LEGEND

- LOC — LIMITS OF CONSTRUCTION
- X X — PROPOSED FENCE
- 100YR — 100 YEAR FLOOD PLAIN
- EXISTING PROPERTY LINE
- WQTZ — WATER QUALITY TRANSITION ZONE
- CWQZ — CRITICAL WATER QUALITY ZONE
- EASEMENT LINES
- OHE — EXISTING OVERHEAD ELECTRIC
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- EXISTING HERITAGE TREE

N

STA. 11+56.00, 6'R SWALE W-CUL1
END CURB RECONSTRUCTION (W)
TRANSITION FROM LAYDOWN CURB
TO SPILL CURB OVER 6 LF

STA. 10+91.14, 6'R SWALE W-CUL1
BEGIN CURB RECONSTRUCTION (W)
TRANSITION FROM LAYDOWN CURB
TO SPILL CURB OVER 6 LF

SWALE W-CUL3

SWALE W-CUL1

STA. 12+46.95, 5'L SWALE E-RG1
BEGIN CURB RECONSTRUCTION (E)
TRANSITION FROM LAYDOWN CURB
TO SPILL CURB OVER 6 LF
N:10078951.72, E:3098480.16

GATED ENTRANCE
FROM REDBUD TRAIL

SWALE E-RG1

N:10078813.13
E:3098430.95

RAIN GARDEN 1

N:10078806.22
E:3098448.65

N:10078781.46
E:3098418.58

CULVERT 1
PROP 18" RCP

N:10078774.55
E:3098436.28

FOREST VIEW DR
(PRIVATE ACCESS DRIVE)

REDBUD TRAIL

MATCHLINE
(SEE SHEET C10-101B)

SWALE E-RG1					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
L101		147.24	N21° 19' 47.43"E	N: 10078721.13,E: 3098390.73	N: 10078858.29,E: 3098444.29
C101	998.63	99.75	N24° 05' 41.90"E	N: 10078858.29,E: 3098444.29	N: 10078949.31,E: 3098484.99

SWALE W-CUL1					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
L100		93.12	N21° 24' 09.29"E	N: 10078769.53,E: 3098374.93	N: 10078856.23,E: 3098408.92
C100	2240.58	117.63	N23° 52' 28.61"E	N: 10078856.23,E: 3098408.92	N: 10078963.78,E: 3098456.52

SWALE W-CUL3					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
C102	1932.85	312.49	S43° 51' 10.15"W	N: 10079642.60,E: 3098994.75	N: 10079417.50,E: 3098778.49
L102		303.19	S37° 15' 00.57"W	N: 10079417.50,E: 3098778.49	N: 10079176.16,E: 3098594.97
C103	3562.39	100.43	S36° 00' 42.94"W	N: 10079176.16,E: 3098594.97	N: 10079094.93,E: 3098535.93
C104	972.19	153.47	S31° 11' 37.19"W	N: 10079094.93,E: 3098535.93	N: 10078963.78,E: 3098456.52

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER: _____ APPLICATION DATE: _____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER: _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: _____ ZONING_____
Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-000372
Main: 512.836.2388 | Fax: 512.836.4515

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

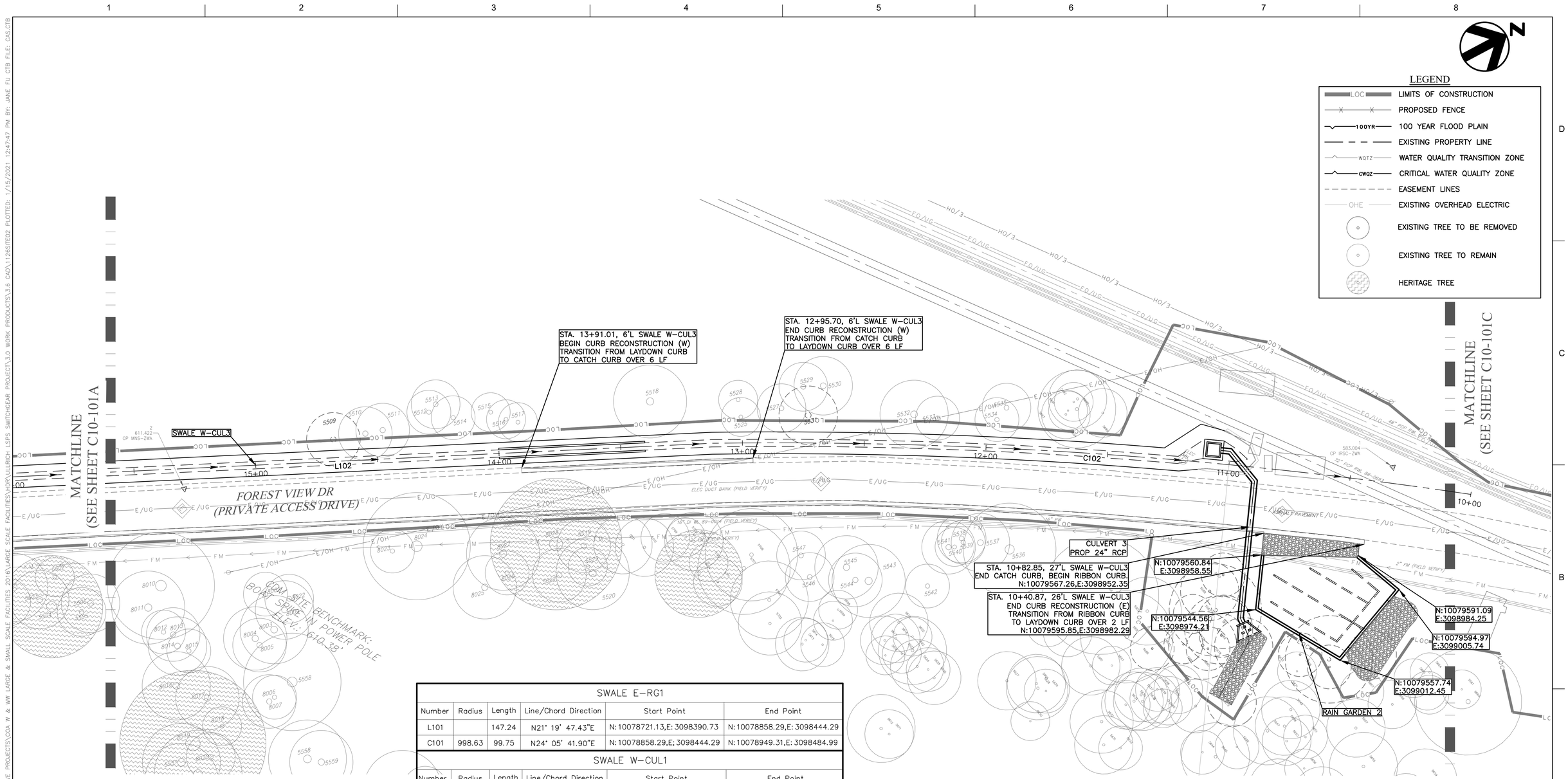
ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

SITE PLAN (1 OF 5)

0 1" 2"

FILENAME 1126SITE01
SCALE 1" = 20'

SHEET 8 of 350
C10-101A



SWALE E-RG1					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
L101		147.24	N21° 19' 47.43"E	N: 10078721.13,E: 3098390.73	N: 10078858.29,E: 3098444.29
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SWALE W-CUL1					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
L100		93.12	N21° 24' 09.29"E	N: 10078769.53,E: 3098374.93	N: 10078856.23,E: 3098408.92
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SWALE W-CUL3					
Number	Radius	Length	Line/Chord Direction	Start Point	End Point
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7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
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HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

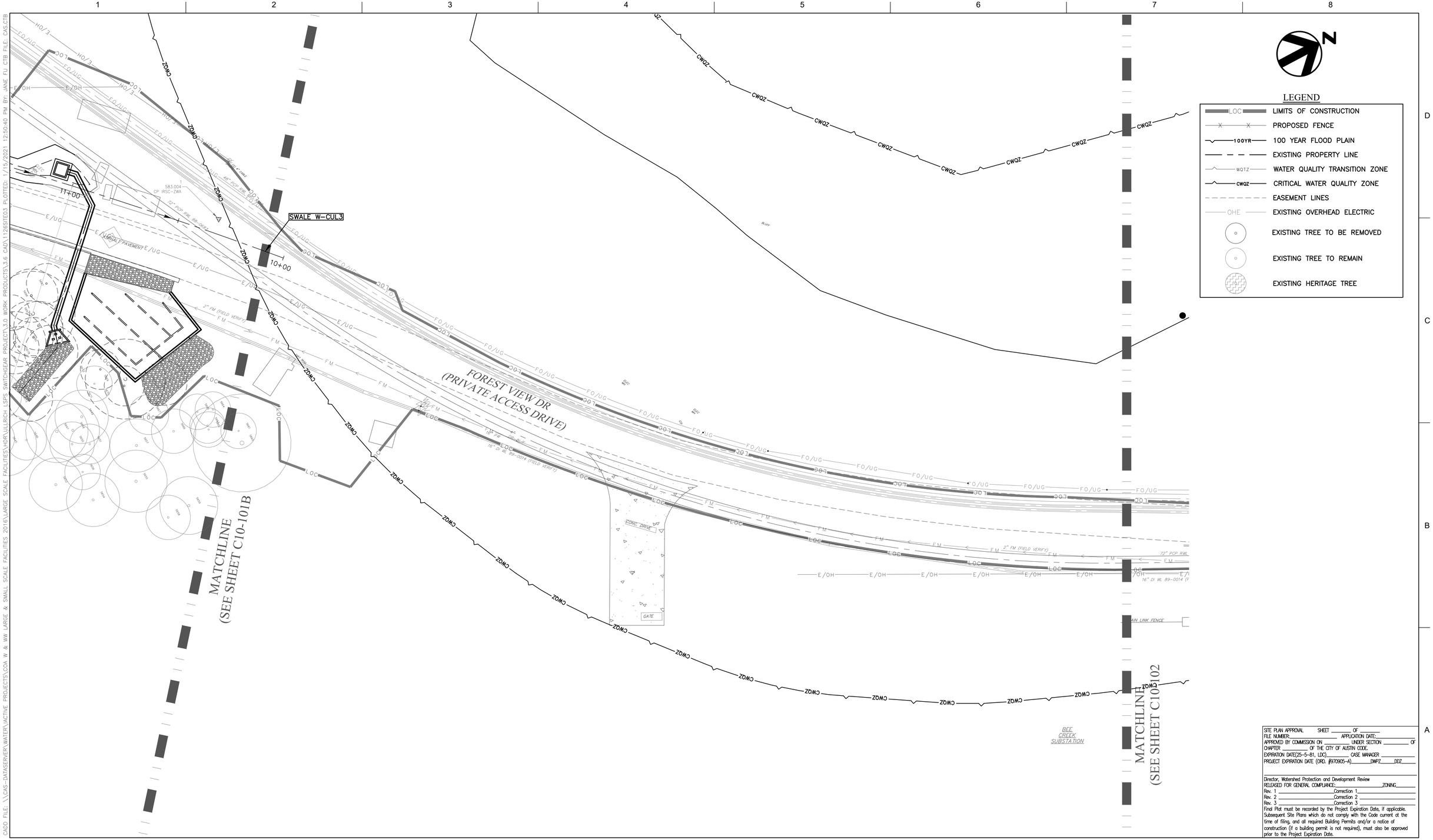
SITE PLAN (2 OF 5)

0 1" 2"

FILENAME 1126SITE02
SCALE 1" = 20'

SHEET 9 of 350
C10-101B

SPC-03-005C (R2)



SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
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EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ____DDZ_____

Director, Watershed Protection and Development Review
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Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
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CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\CON W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH_LSPS_SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126SITE03 PLOTTED: 1/15/2021 12:50:40 PM BY: JANE FU CTB FILE: CAS.CTB

CAS CONSULTING & SERVICES, INC.
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ISSUE	DATE	DESCRIPTION
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PROJECT MANAGER	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS
THOMAS W. ROHLACK
86365
LICENSED
PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN
FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

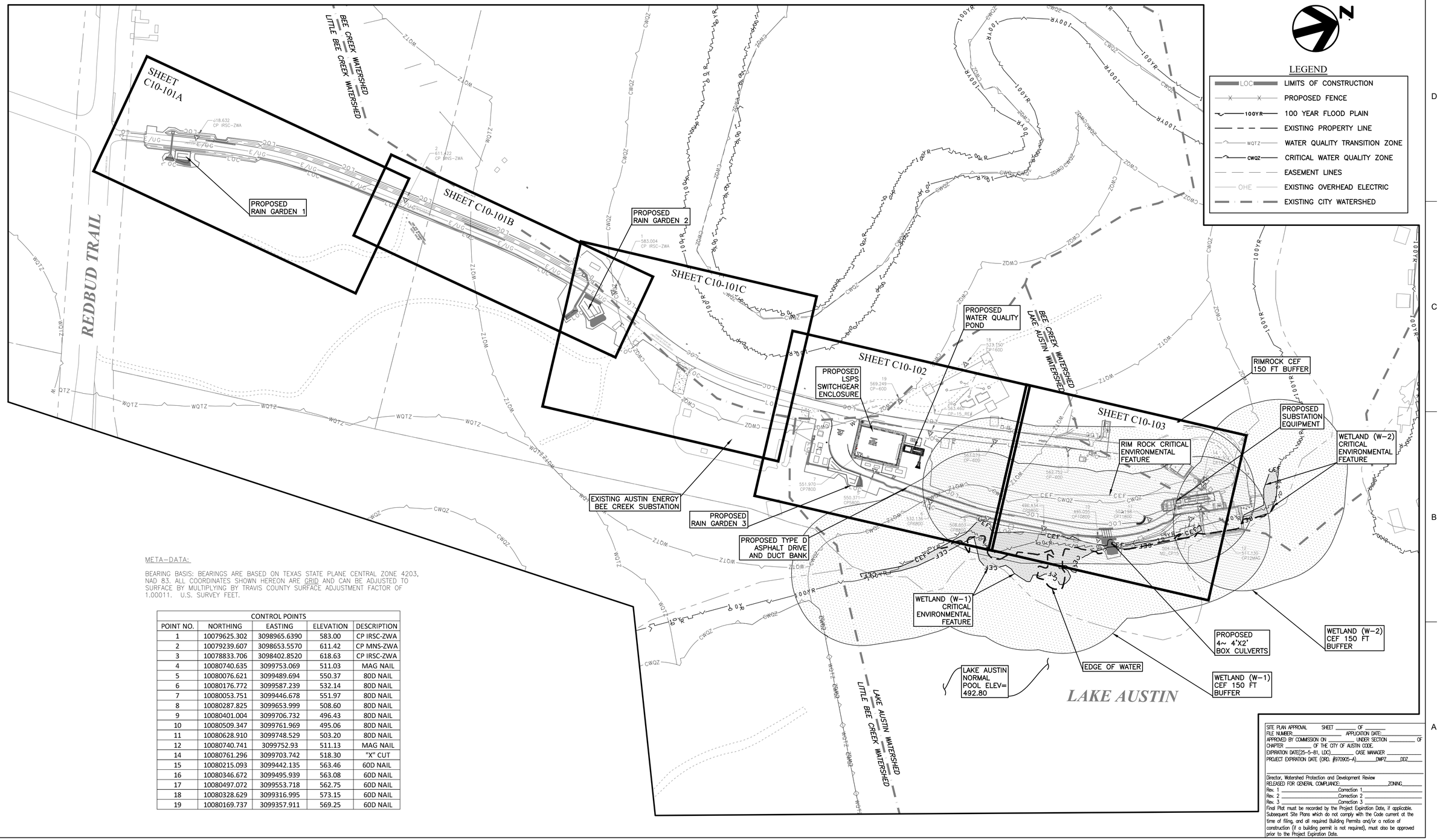
SITE PLAN (3 OF 5)

0 1" 2"

FILENAME 1126SITE03
SCALE 1" = 20'

SHEET 10 of 350
C10-101C

SPC-03-005C (R2)



META-DATA:

BEARING BASIS: BEARINGS ARE BASED ON TEXAS STATE PLANE CENTRAL ZONE 4203, NAD 83. ALL COORDINATES SHOWN HEREON ARE GRID AND CAN BE ADJUSTED TO SURFACE BY MULTIPLYING BY TRAVIS COUNTY SURFACE ADJUSTMENT FACTOR OF 1.00011. U.S. SURVEY FEET.

CONTROL POINTS

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	10079625.302	3098965.6390	583.00	CP IRSC-ZWA
2	10079239.607	3098653.5570	611.42	CP MNS-ZWA
3	10078833.706	3098402.8520	618.63	CP IRSC-ZWA
4	10080740.635	3099753.069	511.03	MAG NAIL
5	10080076.621	3099489.694	550.37	80D NAIL
6	10080176.772	3099587.239	532.14	80D NAIL
7	10080053.751	3099446.678	551.97	80D NAIL
8	10080287.825	3099653.999	508.60	80D NAIL
9	10080401.004	3099706.732	496.43	80D NAIL
10	10080509.347	3099761.969	495.06	80D NAIL
11	10080628.910	3099748.529	503.20	80D NAIL
12	10080740.741	3099752.93	511.13	MAG NAIL
14	10080761.296	3099703.742	518.30	"X" CUT
15	10080215.093	3099442.135	563.46	60D NAIL
16	10080346.672	3099495.939	563.08	60D NAIL
17	10080497.072	3099553.718	562.75	60D NAIL
18	10080328.629	3099316.995	573.15	60D NAIL
19	10080169.737	3099357.911	569.25	60D NAIL

SITE PLAN APPROVAL SHEET _____ OF _____
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Director, Watershed Protection and Development Review
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Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2_____
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CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\FOR\ULLRICH LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126SITE00 PLOTTED: 1/15/2021 12:41:36 PM BY: JANE FU CTB FILE: MSTANDARD.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
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HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	TR
DRAWN BY	JC
CHECKED BY	JC
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS
THOMAS W. ROHLACK
86365
LICENSED
PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

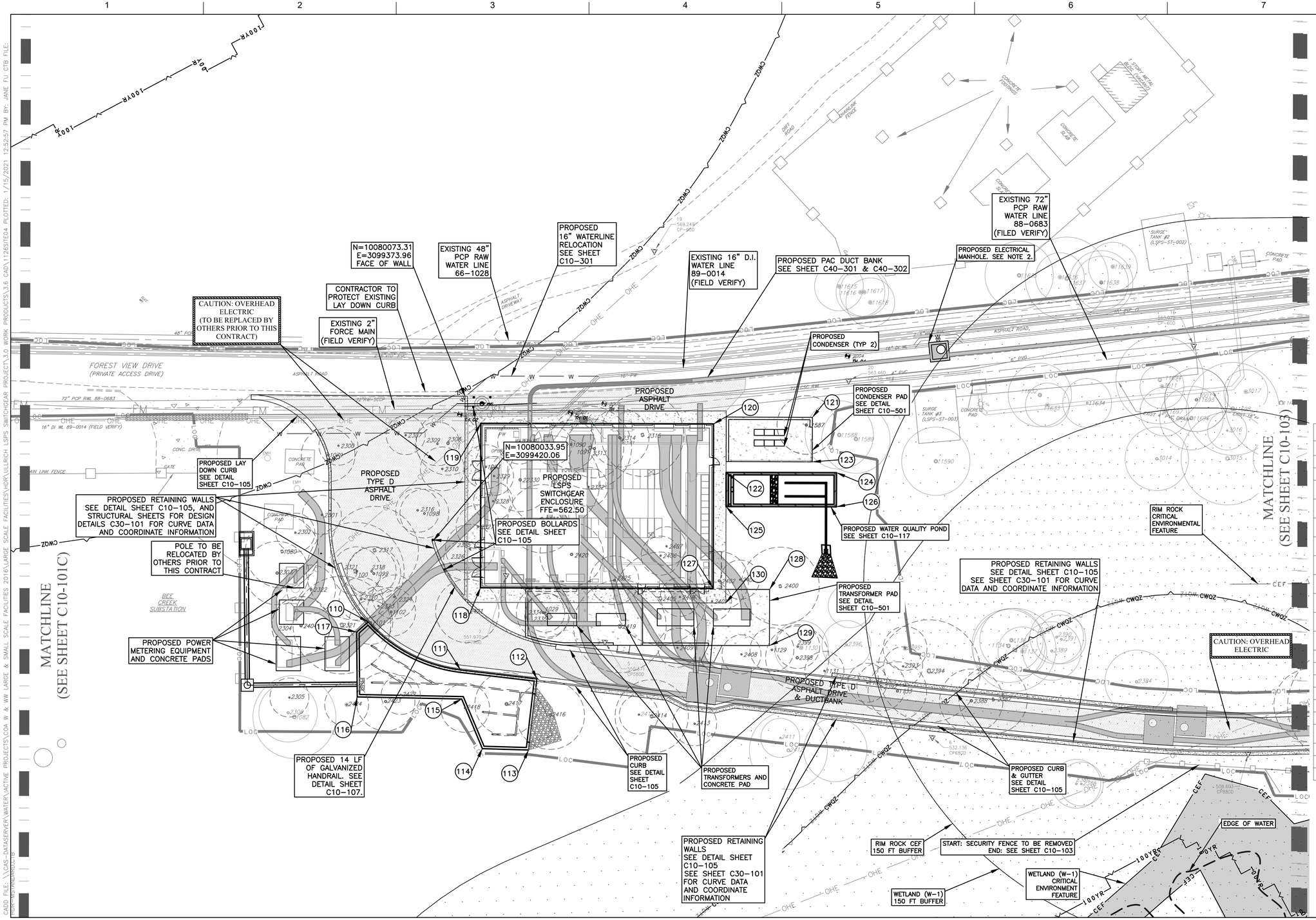
OVERALL SITE PLAN

0 1" 2"

FILENAME 1126SITE00
SCALE 1" = 100'

SHEET 7 of 350
C10-101

SPC-03-005C (R2)



NOTES:

1. DEMOLISH EXISTING FENCE AS NECESSARY FOR CONSTRUCTION OF DRIVE.
2. CONTRACTOR TO RELOCATE EX 16" WL AROUND PROPOSED ELECTRICAL MANHOLES IN THE EXISTING ROAD AS REQUIRED FOR CONSTRUCTION. THE EXISTING VERTICAL POSITION/SLOPE OF THE LINES SHALL BE MAINTAINED, I.E. THE CREATION OF ANY INTERMEDIATE HIGH POINTS WILL NOT BE ALLOWED.

POINT TABLE		
POINT #	NORTHING, EASTING	DESCRIPTION
110	*10079994.86,30994.36.89*	RG3 OUTER PC
111	*10080019.03,3099472.08*	RG3 OUTER PT
112	*10080044.92,3099490.00*	RG3 OUTER CORNER
113	*10080028.24,3099514.11*	RG3 OUTER CORNER
114	*10080011.79,3099504.72*	RG3 OUTER CORNER
115	*10080013.84,3099482.78*	RG3 OUTER CORNER
116	*10079976.47,3099461.93*	RG3 OUTER CORNER
117	*10079988.73,3099438.37*	RG3 OUTER CORNER
118	*10080042.06,3099446.17*	LSPS BLDG CORNER
119	*10080073.82,3099386.79*	LSPS BLDG CORNER
120	*10080157.88,30994.31.76*	LSPS BLDG CORNER
121	*10080194.95,3099448.41*	PAD CORNER
122	*10080153.11,3099451.71*	POND CORNER
123	*10080186.33,3099464.50*	PAD CORNER
124	*10080193.01,3099473.06*	POND CORNER
125	*10080146.51,3099464.06*	POND CORNER
126	*10080186.41,3099485.40*	POND CORNER
127	*10080126.12,3099491.13*	LSPS BLDG CORNER
128	*10080146..33,3099502.42*	PAD CORNER
129	*10080135.48,3099522.70*	PAD CORNER
130	*10080127.88,3099498.88*	SDWK CORNER

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER: _____ APPLICATION DATE: _____
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Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: _____ ZONING_____
Rev. 1 _____ Correction 1_____
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CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH_LSPS_SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126SITE04 PLOTTED: 1/15/2021 12:52:57 PM BY: JANE FU CTB FILE: HDR-ASTM.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-000572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	TR
DRAWN BY	JC
CHECKED BY	TR
DATE	Jan. 15, 21
PROJECT NUMBER	1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

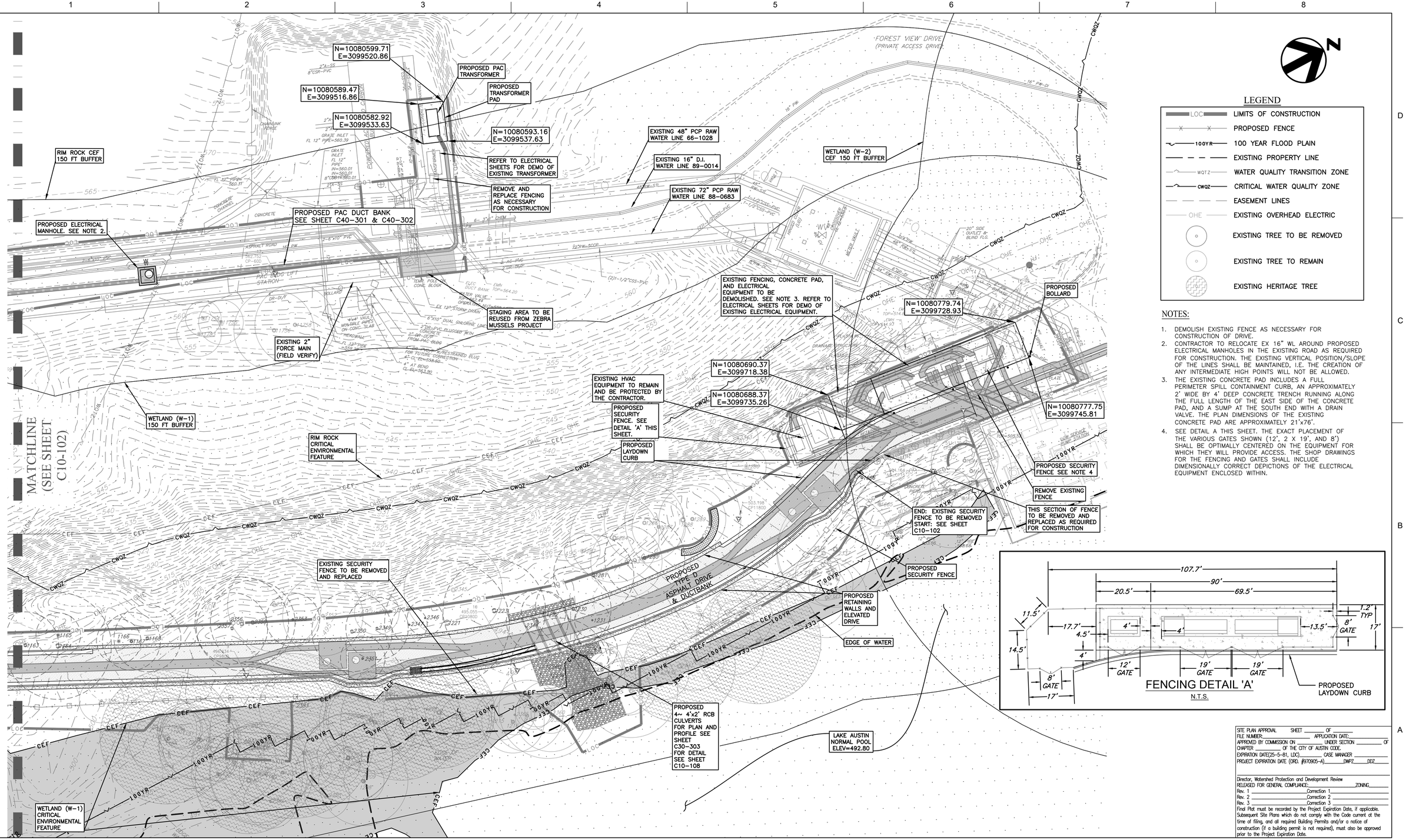
SITE PLAN (4 OF 5)

0 1" 2"

FILENAME 1126SITE04
SCALE 1" = 20'

SHEET 11 of 350
C10-102

SPC-03-005C (R2)



LEGEND

- LOC — LIMITS OF CONSTRUCTION
- X — X — PROPOSED FENCE
- 100YR — 100 YEAR FLOOD PLAIN
- EXISTING PROPERTY LINE
- WQTZ — WATER QUALITY TRANSITION ZONE
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- OHE — EXISTING OVERHEAD ELECTRIC
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NOTES:

1. DEMOLISH EXISTING FENCE AS NECESSARY FOR CONSTRUCTION OF DRIVE.
2. CONTRACTOR TO RELOCATE EX 16" WL AROUND PROPOSED ELECTRICAL MANHOLES IN THE EXISTING ROAD AS REQUIRED FOR CONSTRUCTION. THE EXISTING VERTICAL POSITION/SLOPE OF THE LINES SHALL BE MAINTAINED, I.E. THE CREATION OF ANY INTERMEDIATE HIGH POINTS WILL NOT BE ALLOWED.
3. THE EXISTING CONCRETE PAD INCLUDES A FULL PERIMETER SPILL CONTAINMENT CURB, AN APPROXIMATELY 2' WIDE BY 4' DEEP CONCRETE TRENCH RUNNING ALONG THE FULL LENGTH OF THE EAST SIDE OF THE CONCRETE PAD, AND A SUMP AT THE SOUTH END WITH A DRAIN VALVE. THE PLAN DIMENSIONS OF THE EXISTING CONCRETE PAD ARE APPROXIMATELY 21'x76'.
4. SEE DETAIL A THIS SHEET. THE EXACT PLACEMENT OF THE VARIOUS GATES SHOWN (12', 2 X 19', AND 8') SHALL BE OPTIMALLY CENTERED ON THE EQUIPMENT FOR WHICH THEY WILL PROVIDE ACCESS. THE SHOP DRAWINGS FOR THE FENCING AND GATES SHALL INCLUDE DIMENSIONALLY CORRECT DEPICTIONS OF THE ELECTRICAL EQUIPMENT ENCLOSED WITHIN.

FENCING DETAIL 'A'
N.T.S.

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE
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Director, Watershed Protection and Development Review
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CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HOR\ULLRICH_LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126SITE05.DWG PLOTTED: 1/15/2021 12:55:28 PM BY: JANE FU CTB FILE: CAS.CTB

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PROJECT MANAGER

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DRAWN BY	JC
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DATE	Jan. 15, 21
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STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

SITE PLAN (5 OF 5)

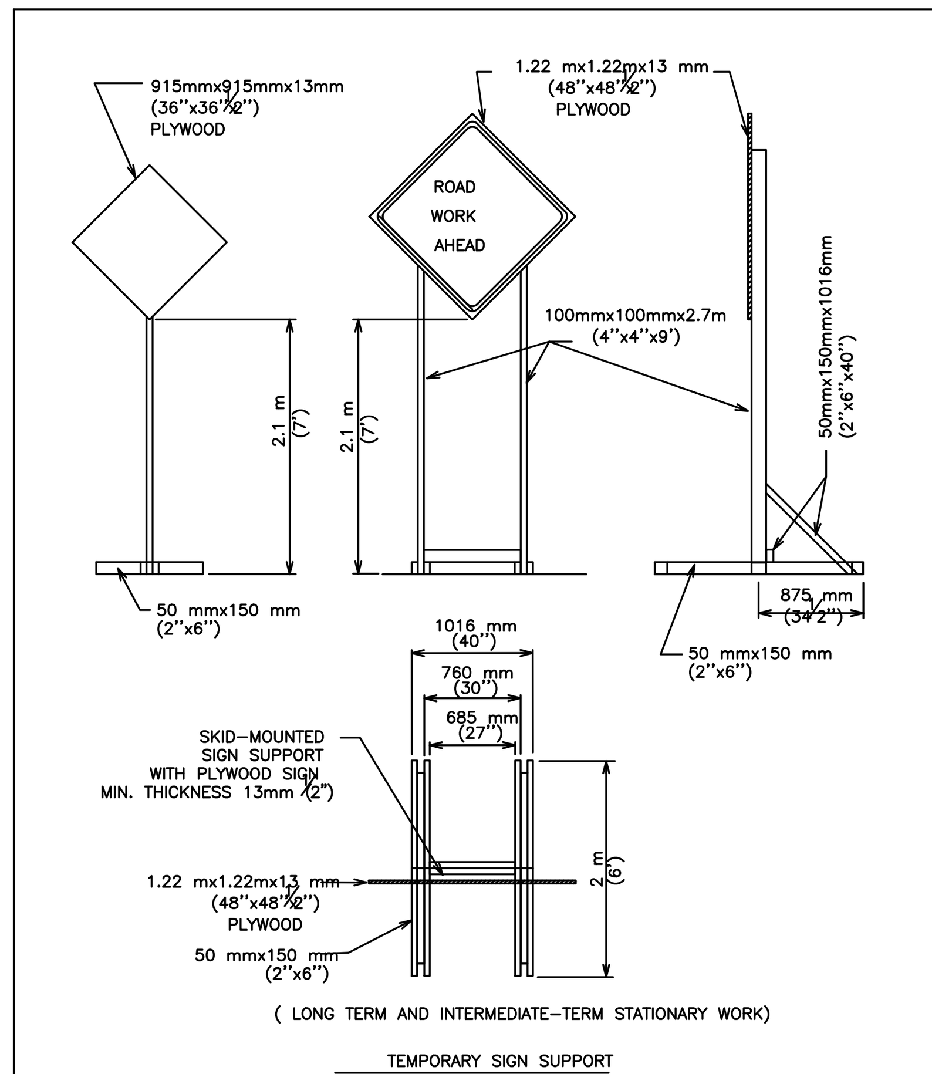
0 1" 2"

FILENAME 1126SITE05
SCALE 1" = 20'

SHEET 12 of 350
C10-103

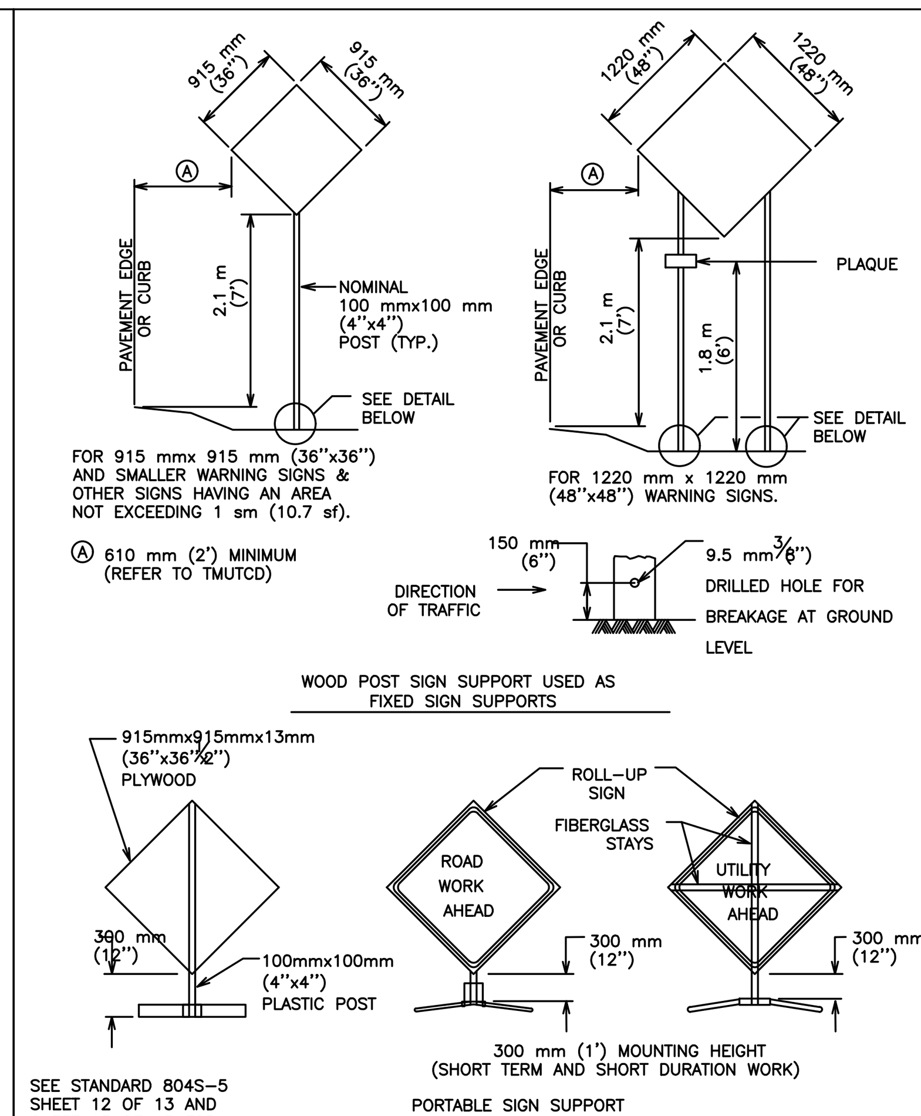
SPC-03-005C (R2)

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8



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

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



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

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS	
RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 6 OF 13

1. WARNING SIGNS SHALL BE ORANGE, FLUORESCENT RED-ORANGE OR FLUORESCENT YELLOW-ORANGE IN COLOR. THE FLUORESCENT VERSIONS OF ORANGE PROVIDE HIGHER CONSPICUITY THAN STANDARD ORANGE, ESPECIALLY DURING TWILIGHT. 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.

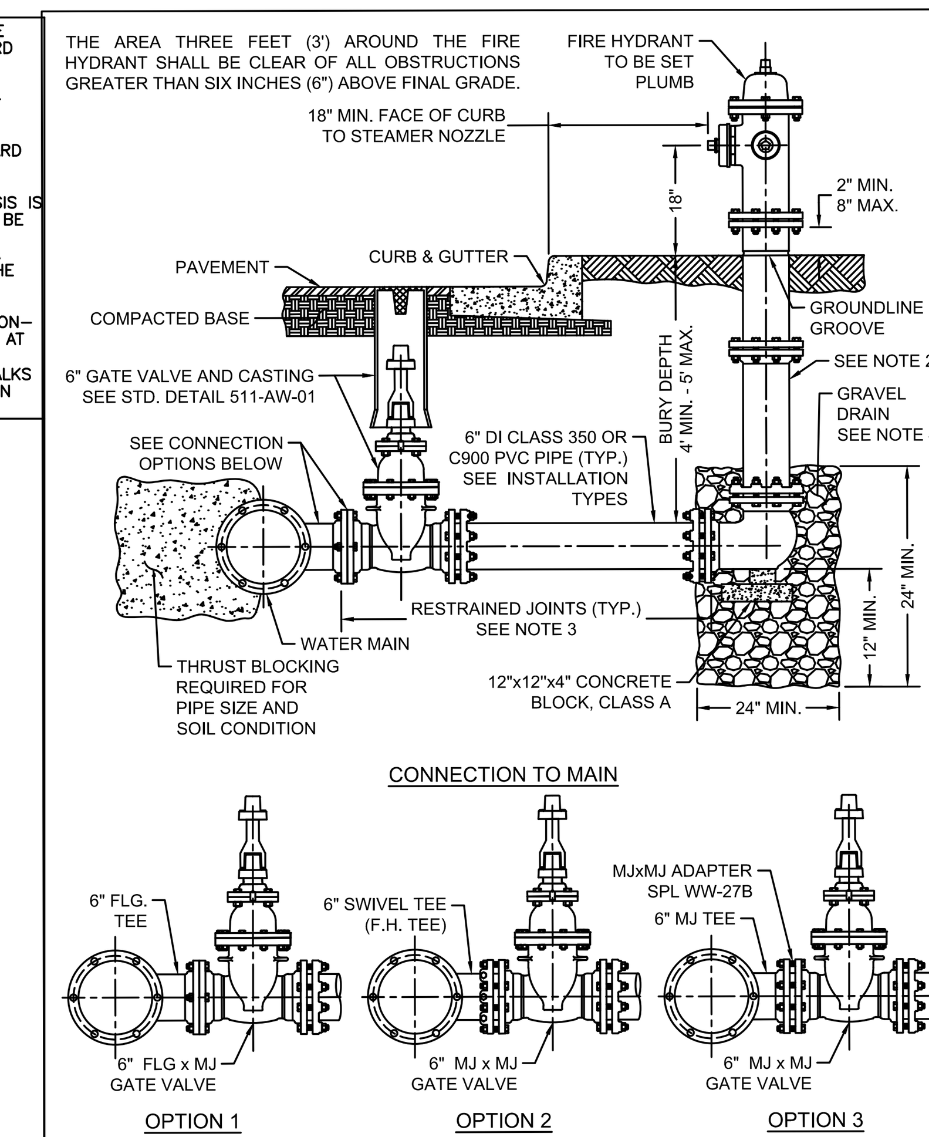
TABLE VI-3 TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING

Roadway Classification	Posted Speed	Sign Spacing ★	Long-term Stationary Or Intermediate-term Stationary Approaching Warning Signs CW20 Series And CW22-1 Sign: Standard	Minimum 4	Short-term Stationary Or Short Duration Approach Warning Signs CW22 Series: Standard	Minimum 4	Other Warning Signs: Standard
Conven.	KPH (MPH)	meter (feet)	mm (inches)	mm (inches)	mm (inches)	mm (inches)	mm (inches)
	50 (30)	40 (120)	1220x1220 (48x48)	915x915 (36x36)			
	55 (35)	50 (160)			915x915 (36x36)		915x915 (36x36)
	65 (40)	75 (240)					
	70 (45)	100 (320)		Use Standard Size		Use Standard Size	
	80 (50)	120 (400)					
	90 (55)	150 (500) 2					
	100 (60)	180 (600) 2			1220x1220 (48x48)		1220x1220 (48x48)
	105 (65)	210 (700) 2					
	115 (70)	240 (800) 2					
Exp. or Fwy	★★	★★ 3			★★★	★★★	★★★

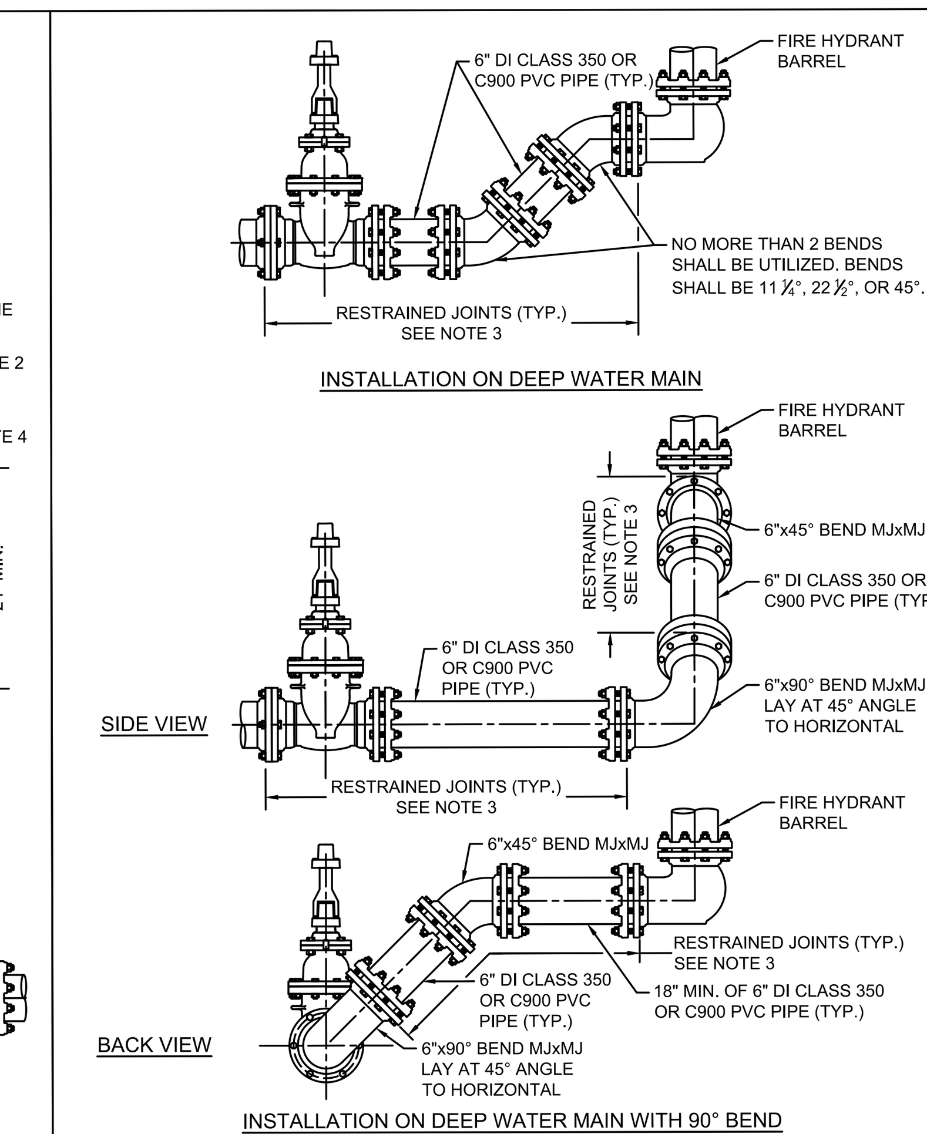
★ MINIMUM DISTANCE FROM WORK TO 1st ADVANCE WARNING SIGN AND/OR DISTANCE BETWEEN EACH ADDITIONAL SIGN.
★★ FOR TYPICAL SIGN SPACINGS ON EXPRESSWAYS AND FREEWAYS, REFER TO THE CURRENT ADDITION OF TMUTCD.
★★★ SMALLER SIGN SIZES MAY BE USED WHERE SIGN DESIGNS HAVE NOT BEEN INCLUDED IN THE "STANDARD HIGHWAY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

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

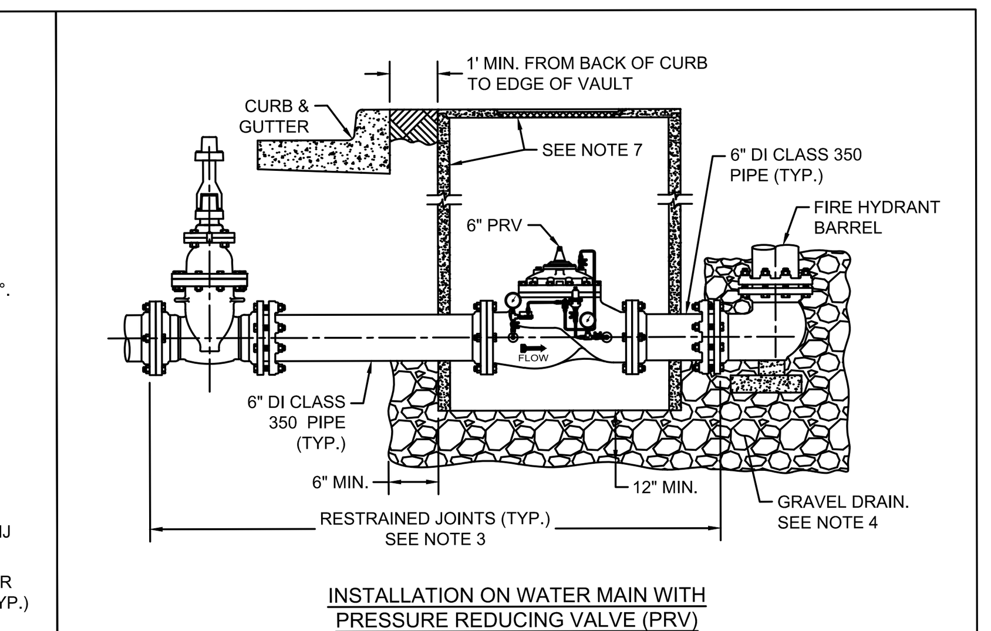
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	TRAFFIC CONTROL SIGNS	
RECORD COPY SIGNED BY SAM ANGOORI 01/04/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 804S-5 7 OF 13



CITY OF AUSTIN AUSTIN WATER	FIRE HYDRANT	
RECORD COPY SIGNED BY 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 AUSTIN WATER	FIRE HYDRANT	
RECORD COPY SIGNED BY 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

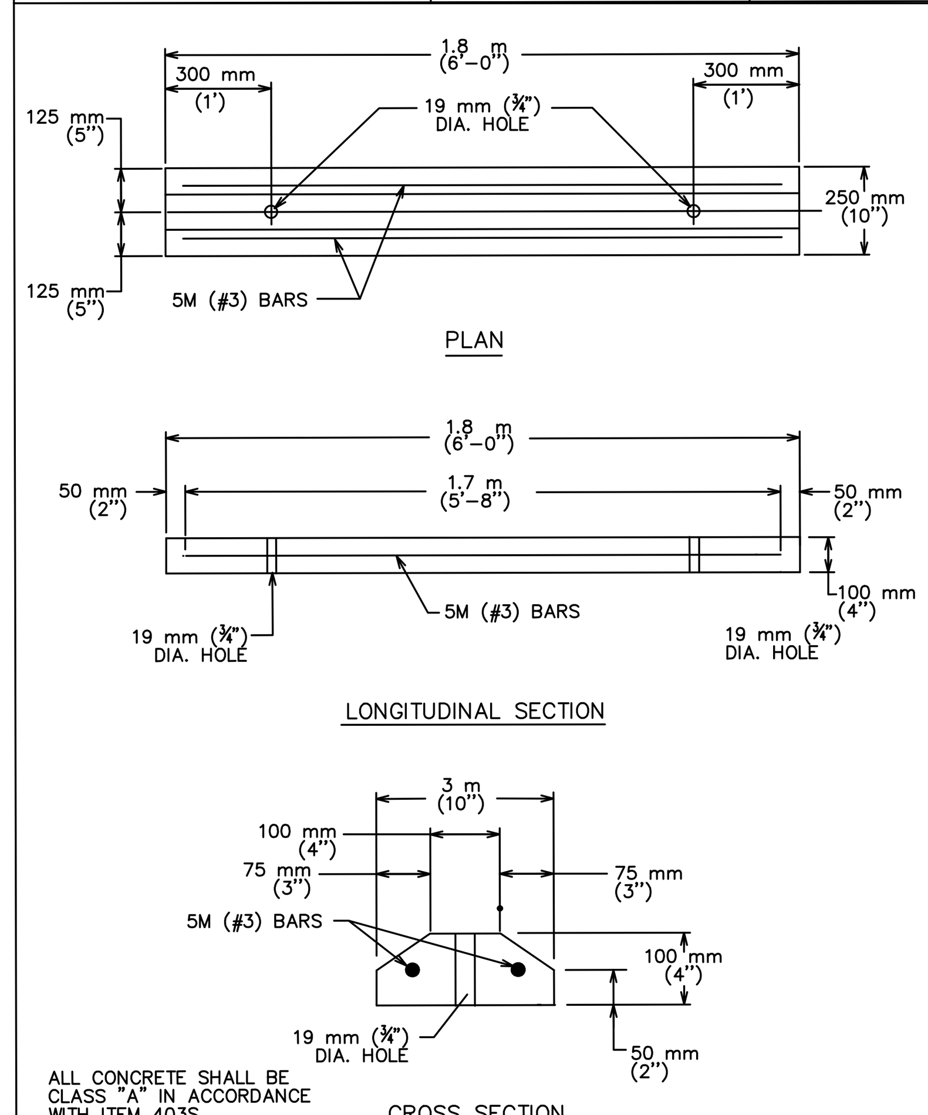


INSTALLATION ON WATER MAIN WITH PRESSURE REDUCING VALVE (PRV)

NOTES: APPLICABLE TO ALL INSTALLATION TYPES.

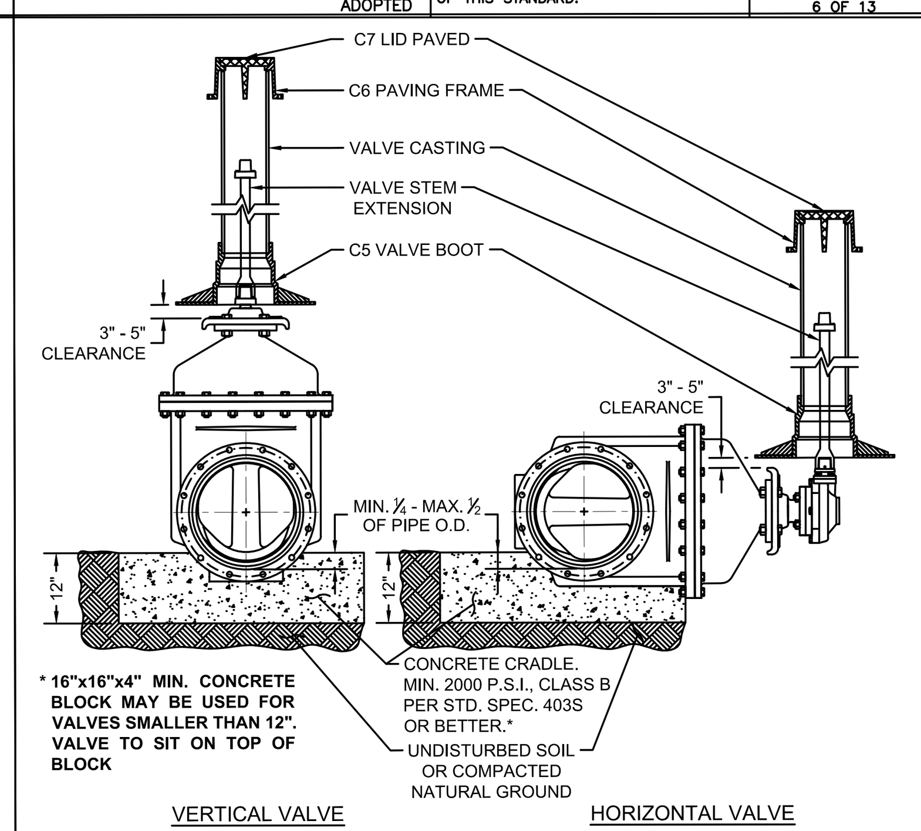
1. NO PART OF A HYDRANT OR ITS NOZZLE CAPS SHALL BE WITHIN 6" OF ANY SIDEWALK OR PEDESTRIAN RAMP. ANY FIRE HYDRANT PLACED NEAR A STREET CORNER SHALL BE LOCATED OUTSIDE THE CURVE RADIUS AND A MINIMUM OF 4' FROM RAMPS.
2. ONE BARREL EXTENSION NOT EXCEEDING 2' LENGTH MAY BE INSTALLED DIRECTLY BELOW THE 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 AUSTIN WATER	FIRE HYDRANT	
RECORD COPY SIGNED BY 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



ALL CONCRETE SHALL BE CLASS "A" IN ACCORDANCE WITH ITEM 403S.

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	PARKING LOT BUMPER CURB	
RECORD COPY SIGNED BY BILL GARDNER 3/15/05 APPROVED ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 439S-1



VERTICAL VALVE

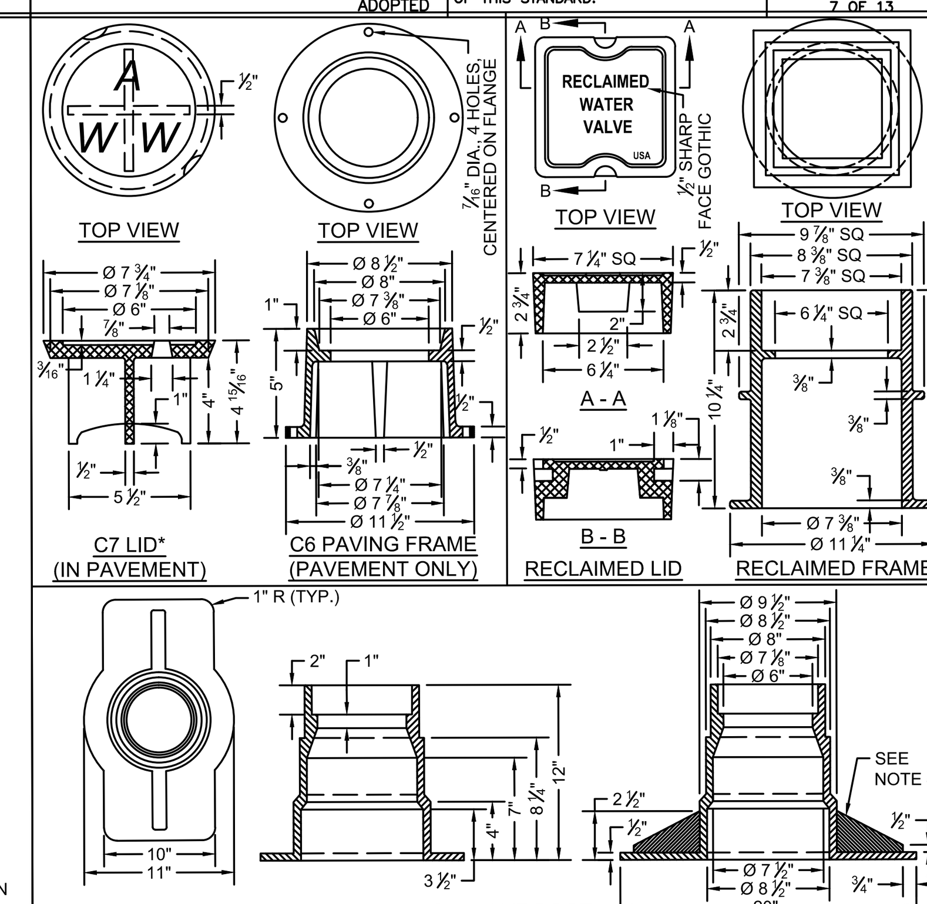
HORIZONTAL VALVE
ONLY TO BE USED WHEN CALLED OUT ON THE DRAWINGS.

NOTES:

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

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

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



NOTES:

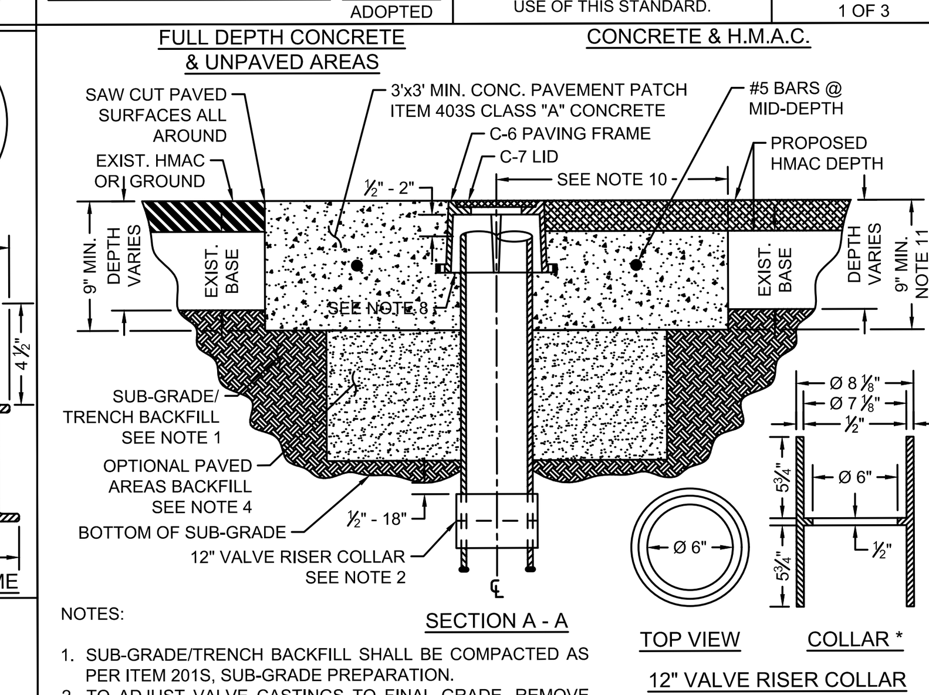
1. MATERIAL SHALL BE GRAY CAST IRON, ASTM A48, GRADE 30B.
2. THE MANUFACTURER'S IDENTIFICATION AND CASTING NUMBER, AND THE COUNTRY WHERE CAST, SHALL BE DISTINCTLY CAST ONTO EACH LID, FRAME, COLLAR AND BASE.
3. DRAFT AND SHRINKAGE ALLOWANCE SHALL BE IN ACCORDANCE WITH NORMAL FOUNDRY PRACTICE.
4. CASTING 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

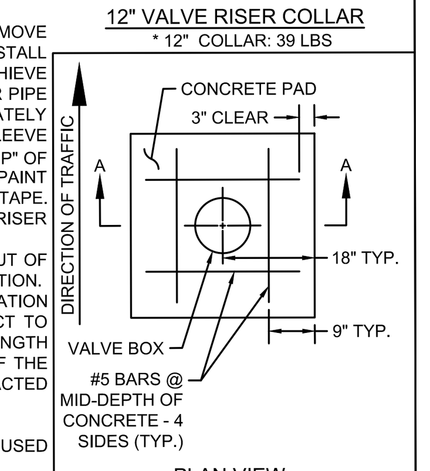
* LETTERING SHALL BE 1½"
2 PICK BAR SLOTS REQUIRED

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



NOTES:

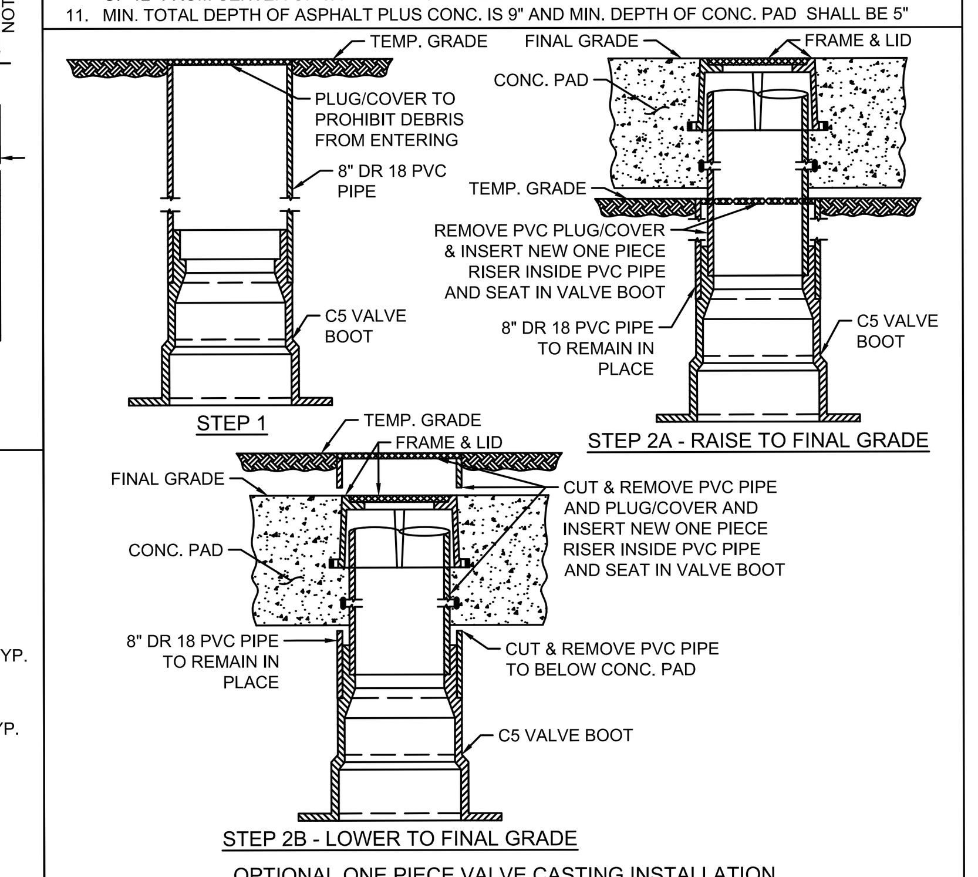
1. SUB-GRADE/TRENCH BACKFILL SHALL BE COMPACTED AS PER ITEM 201S, SUB-GRADE PREPARATION.
2. TO ADJUST VALVE CASTINGS TO FINAL GRADE, REMOVE RISER PIPE BELOW SUB-GRADE AND INSTALL APPROPRIATE LENGTH OF NEW RISER PIPE TO ACHIEVE FINAL GRADE. CONNECT THE TWO PIECES OF RISER PIPE WITH A 6" COLLAR MIN. 12"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



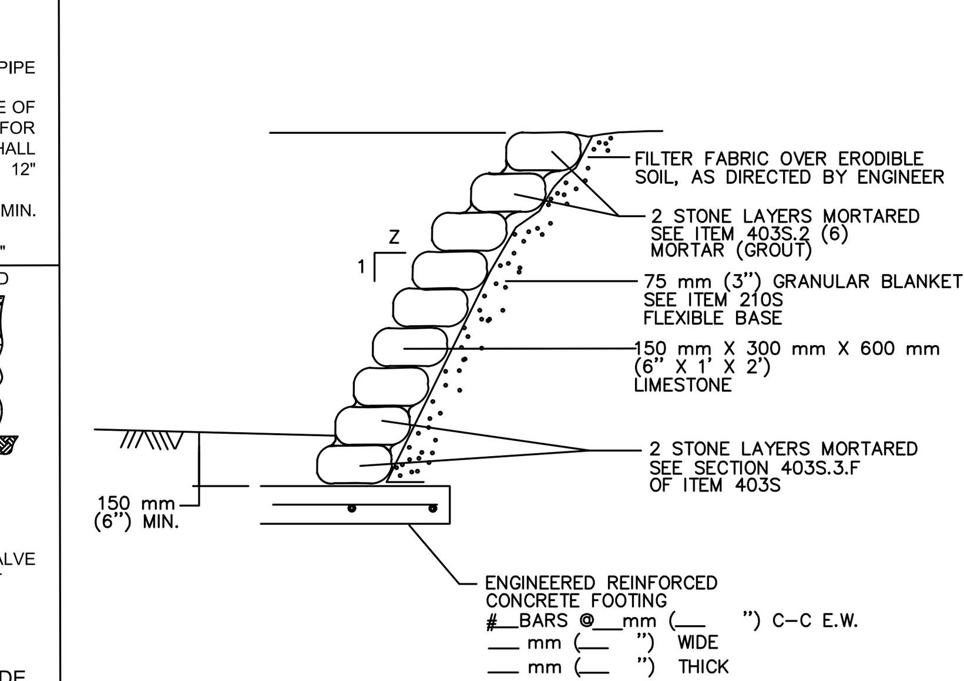
CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY KATHI L FLOWERS 05/18/2016 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-01 3 OF 4

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"



CITY OF AUSTIN AUSTIN WATER	TYPICAL GATE VALVE 4" - 16"	
RECORD COPY SIGNED BY 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



THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:
A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:
1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMIM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS	DRY STACK ROCK WALL FOR SLOPE PROTECTION	
RECORD COPY SIGNED BY BILL GARDNER 03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 623S-1

SITE PLAN APPROVAL SHEET ___ OF ___
FILE NUMBER___ APPLICATION DATE___
APPROVED BY COMMISSION ON ___ UNDER SECTION ___ OF CHAPTER ___ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)___ CASE MANAGER___
PROJECT EXPIRATION DATE (ORD. #970905-A)___ DWPZ___ DDZ___

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:___ ZONING___
Rev. 1 ___ Correction 1 ___
Rev. 2 ___ Correction 2 ___
Rev. 3 ___ Correction 3 ___
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS THOMAS W. ROHLACK 86365 LICENSED PROFESSIONAL ENGINEER 01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP LOW SERVICE PUMP STATION ELECTRICAL FEED RENEWAL

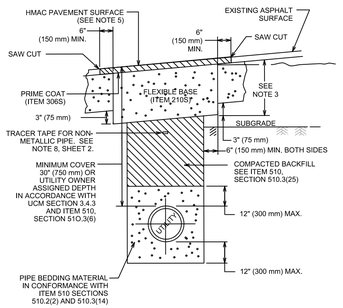
SITE DETAILS (1 OF 4)

0 1" 2"
FILENAME 1126SITED01
SCALE N.T.S.
SHEET 13 of 350
C10-104

SPC-03-005C (R2)

CADD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126SITED01 PLOTTED: 1/15/2021 12:55:55 PM BY: JANE FU CTB FILE: CAS.CTB

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

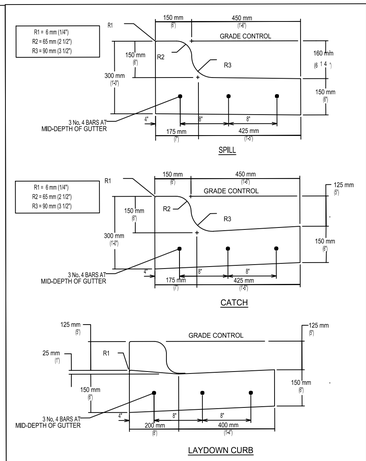


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		FLEXIBLE BASE WITH ASPHALT SURFACE TRENCH REPAIR-EXISTING PAVEMENT	
RECORD COPY SIGNED BY KERI JUAREZ	01/04/11 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 1100S-2 1 OF 2

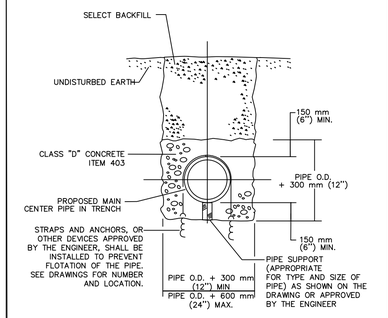
NOTES:

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

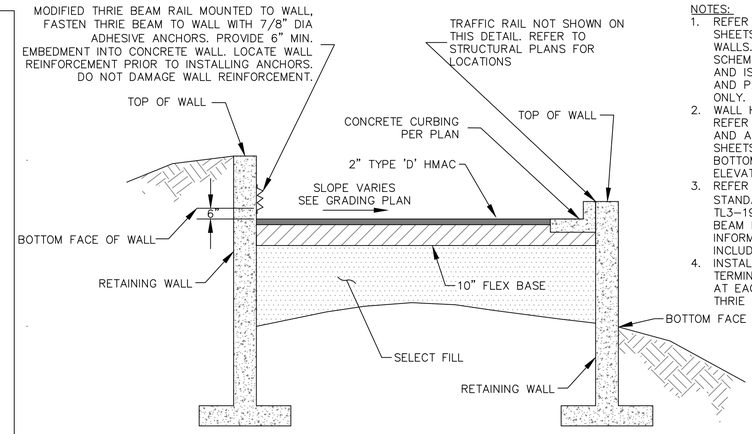


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		REINFORCED CURB AND GUTTER SECTION	
RECORD COPY SIGNED BY SAM ANGORI	01/04/10 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 430S-2



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

MODIFIED THRIE BEAM RAIL MOUNTED TO WALL, FASTEN THRIE BEAM TO WALL WITH 7/8" DIA ADHESIVE ANCHORS. PROVIDE 6" MIN. EMBEDMENT INTO CONCRETE WALL. LOCATE WALL REINFORCEMENT PRIOR TO INSTALLING ANCHORS. DO NOT DAMAGE WALL REINFORCEMENT.

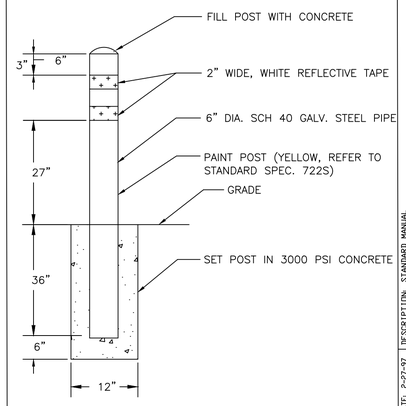


NOTES:

1. REFER TO STRUCTURAL SHEETS FOR RETAINING WALLS. THIS DETAIL IS SCHEMATIC IN NATURE AND IS FOR DRAINAGE AND PAVING PURPOSES ONLY.
2. WALL HEIGHT VARIES. REFER TO GRADING AND ACCESS DRIVE SHEETS FOR TOP AND BOTTOM FACE OF WALL ELEVATIONS.
3. REFER TO TXDOT STANDARD GF (31) TR TL3-19 FOR THRIE BEAM RAIL INFORMATION, INCLUDING HEIGHT.
4. INSTALL THRIE BEAM TERMINAL CONNECTOR AT EACH END OF THRIE BEAM RAIL, TYP.

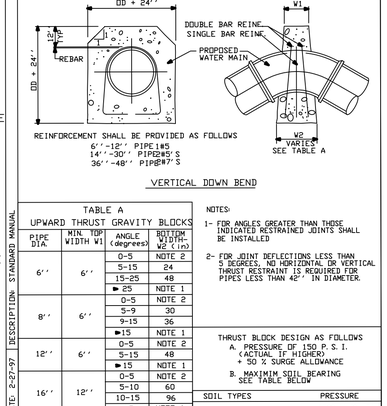
TYPICAL SINGLE SLOPE ROADWAY SECTION WITH RETAINING WALLS

N.T.S.



TYPICAL BOLLARD DETAIL

N.T.S.



VERTICAL DOWN BEND

TABLE A
UPWARD THRUST GRAVITY BLOCKS

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

NOTES:

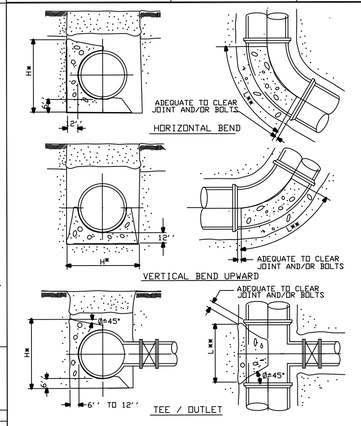
1- FOR ANGLES GREATER THAN THOSE INDICATED RESTRAINED JOINTS SHALL BE INSTALLED

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

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

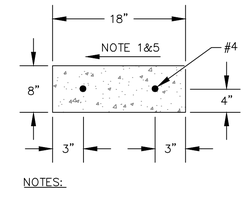
SOIL TYPES	PRESSURE
LOOSE OR SPONGY SOIL	1500 Lb/Sq. Ft.
UNDISTURBED SOIL, CALICHE	2000 Lb/Sq. Ft.
LIMESTONE ROCK	4000 Lb/Sq. Ft.

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



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

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

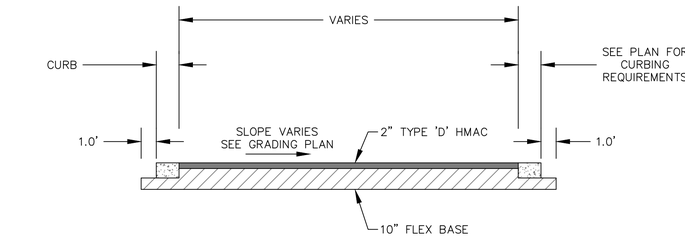


NOTES:

1. SLOPE THE CURB TO MATCH THE ADJACENT LANE.
2. TWO #4 REBAR SHALL BE PLACED IN THE CURB.
3. PROVIDE EXPANSION JOINTS PER CITY OF AUSTIN STANDARD SPECIFICATION 430S.
4. INSTALL REBAR PER CITY OF AUSTIN STANDARD SPECIFICATION 406S, INCLUDING BAR OVERLAPS PER SECTION 406S.7.
5. WHERE ADJACENT TO RAIN GARDEN 2 SLOPE AWAY FROM PAVEMENT AT 10% AND INCREASE WIDTH TO 24 INCHES.

RIBBON CURB DETAIL

N.T.S.



TYPICAL SINGLE SLOPE ROADWAY SECTION (NO RETAINING WALLS)

N.T.S.

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ZONING_____
Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-000372
Main: 512.836.2388 | Fax: 512.836.4515

Texas P.E. Firm Registration No. F-754

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

SITE DETAILS (2 OF 4)

0 1" 2"

FILENAME 1126SITED02
SCALE N.T.S.

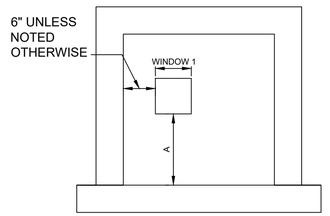
SHEET 14 of 350
C10-105

SPC-03-005C (R2)

PROPOSED ELECTRICAL VAULT WINDOW LAYOUT

TAG	WINDOW 1 IN	WINDOW 2 OUT	WINDOW 3 IN	OPENING ELEVATION A WINDOW 1&2	OPENING ELEVATION A WINDOW 3
MH 1A	2' W x 4' H	2' W x 5' H	2' W x 1'-6" H	3'-0"	6'-6"
MH 1B	2' W x 5' H	2' W x 5' H		3'-0"	
MH 2A	2' W x 5' H	2' W x 5' H		3'-0"	
MH 2B	2' W x 5' H	2' W x 5' H		3'-0"	
MH 3A	2' W x 5' H	3'-3" W x 2'-8" H		3'-0"	
MH 3B	2' W x 5' H	3'-3" W x 2'-8" H		3'-0"	
MH 4A	3'-3" W x 2'-8" H	3'-3" W x 2'-8" H		5'-0"	
MH 4B	3'-3" W x 2'-8" H	3'-3" W x 2'-8" H		5'-0"	
MH 1	12" W x 18" H	12" W x 18" H		1'-10"	
MH 2	12" W x 18" H	12" W x 18" H		1'-5"	

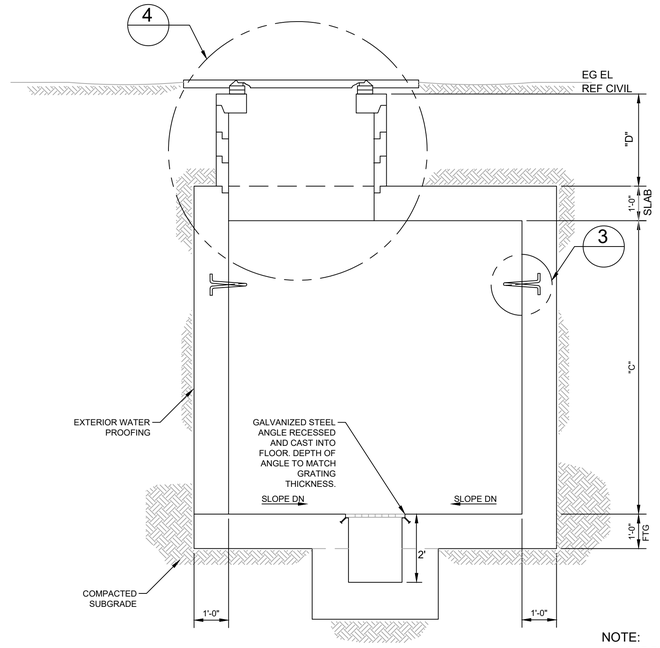
* NOTE:
"WINDOW IN" REFERS TO THE DUCT BANK ENTERING THE MANHOLE FROM THE UP-STATION POSITION.
"WINDOW OUT" REFERS TO DUCT BANK EXITING THE MANHOLE TO THE DOWN-STATION POSITION.



INSIDE VIEW WINDOW LAYOUT
SCALE: NTS

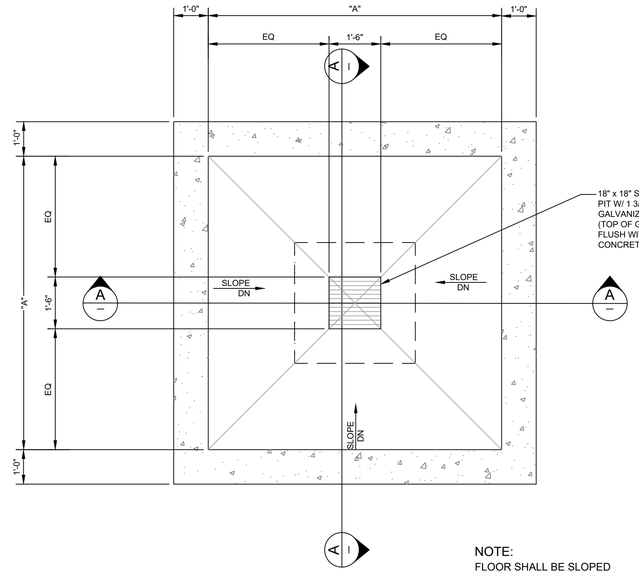
DIMENSION TABLE

DIM.	MANHOLE	DIM. (FT)
A	ALL PAC DUCT BANK MH'S	7
A	MH'S 1A-4B	10
B	ALL MANHOLES	2.5
C	PAC DUCT BANK MH 1	5.5
C	PAC DUCT BANK MH 2	8.5
C	MH'S 1A-4B	10
D	MH 1A/B, 4A/4B	3
D	MH 2A	3.5
D	MH 2B	4
D	MH 3A/B	FLUSH MOUNT
D	ALL PAC DUCT BANK MH'S	1



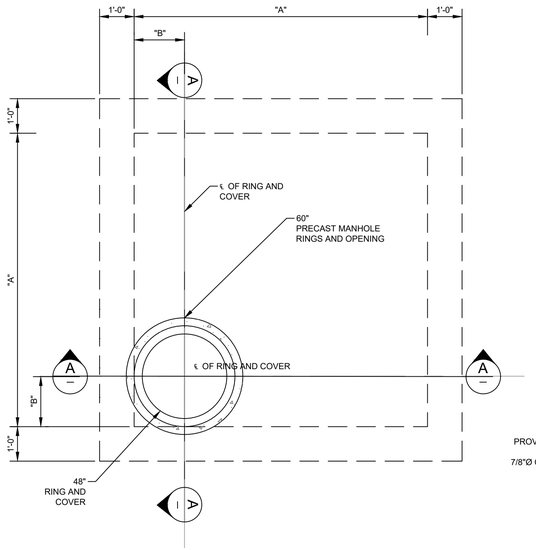
SECTION AT ELECTRICAL VAULT (A)
(FOR VAULT WIDTH <= 10')
SCALE: NTS

NOTE:
1. SEE ELECTRICAL SHEETS FOR GROUNDING.
2. CONTRACTOR TO APPLY EXTERIOR COATING TO INHIBIT WAER INTRUSION INTO THE VAULT, EXTERIOR WRAPID SEALING OF JOINTS, AND MASTIC JOINT SEALING WHERE JOINTS WILL BE CONNECTED.
3. REFER TO ELECTRICAL DRAWINGS AND SPECIFICATION FOR GROUNDING AND OTHER REQUIREMENTS NOT SHOWN ON THIS SHEET.

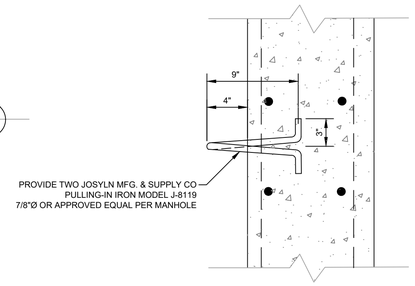


FLOOR SLAB PLAN (1)
SCALE: NTS

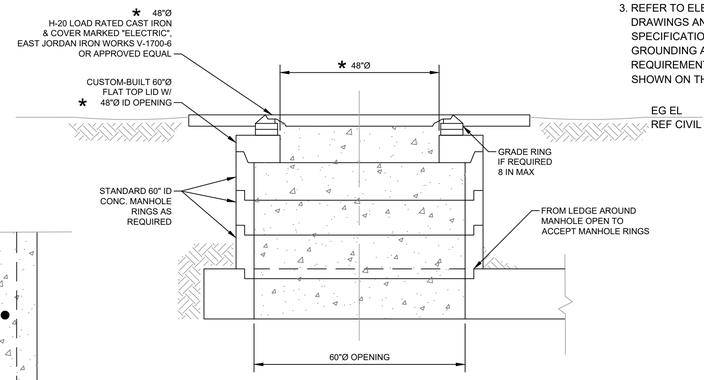
NOTE:
FLOOR SHALL BE SLOPED AT 1% IN ALL DIRECTIONS TOWARD THE SUMP



ROOF SLAB PLAN (2)
SCALE: NTS



DETAIL (3)
SCALE: NTS



MANHOLE DETAIL (4)
SCALE: NTS

* NOTE:
COVER AND COVER OPENING TO MATCH SURROUNDING FINISHED GRADES AND ELEVATIONS. MANHOLES 1A, 2A, 1B, AND 2B ARE LOCATED WHERE ROAD SLOPE APPROACHES 15%.

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER:____ APPLICATION DATE:____
APPROVED BY COMMISSION ON ____ UNDER SECTION ____ OF CHAPTER ____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)____ CASE MANAGER ____
PROJECT EXPIRATION DATE (ORD. #970905-A)____DMPZ____DDZ____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:____ZONING____
Rev. 1 ____Correction 1 ____
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ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS
THOMAS W. ROHLACK
86365
LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

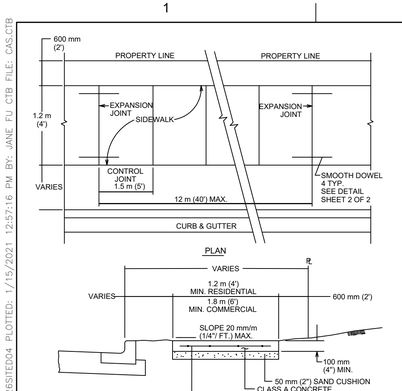
SITE DETAILS (3 OF 4)

0 1" 2"

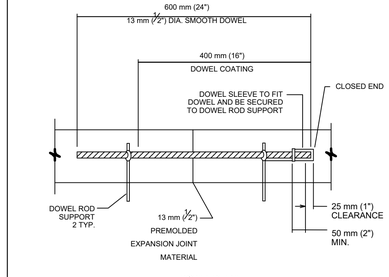
FILENAME 1126SITED03
SCALE N.T.S.

SHEET 15 of 350
C10-106

SPC-03-005C (R2)

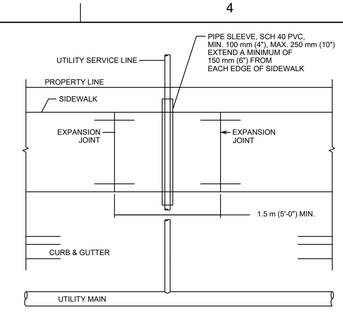


CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS		SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1



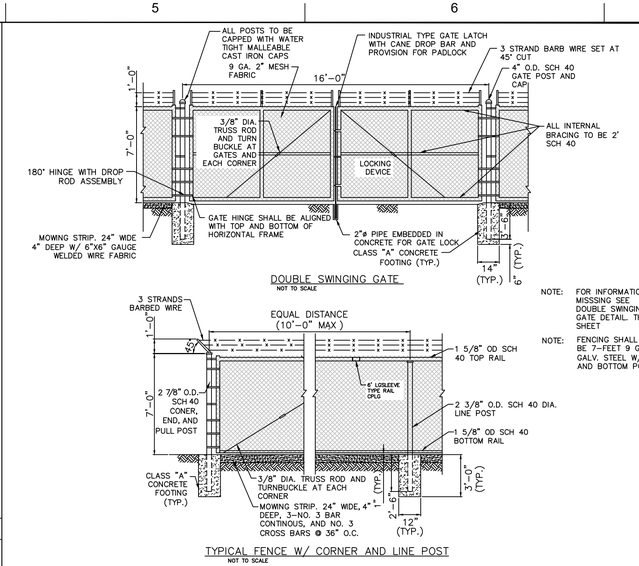
DOWEL DETAIL

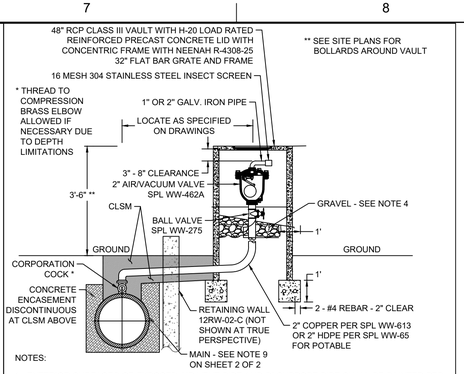
CITY OF AUSTIN DEPARTMENT OF PUBLIC WORKS			SIDEWALK	
RECORD COPY SIGNED BY BILL GARDNER	03/26/08	ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 432S-1 2 OF 3



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

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



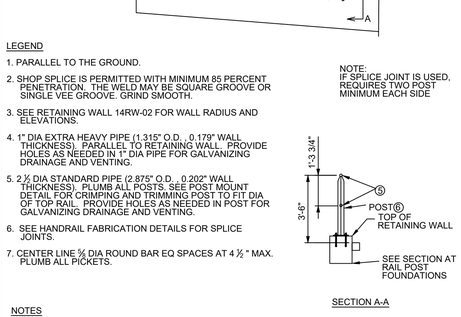


NOTES:
1. EXTERIOR SURFACES OF EXPOSED AIR VENT PIPE AND DI SUPPORT PIPE SHALL BE PAINTED PER SPL WW-3C. POTABLE WATER PIPE SHALL BE PAINTED SAFETY BLUE.
2. AIR VENT PIPE INSTALLATION SHALL BE AS NEAR AS PRACTICAL TO RIGHT-OF-WAY LINE WITH MINIMUM CLEARANCE OF 18" FROM ANY OBSTACLE.
3. HDPE METER BOX 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.

CITY OF AUSTIN AUSTIN WATER	AIR RELEASE AND AIR/VACUUM VALVE	
		STANDARD NO. 511-AW-04 MOD 1 OF 2

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.

CITY OF AUSTIN AUSTIN WATER	AIR RELEASE AND AIR/VACUUM VALVE	
	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 511-AW-04 MOD 2 OF 2



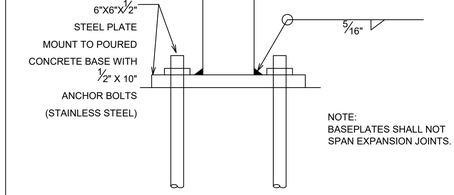
LEGEND
1. PARALLEL TO THE GROUND.
2. SHOP SPLICE IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.
3. SEE RETAINING WALL 14RW-02 FOR WALL RADIUS AND ELEVATIONS.
4. 1" DIA EXTRA HEAVY PIPE (1.315" O.D. , 0.179" WALL THICKNESS). PARALLEL TO RETAINING WALL. PROVIDE HOLES AS NEEDED IN 1" DIA PIPE FOR GALVANIZING DRAINAGE AND VENTING.
5. 2 ½ DIA STANDARD PIPE (2.875" O.D. , 0.202" WALL THICKNESS). PLUMB ALL POSTS. SEE POST MOUNT DETAIL FOR CRIMPING AND TRIMMING POST TO FIT DIA OF TOP RAIL. PROVIDE HOLES AS NEEDED IN POST FOR GALVANIZING DRAINAGE AND VENTING.
6. SEE HANDRAIL FABRICATION DETAILS FOR SPLICE JOINTS.
7. CENTER LINE ⅝ DIA ROUND BAR EQ SPACES AT 4 ½ " MAX. PLUMB ALL PICKETS.

NOTE:
IF SPLICE JOINT IS USED, REQUIRES TWO POST MINIMUM EACH SIDE

SECTION A-A

NOTES
* NOT TO BE USED ON BRIDGES
* ONE SHOP SPLICE PER PANEL IS PERMITTED WITH MINIMUM 85 PERCENT PENETRATION. THE WELD MAY BE SQUARE GROOVE OR SINGLE VEE GROOVE. GRIND SMOOTH.

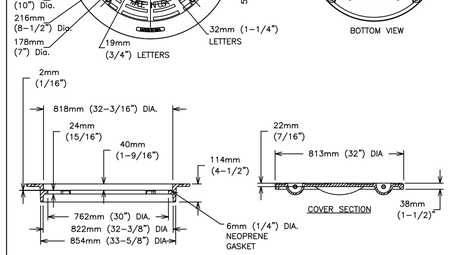
GALVANIZED HANDRAIL DETAIL 1 OF 2



NOTE:
BASEPLATES SHALL NOT SPAN EXPANSION JOINTS.

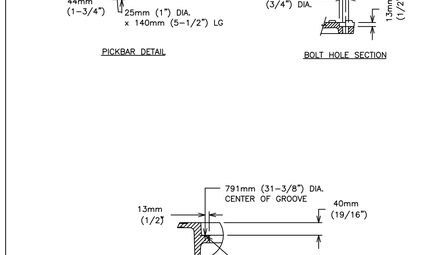
BASE PLATE DETAIL

GALVANIZED HANDRAIL DETAIL 2 OF 2



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

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



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

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____ DMP? ____ DDZ____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ ZONING:_____
Rev. 1 _____ Correction 1_____
Rev. 2 _____ Correction 2 _____
Rev. 3 _____ Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

		PROJECT MANAGER	
		DESIGNED BY	
		DRAWN BY	
		CHECKED BY	
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	
ISSUE	DATE	DESCRIPTION	DATE
		PROJECT NUMBER	1126

STATE OF TEXAS
THOMAS W. ROHLACK
86365
LICENSED
PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

SITE DETAILS (4 OF 4)

0 1" 2"

FILENAME 1126SITED04
SCALE N.T.S.

SHEET 16 of 350
C10-107

SPC-03-005C (R2)

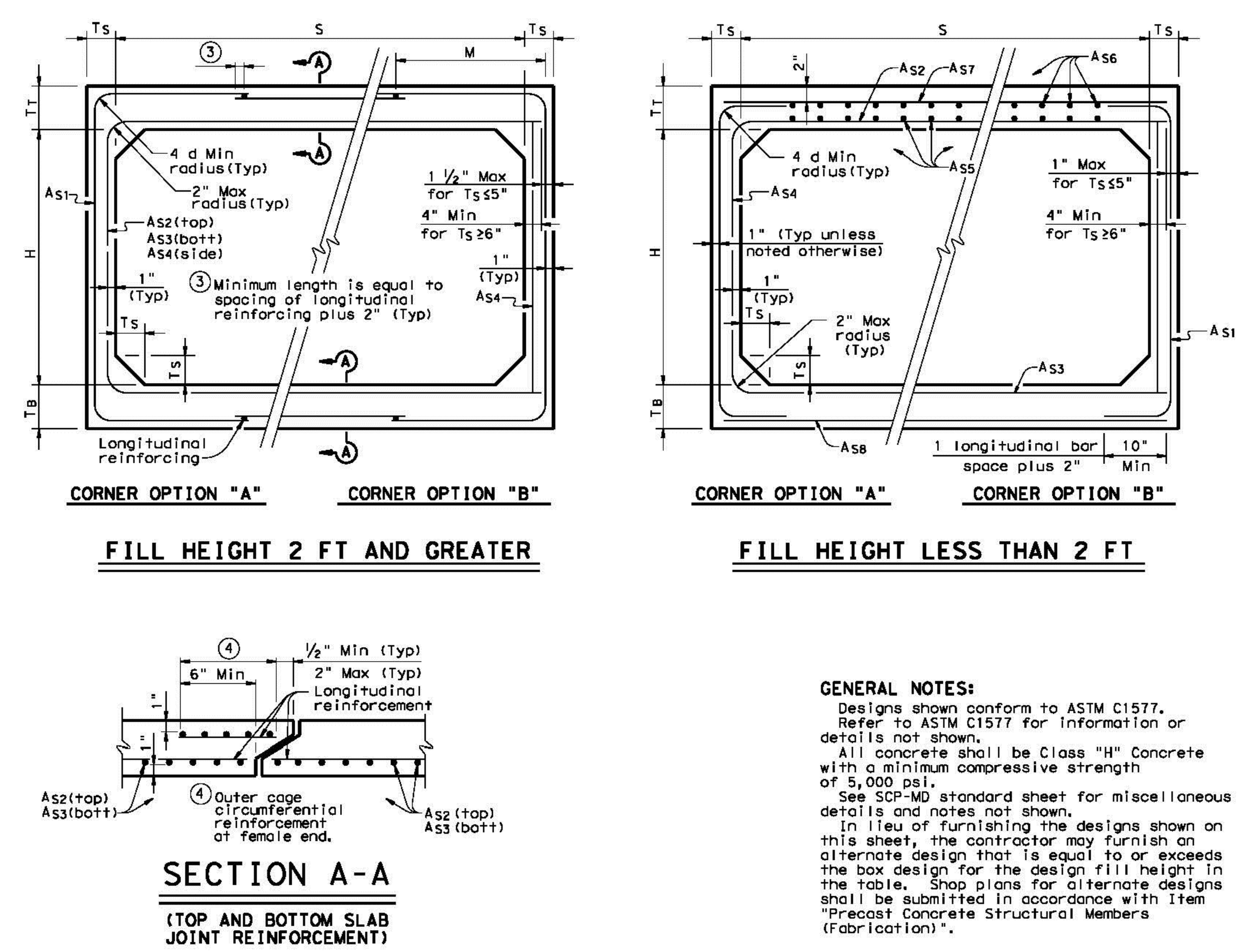
STORM DETAILS (1 OF 3)

BOX DATA

S (ft)	H (ft)	T_T (in)	T_B (in)	T_S (in)	Fill Height (ft)	M (Min) (in)	A_{S1}	A_{S2}	A_{S3}	A_{S4}	A_{S5}	A_{S6}	A_{S7}	A_{S8}	Lift Weight (Tons) (1)
							REINFORCING (in²/ft) (2)								
4	2	7.5	6	5	<2	-	0.18	0.27	0.15	0.12	0.18	0.18	0.18	0.14	4.5
4	2	5	5	5	2<3	38	0.18	0.19	0.17	0.12	-	-	-	-	3.6
4	2	5	5	5	3-5	38	0.13	0.13	0.13	0.12	-	-	-	-	3.6
4	2	5	5	5	10	38	0.12	0.12	0.12	0.12	-	-	-	-	3.6
4	2	5	5	5	15	38	0.14	0.16	0.16	0.12	-	-	-	-	3.6
4	2	5	5	5	20	38	0.18	0.20	0.21	0.12	-	-	-	-	3.6
4	2	5	5	5	25	38	0.23	0.25	0.25	0.12	-	-	-	-	3.6
4	2	5	5	5	30	38	0.28	0.30	0.30	0.12	-	-	-	-	3.6
4	3	7.5	6	5	<2	-	0.18	0.31	0.18	0.12	0.18	0.18	0.18	0.14	5.0
4	3	5	5	5	2<3	38	0.15	0.23	0.20	0.12	-	-	-	-	4.1
4	3	5	5	5	3-5	38	0.12	0.16	0.16	0.12	-	-	-	-	4.1
4	3	5	5	5	10	38	0.12	0.14	0.14	0.12	-	-	-	-	4.1
4	3	5	5	5	15	38	0.12	0.18	0.18	0.12	-	-	-	-	4.1
4	3	5	5	5	20	38	0.14	0.23	0.24	0.12	-	-	-	-	4.1
4	3	5	5	5	25	38	0.17	0.29	0.29	0.12	-	-	-	-	4.1
4	3	5	5	5	30	38	0.21	0.35	0.35	0.12	-	-	-	-	4.1
4	4	7.5	6	5	<2	-	0.18	0.33	0.20	0.12	0.18	0.18	0.18	0.14	5.5
4	4	5	5	5	2<3	38	0.12	0.26	0.23	0.12	-	-	-	-	4.6
4	4	5	5	5	3-5	38	0.12	0.18	0.18	0.12	-	-	-	-	4.6
4	4	5	5	5	10	38	0.12	0.15	0.15	0.12	-	-	-	-	4.6
4	4	5	5	5	15	38	0.12	0.19	0.20	0.12	-	-	-	-	4.6
4	4	5	5	5	20	38	0.12	0.25	0.25	0.12	-	-	-	-	4.6
4	4	5	5	5	25	38	0.14	0.31	0.31	0.12	-	-	-	-	4.6
4	4	5	5	5	30	38	0.17	0.37	0.37	0.12	-	-	-	-	4.6

(1) For Box Length = 8'-0"

(2) A_{S1} thru A_{S4}, A_{S7} and A_{S8} are minimum required areas of reinforcement per linear foot of box length. A_{S6} and A_{S5} are minimum required areas of reinforcement per linear foot of box width.



GENERAL NOTES:
Designs shown conform to ASTM C1577.
Refer to ASTM C1577 for information or details not shown.
All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.
See SCP-MD standard sheet for miscellaneous details and notes not shown.
In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structural Members (Fabrication)".

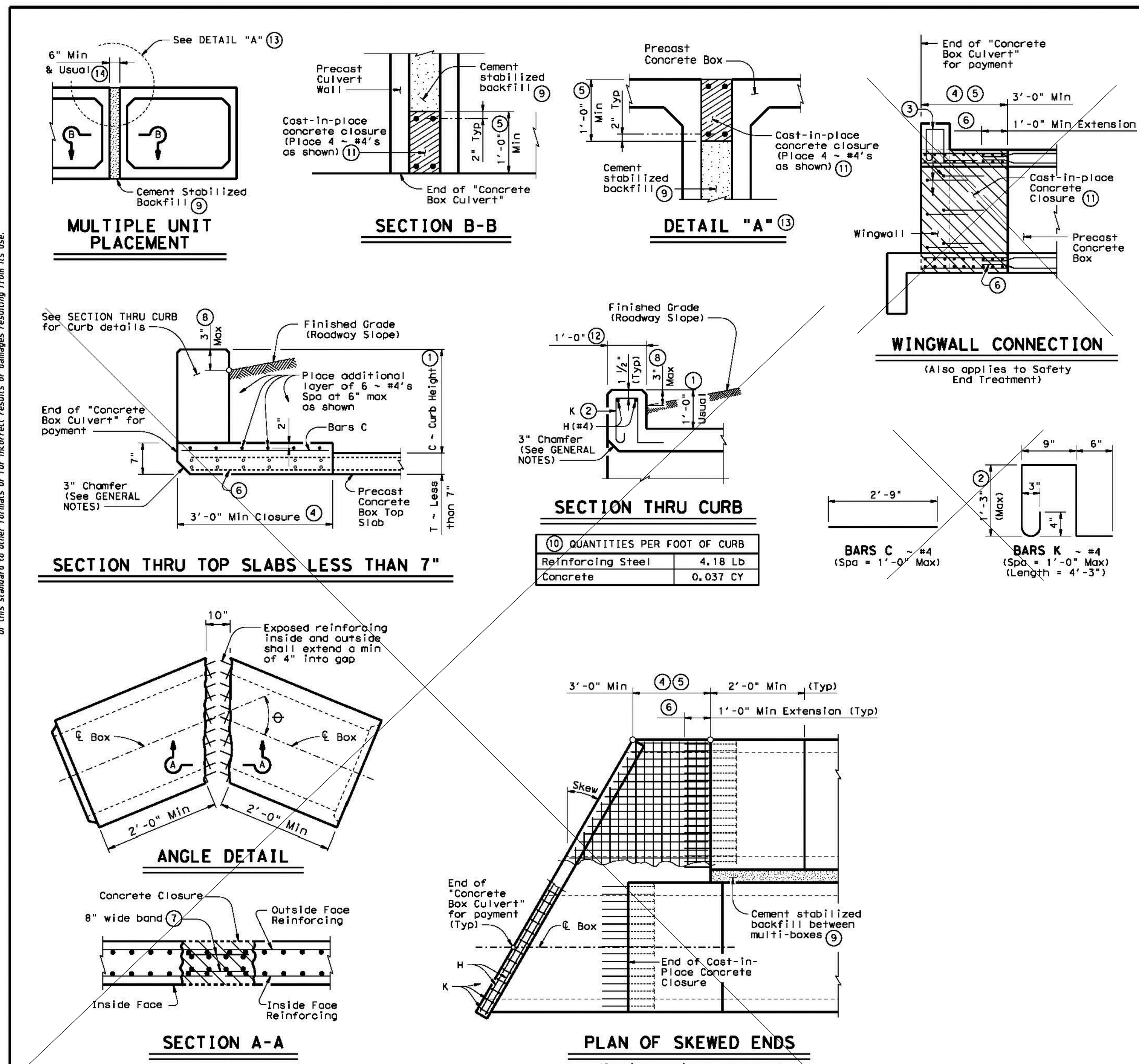
HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

SINGLE BOX CULVERTS
PRECAST
4'-0" SPAN

SCP-4

FILE: scp04sts.dgn | DN: GAF | CK: LMW | DW: BWH/TxDOT | CK: GAF
©TxDOT February 2010



MULTIPLE UNIT PLACEMENT
SECTION B-B
DETAIL "A"
WINGWALL CONNECTION
(Also applies to Safety End Treatment)
SECTION THRU CURB
SECTION THRU TOP SLABS LESS THAN 7"
ANGLE DETAIL
SECTION A-A
PLAN OF SKEWED ENDS
(Showing multi-box placement)
BARS C ~ #4
BARS K ~ #4

(10) QUANTITIES PER FOOT OF CURB	
Reinforcing Steel	4.18 Lb
Concrete	0.037 CY

(1) 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 traffic rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.

(2) For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, Bars K may be omitted.

(3) Curb, Wingwall or Safety End Treatment reinforcing shall extend into concrete closure. Any reinforcing that does not fit into the closure shall be bent or trimmed as necessary.

(4) Cast-in-place concrete closure shall be 3'-0" min. Boxes shall be cast short or broken back in the field. All reinforcing in the closure shall be the same size and spacing as in the precast box section. Except where shown otherwise, the cast-in-place closure shall be flush with the inside and outside faces of the precast box section.

(5) For multiple unit placements the length of the closure for the interior walls may be adjusted as necessary. The length of the top slab, bottom slab, and exterior wall closure shall not be less than 3'-0". See Section B-B detail when interior walls are cast full length.

(6) Precast box reinforcing shall extend a minimum of 1'-0" into concrete closure (Typ).

(7) Bands of reinforcing matching the inside and outside face reinforcing shall be placed in the gaps of the top and bottom slabs. A band matching the outside face reinforcing of the wall shall be placed in the gaps of the walls (placed in the outside face only). The bands shall be tack welded to the exposed reinforcing at each point of contact.

(8) For vehicle safety, the following requirements must be met:
- For structures without bridge rail, curbs shall project no more than 3" above finished grade.
- For structures with bridge rail, curbs shall be flush with finished grade.

Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.

(9) Cement Stabilized Backfill between boxes is considered part of the Box Culvert for payment.

(10) All curb concrete and reinforcing is considered part of the Box Culvert for payment.

(11) Any additional concrete and reinforcing required for the closures shall be considered as subsidiary to the Concrete Box Culvert.

(12) 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.

(13) For multiple unit placement with overlay, with 1 to 2 course surface treatment, or with the top slab as the final riding surface, provide wall closure as shown in DETAIL "A".

(14) This dimension may be increased with approval of the Engineer to allow the precast boxes to be tunneled or jacked in accordance with Item 476, "Jacking, Boring, or Tunneling Pipe or Box". No payment will be made for any additional material in the gap between adjacent boxes.

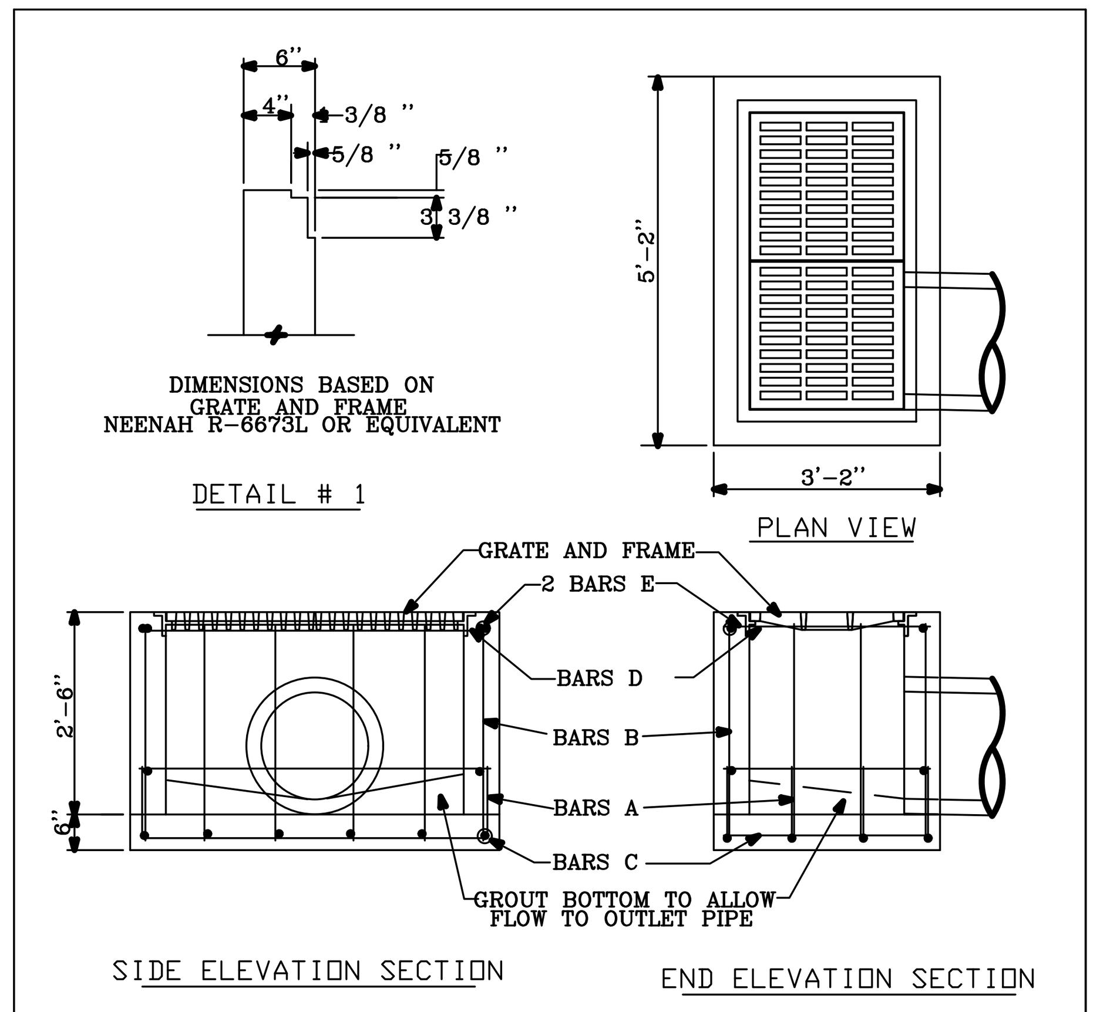
GENERAL NOTES:
Designed according to AASHTO LRFD Specifications.
All closure concrete shall be Class "C" with a minimum compressive strength of 3600 psi and shall be placed according to the Item, "Concrete Substructures".
Any additional concrete required for the closures shall be considered as subsidiary to the Concrete Box Culvert.
Refer to the Single Box Culverts Precast standard for details not shown.
The bottom edge of the top slab closure shall be chamfered 3 inches at the entrance.

HL93 LOADING

Texas Department of Transportation — Bridge Division Standard

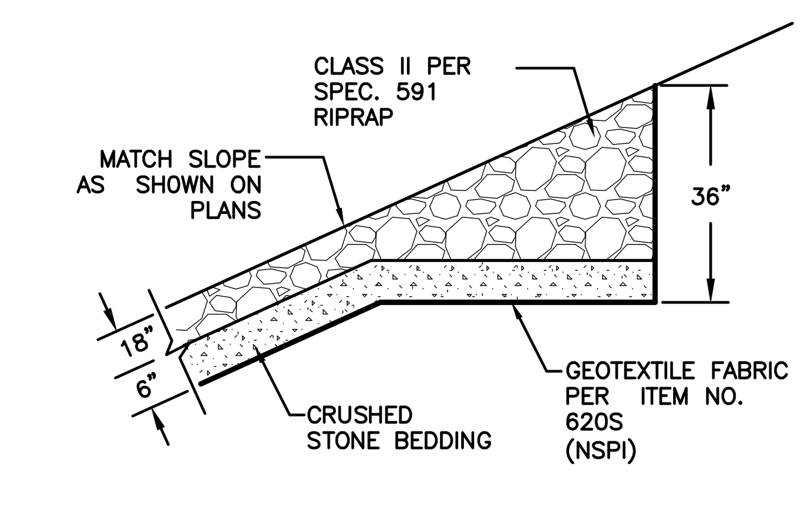
BOX CULVERTS
PRECAST
MISCELLANEOUS DETAILS

SCP-MD

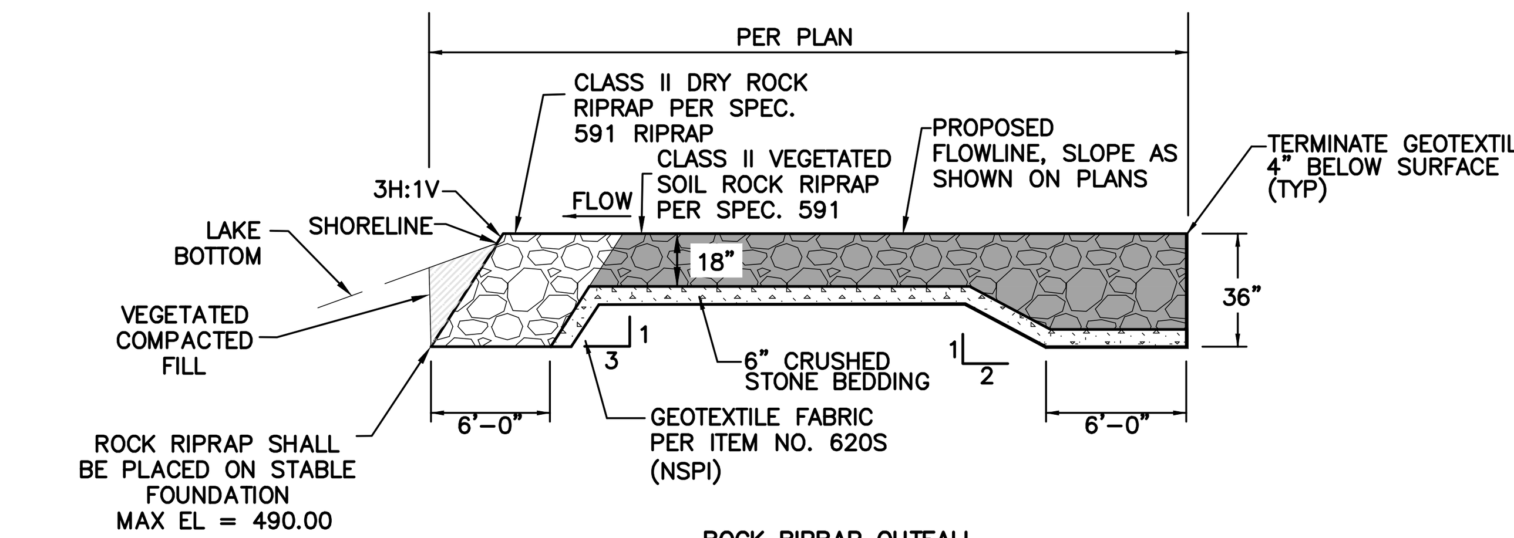


REINFORCING STEEL SCHEDULE					
BAR	QTY	SIZE	SPACING	LENGTH	WEIGHT
A	4	4	12''	6'–8''	18
B	16	4	12''	3'–0''	32
C	8	4	12''	2'–10''	15
D	4	4	12''	5'–2''	14
E	4	5	12''	2'–10''	12
				TOTAL WEIGHT---91 LB.	

CITY OF AUSTIN
DRAINAGE UTILITY
STANDARD DROP INLET
RECORD COPY SIGNED BY ALLEN BRECHER — 5/24/88
APPROVED — DATE
ADOPTED: 04-01-88
SCALE: N. T. S.
INITIAL: B. H.
STANDARD NO. 508-11

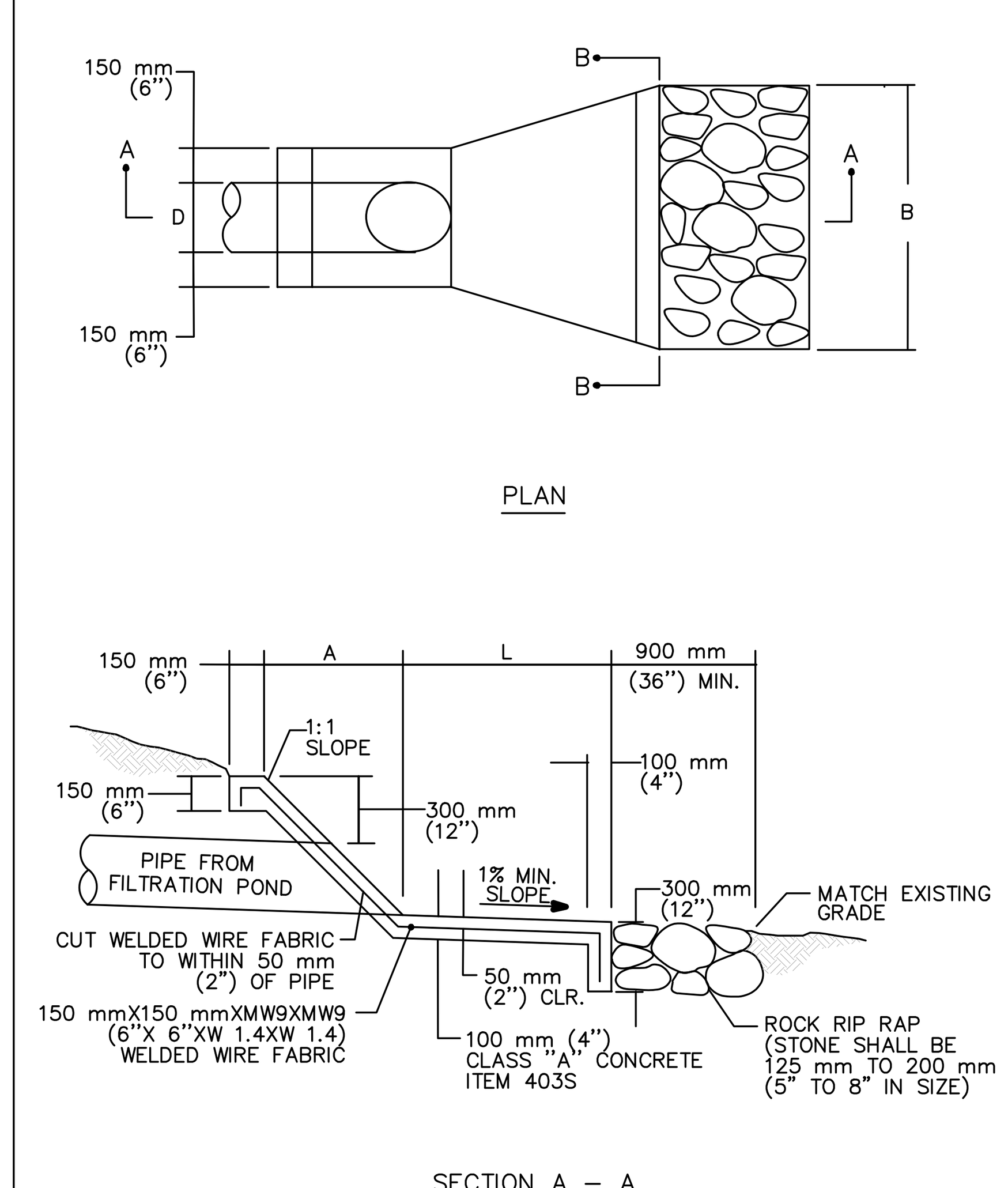


(1) SLOPED ROCK RIPRAP EDGE DETAIL
NTS



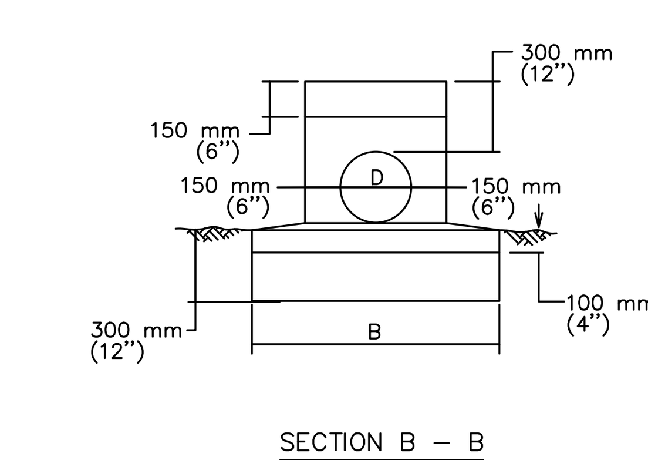
PER PLAN
CLASS II DRY ROCK RIPRAP PER SPEC. 591 RIPRAP
CLASS II VEGETATED SOIL ROCK RIPRAP PER SPEC. 591
PROPOSED FLOWLINE, SLOPE AS SHOWN ON PLANS
TERMINATE GEOTEXTILE 4" BELOW SURFACE (TYP)
3H:1V
FLOW
LAKE BOTTOM
SHORELINE
VEGETATED COMPACTED FILL
6" CRUSHED STONE BEDDING
GEOTEXTILE FABRIC PER ITEM NO. 620S (NSPI)
ROCK RIPRAP SHALL BE PLACED ON STABLE FOUNDATION MAX EL = 490.00
6'-0"
36"

(2) ROCK RIPRAP OUTFALL PROTECTION DETAIL
NTS



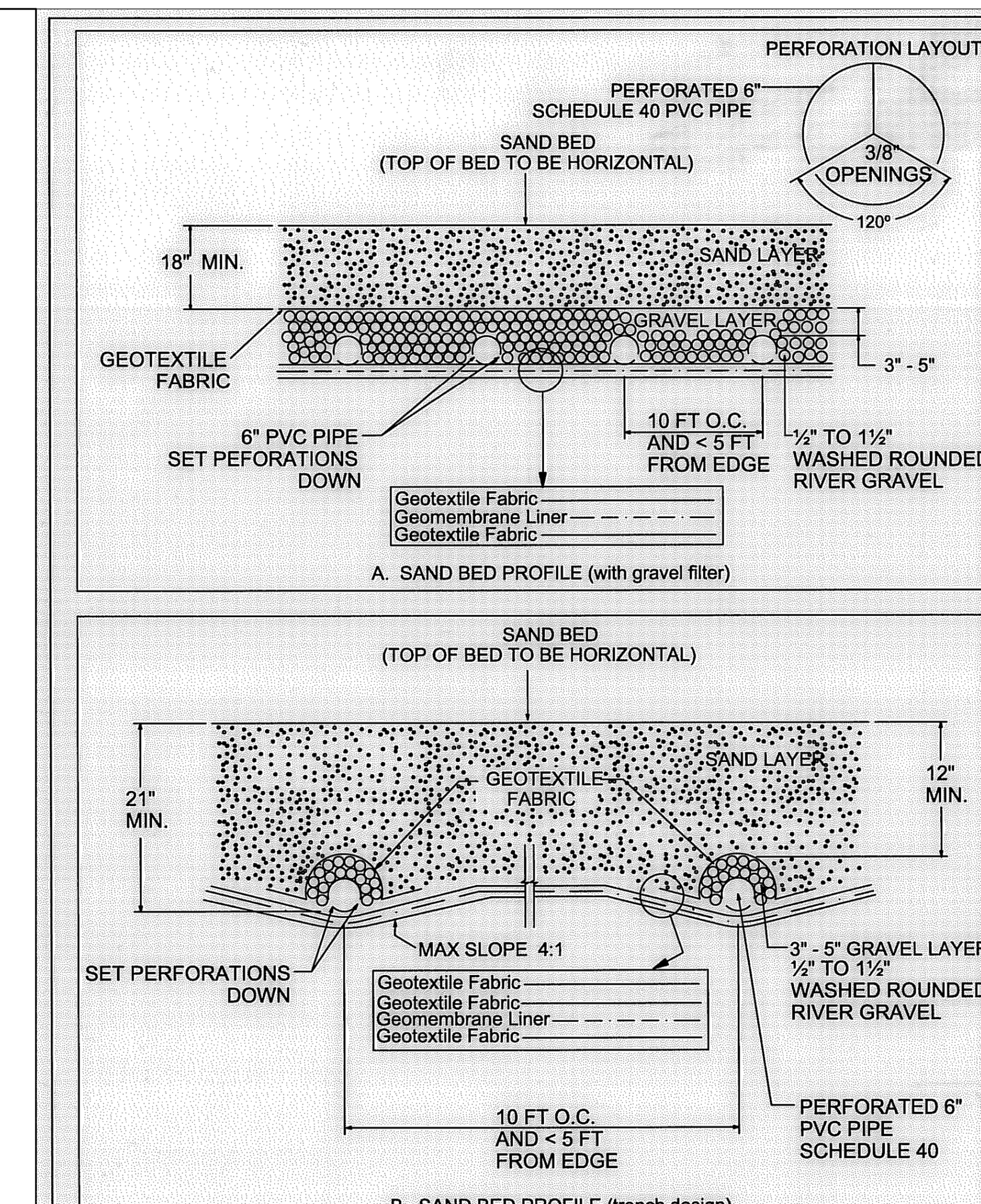
PLAN
PIPE FROM FILTRATION POND
CUT WELDED WIRE FABRIC TO WITHIN 50 mm (2") OF PIPE
150 mmX150 mmXMW9XMW9 (6"X 6"XW 1.4XW 1.4) WELDED WIRE FABRIC
MATCH EXISTING GRADE
ROCK RIP RAP (STONE SHALL BE 125 mm TO 200 mm (5" TO 8" IN SIZE)
CLASS "A" CONCRETE ITEM 403S
SECTION A – A

CITY OF AUSTIN
DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
HEADWALL FOR FILTRATION PONDS W/OUTFALL PIPE 150 mm (6") TO 375 mm (15") DIA.
RECORD COPY SIGNED BY GEORGE E. OSWALD — 3/15/05 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-15, 1 OF 2



A	450 mm (18")	500 mm (20")	550 mm (22")	600 mm (24")	675 mm (27")
B	750 mm (30")	800 mm (32")	850 mm (34")	1.05 m (42")	1.27 m (51")
D	150 mm (6")	200 mm (8")	250 mm (10")	300 mm (12")	375 mm (15")
L	600 mm (24")	600 mm (24")	750 mm (30")	900 mm (36")	1.2 m (48")

CITY OF AUSTIN
DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW
HEADWALL FOR FILTRATION PONDS W/OUTFALL PIPE 150 mm (6") TO 375 mm (15") DIA.
RECORD COPY SIGNED BY GEORGE E. OSWALD — 3/15/05 — ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 508S-15, 2 OF 2



PERFORATION LAYOUT
PERFORATED 6" SCHEDULE 40 PVC PIPE
SAND BED (TOP OF BED TO BE HORIZONTAL)
3/8" OPENINGS
SAND LAYER
GRAVEL LAYER
GEOTEXTILE FABRIC
6" PVC PIPE SET PERFORATIONS DOWN
10 FT O.C. AND < 5 FT FROM EDGE
½" TO 1½" WASHED ROUNDED RIVER GRAVEL
A. SAND BED PROFILE (with gravel filter)
MAX SLOPE 4:1
SET PERFORATIONS DOWN
3"- 5" GRAVEL LAYER ½" TO 1½" WASHED ROUNDED RIVER GRAVEL
PERFORATED 6" PVC PIPE SCHEDULE 40
B. SAND BED PROFILE (trench design)

CITY OF AUSTIN
WATERSHED PROTECTION DEPARTMENT
SAND BED FILTRATION CONFIGURATIONS USING GEOMEMBRANE LINER
P.E. 12/30/14 ADOPTED
THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.
STANDARD NO. 661-1

SITE PLAN APPROVAL SHEET ______ OF ______
FILE NUMBER:__________ APPLICATION DATE:__________
APPROVED BY COMMISSION ON ________ UNDER SECTION ________ OF
CHAPTER ________ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25–5–81, LDC)________ CASE MANAGER ________
PROJECT EXPIRATION DATE (ORD. #970905–A)________DWPZ______DDZ______

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:__________ZONING________
Rev. 1 __________Correction 1__________
Rev. 2 __________Correction 2 __________
Rev. 3 __________Correction 3 __________
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
HDR — Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

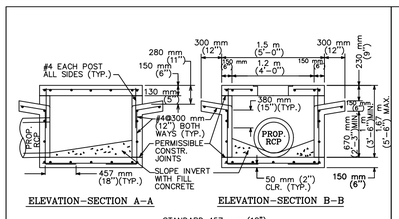
PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 01/21/2021

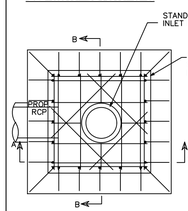
ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

STORM DETAILS (1 OF 3)

FILENAME 1126STRMD01
SCALE N.T.S.
SHEET 17 of 350
C10-108



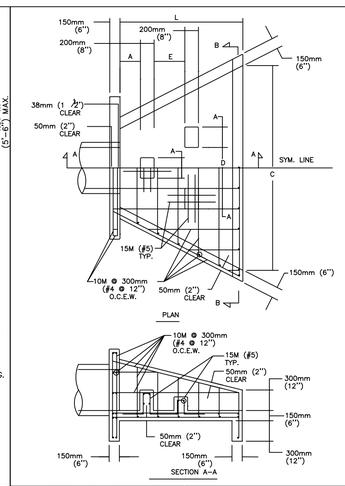
ELEVATION–SECTION A–A ELEVATION–SECTION B–B

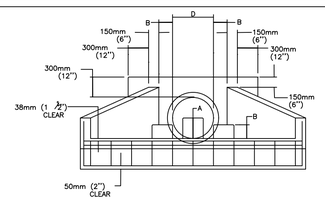


PLAN

NOTES:
1. CHAMFER ALL EXPOSED EDGES 20 mm (3/4").
2. REINFORCING STEEL SHALL BE CUT OR FIELD–BENT AS REQUIRED TO CLEAR PIPE AND INLET FRAME OPENING. ALL CUT STEEL SHALL BE REPLACED WITH ADDITIONAL DIAGONAL BARS OF THE SAME DIAMETER.
3. INLET FRAME AND COVER SHALL BE IN ACCORDANCE WITH CITY OF AUSTIN STANDARD 503S–1.
4. CONCRETE COVERAGE OF STEEL SHALL BE 50 mm (2") MIN. AT ALL SURFACES.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		4–SIDED AREA INLET	
RECORD COPY SIGNED BY ARTHUR C. ROMERO 08/18/2010 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.		STANDARD NO. 508S–9





SECTION B–B

NOTES:
1. ALL CONCRETE SHALL BE TYPE "C" AS PER SPEC. 403S, CONCRETE FOR STURCTURES.
2. CHAMFER ALL EXTERNAL VISIBLE CORNERS.
3. DISSIPATOR BLOCKS REQUIRED ON DISCHARGE HEADWALLS ONLY.

D	457mm (18")	533mm (21")	610mm (24")	685mm (27")	765mm (30")	838mm (33")	914mm (36")	1.067 m (42")	1.219 m (48")	1.372 m (54")	1.524 m (60")
A	225mm (9")	250mm (10")	300mm (12")	350mm (14")	375mm (15")	400mm (16")	450mm (18")	525mm (21")	600mm (24")	675mm (27")	750mm (30")
B	150mm (6")	175mm (7")	200mm (8")	225mm (9")	250mm (10")	275mm (11")	300mm (12")	350mm (14")	400mm (16")	450mm (18")	500mm (20")
C	2.29 m (90")	2.67 m (105")	3.05 m (120")	343 m (135")	3.81 m (150")	4.19 m (165")	4.57 m (180")	5.33 m (210")	6.10 m (240")	6.86 m (270")	7.62 m (300")
L	1.37 m (54")	1.60 m (63")	1.83 m (72")	2.06 m (81")	2.29 m (90")	2.51 m (99")	2.74 m (108")	3.20 m (126")	3.66 m (144")	4.11 m (162")	4.57 m (180")
E	300mm (12")	350mm (14")	400mm (16")	450mm (18")	500mm (20")	550mm (22")	600mm (24")	700mm (28")	800m (32")	900mm (36")	1000mm (40")

DIMENSIONS IN MILLIMETERS, METERS AND (INCHES).

DISCHARGE VELOCITIES GREATER THAN 3 METERS/SECOND (10 fps) REQUIRE ROCK OUTLET PROTECTION.

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		STANDARD HEADWALL AND ENERGY DISSIPATORS	
RECORD COPY SIGNED BY BILL GARDNER 08/20/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.		STANDARD NO. 508S-13 1 OF 2

CITY OF AUSTIN DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		STANDARD HEADWALL AND ENERGY DISSIPATORS	
RECORD COPY SIGNED BY BILL GARDNER 08/20/07 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.		STANDARD NO. 508S-13 2 OF 2

GENERAL NOTES:
1. LEVEL SPREADERS SHALL BE INSTALLED UNDER THE DIRECT SUPERVISION OF THE ENGINEER.
2. CONSTRUCT LEVEL LIP ON ZERO PERCENT GRADE TO INSURE UNIFORM SPREADING OF SEDIMENT–FREE RUNOFF (CONVERTING CHANNEL FLOW TO SHEET FLOW).
3. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT ON FILL).
4. A MATTING EROSION STOP SHALL BE PLACED VERTICALLY AND AT LEAST 150 mm (6") DEEP IN A SILT TRENCH 0.3 m (1') BACK OF AND PARALLEL WITH THE LIP. THIS EROSION STOP SHALL EXTEND THE ENTIRE LENGTH OF THE LEVEL LIP AND SHALL BE TRIMMED AFTER BACKFILLING WITH TAMPED SOIL, SO THAT THE UPPER EDGE IS FLUSH WITH THE SOIL SURFACE.
5. THE ENTIRE LEVEL LIP AREA SHALL BE PROTECTED BY PLACING 2 STRIPS OF JUTE, EXCELSIOR OR OTHER APPROVED PROTECTIVE MATERIAL AS SHOWN ABOVE.
6. THE ENTRANCE CHANNEL SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 6 m (20') BEFORE ENTERING SPREADER.
7. STORM RUNOFF CONVERTED TO SHEET FLOW SHALL OUTLET ONTO STABILIZED AREAS. WATER SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.

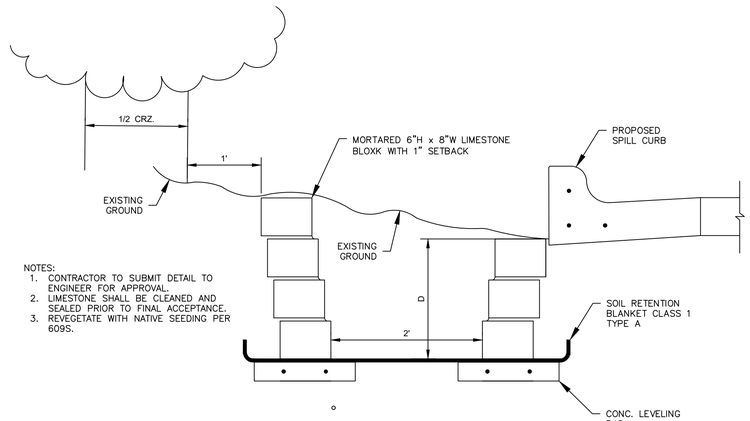
CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		LEVEL SPREADER	
RECORD COPY SIGNED BY J. PATRICK MURPHY 3/27/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.		STANDARD NO. 634S-1

5 AREA INLET RG3 APRON DETAIL
SCALE: NTS

NOTES:
1. CONTRACTOR TO FIELD VERIFY INLET AND APRON LOCATION ALIGN WITH FLUME INSIDE FENCE. STAKE LOCATION FOR REVIEW BY ENGINEER PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO FIELD VERIFY ELEVATIONS. NOTE ELEVATIONS REVIEW BY ENGINEER PRIOR TO CONSTUCTION.

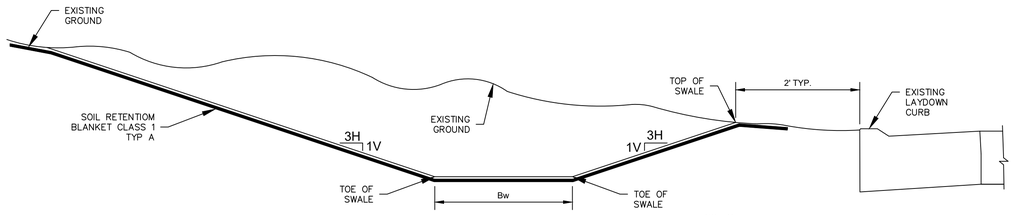
SECTION A-A

1 AREA INLET RG3 APRON DETAIL
SCALE: NTS



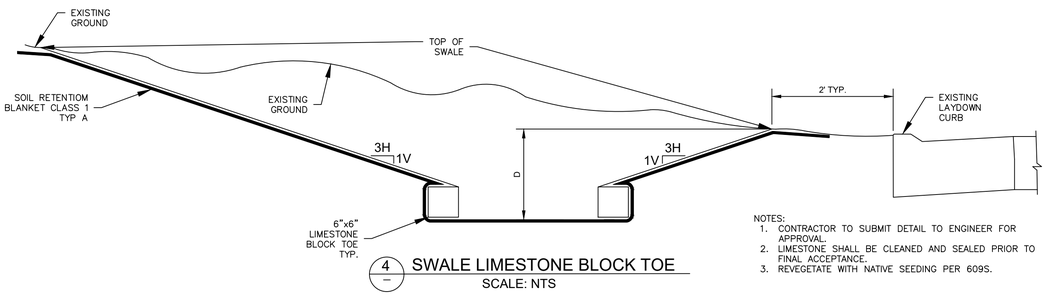
NOTES:
1. CONTRACTOR TO SUBMIT DETAIL TO ENGINEER FOR APPROVAL.
2. LIMESTONE SHALL BE CLEANED AND SEALED PRIOR TO FINAL ACCEPTANCE.
3. REVEGETATE WITH NATIVE SEEDING PER 609S.

2 LIMESTONE EDGED FLUME
SCALE: NTS



NOTES:
1. REVEGETATE WITH NATIVE SEEDING PER 609S.

3 EARTHEN SWALE SECTION
SCALE: NTS



NOTES:
1. CONTRACTOR TO SUBMIT DETAIL TO ENGINEER FOR APPROVAL.
2. LIMESTONE SHALL BE CLEANED AND SEALED PRIOR TO FINAL ACCEPTANCE.
3. REVEGETATE WITH NATIVE SEEDING PER 609S.

4 SWALE LIMESTONE BLOCK TOE
SCALE: NTS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER POLLUTION ABATEMENT PLAN
GENERAL CONSTRUCTION NOTES

EDWARDS AQUIFER PROTECTION PROGRAM CONSTRUCTION NOTES – LEGAL DISCLAIMER

THE FOLLOWING/LISTED "CONSTRUCTION NOTES" ARE INTENDED TO BE ADVISORY IN NATURE ONLY AND DO NOT CONSTITUTE AN APPROVAL OR CONDITIONAL APPROVAL BY THE EXECUTIVE DIRECTOR (ED), NOR DO THEY CONSTITUTE A COMPREHENSIVE LISTING OF RULES OR CONDITIONS TO BE FOLLOWED DURING CONSTRUCTION. FURTHER ACTIONS MAY BE REQUIRED TO ACHIEVE COMPLIANCE WITH TCEQ REGULATIONS FOUND IN TITLE 30, TEXAS ADMINISTRATIVE CODE (TAC), CHAPTERS 213 AND 217, AS WELL AS LOCAL ORDINANCES AND REGULATIONS PROVIDING FOR THE PROTECTION OF WATER QUALITY. ADDITIONALLY, NOTHING CONTAINED IN THE FOLLOWING/LISTED "CONSTRUCTION NOTES" RESTRICTS THE POWERS OF THE ED, THE COMMISSION OR ANY OTHER GOVERNMENTAL ENTITY TO PREVENT, CORRECT, OR CURTAIL ACTIVITIES THAT RESULT OR MAY RESULT IN POLLUTION OF THE EDWARDS AQUIFER OR HYDROLOGICALLY CONNECTED SURFACE WATERS. THE HOLDER OF ANY EDWARDS AQUIFER PROTECTION PLAN CONTAINING "CONSTRUCTION NOTES" IS STILL RESPONSIBLE FOR COMPLIANCE WITH TITLE 30, TAC, CHAPTERS 213 OR ANY OTHER APPLICABLE TCEQ REGULATION, AS WELL AS ALL CONDITIONS OF AN EDWARDS AQUIFER PROTECTION PLAN THROUGH ALL PHASES OF PLAN IMPLEMENTATION. FAILURE TO COMPLY WITH ANY CONDITION OF THE ED'S APPROVAL, WHETHER OR NOT IN CONTRADICTION OF ANY "CONSTRUCTION NOTES," IS A VIOLATION OF TCEQ REGULATIONS AND ANY VIOLATION IS SUBJECT TO ADMINISTRATIVE RULES, ORDERS, AND PENALTIES AS PROVIDED UNDER TITLE 30, TAC § 213.10 (RELATING TO ENFORCEMENT). SUCH VIOLATIONS MAY ALSO BE SUBJECT TO CIVIL PENALTIES AND INJUNCTION. THE FOLLOWING/LISTED "CONSTRUCTION NOTES" IN NO WAY REPRESENT AN APPROVED EXCEPTION BY THE ED TO ANY PART OF TITLE 30 TAC, CHAPTERS 213 AND 217, OR ANY OTHER TCEQ APPLICABLE REGULATION

1. A WRITTEN NOTICE OF CONSTRUCTION MUST BE SUBMITTED TO THE TCEQ REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO THE START OF ANY REGULATED ACTIVITIES. THIS NOTICE MUST INCLUDE:
   – THE NAME OF THE APPROVED PROJECT;
   – THE ACTIVITY START DATE; AND
   – THE CONTACT INFORMATION OF THE PRIME CONTRACTOR.
2. ALL CONTRACTORS CONDUCTING REGULATED ACTIVITIES ASSOCIATED WITH THIS PROJECT MUST BE PROVIDED WITH COMPLETE COPIES OF THE APPROVED WATER POLLUTION ABATEMENT PLAN (WPAP) AND THE TCEQ LETTER INDICATING THE SPECIFIC CONDITIONS OF ITS APPROVAL. DURING THE COURSE OF THESE REGULATED ACTIVITIES, THE CONTRACTORS ARE REQUIRED TO KEEP ON–SITE COPIES OF THE APPROVED PLAN AND APPROVAL LETTER.
3. IF ANY SENSITIVE FEATURE(S) (CAVES, SOLUTION CAVITY, SINK HOLE, ETC.) IS DISCOVERED DURING CONSTRUCTION, ALL REGULATED ACTIVITIES NEAR THE SENSITIVE FEATURE MUST BE SUSPENDED IMMEDIATELY. THE APPROPRIATE TCEQ REGIONAL OFFICE MUST BE IMMEDIATELY NOTIFIED OF ANY SENSITIVE FEATURES ENCOUNTERED DURING CONSTRUCTION. CONSTRUCTION ACTIVITIES MAY NOT BE RESUMED UNTIL THE TCEQ HAS REVIEWED AND APPROVED THE APPROPRIATE PROTECTIVE MEASURES IN ORDER TO PROTECT ANY SENSITIVE FEATURE AND THE EDWARDS AQUIFER FROM POTENTIALLY ADVERSE IMPACTS TO WATER QUALITY.
4. NO TEMPORARY OR PERMANENT HAZARDOUS SUBSTANCE STORAGE TANK SHALL BE INSTALLED WITHIN 150 FEET OF A WATER SUPPLY SOURCE, DISTRIBUTION SYSTEM, WELL, OR SENSITIVE FEATURE.
5. PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY, ALL TEMPORARY EROSION AND SEDIMENTATION (E&S) CONTROL MEASURES MUST BE PROPERLY INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED PLANS AND MANUFACTURERS SPECIFICATIONS. IF INSPECTIONS INDICATE A CONTROL HAS BEEN USED INAPPROPRIATELY, OR INCORRECTLY, THE APPLICANT MUST REPLACE OR MODIFY THE CONTROL FOR SITE SITUATIONS. THESE CONTROLS MUST REMAIN IN PLACE UNTIL THE DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
6. ANY SEDIMENT THAT ESCAPES THE CONSTRUCTION SITE MUST BE COLLECTED AND PROPERLY DISPOSED OF BEFORE THE NEXT RAIN EVENT TO ENSURE IT IS NOT WASHED INTO SURFACE STREAMS, SENSITIVE FEATURES, ETC.
7. SEDIMENT MUST BE REMOVED FROM THE SEDIMENT TRAPS OR SEDIMENTATION BASINS NOT LATER THAN WHEN IT OCCUPIES 50% OF THE BASIN'S DESIGN CAPACITY.
8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER SHALL BE PREVENTED FROM BEING DISCHARGED OFFSITE.
9. ALL SPOILS (EXCAVATED MATERIAL) GENERATED FROM THE PROJECT SITE MUST BE STORED ON–SITE WITH PROPER E&S CONTROLS. FOR STORAGE OR DISPOSAL OF SPOILS AT ANOTHER SITE ON THE EDWARDS AQUIFER RECHARGE ZONE, THE OWNER OF THE SITE MUST RECEIVE APPROVAL OF A WATER POLLUTION ABATEMENT PLAN FOR THE PLACEMENT OF FILL MATERIAL OR MASS GRADING PRIOR TO THE PLACEMENT OF SPOILS AT THE OTHER SITE.
10. IF PORTIONS OF THE SITE WILL HAVE A TEMPORARY OR PERMANENT CEASE IN CONSTRUCTION ACTIVITY LASTING LONGER THAN 14 DAYS, SOIL STABILIZATION IN THOSE AREAS SHALL BE INITIATED AS SOON AS POSSIBLE PRIOR TO THE 14TH DAY OF INACTIVITY. IF ACTIVITY WILL RESUME PRIOR TO THE 21ST DAY, STABILIZATION MEASURES ARE NOT REQUIRED. IF DROUGHT CONDITIONS OR INCLEMENT WEATHER PREVENT ACTION BY THE 14TH DAY, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS POSSIBLE.
11. THE FOLLOWING RECORDS SHALL BE MAINTAINED AND MADE AVAILABLE TO THE TCEQ UPON REQUEST:
   – THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR;
   – THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE; AND
   – THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.
12. THE HOLDER OF ANY APPROVED EDWARD AQUIFER PROTECTION PLAN MUST NOTIFY THE APPROPRIATE REGIONAL OFFICE IN WRITING AND OBTAIN APPROVAL FROM THE EXECUTIVE DIRECTOR PRIOR TO INITIATING ANY OF THE FOLLOWING:
   A. ANY PHYSICAL OR OPERATIONAL MODIFICATION OF ANY WATER POLLUTION ABATEMENT STRUCTURE(S), INCLUDING BUT NOT LIMITED TO PONDS, DAMS, BERMS, SEWAGE TREATMENT PLANTS, AND DIVERSIONARY STRUCTURES;
   B. ANY CHANGE IN THE NATURE OR CHARACTER OF THE REGULATED ACTIVITY FROM THAT WHICH WAS ORIGINALLY APPROVED OR A CHANGE WHICH WOULD SIGNIFICANTLY IMPACT THE ABILITY OF THE PLAN TO PREVENT POLLUTION OF THE EDWARDS AQUIFER;
   C. ANY DEVELOPMENT OF LAND PREVIOUSLY IDENTIFIED AS UNDEVELOPED IN THE ORIGINAL WATER POLLUTION ABATEMENT PLAN.

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE
EXPIRATION DATE(25–5–81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905–A)_____DMP?_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ZONING:_____
Rev. 1 _____Correction 1 _____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAD FILE: \\CAS–DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HORIZ\ULRICH_LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126STRM002 PLOTTED: 1/15/2021 12:59:56 PM BY: JANE FU CTB FILE: CAS.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS THOMAS W. ROHLACK 86365 LICENSED PROFESSIONAL ENGINEER 01/21/2021

CITY OF AUSTIN FOUNDED 1839

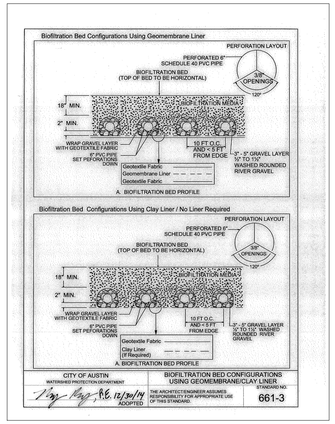
ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

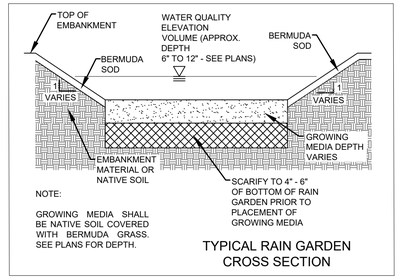
STORM DETAILS (2 OF 3)

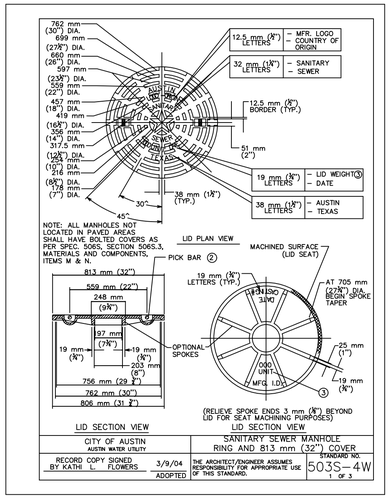
0 1" 2"
FILENAME -
SCALE N.T.S.

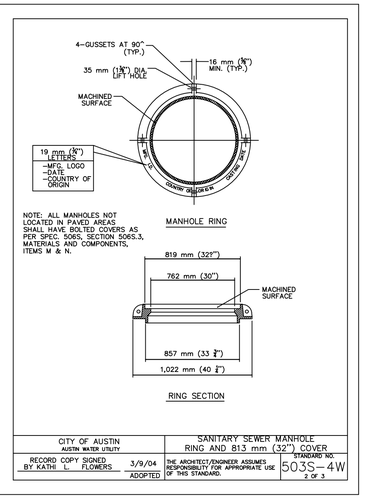
SHEET 18 of 350
C10-109

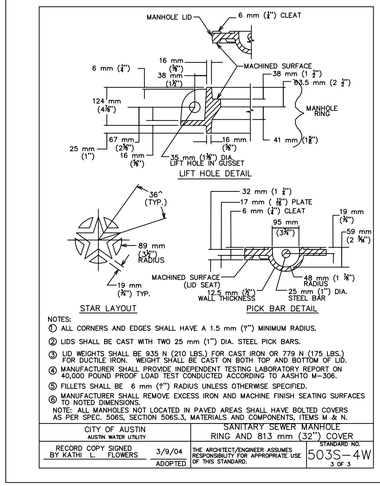
SPC–03–005C (R2)

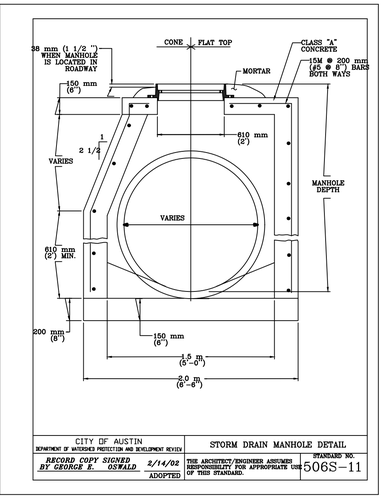


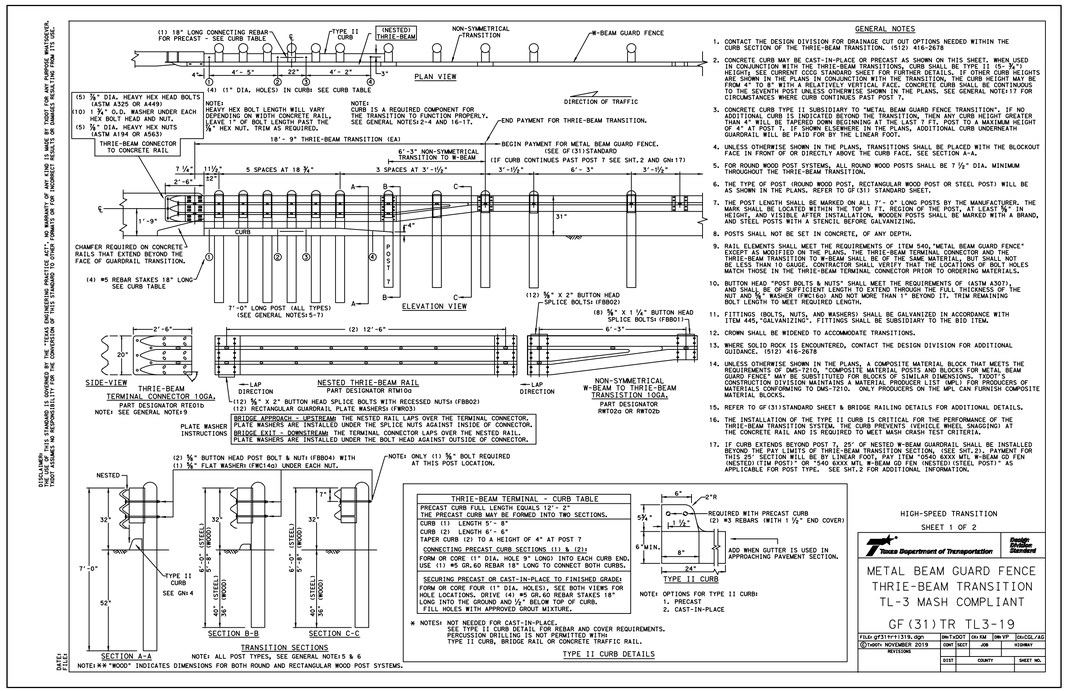












GENERAL NOTES

1. CONTACT THE DESIGN DIVISION FOR DRAINAGE CUT OUT OPTIONS NEEDED WITHIN THE CURB SECTION OF THE THRIE-BEAM TRANSITION. (512) 416-2678
2. CONCRETE CURB MAY BE CAST-IN-PLACE OR PRECAST AS SHOWN ON THIS SHEET. WHEN USED IN CONJUNCTION WITH THE THRIE-BEAM TRANSITIONS, CURB SHALL BE TYPE II (5- 9/16") HEIGHT. SEE CURRENT CCOG STANDARD SHEET FOR FURTHER DETAILS. IF OTHER CURB HEIGHTS ARE SHOWN IN THE PLANS IN CONJUNCTION WITH THE TRANSITION, THE CURB HEIGHT MAY BE FROM 4" TO 8" WITH A RELATIVELY VERTICAL FACE. CONCRETE CURB SHALL BE CONTINUOUS TO THE SEVENTH POST UNLESS OTHERWISE SHOWN IN THE PLANS. SEE GENERAL NOTE 17 FOR CIRCUMSTANCES WHERE CURB CONTINUES PAST POST 7.
3. CONCRETE CURB TYPE II SUBSIDIARY TO "METAL BEAM GUARD FENCE TRANSITION". IF NO ADDITIONAL CURB IS INDICATED BEYOND THE TRANSITION, THEN ANY CURB HEIGHT GREATER THAN 4" WILL BE TAPERED DOWN BEGINNING AT THE LAST 7 FT. POST TO A MAXIMUM HEIGHT OF 4" AT POST 7. IF SHOWN ELSEWHERE IN THE PLANS, ADDITIONAL CURB UNDERNEATH GUARDRAIL WILL BE PAID FOR BY THE LINEAR FOOT.
4. UNLESS OTHERWISE SHOWN IN THE PLANS, TRANSITIONS SHALL BE PLACED WITH THE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE. SEE SECTION A-A.
5. FOR ROUND WOOD POST SYSTEMS, ALL ROUND WOOD POSTS SHALL BE 7 ½" DIA. MINIMUM THROUGHOUT THE THRIE-BEAM TRANSITION.
6. THE TYPE OF POST (ROUND WOOD POST, RECTANGULAR WOOD POST OR STEEL POST) WILL BE AS SHOWN IN THE PLANS. REFER TO GF(31) STANDARD SHEET.
7. THE POST LENGTH SHALL BE MARKED ON ALL 7'- 0" LONG POSTS BY THE MANUFACTURER. THE MARK SHALL BE LOCATED WITHIN THE TOP 1 FT. REGION OF THE POST, AT LEAST ⅝" IN HEIGHT, AND VISIBLE AFTER INSTALLATION. WOODEN POSTS SHALL BE MARKED WITH A BRAND, AND STEEL POSTS WITH A STENCIL BEFORE GALVANIZING.
8. POSTS SHALL NOT BE SET IN CONCRETE, OF ANY DEPTH.
9. RAIL ELEMENTS SHALL MEET THE REQUIREMENTS OF ITEM 540, "METAL BEAM GUARD FENCE" EXCEPT AS MODIFIED ON THE PLANS. THE THRIE-BEAM TERMINAL CONNECTOR AND THE THRIE-BEAM TRANSITION TO W-BEAM SHALL BE OF THE SAME MATERIAL, BUT SHALL NOT BE LESS THAN 10 GAUGE. CONTRACTOR SHALL VERIFY THAT THE LOCATIONS OF BOLT HOLES MATCH THOSE IN THE THRIE-BEAM TERMINAL CONNECTOR PRIOR TO ORDERING MATERIALS.
10. BUTTON HEAD "POST BOLTS & NUTS" SHALL MEET THE REQUIREMENTS OF (ASTM A307), AND SHALL BE OF SUFFICIENT LENGTH TO EXTEND THROUGH THE FULL THICKNESS OF THE NUT AND ⅝" WASHER (FWC16o) AND NOT MORE THAN 1" BEYOND IT. TRIM REMAINING BOLT LENGTH TO MEET REQUIRED LENGTH.
11. FITTINGS (BOLTS, NUTS, AND WASHERS) SHALL BE GALVANIZED IN ACCORDANCE WITH ITEM 445, "GALVANIZING". FITTINGS SHALL BE SUBSIDIARY TO THE BID ITEM.
12. CROWN SHALL BE WIDENED TO ACCOMMODATE TRANSITIONS.
13. WHERE SOLID ROCK IS ENCOUNTERED, CONTACT THE DESIGN DIVISION FOR ADDITIONAL GUIDANCE. (512) 416-2678
14. UNLESS OTHERWISE SHOWN IN THE PLANS, A COMPOSITE MATERIAL BLOCK THAT MEETS THE REQUIREMENTS OF DMS-7210, "COMPOSITE MATERIAL POSTS AND BLOCKS FOR METAL BEAM GUARD FENCE" MAY BE SUBSTITUTED FOR BLOCKS OF SIMILAR DIMENSIONS. TXDOT'S CONSTRUCT DIVISION MAINTAINS A MATERIAL PRODUCER LIST (MPL) FOR PRODUCERS OF COMPOSITE MATERIAL BLOCKS. REFER TO DMS-7210. ONLY PRODUCERS ON THE MPL CAN FURNISH COMPOSITE MATERIAL BLOCKS.
15. REFER TO GF(31)STANDARD SHEET & BRIDGE RAILING DETAILS FOR ADDITIONAL DETAILS.
16. THE INSTALLATION OF THE TYPE II CURB IS CRITICAL FOR THE PERFORMANCE OF THE THRIE-BEAM TRANSITION SYSTEM. THE CURB PREVENTS VEHICLE WHEEL SNAGGING) AT THE CONCRETE RAIL AND IS REQUIRED TO MEET MASH CRASH TEST CRITERIA.
17. IF CURB EXTENDS BEYOND POST 7, 25' OF NESTED W-BEAM GUARDRAIL SHALL BE INSTALLED BEYOND THE PAY LIMITS OF THRIE-BEAM TRANSITION SECTION. (SEE SHT. 2). PAYMENT FOR THIS 25' SECTION WILL BE BY LINEAR FOOT. PAY ITEM "0540 6XXX MTL W-BEAM GD FEN (NESTED) (ITM POST)" OR "540 6XXX MTL W-BEAM GD FEN (NESTED) (STEEL POST)" AS APPLICABLE FOR POST TYPE. SEE SHT. 2 FOR ADDITIONAL INFORMATION.

Inlets							
Label	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Flow (Local Surface) (cfs)	Flow (Captured) (cfs)	Flow (Total Out) (cfs)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CUL-1 INLET	619.18	614.6	10.13	10.13	10.13	616.39	616.04
CUL-2B INLET	501.63	497.63	6.18	6.18	6.18	498.95	498.73
CUL-3 INLET	585.65	582.34	21.47	21.47	21.47	585	585
RG-3 INLET	560.42	556.92	6.72	6.72	6.72	558.76	558.72

Conduits										
Label	Slope (Calculated) (ft/ft)	Manning's n	Size	Flow (cfs)	Velocity (ft/s)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Invert (Start) (ft)	Invert (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)
CO-1	0.005	0.012	24 inch	21.47	6.83	585.65	584.73	582.34	582.32	584.85	584.82
CO-2	0.005	0.012	24 inch	21.47	6.83	584.73	585	582.32	582.24	584.65	584.52
CO-3	0.005	0.012	24 inch	21.47	6.83	585	584.2	582.24	581.96	584.35	583.92
CO-4	0.005	0.012	24 inch	21.47	6.83	584.2	584.2	581.96	581.95	583.68	583.61
CO-5	0.005	0.012	18 inch	6.72	3.8	560.42	560.7	556.92	556.65	558.68	558.49
CO-6	0.005	0.012	18 inch	6.72	5.07	560.7	557.96	556.55	556.34	557.6	557.34
CO-7	0.02	0.012	18 inch	10.13	9.63	619.18	615.36	614.6	613.65	615.83	614.56
CO-8	0.073	0.012	18 inch	6.18	13.59	501.63	501	497.63	493.7	498.59	494.17

Swale Name	Q_{100} (cfs)	Shape	Bottom Width (ft)	Limestone Block Toe?	Side Slopes (H:V)	Design Depth (ft)	Manning's n	Longitudinal Slope (ft/ft)	Velocity (ft/s)	Normal Depth (ft)
E RG1	1.83	Trapezoid	2	No	3H:1V	1	0.06	0.005	0.90	0.55
				Yes	3H:1V	1.33	0.047	0.005	1.15	0.64
E RG1	1.83	Trapezoid	2	No	3H:1V	1	0.06	0.0066	0.99	0.52
				Yes	3H:1V	1.33	0.047	0.0066	1.29	0.60
W CUL1	10.13	Trapezoid	3	No	3H:1V	1	0.06	0.005	1.40	1.13
				Yes	3H:1V	1.33	0.049	0.005	1.62	1.24
W CUL1	10.13	Rectangle	2	N/A	N/A	1	0.017	0.005	4.15	1.22
W CUL3*	10.74	Trapezoid	3	No	3H:1V	1	0.06	0.0084	1.48	0.88
W CUL3	21.47	Trapezoid	3	No	3H:1V	1	0.06	0.0508	4.00	0.93
W CUL 3				Yes	3H:1V	1.33	0.049	0.0752	2.32	1.58

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER: ____ APPLICATION DATE: ____
APPROVED BY COMMISSION ON ____ UNDER SECTION ____ OF CHAPTER ____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC) ____ CASE MANAGER ____
PROJECT EXPIRATION DATE (ORD. #970905-A) ____ DMPZ ____ DDZ ____
Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: ____ ZONING: ____
Rev. 1 ____ Correction 1 ____
Rev. 2 ____ Correction 2 ____
Rev. 3 ____ Correction 3 ____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

			PROJECT MANAGER	
			DESIGNED BY	
			DRAWN BY	
			CHECKED BY	
			DATE	
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	PROJECT NUMBER	1126
ISSUE	DATE	DESCRIPTION		

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

STATE OF TEXAS THOMAS W. ROHLACK 86365 LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

STORM DETAILS (3 OF 3)

0 1" 2"

FILENAME 1126STRMD03
SCALE N.T.S.

SHEET 19 of 350
C10-110

SPC-03-005C (R2)

CITY OF AUSTIN – STANDARD NOTES EROSION AND SEDIMENTATION CONTROL

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 ENVIRONMENTAL INSPECTOR 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 DEVELOPMENT SERVICES DEPARTMENT AT 512/974-2278, 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 DEVELOPMENT SERVICES DEPARTMENT OFFICE OF THE PLANNING AND DEVELOPMENT REVIEW DEPARTMENT.

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 ENVIRONMENTAL INSPECTOR.

10. DEVELOPER INFORMATION:

OWNER:

COMPANY: CITY OF AUSTIN , AUSTIN WATER
CONTACT: ROBYN HAASCH
ADDRESS: 6800 BURLESON ROAD BUILDING 312, SUITE 200
AUSTIN, TEXAS 78744
PHONE: 512-974-2624
FAX:

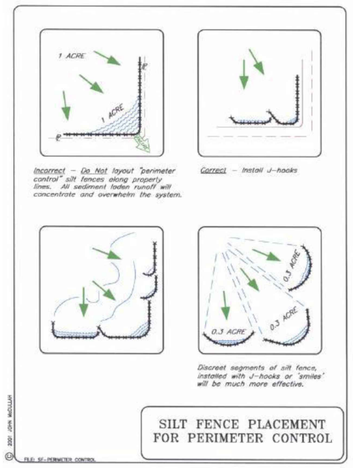
OWNER'S REPRESENTATIVE RESPONSIBLE FOR PLAN ALTERATIONS:

COMPANY: CAS CONSULTING & SERVICES, INC.
CONTACT: THOMAS W. ROHLACK
ADDRESS: 7908 CAMERON ROAD
AUSTIN, TEXAS 78754
PHONE: (512) 836-2388
FAX: (512) 836-4515

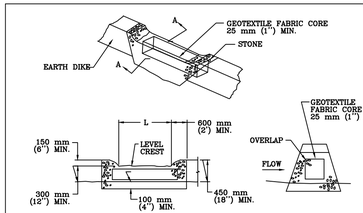
PARTY RESPONSIBLE FOR EROSION/SEDIMENTATION CONTROL MAINTENANCE:
COMPANY: CONTRACTOR

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

11. THE CONTRACTOR SHALL NOT DISPOSE OF SURPLUS EXCAVATED MATERIAL FROM THE SITE WITHOUT NOTIFYING THE ENVIRONMENTAL INSPECTOR, AT 974-2278, 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.



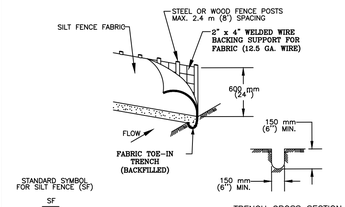
SILT FENCE PLACEMENT FOR PERIMETER CONTROL



STANDARD SYMBOL FOR STONE OUTLET STRUCTURE (SOS)
SOS
L=

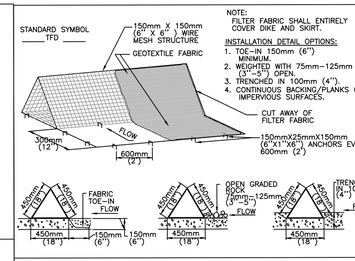
NOTES:
1. THE STONE SHALL BE CRUSHED STONE, UNLESS OTHERWISE SPECIFIED, ALL AGGREGATE USED IN A STONE OUTLET STRUCTURE SHALL BE 75–125 mm (3–5") OPEN GRADED ROCK.
2. THE CREST OF THE STONE DIKE SHALL BE AT LEAST 150 mm (6") LOWER THAN THE LOWEST ELEVATION OF THE TOP OF THE EARTH DIKE AND SHALL BE LEVEL.
3. THE STONE OUTLET STRUCTURE SHALL BE EMBEDDED INTO THE SOIL A MINIMUM OF 100 mm (4").
4. A TABLE OF THE MINIMUM LENGTH OF THE CREST OF THE STONE OUTLET STRUCTURE SHALL BE EQUAL TO 6 TIMES THE NUMBER OF ACRES OF CONTRIBUTING DRAINAGE AREA.
5. WHEN SILT REACHES A DEPTH EQUAL TO ONE-THIRD THE HEIGHT OF THE STRUCTURE OR 150 mm (6"), WHICHEVER IS LESS, THE SILT SHALL BE REMOVED AND DISPOSED OF ON AN APPROVED SITE AND IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION.
6. THE STONE OUTLET STRUCTURE SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY OR AFTER EACH RAIN, AND THE STONE SHALL BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE STONE, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
7. A GEOTEXTILE FABRIC CORE HAVING MINIMUM DIAMETER OF 300 mm (1') SHALL BE INCORPORATED IN THE STRUCTURE.
8. WHEN THE SITE IS COMPLETELY STABILIZED, THE STRUCTURE AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		STONE OUTLET STRUCTURE	STANDARD NO.
RECORD COPY SIGNED BY J. PATRICK MURPHY	5/23/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	643S-1



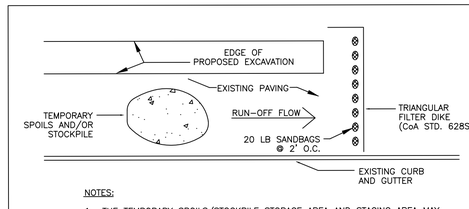
1. STEEL OR WOOD POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 300 mm (12 INCHES). IF WOOD POSTS CANNOT ACHIEVE 300 mm (12 inches) DEPTH, USE STEEL POSTS.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A 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 PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 150 mm (6 inches). THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		SILT FENCE	STANDARD NO.
RECORD COPY SIGNED BY MORGAN BYARS	09/01/2011 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	642S-1



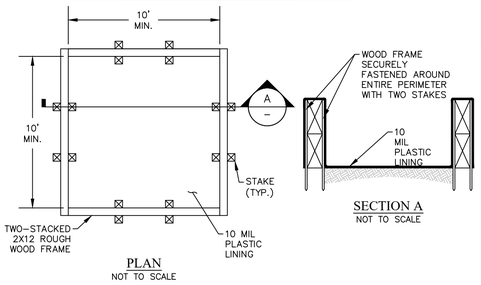
GENERAL NOTES
1. DIKES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT DIKE.
2. THE FABRIC COVER AND SKIRT SHALL BE A CONTINUOUS WRAPPING OF GEOTEXTILE. THE SKIRT SHALL BE A CONTINUOUS EXTENSION OF THE FABRIC ON THE UPSTREAM FACE.
3. THE SKIRT SHALL BE WEIGHTED WITH A CONTINUOUS LAYER 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, AND 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 STAPLES AND 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 COMPLETELY STABILIZED, THE DIKES AND ANY REMAINING SILT SHALL BE REMOVED. SILT SHALL BE DISPOSED OF AS INDICATED IN GENERAL NOTE 8 ABOVE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		TRIANGULAR SEDIMENT FILTER DIKE	STANDARD NO.
RECORD COPY SIGNED BY J. PATRICK MURPHY	3/27/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	628S



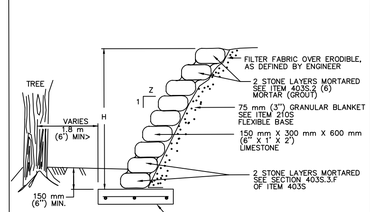
NOTES:
1. THE TEMPORARY SPOILS/STOCKPILE STORAGE AREA AND STAGING AREA MAY BE LOCATED DIRECTLY ADJACENT TO THE EXCAVATION AND ON THE PAVEMENT.
2. ANY SPOIL NOT INTENDED TO BE REUSED WILL BE HAULED TO AN APPROVED OR PERMITTED DISPOSAL SITE DAILY.
3. INSTALL TRIANGULAR SEDIMENT FILTER DIKE ACROSS FULL 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



NOTES:
1. ACTUAL LAYOUT DETERMINED IN FIELD.
2. INSTALL CONCRETE WASHOUT SIGN WITHIN 30 FT. OF THE TEMPORARY CONCRETE WASHOUT FACILITY.
3. IN LIEU OF DESIGN SHOWN ABOVE, CONTRACTOR MAY SUBSTITUTE PREFABRICATED DESIGN OR OTHER FABRICATED ON-SITE DESIGN PROVIDED HE/SHE SUBMITS SKETCH TO ENVIRONMENTAL INSPECTOR FOR APPROVAL.
4. CONTRACTOR SHALL SUBMIT MAINTENANCE PLAN TO ENVIRONMENTAL INSPECTOR FOR APPROVAL. PLAN SHALL INCLUDE ANTICIPATED NUMBER OF CONCRETE TRUCKS PER DAY, CLEANING SCHEDULE, DISPOSAL PLAN FOR SOLIDS AND LIQUIDS, AND FREQUENCY OF INSPECTION.
5. CONTRACTOR SHALL IMMEDIATELY REPAIR LINER IF LEAKAGE IS OBSERVED.

CONCRETE WASHOUT AREA



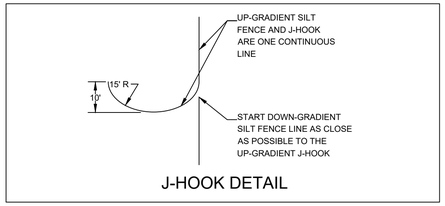
THIS STANDARD APPLIES ONLY UNDER THE FOLLOWING CONDITIONS:
A. H AND Z ARE SPECIFIED ON THE DRAWING.
B. GROUNDWATER IS NO HIGHER THAN THE BOTTOM OF THE FOOTING.
C. THE MATERIAL BELOW THE FOOTING IS FIRM AND STABLE.
D. THE MATERIAL BEHIND THE WALL HAS A LEVEL SURFACE.
E. THE MATERIAL IN FRONT OF THE WALL HAS A SLOPE NO STEEPER THAN 4 HORIZONTAL TO 1 VERTICAL.
F. THE FACE OF THE WALL IS NO STEEPER THAN 1 HORIZONTAL TO 2 VERTICAL.
G. SURCHARGE LOADS BEHIND THE WALL ARE NO CLOSER THAN DISTANCE H FROM THE TOP OF WALL.

NOTES:
1. DESIGN AND CONSTRUCTION OF ROCK WALL SHALL CONFORM TO THE REQUIREMENTS OF CITY CODE 16-7-2, PLACEMENT OF FENCES IN STREET CORNER AREAS, AND THE CITY OF AUSTIN TRANSPORTATION CRITERIA MANUAL FOR MINIMM SIGHT DISTANCE.
2. CONCRETE SHALL CONFORM TO ITEM 403S, "CONCRETE FOR STRUCTURES".

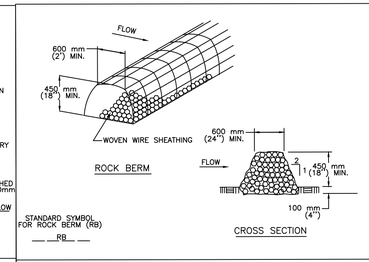
DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS	STANDARD NO.
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	610S-6 1 OF 2

PROJECT SPOILS NOTES:

1. ALL SPOILS ARE TO BE PLACED BACK IN TRENCH EVERY NIGHT; OR IF SPOILS PILES ARE TO REMAIN OVERNIGHT, SPOILS MUST BE PLACED ON THE UPHILL SIDE OF TRENCH WITHIN THE LOC.
2. SPOILS ARE TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

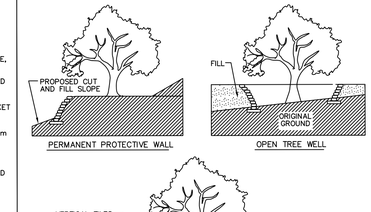


J-HOOK DETAIL

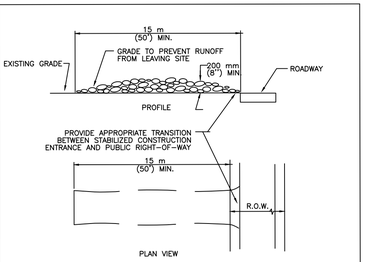


NOTES:
1. USE ONLY OPEN GRADED ROCK 75 to 125 mm (3 to 5") DIAMETER FOR ALL CONDITIONS.
2. THE ROCK BERM SHALL BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM 25 mm (1") OPENING AND MINIMUM WIRE DIAMETER OF 12.9 mm (20 GAUGE).
3. THE ROCK BERM SHALL BE INSPECTED DAILY OR AFTER EACH RAIN, AND THE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

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

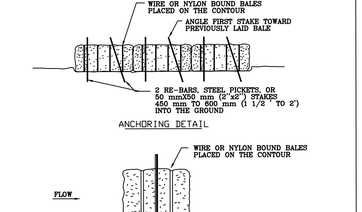


DEPARTMENT OF WATERSHED PROTECTION AND DEVELOPMENT REVIEW		SLOPE PROTECTION AND TREE WELLS	STANDARD NO.
RECORD COPY SIGNED BY J. PATRICK MURPHY	03/13/06 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	610S-6 2 OF 2



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 DEVISED USED TO TRAP SEDIMENT. ALL SEDIMENTS THAT IS SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY.
7. DRAINAGE: ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.

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



GENERAL NOTES:
1. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 100 mm (4").
2. BALES SHALL BE SECURELY ANCHORED IN PLACE BY 10M (3/8 ") REBAR STAKES DRIVEN THROUGH THE BALES. THE FIRST STAKE IN EACH BALE SHALL BE ANGLED TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.
3. INSPECTION SHALL BE WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
4. WHEN SILT REACHES A DEPTH OF 150 mm (6"), IT SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED SITE AS TO NOT CREATE A SILTATION PROBLEM.
5. AFTER THE DEVELOPMENT SITE IS COMPLETELY STABILIZED, THE BALE AND ACCUMULATED SILT SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED SPOIL DISPOSAL SITE.

CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT		HAY BALE DIKE	STANDARD NO.
RECORD COPY SIGNED BY J. PATRICK MURPHY	3/27/00 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	628S-1

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER: _____ APPLICATION DATE: _____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: _____ ZONING: _____
Rev. 1 _____ Correction 1 _____
Rev. 2 _____ Correction 2 _____
Rev. 3 _____ Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	TR
DRAWN BY	JC
CHECKED BY	JC
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS THOMAS W. ROHLACK 86385 LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

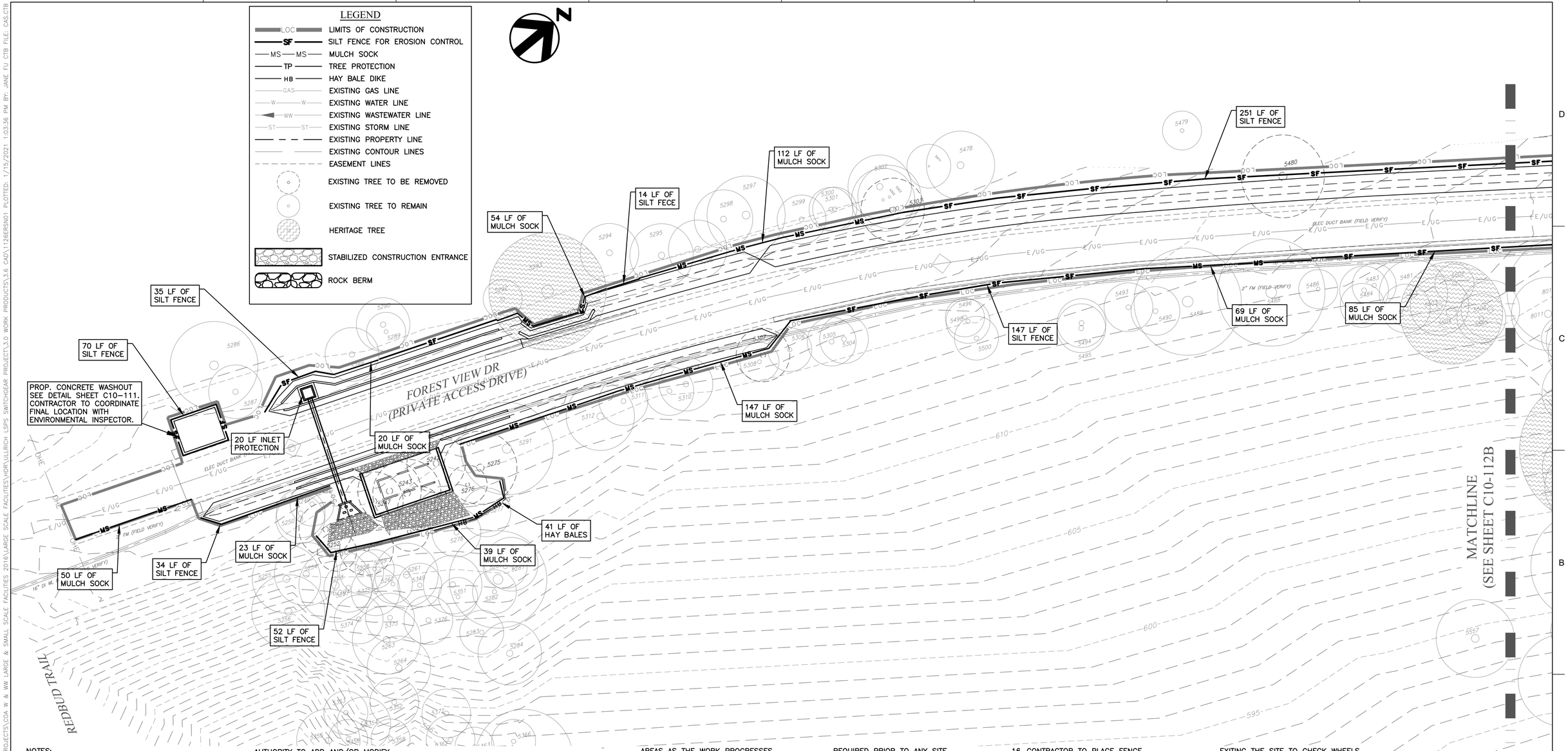
TREE PROTECTION NOTES & DETAILS (1 OF 2)

0 1" 2"

FILENAME 1126ERSD01
SCALE N.T.S.

SHEET 20 of 350
C10-111

SPC–03–005C (R2)



NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. SILT FENCES SHALL INCLUDE J-HOOKS. REFER TO J-HOOK DETAIL ON SHEET C10-111. J-HOOK SPACING SHALL BE EVERY 20 FEET.
4. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS. [LDC 25-8-183]
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(D), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. MULCH SOCK TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2(G). DIAMETER OF MULCH SOCK IS 12" AND FILLER MATERIAL SHALL BE HAY.
7. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 5 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING. [ECM 1.4.1.2(C)(2)]
8. TRENCHES WILL BE REFILLED TO NATURAL GRADE AND REVEGETATED.
9. NO MORE THAN 2000 FEET OF CONSTRUCTION ZONE SHALL BE OPEN AT ANY TIME WITH CLEAN UP AND RESTORATION WORK OCCURRING BEFORE PROCEEDING TO THE NEXT SECTION. THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS AS THE WORK PROGRESSES. [ECM 1.4.1.2(E), ECM 1.4.1.2(C)(2)]
10. ALL SPOILS WILL BE CLEANED OFF ALL ROADS, DRIVEWAYS AND ANY OTHER IMPERVIOUS COVER LOCATED OUTSIDE THE LOC AT THE END OF EACH DAY. [ECM 1.4.1.1 (A)(B), ECM 1.4.2]
11. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
12. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
13. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY.
14. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
15. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
16. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
17. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.
18. CONTRACTOR SHALL INSTALL SIGNS REQUIRING CONSTRUCTION VEHICLES EXITING THE SITE TO CHECK WHEELS AND UNDER SIDE OF VEHICLE FOR SEDIMENT. IF SEDIMENT IS PRESENT VEHICLES SHALL BE REQUIRED TO RETURN TOT HE WASH DOWN AREA TO REMOVE SEDIMENT PRIOR TO EXITING THE GATE.

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER ____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ZONING:_____
Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH_LSPS_SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126ERSN01 PLOTTED: 1/15/2021 1:03:36 PM BY: JANE FU CTB FILE: CAS.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-000372
Main: 512.836.2588 | Fax: 512.836.4523

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

E&S PLAN (1 OF 5)

0 1" 2"
FILENAME 1126ERSN01
SCALE 1" = 20'

SHEET 22 of 350
C10-112A

LEGEND

- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE FOR EROSION CONTROL
- MS — MULCH SOCK
- TP — TREE PROTECTION
- HB — HAY BALE DIKE
- GAS — EXISTING GAS LINE
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- ST — EXISTING STORM LINE
- EXISTING PROPERTY LINE
- EXISTING CONTOUR LINES
- EASEMENT LINES
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- HERITAGE TREE
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK BERM

94 LF OF SILT FENCE

38 LF OF SILT FENCE

79 LF OF MULCH SOCK

22 LF OF MULCH SOCK

18 LF OF SILT FENCE

32 LF OF MULCH SOCK

33 LF OF SILT FENCE

55 LF OF MULCH SOCK

63 LF OF SILT FENCE

300 LF OF SILT FENCE

THIS AREA TO BE USED FOR STORAGE DURING CONSTRUCTION

24 LF OF INLET PROTECTION

255 LF OF SILT FENCE

102 LF OF SILT FENCE

102 LF OF MULCH SOCK

STABILIZEDC ONSTRUCTION ENTRANCE 30'X50' SEE DETAIL SHEET C10-111. CONTRACTOR TO COORDINATE FINAL LOCATION WITH ENVIRONMENTAL INSPECTOR. CONTRACTOR TO PRESERVE TREES

130 LF OF SILT FENCE

70 LF OF SILT FENCE

15 LF OF MULCH SOCK & 17 LF OF HAY BALE

28 LF OF MULCH SOCK & 30 LF OF HAY BALE

FOREST VIEW DR (PRIVATE ACCESS DRIVE)

COM SITE BENCHMARK: BOLT SET IN POWER POLE ELEV.: 619.38'

MATCHLINE (SEE SHEET C10-112A

MATCHLINE (SEE SHEET C10-113

NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. SILT FENCES SHALL INCLUDE J-HOOKS. REFER TO J-HOOK DETAIL ON SHEET C10-111. J-HOOK SPACING SHALL BE EVERY 20 FEET.
4. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS. [LDC 25-8-183]
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(D), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. MULCH SOCK TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2(G). DIAMETER OF MULCH SOCK IS 12" AND FILLER MATERIAL SHALL BE HAY.
7. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 5 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING. [ECM 1.4.1.2(C)(2)]
8. TRENCHES WILL BE REFILLED TO NATURAL GRADE AND REVEGETATED.
9. NO MORE THAN 2000 FEET OF CONSTRUCTION ZONE SHALL BE OPEN AT ANY TIME WITH CLEAN UP AND RESTORATION WORK OCCURRING BEFORE PROCEEDING TO THE NEXT SECTION. THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS AS THE WORK PROGRESSES. [ECM 1.4.1.2(E), ECM 1.4.1.2(C)(2)]
10. ALL SPOILS WILL BE CLEANED OFF ALL ROADS, DRIVEWAYS AND ANY OTHER IMPERVIOUS COVER LOCATED OUTSIDE THE LOC AT THE END OF EACH DAY. [ECM 1.4.1.1 (A)(B), ECM 1.4.2]
11. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
12. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
13. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY.
14. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
15. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
16. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
17. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
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Director, Watershed Protection and Development Review
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Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

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HDR
Texas P.E. Firm
Registration No. F-754

			PROJECT MANAGER	
			DESIGNED BY	TR
			DRAWN BY	JC
1	05/12/2021	RFI039	CHECKED BY	JC
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	DATE	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER	1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 5/14/21

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

E&S PLAN (2 OF 5)

0 1" 2"

FILENAME 1126ERSN02
SCALE 1" = 20'

SHEET
C10-112B
108 OF 174

SPC-03-005C (R2)

APPENDIX P–1 – EROSION CONTROL NOTES:

1. The contractor shall install erosion/sedimentation controls, tree/natural area protective fencing, and conduct "Pre–Construction" tree fertilization (if applicable) prior to any site preparation work (clearing, grubbing or excavation).
2. The placement of erosion/sedimentation controls shall be in accordance with the Environmental Criteria Manual and the approved Erosion and Sedimentation Control Plan. The COA ESC Plan shall be consulted and used as the basis for a TPDES required SWPPP. If a SWPPP is required, it shall be available for review by the City of Austin Environmental Inspector at all times during construction, including at the Pre–Construction meeting. The checklist below contains the basic elements that shall be reviewed for permit approval by COA EV Plan Reviewers as well as COA EV Inspectors.

   – Plan sheets submitted to the City of Austin MUST show the following:
   Direction of flow during grading operations.
   Location, description, and calculations for off–site flow diversion structures.
   Areas that will not be disturbed; natural features to be preserved.
   Delineation of contributing drainage area to each proposed BMP (e.g., silt fence, sediment basin, etc.).
   Location and type of E&S BMPs for each phase of disturbance.
   Calculations for BMPs as required.
   Location and description of temporary stabilization measures.
   Location of on–site spoils, description of handling and disposal of borrow materials, and description of on–site permanent spoils disposal areas, including size, depth of fill and revegetation procedures.
   Describe sequence of construction as it pertains to ESC including the following elements:
   1. Installation sequence of controls (e.g. perimeter controls, then sediment basins, then temporary stabilization, then permanent, etc.)
   2. Project phasing if required (LOC greater than 25 acres)
   3. Sequence of grading operations and notation of temporary stabilization measures to be used
   4. Schedule for converting temporary basins to permanent WQ controls
   5. Schedule for removal of temporary controls
   6. Anticipated maintenance schedule for temporary controls
   – Categorize each BMP under one of the following areas of BMP activity as described below:
   3.1 Minimize disturbed area and protect natural features and soil
   3.2 Control Stormwater flowing onto and through the project
   3.3 Stabilize Soils
   3.4 Protect Slopes
   3.5 Protect Storm Drain Inlets
   3.6 Establish Perimeter Controls and Sediment Barriers
   3.7 Retain Sediment On–Site and Control Dewatering Practices
   3.8 Establish Stabilized Construction Exits
   3.9 Any Additional BMPs
   – Note the location of each BMP on your site map(s).
   – For any structural BMPs, you should provide design specifications and details and refer to them.
   – For more information, see City of Austin Environmental Criteria Manual 1.4.
3. The Placement of tree/natural area protective fencing shall be in accordance with the City of Austin standard Notes for Tree and Natural Area Protection and the approved Grading/Tree and Natural Area Plan.
4. A pre–construction conference shall be held on–site with the contractor, design Engineer/permit applicant and Environmental Inspector after installation of the erosion/sedimentation controls, tree/natural area protection measures and "Pre–Construction" tree fertilization (if applicable) prior to beginning any site preparation work. The owner or owner's representative shall notify the Development Services Department, 512–974–2278 or by email at environmental.inspections@austintexas.gov, at least three days prior to the meeting date. COA approved ESC Plan and TPDES SWPPP (if required) should be reviewed by COA EV Inspector at this time.
5. Any major variation in materials or locations of controls or fences from those shown on the approved plans will require a revision and must be approved by the reviewing Engineer, Environmental Specialist or City Arborist as appropriate. Major revisions must be approved by authorized COA staff. Minor changes to be made as field revisions to the Erosion and Sedimentation Control Plan may be required by the Environmental Inspector during the course of construction to correct control inadequacies.
6. The contractor is required to provide a certified inspector that is either a licensed engineer (or person directly supervised by the licensed engineer) or Certified Professional in Erosion and Sediment Control (CPESC or CPESC – IT), Certified Erosion, Sediment and Stormwater – Inspector (CESSWI or CESSWI – IT) or Certified Inspector of Sedimentation and Erosion Controls (CISEC or CISEC – IT) certification to inspect the controls and fences at weekly or bi–weekly intervals and after one–half (½) inch or greater rainfall events to insure that they are functioning properly. The person(s) responsible for maintenance of controls and fences shall immediately make any necessary repairs to damaged areas. Silt accumulation at controls must be removed when the depth reaches six (6) inches or one–third (⅓) of the installed height of the control whichever is less.
7. Prior to final acceptance by the City, haul roads and waterway crossings constructed for temporary contractor access must be removed, accumulated sediment removed from the waterway and the area restored to the original grade and revegetated. All land clearing debris shall be disposed of in approved spoil disposal sites.
8. All work must stop if a void in the rock substrate is discovered which is; one square foot in total area; blows air from within the substrate and/or consistently receives water during any rain event. At this time it is the responsibility of the Project Manager to immediately contact a City of Austin Environmental Inspector for further investigation.
9. Temporary and Permanent Erosion Control: All disturbed areas shall be restored as noted below:
   A. All disturbed areas to be revegetated are required to place a minimum of six (6) inches of topsoil [see Standard Specification Item No. 601S.3(A)]. Do not add topsoil within the critical root zone of existing trees.
   B. Topsoil salvaged from the existing site is encouraged for use, but it should meet the standards set forth in 601S.
      An owner/engineer may propose use of onsite salvaged topsoil which does not meet the criteria of Standard Specification 601S by providing a soil analysis and a written statement from a qualified professional in soils, landscape architecture, or agronomy indicating the onsite topsoil will provide an equivalent growth media and specifying what, if any, soil amendments are required.
   C. Soil amendments shall be worked into the existing onsite topsoil with a disc or tiller to create a well–blended material.

The vegetative stabilization of areas disturbed by construction shall be as follows:

TEMPORARY VEGETATIVE STABILIZATION:

1. From September 15 to March 1, seeding shall be with or include a cool season cover crop: (Western Wheatgrass (Pascopyrum smithii) at 5.6 pounds per acre, Oats (Avena sativa) at 4.0 pounds per acre, Cereal Rye Grain (Secale cereale) at 45 pounds per acre. Contractor must ensure that any seed application requiring a cool season cover crop does not utilize annual ryegrass (Lolium multiflorum) or perennial ryegrass (Lolium perenne). Cool season cover crops are not permanent erosion control.
2. From March 2 to September 14, seeding shall be with hulled Bermuda at a rate of 45 pounds per acre or a native plant seed mix conforming to Item 604S or 609S.
   A. Fertilizer shall be applied only if warranted by a soil test and shall conform to Item No. 606S, Fertilizer. Fertilization should not occur when rainfall is expected or during slow plant growth or dormancy. Chemical fertilizer may not be applied in the Critical Water Quality Zone.
   B. Hydromulch shall comply with Table 1, below.
   C. Temporary erosion control shall be acceptable when the grass has grown at least 1½ inches high with a minimum of 95% total coverage so that all areas of a site that rely on vegetation for temporary stabilization are uniformly vegetated, and provided there are no bare spots larger than 10 square feet.
   D. When required, native plant seeding shall comply with requirements of the City of Austin Environmental Criteria Manual, and Standard.

Table 1: Hydromulching for Temporary Vegetative Stabilization

Material	Description	Longevity	Typical Applications	Application Rates
100% or any blend of wood, cellulose, straw, and/or cotton plant material (except no mulch shall exceed 30% paper)	70% or greater Wood/Straw 30% or less Paper or Natural Fibers	0-3 months	Moderate slopes; from flat to 3:1	1,500 to 2,000 lbs per acre

PERMANENT VEGETATIVE STABILIZATION:

1. From September 15 to March 1, seeding is considered to be temporary stabilization only. If cool season cover crops exist where permanent vegetative stabilization is desired, the grasses shall be mowed to a height of less than one–half (½) inch and the area shall be re–seeded in accordance with Table 2 below. Alternatively, the cool season cover crop can be mixed with native seed and installed together, understanding that germination of warm–season seed typically requires soil temperatures of 60 to 70 degrees.
2. From March 2 to September 14, seeding shall be with native grasses at a rate of 45 pounds per acre with a purity of 95% and a minimum pure live seed (PLS) of 0.83. Permanent vegetative stabilization can be accomplished with a native plant seed mix conforming to Item 604S or 609S.
   A. Fertilizer use shall follow the recommendation of a soil test. See Item 606S, Fertilizer. Applications of fertilizer (and pesticide) on City–owned and managed property requires the yearly submittal of a Pesticide and Fertilizer Application Record, along with a current copy of the applicator's license. For current copy of the record template contact the City of Austin's IPM Coordinator.
   B. Hydromulch shall comply with Table 2, below.
   C. Water the seeded areas immediately after installation to achieve germination and a healthy stand of plants that can ultimately survive without supplemental water. Apply the water uniformly to the planted areas without causing displacement or erosion of the materials or soil. Maintain the seedbed in a moist condition favorable for plant growth. All watering shall comply with City Code Chapter 6–4 (Water Conservation), at rates and frequencies determined by a licensed irrigator or other qualified professional, and as allowed by the Austin Water Utility and current water restrictions and water conservation initiatives.
   D. Permanent erosion control shall be acceptable when the grass has grown at least 1½ inches high with a minimum of 95 percent for the non–native mix, and 95 percent coverage for the native mix so that all areas of a site that rely on vegetation for stability must be uniformly vegetated, and provided there are no bare spots larger than 10 square feet.
   E. When required, native plant seeding shall comply with requirements of the City of Austin Environmental Criteria Manual, Items 604S and 609S.

Table 2: Hydromulching for Permanent Vegetative Stabilization

Material	Description	Longevity	Typical Applications	Application Rates
Bonded Fiber Matrix (BFM)	80% Organic defibrated fibers			
10% Tackifier	6 months	On slopes up to 2:1 and erosive soil conditions	2,500 to 4,000 lbs per acre (see manufacturers recommendations)	
Fiber Reinforced Matrix (FRM)	65% Organic defibrated fibers 25% Reinforcing Fibers or less 10% Tackifier	Up to 12 months	On slopes up to 1:1 and erosive soil conditions	3,000 to 4,500 lbs per acre (see manufacturers recommendations)

10. Developer Information:
    Owner CITY OF AUSTIN
    Phone # TBD
    Address TBD
    Owner's representative responsible for plan alterations: TBD
    Phone # TBD
    Person or firm responsible for erosion/sedimentation control maintenance: CONTRACTOR
    Phone # _____
    Person or firm responsible for tree/natural area protection Maintenance: CONTRACTOR
    Phone # _____
11. The contractor shall not dispose of surplus excavated material from the site without notifying the Development Services Department at 512–974–2278 at least 48 hours prior with the location and a copy of the permit issued to receive the material.

STANDARD SEQUENCE OF CONSTRUCTION NOTES:

SEE GENERAL NOTES SHEET.

APPENDIX P–2 – TREE AND NATURAL AREA PROTECTION NOTES

STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION:

1. ALL TREES AND NATURAL AREAS SHOWN ON PLAN TO BE PRESERVED SHALL BE PROTECTED DURING CONSTRUCTION WITH TEMPORARY FENCING.
2. PROTECTIVE FENCES SHALL BE ERECTED ACCORDING TO CITY OF AUSTIN STANDARDS FOR TREE PROTECTION.
3. PROTECTIVE FENCES SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING OR GRADING), AND SHALL BE MAINTAINED THROUGHOUT ALL PHASES OF THE CONSTRUCTION PROJECT.
4. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD–UP WITHIN TREE DRIP LINES.
5. PROTECTIVE FENCES SHALL SURROUND THE TREES OR GROUP OF TREES, AND WILL BE LOCATED AT THE OUTERMOST LIMIT OF BRANCHES (DRIP LINE) , FOR NATURAL AREAS, PROTECTIVE FENCES SHALL FOLLOW THE LIMIT OF CONSTRUCTION LINE, IN ORDER TO PREVENT THE FOLLOWING:
   A. SOIL COMPACTION IN THE ROOT ZONE AREA RESULTING FROM VEHICULAR TRAFFIC OR STORAGE OF EQUIPMENT OR MATERIALS;
   B. ROOT ZONE DISTURBANCES DUE TO GRADE CHANGES (GREATER THAN 6 INCHES CUT OR FILL), OR TRENCHING NOT REVIEWED AND AUTHORIZED BY THE CITY ABORIST;
   C. WOUNDS TO EXPOSED ROOTS, TRUNK OR LIMBS BY MECHANICAL EQUIPMENT;
   D. OTHER ACTIVITIES DETRIMENTAL TO TREES SUCH AS CHEMICAL STORAGE, CEMENT TRUCK CLEANING, AND FIRES.

STANDARD NOTES FOR TREE AND NATURAL AREA PROTECTION (CONTINUED):

6. EXCEPTIONS TO INSTALLING FENCES AT TREE DRIP LINES MAY BE PERMITTED IN THE FOLLOWING CASES:
   A. WHERE THERE IS TO BE AN APPROVED GRADE CHANGE, IMPERMEABLE PAVING SURFACE, TREE WELL, OR OTHER SUCH SITE DEVELOPMENT, ERECT THE FENCE APPROXIMATELY 2 TO 4 FEET BEYOND THE AREA DISTURBED;
   B. WHERE PERMEABLE PAVING IS TO BE INSTALLED WITHIN A TREE'S DRIP LINE, ERECT THE FENCE AT THE OUTER LIMITS OF THE PERMEABLE PAVING AREA (PRIOR TO SITE GRADING SO THAT THIS AREA IS GRADED SEPARATELY PRIOR TO PAVING INSTALLATION TO MINIMIZED ROOT DAMAGE);
   C. WHERE TREES ARE CLOSE TO PROPOSED BUILDINGS, ERECT THE FENCE TO ALLOW 6 TO 10 FEET OF WORK SPACE BETWEEN THE FENCE AND THE BUILDING;
   D. WHERE THERE ARE SEVERE SPACE CONSTRAINTS DUE TO TRACT SIZE, OR OTHER SPECIAL REQUIREMENTS, CONTACT THE CITY ARBORIST AT 974–1876 TO DISCUSS ALTERNATIVES.

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

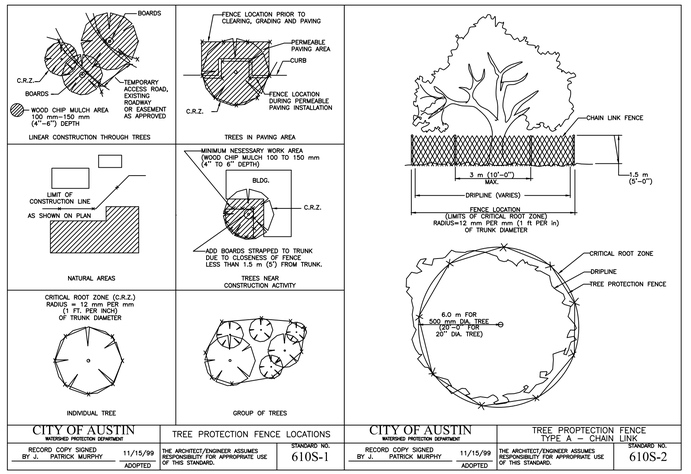
7. WHERE ANY OF THE ABOVE EXCEPTIONS RESULT IN A FENCE BEING CLOSER THAN 4 FEET TO A TREE TRUNK, PROTECT THE TRUNK WITH STRAPPED–ON PLANKING TO A HEIGHT OF 8 FT (OR TO THE LIMITS OF LOWER BRANCHING) IN ADDITION TO THE REDUCED FENCING PROVIDED.
8. TREES APPROVED FOR REMOVAL SHALL BE REMOVED IN A MANNER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

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 WATERSHED PROTECTION DEPARTMENT	TREE PROTECTION FENCE LOCATIONS		CITY OF AUSTIN WATERSHED PROTECTION DEPARTMENT	TREE PROPTECTION FENCE TYPE A. – CHAIN LINK	
RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-1	RECORD COPY SIGNED BY J. PATRICK MURPHY 11/15/99 ADOPTED	THE ARCHITECT/ENGINEER ASSUMES RESPONSIBILITY FOR APPROPRIATE USE OF THIS STANDARD.	STANDARD NO. 610S-2

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER: _____ APPLICATION DATE: _____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE
EXPIRATION DATE(25–5–81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905–A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: _____ ZONING: _____
Rev. 1 _____ Correction 1 _____
Rev. 2 _____ Correction 2 _____
Rev. 3 _____ Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

HDR
Texas P.E. Firm
Registration No. F-754

		PROJECT MANAGER	
		DESIGNED BY	
		DRAWN BY	
		CHECKED BY	
		DATE	
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER 1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86385 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

TREE PROTECTION NOTES & DETAILS (2 OF 2)

0 1" 2"

FILENAME 1126ERSD02
SCALE N.T.S.

SHEET 21 of 350
C10-112

SPC–03–005C (R2)

CADD FILE: \\CAS–DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH_LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126ERSD02 PLOTTED: 1/15/2021 10:12:1 PM BY: JANE FU CTB FILE: CAS.CTB

LEGEND

- LOC — LIMITS OF CONSTRUCTION
- SF — SILT FENCE FOR EROSION CONTROL
- MS — MS — MULCH SOCK
- TP — TREE PROTECTION
- HB — HAY BALE DIKE
- GAS — EXISTING GAS LINE
- W — W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- ST — ST — EXISTING STORM LINE
- EXISTING PROPERTY LINE
- EXISTING CONTOUR LINES
- EASEMENT LINES
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- HERITAGE TREE
- STABILIZED CONSTRUCTION ENTRANCE
- ROCK BERM

PROP. CONCRETE WASHOUT SEE DETAIL SHEET C10-111. CONTRACTOR TO COORDINATE FINAL LOCATION WITH ENVIRONMENTAL INSPECTOR.

28 LF OF SILT FENCE

THIS AREA TO BE USED FOR STORAGE DURING CONSTRUCTION.

139 LF OF SILT FENCE

105 LF OF MULCH SOCK

STABILIZED CONSTRUCTION ENTRANCE 30'x50' MIN WITH WHEEL WASH DOWN STATION. SEE DETAIL SHEET C10-111. CONTRACTOR TO COORDINATE FINAL LOCATION WITH ENVIRONMENTAL INSPECTOR. CONTRACTOR TO PRESERVE TREES.

203 LF OF SILT FENCE

203 LF OF MULCH SOCK

CONTRACTOR TO MAINTAIN ACCESS TO THE BEE CREEK SUBSTATION AT ALL TIMES.

FOREST VIEW DR (PRIVATE ACCESS DRIVE)

BEE CREEK SUBSTATION

MATCHLINE (SEE SHEET C10-112B

MATCHLINE (SEE SHEET C10-114

NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. SILT FENCES SHALL INCLUDE J-HOOKS. EFER TO J-HOOK DETAIL ON SHEET C10-111. J-HOOK SPACING SHALL BE EVERY 20 FEET.
4. ENVIRONMENTAL INSPECTOR HAS THE AUTHORITY TO ADD AND/OR MODIFY EROSION/SEDIMENTATION CONTROLS ON SITE TO KEEP PROJECT IN-COMPLIANCE WITH THE CITY OF AUSTIN RULES AND REGULATIONS. [LDC 25-8-183]
5. CONTRACTOR SHALL UTILIZE DUST CONTROL MEASURES DURING SITE CONSTRUCTION SUCH AS IRRIGATION TRUCKS AND MULCHING AS PER ECM 1.4.5(D), OR AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
6. MULCH SOCK TYPE AND INSTALLATION SHALL COMPLY WITH ECM 1.4.2(G). DIAMETER OF MULCH SOCK IS 12" AND FILLER MATERIAL SHALL BE HAY.
7. IF DISTURBED AREA IS NOT TO BE WORKED ON FOR MORE THAN 5 DAYS, DISTURBED AREA NEEDS TO BE STABILIZED BY REVEGETATION, MULCH, TARP OR REVEGETATION MATTING. [ECM 1.4.1.2(C)(2)]
8. TRENCHES WILL BE REFILLED TO NATURAL GRADE AND REVEGETATED.
9. NO MORE THAN 2000 FEET OF CONSTRUCTION ZONE SHALL BE OPEN AT ANY TIME WITH CLEAN UP AND RESTORATION WORK OCCURRING BEFORE PROCEEDING TO THE NEXT SECTION. THE CONTRACTOR IS REQUIRED TO RESTORE ALL DISTURBED AREAS AS THE WORK PROGRESSES. [ECM 1.4.1.2(E), ECM 1.4.1.2(C)(2)]
10. ALL SPOILS WILL BE CLEANED OFF OF ALL ROADS, DRIVEWAYS AND ANY OTHER IMPERVIOUS COVER LOCATED OUTSIDE THE LOC AT THE END OF EACH DAY. [ECM 1.4.1.1 (A)(B), ECM 1.4.2]
11. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
12. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
13. THE CONTRACTOR WILL CLEAN UP SPOILS THAT MIGRATE ONTO THE ROADS A MINIMUM OF ONCE DAILY.
14. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
15. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
16. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAX,
17. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER: _____ APPLICATION DATE: _____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER: _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: _____ ZONING: _____
Rev. 1 _____ Correction 1 _____
Rev. 2 _____ Correction 2 _____
Rev. 3 _____ Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 |REG. NO. F-003572
Main: 512.836.2348 | Fax: 512.836.4515

Texas P.E. Firm
Registration No. F-754

		PROJECT MANAGER	
		DESIGNED BY	TR
		DRAWN BY	JC
1	05/12/2021	RFI039	CHECKED BY JC
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	DATE
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER 1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 5/12/21

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

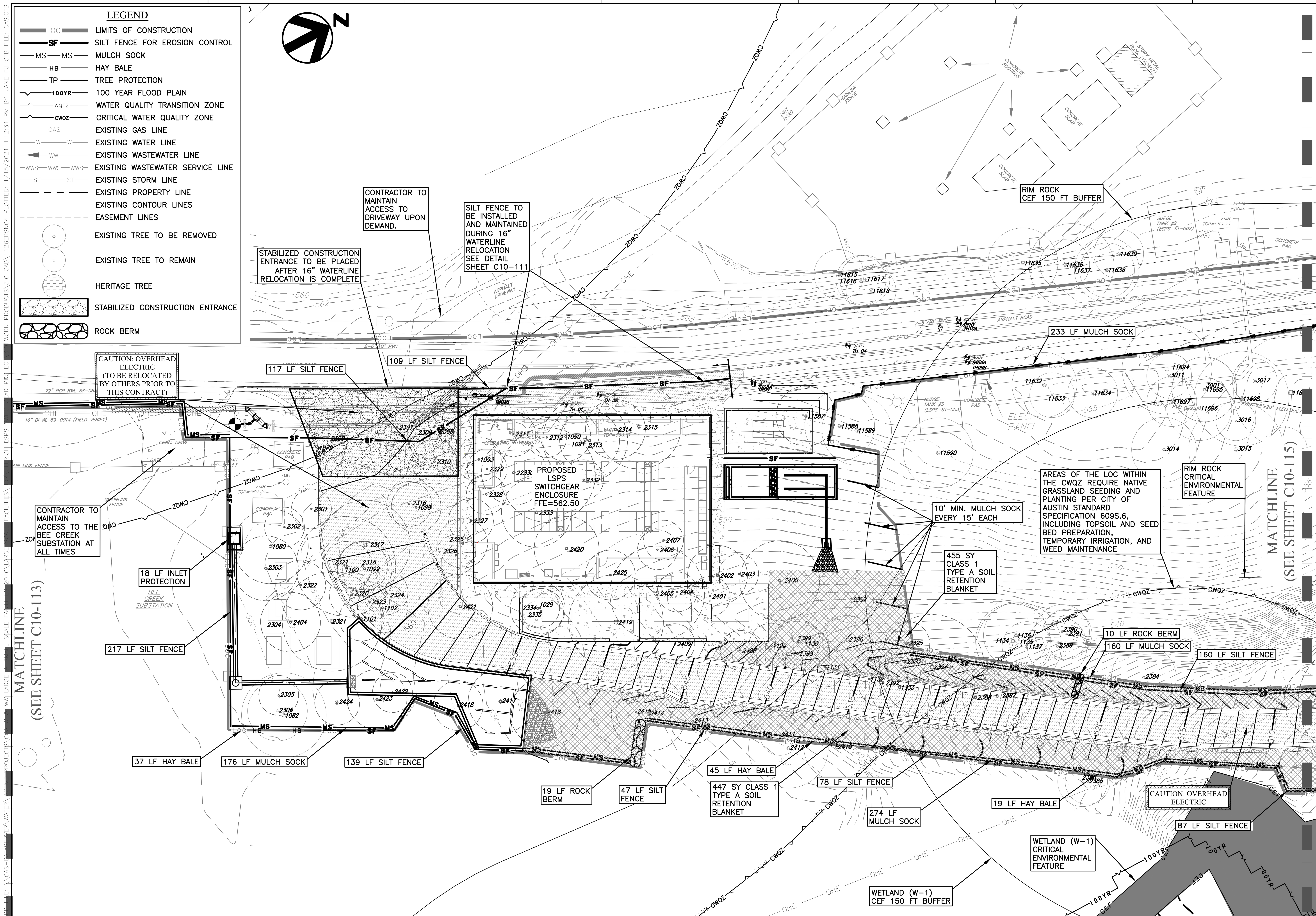
E&S PLAN (3 OF 5)

0 1" 2"

FILENAME 1126ERSN03
SCALE 1" = 20'

SHEET **C10-113**

SPC-03-005C (R2)



LEGEND
LIMITS OF CONSTRUCTION
SILT FENCE FOR EROSION CONTROL
MULCH SOCK
HAY BALE
TREE PROTECTION
100 YEAR FLOOD PLAIN
WATER QUALITY TRANSITION ZONE
CRITICAL WATER QUALITY ZONE
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WASTEWATER LINE
EXISTING WASTEWATER SERVICE LINE
EXISTING STORM LINE
EXISTING PROPERTY LINE
EXISTING CONTOUR LINES
EASEMENT LINES
EXISTING TREE TO BE REMOVED
EXISTING TREE TO REMAIN
HERITAGE TREE
STABILIZED CONSTRUCTION ENTRANCE
ROCK BERM
CAUTION: OVERHEAD ELECTRIC (TO BE RELOCATED BY OTHERS PRIOR TO THIS CONTRACT)
CONTRACTOR TO MAINTAIN ACCESS TO DRIVEWAY UPON DEMAND.
STABILIZED CONSTRUCTION ENTRANCE TO BE PLACED AFTER 16" WATERLINE RELOCATION IS COMPLETE
SILT FENCE TO BE INSTALLED AND MAINTAINED DURING 16" WATERLINE RELOCATION SEE DETAIL SHEET C10-111
117 LF SILT FENCE
109 LF SILT FENCE
RIM ROCK CEF 150 FT BUFFER
233 LF MULCH SOCK
PROPOSED LSPS SWITCHGEAR ENCLOSURE FFE=562.50
CONTRACTOR TO MAINTAIN ACCESS TO THE BEE CREEK SUBSTATION AT ALL TIMES
18 LF INLET PROTECTION
BEE CREEK SUBSTATION
217 LF SILT FENCE
AREAS OF THE LOC WITHIN THE CWQZ REQUIRE NATIVE GRASSLAND SEEDING AND PLANTING PER CITY OF AUSTIN STANDARD SPECIFICATION 609S.6, INCLUDING TOPSOIL AND SEED BED PREPARATION, TEMPORARY IRRIGATION, AND WEED MAINTENANCE
RIM ROCK CRITICAL ENVIRONMENTAL FEATURE
10' MIN. MULCH SOCK EVERY 15' EACH
455 SY CLASS 1 TYPE A SOIL RETENTION BLANKET
10 LF ROCK BERM
160 LF MULCH SOCK
160 LF SILT FENCE
37 LF HAY BALE
176 LF MULCH SOCK
139 LF SILT FENCE
19 LF ROCK BERM
47 LF SILT FENCE
45 LF HAY BALE
447 SY CLASS 1 TYPE A SOIL RETENTION BLANKET
78 LF SILT FENCE
274 LF MULCH SOCK
19 LF HAY BALE
CAUTION: OVERHEAD ELECTRIC
87 LF SILT FENCE
WETLAND (W-1) CRITICAL ENVIRONMENTAL FEATURE
WETLAND (W-1) CEF 150 FT BUFFER
MATCHLINE (SEE SHEET C10-113)
MATCHLINE (SEE SHEET C10-115)
MATCHLINE

NOTES:

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2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
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16. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
17. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.

SITE PLAN APPROVAL SHEET ____ OF ____
FILE NUMBER ____ APPLICATION DATE ____
APPROVED BY COMMISSION ON ____ UNDER SECTION ____ OF CHAPTER ____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC) ____ CASE MANAGER ____
PROJECT EXPIRATION DATE (ORD. #970905-A) ____ DWPZ ____ DDZ ____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE: ____ ZONING ____
Rev. 1 ____ Correction 1 ____
Rev. 2 ____ Correction 2 ____
Rev. 3 ____ Correction 3 ____
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CAS CONSULTING & SERVICES, INC.
HDR
Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER
DESIGNED BY
DRAWN BY
CHECKED BY
DATE
PROJECT NUMBER 1126

STATE OF TEXAS THOMAS W. ROHLACK 86365 LICENSED PROFESSIONAL ENGINEER 01/21/2021

CITY OF AUSTIN FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

E&S PLAN (4 OF 5)

FILENAME 1126ERSN04
SCALE 1" = 20'
SHEET 25 of 350
C10-114

SPC-03-005C (R2)

TREE NO.	DESCRIPTION	REMOVED	ON APPENDIX F 8" - 18"	OFF APENDIX F 8" - 18"	ON APPENDIX F 19"+	OFF APPENDIX F 19"+	HERITAGE 24"+	NOTES
1029	8 CEDAR ELM	Y	8					
1079	11 CEDAR ELM	Y	11					
1080	14 CEDAR ELM	Y	14					
1082	17 HACKBERRY							
1090	10 CEDAR ELM	Y	10					
1091	14 CEDAR ELM	Y	14					
1093	9 CEDAR ELM	Y	9					
1098	10 CEDAR ELM	Y	10					
1099	11 CEDAR ELM	Y	11					
1100	10 CEDAR ELM	Y	10					
1101	9 CEDAR ELM	Y	9					
1102	10 CEDAR ELM	Y	10					
1129	9 CEDAR ELM	Y	9					
1131	8 CEDAR ELM	Y	8					
1132	7 HACKBERRY	Y	7					
1133	10 HACKBERRY	Y	10					
1134	13 LIVE OAK							
1135	12 LIVE OAK							
1136	11 LIVE OAK							
1137	9 LIVE OAK							
1163	12 CEDAR ELM	Y	12					
1164	24 COTTONWOOD	Y			24			
1165	10 COTTONWOOD	Y	10					
1166	10 LIVE OAK	Y	10					
1167	13 AMERICAN ELM	Y	13					
1168	12 CHINABERRY	Y						INVASIVE
1186	17 WHITE ASH							
1187	30 CYPRESS (H)							
1188	18 CYPRESS							
1189	9 SYCAMORE							
1190	9 SYCAMORE							
1191	12 SYCAMORE							
1192	20 WHITE ASH							
1193	8 WHITE ASH							
1194	10 WHITE ASH							
1195	12 WHITE ASH							
1196	19 WHITE ASH							
1197	8 CYPRESS							
1198	23 CYPRESS							
1199	12 CYPRESS							
1200	13 CYPRESS							
1201	24 CYPRESS (H)							
1202	37 CYPRESS (H)							
1203	18 WHITE ASH							
1204	19 CYPRESS							
1205	17 AMERICAN SYCAMORE							
1208	19 AMERICAN SYCAMORE							
1209	19 CYPRESS (14"9") (M)							
1212	13 AMERICAN SYCAMORE							
1213	25 CYPRESS (H)							
1214	11 AMERICAN SYCAMORE							
1215	10 AMERICAN SYCAMORE							
1216	13 CYPRESS							
1221	19 SYCAMORE	Y			19			
1222	10 AMERICAN SYCAMORE	Y	10					
1223	18 AMERICAN SYCAMORE	Y	18					
1224	19 CYPRESS	Y			19			
1225	9 AMERICAN SYCAMORE	Y	9					
1226	8 CYPRESS	Y						
1227	9 AMERICAN SYCAMORE	Y	9					
1228	10 AMERICAN SYCAMORE							
1229	9 CYPRESS							
1230	17 WILLOW (DEAD)	Y						DEAD
1231	8 SYCAMORE	Y	8					
1279	13 CEDAR ELM							
1280	10 HACKBERRY							
1281	14 AMERICAN SYCAMORE	Y	14					
1282	9 AMERICAN SYCAMORE							
1283	16 AMERICAN SYCAMORE							TRUNK PLANKING
1284	18 AMERICAN SYCAMORE							
1285	18 AMERICAN ELM	Y	18					TRUNK PLANKING
1286	15 AMERICAN SYCAMORE							
1287	13 AMERICAN SYCAMORE							
1288	27 AMERICAN SYCAMORE							TRUNK PLANKING
1289	15 AMERICAN SYCAMORE							TRUNK PLANKING
1643	16 AMERICAN SYCAMORE							
1644	13 AMERICAN SYCAMORE							
1665	13 LIVE OAK*							TO BE TRIMMED
1666	14 ELM (10"8") (M)	Y	14					
1742	16 CEDAR ELM							
1743	20 SPANISH OAK							
1744	11 CEDAR ELM							
1745	19 CYPRESS							
1746	23 CEDAR ELM							
1747	16 CEDAR ELM							
1748	12 CEDAR ELM							
1749	10 CEDAR ELM							
1750	18 CEDAR ELM							
1751	18 CEDAR ELM							
1759	12 CEDAR							
2300	8 ELM	Y	8					
2301	8 CEDAR	Y	8					
2302	8 CEDAR	Y	8					TRUNK PLANKING
2303	13 CEDAR	Y	13					
2304	12 MESQUITE	Y	12					
2305	8 CEDAR	Y	8					
2306	12 HACKBERRY							

TREE NO.	DESCRIPTION	REMOVED	ON APPENDIX F 8" - 18"	OFF APENDIX F 8" - 18"	ON APPENDIX F 19"+	OFF APPENDIX F 19"+	HERITAGE 24"+	NOTES
2307	8 CEDAR ELM	Y	8					
2308	13 CEDAR (9" 8") (M)	Y	13					
2309	9 CEDAR	Y	9					
2310	9 CEDAR	Y	9					
2311	9 HACKBERRY	Y	9					
2312	8 ELM	Y	8					
2313	12 ELM (DEAD)	Y						DEAD
2314	12 LIVE OAK	Y	12					
2315	17 HACKBERRY (11"11") (M)	Y	17					
2316	9 LIVE OAK	Y	9					
2317	18 CEDAR (14"7") (M)	Y	18					
2318	10 LIVE OAK	Y	10					
2320	9 CEDAR	Y	9					
2321	20 CEDAR (11"9"7") (M)	Y			20			50% MITIGATION
2322	10 CEDAR (8"3") (M)	Y	10					
2323	8 ELM	Y	8					
2324	9 LIVE OAK	Y	9					
2325	9 CEDAR	Y	9					
2326	9 CEDAR	Y	9					
2327	8 CEDAR	Y	8					
2328	8 CEDAR	Y	8					
2329	8 ELM	Y	8					
2330	13 CEDAR (9"7") (M)	Y	13					
2331	19 CEDAR (8"5"4"3"2"2") (M)	Y			19			50% MITIGATION
2332	8 CEDAR	Y	8					
2333	14 CEDAR (9"5"4") (M)	Y	14					
2334	11 CEDAR ELM (8"5") (M)	Y	11					
2335	9 CEDAR	Y	9					
2337	26 AMERICAN SYCAMORE							TRUNK PLANKING
2338	21 AMERICAN SYCAMORE							TRUNK PLANKING
2339	10 CEDAR ELM							
2340	10 AMERICAN SYCAMORE							
2341	18 CYPRESS							
2342	15 AMERICAN SYCAMORE							
2343	9 LIVE OAK							
2344	14 AMERICAN SYCAMORE	Y	14					
2345	22 AMERICAN SYCAMORE							TRUNK PLANKING
2346	8 AMERICAN SYCAMORE	Y	8					TRUNK PLANKING
2347	8 AMERICAN SYCAMORE	Y	8					
2348	10 AMERICAN SYCAMORE							TRUNK PLANKING
2349	14 AMERICAN SYCAMORE	Y	14					
2350	18 AMERICAN SYCAMORE	Y	18					
2351	10 CHINESE ELM	Y		10				
2352	18 AMERICAN SYCAMORE							TRUNK PLANKING
2353	12 AMERICAN SYCAMORE	Y	12					
2354	21 LIVE OAK							TRUNK PLANKING
2355	19 AMERICAN SYCAMORE	Y			19			
2356	21 AMERICAN SYCAMORE	Y			21			
2357	16 AMERICAN SYCAMORE	Y	16					
2358	10 AMERICAN ELM							TRUNK PLANKING
2359	22 CYPRESS							TRUNK PLANKING
2360	9 AMERICAN SYCAMORE							
2361	16 CYPRESS							
2362	8 AMERICAN SYCAMORE							
2363	8 AMERICAN SYCAMORE							
2364	16 CYPRESS							
2365	9 AMERICAN SYCAMORE							
2368	13 LIGUSTRUM (6"6"4"3") (M)							
2371	27 CYPRESS (H)							
2372	22 CYPRESS							
2373	16 CYPRESS							
2374	22 CYPRESS (19"6") (M)							
2375	10 CYPRESS							
2378	10 CEDAR							
2379	9 CEDAR							
2380	10 CHINESE ELM							
2381	8 COTTON WOOD							
2382	12 CYPRESS							
2383	15 LIGUSTRUM (8"7"4"2") (M)							
2384	13 PRIVIT (8"6"4") (M)							TRUNK PLANKING
2385	9 CEDAR							
2386	10 CEDAR							
2387	14 CEDAR (10"4"4") (M)	Y	14					
2388	13 CEDAR (9"7") (M)	Y	13					
2389	12 LIVE OAK (9"6")(M)							
2390	11 LIVE OAK							
2391	10 LIVE OAK							
2392	10 CEDAR	Y	10					
2393	8 CEDAR	Y	8					
2394	21 CEDAR (10"8"6"4"3") (M)	Y			21			50% MITIGATION
2395	9 CEDAR	Y	9					
2396	10 CEDAR							
2397	9 CEDAR							
2398	22 CEDAR (12"8"4") (M)	Y			22			50% MITIGATION
2399	11 LIGUSTRUM	Y						INVASIVE
2400	16 CEDAR (11"10") (M)	Y	16					
2401	8 CEDAR ELM	Y	8					
2402	12 CEDAR	Y	12					
2403	8 CEDAR	Y	8					
2404	8 CEDAR	Y	8					
2405	19 CEDAR (9"6"5"5"3") (M)	Y			19			50% MITIGATION
2406	8 CEDAR	Y	8					
2407	8 CEDAR	Y	8					
2408	8 CEDAR	Y	8					
2409	8 CEDAR	Y	8					
2410	13 LIGUSTRUM (7"6"5") (M)							
2411	8 CEDAR							
2412	16 CEDAR (7"5"4") (M)							
2413	9 CEDAR	Y	9					
2414	15 CEDAR (8"7"6") (M)	Y	15					
2415	8 CEDAR	Y	8					TRUNK PLANKING
2416	14 CEDAR (9"5"5") (M)	Y	14					TRUNK PLANKING
2417	13 CEDAR (8"6"4") (M)	Y	13					TRUNK PLANKING
2418	10 CEDAR	Y	10					TRUNK PLANKING
2419	19 CEDAR (9"7"6"6") (M)	Y			19			50% MITIGATION
2420	13 CEDAR (7"6"6") (M)	Y	13					
2421	13 CEDAR (9"7") (M)	Y						DEAD
2422	8 CEDAR	Y	8					
2423	12 CEDAR (8"7") (M)	Y	12					
2424	9 CEDAR	Y	9					
2425	10 CEDAR (7"5") (M)	Y	10					
2426	14 COTTON WOOD		7					50% MITIGATION

TREE NO.	DESCRIPTION	REMOVED	ON APPENDIX F 8" - 18"	OFF APENDIX F 8" - 18"	ON APPENDIX F 19"+	OFF APPENDIX F 19"+	HERITAGE 24"+	NOTES
2427	8 CEDAR		4					50% MITIGATION
2428	28 CYPRESS (20"15") (M) (H)							
2429	12 AMERICAN SYCAMORE (9"5") (M)							
2430	13 AMERICAN SYCAMORE							
2431	25 CYPRESS (H)							
2432	12 CYPRESS							
2433	21 CYPRESS							
2434	13 CYPRESS							
2435	12 CYPRESS							
2436	8 CYPRESS	Y	8					
3001	13 LIVE OAK							
3011	9 LIVE OAK							
3017	9 CEDAR							
5242	12 LIVE OAK	Y	12					
5243	14 CEDAR	Y	14					
5244	9 CEDAR	Y	9					
5245	8 CEDAR	Y	8					
5246	13 CEDAR	Y	13					
5247	12 LIGUSTRUM	Y						INVASIVE
5248	9 CEDAR							
5249	10 CEDAR							
5250	10 CEDAR ELM							
5251	11 CEDAR ELM	Y	11					
5252	8 LIVE OAK	Y	8					
5253	15 CEDAR							
5254	13 CEDAR							
5257	10 LIGUSTRUM							
5258	9 LIVE OAK							
5259	8 LIVE OAK							
5260	11 CEDAR	Y	11					
5275	15 LIVE OAK	Y	15					
5276	8 LIVE OAK	Y	8					
5277	12 CEDAR							
5278	10 LIVE OAK							
5286	18 CEDAR							
5287	11 LIVE OAK							
5288	11 CEDAR ELM							
5289	8 CEDAR							
5290	11 CEDAR							
5291	19 LIVE OAK							
5292	8 CEDAR ELM							
5293	25 LIVE OAK (H)							
5294	12 CEDAR							
5295	13 CEDAR							
5296	12 CEDAR							
5297	16 CEDAR							
5298	12 CEDAR							
5299	10 CEDAR							
5300	9 CEDAR							
5301	9 LIVE OAK							
5302	13 CEDAR							
5303	13 LIVE OAK	Y	13					
5304	10 LIVE OAK							
5305	10 CEDAR							
5306	9 CEDAR ELM							
5307	11 CEDAR	Y	11					
5308	8 LIVE OAK							
5309	11 CEDAR							
5310	10 LIVE OAK							
5311	10 CEDAR ELM							
5312	14 CEDAR							
5477	9 LIVE OAK							
5478	14 CEDAR (8"7"6") (M)							
5480	17 CEDAR (5"4"3"4"9") (M)	Y	17					
5481	14 CEDAR (9"9") (M)							
5483	9 CEDAR							
5484	10 LIVE OAK							
5486	8 LIVE OAK							
5488	22 CEDAR (10"7"3"9"9") (M)							
5489	22 CEDAR (9"7"7"6"6") (M)							
5490	10 CEDAR							
5493	10 CEDAR ELM (8"3") (M)							
5498	8 LIVE OAK							
5499	9 CEDAR							
5502	8 CEDAR							
5503	12 LIVE OAK							
5504	24 LIVE OAK (BEEHIVE) (H)							
5509	11 LIVE OAK (7"7") (M)	Y	11					
5510	11 CEDAR ELM (8"5") (M)							
5511	11 CEDAR							
5512	9 LIVE OAK							
5513	10 LIVE OAK							
5514	9 LIVE OAK							
5515	8 LIVE OAK							
5516	8 CEDAR							
5517	8 LIVE OAK							
5518	15 CEDAR							
5519	11 WH WHITE ASH							
5520	15 CEDAR (13"4") (M)							
5525	8 CEDAR							
5527	10 CEDAR (7"6") (M)							
5528	8 CEDAR							
5529	10 CEDAR ELM							
5530	12 CEDAR (8"5"3") (M)							
5531	12 CEDAR ELM	Y	12					
5532	14 CEDAR (9"6"4") (M)							
5533	9 CEDAR							
5534	9 CEDAR (6"6") (M)							
5535	10 CEDAR							
5536	19 CEDAR (10"10"9") (M)							
5537	12 CEDAR (8"6") (M)							
5538	10 CEDAR							
5539	9 CEDAR							
5540	8 CEDAR							
5541	11 CEDAR							
5547	10 CEDAR (6"5"3") (M)							
5638	9 LIGUSTRUM							
5639	10 CEDAR (5"4"3"1"1") (M)							

TREE NO.	DESCRIPTION	REMOVED	ON APPENDIX F 8" - 18"	OFF APENDIX F 8" - 18"	ON APPENDIX F 19"+	OFF APPENDIX F 19"+	HERITAGE 24"+	NOTES
5640	8 LIVE OAK							
5641	10 LIVE OAK							
5642	10 CEDAR							
5643	11 CEDAR ELM							
5645	14 CEDAR							
5646	9 LIVE OAK							
5647	14 CEDAR ELM							
5649	12 CEDAR (9"6") (M)							
5657	15 CEDAR (8"5"7"5") (M)							
5664	8 CEDAR							
5665	8 CEDAR							
5666	9.5 LIVE OAK							
5667	9 LIVE OAK							
5668	10 CEDAR	Y	10					
5669	18 CEDAR (M)	Y	18					
5670	9 CEDAR	Y	9					
5671	8 CEDAR							
5672	9 CEDAR	Y	9					
5673	10 CEDAR	Y	10					
5674	12 CEDAR (8"4"4") (M)	Y	12					
5678	9 CEDAR (8"5") (M)	Y	9					
5679	14 CEDAR	Y	14					
5680	9 CEDAR	Y	9					
5681	14 CEDAR (6"5"3"3"4") (M)	Y	14					
5682	11 CEDAR (9"4") (M)	Y	11					
5683	19 CEDAR (9"8"6"3"3") (M)	Y			19			50% MITIGATION
5684	8 CEDAR	Y	8					
5685	8 CEDAR (8"3"1") (M)	Y	8					
5686	9 CEDAR	Y	9					
5687	9 CEDAR	Y	9					
5688	12 CEDAR (9"5") (M)	Y	12					
5689	10 CEDAR ELM							
5690	16 WHITE ASH (7"6"6"5") (M)							
5691	8 LIVE OAK							
5692	12 LIVE OAK							
5693	10 LIVE OAK							
5694	8 LIVE OAK							
5703	8 LIVE OAK							
5704	26 LIVE OAK (H)							
5705	12 LIVE OAK							
5706	8 CEDAR							
5707	19 CEDAR							
5708	19 CEDAR							
5709	10 WHITE ASH							
5710	12 CEDAR							
5711	12 CEDAR							
5714	15 CEDAR							
5900	19 LIVE OAK							
5902	14 CEADR							
5903	24 CEADR (13"8"7"7") (M)							
8010	22 CEDAR (10"7"6"5"5") (M)							
8023	9 LIVE OAK							
8024	22 CEDAR (13"10"8") (M)							
8027	15 RED OAK (7"5"5"3"2") (M)							
8028	24 LIVE OAK (H)							
11587	12 CEDAR	Y	12					
11588	14 CEDAR							
11589	14 CEDAR							
11615	10 CEDAR							
11616	10 CEDAR							
11617	10 CEDAR							
11618	10 CEDAR ELM							
11632	13 LIVE OAK							
11633	9 CEDAR ELM							
11634	10 CEDAR							
11635	14 CEDAR							
11636	10 CHINABERRY							
11637	17 CHINABERRY							
11638	13 CEDAR ELM							
11639	10 CHINABERRY							
11694	18 LIVE OAK (14"7") (M)							
11695	13 LIVE OAK							
11696	13 CEDAR (9"4") (M)							
11697	13 MESQUITE							
11698	19 CEDAR (9"7"7"6") (M)							
11699	23 CEDAR (17"11") (M)							
11753	10 CEDAR ELM							
11754	8 CEDAR							
11755	10 CEDAR ELM							
11756	18 CEDAR							
11758	18 CEDAR							
	TOTALS		1320	10	241	0	0	
	MITIGATION PERCENTAGE		50%	25%	100%	50%	300%	
	50% MITIGATION PERCENTAGE ADJUSTMENTS FOR PROTECTED CEDARS AND TREES TO BE PRESERVED WITH INSUFFICIENT TREE PROTECTION		5.50		-69.50			
	INCHES TO BE MITIGATED		665.5	2.5	171.5	0	0	
	TOTAL CALIPER INCHES REMOVED							1571
	CALIPER INCHES FOR FEE IN LIEU							840

H - DENOTES HERITAGE TREES
M - DENOTES MULTI-TRUNK TREES
* - DENOTES TREE TO BE TRIMMED FOR 14' CLEARANCE

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
APPROVED BY COMMISSION ON _____ UNDER SECTION _____ OF CHAPTER _____ OF THE CITY OF AUSTIN CODE.
EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMPZ_____DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ZONING_____
Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
Final Plat must be recorded by the Project Expiration Date, if applicable. Subsequent Site Plans which do not comply with the Code current at the time of filing, and all required Building Permits and/or a notice of construction (if a building permit is not required), must also be approved prior to the Project Expiration Date.

URBAN FORESTRY SUMMARY			
Category	Phase 2	Phase 3	Total
TOTAL APPENDIX F TREE INCHES SURVEYED	4730.5	347	5077.5
HERITAGE TREE INCHES SURVEYED	292	89	381
NON-APPENDIX F TREE INCHES SURVEYED	301	13	314
INVASIVE TREE INCHES SURVEYED	120	13	133
APPENDIX F TREE INCHES REMOVED	1561	23	1584
HERITAGE TREE INCHES REMOVED	0	0	0
NON APPENDIX F TREE INCHES REMOVED	10	13	23
INVASIVE TREE INCHES REMOVED	35	13	48
TOTAL DEAD, DISEASED, OR IMMINENT HAZARD (DDI) TREE INCHES REMOVED	42	23	65
DDI APPENDIX F TREE INCHES REMOVED	42	23	65
DDI HERITAGE TREE INCHES REMOVED	0	0	0
DDI NON APPENDIX F TREE INCHES REMOVED	0	13	13
DDI INVASIVE TREE INCHES REMOVED	0	13	13
TOTAL MITIGATION REPLACEMENT INCHES PLANTED	0	0	0
TOTAL REPLACEMENT INCHES PLANTED ON SITE (PRIVATE TREES)	0	0	0
TOTAL REPLACEMENT ROW INCHES PLANTED	0	0	0
PRIVATE INCHES OWED TO URBAN FOREST REPLENISHMENT FUND (URFR)	840	0	839.5
PUBLIC INCHES OWED TO (URFF)	0	0	0
TOTAL NON-MITIGATION INCHES PLANTED ON SITE [ECM 3.5.4]	0	0	0

CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH_LSPS_SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126TREE00 PLOTTED: 1/15/2021 1:21:12 PM BY: JANE FU CTB FILE: CAS.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-003572
Main: 512.836.2388 | Fax: 512.836.4515

Texas P.E. Firm
Registration No. F-754

		PROJECT MANAGER	
		DESIGNED BY	
		DRAWN BY	
		CHECKED BY	
		DATE	
0	01/21/2021	CONFORMED CONTRACT DRAWINGS	
ISSUE	DATE	DESCRIPTION	PROJECT NUMBER 1126

STATE OF TEXAS
THOMAS W. ROHLACK
86365
LICENSED
PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN
FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

TREE LIST & MITIGATION TABLE

0 1" 2"

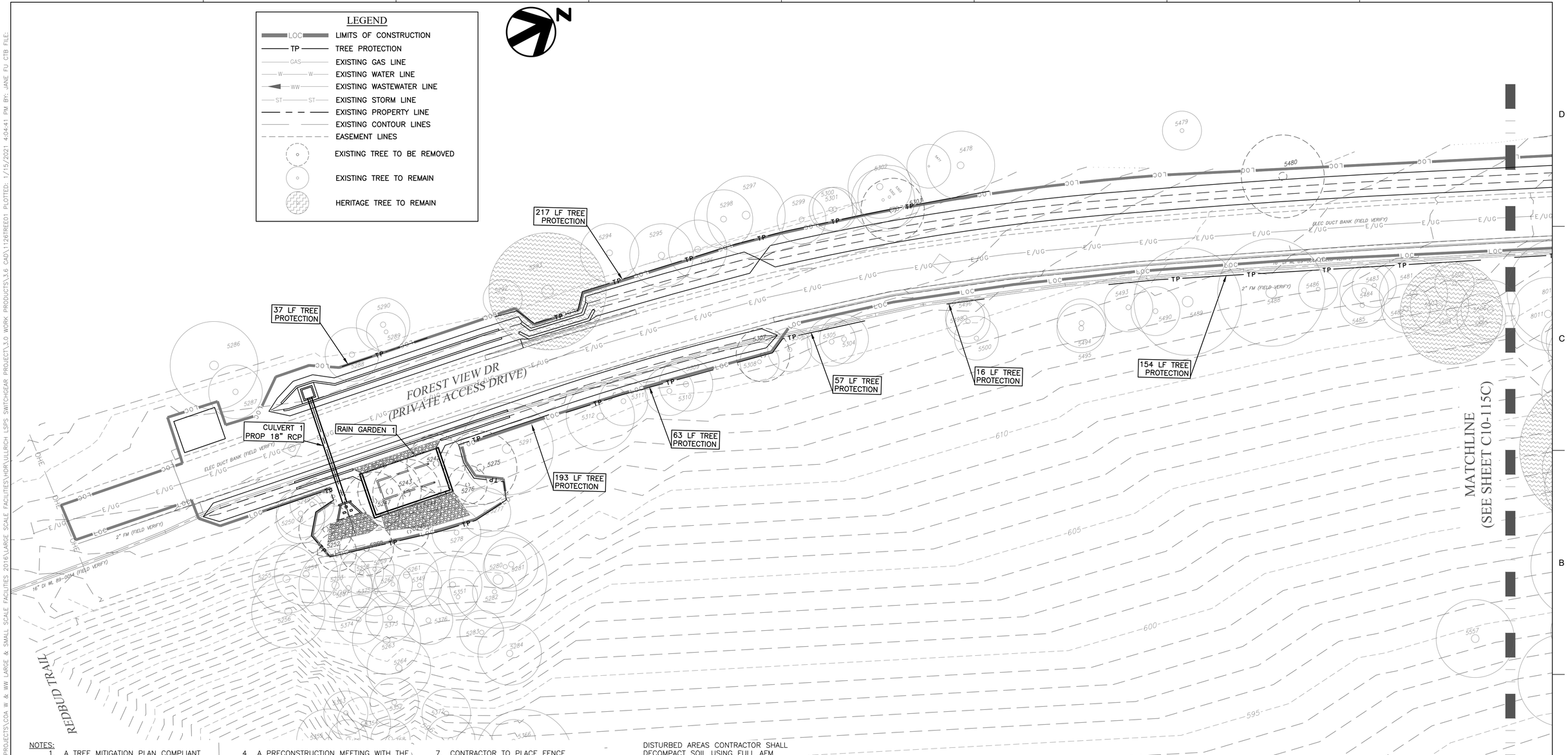
FILENAME 1126TREE00
SCALE NTS

SHEET 27 of 350
C10-115A

SPC-03-005C (R2)

LEGEND

- LOC — LIMITS OF CONSTRUCTION
- TP — TREE PROTECTION
- GAS — EXISTING GAS LINE
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- ST — EXISTING STORM LINE
- EXISTING PROPERTY LINE
- EXISTING CONTOUR LINES
- EASEMENT LINES
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- HERITAGE TREE TO REMAIN



NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
4. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
5. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
6. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
7. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
8. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.
9. PRIOR TO FINAL STABILIZATION OF DISTURBED AREAS CONTRACTOR SHALL DECOMPACT SOIL USING FULL AFM WITHIN THE CRITICAL ROOT ZONES OF TREES TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION, AND OUTSIDE OF WETLANDS.

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
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Director, Watershed Protection and Development Review
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CAS CONSULTING & SERVICES, INC.
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7908 Cameron Road | Austin, TX 78754 | REG. NO. F-000372
Main: 512.836.2588 | Fax: 512.836.4523

Texas P.E. Firm
Registration No. F-754

ISSUE	DATE	DESCRIPTION
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	
DRAWN BY	
CHECKED BY	
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER
01/21/2021

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

TREE PROTECTION PLAN (1 OF 5)

0 1" 2"

FILENAME 1126TREE01
SCALE 1" = 20'

SHEET 28 of 350
C10-115B

NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
4. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
5. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
6. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
7. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
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N

LEGEND

- LOC — LIMITS OF CONSTRUCTION
- TP — TREE PROTECTION
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- ST — ST — EXISTING STORM LINE
- EXISTING PROPERTY LINE
- EXISTING CONTOUR LINES
- EASEMENT LINES
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- HERITAGE TREE TO REMAIN

81 LF TREE PROTECTION
31 LF TREE PROTECTION
35 LF TREE PROTECTION
34 LF TREE PROTECTION
77 LF TREE PROTECTION
37 LF TREE PROTECTION
186 LF TREE PROTECTION
361 LF TREE PROTECTION
CULVERT 2 PROP 24" RCP
RAIN GARDEN 2
STABILIZED CONSTRUCTION ENTRANCE

FOREST VIEW DR (PRIVATE ACCESS DRIVE)

MATCHLINE (SEE SHEET C10-115B)

MATCHLINE (SEE SHEET C10-115D)

SITE PLAN APPROVAL SHEET _____ OF _____
FILE NUMBER:_____ APPLICATION DATE:_____
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EXPIRATION DATE(25-5-81, LDC)_____ CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____DMP?_____DDZ_____

Director, Watershed Protection and Development Review
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CAD FILE: \\CAS-DATASERVER\WATER\ACTIVE PROJECTS\COA W & WW LARGE & SMALL SCALE FACILITIES 2016\LARGE SCALE FACILITIES\HDR\ULLRICH LSPS SWITCHGEAR PROJECT\3.0 WORK PRODUCTS\3.6 CAD\1126TREE02 PLOTTED: 5/14/2021 10:19:27 AM BY: JANE FU CTB FILE: HDR-WSTANDARD.CTB

CAS CONSULTING & SERVICES, INC.
CIVIL ENGINEERING | PROGRAM MANAGEMENT | CONSTRUCTION MANAGEMENT
7908 Cameron Road | Austin, TX 78754 | REG. NO. F-000372
Main: 512.836.2348 | Fax: 512.836.4523

Texas P.E. Firm Registration No. F-754

ISSUE	DATE	DESCRIPTION
1	05/12/2021	RFI039
0	01/21/2021	CONFORMED CONTRACT DRAWINGS

PROJECT MANAGER	
DESIGNED BY	TR
DRAWN BY	JC
CHECKED BY	JC
DATE	
PROJECT NUMBER	1126

STATE OF TEXAS — THOMAS W. ROHLACK — 86365 — LICENSED PROFESSIONAL ENGINEER — 5/14/21

CITY OF AUSTIN — FOUNDED 1839

ULLRICH WTP
LOW SERVICE PUMP STATION
ELECTRICAL FEED RENEWAL

TREE PROTECTION PLAN (2 OF 5)

0 1" 2"

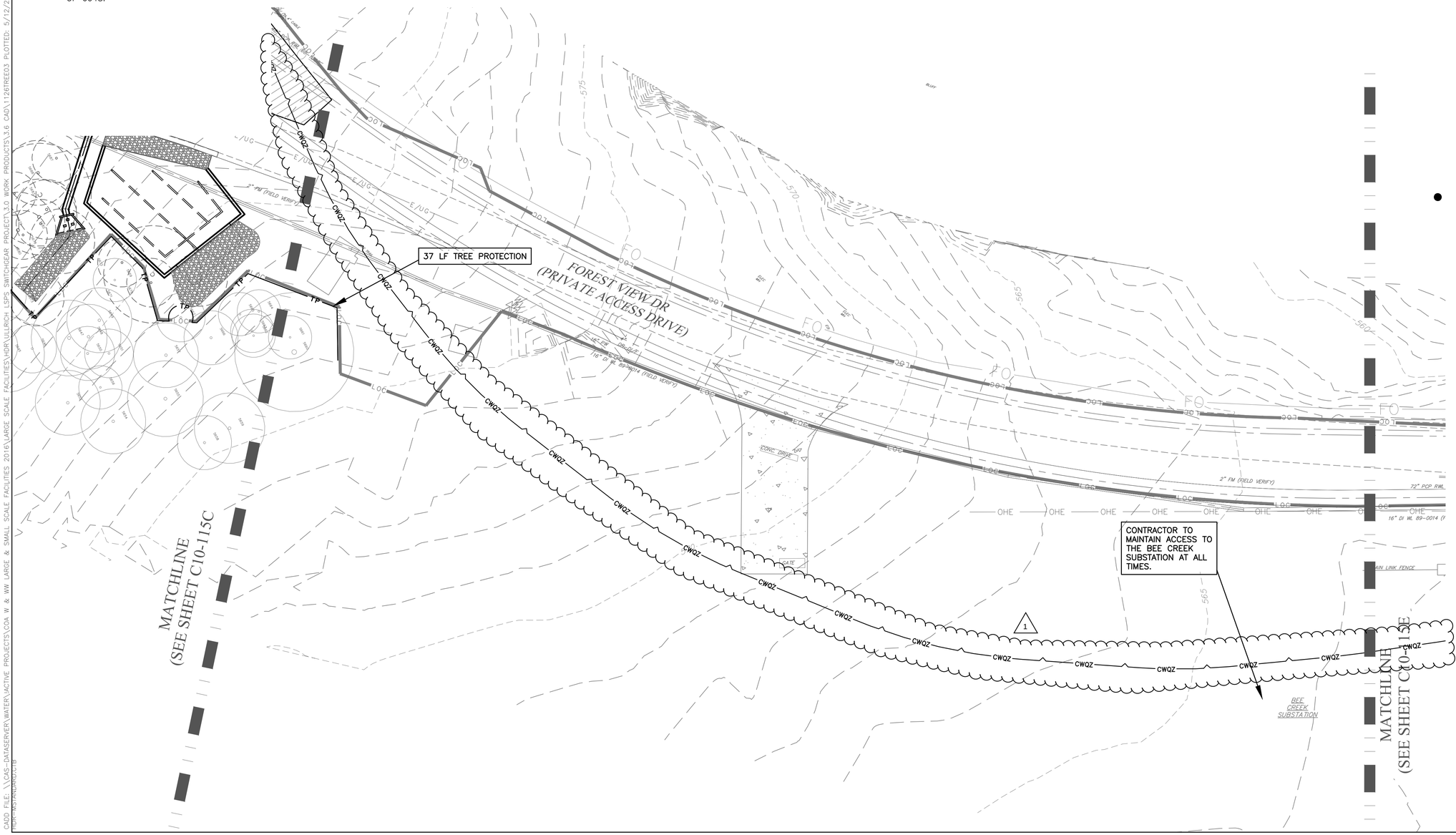
FILENAME 1126TREE02
SCALE 1" = 20'

SHEET
C10-115C

SPC-03-005C (R2)

NOTES:

1. A TREE MITIGATION PLAN COMPLIANT WITH CHAPTER 25-8, SUBCHAPTER B, ARTICLE 1, DIVISION 2 OF THE COA LDC AND SECTION 3 OF THE COA ECM WILL BE PROVIDED BY THE PERMIT APPLICANT.
2. TREE CARE PLAN SHALL BE PREPARED BY A CERTIFIED ARBORIST. REFER TO SPECIFICATION SECTION 01595.
3. REVEGETATE ALL DISTURBED AREAS WITH NATIVE SEED MIX PER COA STANDARD SPECIFICATION 604S. USE DRY AREA SEED MIX INCLUDING WILDFLOWER SEED LISTED IN TABLE 4 OF 604S.
4. A PRECONSTRUCTION MEETING WITH THE ENVIRONMENTAL INSPECTOR IS REQUIRED PRIOR TO ANY SITE DISTURBANCE.
5. CONTRACTOR TO INCLUDE TEMPORARY IRRIGATION FOR FINAL STABILIZATION.
6. TREE PROTECTION FENCING TO BE INSTALLED AROUND THE FULL CRZ WHERE POSSIBLE. WHERE NOT POSSIBLE, TREE PROTECTION FENCING TO BE INSTALLED AROUND THE 1/2 CRZ AND ADD 8" OF HARDWOOD MULCH FROM THE 1/2 CRZ TO THE FULL CRZ.
7. CONTRACTOR TO PLACE FENCE FOOTINGS OUTSIDE OF THE 1/4 CRZ OF ALL TREES. IF LOCATED WITHIN THE 1/2 CRZ, ENSURE CUT DEPTH IS ONLY 4" MAXIMUM.
8. 2x4x6 OR GREATER SIZE LUMBER SHALL BE STRAPPED VERTICALLY TO THE TREE AND 8" OF HARDWOOD MULCH SHALL BE APPLIED WITHIN THE FULL CRZ, WHERE POSSIBLE. SEE TREE MITIGATION TABLES AND TREE PROTECTION SHEETS FOR TREE PROTECTION AND REMOVAL.
9. PRIOR TO FINAL STABILIZATION OF DISTURBED AREAS CONTRACTOR SHALL DECOMPACT SOIL USING FULL AFM WITHIN THE CRITICAL ROOT ZONES OF TREES TO REMAIN WITHIN THE LIMITS OF CONSTRUCTION, AND OUTSIDE OF WETLANDS.



LEGEND

- LOC — LIMITS OF CONSTRUCTION
- TP — TREE PROTECTION
- GAS — EXISTING GAS LINE
- W — EXISTING WATER LINE
- WW — EXISTING WASTEWATER LINE
- ST — EXISTING STORM LINE
- EXISTING PROPERTY LINE
- EXISTING CONTOUR LINES
- EASEMENT LINES
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO REMAIN
- HERITAGE TREE TO REMAIN

SITE PLAN APPROVAL	SHEET _____ OF _____
FILE NUMBER:	APPLICATION DATE:
APPROVED BY COMMISSION ON _____	UNDER SECTION _____ OF
CHAPTER _____ OF THE CITY OF AUSTIN CODE.	
EXPIRATION DATE(25-5-81, LDC)_____	CASE MANAGER _____
PROJECT EXPIRATION DATE (ORD. #970905-A)_____	DMPZ_____ DDZ_____

Director, Watershed Protection and Development Review
RELEASED FOR GENERAL COMPLIANCE:_____ZONING:_____
Rev. 1 _____Correction 1_____
Rev. 2 _____Correction 2 _____
Rev. 3 _____Correction 3 _____
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TREE PROTECTION PLAN (3 OF 5)

0 1" 2"

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SPC-03-005C (R2)