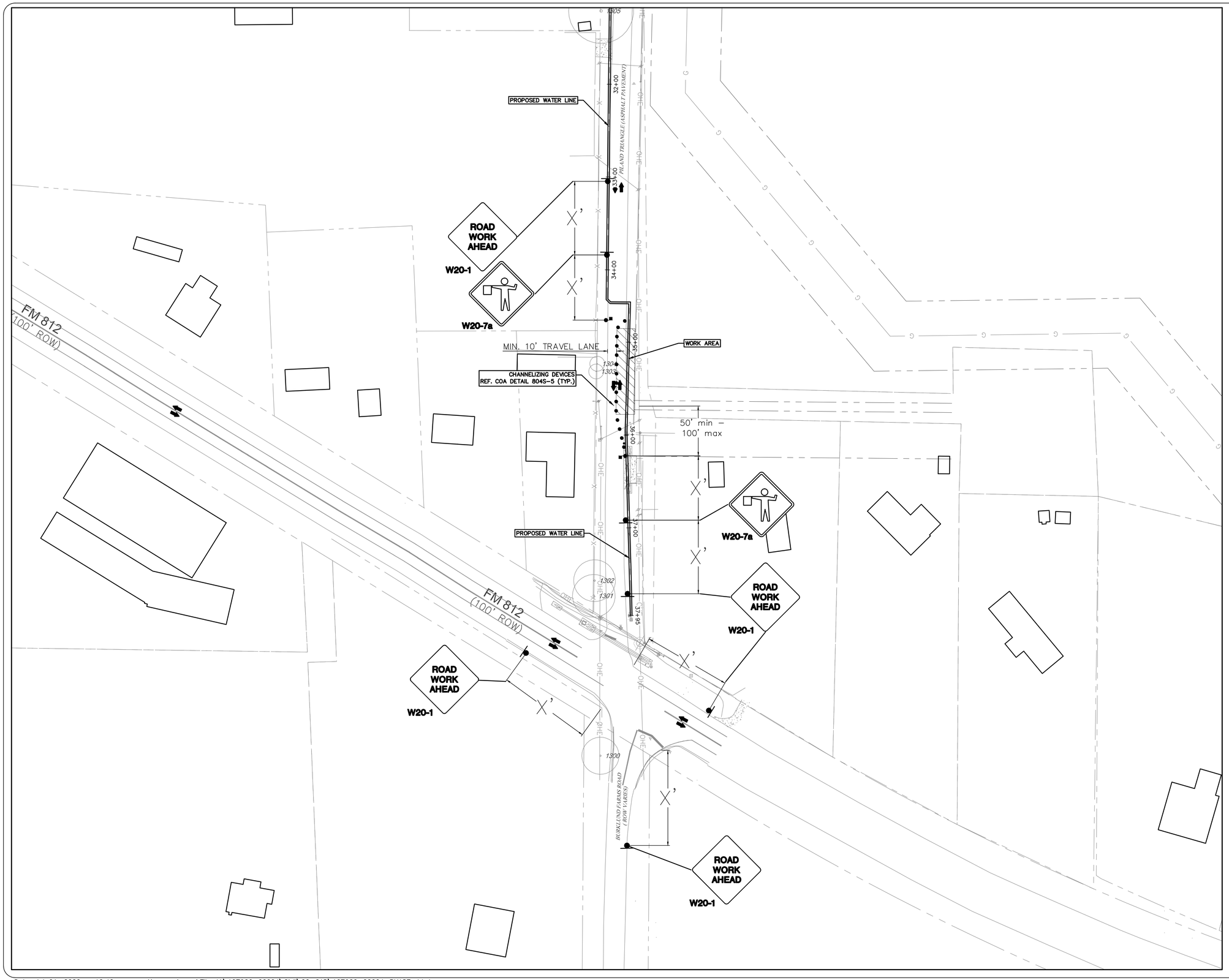
FILE NAME 107920-00004-PHASE-10.dwg

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET TC-10

SEQ. 41

Date: Jul 01, 2020 – 10:39am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-10.dwg




50 0 25 50 100

1" = 50'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

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3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
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10/15/2020


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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

# PILAND TRIANGLE TCP 9

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DATE 07/01/20
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FILE NAME 107920-00004-PHASE-11.dwg

VERIFY SCALE 0 1
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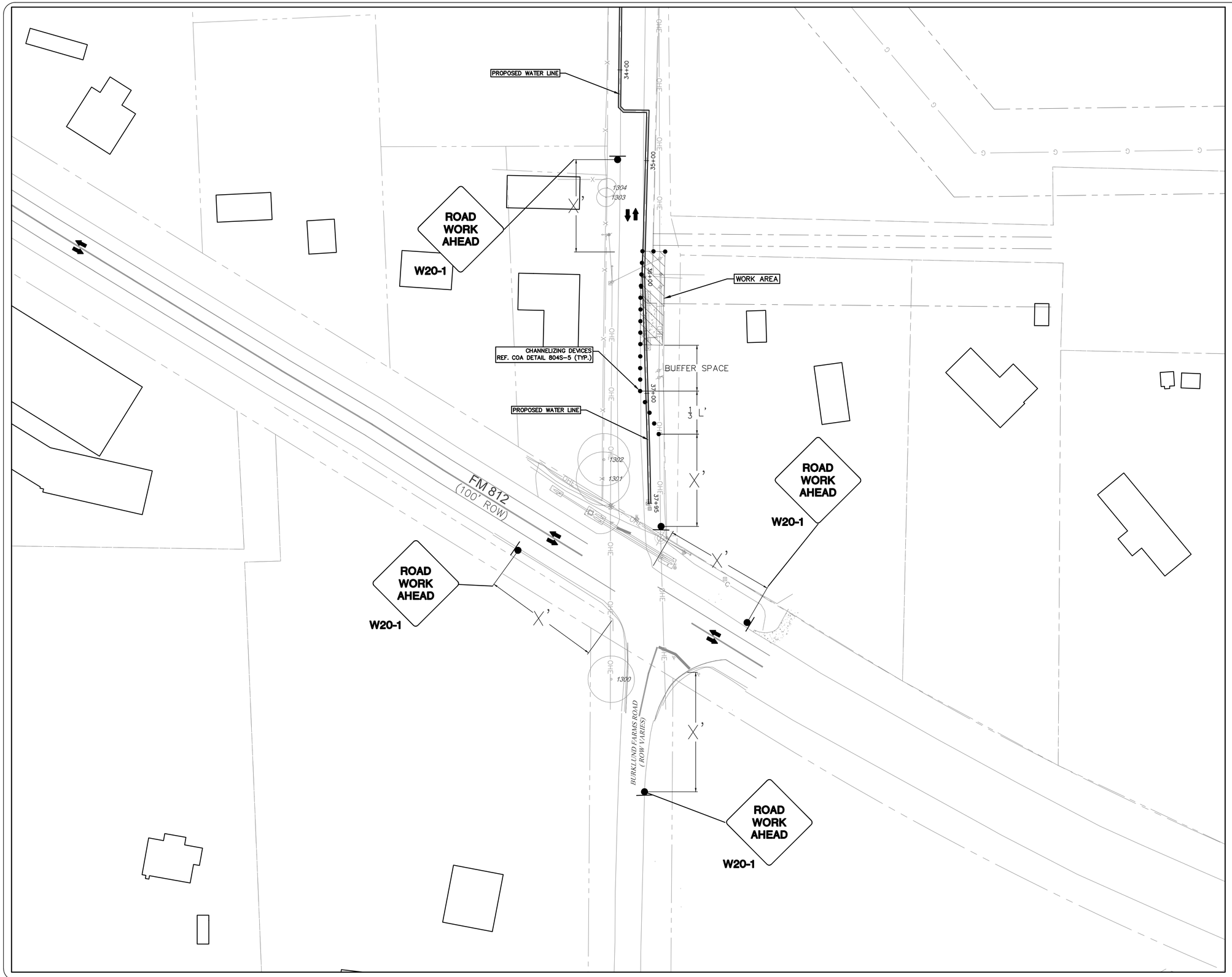
SHEET TC-11

SEQ. 42

Date: Jul 01, 2020 – 10:40am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-11.dwg




40 0 20 40 80

1" = 40'

## LEGEND

| EXISTING | PROPOSED | DESCRIPTION |
|---|---|---|
| | | PROPERTY (R.O.W.) LINE |
| | | LIMITS OF CONSTRUCTION |
| | | TRAFFIC CONTROL SIGNAGE |
| | | CHANNELIZING DEVICE |
| | | TRAFFIC DIRECTION |
| | | WORK AREA |
| | | CONSTRUCTION FENCE |
| | | FLAGGER |
| | | TRAILER MOUNTED FLASHING ARROW BOARD |

## GENERAL NOTES

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3. REFERENCE CITY OF AUSTIN DETAIL 804S-5 FOR "X", "L", BUFFER LENGTHS.

STATE OF TEXAS
KELLEY W. FOWLER
108583
LICENSED
PROFESSIONAL ENGINEER
10/15/2020


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CITY OF AUSTIN, TEXAS

# PILAND TRIANGLE INTERCONNECT

# PILAND TRIANGLE TCP 10

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F&N JOB NO. AU118116
DATE 07/01/20
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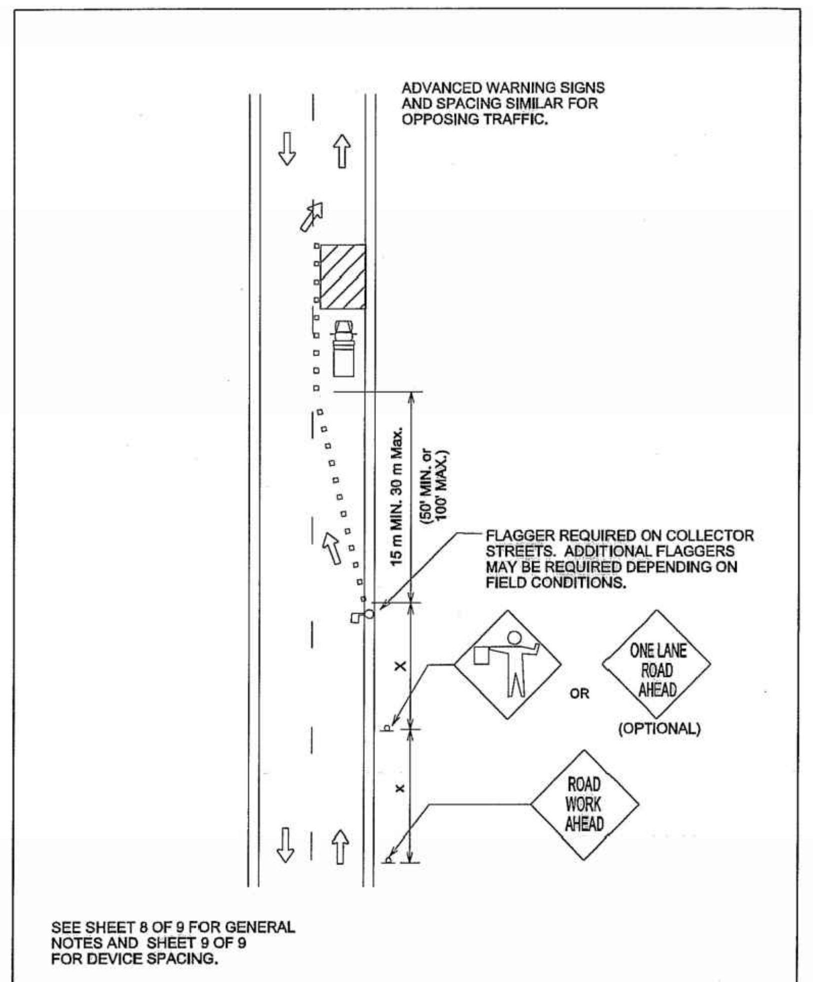
REVISED
CHECKED
FILE NAME 107920-00004-PHASE-12.dwg

VERIFY SCALE 0 1
Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

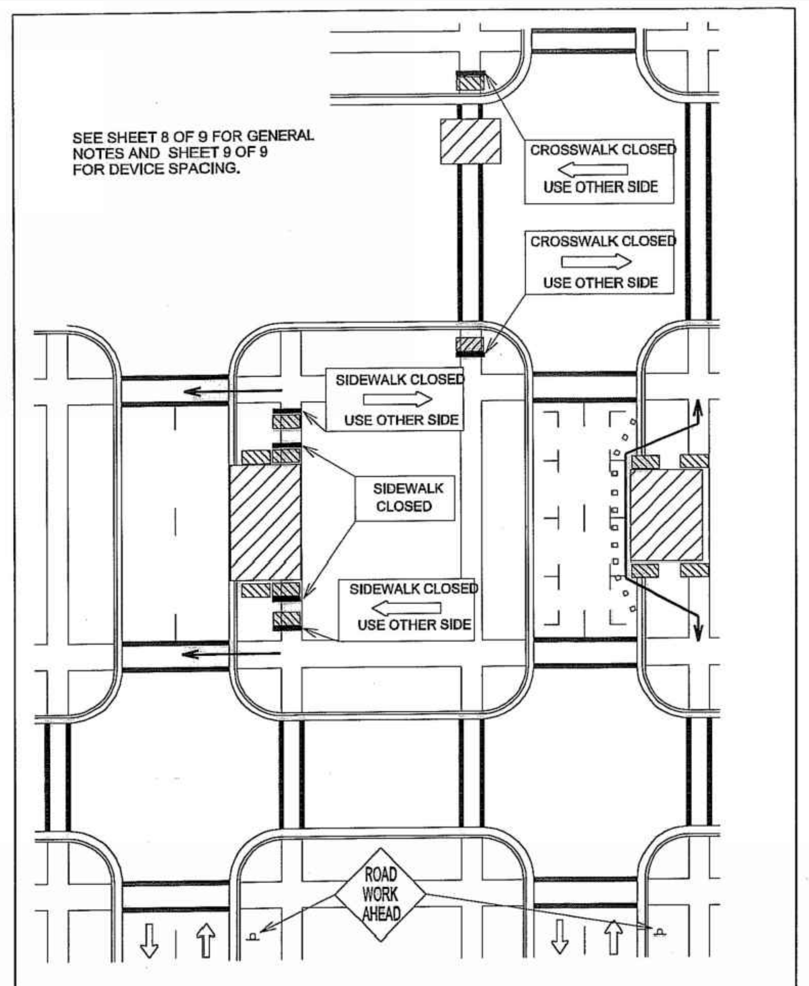
SHEET TC-12

SEQ. 43

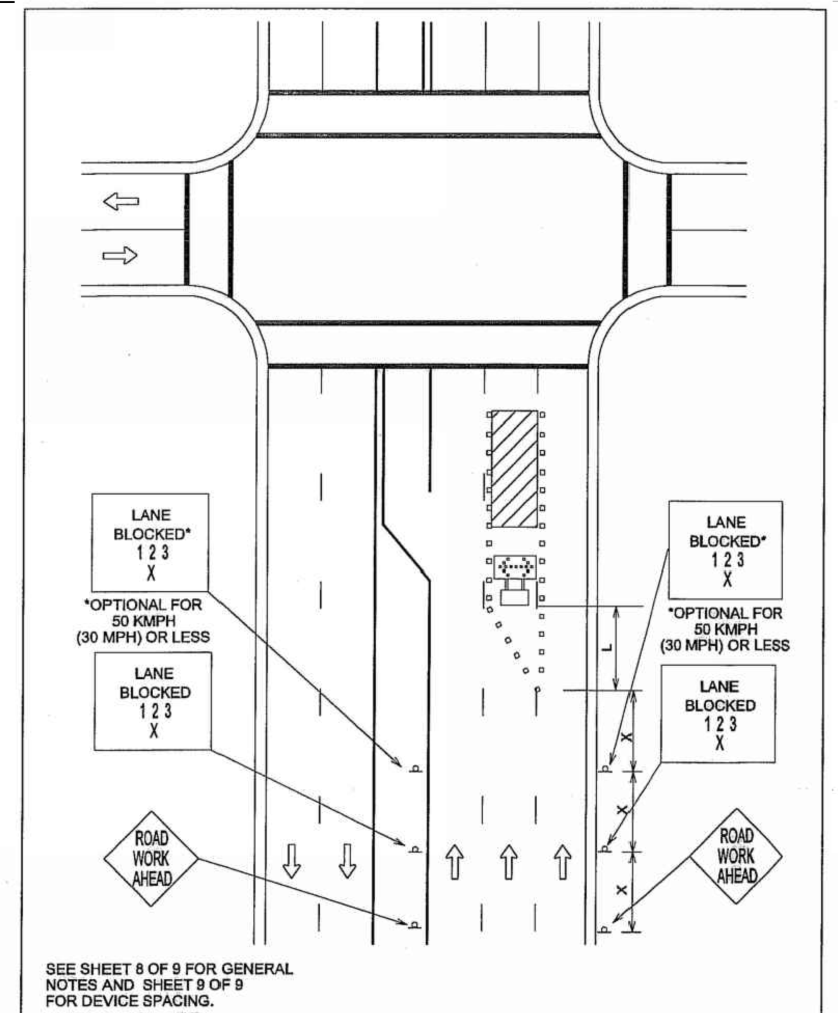
Date: Jul 01, 2020 – 10:40am User: aaboussie File: V:\107920-00004\Civil\00-CAD\107920-00004-PHASE-12.dwg



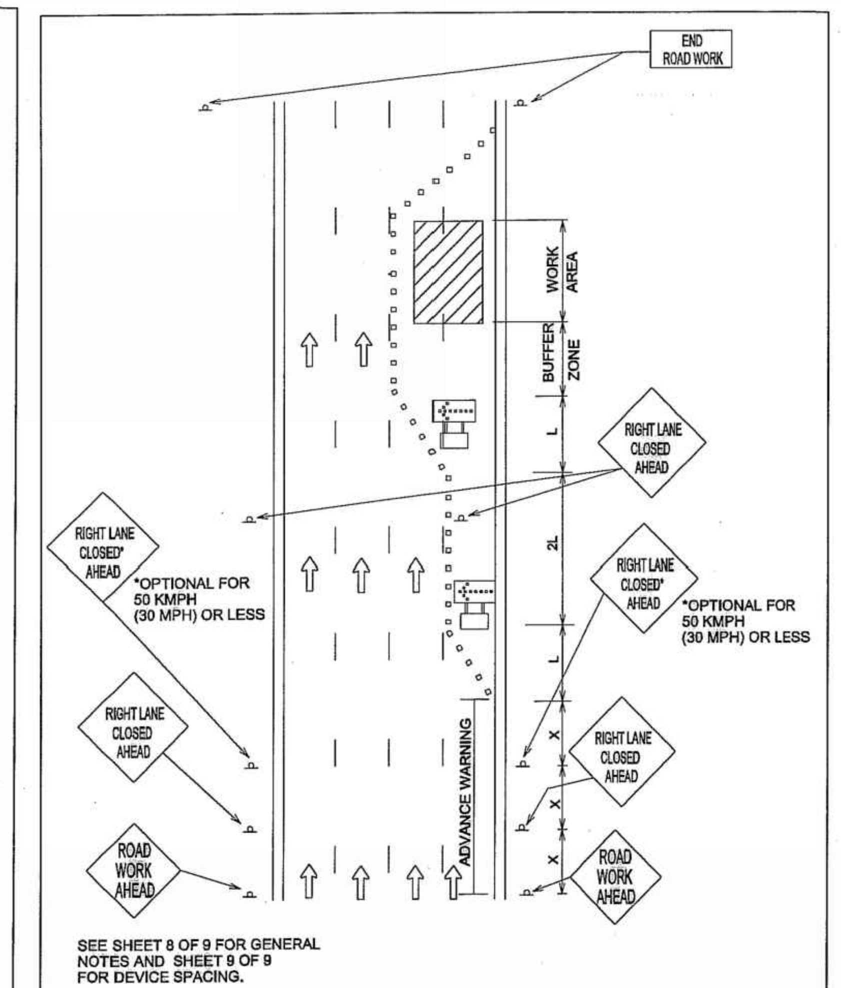

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
COLLECTOR/RESIDENTIAL LANE CLOSURES
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 5 OF 9



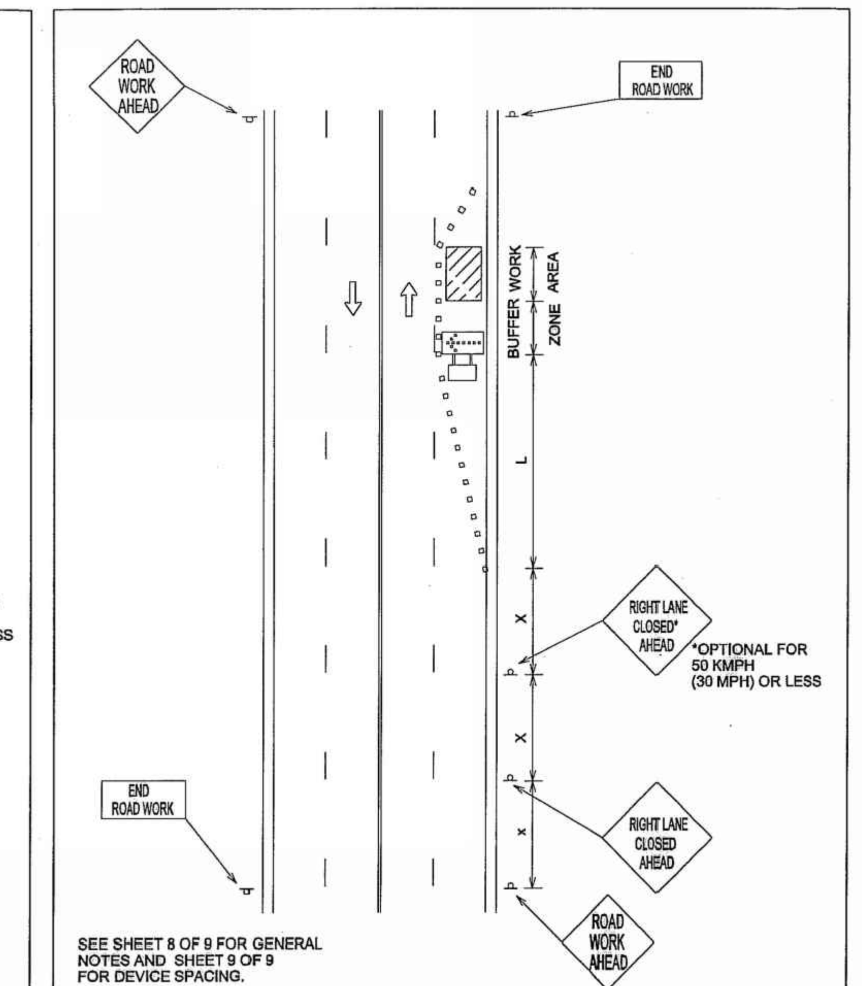

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
BYPASS WALKWAY, SIDEWALK AND CROSSWALK CLOSURES
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 4 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TWO WAY, DIVIDED ARTERIAL ONE LANE CLOSURE
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 3 OF 9



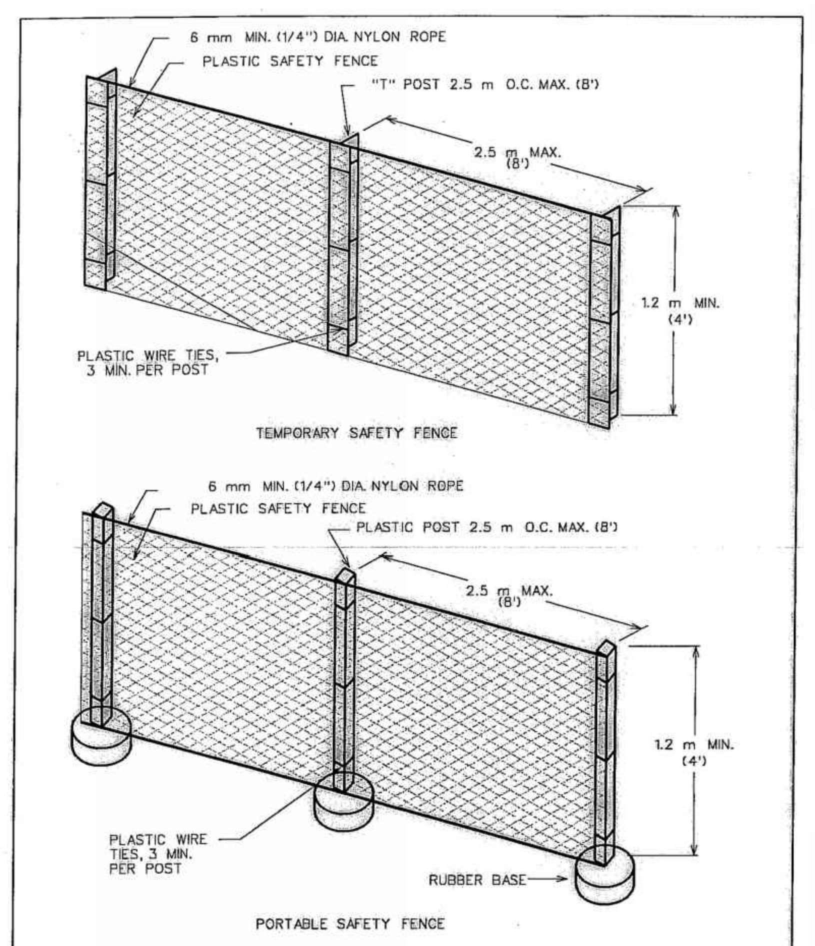

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ONE WAY ARTERIAL TWO-LANE CLOSURE
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 2 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
ARTERIAL ONE LANE CLOSURE
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 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 803S, 'BARRICADES, SIGNS AND TRAFFIC HANDLING', PAY ITEM NO. 803S-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
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 2 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
SAFETY FENCE
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 1 OF 9

Typical Transition Lengths and Suggested Maximum Spacing of Devices

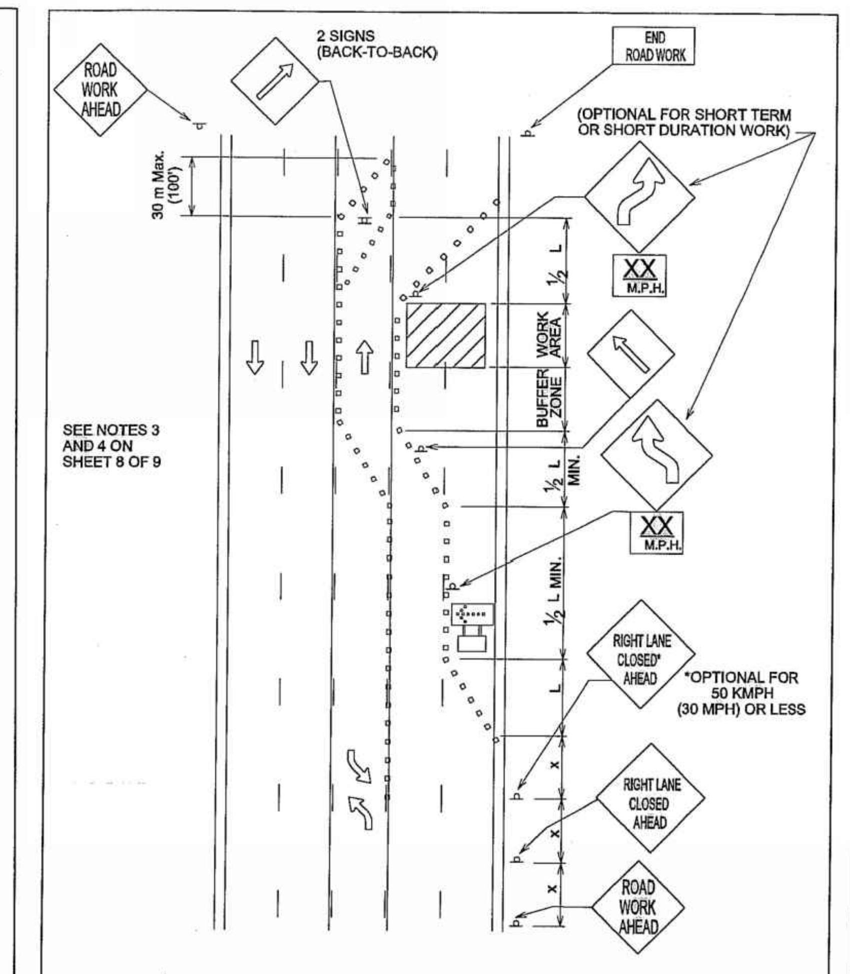
| Speed KMPH | Posted Speed MPH | Formula | Minimum Desirable Taper Lengths (L) Meters (Feet): 3.0(10) Offset Meters (feet) | 3.3(11) Offset Meters (feet) | 3.6(12) Offset Meters (feet) | Suggested Max. Device Spacing: On a taper Meters (feet) | On a tangent Meters (feet) | Suggested Sign Spacing Meters (Feet): "X" Dimension |
|---|---|---|---|---|---|---|---|---|
| 50 | 30 | $L=\frac{WS^2}{60}$ | 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) | 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

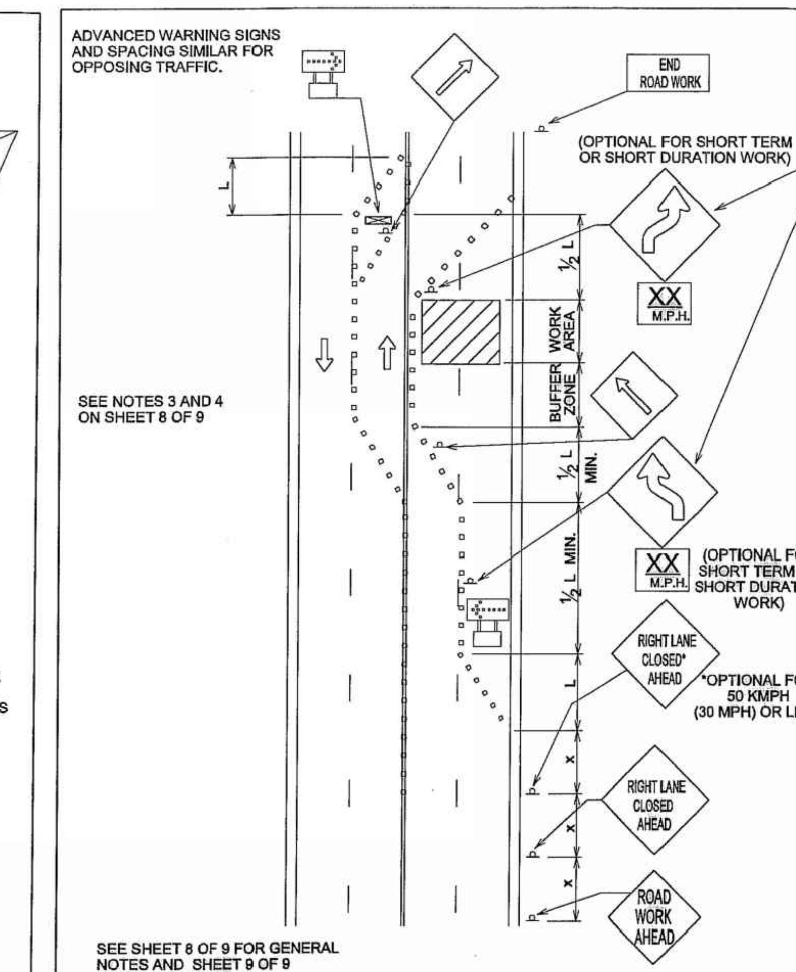
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
DEVICE SPACING
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 9 OF 9

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
DEPARTMENT OF PUBLIC WORKS
GENERAL NOTES
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 8 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 7 OF 9

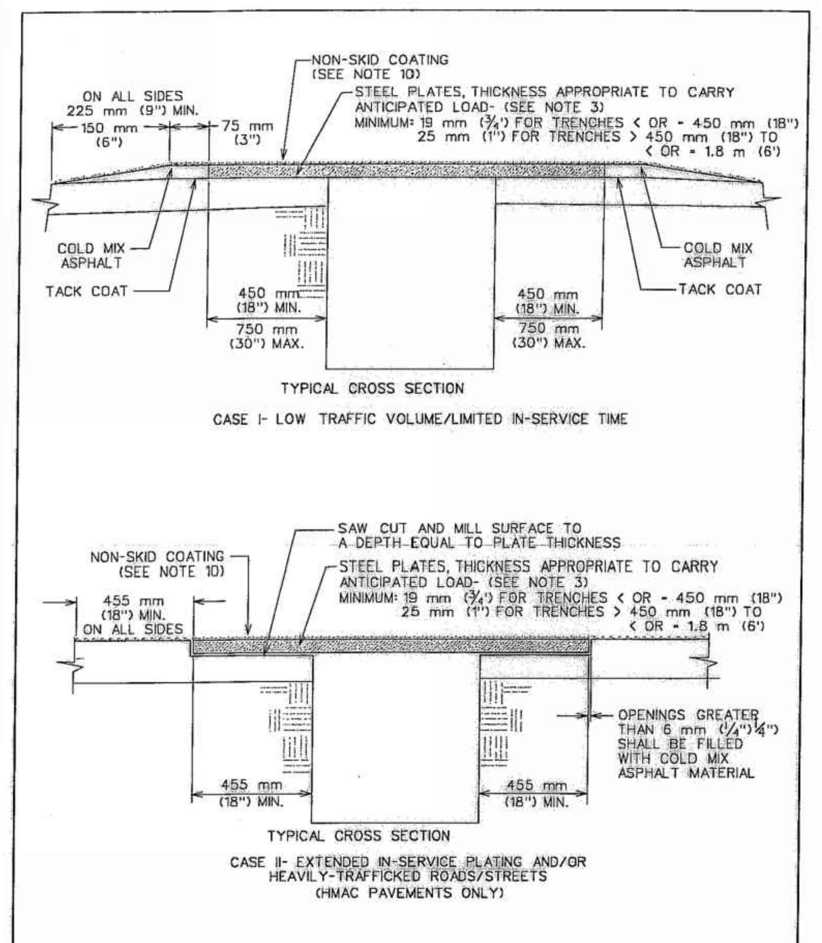



CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
TYPICAL TRAFFIC CONTROL PLAN FOR SHIFTING TRAFFIC
ADOPTED 1/4/11
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-1, 6 OF 9

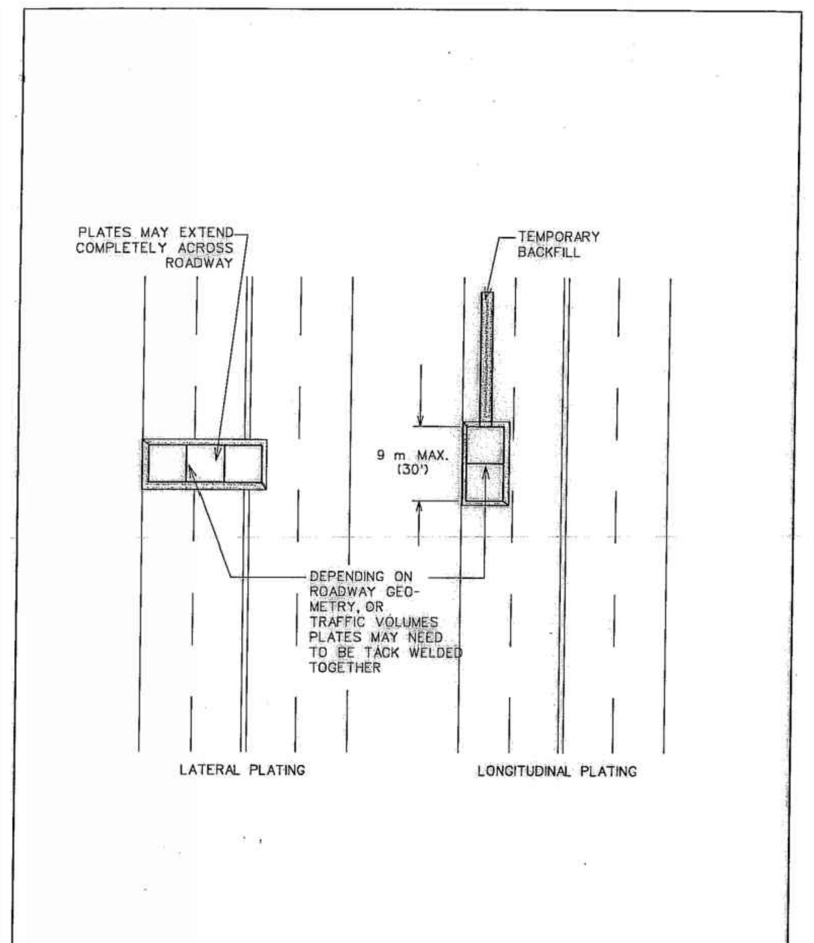
NOTES:

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 DEVLOPMENT 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 (½") 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 (½") SHALL NOT BE USED FOR PLATING PURPOSES. PLATES THAT DEVELOP A PERMANENT DISPLACEMENT EXCEEDING 12 mm (½") 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; SLIPFIX, INC. SPS (SLIP PROTECTION SURFACE) OR AN EQUIVALENT PRODUCT APPROVED BY THE ENGINEER OR DESIGNATED REPRESENTATIVE.

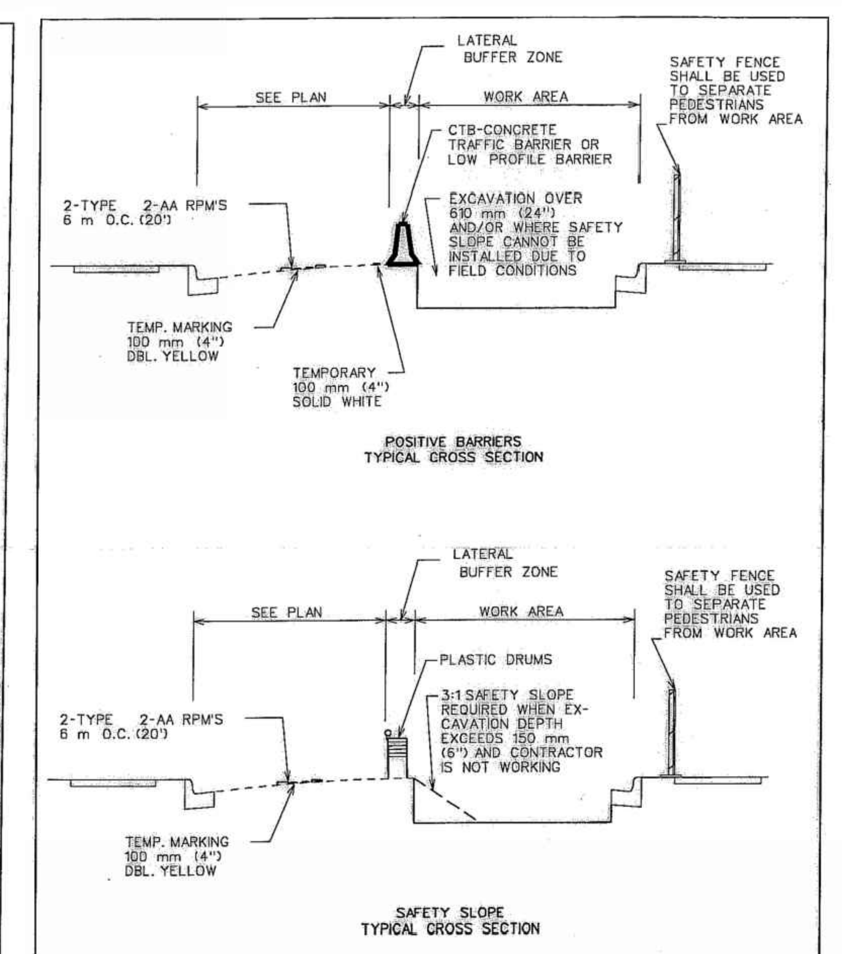
CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
STEEL PLATING
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 7 OF 9



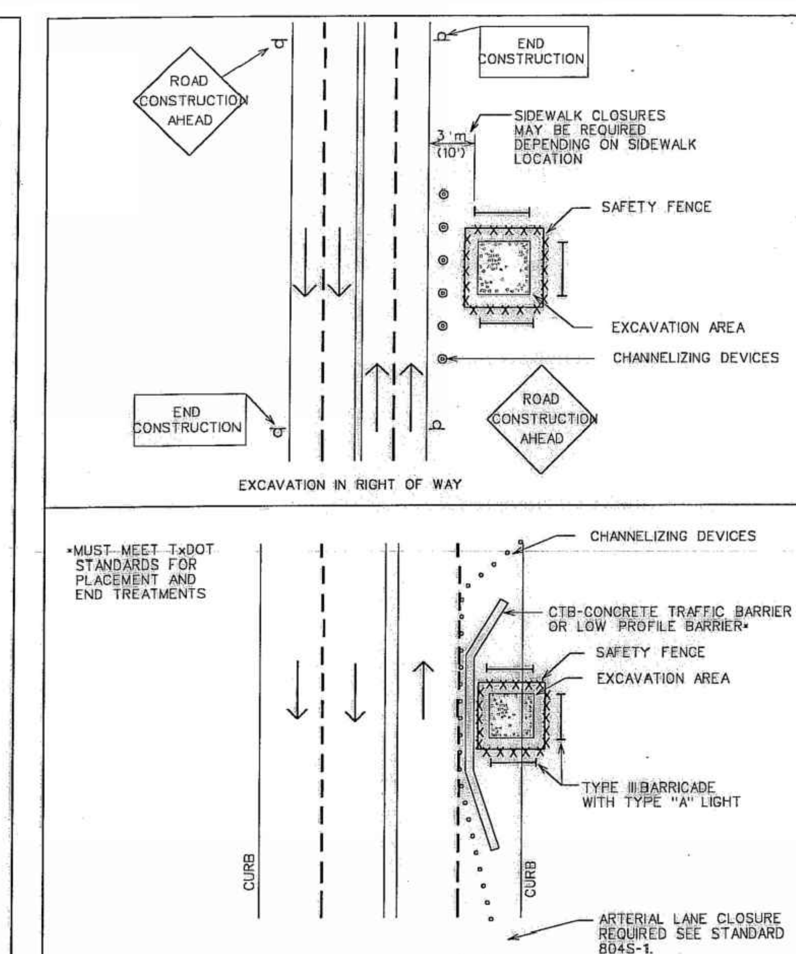

CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
STEEL PLATING
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 6 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
STEEL PLATING
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 5 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
WORK AREA PROTECTION
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 4 OF 9




CITY OF AUSTIN
DEPARTMENT OF PUBLIC WORKS
LARGE EXCAVATION
ADOPTED 4/3/09
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 804S-4, 3 OF 9

STATE OF TEXAS
KELLEY W. FOWLER
108583
LICENSED PROFESSIONAL ENGINEER
10/15/2020

Freese and Nichols, Inc.
Texas Registered Engineering Firm F-2144

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CITY OF AUSTIN, TEXAS
PILAND TRIANGLE INTERCONNECT

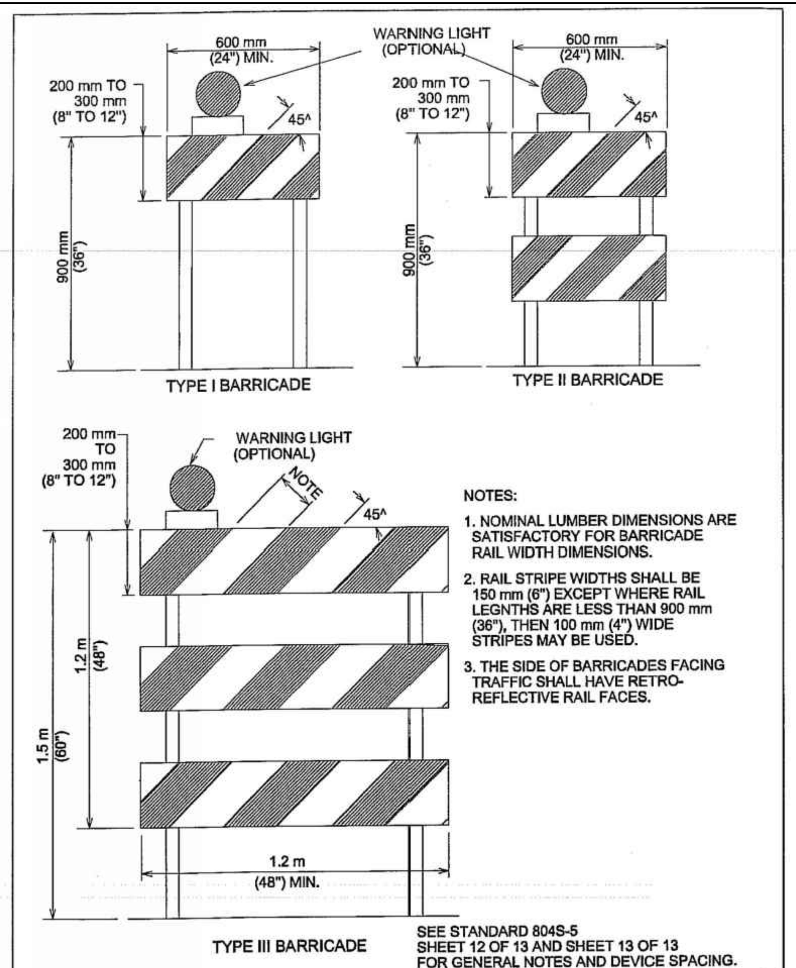
# TRAFFIC CONTROL DETAILS (1 OF 2)

| NO. | ISSUE | BY | DATE |
|---|---|---|---|
| | | | |

F&N JOB NO. AU118116
DATE 06/30/20
DESIGNED DGS
DRAWN ESL
REVISED
CHECKED
FILE NAME 107920-00004-TCD.dwg

VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET TC-13
SEQ. 44




NOTES:

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

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

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS — BARRICADES — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 3 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.

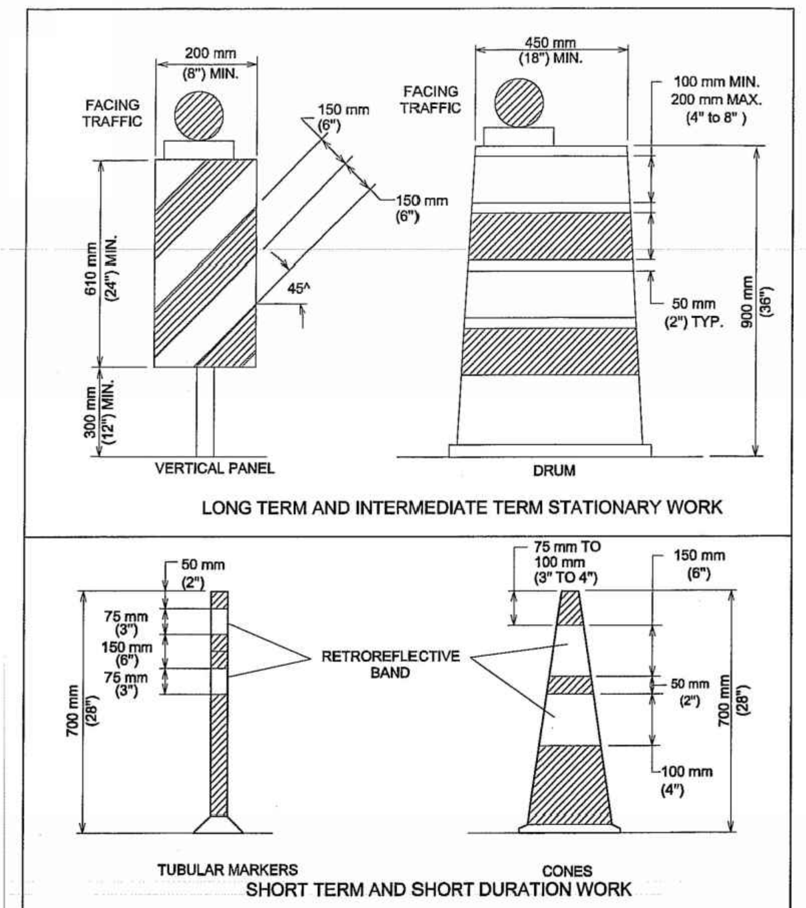
### VERTICAL PANELS

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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 2 OF 13

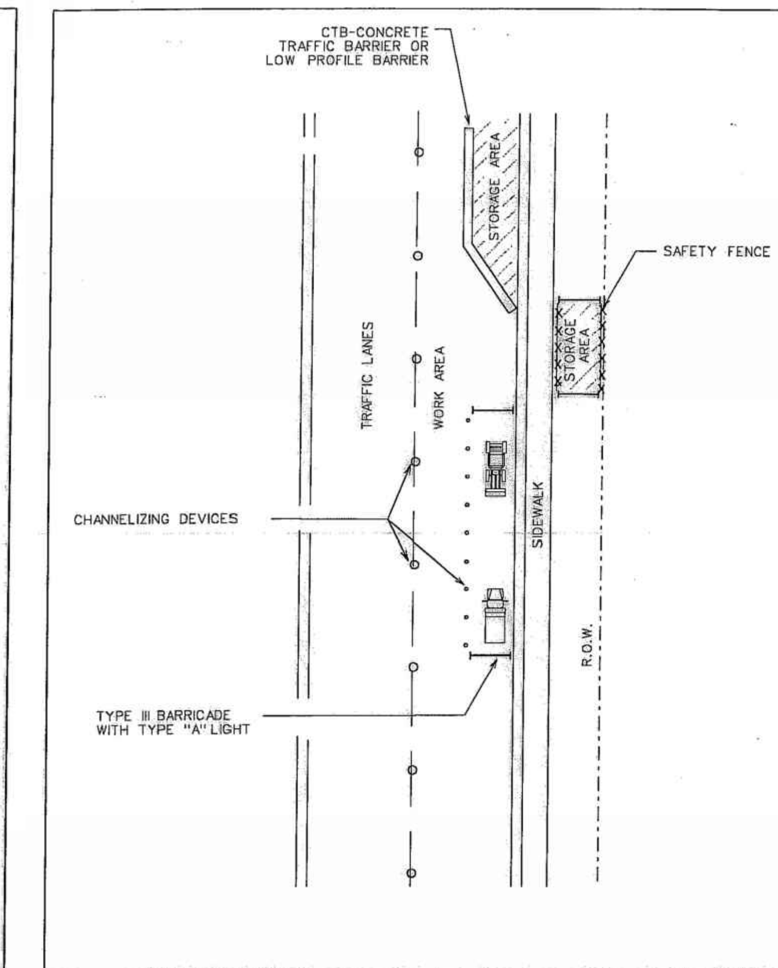



SEE STANDARD 804S-5 SHEET 12 OF 13 AND SHEET 13 OF 13 FOR GENERAL NOTES AND DEVICE SPACING.

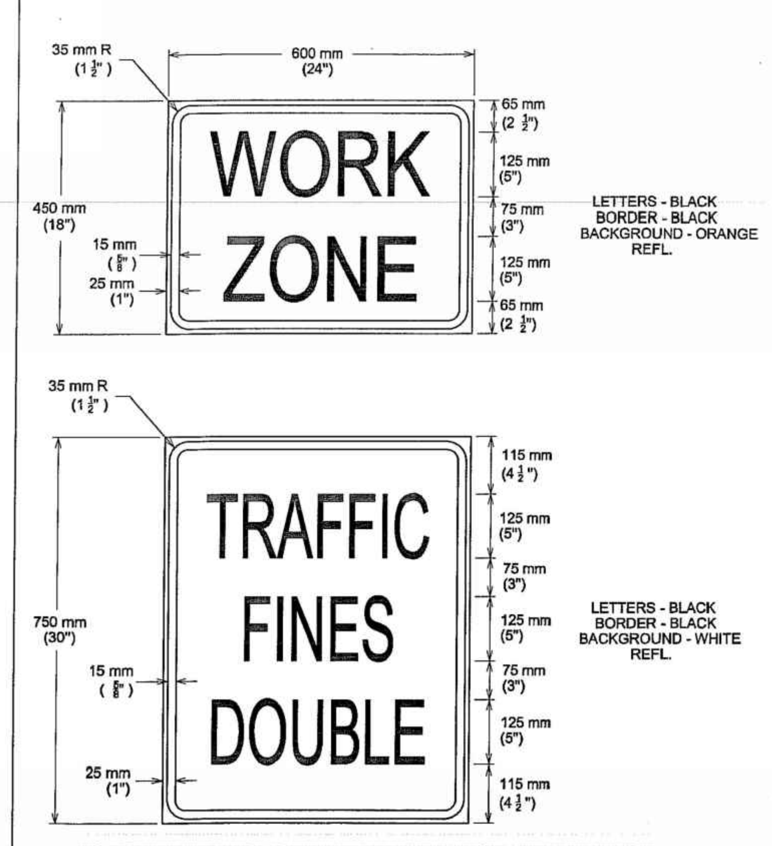
CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS — CHANNELIZING DEVICES — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 1 OF 13

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 — 4/3/09 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-4, 9 OF 9

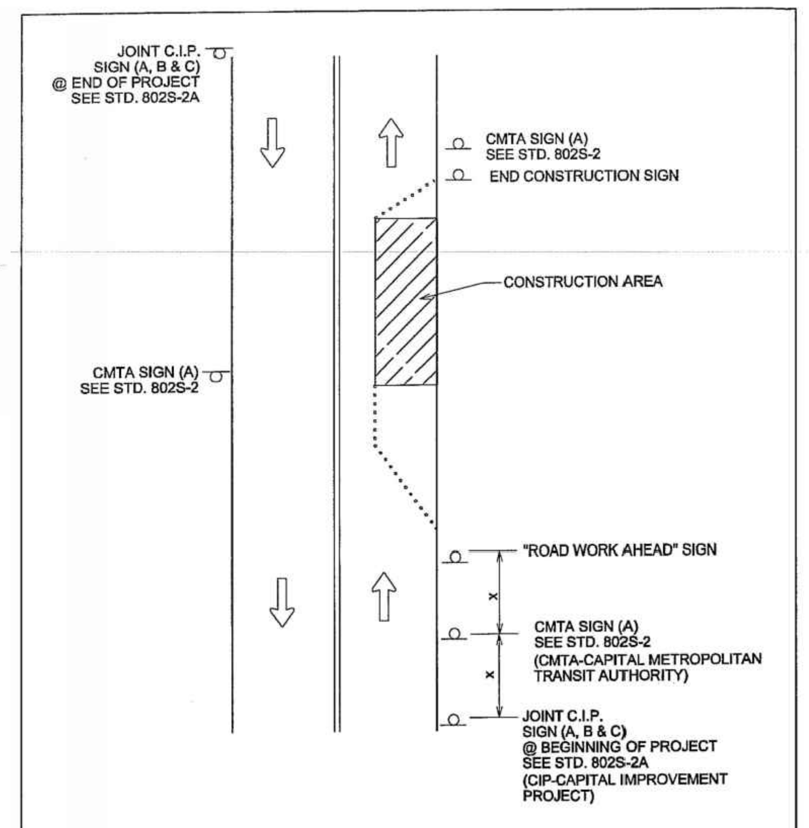



CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS — MATERIAL AND EQUIPMENT STORAGE — 4/3/09 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-4, 8 OF 9




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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 9 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 8 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 0.3 m (1') LESS THAN THE APPROPRIATE HEIGHT ABOVE.
4. SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS FOR SHORT-TERM, SHORT DURATION, MOBILE CON-DITIONS AND EMERGENCIES. SIGNS MOUNTED ON PORTABLE SUPPORTS SHALL BE AT A HEIGHT OF AT LEAST 0.3 m (1'), MEASURED FROM THE BOTTOM OF THE SIGN.
5. ALL SIGN SYSTEMS SHOULD BE CRASHWORTHY. NO SIGN MOUNTS SHALL BLOCK OR IMPEDE SIDEALKS UNLESS NO OTHER OPTION IS AVAILABLE. ONLY SANDBAGS SHOULD BE USED FOR BALLASTING SIGN MOUNTS.

TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

| Roadway Classification | Posted Speed | Sign Spacing ☆ | Long-term Stationary Or Intermediate-term Stationary Approaching Warning Signs CW20 Series And CW22-1 Sign: Standard | Long-term …: Minimum[4] | Short-term Stationary Or Short Duration Approach Warning Signs CW22 Series: Standard | Short-term …: Minimum[4] | Other Warning Signs: Standard |
|---|---|---|---|---|---|---|---|
| Conven. | KPH (MPH) | meter (feet) | mm (inches) | mm (inches) | mm (inches) | mm (inches) | mm (inches) |
| | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | | [illegible] |
| | 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 | | | ☆☆☆ | ☆☆☆ | ☆☆☆ |

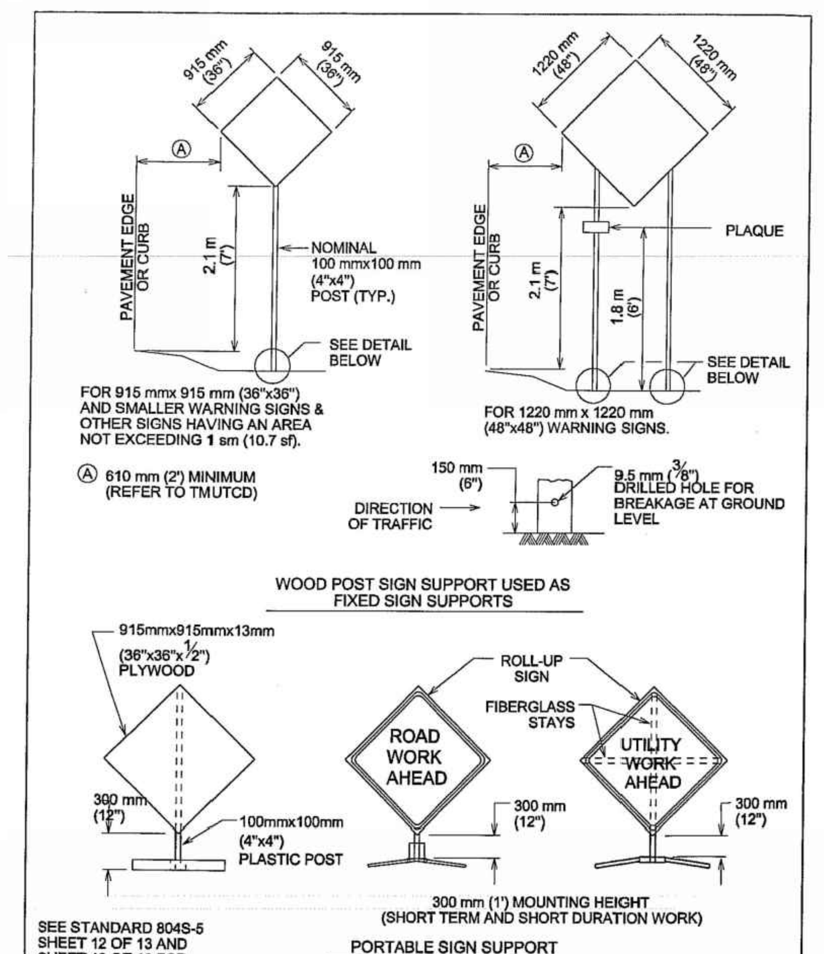
☆ MINIMUM DISTANCE FROM WORK TO 1st ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.

☆☆ FOR TYPICAL SIGN SPACINGS ON EXPRESSWAYS AND FREEWAY'S, 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".

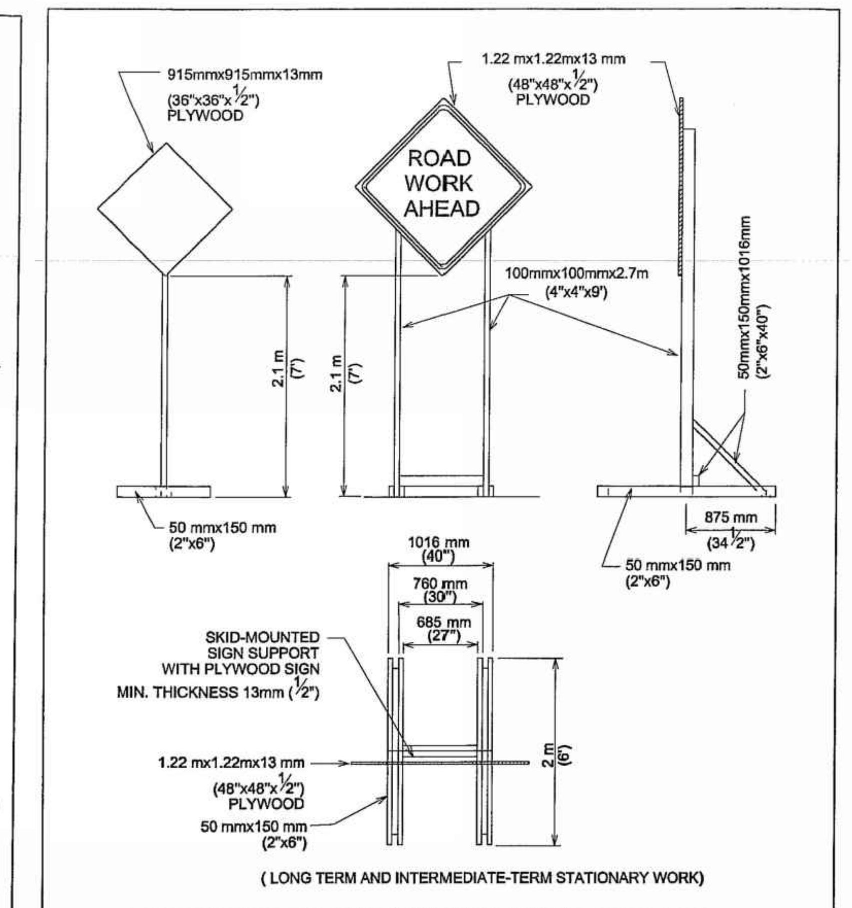
1. SPECIAL OR LARGER SIZE SIGNS MAY BE USED AS NECESSARY.
2. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE 450 m (1500') OR MORE ADVANCE WARNING.
3. DISTANCE BETWEEN SIGNS SHOULD BE INCREASED AS REQUIRED TO HAVE A 0.8 km ($\frac{1}{2}$ MILE) OR MORE ADVANCE WARNING.
4. FOR USE ONLY ON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

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS — TRAFFIC CONTROL SIGNS — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 7 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 6 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 5 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 4 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.

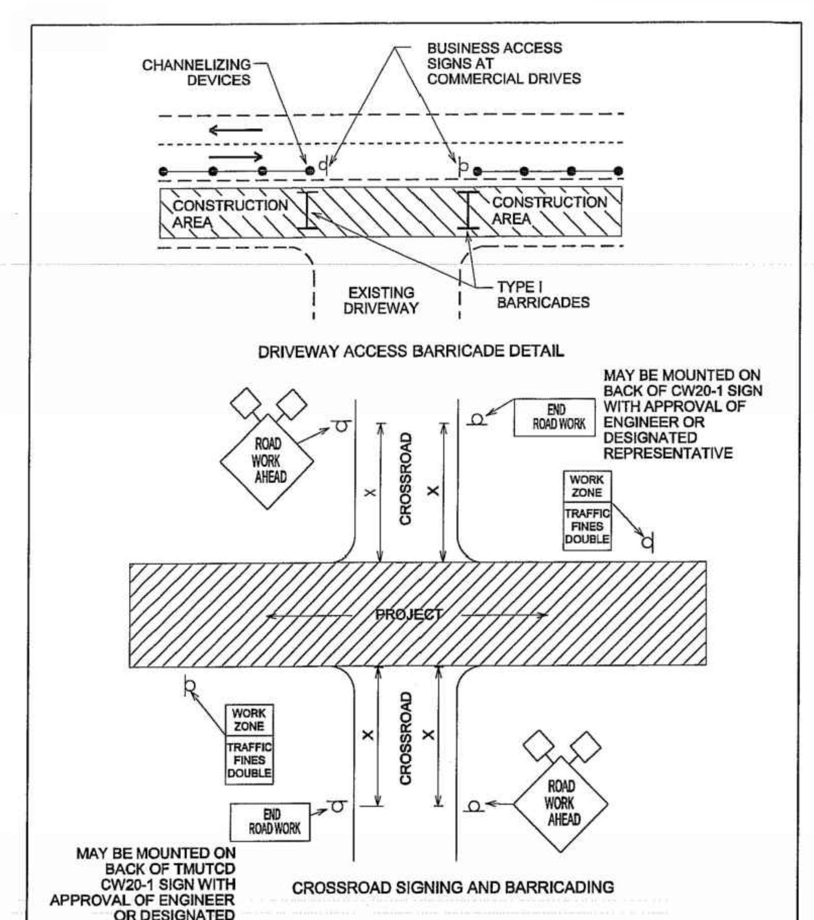
Typical Transition Lengths and Suggested Maximum Spacing of Devices

| Posted Speed KPH (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) | $L=\frac{WS^2}{60}$ | 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 13 OF 13

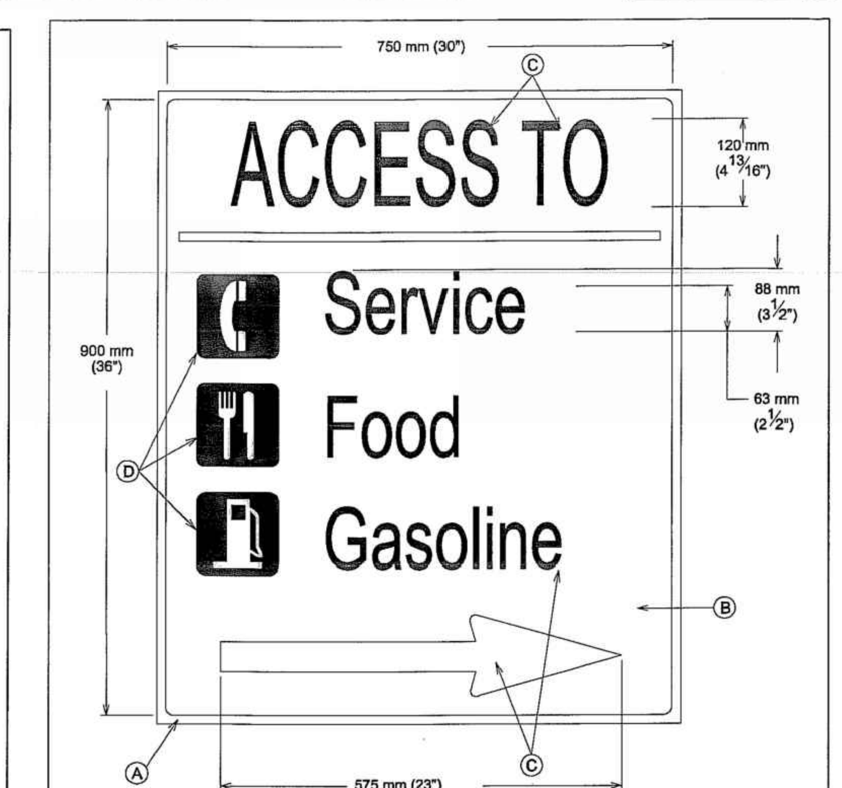
1. ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES AND WARNING SIGNS SHALL BE FURNISHED, PLACED, CONSTRUCTED AND MAINTAINED IN THE APPROPRIATE TYPES AND SIZES AND FLAGGER OPERATIONS EXECUTED IN ACCORDANCE WITH THE CURRENT EDITION OF THE TEXAS MANUAL ON UNIFORM CONTROL DEVICES (TMUTCD), THE CITY OF AUSTIN 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 12 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 — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 11 OF 13




Ⓐ 50 mm ($\frac{1}{2}$") WHITE RETROREFLECTIVE BORDER
Ⓑ BLUE RETROREFLECTIVE BACKGROUND
Ⓒ WHITE RETROREFLECTIVE ARROW AND LETTERS
Ⓓ WHITE RETROREFLECTIVE BUSINESS LOGO

NOTES:

1. CONTRACTORS CAN MAKE BUSINESS NAMES REMOVABLE/CHANGEABLE AS AN OPTION.
2. BUSINESS LOGO ARE OPTIONAL. IF USED LETTERING MUST BE MINIMIZED.

CITY OF AUSTIN — DEPARTMENT OF PUBLIC WORKS — SPECIAL WORK ZONE SIGNS — 1/4/10 ADOPTED — THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD. — STANDARD NO. 804S-5, 10 OF 13

STATE OF TEXAS — KELLEY W. FOWLER — 108583 — LICENSED PROFESSIONAL ENGINEER — 07/15/2020


Freese and Nichols, Inc.
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CITY OF AUSTIN, TEXAS

PILAND TRIANGLE INTERCONNECT

# TRAFFIC CONTROL DETAILS (2 OF 2)

| F&N JOB NO. | AU118116 |
|---|---|
| DATE | 06/30/20 |
| DESIGNED | DGS |
| DRAWN | ESL |
| REVISED | |
| CHECKED | |
| FILE NAME | 107920-00004-TCD.dwg |

| NO. | ISSUE | BY | DATE |
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VERIFY SCALE: Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

SHEET TC-14

SEQ. 45

Date: Jun 30, 2020 – 10:34pm User: fgarza File: V:\107920-00004\Civil\00-CAD\107920-00004-TCD.dwg