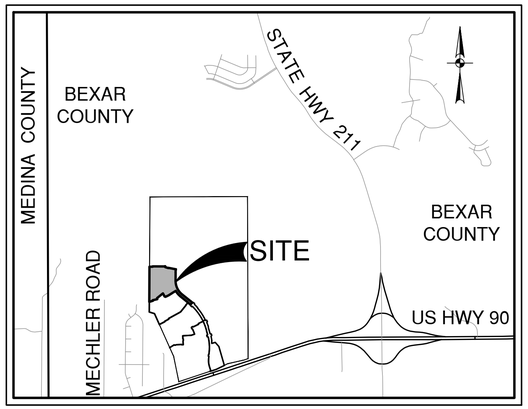
STONEHILL UNIT-9

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS

Sheet List Table

Sheet Description	Sheet No.
COVER SHEET	C0.00
MASTER DRAINAGE PLAN - ULTIMATE CONDITIONS	C1.00
MASTER DRAINAGE PLAN - INTERIM CONDITIONS	C1.00A
DRAIN "A" PLAN & PROFILE	C1.01
DRAIN "A" PLAN & PROFILE	C1.02
DRAIN "A" PLAN & PROFILE	C1.03
DRAIN "B" PLAN & PROFILE	C1.04
DRAIN "C" 'D" & "E" PLAN & PROFILE	C1.05
DRAIN F PLAN & PROFILE	C1.06
DRAIN G PLAN & PROFILE	C1.07
DRAINAGE DETAILS	C1.10
DRAINAGE DETAILS	C1.11
DRAINAGE DETAILS	C1.12
FANNIN CRANE PLAN & PROFILE	C2.00
FANNIN CRANE PLAN & PROFILE	C2.01
HEMPHILL KING PLAN & PROFILE	C2.02
COCHRAN KING PLAN & PROFILE	C2.03
HOCKLEY BEND PLAN & PROFILE	C2.04
HARTLEY HOME PLAN & PROFILE	C2.05
STONE MASON DRIVE PLAN & PROFILE	C2.06
STREET DETAILS	C2.10
STREET DETAILS	C2.11
STREET DETAILS	C2.12
OVERALL SIGNAGE PLAN	C3.00
SIGNAGE DETAILS SHEET	C3.10
SIGNAGE DETAILS SHEET	C3.11
SIGNAGE DETAILS SHEET	C3.12



LOCATION MAP
NOT-TO-SCALE

Sheet List Table

Sheet Description	Sheet No.
OVERALL WATER DISTRUBUTION PLAN	C4.00
OVERALL WATER DISTRUBUTION PLAN	C4.01
WATER DISTRIBUTION PLAN DETAILS	C4.10
WATER DISTRIBUTION PLAN NOTES	C4.11
OVERALL SANITARY SEWER PLAN & PROFILE	C5.00
OVERALL SANITARY SEWER PLAN & PROFILE	C5.01
SANITARY SEWER LINE "A" PLAN & PROFILE	C5.02
SANITARY SEWER LINE "A" PLAN & PROFILE	C5.03
SANITARY SEWER LINE "B" PLAN & PROFILE	C5.04
SANITARY SEWER LINE "C" PLAN & PROFILE	C5.05
SANITARY SEWER LINE "D" PLAN & PROFILE	C5.06
SANITARY SEWER LINE "E" PLAN & PROFILE	C5.07
SANITARY SEWER LINE "F" & "G" PLAN & PROFILE	C5.08
SANITARY SEWER DETAILS	C5.10
SANITARY SEWER NOTES	C5.11
OVERALL UTILITY PLAN	C6.00
OVERALL UTILITY PLAN	C6.01
GRADING PLAN	C7.00
STORMWATER POLLUTION PREVENTION PLAN	C8.00
STORMWATER POLLUTION PREVENTION PLAN DETAILS	C8.10

PREPARED FOR:

CONTINENTAL HOMES OF TEXAS, L.P.
5419 N LOOP 1504 E
SAN ANTONIO, TX 78247

MARCH 2024

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
3/20/24

WATER (SAWS PRESSURE ZONE 930)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210)496-2668 FAX# (210)496-2668
SAWS BLOCK MAP# 66562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 5,568 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 23-XXXX

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS\LEON CREEK

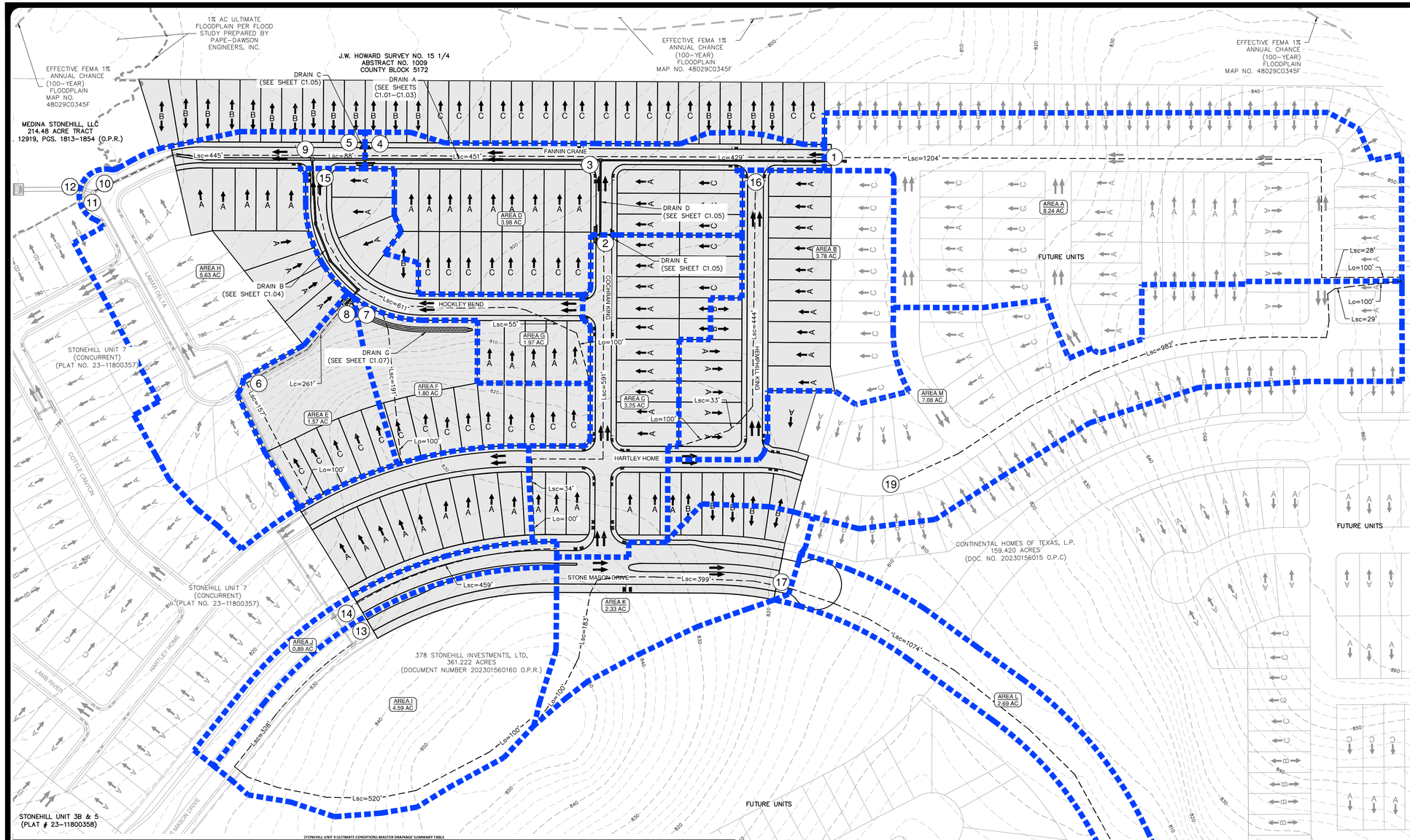
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

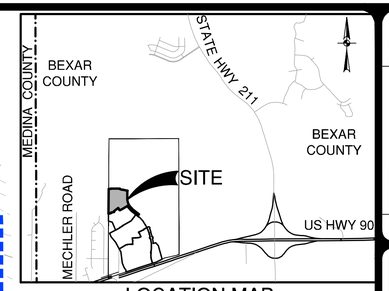
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PLAT NO. 24-11800057 PD JOB NO. 12456-12 STONEHILL UNIT-9

Date: Mar. 20, 2024, 4:01pm User ID: DDoyle
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LOCATION MAP
NOT-TO-SCALE

0' 100' 200' 300'
SCALE: 1"= 100'

MASTER DRAINAGE LEGEND

PROJECT LIMITS	
EXISTING CONTOUR	690
100 YR EXISTING FEMA FLOODPLAIN	
100 YR UD FLOODPLAIN	
RUNOFF FLOW PATH	
DRAINAGE AREA BOUNDARY	
FHA LOT GRADING TYPE	A,B,C
PROPOSED DIRECTION OF FLOW	
DRAINAGE CALCULATION POINT	11
DRAINAGE AREA	AREA X.XX AC

STONEHILL UNIT 9 ULTIMATE CONDITIONS MASTER DRAINAGE SUMMARY TABLE

Point	Structure	Area	Total Flow Length (ft)	Total Area (ac)	Character of Ground	Overland Flow Slope %	Overland Flow L (ft)	Overland Flow Tc (min)	Shallow Concentrated Slope %	Shallow Concentrated L (ft)	Shallow Concentrated Surface	Shallow Concentrated Tc (min)	Channel Flow (5 fps) Tc (min)	Total Tc (min)	C	I (PA-4)	Q (cfs)	Frequency (yrs)	Total Q25 (Q-Intercept/Bypass) (cfs)	Intercept (cfs)	Bypass (cfs)	Point
1	Drain A -Future Curb Inlets on Grade	A	1332	8.24	Bare Soil	2.0	100	12	3.7	1232	Composite	5.5	0.0	17.0	0.72	4.91	29.13	5		20.71	19.39	1
																6.76	40.11	25				
																8.42	**49.95**	**100**				
2	Drain E - 15' & 30' Curb Inlet on Grade	C	725	3.25	Bare Soil	2.0	100	12	4.7	625	Composite	2.6	0.0	14.0	0.72	5.42	12.68	5		14.05	3.57	2
																7.53	17.62	25				
																9.39	**21.97**	**100**				
3	Drain A - Storm Drain	A+C	1761	11.49	Bare Soil	2.0	100	12	3.7	1661	Composite	6.5	0.0	18.0	0.72	4.76	39.98	5	54.27-19.39-3.57 = 31.31			3
																6.56	54.27	25				
																8.16	**67.51**	**100**				
4	Drain C - 15' & 30' Curb Inlet on Grade	A+B+C+D	2212	19.25	Bare Soil	2.0	100	12	2.9	2112	Composite	10.5	0.0	22.0	0.72	4.30	59.60	5	81.91-20.71-14.05 = 47.15	23.37	23.79	4
																5.91	81.91	25				
																7.34	**101.73**	**100**				
5	Drain A - Storm Drain	A+B+C+D	2212	19.25	Bare Soil	2.0	100	12	2.9	2112	Composite	10.5	0.0	22.0	0.72	4.30	59.60	5	81.53-23.37 = 58.16			5
																5.91	81.91	25				
																7.34	**101.73**	**100**				
6	Existing Earthen Channel	E	257	1.57	Bare Soil	2.0	100	12	6.6	157	Composite	1.5	0.0	13.0	0.60	5.61	5.28	5				6
																7.82	7.37	25				
																9.76	**9.19**	**100**				
7	Drain G - Earthen Interceptor Channel	F	291	1.80	Bare Soil	2.0	100	12	18.0	191	Composite	1.1	0.0	13.0	0.64	5.61	6.46	5				7
																7.82	9.01	25				
																9.76	**11.24**	**100**				
8	Drain B - 4 - Way Inlet	E+F	291	3.37	Bare Soil	2.0	100	12	18.0	191	Composite	1.1	0.0	13.0	0.62	5.61	11.72	5				8
																7.82	16.34	25				
																9.76	**20.39**	**100**				
9	Drain A -Storm Drain	A+B+C+D+E+F	2300	22.62	Bare Soil	2.0	100	12	2.9	2200	Composite	10.5	0.0	22.0	0.71	4.30	69.06	5	94.92-23.37 = 71.55			9
																5.91	94.92	25				
																7.34	**117.88**	**100**				
10	Existing Curb Inlet	A+B+C+D+G+H	2745	26.85	Bare Soil	2.0	100	12	2.9	2645	Composite	12.5	0.0	24.0	0.72	4.12	79.65	5	109.23-20.71-14.05-23.37 = 51.10			10
																5.65	109.23	25				
																7.01	**135.52**	**100**				
11	Existing Storm Drain	A+B+C+D+E+F+I+J	2745	28.14	Bare Soil	2.0	100	12	2.9	2645	Composite	12.5	0.0	24.0	0.69	4.12	80.00	5	109.70-23.37 = 86.33			11
																5.65	109.70	25				
																7.01	**136.11**	**100**				
12	Existing Storm Drain	A+B+C+D+E+F+G+H+I+J	2745	35.74	Bare Soil	2.0	100	12	2.9	2645	Composite	12.5	0.0	24.0	0.70	4.12	103.07	5				12
																5.65	141.55	25				
																7.01	**175.58**	**100**				
13	Existing Curb Inlet	I	948	4.63	Bare Soil	0.5	100	17	3.9	848	Composite	8.1	0.0	25.0	0.56	4.04	10.47	5				13
																5.53	14.34	25				
																6.86	**17.79**	**100**				
14	Existing Curb Inlet	J	459	0.89	Bare Soil	0.0	0	5	0.0	459	Composite	4.0	0.0	9.0	0.84	6.48	4.84	5				14
																9.11	6.81	25				
																11.38	**8.51**	**100**				
15	Street Capacity Check - Hockley Bend	G	766	1.97	Bare Soil	2.0	100	12	2.9	666	Composite	2.9	0.0	14.0	0.72	5.42	7.69	5				15
																7.53	10.68	25				
																9.39	**13.32**	**100**				
16	Street Capacity Check - Hemphill King	B	577	3.78	Bare Soil	2.0	100	12	3.9	477	Composite	1.6	0.0	13.0	0.72	5.61	15.27	5				16
																7.82	21.28	25				
																9.76	**26.56**	**100**				
17	Street Capacity - Stone Mason Drive	K	682	5.86	Bare Soil	0.5	100	17	2.3	582	Composite	4.8	0.0	21.0	0.64	4.40	16.50	5				17
																6.05	22.69	25				
																7.52	**28.20**	**100**				
18	Future Street Calc	K+L	682	8.34	Bare Soil	0.5	100	17	2.3	1656	Composite	4.8	0.0	31.0	0.67	**3.62**	**20.23**	**5**				18
																4.96	27.72	25				
																6.14	**34.31**	**100**				
19	Future Street Calc	M	1111	7.86	Bare Soil	2.0	100	12	0.8	1011	Composite	4.5	0.0	16.0	0.74	**5.06**	**29.45**	**5**				19
																6.99	40.66	25				
																8.71	**50.66**	**100**				

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

NO.	REVISION	DATE

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
MASTER DRAINAGE PLAN - ULTIMATE CONDITIONS

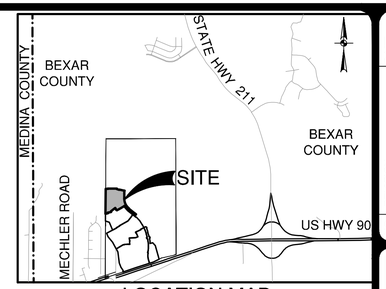
PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER XX
CHECKED XX DRAWN XX
SHEET C1.00

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MASTER DRAINAGE LEGEND

PROJECT LIMITS
EXISTING CONTOUR — 690 —
100 YR FLOODPLAIN
RUNOFF FLOW PATH
DRAINAGE AREA BOUNDARY
FHA LOT GRADING TYPE — A,B,C
PROPOSED DIRECTION OF FLOW
DRAINAGE CALCULATION POINT — (11)
DRAINAGE AREA — A

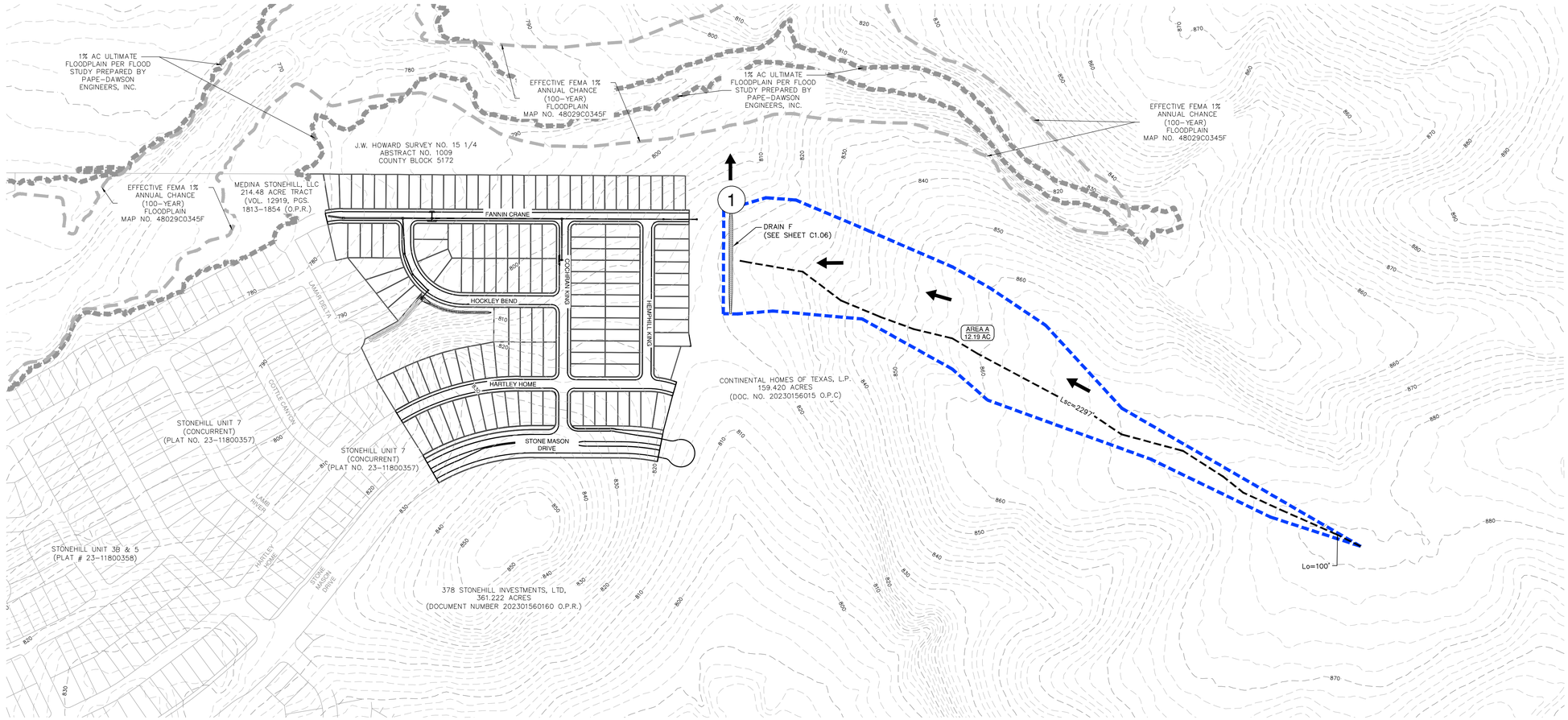


LOCATION MAP
NOT-TO-SCALE

STONEHILL UNIT 9 INTERIM CONDITIONS MASTER DRAINAGE SUMMARY TABLE

					Overland Flow			Shallow Concentrated				Channel Flow (6 fps)	Total				
Point	Area	Total Flow Length (ft)	Total Area (ac)	Character of Ground	Slope %	L (ft)	Tc (min)	Slope %	L (ft)	Surface	Tc (min)	Tc (min)	Tc (min)	C	I (PA-4)	Q (cfs)	Frequency (yrs)
1	A	2397	12.19	Bare Soil	0.5	100	17	2.7	2297	Unpaved	43.0	0.0	60.0	0.39	**2.41**	**11.46**	**5**
															3.35	15.93	25
															4.19	**19.92**	**100**

0' 200' 400' 600'
SCALE: 1"= 200'



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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

DATE
NO. REVISION

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

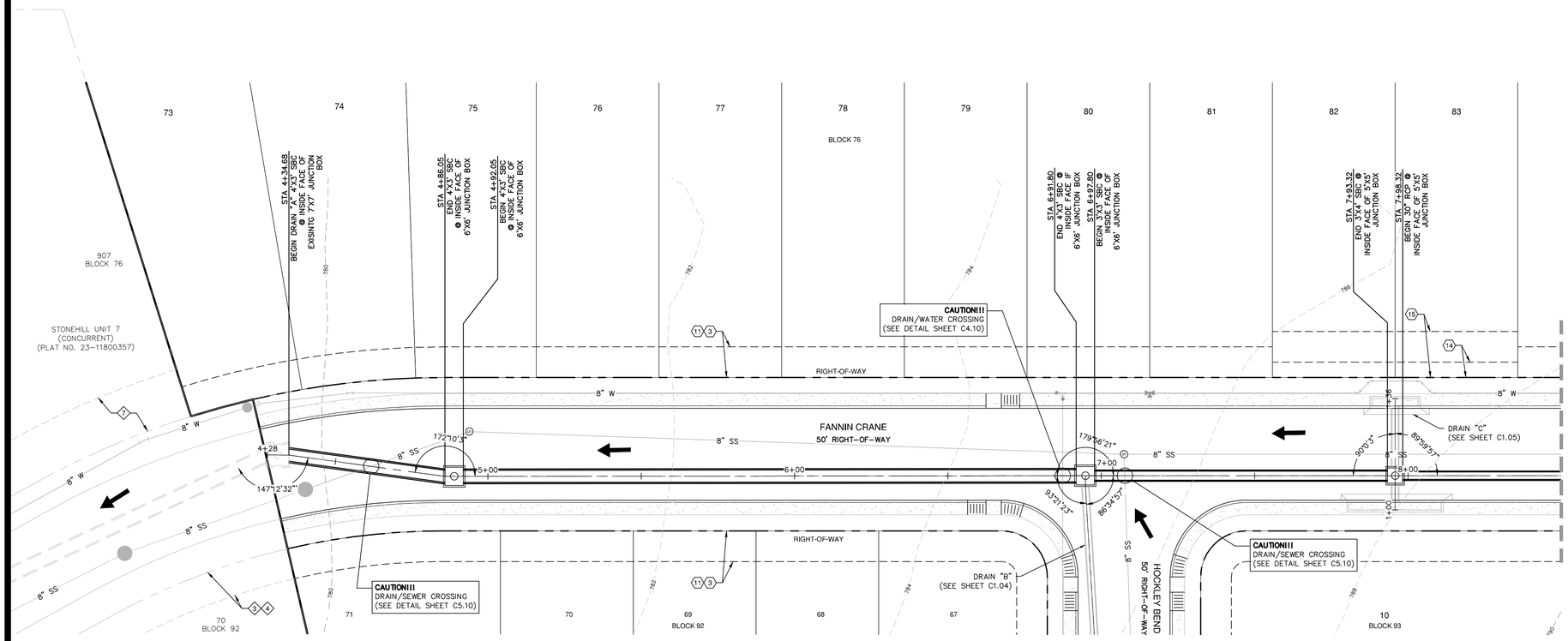
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

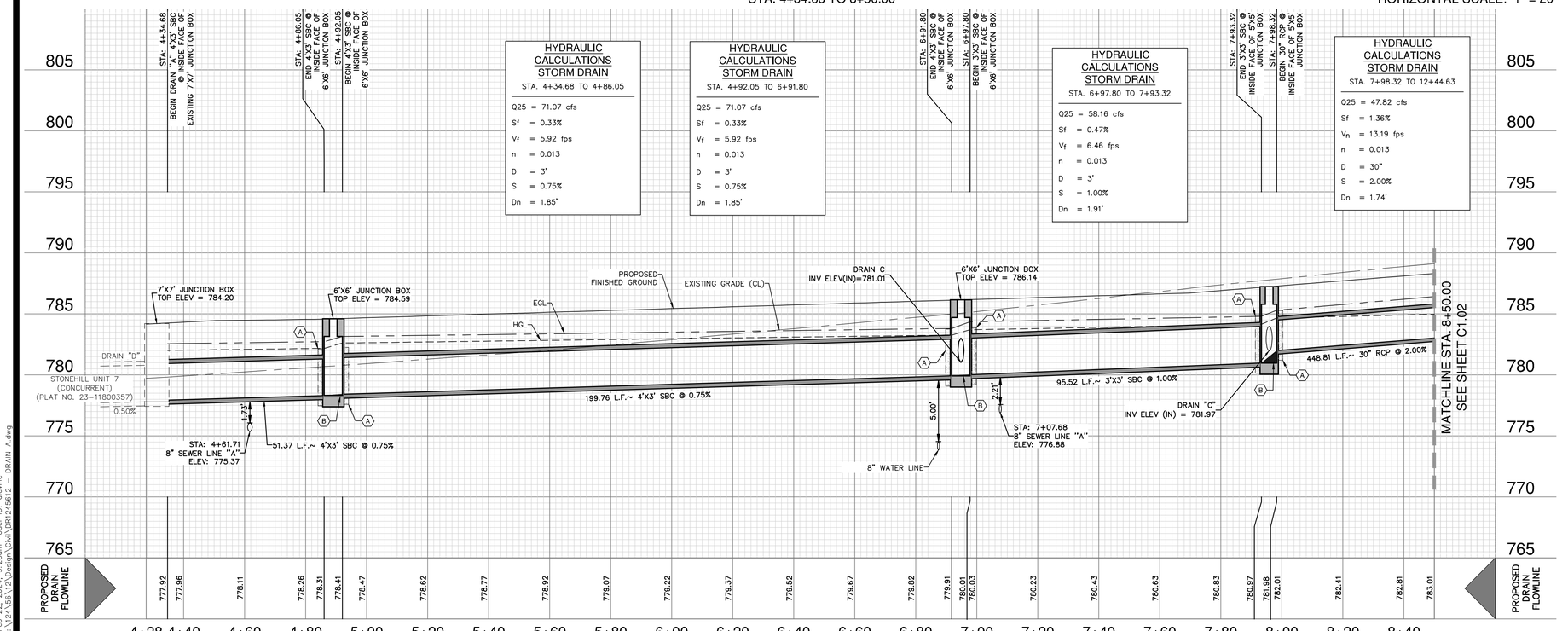
MASTER DRAINAGE PLAN - INTERIM CONDITIONS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER XX
CHECKED XX DRAWN XX
SHEET C1.00A

Date: Feb 22, 2024, 9:22am User ID: dlevine
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SCALE: 1"= 20'

0' 20' 40' 60'

DRAINAGE LEGEND

- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

KEY LEGEND

- (A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
- (B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
- (3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (11) 10' BUILDING SETBACK
- (14) 5' WATER EASEMENT
- (15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (11) 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (14) 16' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)

DRAINAGE & GRADING NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

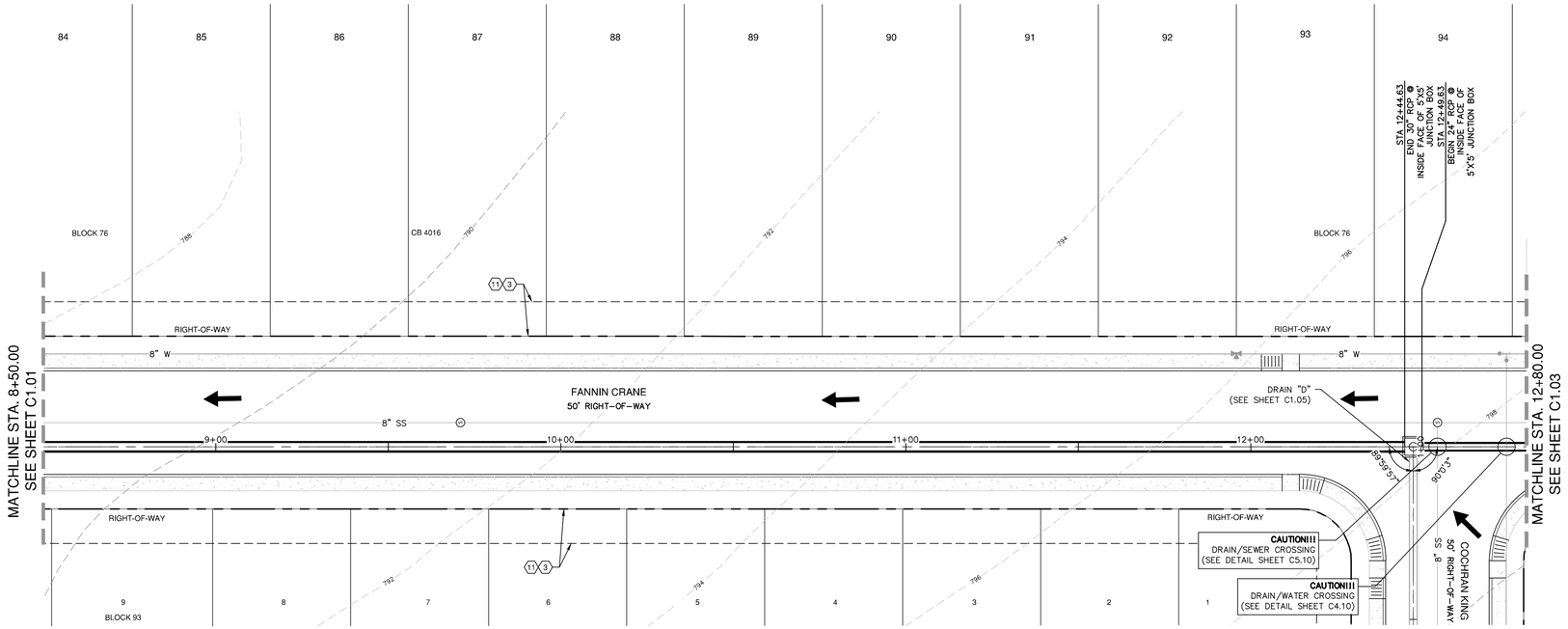
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

DRAIN "A" PLAN & PROFILE
STA. 4+34.68 TO STA. 8+50.00

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.01

Date: Feb 22, 2024, 9:23am User ID: dlevine
File: P:\124\56\12\Design\Civil\DR1245612 - DRAIN A.dwg
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SCALE: 1"= 20'

0' 20' 40' 60'

DRAINAGE LEGEND

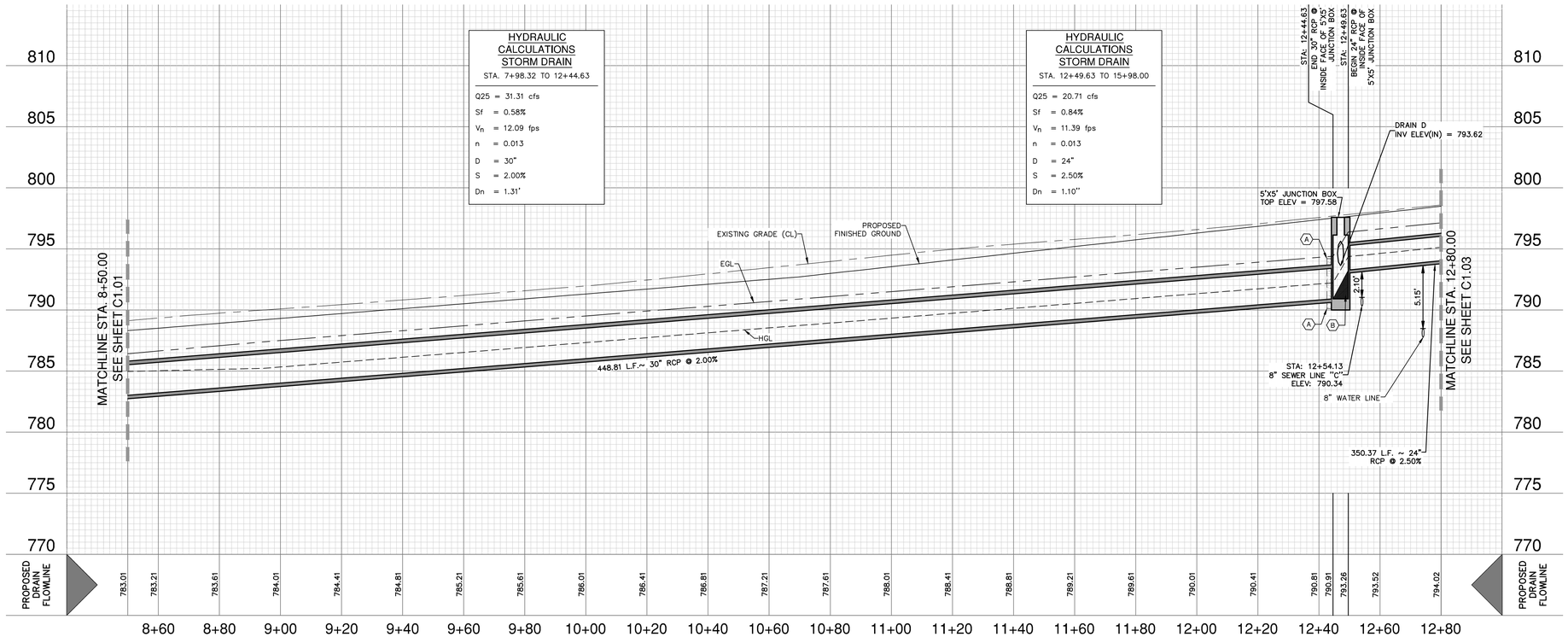
- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

KEY LEGEND

- (A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
- (B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
- (1) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (1A) 10' BUILDING SETBACK
- (1B) 5' WATER EASEMENT
- (1C) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (2) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (2A) 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (2B) 16' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)

DRAIN "A"
STA. 8+50.00 TO 12+80.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



DRAINAGE & GRADING NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9

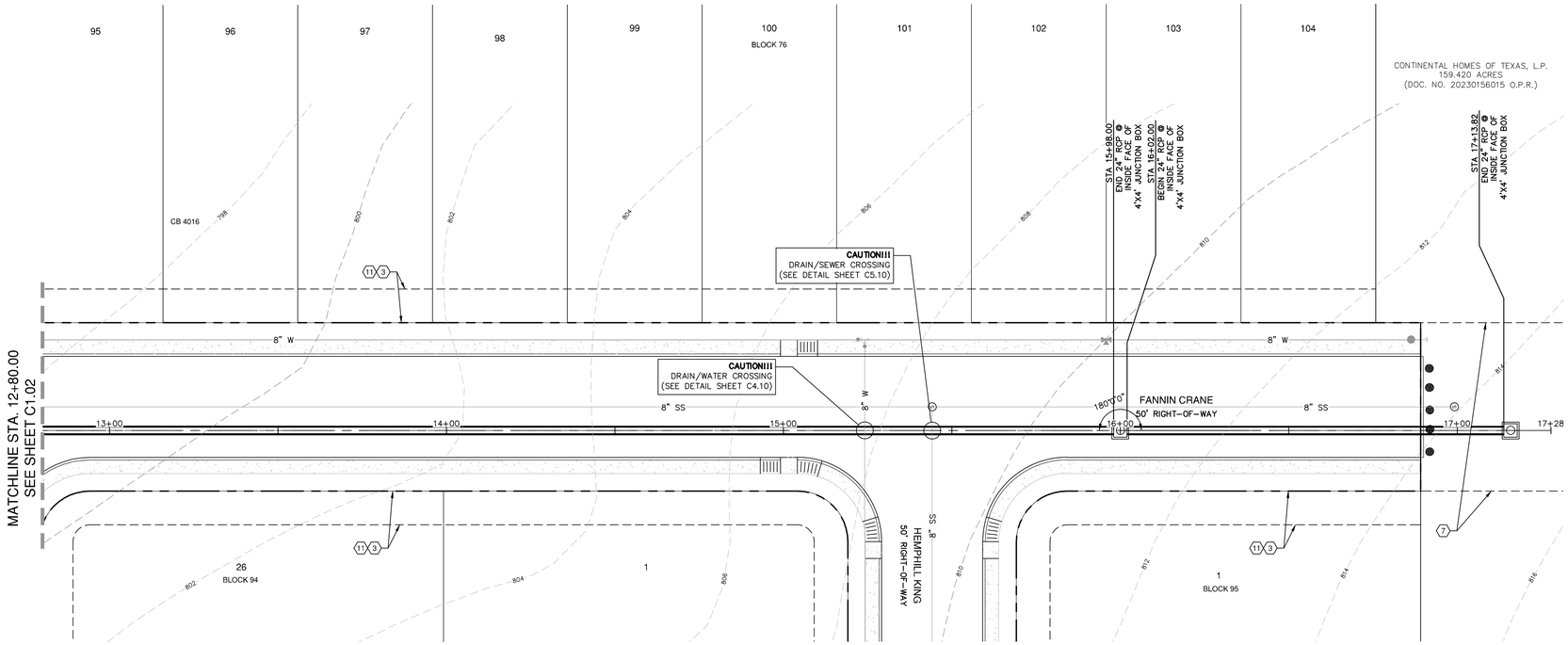
SAN ANTONIO, TEXAS

DRAIN "A" PLAN & PROFILE
(STA. 8+50.00 TO 12+80.00)

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.02

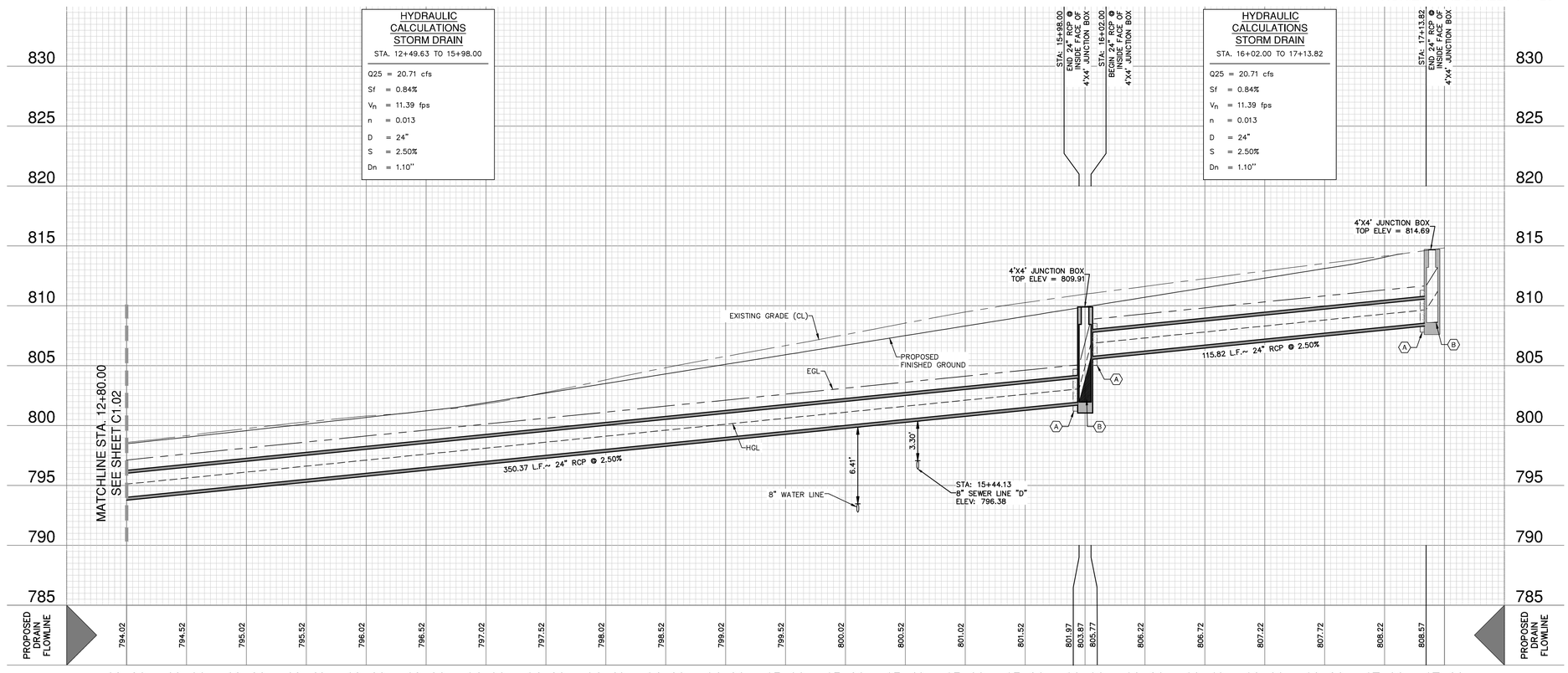
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DRAIN "A"
STA. 12+80.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



SCALE: 1"= 20'
0' 20' 40' 60'

DRAINAGE LEGEND

- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

KEY LEGEND

(A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
(B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
(C) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
(D) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY
(E) 10' BUILDING SETBACK
(F) 5' WATER EASEMENT
(G) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
(1) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
(2) 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
(3) 16' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)

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CAUTION!!

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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

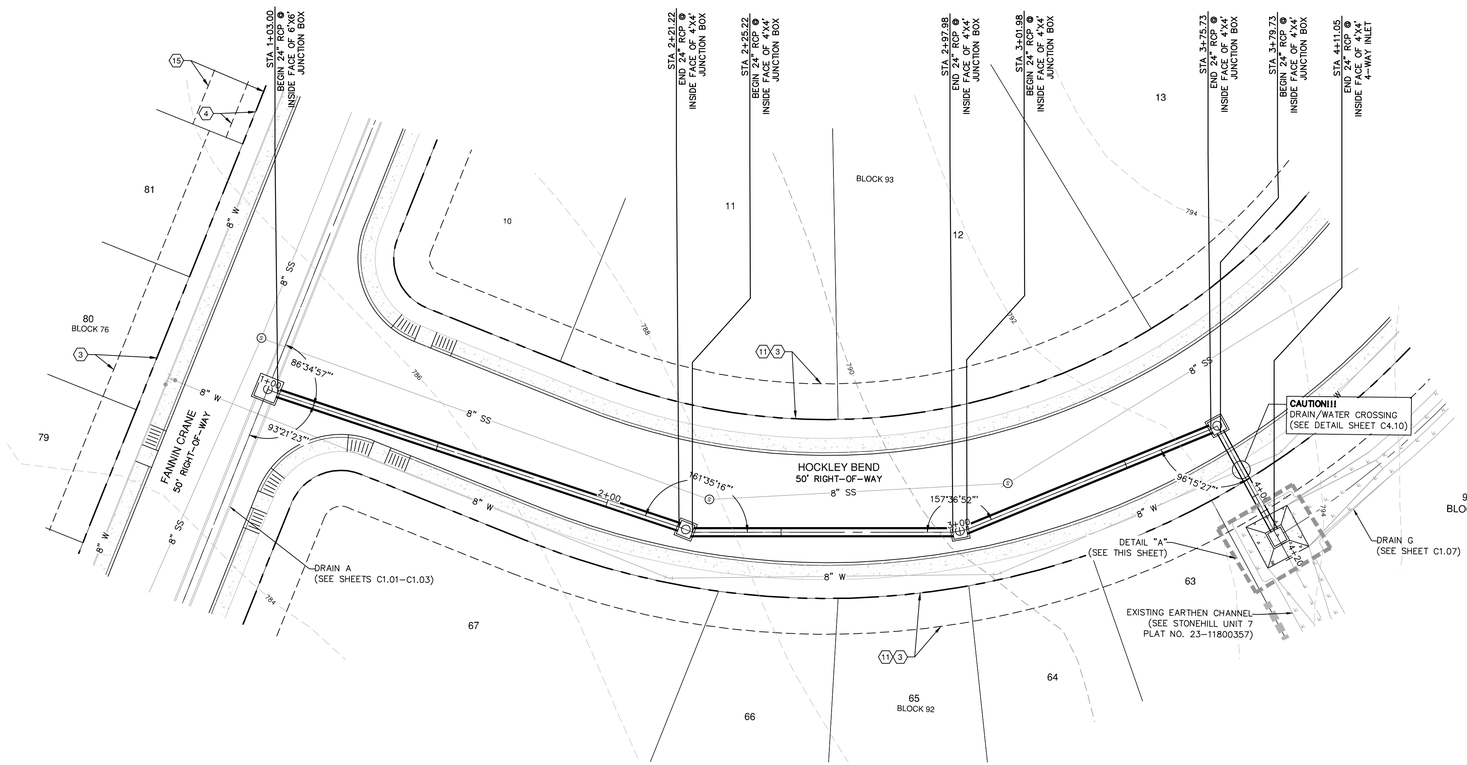
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

DRAIN "A" PLAN & PROFILE
STA. 12+80.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.03

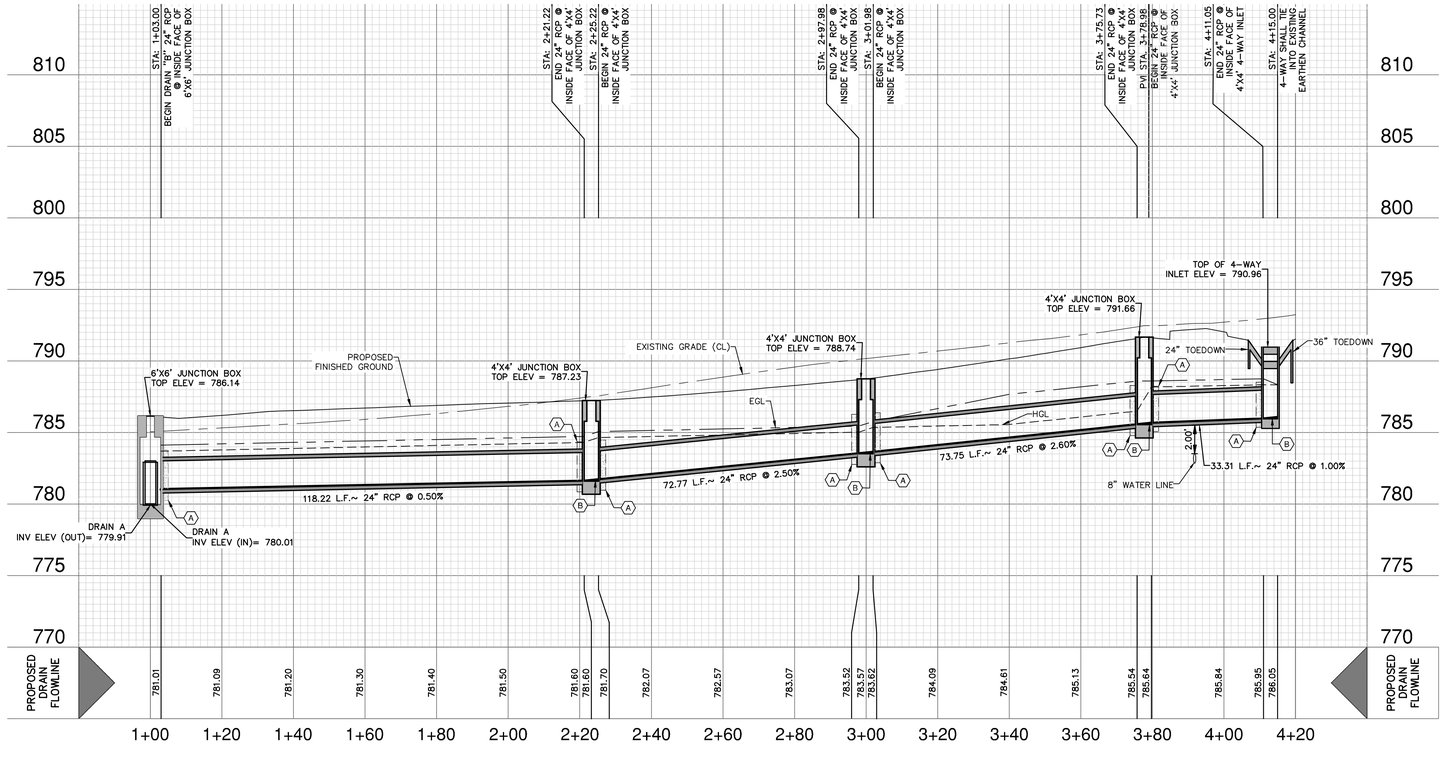
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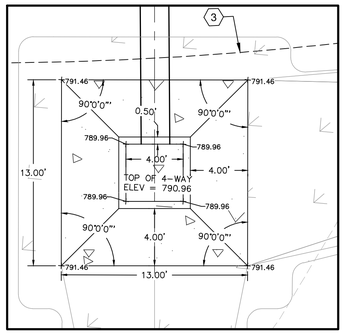
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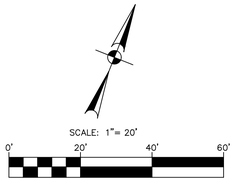
DRAIN "B"
STA. 1+03.00 TO STA. 4+15.05

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'





DETAIL "A"
SCALE: 1" = 5'



DRAINAGE LEGEND

- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

HYDRAULIC CALCULATIONS–DRAIN "B"

TOTAL Q_{25} = 13.66 CFS

CHECK WITH WEIR FORMULA

$$h = \left(\frac{Q}{(CL)}\right)^{2/3} = \left(\frac{13.66}{(3.087)\ (16)}\right)^{2/3} = 0.42 \text{ FT.}$$

h = 0.42 < 0.79 OK

HYDRAULIC CALCULATIONS STORM DRAIN
STA. 1+03.00 TO 2+21.22

Q25 = 16.34 cfs
Sf = 0.52%
V_f = 5.20 fps
n = 0.013
D = 24"
S = 0.50%
Dn = 1.65'

HYDRAULIC CALCULATIONS STORM DRAIN
STA. 2+25.22 TO 2+97.98

Q25 = 16.34 cfs
Sf = 0.52%
V_n = 11.05 fps
n = 0.013
D = 24"
S = 2.50%
Dn = 0.96'

HYDRAULIC CALCULATIONS STORM DRAIN
STA. 3+01.98 TO 3+75.73

Q25 = 16.34 cfs
Sf = 0.52%
V_n = 11.17 fps
n = 0.013
D = 24"
S = 2.60%
Dn = 0.95'

HYDRAULIC CALCULATIONS STORM DRAIN
STA. 3+79.73 TO 4+11.05

Q25 = 16.34 cfs
Sf = 0.52%
V_n = 7.82 fps
n = 0.013
D = 24"
S = 1.00%
Dn = 1.27'

KEY LEGEND

- (A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
- (B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
- (3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (11) 10' BUILDING SETBACK
- (12) 5' WATER EASEMENT
- (13) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
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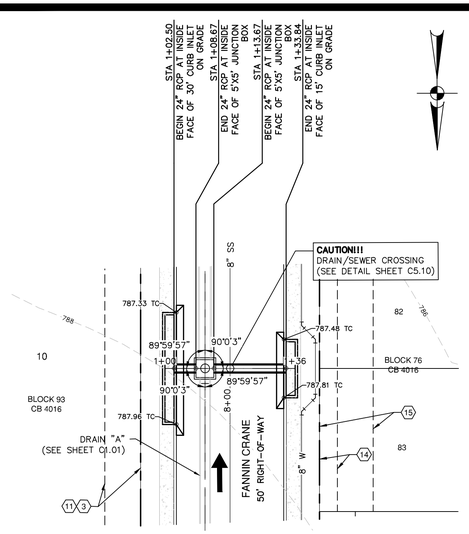
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

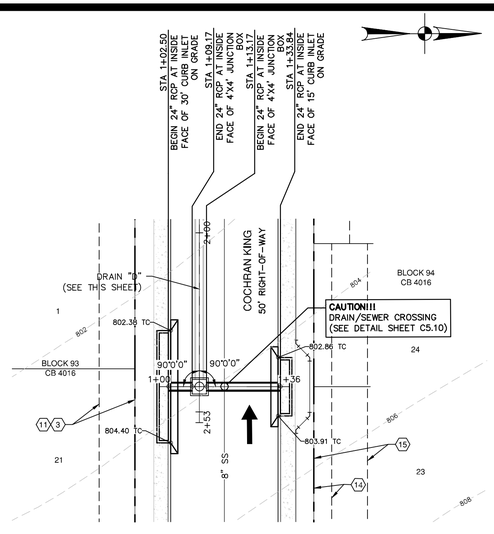
DRAIN "B" PLAN & PROFILE
STA. 1+03.00 TO STA. 4+15.05

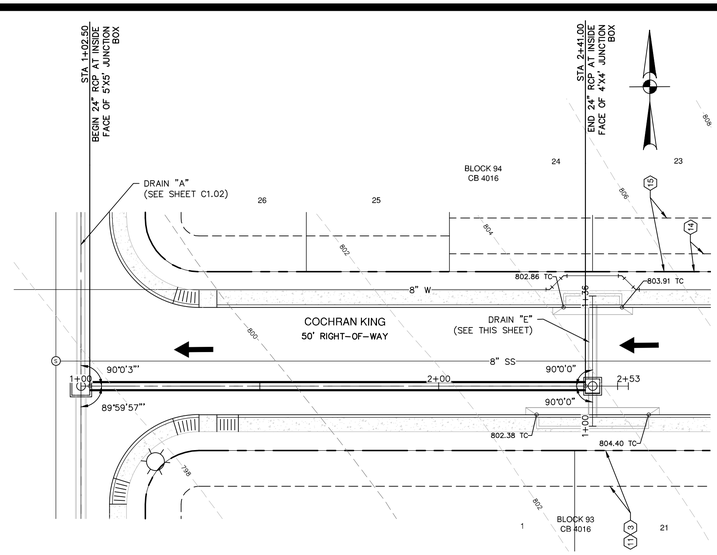
PLAT NO. 24-11800057
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DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.04

Date: Feb. 22, 2024, 9:26am User ID: dlevine
File: P:\124\56\12\Design\Civil\DR124561 2 – DRAIN B.dwg

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SCALE: 1"= 20'

0' 20' 40' 60'

DRAINAGE LEGEND

- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

HYDRAULIC CALCULATIONS STORM DRAIN STA. 1+02.50 TO 1+08.67	HYDRAULIC CALCULATIONS STORM DRAIN STA. 1+13.67 TO 1+33.84
Q25 = 15.39 cfs	Q25 = 7.69 cfs
Sf = 0.46%	Sf = 0.11%
Vf = 9.66 fps	Vf = 8.20 fps
n = 0.013	n = 0.013
D = 24"	D = 24"
S = 1.76%	S = 2.00%
Dn = 1.02'	Dn = 0.69'

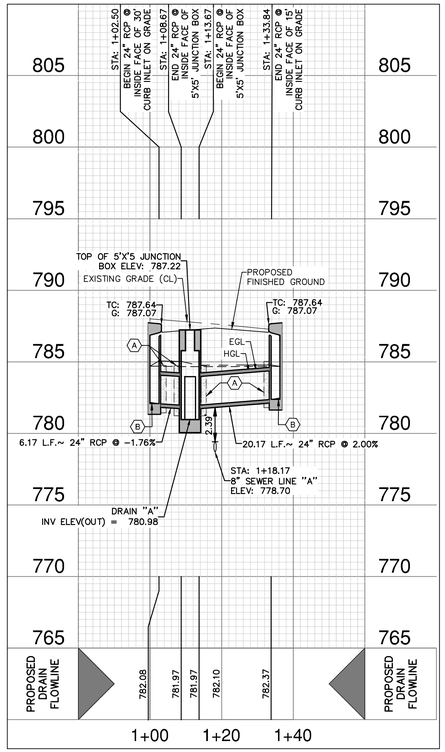
HYDRAULIC CALCULATIONS STORM DRAIN STA. 1+02.50 TO 1+09.17	HYDRAULIC CALCULATIONS STORM DRAIN STA. 1+13.17 TO 1+33.84
Q25 = 8.47 cfs	Q25 = 5.19 cfs
Sf = 0.14%	Sf = 0.05%
Vf = 8.39 fps	Vf = 7.46 fps
n = 0.013	n = 0.013
D = 24"	D = 24"
S = 2.00%	S = 2.00%
Dn = 0.73'	Dn = 0.55'

HYDRAULIC CALCULATIONS STORM DRAIN STA. 1+02.50 TO 2+41.00
Q25 = 17.62 cfs
Sf = 0.61%
Vf = 7.94 fps
n = 0.013
D = 24"
S = 1.00%
Dn = 1.34'

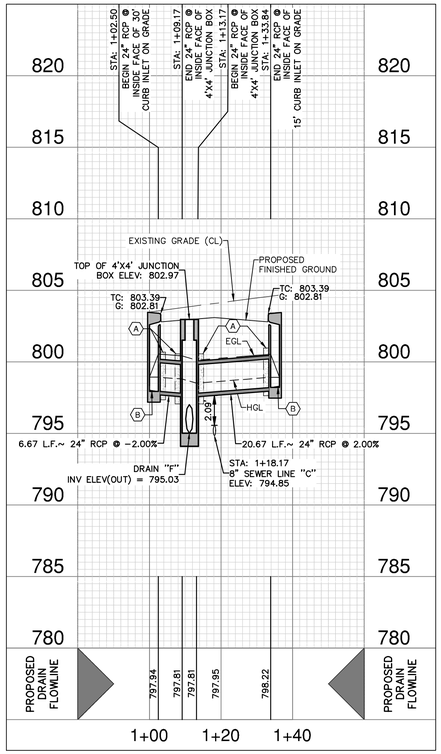
KEY LEGEND

- (A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
- (B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
- (3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (11) 10' BUILDING SETBACK
- (W) 5' WATER EASEMENT
- (15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (2) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (4) 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (7) 16' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)

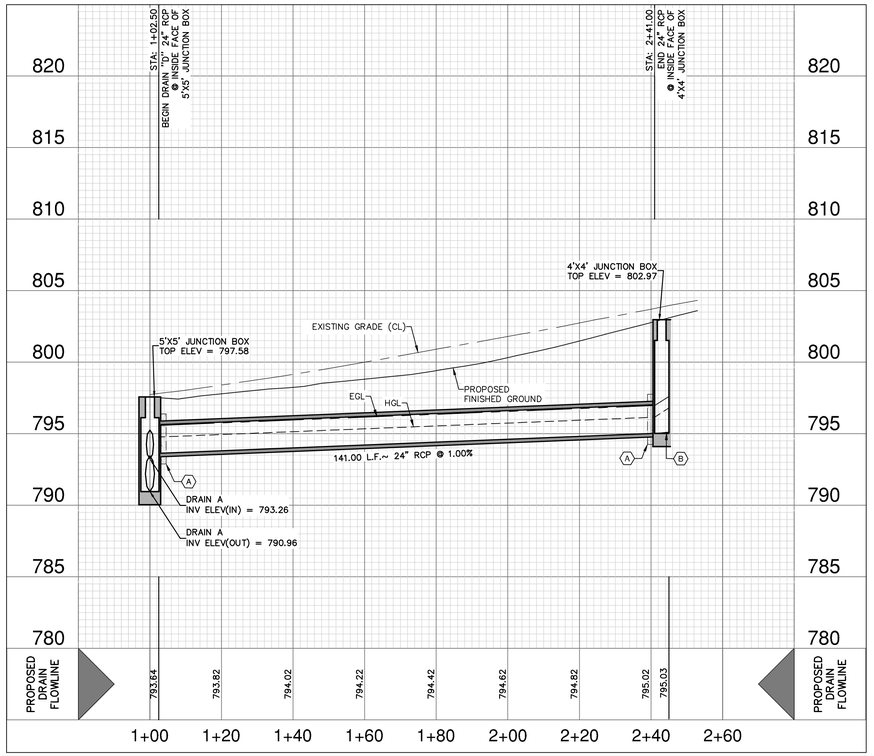
DRAIN "C"
STA. 1+00.00 TO END
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



DRAIN "E"
STA. 1+00.00 TO END
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



DRAIN "D"
STA. 1+00.00 TO END
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



DRAINAGE & GRADING NOTES:

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4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
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6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

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CAUTION!!

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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

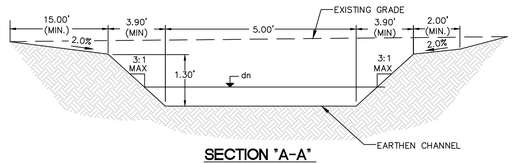
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

DRAIN "C" "D" & "E" PLAN & PROFILE

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.05

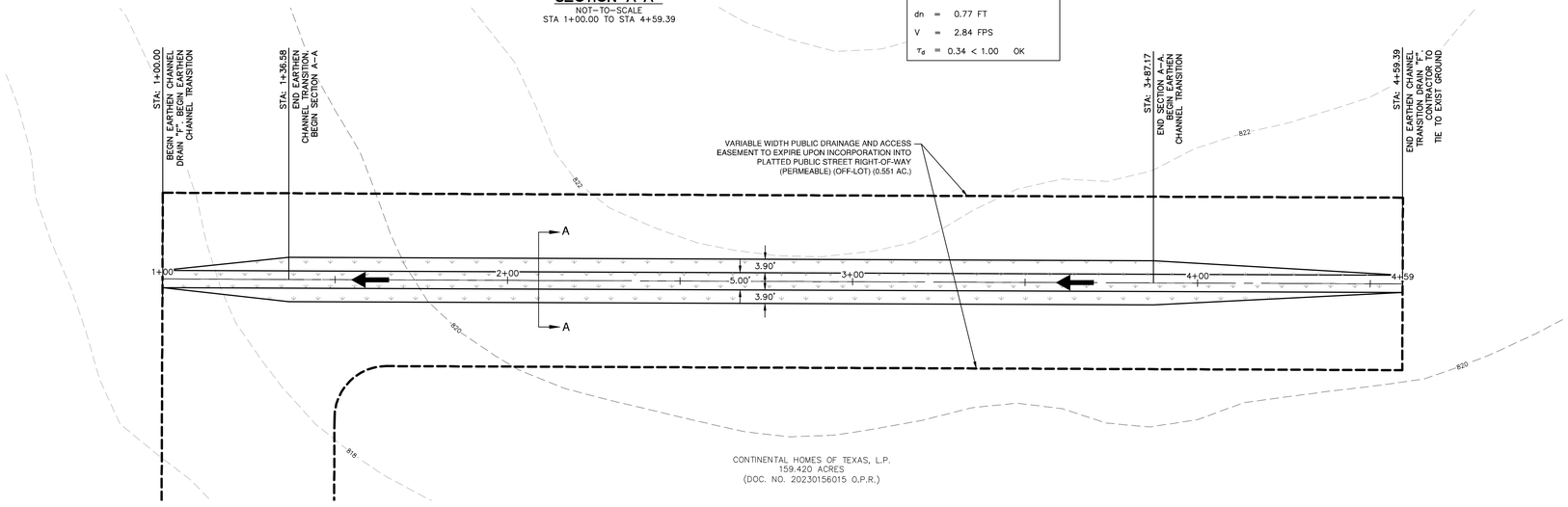
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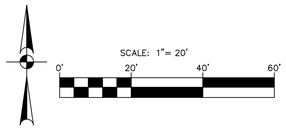
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SECTION "A-A"
NOT-TO-SCALE
STA 1+00.00 TO STA 4+59.39

HYDRAULIC CALCULATIONS EARTHEN CHANNEL		
STA. 1+00.00 TO 4+59.39		
Q_{25}	=	15.93 CFS
Bw	=	5 FT
n	=	0.035
S	=	0.95%
D	=	1.30 FT
dn	=	0.77 FT
V	=	2.84 FPS
τ_d	=	0.34 < 1.00 OK



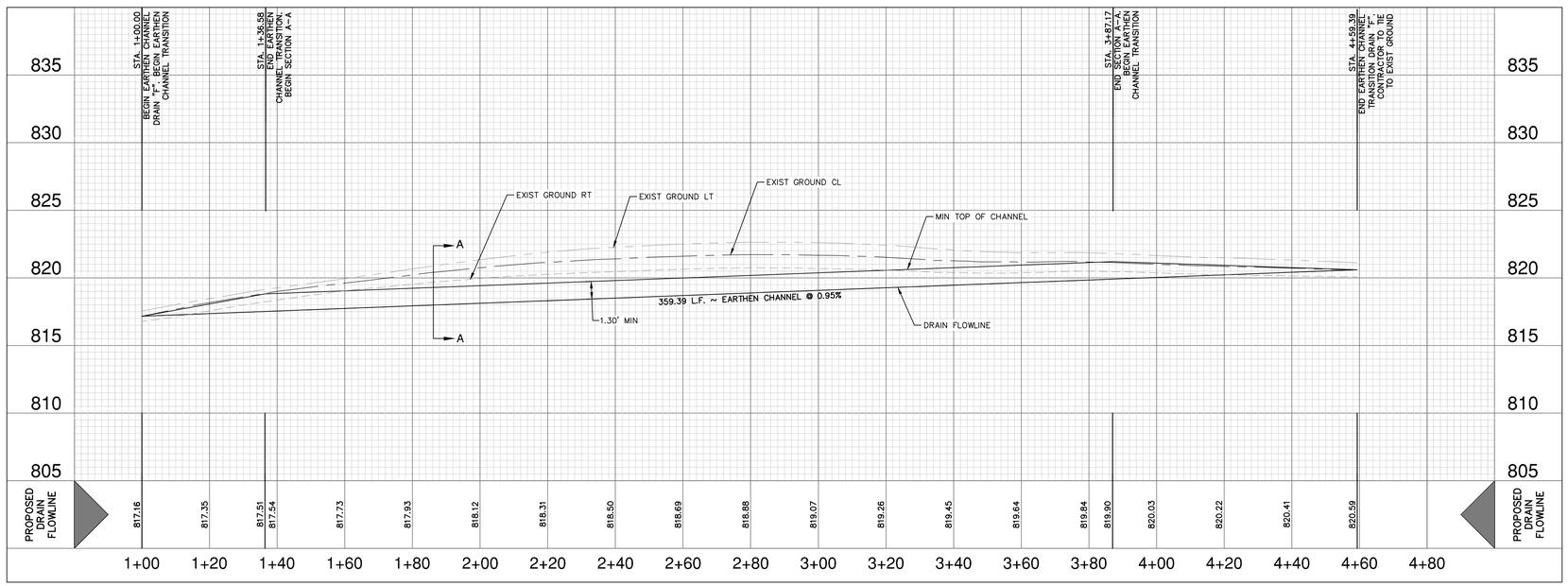


DRAINAGE LEGEND

- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR (690)
- PROPOSED CONTOUR (690)
- PROPOSED WATER (W)
- PROPOSED SEWER (SS)
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

INTERCEPTOR DRAIN "F"
STA. 1+00.00 TO 4+59.39

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

DRAIN "F" PLAN & PROFILE
(STA 1+00.00 TO STA 4+59.39)

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.06

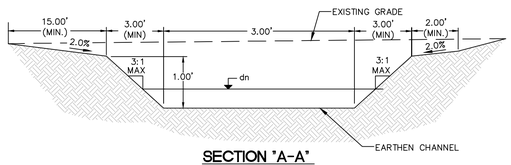
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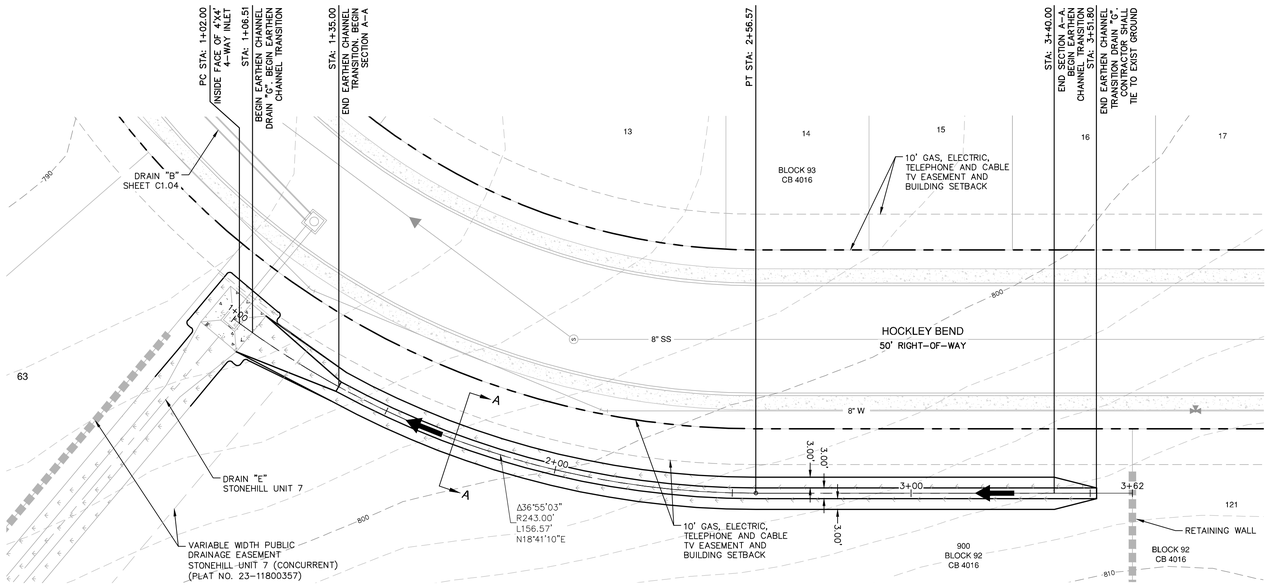
HYDRAULIC CALCULATIONS EARTHEN CHANNEL

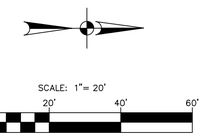
STA. 1+06.51 TO 3+51.80

Q_{25}	=	9.01 CFS
Bw	=	3.0 FT
n	=	0.035
S	=	5.0%
D	=	1.00 FT
dn	=	0.45 FT
V	=	4.59 FPS
τ_d	=	1.05 < 2.10 OK



SECTION "A-A"
NOT-TO-SCALE
STA 1+06.26 TO STA 3+51.80





DRAINAGE LEGEND

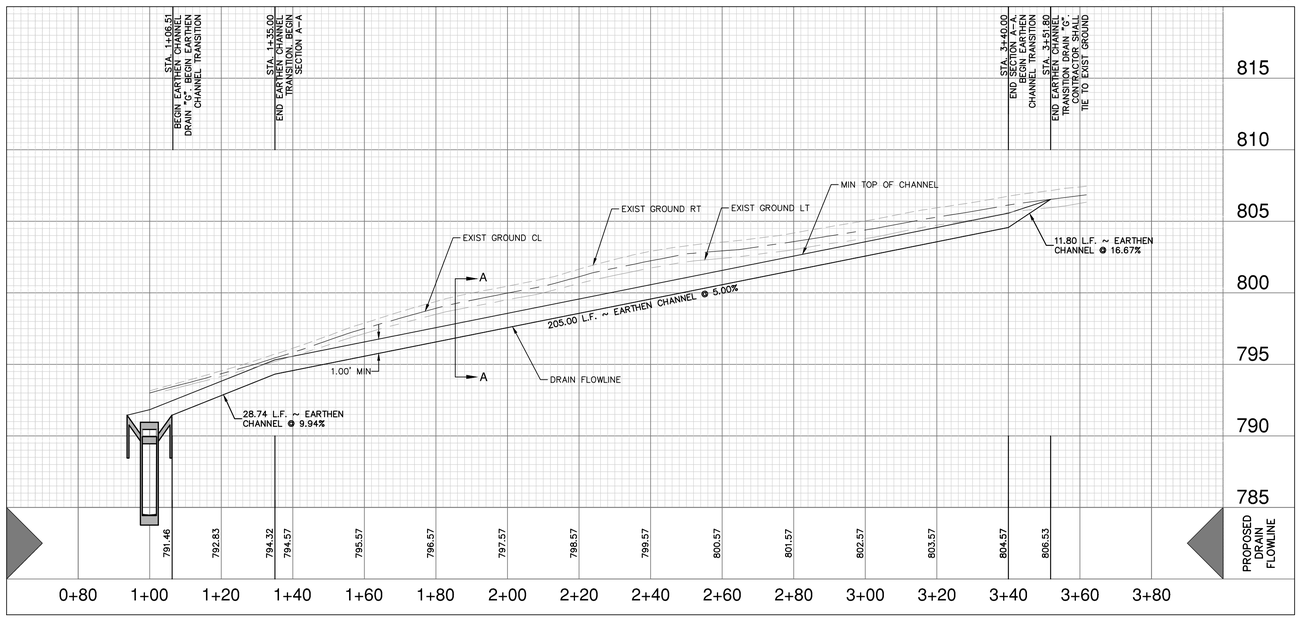
- PROJECT LIMITS
- 100 YR FLOODPLAIN
- EXISTING CONTOUR — 690
- PROPOSED CONTOUR — 690
- PROPOSED WATER — W
- PROPOSED SEWER — SS
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN
- FLOW ARROW

KEY LEGEND

- (A) CONCRETE COLLAR (SEE DETAIL SHEET C1.11)
- (B) CONTRACTOR TO GROUT BOTTOM OF BOX TO ALLOW FOR POSITIVE DRAINAGE
- (3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (7) 10' BUILDING SETBACK
- (W) 5' WATER EASEMENT
- (18) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (2) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (4) 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)
- (5) 16' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800357) (CONCURRENT)

DRAIN "G"
STA. 1+06.51 TO 3+51.80

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

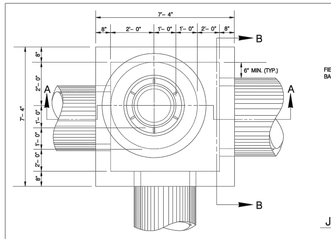
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

DRAIN "G" PLAN & PROFILE
(STA 1+06.51 TO 3+51.80)

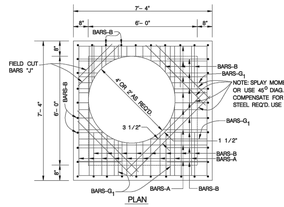
PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C1.07

Date: Feb 22, 2024, 9:32am User ID: dlevine
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PLAN



PLAN

JUNCTION BOX TOP SLAB SHOWING STEEL



BARS–B



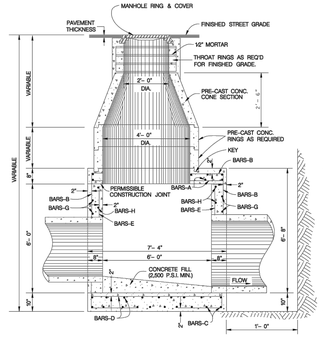
BARS–C

SCHEDULE FOR REINFORCING STEEL						
SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	21	4	9" O.C.	7'– 1"	99
	B	46	5	8" O.C.	5'– 3"	408
	C	46	5	8" O.C.	5'– 3"	252
STRAIGHT	D	21	4	9" O.C.	7'– 1"	99
STRAIGHT	E	28	3	12" O.C.	5'– 11"	62
STRAIGHT	G	20	4	12" O.C.	7'– 1"	95
STRAIGHT	G_1	8	4	AS SHOWN	6'– 1"	33
STRAIGHT	H	27	3	12" O.C.	7'– 1"	72
STRAIGHT	J	8	6	3 1 / 2" O.C.	4'– 11"	59
					TOTAL	1,179 LBS.

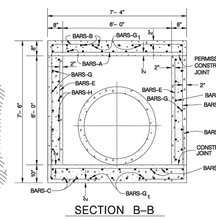
CLASS "A" CONCRETE – 6.94 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

★ NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN – ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE-DESIGN ON STEEL REQ'D.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3 /4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A–15. THE DEFORMATION SHALL CONFORM TO ASTM A–305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD–CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
8. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 – "STORM SEWER JUNCTION BOXES AND INLETS".



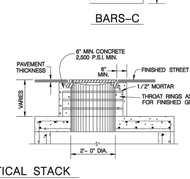
SECTION A–A

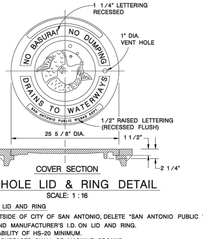


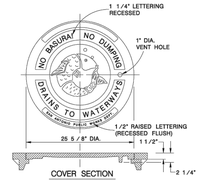
SECTION B–B

VARIATION OF VERTICAL STACK

VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.







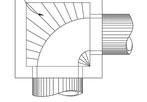
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS–20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



CURVED DEFLECTOR DETAIL

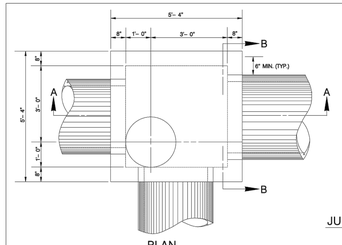
JANUARY 2005

CITY OF SAN ANTONIO

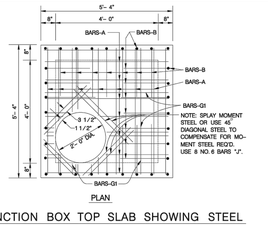
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

6'x6'x6' JUNCTION BOX STANDARDS

% SUBMITTAL PROJECT NO.:		DATE:
DRWN. BY:	DSGN. BY:	CHKD. BY:	SHEET NO.:	OF:

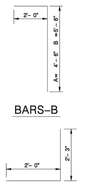


PLAN



PLAN

JUNCTION BOX TOP SLAB SHOWING STEEL



BARS–B



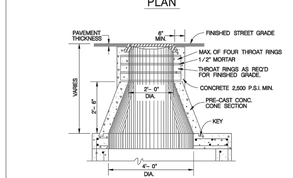
BARS–C

SCHEDULE FOR REINFORCING STEEL						
SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	16	4	9" O.C.	5'– 1"	54
	B	32	5	8" O.C.	6'– 10"	228
	C	32	5	8" O.C.	4'– 3"	142
STRAIGHT	D	16	4	9" O.C.	5'– 1"	54
STRAIGHT	E	16	3	12" O.C.	3'–11"	24
STRAIGHT	G	16	4	12" O.C.	5'–1"	54
STRAIGHT	G_1	8	4	AS SHOWN	5'–1"	27
STRAIGHT	H	20	3	12" O.C.	4'–5"	33
STRAIGHT	J	8	6	3 1/2"	2'– 10"	34
					TOTAL	650 LBS.

CLASS "A" CONCRETE– 3.43 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

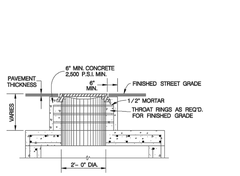
★ NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN – ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE–DESIGN ON STEEL REQD.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3 /4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A–15; THE DEFORMATION SHALL CONFORM TO ASTM A–305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD–CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
8. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 – "STORM SEWER JUNCTION BOXES AND INLETS".



VARIATION OF VERTICAL STACK

VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.



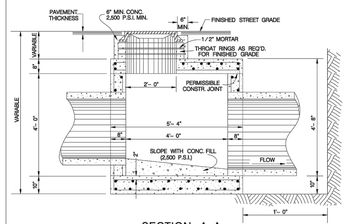
COVER SECTION

MANHOLE LID & RING DETAIL

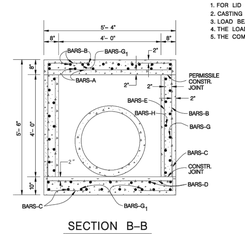
SCALE: 1 : 16

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS–20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



SECTION A–A



SECTION B–B



CURVED DEFLECTOR DETAIL

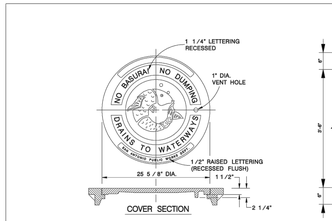
JANUARY 2005

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

4'x4'x4' JUNCTION BOX STANDARDS

% SUBMITTAL PROJECT NO.:		DATE:
DRWN. BY:	DSGN. BY:	CHKD. BY:	SHEET NO.:	OF:



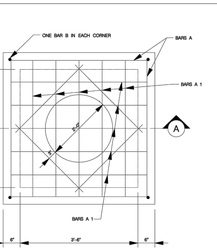
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

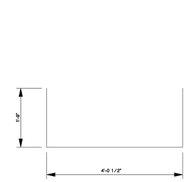
NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS–20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



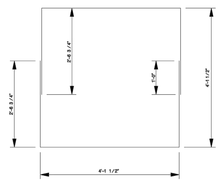
TOP SLAB PLAN VIEW

SCALE: 1" = 2'-0"



BARS A

SCALE: 1" = 2'-0"

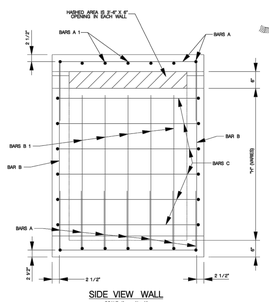


BARS C

SCALE: 1" = 2'-0"

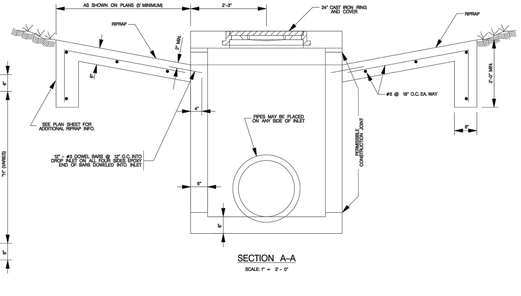
ESTIMATED QUANTITIES FOR "H" = 4'–6"					
REINFORCING STEEL					
BAR	NO.	SIZE	SPACE	LENGTH	WEIGHT
A	18	4	8" +/–	7'–6 1/2"	79
A 1	10	4	8" +/–	4'–0 1/2"	27
B	4	4	AS SHOWN	5'–7"	15
B 1	20	4	8" +/–	4'–7"	61
C	12	4	9" +/–	18'–6"	148
J	4	4	AS SHOWN	2'–8"	6
TOTAL REINFORCING STEEL					336 Lbs. *
CLASS A CONCRETE					2.10 CY *

* FOR CONTRACTOR'S INFORMATION ONLY. QUANTITIES VARY WITH "H". SEE INLET & MANHOLE SUMMARY SHEETS FOR "H".



SIDE VIEW WALL

SCALE: 1" = 2'-0"



SECTION A–A

SCALE: 1" = 2'-0"

GENERAL NOTES:

1. ALL BARS INTERCEPTING THE RING AND COVER OPENING AND PIPE OPENINGS. SHALL BE FIELD CUT
2. CONCRETE SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL HAVE 3/4" CHAMFER
5. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, RING, AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".

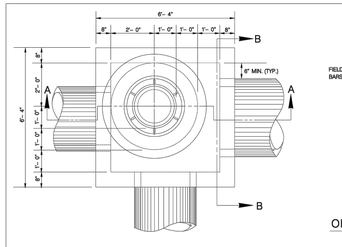
JANUARY 2005

CITY OF SAN ANTONIO

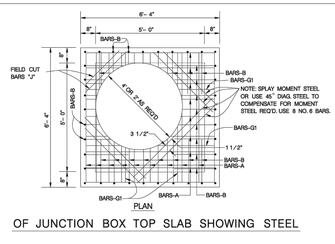
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

4–WAY INLET STANDARDS

% SUBMITTAL PROJECT NO.:		DATE:
DRWN. BY: M. BARRERA, P.E.	DSGN. BY:	CHKD. BY:	SHEET NO.:	OF:



PLAN



PLAN

OF JUNCTION BOX TOP SLAB SHOWING STEEL



BARS–B



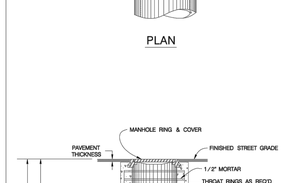
BARS–C

SCHEDULE FOR REINFORCING STEEL						
SHAPE	BAR	NO.	SIZE	SPACING	LENGTH	WEIGHT
STRAIGHT	A	18	4	9" O.C.	6'– 1"	73
	B	36	5	8" O.C.	7'– 6"	282
	C	36	5	8" O.C.	4'– 3"	160
STRAIGHT	D	18	4	9" O.C.	6'– 1"	73
STRAIGHT	E	20	3	12" O.C.	4'– 11"	37
STRAIGHT	G	20	4	12" O.C.	6'– 1"	81
STRAIGHT	G_1	8	4	AS SHOWN	6'– 1"	33
STRAIGHT	H	24	3	12" O.C.	5'– 5"	49
STRAIGHT	J	8	6	3 1/2" O.C.	4'– 11"	59
					TOTAL	847 lbs.

CLASS "A" CONCRETE – 5.03 CU. YDS.
(DOES NOT EXCLUDE MANHOLE OPENINGS OR PIPE OPENING)

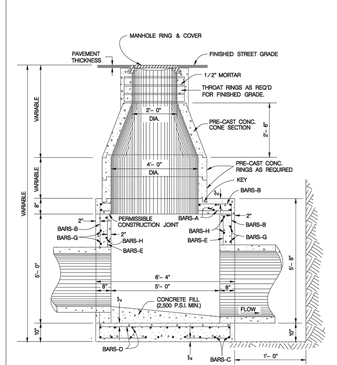
★ NOTE: BAR SIZE AND SPACING BASED ON SPANS AS SHOWN – ANY REVISIONS TO THESE SPANS SHALL INCLUDE A RE–DESIGN ON STEEL REQD.

1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM A–15. THE DEFORMATION SHALL CONFORM TO ASTM A–305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD–CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (2,500 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).
8. PAYMENT FOR ALL EXCAVATION, BACKFILLING, CONCRETE, REINFORCING STEEL, VERTICAL STACK, RING AND COVER SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 – "STORM SEWER JUNCTION BOXES AND INLETS".

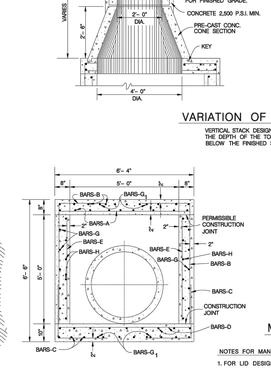


VARIATION OF VERTICAL STACK

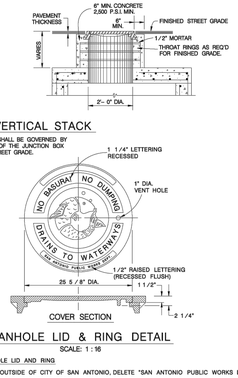
VERTICAL STACK DESIGN SHALL BE GOVERNED BY THE DEPTH OF THE TOP OF THE JUNCTION BOX BELOW THE FINISHED STREET GRADE.



SECTION A–A



SECTION B–B



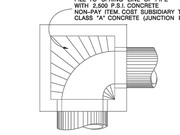
COVER SECTION

MANHOLE LID & RING DETAIL

SCALE: 1 : 16

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS–20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.



CURVED DEFLECTOR DETAIL

JANUARY 2005

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

5'x5'x5' JUNCTION BOX STANDARDS

% SUBMITTAL PROJECT NO.:		DATE:
DRWN. BY:	DSGN. BY:	CHKD. BY:	SHEET NO.:	OF:

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

NO.	REVISION	DATE

STONEHILL UNIT-9

SAN ANTONIO, TEXAS

DRAINAGE DETAILS

PLAT NO. 24-11800057

JOB NO. 12456-12

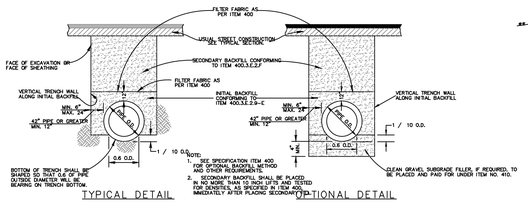
DATE FEBRUARY 2024

DESIGNER DL/RD/UV

CHECKED AS DRAWN DD/RD

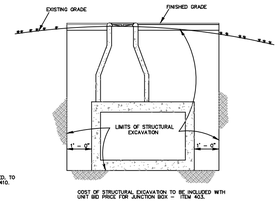
SHEET C1.10

Date: Feb 22, 2024, 9:32am User ID: dfeirfe
File: P:\124\56\12\Design\Civil\DRDT-124561 2.dwg



TYPICAL DETAIL — OPTIONAL DETAIL

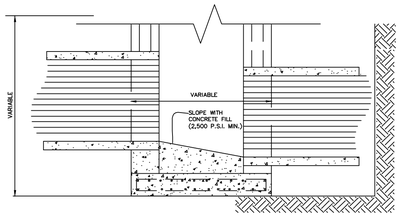
PIPE BEDDING & BACKFILL DETAILS



COST OF STRUCTURAL EXCAVATION TO BE INCLUDED WITH UNIT BID PRICE FOR JUNCTION BOX — ITEM 403.

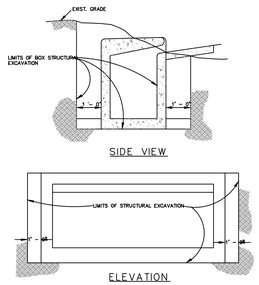
STRUCTURAL EXCAVATION AT JUNCTION BOXES

NO SCALE



GROUTED INVERT DETAIL

NOT-TO-SCALE



SIDE VIEW

ELEVATION

COST OF STRUCTURAL EXCAVATION TO BE INCLUDED WITH UNIT BID PRICE FOR INLETS — ITEM 403.

STRUCTURAL EXCAVATIONS AT DRAINAGE INLETS

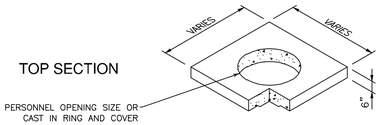
NO SCALE

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

PIPE BEDDING & MISCELLANEOUS DRAINAGE DETAILS

SUBMITTAL/PROJECT NO.: _____ DATE: _____
DRWN. BY: _____ DSGN. BY: _____ CHKD. BY: _____ SHEET NO.: _____ OF _____



APPROXIMATE TOP SECTION WEIGHT 1200 LBS.

ALL CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF 4500 psi.

REINFORCING STEEL SHALL COMPLY WITH ASTM A615 GRADE 60, A706 GRADE 60 OR A497 GRADE 70. BAR BENDING AND PLACEMENT SHALL COMPLY WITH THE LATEST ACI STANDARDS

WATER TABLE IS AT 3'-0" BELOW GRADE FOR STANDARD STRUCTURAL DESIGN

THE STANDARD DESIGN IS BASED ON THE TOP AT GRADE AND THE BASE AT 13'-0" MAX. BELOW GRADE.

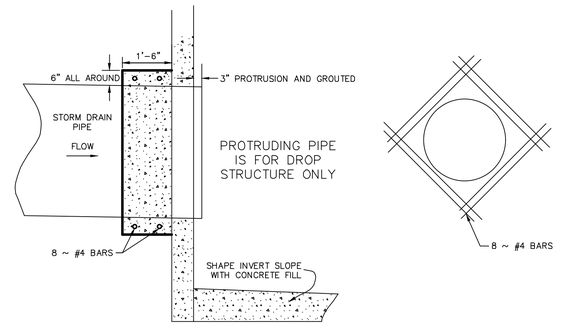
THE STRUCTURE SHALL BE PLACED ON A COMPACTED GRANULAR BASE TO INSURE UNIFORM DISTRIBUTION OF SOIL PRESSURES.

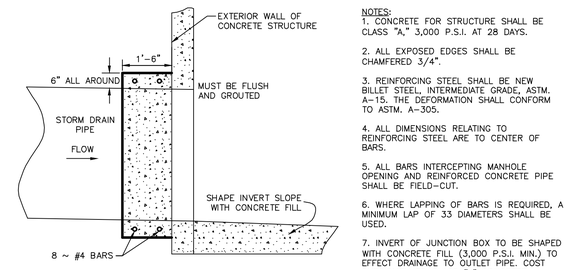
SPECIAL DESIGNS BASED ON OTHER LOADINGS OR DEEPER INSTALLATION DEPTHS ARE AVAILABLE ON REQUEST.

KNOCKOUTS OR PIPE OPENINGS CAN BE PROVIDED IN THE SIZE AND LOCATIONS REQUIRED.

TYPICAL PRECAST JUNCTION BOX

NOT-TO-SCALE





PIPE FLUSH WITH INVERT

NOTES:
1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A," 3,000 P.S.I. AT 28 DAYS.

2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4".

3. REINFORCING STEEL SHALL BE NEW BILLET STEEL, INTERMEDIATE GRADE, ASTM. A-15. THE DEFORMATION SHALL CONFORM TO ASTM. A-305.

4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.

5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.

6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.

7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN.) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).

CONCRETE COLLAR DETAIL

NOT-TO-SCALE
PROVIDE AT CONNECTION TO ALL STRUCTURES

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

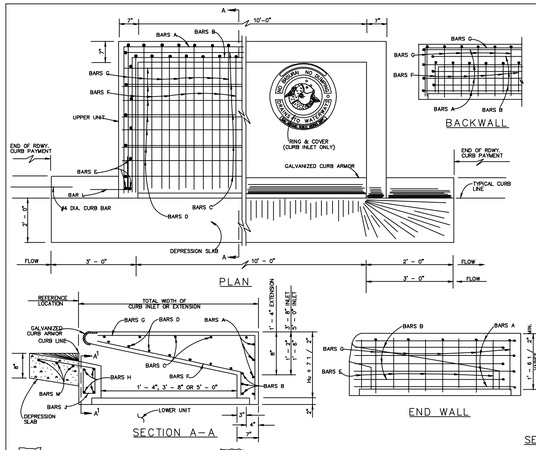
STONEHILL UNIT-9

SAN ANTONIO, TEXAS

DRAINAGE DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RD/UV
CHECKED AS DRAWN DD/RD
SHEET C1.11

Date: Feb 22, 2024, 11:16am User ID: dlevine
File: P:\124\56\12\Design\Civil\PROT-1245612.dwg



REINFORCING STEEL (FOR Hu=11")

UPPER UNIT 10' X 3'-8" (TYPE I)					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	4	#4	—	19'-10"	53
B	3	#4	—	18'-10"	38
C	5	#4	11"	17'-2"	44
D	7	#4	6"	10'-10"	51
E	12	#4	11"	1'-2"	9
F	21	#6	6"	4'-8"	147
G	22	#6	6"	5'-8"	187
H	4	#4	—	10'-10"	29
J	12	#4	12"	2'-6"	28
L	4	#4	—	2'-0"	5
M	3	#4	—	14'-8"	29
TOTAL WEIGHT					620 LBS.

UPPER UNIT 10' X 5' (TYPE II)					
BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
A	4	#4	—	22'-8"	60
B	3	#4	—	21'-8"	43
C	7	#4	11"	13'-2"	62
D	11	#4	6"	10'-10"	80
E	16	#4	11"	1'-2"	13
F	21	#6	6"	5'-8"	179
G	22	#6	6"	7'-0"	231
H	4	#4	—	10'-10"	29
J	12	#4	12"	3'-8"	28
L	4	#4	—	2'-0"	5
M	3	#4	—	14'-8"	29
TOTAL WEIGHT					759 LBS.

CLASS "A" CONCRETE QUANTITIES (FOR Hu = 11")

DEPRESSION SLAB	C.Y.
10' INLET	0.7
10' EXTENSION	0.7

UPPER UNIT (ONLY)	C.Y.
10' X 3'-8" CURB INLET	1.9
10' X 5'-0" CURB INLET	2.7
10' EXTENSION	1.0

NOTES FOR MANHOLE LID AND RING

1. FOR LID DESIGN OUTSIDE OF CITY OF SAN ANTONIO, DELETE "SAN ANTONIO PUBLIC WORKS DEPT.".
2. CASTING NUMBER AND MANUFACTURER'S I.D. ON LID AND RING.
3. LOAD BEARING CAPABILITY OF HS-20 MINIMUM.
4. THE LOAD BEARING SURFACES SHALL BE MACHINE GROUND.
5. THE COMBINED WEIGHT OF THE MANHOLE RING AND COVER MUST BE AT LEAST 260 LBS.

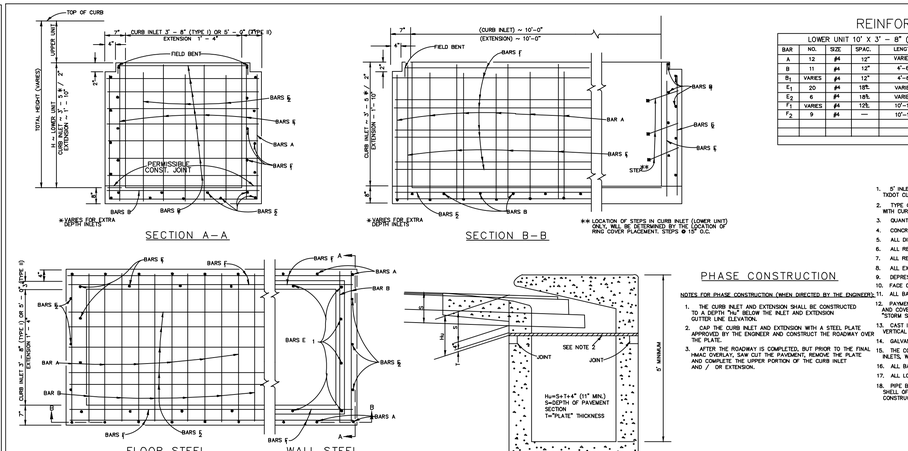
MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 2 OF 3

_X_ SUBMITTAL PROJECT NO.: _____ DATE: _____
DRWN. BY: K. VASQUEZ DSGN. BY: E. WALTOS, P.E. CHKD. BY: S. HOSSEIN, P.E. SHEET NO.: 2 OF 3

NOT USED
(CONTRACTOR SHALL NOTIFY ENGINEER IF USED)



REINFORCING STEEL

LOWER UNIT 10' X 3'-8" (TYPE I)				
BAR	NO.	SIZE	SPAC.	LENGTH
A	12	#4	12"	VARIES
B	11	#4	12"	4'-6"
B_1	VARIES	#4	12"	4'-8"
E_1	20	#4	18½	VARIES
E_2	6	#4	18½	VARIES
F_1	VARIES	#4	12½	10'-10"
F_2	9	#4	—	10'-10"

LOWER UNIT 10' X 5'-0" (TYPE II)				
BAR	NO.	SIZE	SPAC.	LENGTH
A	12	#4	12"	VARIES
B	11	#4	12"	5'-10"
B_1	VARIES	#4	12"	5'-10"
E_1	22	#4	18½	VARIES
E_2	8	#4	18½	VARIES
F_1	VARIES	#4	12½	10'-10"
F_2	11	#4	—	10'-10"

GENERAL NOTES

1. 5' INLETS AND 5' EXTENSIONS MUST BE IN ACCORDANCE WITH THE LATEST TXDOT CURB INLET TYPE "C" AND EXTENSION TYPE E (L=C).
2. TYPE C-II INLET TO BE USED ONLY WHEN STORM DRAIN PIPE IS IN-LINE WITH CURB INLET AND APPROVED BY THE ENGINEER.
3. QUANTITIES SHOWN ARE FOR CONTRACTORS INFORMATION ONLY.
4. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
5. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
6. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 1 1/2" 2".
7. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615, GRADE 60 REQUIREMENTS.
8. ALL EXPOSED CORNERS SHALL BE CHAMFERED 3 / 4".
9. DEPRESSION SLAB SHALL RECEIVE A WOOD FLOAT FINISH.
10. FACE OF INLET TO CONFORM TO FACE OF CURB LINE.
11. ALL BARS INTERCEPTING MANHOLE RING & COVER SHALL BE CUT OR BENT.
12. PAYMENT FOR ALL EXCAVATION, BACK-FILLING, CONCRETE, REINFORCING STEEL, RING AND COVER, CURB ARMOR AND STEPS SHALL BE INCLUDED IN THE UNIT COST OF ITEM 403 "STORM SEWER JUNCTION BOXES AND INLETS".
13. CAST IRON MANHOLE RING AND COVER TO BE PLACED NEXT TO OUTLET PIPE, EXCEPT FOR VERTICAL OUTLET PIPE IN WHICH CASE MANHOLE RING AND COVER WILL BE OFFSET.
14. GALVANIZED BOLTS, NUTS, WASHERS, PLATES AND GASKETS ARE SUBSIDIARY TO INLETS.
15. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MEANS TO LIFT AND PLACE THE INLETS, WHEN USING PRECAST UNITS.
16. ALL BARS AT PIPE BLOCKOUT LOCATIONS SHALL BE CUT OR BEND.
17. ALL LOWER UNITS SHALL RECEIVE INVERT MORTAR SHAPING.
18. PIPE BLOCKOUTS IN INLET WALLS SHOULD NOT EXCEED 3" BEYOND THE OUTER SHELL OF THE PIPE, TAKING INTO ACCOUNT THE SIZE OF THE PIPE AS NECESSARY. CONSTRUCTION JOINT MAY BE RAISED A MAXIMUM OF 6".

PHASE CONSTRUCTION

NOTES FOR PHASE CONSTRUCTION (WHEN DIRECTED BY THE ENGINEER):

1. THE CURB INLET AND EXTENSION SHALL BE CONSTRUCTED TO A DEPTH "Hu" BELOW THE INLET AND EXTENSION GUTTER LINE ELEVATION.
2. CAP THE CURB INLET AND EXTENSION WITH A STEEL PLATE APPROVED BY THE ENGINEER AND CONSTRUCT THE ROADWAY OVER THE PLATE.
3. AFTER THE ROADWAY IS COMPLETED, BUT PRIOR TO THE FINAL HMAC OVERLAY, SAW CUT THE PAVEMENT, REMOVE THE PLATE AND COMPLETE THE UPPER PORTION OF THE CURB INLET AND / OR EXTENSION.

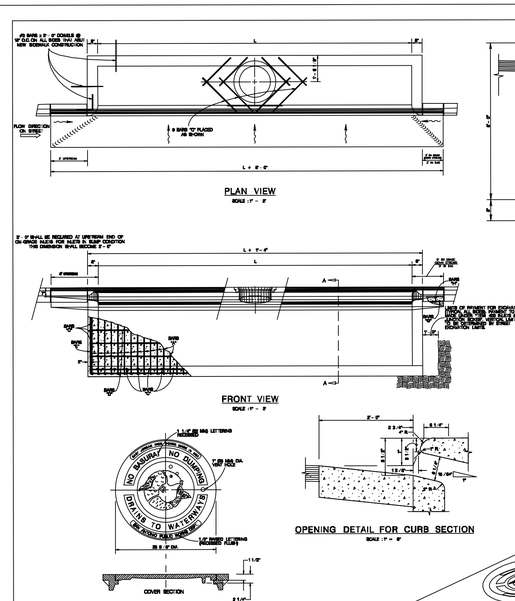
MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

TYPE "C" INLET (TYPE I & II) & INLET EXTENSION STANDARDS
SHEET 1 OF 3

_X_ SUBMITTAL PROJECT NO.: _____ DATE: _____
DRWN. BY: K. VASQUEZ DSGN. BY: E. WALTOS, P.E. CHKD. BY: S. HOSSEIN, P.E. SHEET NO.: 1 OF 3

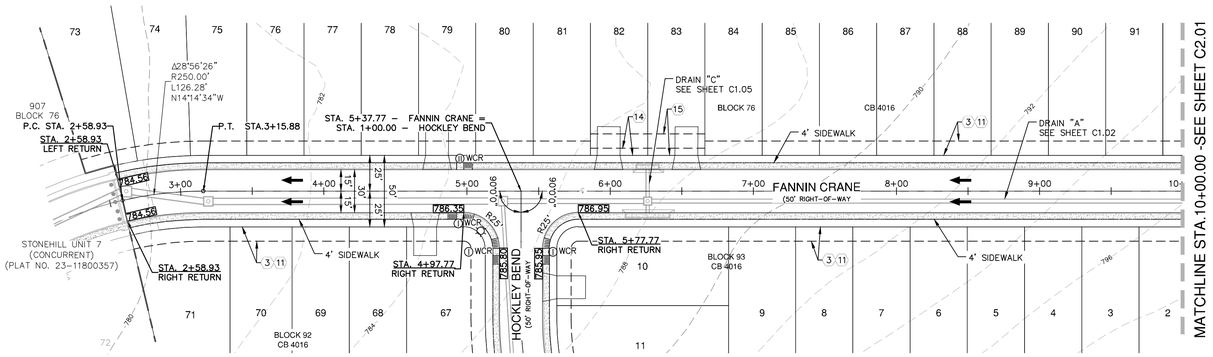
NOT USED
(CONTRACTOR SHALL NOTIFY ENGINEER IF USED)

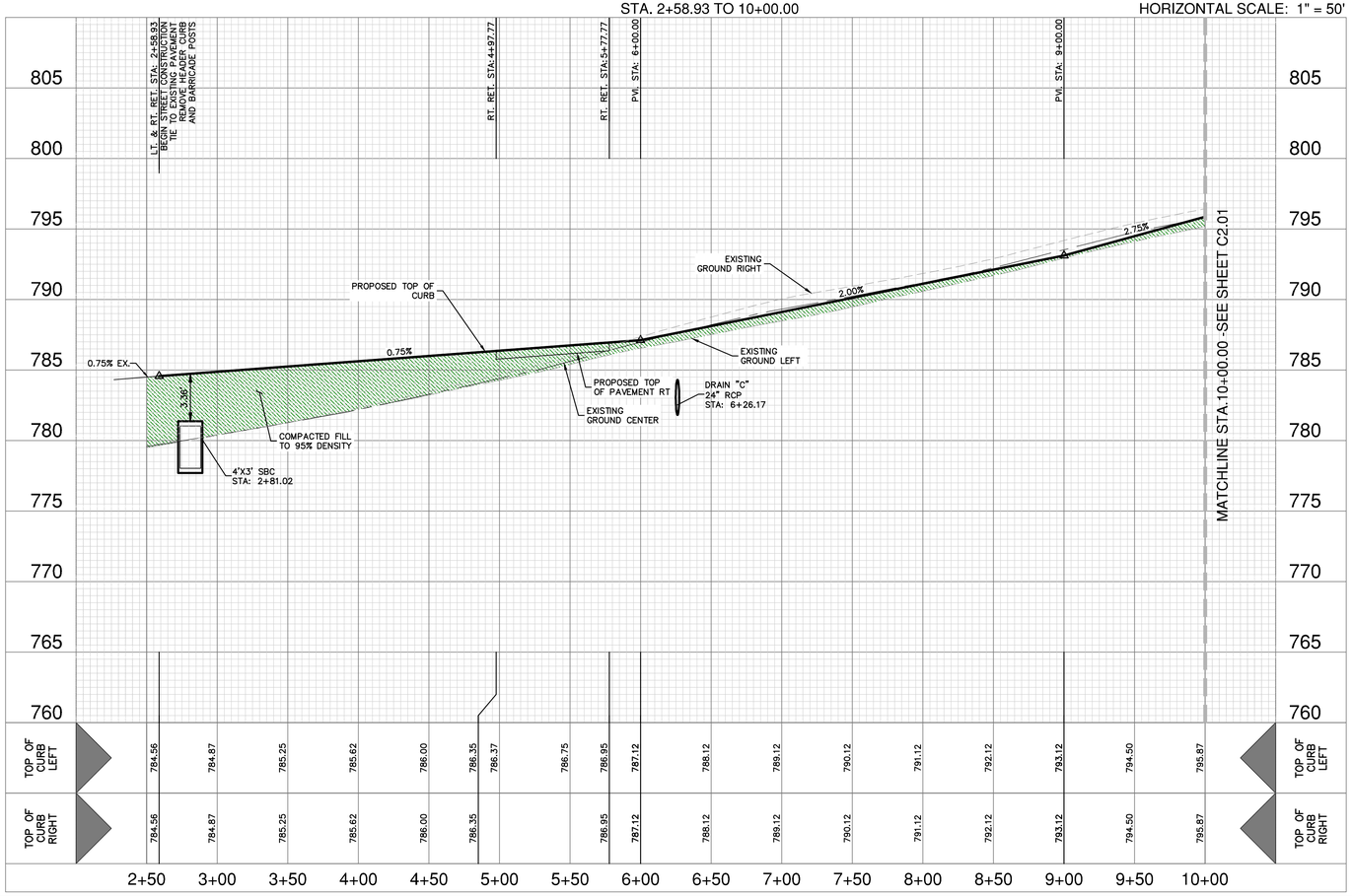


GENERAL NOTES

1. ALL BARS INTERCEPTING MANHOLE RING & REINFORCING CONCRETE PIPE SHALL BE CUT OR BENT.
2. CONCRETE FOR STRUCTURES SHALL BE CLASS "A", 3000 PSI IN 28 DAYS.
3. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
4. ALL EXPOSED CORNERS SHALL BE CHAMFERED TO 3 / 4"
5. REINFORCING STEEL SHALL BE GRADE 60 UNLESS OTHERWISE NOTED.
6. ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A-615, GRADE 60 REQUIREMENTS.
7. RAMP OR SLOPE MUST TO BE GRADED WITH CONCRETE FILL TO AVOID DRAINAGE TO OUTLET PIPE.
8. REFER TO "J" BAR FROM SCHEDULE QUANTITIES IF MANHOLE RING AND COVER ARE PLACED ON TOP OF INLET.
9. CONCRETE FOR CURB SECTION SHALL BE CLASS "A", 3000 PSI IN 28 DAYS. SEE ITEM 420 FOR CONCRETE STRUCTURES. CURB SECTION SHALL BE CAST MONOLITHICALLY.
10. EXPANSION JOINTS SHALL BE PLACED AT 30' MAXIMUM SPACING AND AT POINTS OF TANGENCY OF CURB RETURNS. EXPANSION JOINTS SHALL BE PLACED AT ALL POINTS OF CURVATURE AND TANGENCY OF CURB RETURNS.

INLET LENGTH	REINFORCING STEEL SCHEDULE					
	MK	NO.	SIZE	SPACING	LENGTH	WEIGHT
L=8'-9"	A	8	#4	1'-0"	8'-9 1/2"	47
	B	3	#4	1'-0"	2'-0"	4
	C	3	#4	1'-0"	2'-0"	4
	D	3	#4	1'-0"	2'-0"	4
	E	3	#4	1'-0"	2'-0"	4
	F	3	#4	1'-0"	2'-0"	4
	G	3	#4	1'-0"	2'-0"	4
	H	3	#4	1'-0"	2'-0"	4
	J	3	#4	1'-0"	2'-0"	4
	K	3	#4	1'-0"	2'-0"	4
	L	3	#4	1'-0"	2'-0"	4
	M	3	#4	1'-0"	2'-0"	4
	N	3	#4	1'-0"	2'-0"	4
	P	3	#4	1'-0"	2'-0"	4
	Q	3	#4	1'-0"	2'-0"	4
	R	3	#4	1'-0"	2'-0"	4
	S	3	#4	1'-0"	2'-0"	4
	T	3	#4	1'-0"	2'-0"	4
	U	3	#4	1'-0"	2'-0"	4
	V	3	#4	1'-0"	2'-0"	4
	W	3	#4	1'-0"	2'-0"	4
	X	3	#4	1'-0"	2'-0"	4
	Y	3	#4	1'-0"	2'-0"	4
	Z	3	#4	1'-0"	2'-0"	4
	AA	3	#4	1'-0"	2'-0"	4
	BB	3	#4	1'-0"	2'-0"	4
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	DD	3	#4	1'-0"	2'-0"	4
	EE	3	#4	1'-0"	2'-0"	4
	FF	3	#4	1'-0"	2'-0"	4
	GG	3	#4	1'-0"	2'-0"	4
	HH	3	#4	1'-0"	2'-0"	4
	JJ	3	#4	1'-0"	2'-0"	4
	KK	3	#4	1'-0"	2'-0"	4
	LL	3	#4	1'-0"	2'-0"	4
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	QQ	3	#4	1'-0"	2'-0"	4
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	WWWW	3	#4	1'-0"	2'-0"	4
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	AAAAA	3	#4	1'-0"	2'-0"	4
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	CCCCC	3	#4	1'-0"	2'-0"	4
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	FFFFF	3	#4	1'-0"	2'-0"	4
	GGGGG	3	#4	1'-0"	2'-0"	4
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	JJJJJ	3	#4	1'-0"	2'-0"	4
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	YYYYYY	3	#4	1'-0"	2'-0"	4
	ZZZZZZ	3	#4	1'-0"	2'-0"	4
	AAAAAAA	3	#4	1'-0"	2'-0"	4
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	KKKKKKK	3	#4	1'-0"	2'-0"	4
	LLLLLLL	3	#4	1'-0"	2'-0"	4
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	PPPPPPP	3	#4	1'-0"	2'-0"	4
	QQQQQQQ	3	#4	1'-0"	2'-0"	4
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	SSSSSSS	3	#4	1'-0"	2'-0"	4
	TTTTTTT	3	#4	1'-0"	2'-0"	4
	UUUUUUU	3	#4	1'-0"	2'-0"	4
	VVVVVVV	3	#4	1'-0"	2'-0"	4
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	SSSSSSSSS	3	#4	1'-0"	2'-0"	4
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	FFFFFFFFFFFFF	3	#4	1'-0"	2'-0"	4
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	JJJJJJJJJJJJJ	3	#4	1'-0"	2'-0"	4
	KKKKKKKKKKKKK	3	#4	1'-0"	2'-0"	4
	LLLLLLLLLLLLL	3	#4





SCALE: 1"= 50'
0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

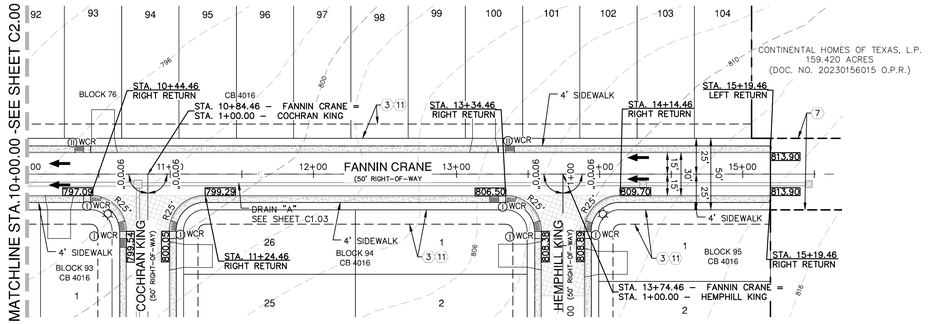
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

FANNIN CRANE PLAN & PROFILE
STA. 2+58.93 TO 10+00.00

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.00

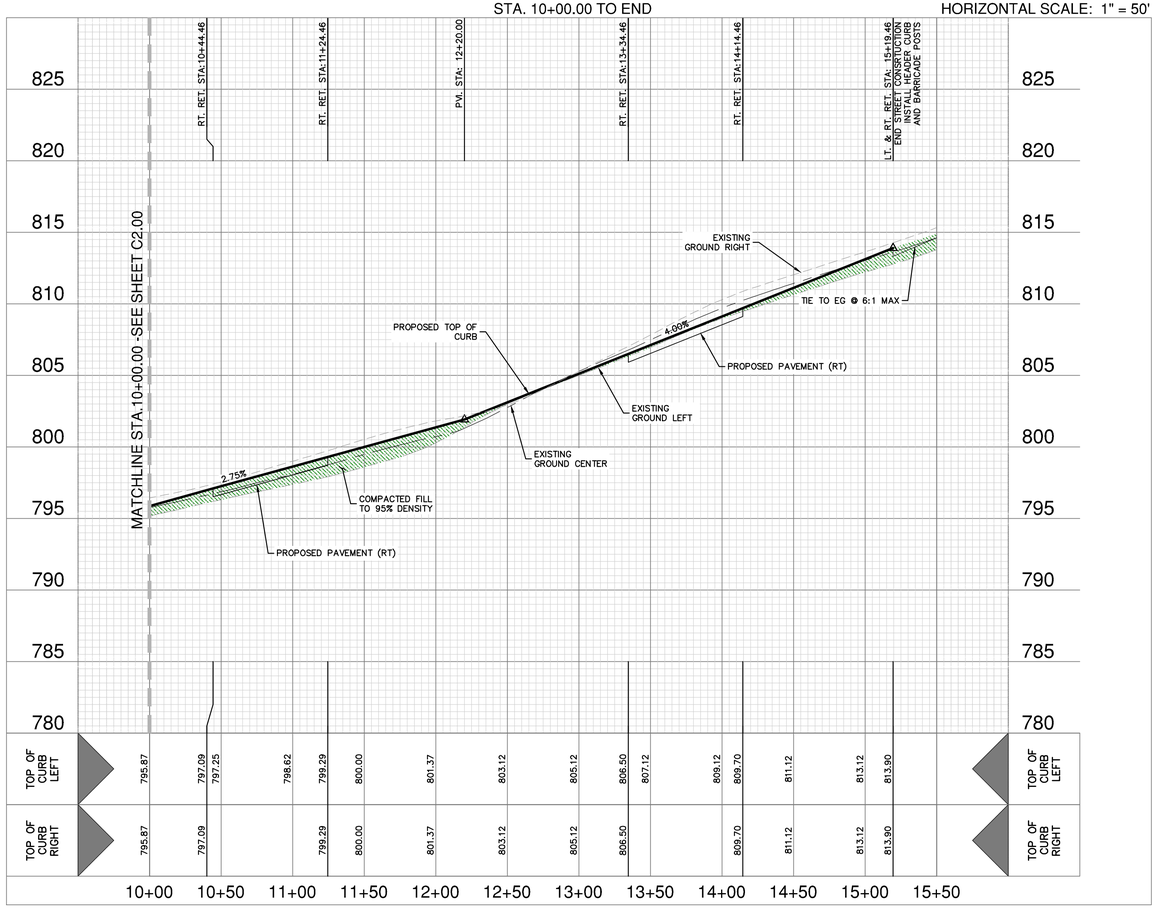
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FANNIN CRANE
STA. 10+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



SCALE: 1"= 50'
0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

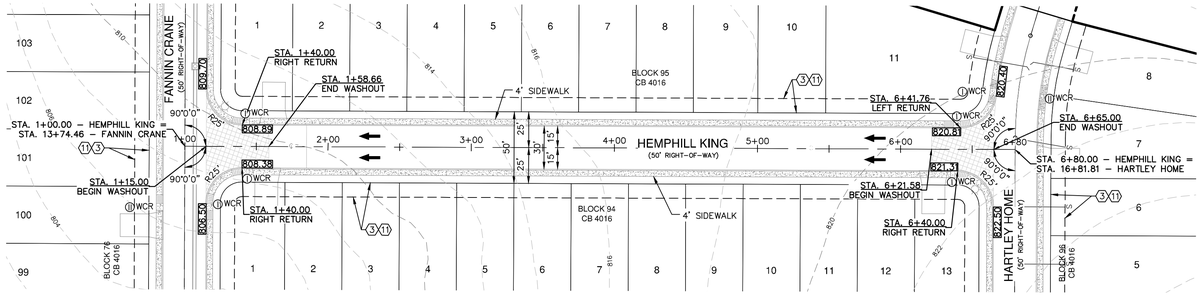
PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

FANNIN CRANE PLAN & PROFILE
STA. 10+00.00 TO END

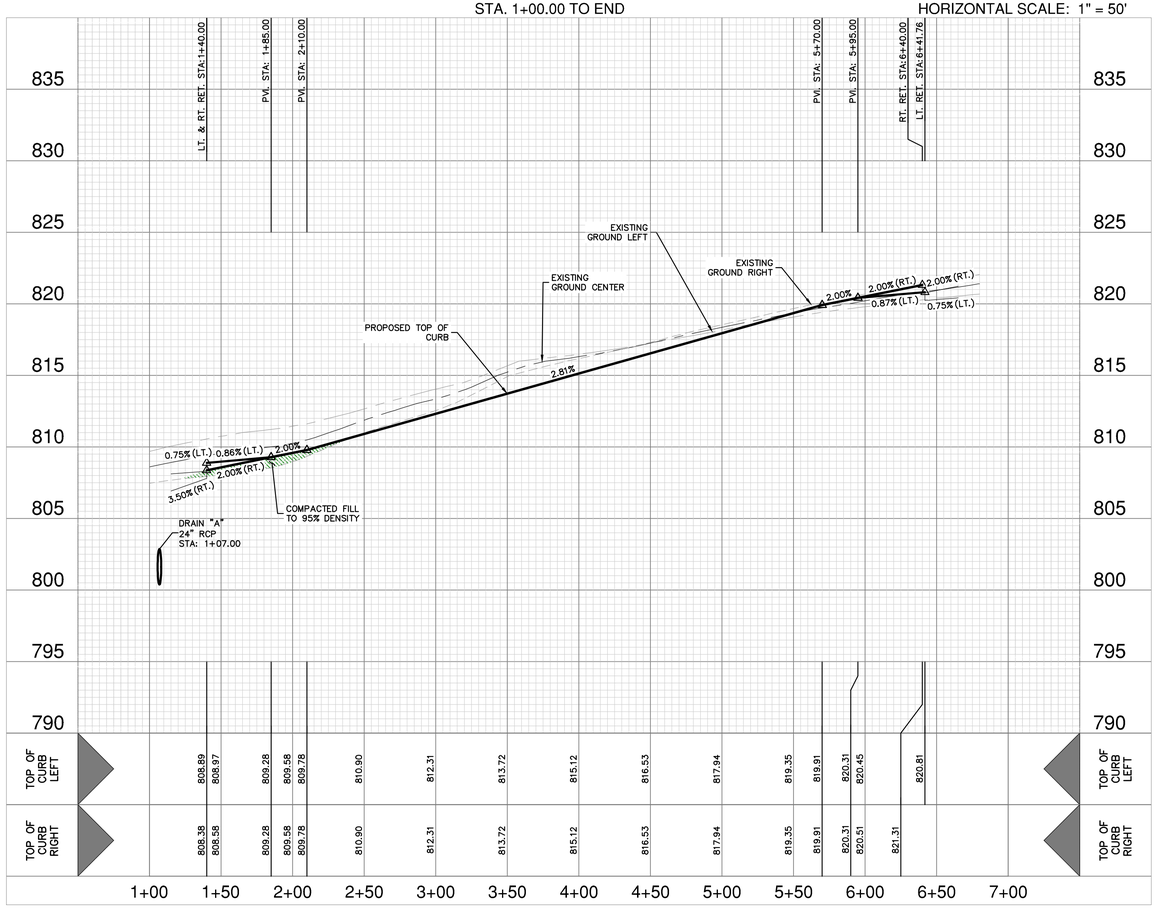
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DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.01

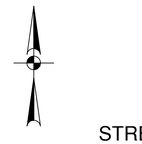
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HEMPHILL KING
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'





STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
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4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

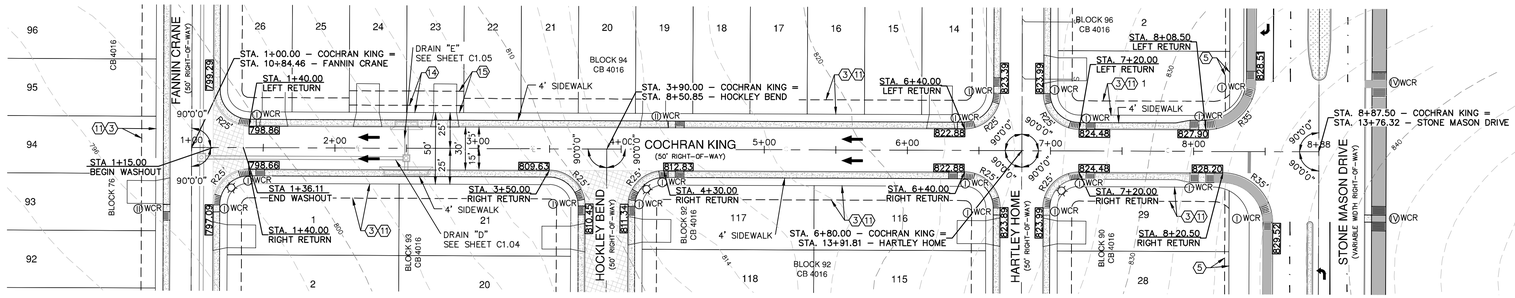
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

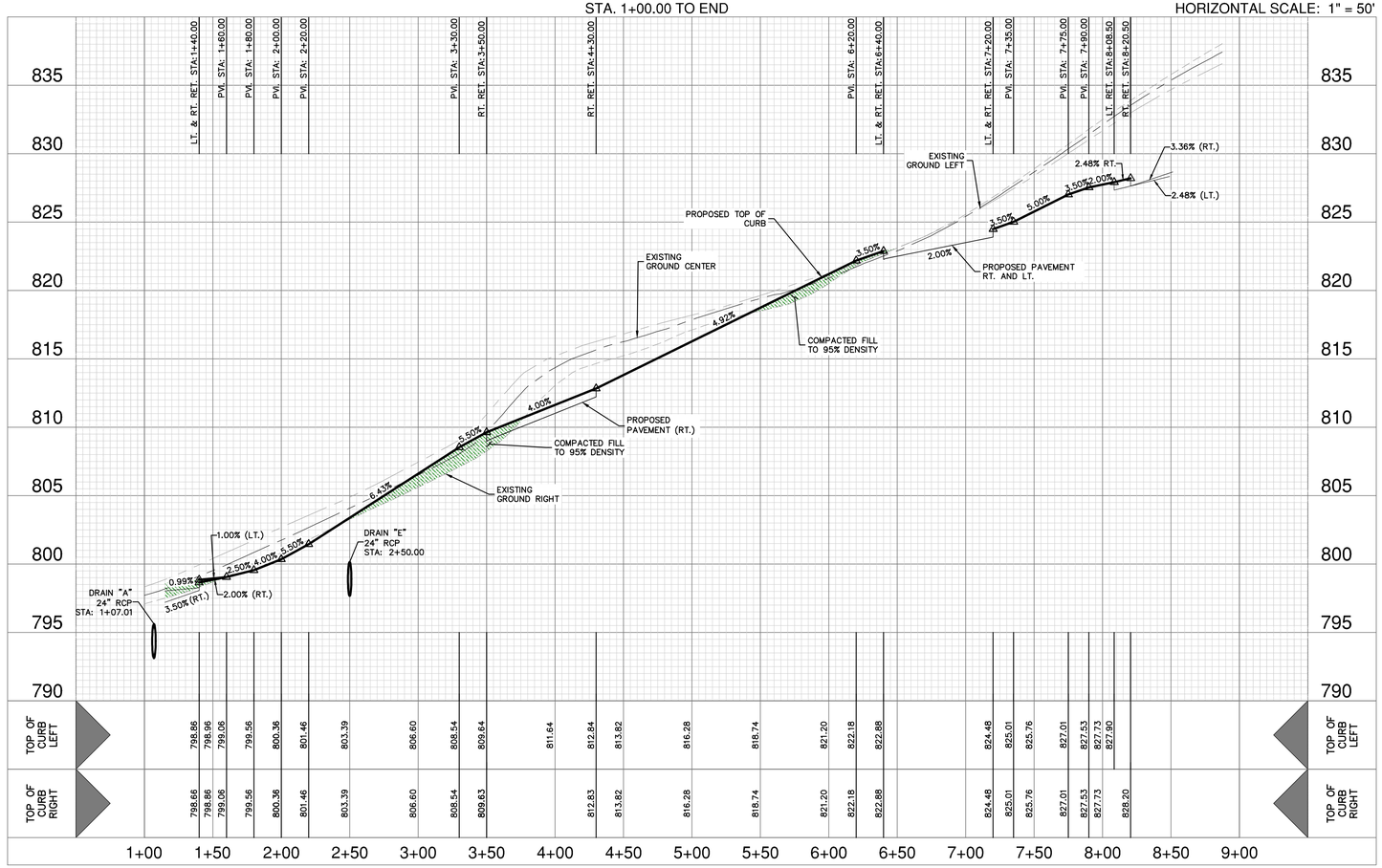
HEMPHILL KING PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.02

Date: Feb 22, 2024, 8:34am User ID: dfeifer
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STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(T1) 10' BUILDING SETBACK

(T2) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(T3) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
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7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

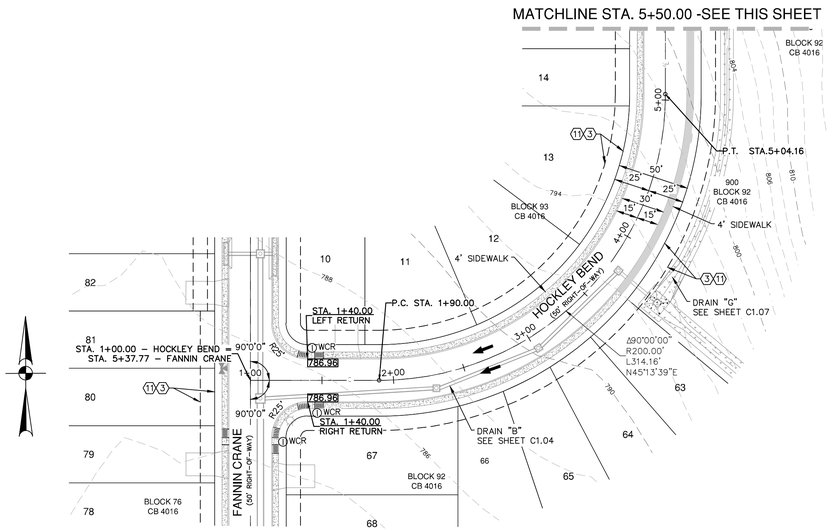
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

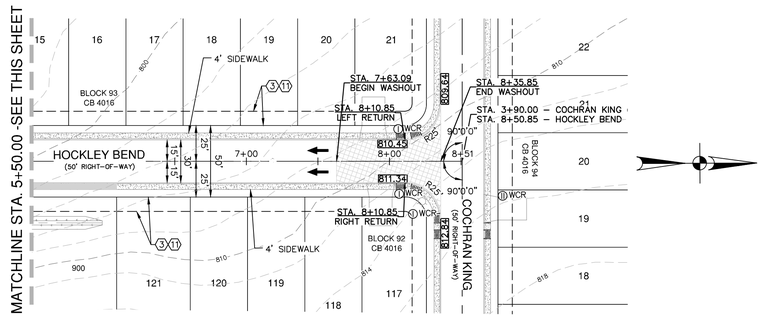
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

COCHRAN KING PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.03

Date: Feb 22, 2024, 9:34am User ID: dlevine
File: P:\124\56\12\Design\Civil\ST-1245612 - COCHRAN KING.dwg
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SCALE: 1"= 50'

0' 50' 100' 150'

STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

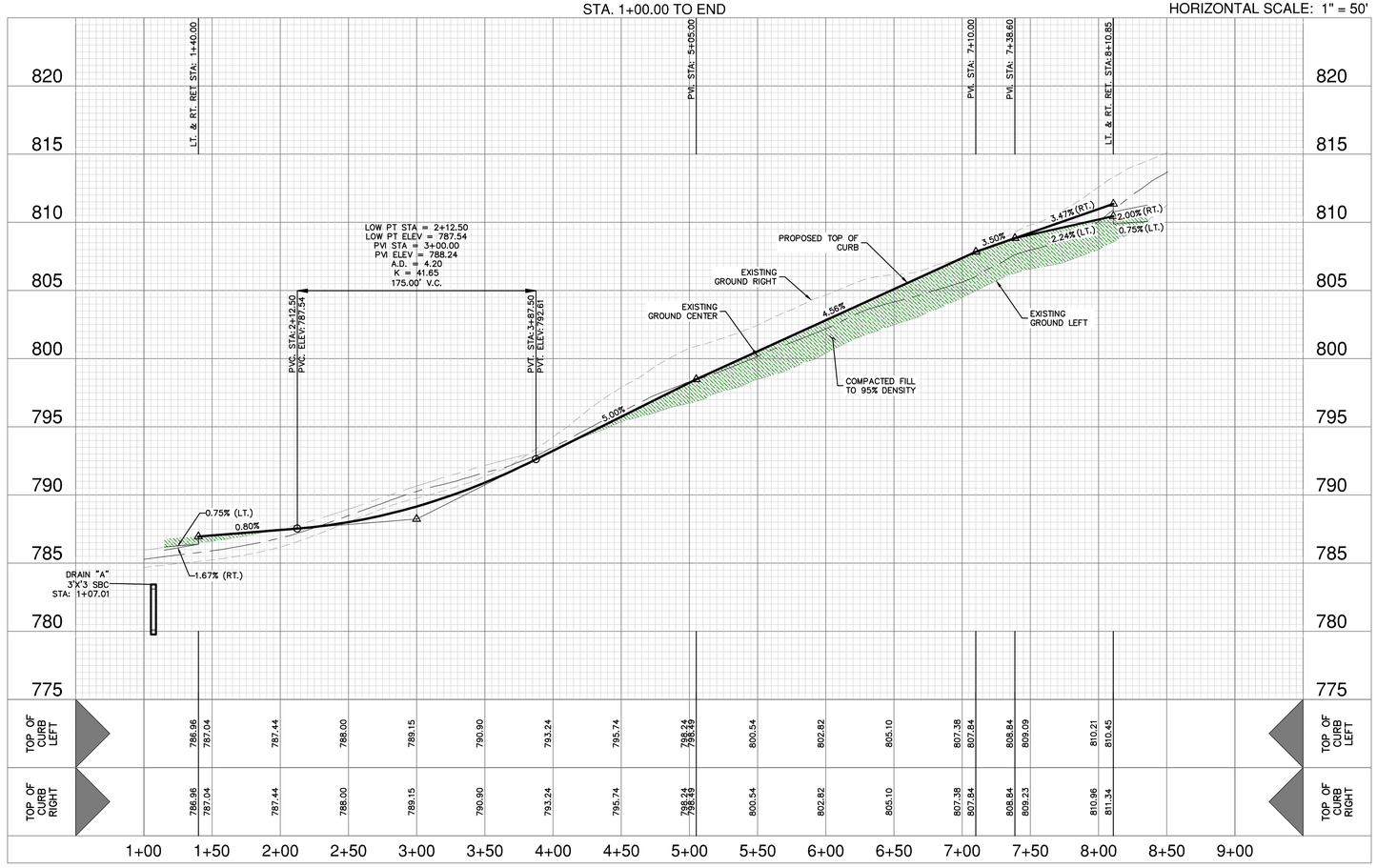
(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

HOCKLEY BEND
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

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7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

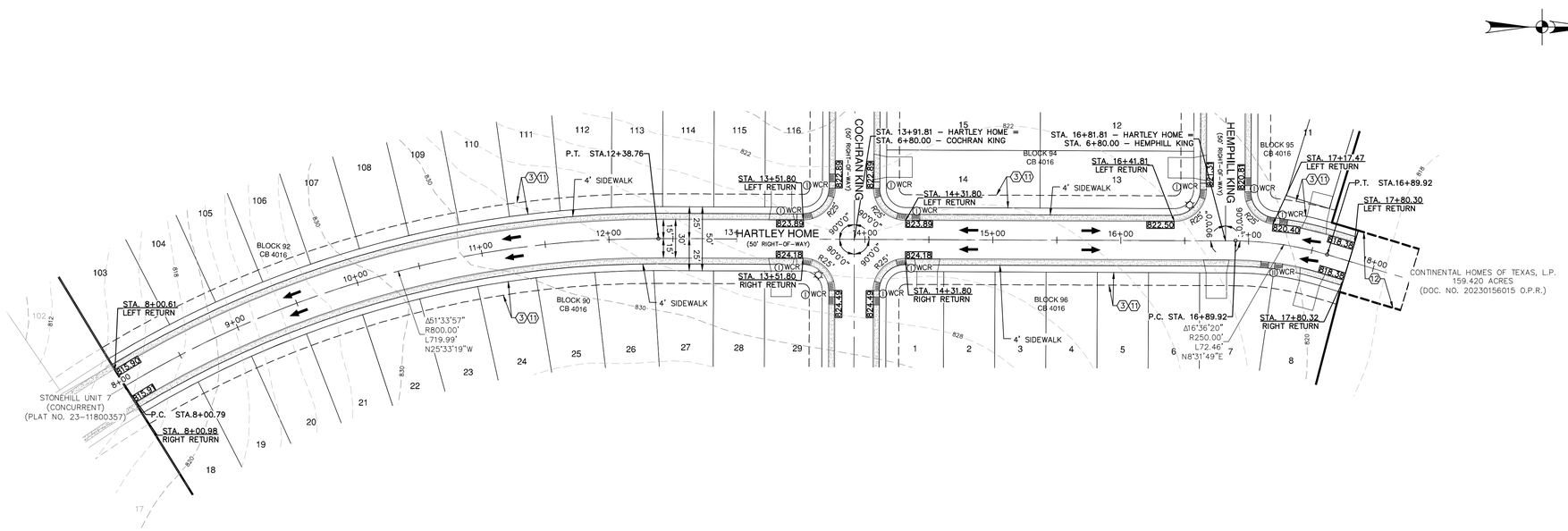
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

HOCKLEY BEND PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.04

Date: Feb 22, 2024, 9:35am User ID: devine
File: P:\124\56\12\Design\Civil\ST-1245612 - HOCKLEY BEND.dwg

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STREET LEGEND

- PROJECT LIMITS
- MAINTAIN GUTTER
- EXISTING CONTOUR — 970
- WHEELCHAIR RAMP — (I)
- CENTERLINE — CL
- RADIUS POINT — RP
- POINT OF CURVATURE — PC
- POINT OF TANGENCY — PT
- RETURN — RET
- DRAINAGE FLOW ARROW
- TOP OF CURB SPOT ELEVATION — 857.30
- PAVEMENT ELEVATION — 857.00(P) ×
- WASHOUT CROWN SECTION
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- SIDEWALK (HOMEOWNER'S RESPONSIBILITY)
- DRIVEWAY
- STREET LIGHTS

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

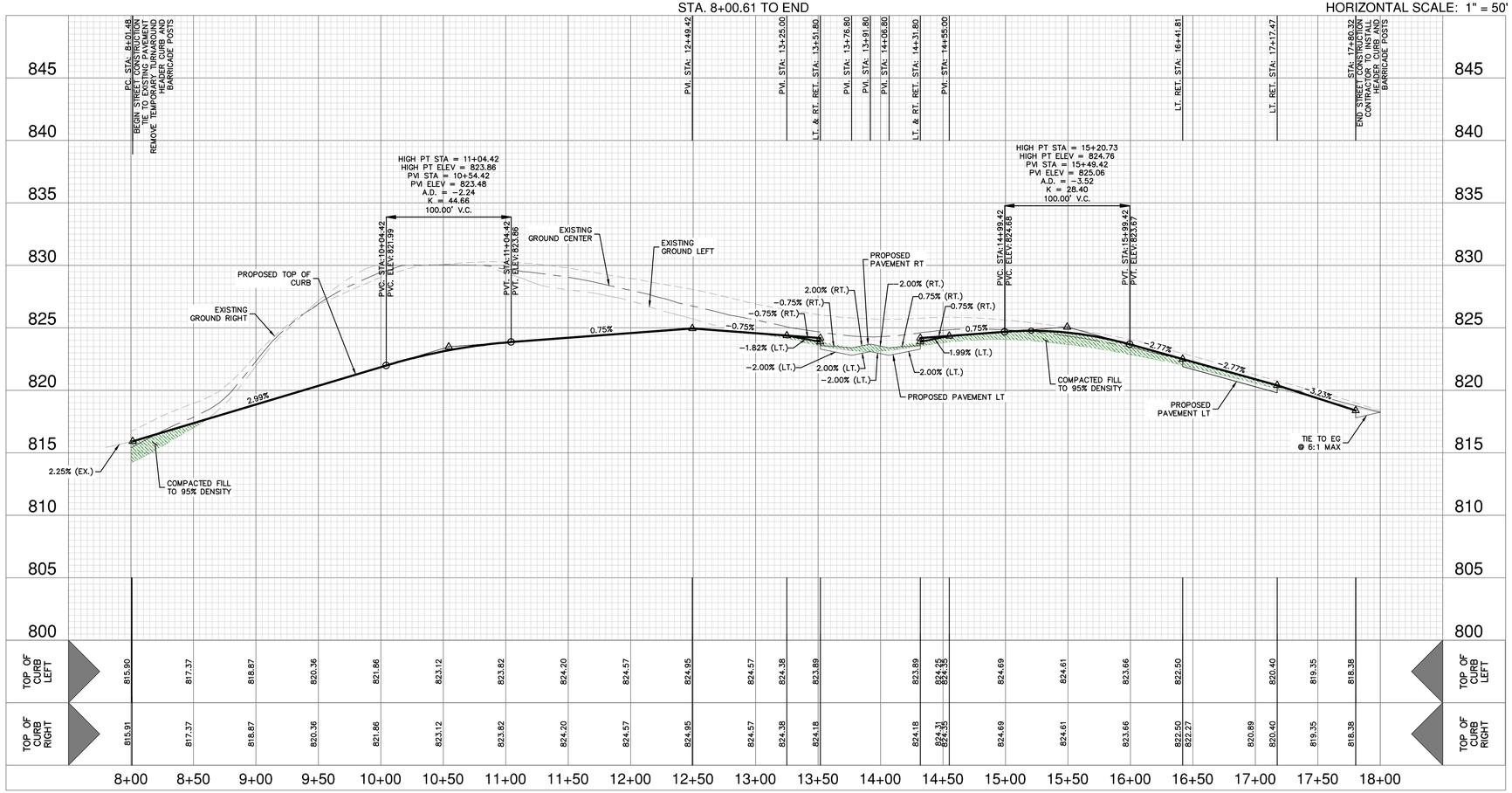
(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

HARTLEY HOME
STA. 8+00.61 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

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7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

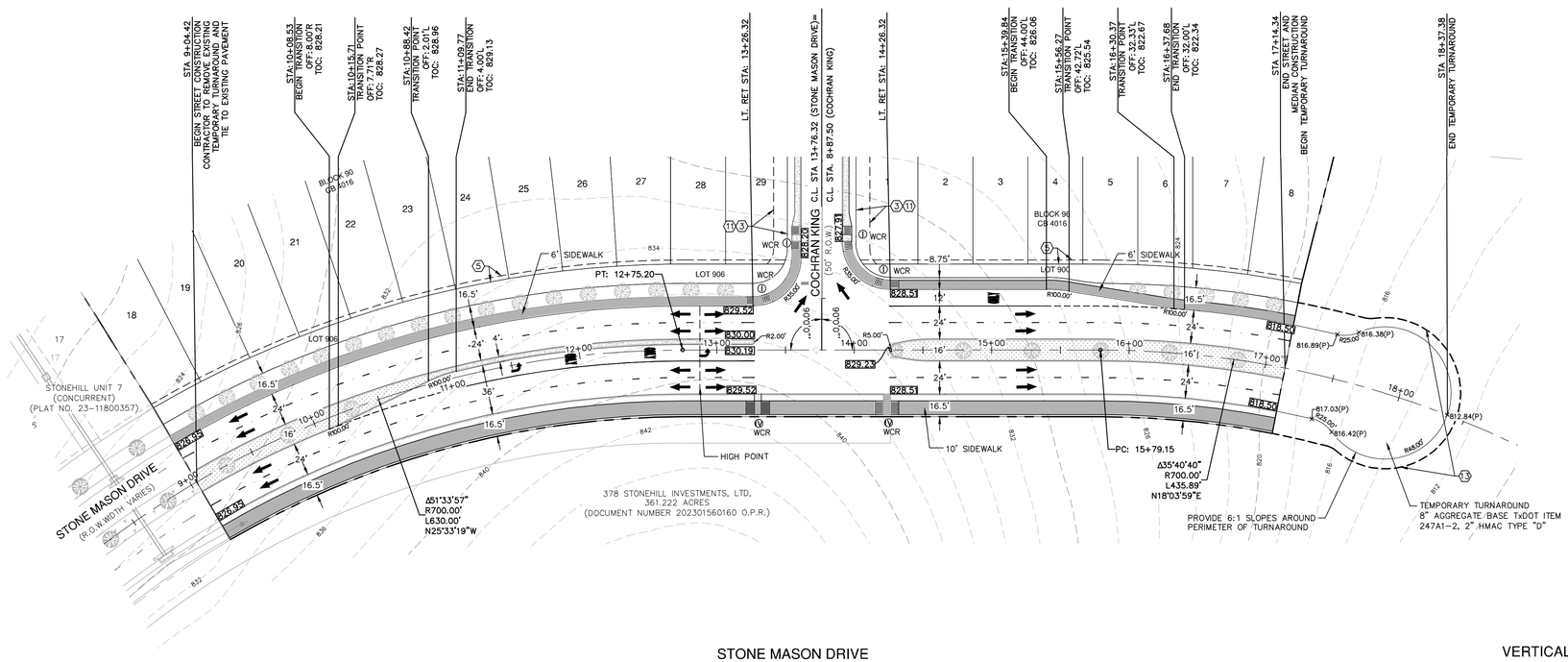
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

HARTLEY HOME PLAN & PROFILE
STA. 8+00.61 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.05

Date: Feb 22, 2024, 9:36am User ID: dlevine
File: P:\124\56\12\Design\Civil\ST-1245612 - HARTLEY HOME.dwg

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STREET LEGEND

PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	970
WHEELCHAIR RAMP	Ⓘ
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	
DRIVEWAY	
STREET LIGHTS	☼

③ 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

⑤ 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

⑦ VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

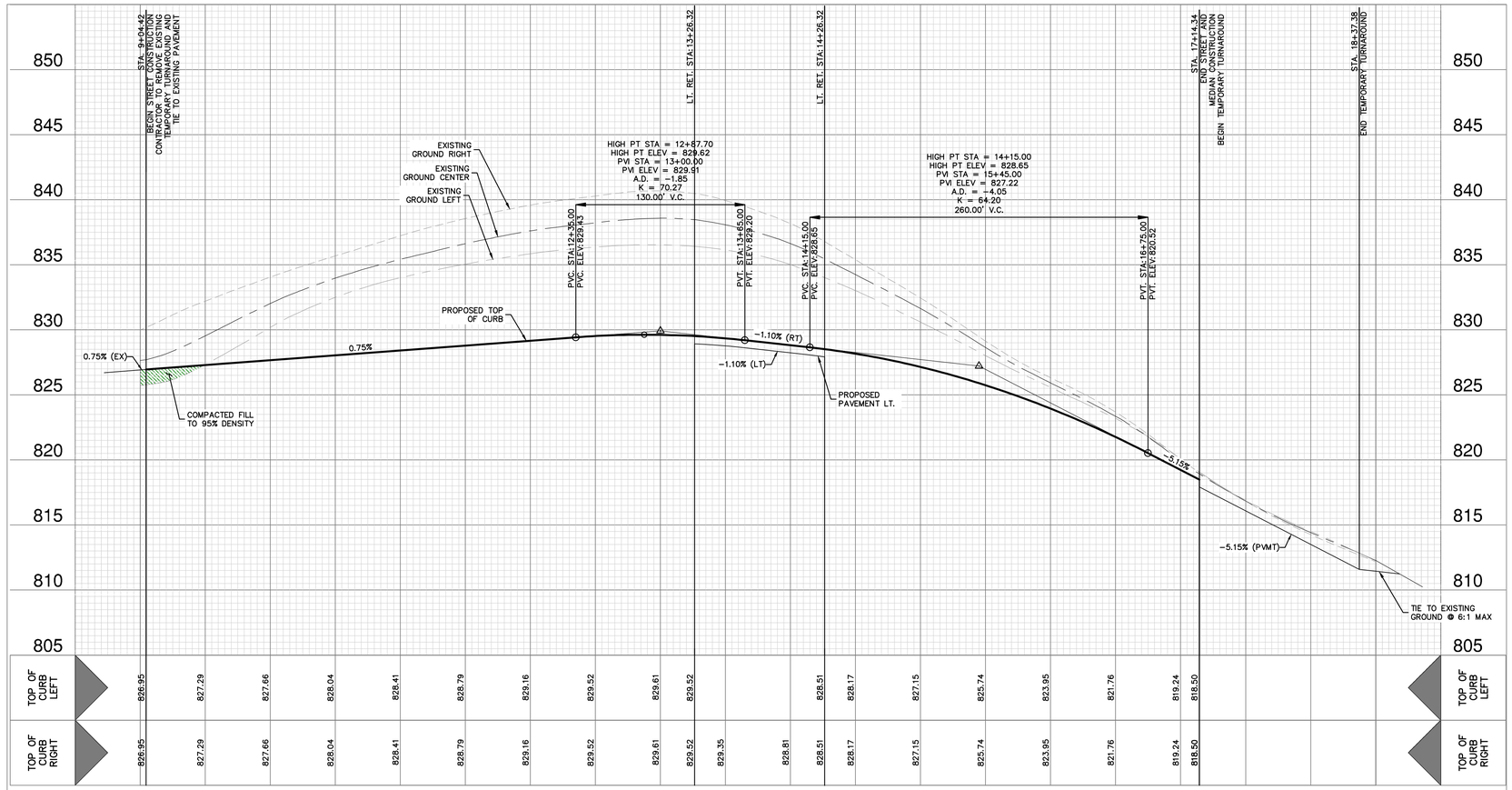
⑪ 10' BUILDING SETBACK

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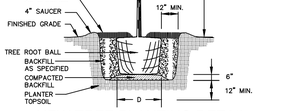
⑬ VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

STONE MASON DRIVE
STA. 9+04.42 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



TOP OF CURB LEFT	826.95	827.29	827.66	828.04	828.41	828.79	829.16	829.52	829.61	829.52		828.51	828.17	827.15	825.74	823.95	821.76	819.24	818.50		TOP OF CURB LEFT
TOP OF CURB RIGHT	826.95	827.29	827.66	828.04	828.41	828.79	829.16	829.52	829.61	829.52	829.35	828.81	828.51	828.17	827.15	825.74	823.95	821.76	819.24	818.50	TOP OF CURB RIGHT



NEW TREE PLANTING DETAIL

STREETSCAPE TREE PLANTING NOTES:

LARGE TREES (PER UDC) TO BE PLANTED EVERY 50 FEET PER DETAIL.

1. SPECIES OF TREES TO BE DETERMINED BY DEVELOPER'S PROJECT LANDSCAPE ARCHITECT TO CONFORM WITH THE STREETSCAPE PLANTING STANDARDS.
2. DEVELOPER TO PROVIDE IRRIGATION ON PLANTED STREET TREES FOR A MINIMUM OF 3 YEARS.
3. ALL LANDSCAPING SHALL COMPLY WITH THE CLEAR VISION AREAS DEFINED BY THE LATEST VERSION OF AASHTO'S "A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS."
4. TYPES OF TREES AND SPACING ARE BASED ON UNDERGROUND ELECTRIC, IF OVERHEAD ELECTRIC IS REQUIRED BY CPS, PLANS WILL BE REVISED TO REFLECT CHANGES IN SIZE, TYPE, AND SPACING OF TREES, PER THE UDC.

STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
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NO.	REVISION	DATE

STATE OF TEXAS
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98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

STONE MASON DRIVE PLAN & PROFILE
STA. 9+04.42 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.06

Date: Feb 22, 2024, 9:37am User ID: dfevine
File: P:\124\56\12\Design\Civil\ST-1245612 - STONE MASON.dwg

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PAVEMENT SECTION DETAIL - INTEC PROJECT NO. S231361								
STREET NAME	STATION	TYPE "D" HMAC	TYPE "C" HMAC	CRUSHED LIMESTONE BASE	STABILIZED SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	SN
FANNIN CRANE	2+58.93 TO END	2"	–	10"	8"	NO	2.0	2.92
HEMPHILL KING	1+00.00 TO END	2"	–	10"	8"	NO	2.0	2.92
COCHRAN KING	1+00.00 TO END	2"	–	10"	8"	NO	2.0	2.92
HOCKLEY BEND	1+00.00 TO END	2"	–	10"	8"	NO	2.0	2.92
HARTLEY HOME	8+00.61 TO END	2"	–	10"	8"	NO	2.0	2.92
STONE MASON	9+04.42 TO END	2"	3"	22.5"	8"	NO	2.0	5.99

GENERAL NOTES:

1. CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT NO. **S231361** PREPARED BY **INTEC** DATED **01/31/2024**
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
3. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
4. THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
5. THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
7. WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2–FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
9. FILL MATERIAL SHOULD BE NATIVE ON–SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A PI WITHIN RANGE OF 5 AND 60. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE–EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES. CONTRACTOR TO VERIFY EXACT SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.
10. A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

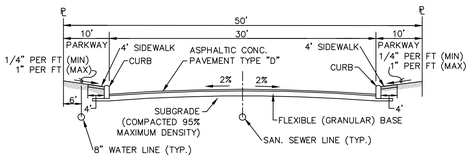
STREET SUBGRADE NOTES:

1. CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME
2. FILL USED TO RAISE THE GRADE:
   - APPROVED FILL MATERIAL FREE SHOULD HAVE A MINIMUM CBR VALUE OF 2.0 AND A MAXIMUM PLASTICITY INDEX VALUE OF 60 (ON SITE MATERIAL). LIME APPLICATION RATES SHOULD BE RE–EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF THE FILL MATERIAL.
   - THE FILL MATERIAL SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER, FREE OF DELETERIOUS MATERIAL, AND THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN SIZE. THE MATERIAL SHOULD BE PLACED AND COMPACTED AS PER APPLICABLE CITY / COUNTY GUIDELINES.
3. BASED ON THE THICKNESS OF THE CLAYS ENCOUNTERED IN THE BORINGS, WE ANTICIPATE THE FINAL PAVEMENT SUBGRADE PLASTICITY INDEX VALUE TO BE GREATER THAN 20.
4. IF THE SUBGRADE PLASTICITY INDEX VALUES ARE LESS THAN OR EQUAL TO 20, AS PER CITY OF SAN ANTONIO OR BEXAR COUNTY REQUIREMENTS, SUBGRADE STABILIZATION IS NOT NEEDED.
5. IF THE FINAL STREET SUBGRADE PLASTICITY INDEX VALUES ARE GREATER THAN 20, THEN THE SUBGRADE SHOULD BE STABILIZED.
   - REMOVE THE CLAYS SOILS (WITH PLASTICITY INDEX VALUES GREATER THAN 20) AND REPLACE WITH FILL MATERIAL WITH PLASTICITY INDEX VALUES LESS THAN OR EQUAL TO 20. IF SUBGRADE STABILIZATION IS REQUIRED, THE FOLLOWING SPECIFICATIONS MUST BE MET. THE CONTRACTOR SHALL COORDINATE WITH THE GEOTECHNICAL ENGINEER IN THE FIELD FOR SUBGRADE TREATMENT.
   - TREAT THE SUBGRADE:
     - STABILIZED TO A DEPTH OF 8 INCHES USING 8 PERCENT LIME CONTENT.
     - THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO TREATMENT. IF THE SOIL SULFATE CONTENT IS HIGHER THAN 3000 PPM, AN ALTERNATE PROCEDURE WILL BE NEEDED.
     - LIME APPLICATION RATE OF 45.5 LBS PER SQ YARD FOR 8–INCH DEPTH OF STABILIZATION IS RECOMMENDED.
     - CEMENT MAY BE USED IN LIEU OF LIME. CEMENT APPLICATION RATE SHOULD BE DETERMINED AT THE TIME OF CONSTRUCTION.

LIME NOTES:

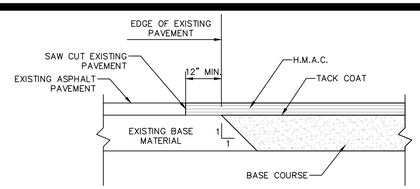
FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD:

1. AFTER INITIAL MIXING THE SOIL–LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2–3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
2. AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON–SLAKING AGGREGATES RETAINED ON THE ¾ INCH SIEVE FROM THE SAMPLE):
   - MINIMUM PASSING 1½" SIEVE 100
   - MINIMUM PASSING ¾" SIEVE 85
   - MINIMUM PASSING NO. 4 SIEVE 60
3. SAMPLE SOIL–LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED IN THE BEXAR COUNTY FLEXIBLE PAVEMENT DESIGN CRITERIA GUIDE FOR MIXTURE DESIGN.
4. COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED).
5. CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
6. VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN +/– 1.0 INCH.



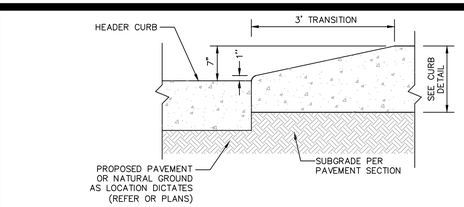
50' (LOCAL TYPE "A") STREET SECTION

NOT–TO–SCALE



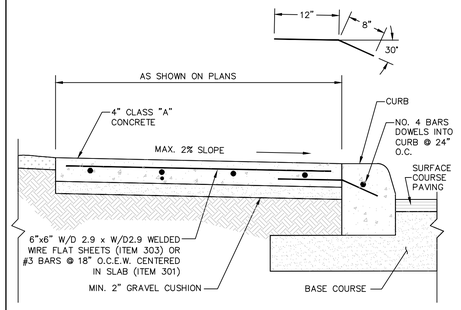
ASPHALT/ASPHALT JUNCTURE DETAIL

NOT–TO–SCALE



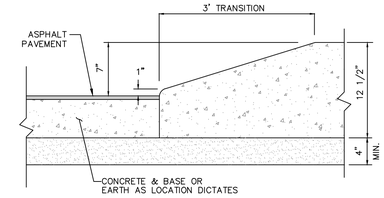
CURB TRANSITION DETAIL
(FROM HEADER CURB TO STANDARD CURB)

NOT–TO–SCALE



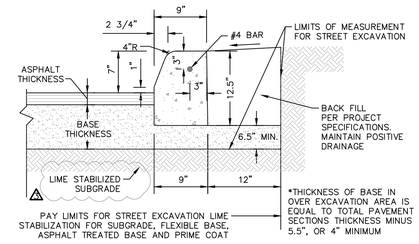
SIDEWALK DETAIL

NOT–TO–SCALE



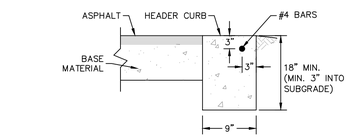
CURB TRANSITION DETAIL
(FROM PAVEMENT TO STANDARD CURB)

NOT–TO–SCALE



CONCRETE CURB DETAIL

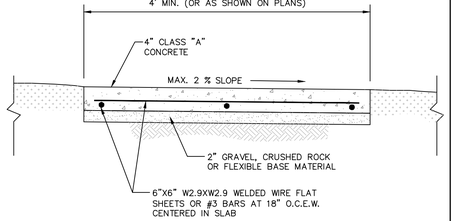
NOT–TO–SCALE



HEADER CURB DETAIL

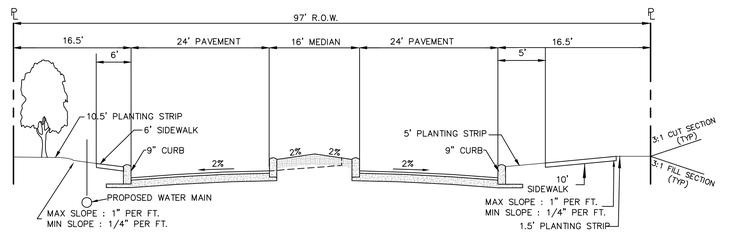
NOT–TO–SCALE

NOTE:
TOOL FORMED CONTROL JOINTS SHALL BE PLACED AT A MAXIMUM OF EVERY 5' ALONG ENTIRE LENGTH OF SIDEWAK.



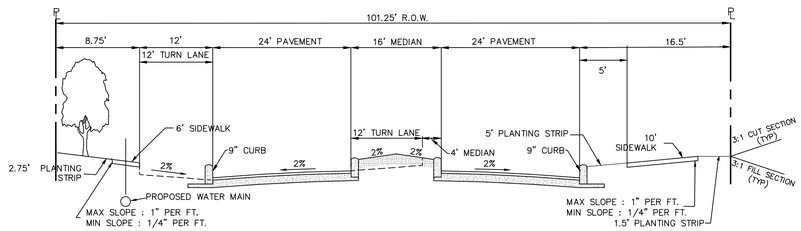
SIDEWALK DETAIL

NOT–TO–SCALE



97' R.O.W. SECONDARY ARTERIAL SECTION
(STA 9+02.42 TO 10+08.53)
(16+37.68 TO END)

NOT TO SCALE



101.25' R.O.W. SECONDARY ARTERIAL STREET SECTION
(STA. 10+08.53 TO STA. 16+37.68)

NOT TO SCALE

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

STREET DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.10

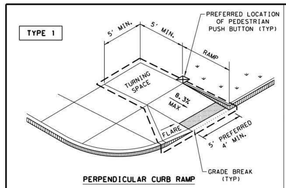
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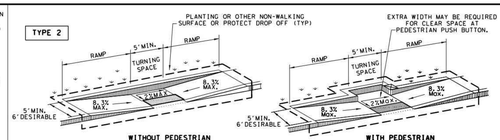
DATE:
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TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

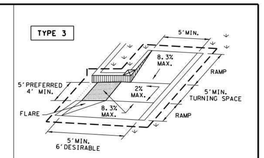


WITHOUT PEDESTRIAN PUSH BUTTON

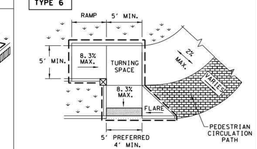
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

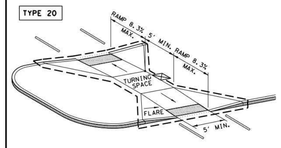


TYPE 6



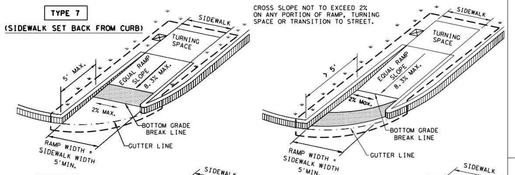
COMBINATION CURB RAMPS

TYPE 20

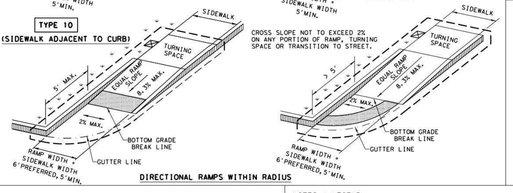


CURB RAMPS AT MEDIAN ISLANDS

TYPE 7
(SIDEWALK SET BACK FROM CURB)

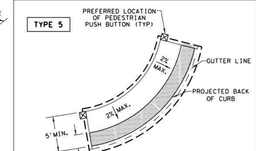


TYPE 10
(SIDEWALK ADJACENT TO CURB)



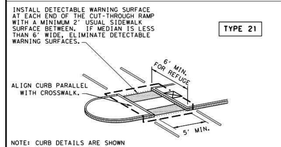
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 5



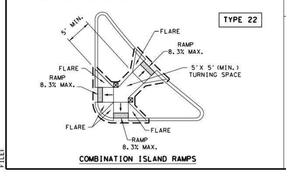
BLENDED TRANSITION (FLUSH LANDING)

TYPE 21

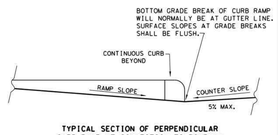


NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

NOTES / LEGEND:

SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

GUTTER LINE

GRADE BREAK

RAMP LIMITS OF PAYMENT

SHEET 1 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN:TxDOT	CK:	DW:	CK:	CK:
©TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
	DIST	COUNTY			SHEET NO.

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DATE:
FILE:

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to unacolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

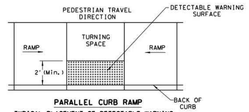
DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

SIDEWALKS

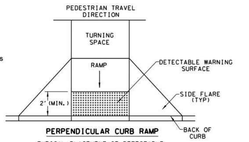
27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

DETECTABLE WARNING SURFACE DETAILS



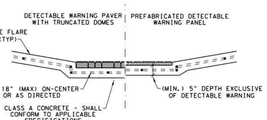
PARALLEL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.

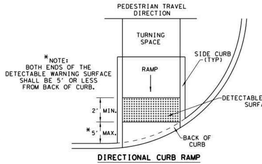


PERPENDICULAR CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS



*NOTE: BOTH ENDS OF THE DETECTABLE WARNING SURFACE SHALL BE 5' OR LESS FROM BACK OF CURB.

DIRECTIONAL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

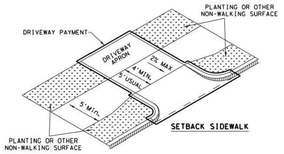
PED-18

FILE: ped18	DN:TxDOT	CK:	DW:	CK:	CK:
©TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
	DIST	COUNTY			SHEET NO.

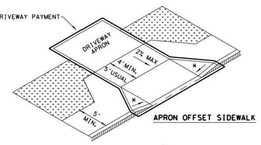
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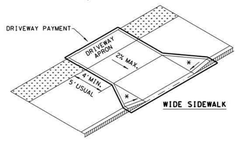
SIDEWALK TREATMENT AT DRIVEWAYS



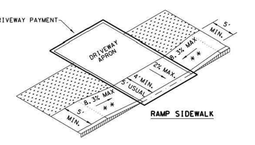
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



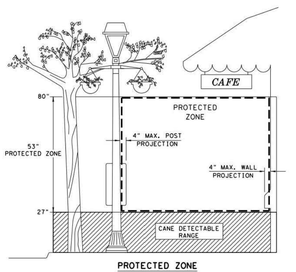
WIDE SIDEWALK



RAMP SIDEWALK

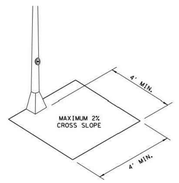
NOTES:
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%, HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.

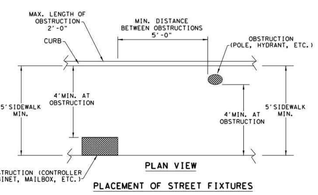


PROTECTED ZONE

NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



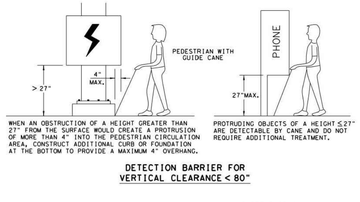
CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

PROTRUDING OBJECTS OF A HEIGHT ≤ 27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

SHEET 3 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

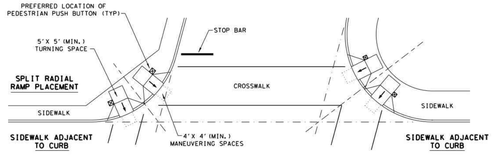
FILE: ped18	DN:TxDOT	CK:	DW:	CK:	CK:
©TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
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	DIST	COUNTY			SHEET NO.

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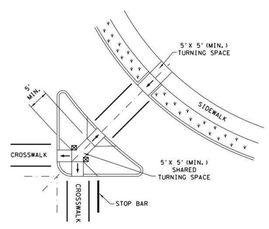
DATE:
FILE:

TYPICAL CROSSING LAYOUTS

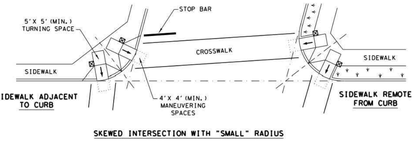
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



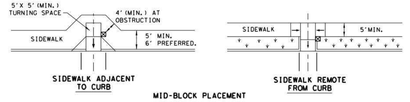
SKEWED INTERSECTION WITH "LARGE" RADIUS



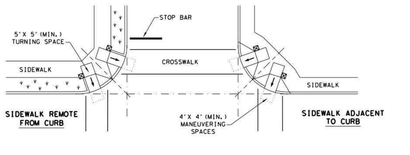
AT INTERSECTION W/FREE RIGHT TURN & ISLAND



SKEWED INTERSECTION WITH "SMALL" RADIUS



MID-BLOCK PLACEMENT PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

LEGEND:

SHOWS DOWNWARD SLOPE.

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE).

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

SHEET 4 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN:TxDOT	CK:	DW:	CK:	CK:
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NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

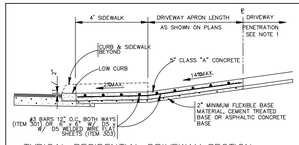
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

STREET DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.11

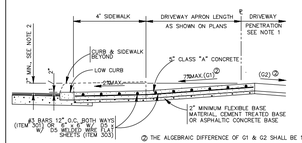
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TYPICAL RESIDENTIAL DRIVEWAY SECTION

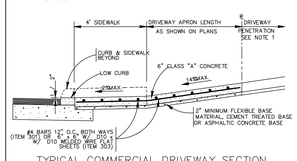
WITH SIDEWALK ABUTTING CURB
ITEM 503.1



② THE ALGEBRAIC DIFFERENCE OF G1 & G2 SHALL BE 14% OR LESS

TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS ABUTTING CURB
ITEM 503.1



TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.2

CONCRETE DRIVEWAY NOTES

1. DRIVEWAY PENETRATION REFERS TO A PORTION OF THE DRIVEWAY THAT MAY BE NECESSARY TO RECONSTRUCT WITHIN PRIVATE PROPERTY TO COMPLY WITH A MAXIMUM DRIVEWAY SLOPE. THIS PORTION OF THE DRIVEWAY SHALL BE PAID FOR UNDER THE FOLLOWING ITEMS AS MAY APPLY:
   A.) CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.1 OR 503.2.
   B.) ASPHALTIC CONCRETE DRIVEWAY PAID FOR UNDER ITEM NO. 503.4 AND SHALL INCLUDE A MINIMUM OF 1" ASPHALT TYPE 'D' & 6" FLEXIBLE BASE
   C.) GRAVEL DRIVEWAY PAID FOR UNDER ITEM NO. 503.5 AND SHALL INCLUDE A MINIMUM OF 6" FLEXIBLE BASE
2. 1" MINIMUM HEIGHT WILL NOT NECESSARILY OCCUR AT THE PROPERTY LINE. IT MAY OCCUR WITHIN THE RIGHT OF WAY OR WITHIN THE DRIVEWAY PENETRATION ON PRIVATE PROPERTY.
3. THE PROPOSED DRIVEWAY SHOULD MATCH THE EXISTING WIDTH AT THE PROPERTY LINE BUT UNLESS AUTHORIZED BY THE CITY TRAFFIC ENGINEER, THE WIDTH SHALL BE WITHIN THE FOLLOWING VALUES:

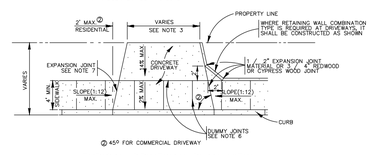
TYPE	MINIMUM	MAXIMUM
RESIDENTIAL	10'	20'
COMMERCIAL – ONE WAY	12'	20'
COMMERCIAL – TWO WAY	24'	30'

4. FOR LOCAL TYPE "A" STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
6. DUMMY JOINTS PARALLEL TO THE CURB SHALL BE PLACED WHERE THE SIDEWALK MEETS THE DRIVEWAY. DUMMY JOINTS PERPENDICULAR TO THE CURB, AND WITHIN THE BOUNDARIES OF THE PARALLEL DUMMY JOINTS, SHALL BE PLACED AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK.
7. A MINIMUM OF TWO ROUND AND SMOOTH DOWEL BARS 3 /8" IN DIAMETER AND 18" IN LENGTH SHALL BE SPACED 18" APART AT EACH EXPANSION JOINT.
8. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN 8.33% (1:12) MAXIMUM SLOPE. WHERE SIDEWALKS CROSS DRIVEWAYS, SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
9. SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



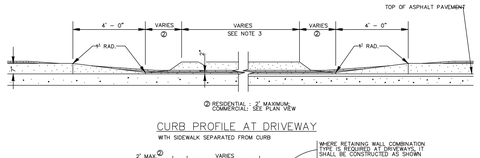
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



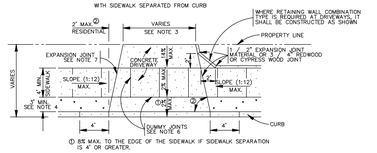
TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



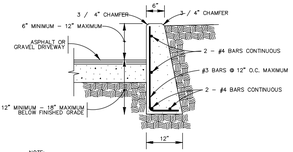
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB



NOTE:
1. COST OF REINFORCEMENT TO BE INCLUDED IN UNIT COST OF ITEM 307.1.
2. CONCRETE RETAINING WALL COMBINATION TYPE SHALL BE USED FOR CONCRETE DRIVEWAYS.

DRIVEWAY – CONCRETE RETAINING WALL

ON COMPACTED SUBGRADE
ITEM 307.1

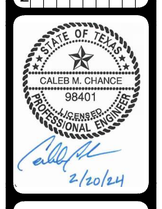
MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

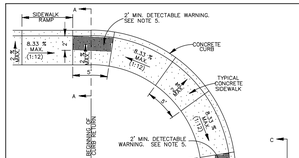
___% SUBMITTAL	PROJECT NO.		DATE
DRAWN BY: J.J.VASQUEZ	DESIGN BY	CHKD. BY: R.G.ROSSERA P.E.	SHEET NO. ___ OF ___

NO.	REVISION	DATE



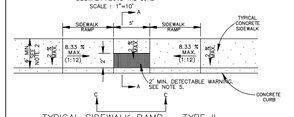
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
STREET DETAILS



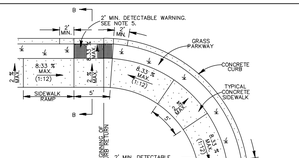
TYPICAL SIDEWALK RAMP – TYPE I

SIDEWALK ABUTS THE CURB
SCALE : 1"=10'



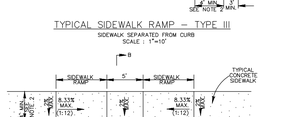
TYPICAL SIDEWALK RAMP – TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB
SCALE : 1"=10'



TYPICAL SIDEWALK RAMP – TYPE III

SIDEWALK SEPARATED FROM CURB
SCALE : 1"=10'

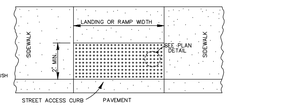


TYPICAL SIDEWALK RAMP – TYPE IV

USED AT TEE INTERSECTIONS WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=10'

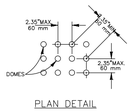
GENERAL NOTES

1. WHEN POSSIBLE SIDEWALKS SHOULD BE PLACED NEXT TO THE PROPERTY LINE, ALLOWING A MINIMUM OF 1 FOOT BUFFER. DEVIATION OF THE PATHWAY FROM A STRAIGHT LINE IS ENCOURAGED TO AVOID TREES OR OTHER OBSTRUCTIONS.
2. FOR LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
3. FOR OTHER THAN LOCAL TYPE "A" STREETS, SIDEWALKS SHALL HAVE A MINIMUM UNOBSTRUCTED WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
4. SIDEWALK RAMP LENGTHS PRESENTED IN TABLE 1 ARE GUIDELINES ONLY. SIDEWALK RAMP LENGTHS SHALL BE OF SUFFICIENT LENGTH TO MAINTAIN A 2.5% (1:12) MAXIMUM SLOPE.
5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP ALONG THE ENTIRE LENGTH OF THE RAMP, EXTENDING TO FULL WIDTH OF THE DOWN RAMP. THE DETECTABLE WARNING SHALL CONSIST OF RAISED TRUNCATED DOMES, ALIGNED IN A GRID PATTERN WITH A DIAMETER OF A NOMINAL 0.9 INCHES (23 MM), A HEIGHT OF NOMINAL 0.2 INCHES (5 MM) AND A CENTER-TO-CENTER SPACING OF NOMINAL 2.35 INCHES (60 MM). THE DETECTABLE WARNING SURFACE SHALL BE PAVERS CONFORMING TO TXDOT STANDARD PED-05, PEDESTRIAN FACILITIES.
6. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE AN INTEGRAL PART OF THE WALKING SURFACE.
7. SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
8. CONSTRUCTION OF ALL WHEELCHAIR RAMPS TO BE INCLUDED UNDER ITEMS "500 – CONCRETE CURB, GUTTER, AND CONCRETE CURB AND GUTTER" AND / OR "502 – CONCRETE SIDEWALKS". RAMP SURFACE SHALL BE BRUSH FINISHED.
9. THESE DETAILS ARE FOR REFERENCE ONLY. ACTUAL LOCATIONS OF WHEELCHAIR RAMPS TO BE SHOWN ON CONSTRUCTION PLANS. CITY CONSTRUCTION INSPECTOR CAN ADJUST LOCATIONS FOR SAFETY OR UTILITY CLEARANCE.
10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM SPACING OF 200 FEET.
11. WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
12. REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" – W2.9 x W2.9 WIRE MESH.
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH ADA AND TAS STANDARDS.
14. SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
15. THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES SHALL BE LESS THAN 11%. THE CHANGE OF GRADE IS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A SINGLE ACCESS RAMP, THE CHANGE OF GRADE MAXIMUM APPLIES TO THE LANDING TO GUTTER. IT SHALL BE LESS THAN 2.61% (I.E. 8.33%–(–2.61%)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.
17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE

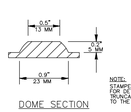


DETECTABLE WARNING SURFACE

SCALE : 1"=4'



PLAN DETAIL



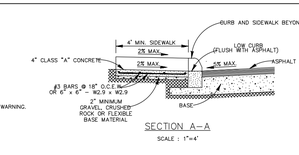
DOME SECTION

NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED.
FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS, CONTRACTOR MUST SUBMIT TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.



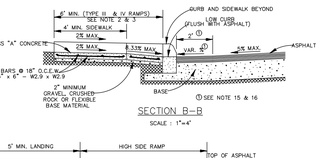
TYPICAL SIDEWALK RAMP – TYPE V

SIDEWALK ABUTS CURB
SCALE : 1"=10'



SECTION A–A

SCALE : 1"=4'



SECTION B–B

SCALE : 1"=4'



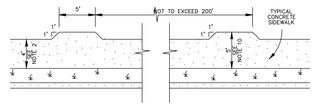
SECTION C–C

CURB PROFILE WHERE SIDEWALK ABUTS CURB
SCALE : 1"=4'



SECTION D–D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB
SCALE : 1"=4'



SIDEWALK PASSING SPACE

SCALE : 1"=10'

GUTTER SLOPE	(TABLE 1 (SEE NOTE 4)) SIDEWALK RAMP LENGTH (1:12) LOW SIDE	HIGH SIDE
1%	5'–6"	7'–2"
2%	5'–0"	8'–4"
3%	4'–8"	10'–0"
4%	4'–2"	12'–6"
5%	3'–10"	16'–8"

MAY 2009

CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

WHEELCHAIR RAMP STANDARDS

PROJECT NO.		DATE
DESIGN BY	DRAWN BY: R.G.ROSSERA P.E.	SHEET NO. ___ OF ___

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C2.12

Date: Feb 22, 2024, 9:37am User ID: dfevine
File: P:\124\56\12\Design\Civil\STDT-1245612.dwg
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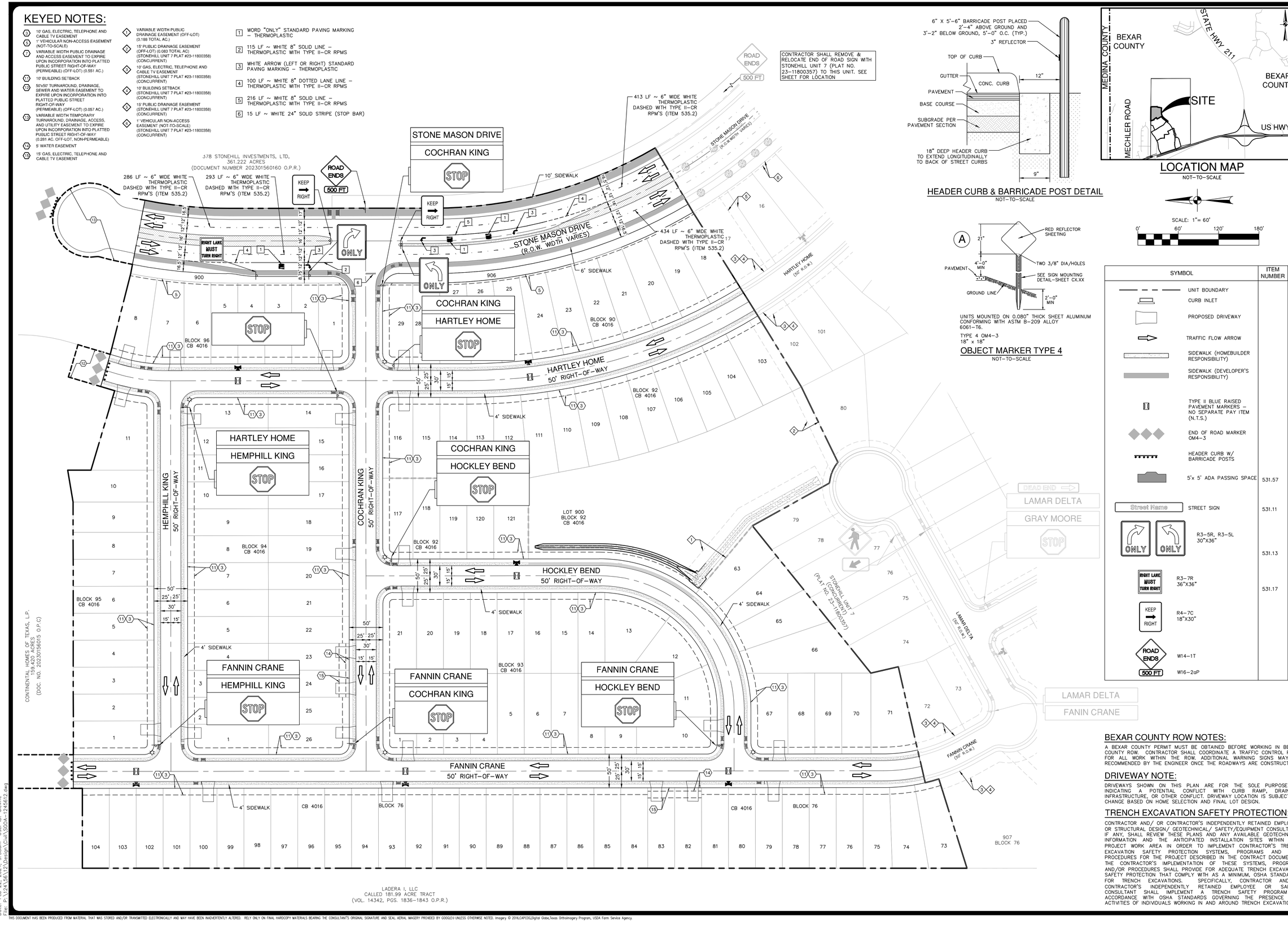
KEYED NOTES:

1. 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)
3. VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)
4. 10' BUILDING SETBACK
5. 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)
6. VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)
7. 5' WATER EASEMENT
8. 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

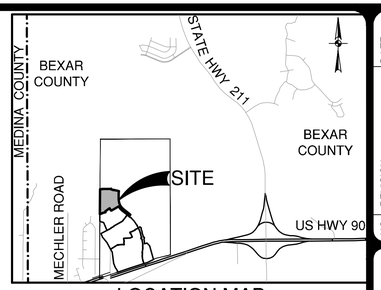
1. VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT (OFF-LOT) (0.188 TOTAL AC.)
2. 15' PUBLIC DRAINAGE EASEMENT (OFF-LOT) (0.083 TOTAL AC) (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
3. 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
4. 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
5. 15' PUBLIC DRAINAGE EASEMENT (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
6. 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE) (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)

1. WORD "ONLY" STANDARD PAVING MARKING – THERMOPLASTIC
2. 115 LF ~ WHITE 8" SOLID LINE – THERMOPLASTIC WITH TYPE II–CR RPMS
3. WHITE ARROW (LEFT OR RIGHT) STANDARD PAVING MARKING – THERMOPLASTIC
4. 100 LF ~ WHITE 8" DOTTED LANE LINE – THERMOPLASTIC WITH TYPE II–CR RPMS
5. 216 LF ~ WHITE 8" SOLID LINE – THERMOPLASTIC WITH TYPE II–CR RPMS
6. 15 LF ~ WHITE 24" SOLID STRIPE (STOP BAR)

CONTRACTOR SHALL REMOVE & RELOCATE END OF ROAD SIGN WITH STONEHILL UNIT 7 (PLAT NO. 23–11800357) TO THIS UNIT. SEE SHEET FOR LOCATION



HEADER CURB & BARRICADE POST DETAIL
NOT–TO–SCALE



LOCATION MAP
NOT–TO–SCALE

UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM CONFORMING WITH ASTM B–209 ALLOY 6061–T6.
TYPE 4 OM4–3
18" x 18"

OBJECT MARKER TYPE 4
NOT–TO–SCALE

SCALE: 1"= 60'
0' 60' 120' 180'

SYMBOL		ITEM NUMBER
	UNIT BOUNDARY	
	CURB INLET	
	PROPOSED DRIVEWAY	
	TRAFFIC FLOW ARROW	
	SIDEWALK (HOMEBUILDER RESPONSIBILITY)	
	SIDEWALK (DEVELOPER'S RESPONSIBILITY)	
	TYPE II BLUE RAISED PAVEMENT MARKERS – NO SEPARATE PAY ITEM (N.T.S.)	
	END OF ROAD MARKER OM4–3	
	HEADER CURB W/ BARRICADE POSTS	
	5'x 5' ADA PASSING SPACE	531.57
Street Name	STREET SIGN	531.11
ONLY ONLY	R3–5R, R3–5L 30"X36"	531.13
RIGHT LANE MUST TURN RIGHT	R3–7R 36"X36"	531.17
KEEP RIGHT	R4–7C 18"X30"	
ROAD ENDS 500 FT	W14–1T W16–2aP	

BEXAR COUNTY ROW NOTES:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

DRIVEWAY NOTE:

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

OVERALL SIGNAGE PLAN

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C3.00

Date: Feb 22, 2024, 9:38am User ID: dlevine
File: P:\12456\12\Design\Civil\SGOA-124561 2.dwg

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DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by the Texas Department of Transportation for any purpose whatsoever. The Texas Department of Transportation shall not be liable for any damages resulting from the use of this standard or for incorrect results or damages resulting from its use.

DATE:
FILE:

SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type
- FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
- TWT = Thin-Walled Tubing (see SMD(TWT))
- 10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
- SBO = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

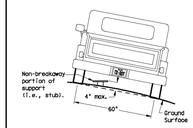
Number of Posts (1 or 2)

Anchor Type
- UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
- UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))
- WS = Wedge Anchor Steel - (see SMD(TWT))
- WP = Wedge Anchor Plastic (see SMD(TWT))
- SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
- SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

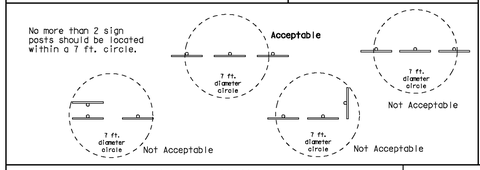
Sign Mounting Designation
- P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
- T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
- U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))

IF REQUIRED:
- TEXT or (EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
- BW = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
- MC = 1.12 #/FT Wing Channel (see SMD(SLIP-1) to (SLIP-3))
- EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT

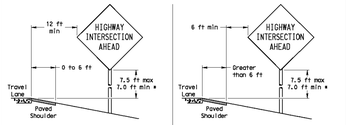


To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).



SIGN LOCATION

PAVED SHOULDERS



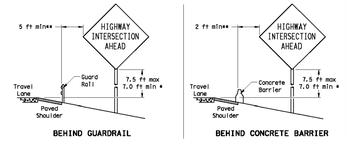
LESS THAN 6 FT. WIDE

When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.

GREATER THAN 6 FT. WIDE

When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

BEHIND BARRIER

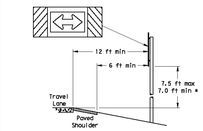


BEHIND GUARDRAIL

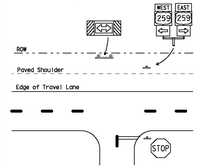
BEHIND CONCRETE BARRIER

**Concrete barrier clearance based on distance required for proper guard rail or concrete barrier performance.

T-INTERSECTION



When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

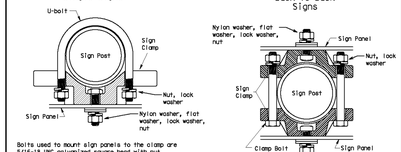
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

The website address is: https://www.txdot.gov/publications/traffic.html

TYPICAL SIGN ATTACHMENT DETAIL



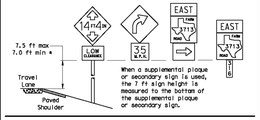
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

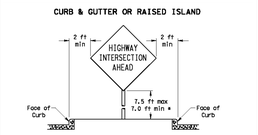
Sign clamps may be either the specific size clamp or the universal clamp.

Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES

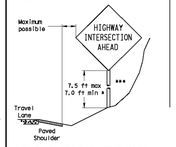


CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.

Texas Department of Transportation
Traffic Operations Division

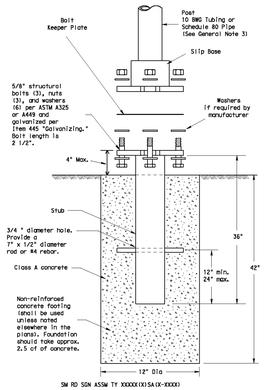
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

©TxDOT July 2022	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

264

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

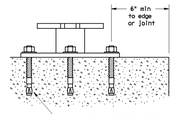
1. Slip base shall be permanently marked to indicate manufacturer, Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   0.134" nominal wall thickness
   Seamless or electric-resistance welded steel tubing or pipe
   Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
   Other steels may be used if they meet the following:
   55,000 PSI minimum yield strength
   70,000 PSI minimum tensile strength
   20% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
   Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
   Galvanization per ASTM A123 or ASTM A653 G210. For preconcreted steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
   Schedule 80 Pipe (2.875" outside diameter)
   0.276" nominal wall thickness
   Steel tubing per ASTM A500 Gr C
   Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
   46,000 PSI minimum yield strength
   62,000 PSI minimum tensile strength
   21% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
   Outside diameter (uncoated) shall be within the range of 2.805" to 2.895"
   Galvanization per ASTM A123
3. See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: https://www.txdot.gov/publications/traffic.htms
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
2. The Engineer may permit backhoes of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
3. Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to insure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the traveway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the traveway. The cut shall be plumb and straight.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

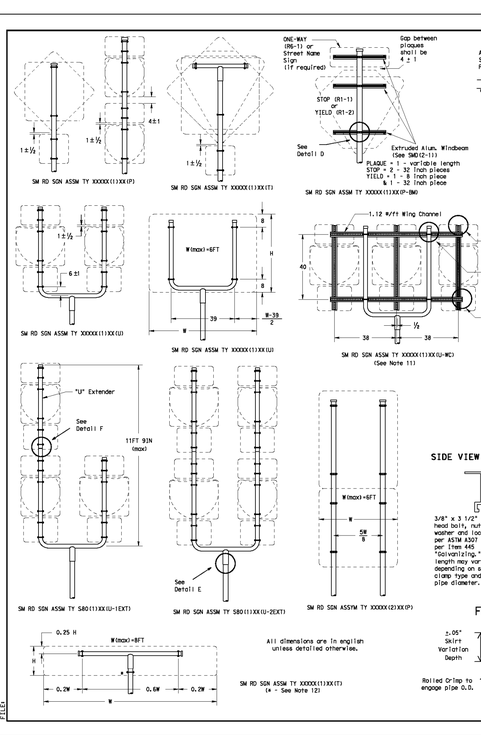
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

©TxDOT July 2022	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

268



SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch. 80	1	32 SF
Sch. 80	2	64 SF

1. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
4. Sign supports shall be designed for wind loads in addition to windloading conditions indicated on the "REQUIRED SUPPORT" table on this sheet.
5. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
6. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
7. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
8. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front). Cut shall be plumb and coating shall meet proper thickness per Item 445, "Galvanizing."
9. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
10. Additional sign clamps required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
11. Post open ends shall be fitted with Friction Caps.
12. Sign blanks shall be the sizes and shapes shown on the plans.

SIGN DESCRIPTION	SUPPORT
Regulatory: 48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BW)
Regulatory: 60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BW)
Regulatory: 48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BW)
Regulatory: 36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
Regulatory: 48x60-inch signs	TY S80(1)XX(T)
Regulatory: 48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
Regulatory: 48x60-inch signs	TY S80(1)XX(T)
Warning: 48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
Warning: 48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
Warning: Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

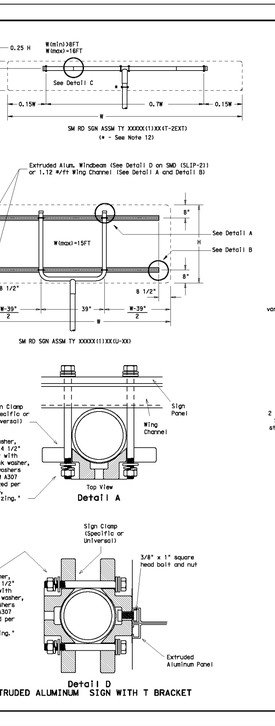
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

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9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

264



SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch. 80	1	32 SF
Sch. 80	2	64 SF

1. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
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7. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
8. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front). Cut shall be plumb and coating shall meet proper thickness per Item 445, "Galvanizing."
9. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
10. Additional sign clamps required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
11. Post open ends shall be fitted with Friction Caps.

SIGN DESCRIPTION	SUPPORT
Regulatory: 48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BW)
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Warning: 48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
Warning: Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

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9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

260

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

NO.	REVISION	DATE

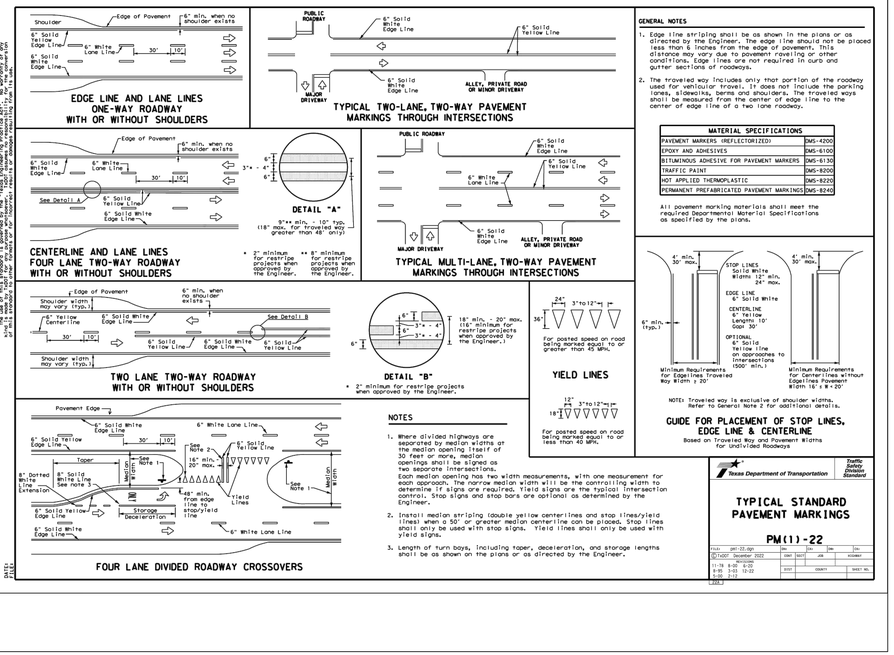
STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

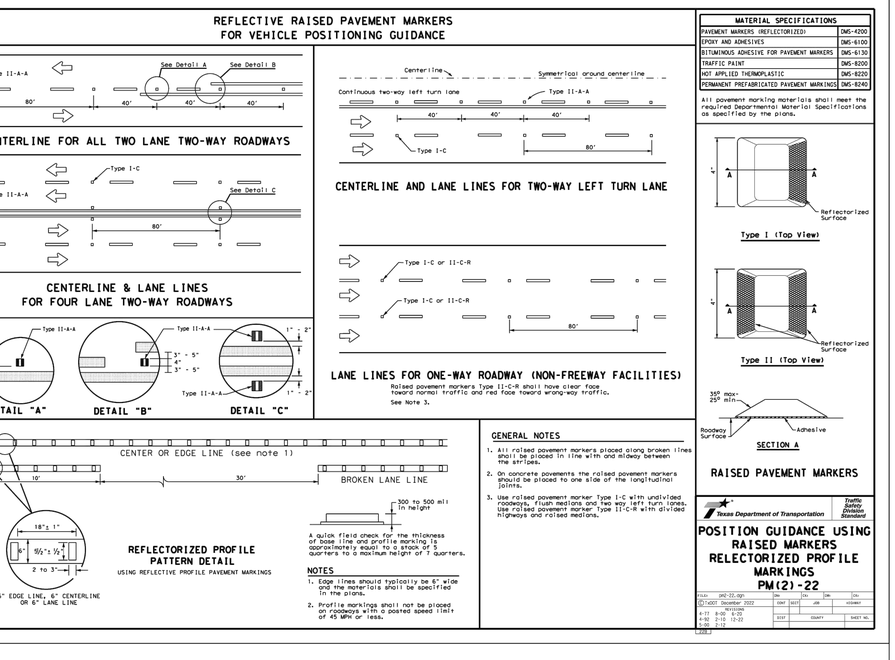
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

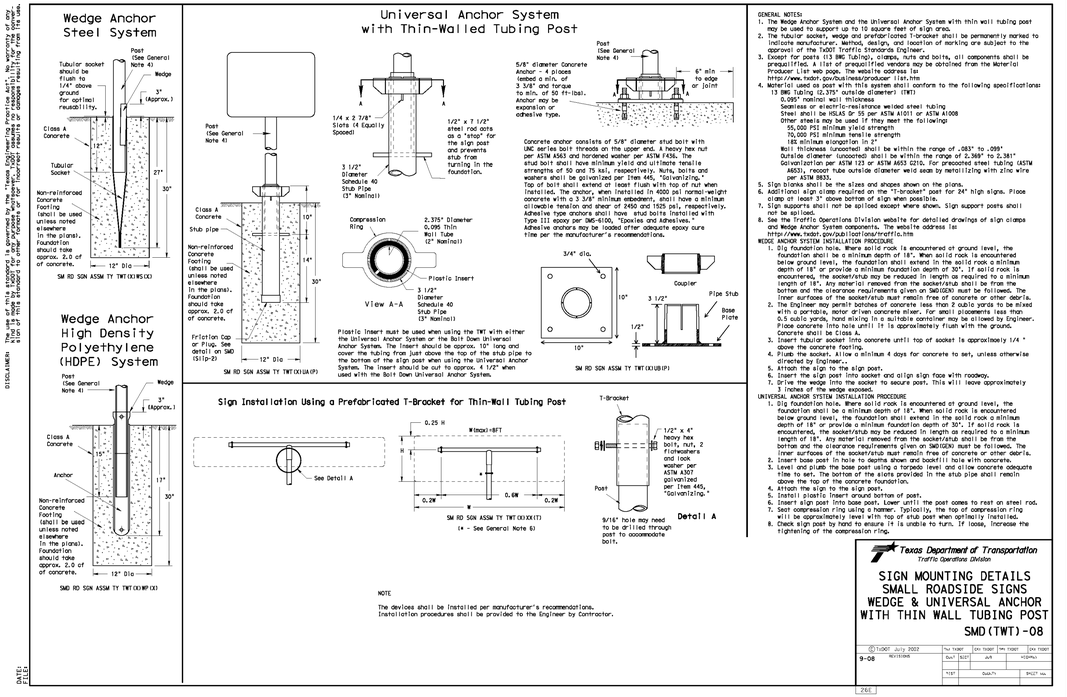
SIGNAGE DETAILS SHEET

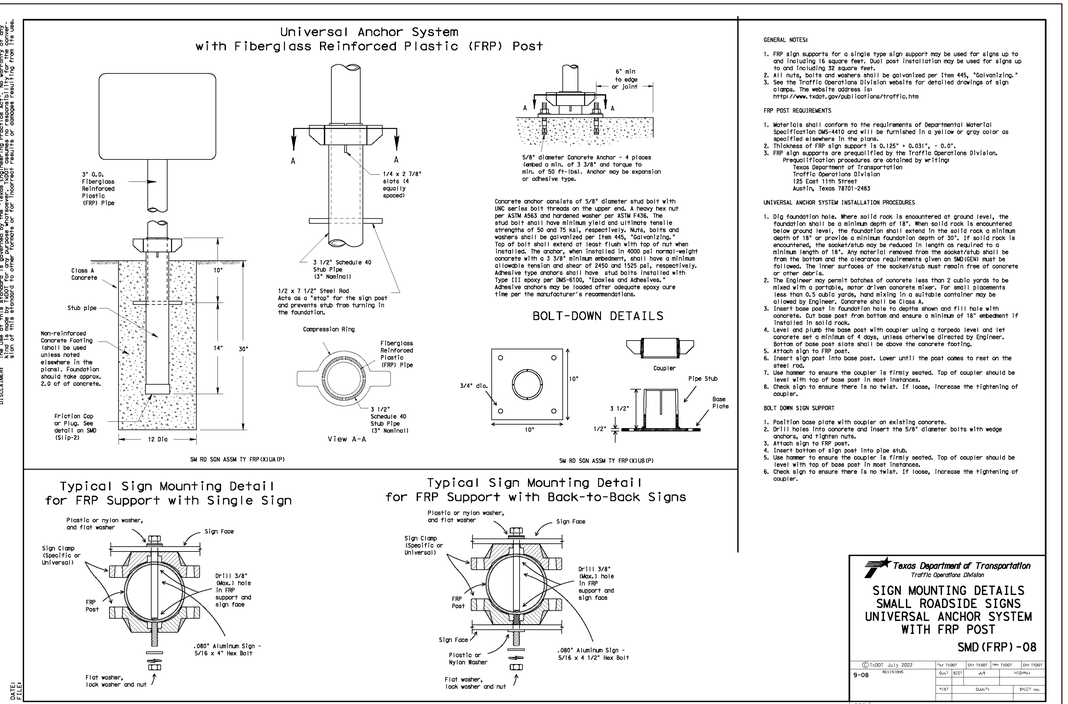
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JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C3.10

Date: Feb 22, 2024, 9:38am User ID: dlevine
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DATE FILED

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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

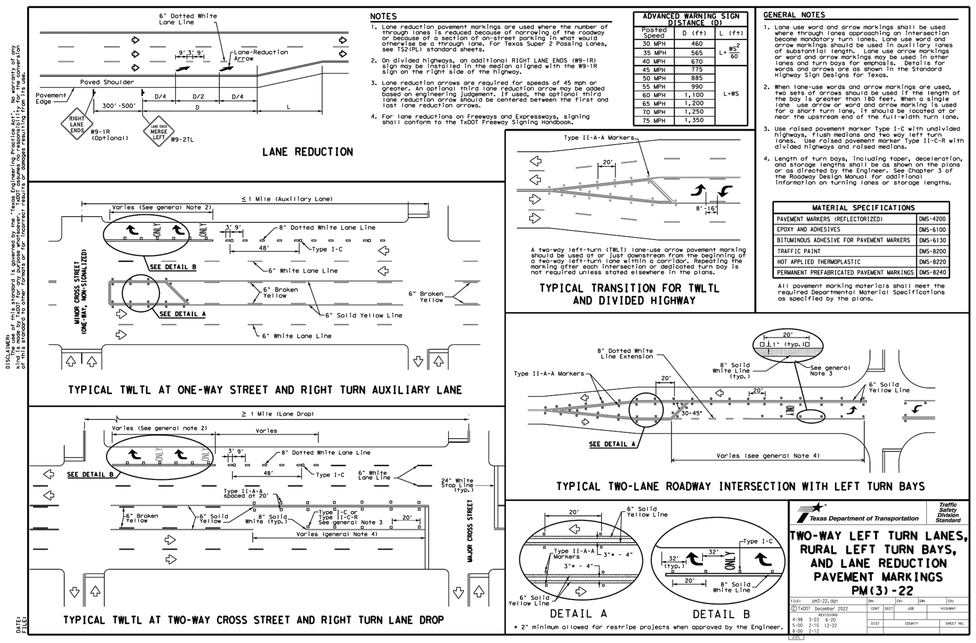
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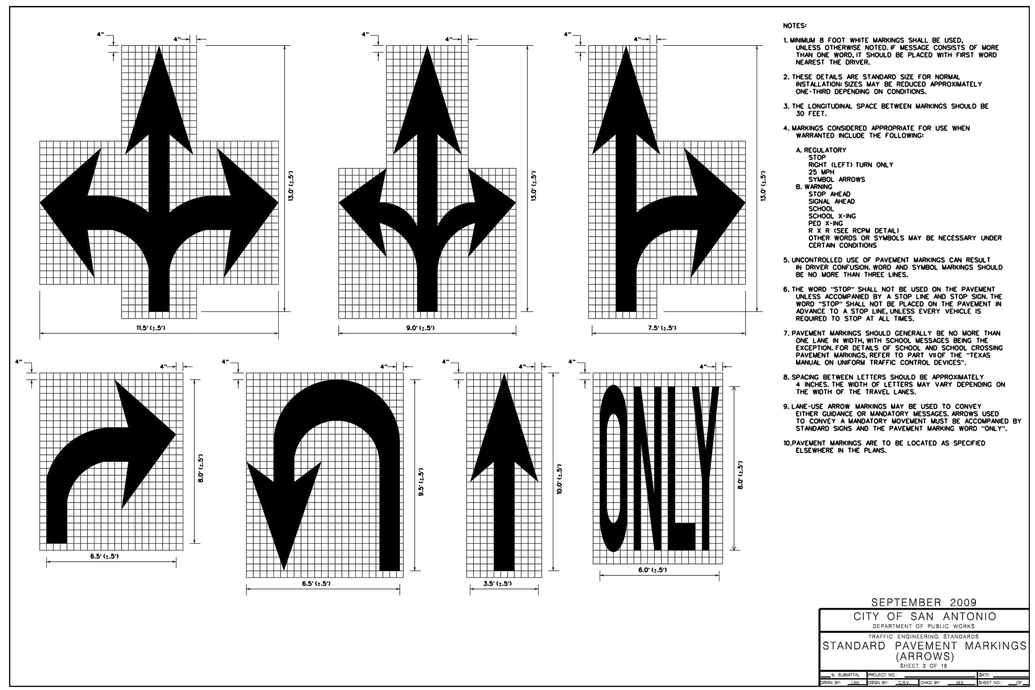
STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
SIGNAGE DETAILS SHEET

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C3.11

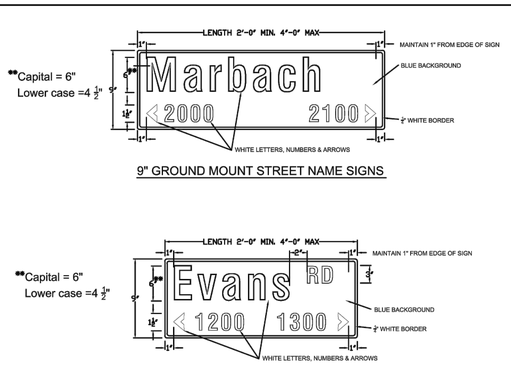
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NOTES:
1. MINIMUM 8 FOOT WHITE MARKINGS SHALL BE USED, UNLESS OTHERWISE NOTED. IF MESSAGE CONSISTS OF MORE THAN ONE WORD, IT SHOULD BE PLACED WITH FIRST WORD NEAREST THE DRIVER.
2. THESE DETAILS ARE STANDARD SIZE FOR NORMAL INSTALLATION SIZES MAY BE REDUCED APPROXIMATELY ONE-THIRD DEPENDING ON CONDITIONS.
3. THE LONGITUDINAL SPACE BETWEEN MARKINGS SHOULD BE 50 FEET.
4. MARKINGS CONSIDERED APPROPRIATE FOR USE WHEN WARRANTED INCLUDE THE FOLLOWING:
   A. REGULATORY
      STOP
      RIGHT (LEFT) TURN ONLY
      25 MPH
      SYMBOL ARROWS
   B. WARNING
      STOP AHEAD
      SIGNAL AHEAD
      SCHOOL
      SCHOOL X-ING
      PED X-ING
      R X R (SEE RCPM DETAIL)
      OTHER WORDS OR SYMBOLS MAY BE NECESSARY UNDER CERTAIN CONDITIONS
5. UNCONTROLLED USE OF PAVEMENT MARKINGS CAN RESULT IN DRIVER CONFUSION. WORD AND SYMBOL MARKINGS SHOULD BE NO MORE THAN THREE LINES.
6. THE WORD "STOP" SHALL NOT BE USED ON THE PAVEMENT UNLESS ACCOMPANIED BY A STOP LINE AND STOP SIGN. THE WORD "STOP" SHALL NOT BE PLACED ON THE PAVEMENT IN ADVANCE TO A STOP LINE, UNLESS EVERY VEHICLE IS REQUIRED TO STOP AT ALL TIMES.
7. PAVEMENT MARKINGS SHOULD GENERALLY BE NO MORE THAN ONE LANE IN WIDTH, WITH SCHOOL MESSAGES BEING THE EXCEPTION. FOR DETAILS OF SCHOOL AND SCHOOL CROSSING PAVEMENT MARKINGS, REFER TO PART VIII OF THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
8. SPACING BETWEEN LETTERS SHOULD BE APPROXIMATELY 4 INCHES. THE WIDTH OF LETTERS MAY VARY DEPENDING ON THE WIDTH OF THE TRAVEL LANES.
9. LANE-USE ARROW MARKINGS MAY BE USED TO CONVEY EITHER GUIDANCE OR MANDATORY MESSAGES. ARROWS USED TO CONVEY A MANDATORY MOVEMENT MUST BE ACCOMPANIED BY STANDARD SIGNS AND THE PAVEMENT MARKING WORD "ONLY".
10. PAVEMENT MARKINGS ARE TO BE LOCATED AS SPECIFIED ELSEWHERE IN THE PLANS.

SEPTEMBER 2009
CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS
TRAFFIC ENGINEERING STANDARDS
STANDARD PAVEMENT MARKINGS (ARROWS)
SHEET 2 OF 16
DESIGN: S. SUBMITAL | PROJECT NO. | DATE
DRAWN BY: | CHKD. BY: | CHKD. BY: | SHEET NO.:

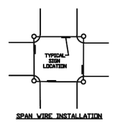


9" GROUND MOUNT STREET NAME SIGNS

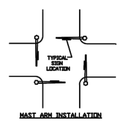
	18" OVERHEAD SIGN	9" GROUND MOUNT SIGNS
HEIGHT	18" (381 mm)	9" (228 mm)
LENGTH	48" (1200 mm) MIN. 72" (1800 mm) MAX. 1' (300mm) INCREMENTS OF LENGTH	24" (600 mm) MIN. 48" (1200 mm) MAX. 6" (150mm) INCREMENTS OF LENGTH
THICKNESS	0.125" (3 mm)	
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209 GOLD CHROMATE FINISH	
SIGN FACE MATERIALS	BLUE FILM ✱ OVER DIAMOND GRADE - ASTM Type XI Non-Fluorescent	BLUE FILM ✱ OVER HIGH INTENSITY PRISMATIC- ASTM Type IV
LEGENDS AND SYMBOLS	SERIES D, B OR C IF NAME OTHERWISE EXCEEDS MAXIMUM SIGN LENGTH	
COLOR	WHITE LEGEND ON BLUE BACKGROUND	
LETTER TRACKING	17% (USUAL) 10% (MIN.)	10%

✱ ACRYLIC ELECTRONIC CUTTABLE FILM

9" GROUND MOUNT STREET NAME SIGNS WITH STREET DESIGNATION

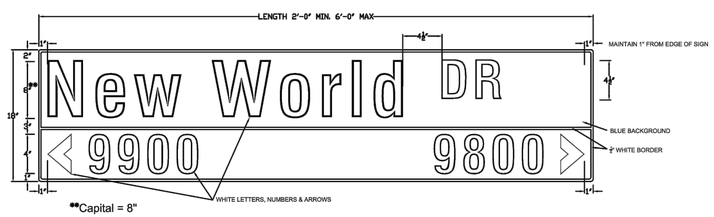


SPAN WIRE INSTALLATION



MAST ARM INSTALLATION

SIGN FACE MATERIALS SHALL CONFORM TO:
1. STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FP-03 U.S. CUSTOMARY UNITS SECTION 718
2. GENERAL SERVICES ADMINISTRATION FEDERAL SPECIFICATIONS L-S-300C
3. ASTM D 4956 - 05e1



18" OVERHEAD STREET NAME SIGNS

Bexar County Public Works
Street Name Sign Details
SHEET 1

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
SIGNAGE DETAILS SHEET

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C3.12

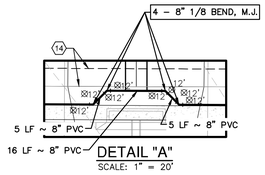
DATE | NO. | REVISION

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

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DETAIL "A"
SCALE: 1" = 20'

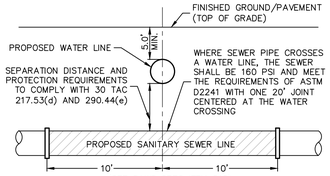
16 1 ~ STANDARD FIRE HYDRANT
1 – 8" X 6" ANCHOR TEE, M.J.
6" D.I. PIPE, CUT AS REQ'D
1 – 6" 1/4 ANCHOR BEND, M.J.
1 – 6" GATE VALVE, M.J.
1 – 6" VALVE BOX, COMPLETE
(SEE SAWS DETAIL DD–834–01 SHEET 2 OF 2)

17 FOR CHLORINATION INJECTION
2 – 1" CORPORATION STOP, C.C.XI.P
1 – 1" COPPER TUBING, CUT AS REQUIRED
2 – 1" COMP. 1 1/4 COUPLING, CORP. STOP
2 – 1 1/4" THD. SOLID CAPS, THR.

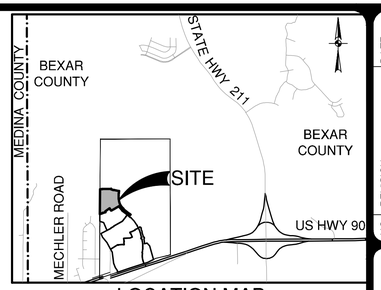
8" VALVE CONSTRUCTED WITH SAWS JOB NUMBER 23–1155 SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS

CONTRACTOR SHALL TIE TO EXISTING 8" STUBOUT (SAWS JOB NO. 23–1155) AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY SAWS

2" TEMPORARY BLOWOFF ASSEMBLY
SEE SAWS DWG DD–844–01 SHEET 1 OF 4

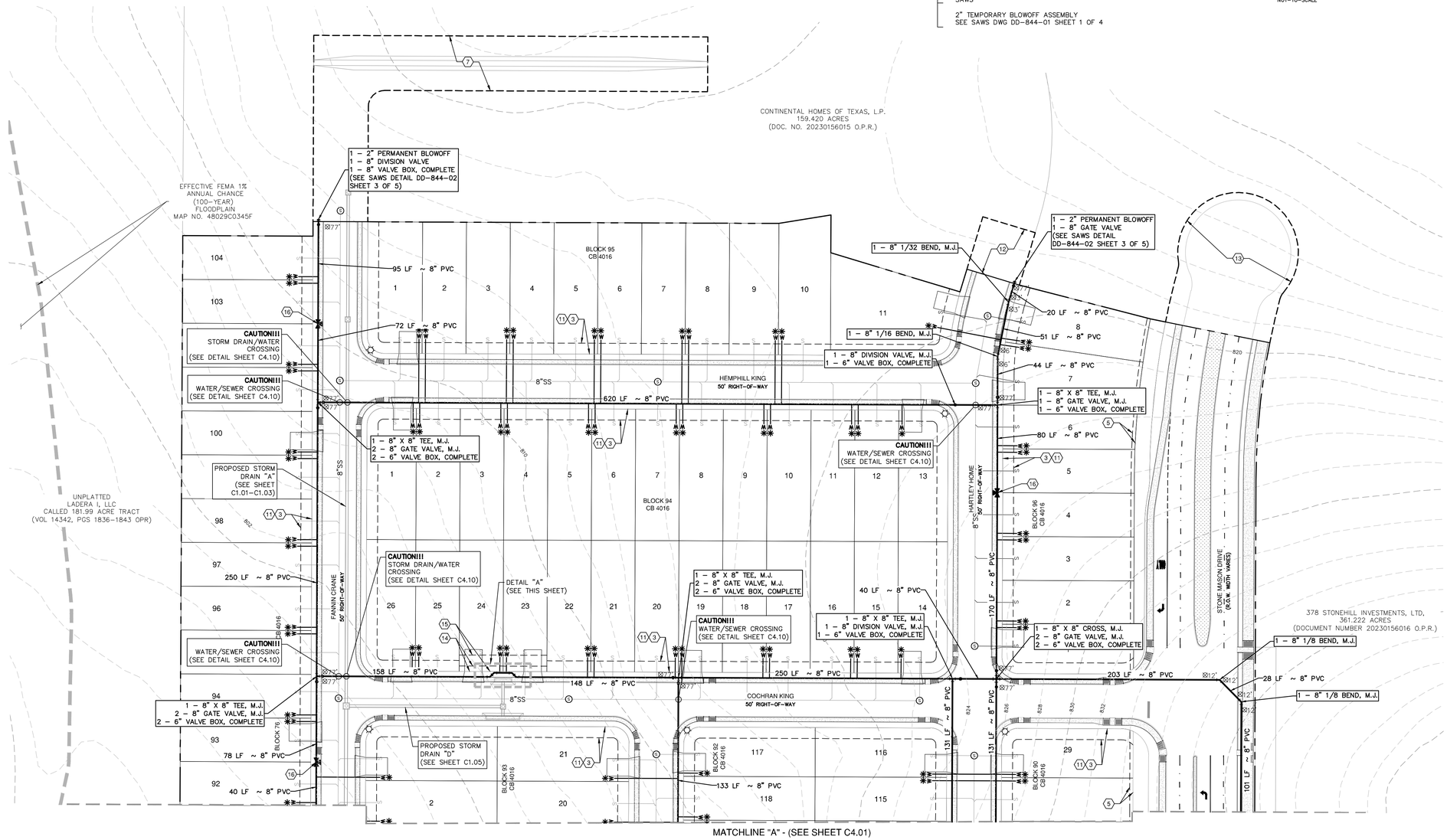


TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT–TO–SCALE



LOCATION MAP
NOT–TO–SCALE

SCALE: 1"= 50'
0' 50' 100' 150'



WATER LEGEND

PROJECT LIMITS	
EXISTING WATER	FIRE HYDRANT, W
EXISTING SEWER	SS, MANHOLE
PROPOSED SEWER	SS
PROPOSED WATER	FIRE HYDRANT, W
PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER	W
PROPOSED 1" DUAL SERVICE WITH 5/8" METER	W W
SINGLE IRRIGATION SERVICE (REF. PLAN VIEW FOR SIZE)	IRR
JOINT RESTRAINT	⊠

3 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

5 1' VEHICULAR NON–ACCESS EASEMENT (NOT–TO–SCALE)

7 VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT–OF–WAY (PERMEABLE) (OFF–LOT) (0.551 AC.)

11 10' BUILDING SETBACK

12 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT–OF–WAY (PERMEABLE) (OFF–LOT) (0.057 AC.)

13 VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT–OF–WAY (0.281 AC. OFF–LOT, NON–PERMEABLE)

14 5' WATER EASEMENT

15 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

PRESSURE REDUCING VALVE NOTE:

PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEBUILDER.

PRESSURE NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.
*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

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WATER (SAWS PRESSURE ZONE 930)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210)496–2668 FAX# (210)496–2668
SAWS BLOCK MAP# 66562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8" – 5,568 LF PLAT NO. 24–11800057
NUMBER OF LOTS 138 SAWS JOB NO. 23–XXXX

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

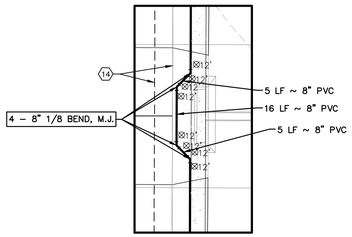
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

OVERALL WATER DISTRUBUTION PLAN

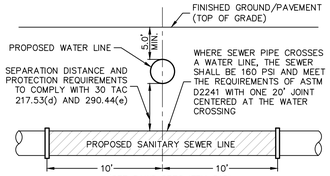
PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C4.00

Date: Feb 22, 2024, 9:39am User ID: dteirve
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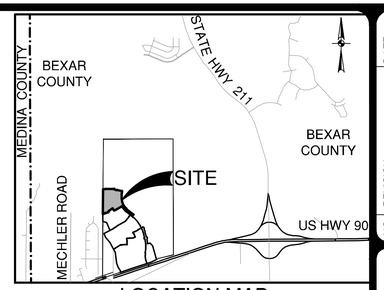
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DETAIL "B"
SCALE: 1" = 20'



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE

SCALE: 1"= 50'
0' 50' 100' 150'

MATCHLINE "A" - (SEE SHEET C4.00)

EFFECTIVE FEMA 1% ANNUAL CHANCE (100-YEAR) FLOODPLAIN MAP NO. 48029C0345F

UNPLATTED LADERA I, LLC CALLED 181.99 ACRE TRACT (VOL 14342, PGS 1836-1843 OPR)

PROPOSED STORM DRAIN "A" (SEE SHEET C1.01-C1.03)

FANNIN CRANE 50' RIGHT-OF-WAY

HOCKLEY BEND 50' RIGHT-OF-WAY

HARTLEY HOME 50' RIGHT-OF-WAY

STONE MASON DRIVE (VARIABLE WIDTH R.O.W.)

BLOCK 93 CB 4016

BLOCK 92 CB 4016

BLOCK 76

BLOCK 66 CB 4016

348 LF ~ 8" PVC

148 LF ~ 8" PVC

128 LF ~ 8" PVC

89 LF ~ 8" PVC

235 LF ~ 8" PVC

CAUTION!!! DRAIN/WATER CROSSING (SEE DETAIL SHEET C4.10)

CAUTION!!! SEWER/WATER CROSSING (SEE DETAIL SHEET C4.10)

1 – 8" X 8" TEE, M.J.
2 – 8" GATE VALVE, M.J.
2 – 6" VALVE BOX, COMPLETE

28 LF ~ 8" PVC
151 LF ~ 8" PVC
68 LF ~ 8" PVC
86 LF ~ 8" PVC
92 LF ~ 8" PVC
30 LF ~ 8" PVC

1 – 8" 1/16 BEND, M.J.
1 – 8" 1/32 BEND, M.J.

62 LF ~ 8" PVC
81 LF ~ 8" PVC
76 LF ~ 8" PVC
48 LF ~ 8" PVC
48 LF ~ 8" PVC
43 LF ~ 8" PVC
43 LF ~ 8" PVC
33 LF ~ 8" PVC
40 LF ~ 8" PVC

66 LF ~ 8" PVC
118 LF ~ 8" PVC
26 LF ~ 8" PVC
91 LF ~ 8" PVC
82 LF ~ 8" PVC
80 LF ~ 8" PVC

35 LF ~ 8" PVC
103 LF ~ 8" PVC
93 LF ~ 8" PVC
104 LF ~ 8" PVC

378 STONEHILL INVESTMENTS, LTD, 361.222 ACRES (DOCUMENT NUMBER 202301560160 O.P.R.)

STONEHILL UNIT 7 (CONCURRENT) (PLAT NO. 23-11800357)

LAMAR DELTA (50' R.O.W.)

FANNIN CRANE (50' R.O.W.)

HARTLEY HOME (50' R.O.W.)

STONE MASON DRIVE (VARIABLE WIDTH R.O.W.)

(SAWS JOB NO. 23-1155) 6" W

WATER LEGEND

PROJECT LIMITS	
EXISTING WATER	FIRE HYDRANT, W
EXISTING SEWER	SS, MANHOLE
PROPOSED SEWER	SS
PROPOSED WATER	FIRE HYDRANT, W
PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER	W
PROPOSED 1" DUAL SERVICE WITH 5/8" METER	W W
SINGLE IRRIGATION SERVICE (REF. PLAN VIEW FOR SIZE)	IRR
JOINT RESTRAINT	

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(19) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

PRESSURE REDUCING VALVE NOTE:

PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEBUILDER.

PRESSURE NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.
*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

JOINT RESTRAINT NOTE:

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WATER (SAWS PRESSURE ZONE 930)

(16) 1 ~ STANDARD FIRE HYDRANT
1 – 8" X 6" ANCHOR TEE, M.J.
6" D.I. PIPE, CUT AS REQ'D
1 – 6" 1/4 ANCHOR BEND, M.J.
1 – 6" GATE VALVE, M.J.
1 – 6" VALVE BOX, COMPLETE
(SEE SAWS DETAIL DD-834-01 SHEET 2 OF 2)

(17) FOR CHLORINATION INJECTION
2 – 1" CORPORATION STOP, C.C.XI.P
1 – 1" COPPER TUBING, CUT AS REQUIRED
2 – 1" COMP. 1 1/4 COUPLING, CORP. STOP
2 – 1 1/4" THD. SOLID CAPS, THR.

8" VALVE CONSTRUCTED WITH SAWS JOB NUMBER 23-1155 SHALL REMAIN CLOSED UNTIL NEW MAINS HAVE BEEN DISINFECTED BY CONTRACTOR AND ACCEPTED BY SAWS

CONTRACTOR SHALL TIE TO EXISTING 8" STUBOUT (SAWS JOB NO. 23-1155) AFTER DISINFECTION BY CONTRACTOR AND ACCEPTANCE BY SAWS

2" TEMPORARY BLOWOFF ASSEMBLY
SEE SAWS DWG DD-844-01 SHEET 1 OF 4

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78247
PHONE# (210)496-2668	FAX# (210)496-2668
SAWS BLOCK MAP# 66562	TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8" = 5,568 LF	PLAT NO. 24-11800057
NUMBER OF LOTS 138	SAWS JOB NO. 23-XXXX

DATE

NO.	REVISION

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

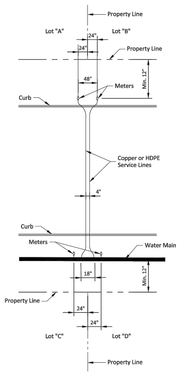
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

OVERALL WATER DISTRUBUTION PLAN

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C4.01

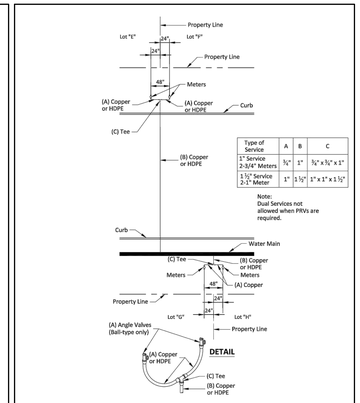
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SINGLE SERVICE LINE - SINGLE METER

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL NEW DEVELOPMENT SERVICE ARRANGEMENT	March 2008	December 2018
	DD-824-05	SHEET 1 OF 3	

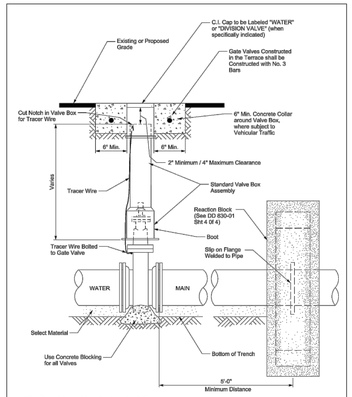


Type of Service	A	B	C
1" Service 2-3/4" Meters	¾"	1"	¾" x ¾" x 1"
1-½" Service 2-1" Meter	1"	1-½"	1" x 1" x 1-½"

Note:
Dual Services not allowed when PRVs are required.

SINGLE SERVICE LINE - DUAL METER

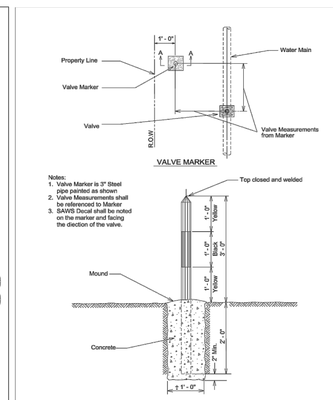
PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL SERVICE ARRANGEMENT	March 2008	December 2018
	DD-824-05	SHEET 2 OF 3	



NOTE: Tracer Wire for PVC (Typ. for PVC & HDPE)
NOTE: All Concrete to be 3,000 psi

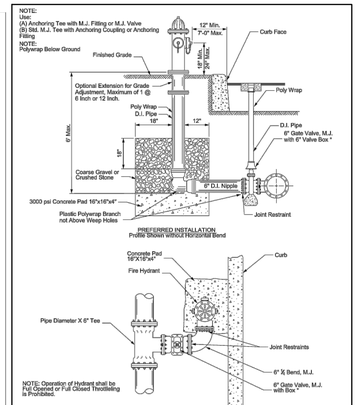
Note: For all work associated with Recycled Water Valves, refer to DD 110-10, Sht. 1 of 1

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION	MARCH 2008	AUG 2019
	DD 828-01	SHEET 1 OF 1	



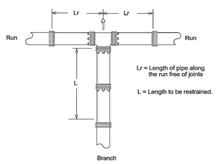
Notes:
1. Valve Marker is 3" Steel pipe painted as shown
2. Valve Measurements shall be referenced to Marker
3. SAWS Decal shall be noted on the marker and facing the direction of the valve.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	VALVE MARKER	MARCH 2008	AUG 2019
	DD-828-04	SHEET 1 OF 1	



NOTE: Operation of Hydrant shall be Pull Opened or Full Closed Throttling is Prohibited.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	FIRE HYDRANT INSTALLATION (JOINT RESTRAINT)	MAY 2013	AUG 2019
	DD-834-01	SHEET 1 of 3	



RESTRAINED LENGTH FOR TEES

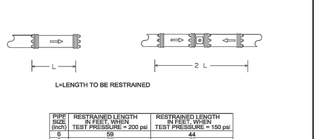
PIPE SIZE (inch)	BRANCH SIZE (inch)	LENGTH OF RUN (ft.)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	4	0	42	31
6	4	5	7	1
6	4	10	7	1
8	6	0	59	44
8	6	5	35	20
8	6	10	11	1
8	4	0	42	31
8	4	5	1	1
8	6	0	59	44
8	6	5	28	13
8	6	10	1	1
8	8	0	77	58
8	8	5	53	34
8	8	10	30	11
8	8	15	6	1

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe.The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR TEES	March 2008	AUG 2019
	DD-839-04	SHEET 1 OF 2	



L=LENGTH TO BE RESTRAINED

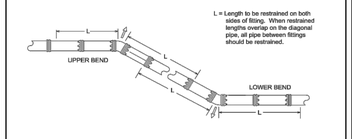
PIPE SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	59	44
8	77	58
10	93	69
12	109	82

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provide for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR DEAD ENDS / INLINE VALVES	MARCH 2008	AUG 2019
	DD-839-05	SHEET 1 OF 1	



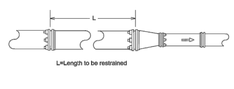
PIPE SIZE (inch)	BEND ANGLE (deg.)	LOW SIDE DEPTH	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi
6	45	5	24	8	18	6
6	22.5	5	12	4	9	3
6	11.25	5	6	2	4	1
6	45	10	24	5	18	4
6	22.5	10	12	2	9	2
6	11.25	10	6	1	4	1
8	45	5	32	11	24	8
8	22.5	5	15	5	11	4
8	11.25	5	8	3	6	2
8	45	10	32	7	24	5
8	22.5	10	15	3	11	2
8	11.25	10	8	2	6	1
12	45	5	45	16	34	12
12	22.5	5	22	7	16	8
12	11.25	5	11	4	8	3
12	45	10	45	10	34	7
12	22.5	10	22	5	16	3
12	11.25	10	11	2	8	2

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provide for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS VERTICAL OFFSETS	MARCH 2008	AUG 2019
	DD-839-06	SHEET 1 OF 1	



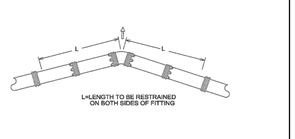
PIPE SIZE (inch)	SMALL SIZE (inch)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
8	4	30	23
8	6	55	42
12	6	32	24
12	4	80	60
12	6	80	60
12	8	58	43

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. Th restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR REDUCERS	MARCH 2008	AUG 2019
	DD-839-07	SHEET 1 OF 1	



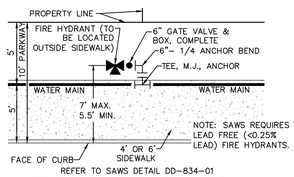
PIPE SIZE (inch)	BEND ANGLE (deg)	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET, WHEN TEST PRESSURE = 150 psi
6	90	23	17
6	45	9	7
6	22.5	5	3
6	11.25	2	2
8	90	30	22
8	45	12	9
8	22.5	6	4
8	11.25	3	2
12	90	43	32
12	45	18	13
12	22.5	8	6
12	11.25	4	3

RESTRAINED LENGTH DESIGN

Restrained length calculations are for P.V.C pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

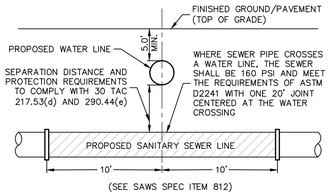
Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	RESTRAINED LENGTHS FOR HORIZONTAL BENDS	MARCH 2008	AUG 2019
	DD-839-08	SHEET 1 OF 1	



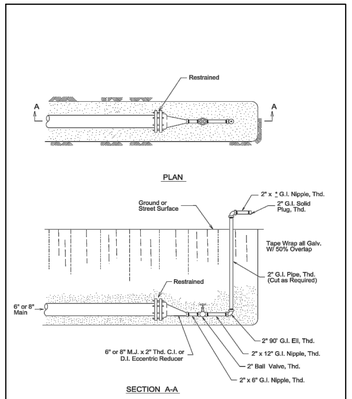
FIRE HYDRANT INSTALLATION

NOT–TO–SCALE



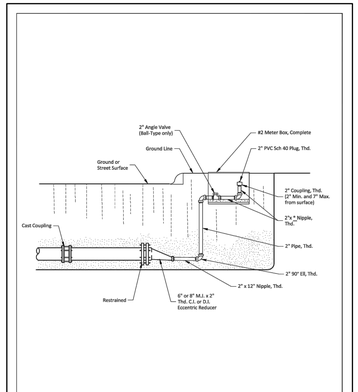
TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT–TO–SCALE



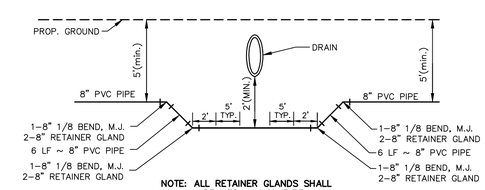
* Cut as required to extend beyond excavation

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	MARCH 2008	AUG 2019
	DD-844-01	SHEET 1 OF 4	



* Cut to fit in meter box

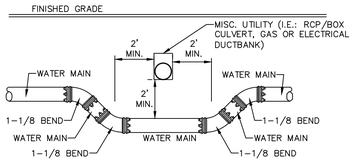
PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	2" PERMANENT BLOW-OFF ASSEMBLY ON 6" & 8" MAINS	MARCH 2008	AUG 2019
	DD-844-02	SHEET 3 OF 5	



NOTE: ALL RETAINER GLANDS SHALL BE MEG–A–LUG TYPE

WATER/DRAIN CROSSING DETAIL

NOT TO SCALE



ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SAWS SPECIFICATION TABLE DD–839–06.

TYPICAL UTILITY/WATER CROSSING DETAIL

NOT–TO–SCALE

WATER (SAWS PRESSURE ZONE 930)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210)496–2668 FAX# (210)496–2668
SAWS BLOCK MAP# 66562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8" – 5,968 LF PLAT NO. 24–11800057
NUMBER OF LOTS 138 SAWS JOB NO. 23–XXXX

NO. | REVISION | DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C4.10

Date: Feb 22, 2024, 9:40am User ID: dlevine
File: P:\124\56\12\Design\Civil\WTDT-124512.dwg

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SAWS CONSTRUCTION NOTES

(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER"; TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION";
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION";
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.

3. THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.

4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT
   (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.

5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.

8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.

9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

    HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

11. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS WATER NOTES

1. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

   - FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014

2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS- CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".

3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSPI)

4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.

5. ALL VALVES SHALL READ "OPEN RIGHT".

6. PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. *NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.

8. BACKFLOW PREVENTION DEVICES:

   - ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
   - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.

9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.

10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PROJECT WATER NOTES

1. MACHINE CHLORINATION BY THE S.A.W.S.
2. ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
4. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
6. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF ALL WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, OR BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THE PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
8. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
9. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.
11. UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
12. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
13. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. THIS AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN OF VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

WATER (SAWS PRESSURE ZONE 930)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210)496-2668 FAX# (210)496-2668
SAWS BLOCK MAP# 66562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 5,568 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 23-XXXX

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9

SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN NOTES

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C4.11

Date: Feb 22, 2024, 9:40am User ID: dlevine
File: P:\124\56\12\Design\Civil\WTD1-1245612.dwg

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SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

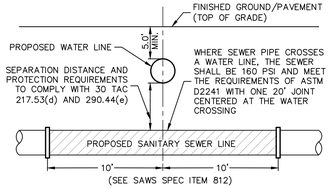
PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

MANHOLE

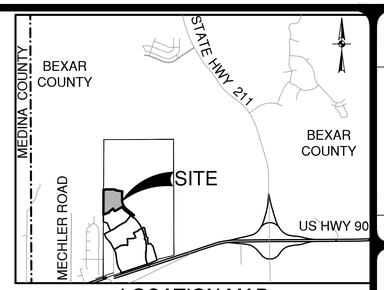
FIRE HYDRANT

FF = XXXX.XX



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

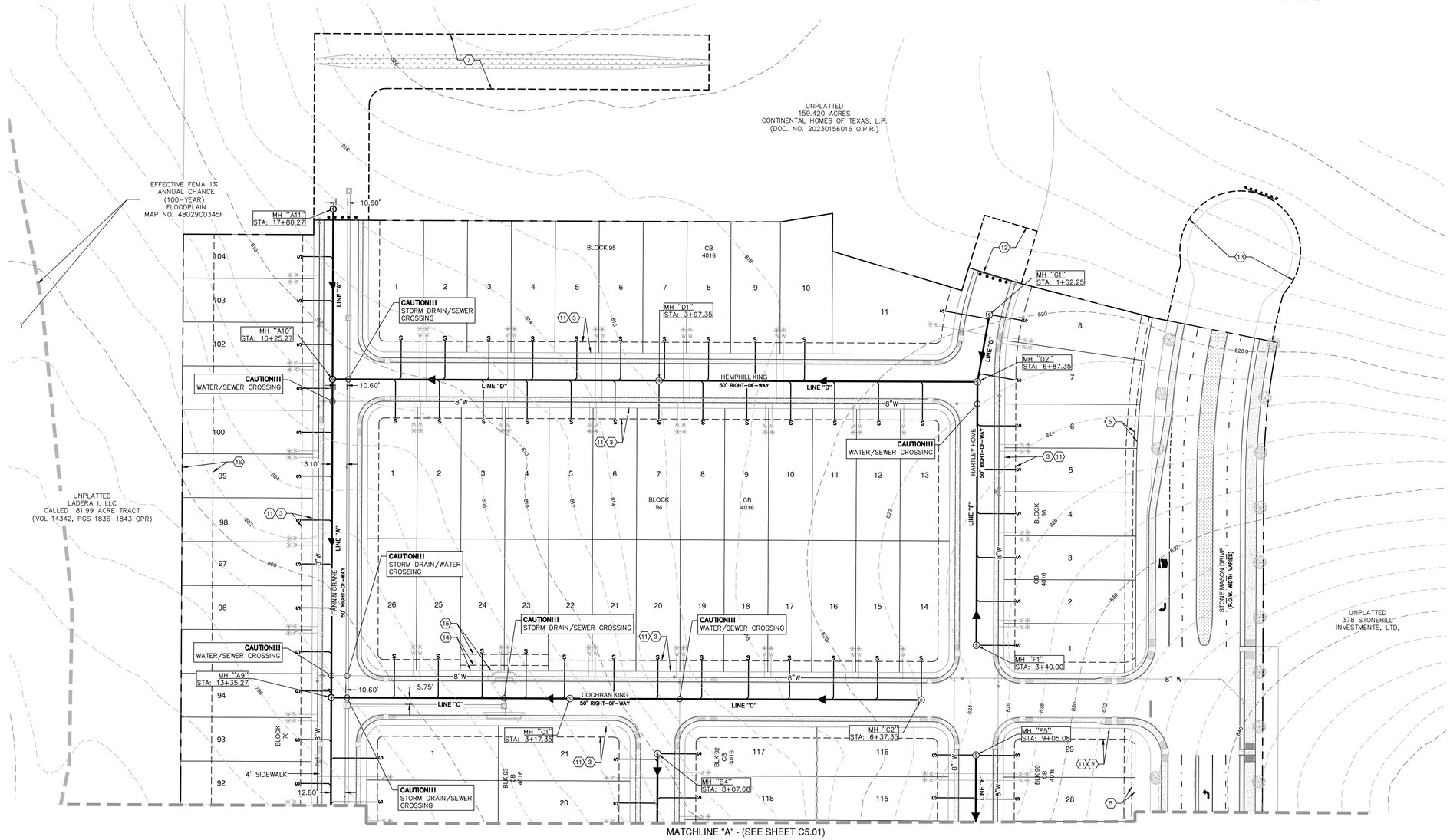


LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'



MATCHLINE "A" - (SEE SHEET C5.01)

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE, SEWER AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(16) 28' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

FINISHED FLOOR NOTES:

1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION AS-BUILT CONDITIONS FOR FOUND SEWER SERVICES AND ACTUAL LATERAL PLACEMENT. IT IS THE BUILDER'S SOLE RESPONSIBILITY TO DETERMINE ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT PRIOR TO THE START OF HOME FOUNDATION CONSTRUCTION TAKING INTO CONSIDERATION SITE DRAINAGE, STREET ACCESS AND SANITARY SEWER SERVICE ELEVATIONS.

2. THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

ROW PERMIT NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
3/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9

SAN ANTONIO, TEXAS

OVERALL SANITARY SEWER PLAN & PROFILE

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.00

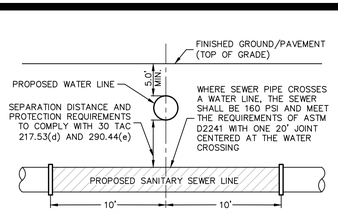
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SEWER LEGEND

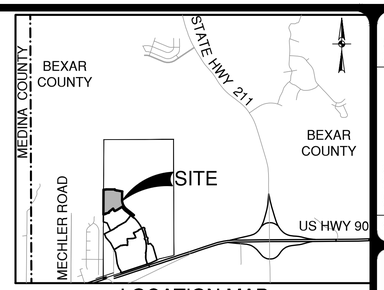
PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
PROPOSED WATER
PROPOSED SEWER LATERAL
FINISHED FLOOR ELEVATION FOR SEWER

MANHOLE
FIRE HYDRANT
FF = XXXX.XX



TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'

MATCHLINE "A" - (SEE SHEET C5.00)

EFFECTIVE FEMA 1% ANNUAL CHANCE (100-YEAR) FLOODPLAIN MAP NO. 48029C0345F

UNPLATTED LADERA I, LLC CALLED 181.99 ACRE TRACT (VOL 14342, PGS 1836-1843 OPR)

UNPLATTED 378 STONEHILL INVESTMENTS, LTD, 361.222 ACRES

LINE "A"
LINE "B"
LINE "C"
LINE "D"
LINE "E"
LINE "F"

FANNIN CRANE 50' RIGHT-OF-WAY
HOCKLEY BEND 50' RIGHT-OF-WAY
HARTLEY POINT 50' RIGHT-OF-WAY
STONE MASON DRIVE (R.O.W. WIDTH VARIES)
HARTLEY HOME (50' R.O.W.)
FANNIN CRANE (50' R.O.W.)
LAMAR DELTA (50' R.O.W.)

BLOCK 76
BLOCK 93
BLOCK 92
BLOCK 90
BLOCK 92 CB 4016

MH "A8" STA: 10+52.05
MH "A7" STA: 7+88.58
MH "A6" STA: 5+75.07
EX MH "A5" STA: 1+18.86
MH "B3" STA: 4+60.07
MH "B2" STA: 3+23.98
MH "B1" STA: 2+40.46
MH "E4" STA: 8+02.03
MH "E3" STA: 5+84.07
EX MH "E2" STA: 3+88.32

CAUTION!! STORM DRAIN/SEWER CROSSING
CAUTION!! SEWER/WATER CROSSING

SAWS JOB NO. 23-1627

STONEHILL UNIT 7 (CONCURRENT) (PLAT NO. 23-11800357)

12.80'
12.50'
10.00'
9.75'
3.89'
5.41'

8"W

SEWER LEGEND

3 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
5 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)
7 VARIABLE WIDTH PUBLIC DRAINAGE, SEWER AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)
11 10' BUILDING SETBACK
12 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)
13 VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)
14 5' WATER EASEMENT
15 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
16 28' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

FINISHED FLOOR NOTES:

1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION AS-BUILT CONDITIONS FOR FOUND SEWER SERVICES AND ACTUAL LATERAL PLACEMENT. IT IS THE BUILDER'S SOLE RESPONSIBILITY TO DETERMINE ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT PRIOR TO THE START OF HOME FOUNDATION CONSTRUCTION TAKING INTO CONSIDERATION SITE DRAINAGE, STREET ACCESS AND SANITARY SEWER SERVICE ELEVATIONS.
2. THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

ROW PERMIT NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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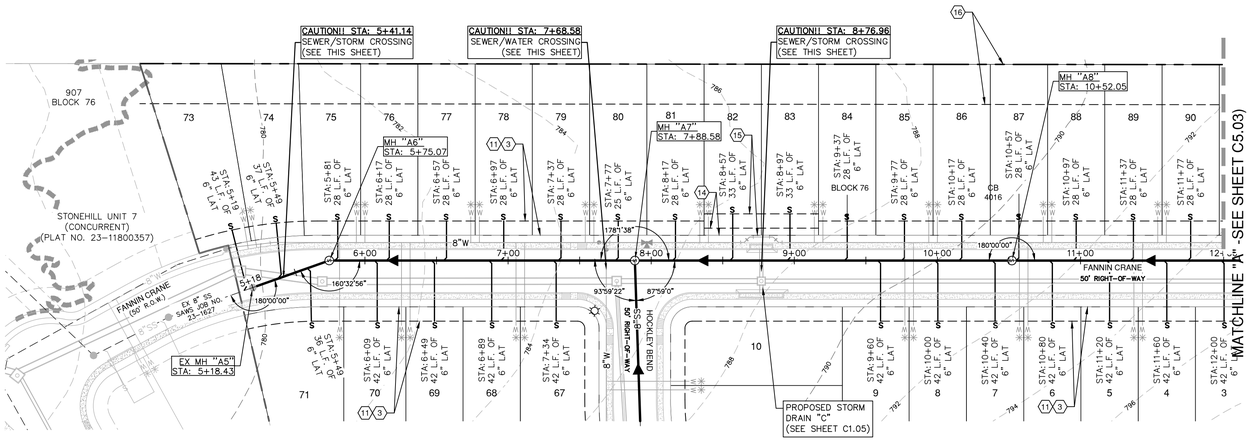
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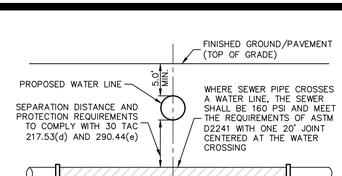
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OVERALL SANITARY SEWER PLAN & PROFILE

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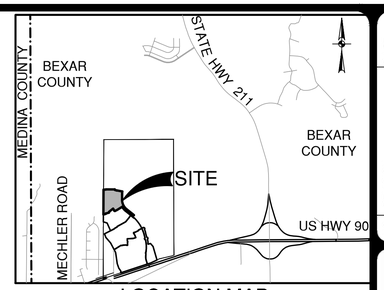
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TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1" = 50'

0' 50' 100' 150'

SEWER LEGEND

- PROJECT LIMITS
- EXISTING WATER
- EXISTING SEWER
- PROPOSED SEWER
- PROPOSED WATER
- PROPOSED WYE & LATERAL
- EXISTING STORM DRAIN
- MANHOLE
- FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC SEWER, DRAINAGE, AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(16) 28' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

TRENCH EXCAVATION SAFETY PROTECTION:

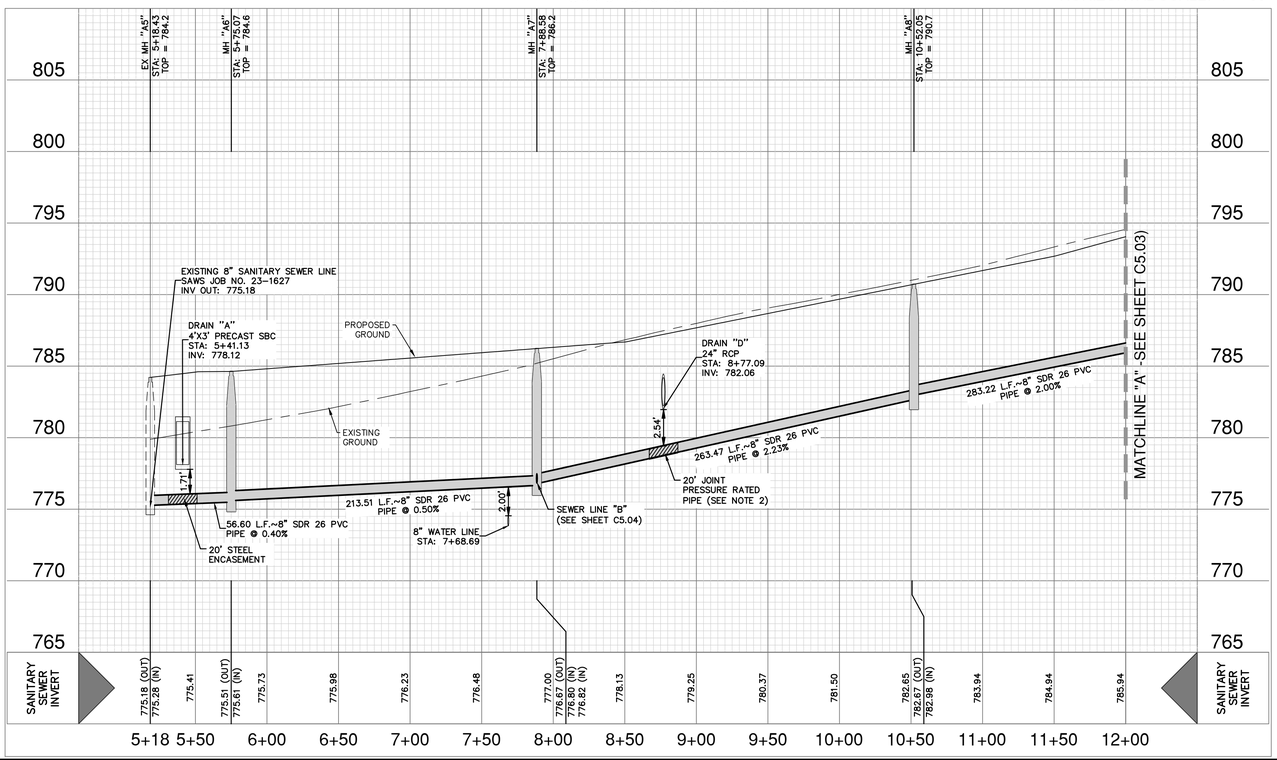
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SANITARY SEWER LINE "A"
STA. 5+18.43 TO 12+00.00

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



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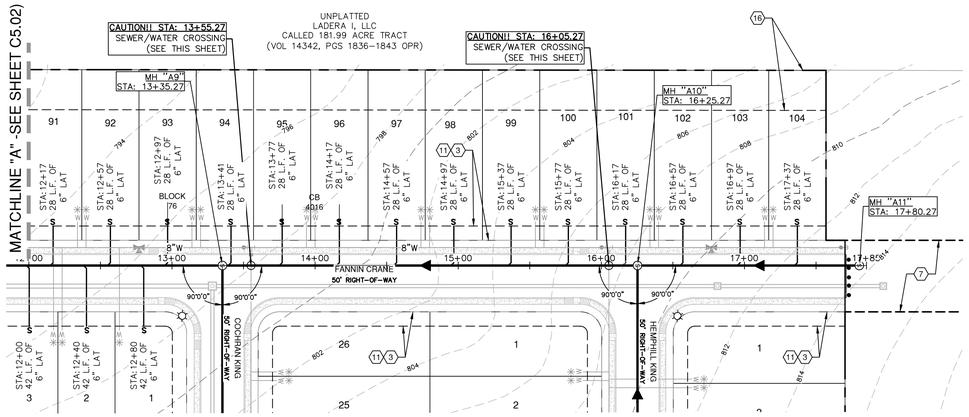
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

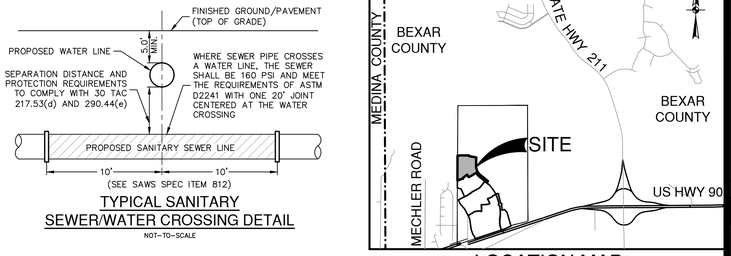
SANITARY SEWER LINE "A" PLAN & PROFILE
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PLAT NO. 24-11800057
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CHECKED AS DRAWN DD/RD
SHEET C5.02

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TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

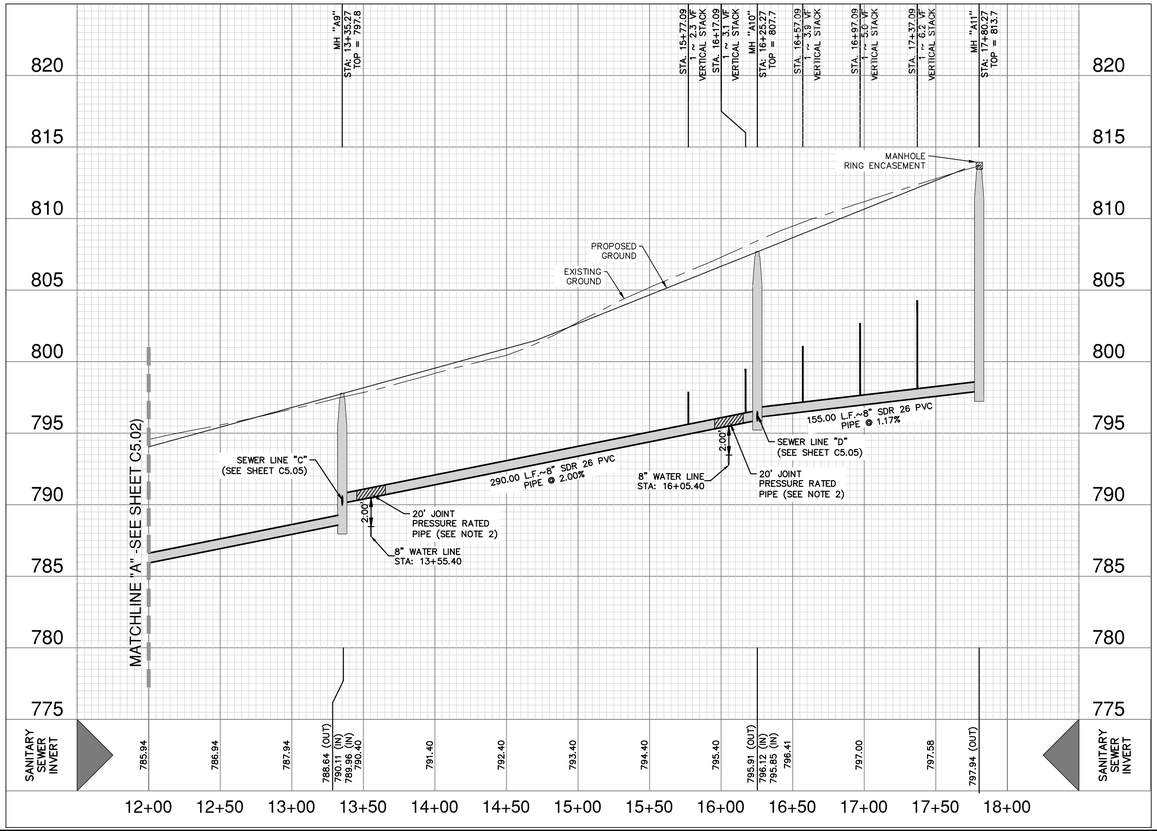
LOCATION MAP
NOT-TO-SCALE

SCALE: 1" = 50'

0' 50' 100' 150'

SEWER LEGEND

- PROJECT LIMITS
- EXISTING WATER
- EXISTING SEWER
- PROPOSED SEWER — MANHOLE
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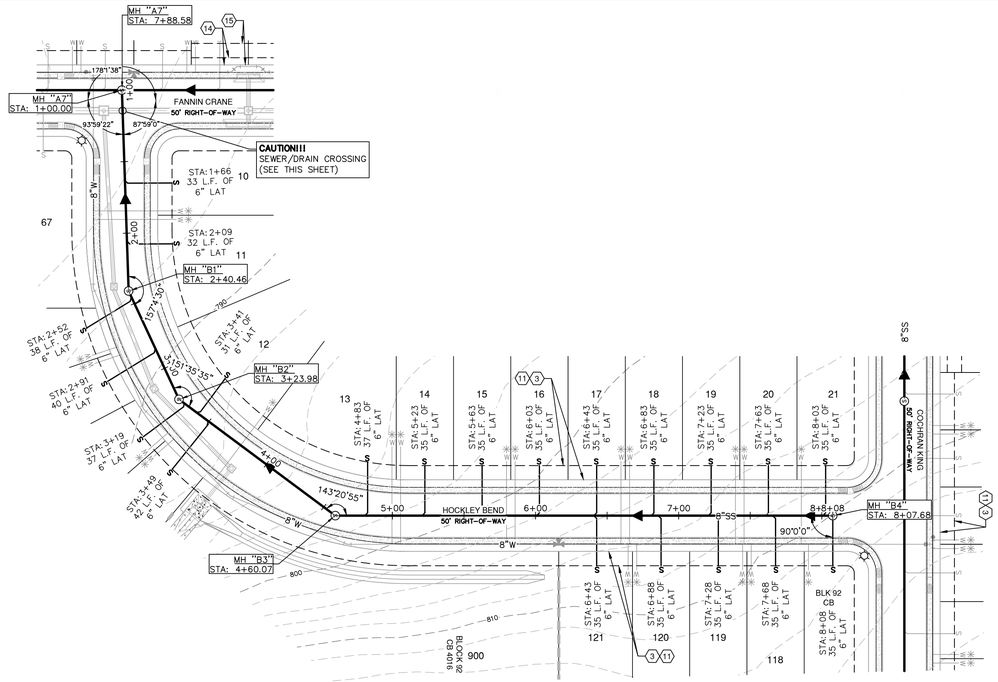
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STONEHILL UNIT-9
SAN ANTONIO, TEXAS

SANITARY SEWER LINE "A" PLAN & PROFILE
STA. 12+00.00 TO END

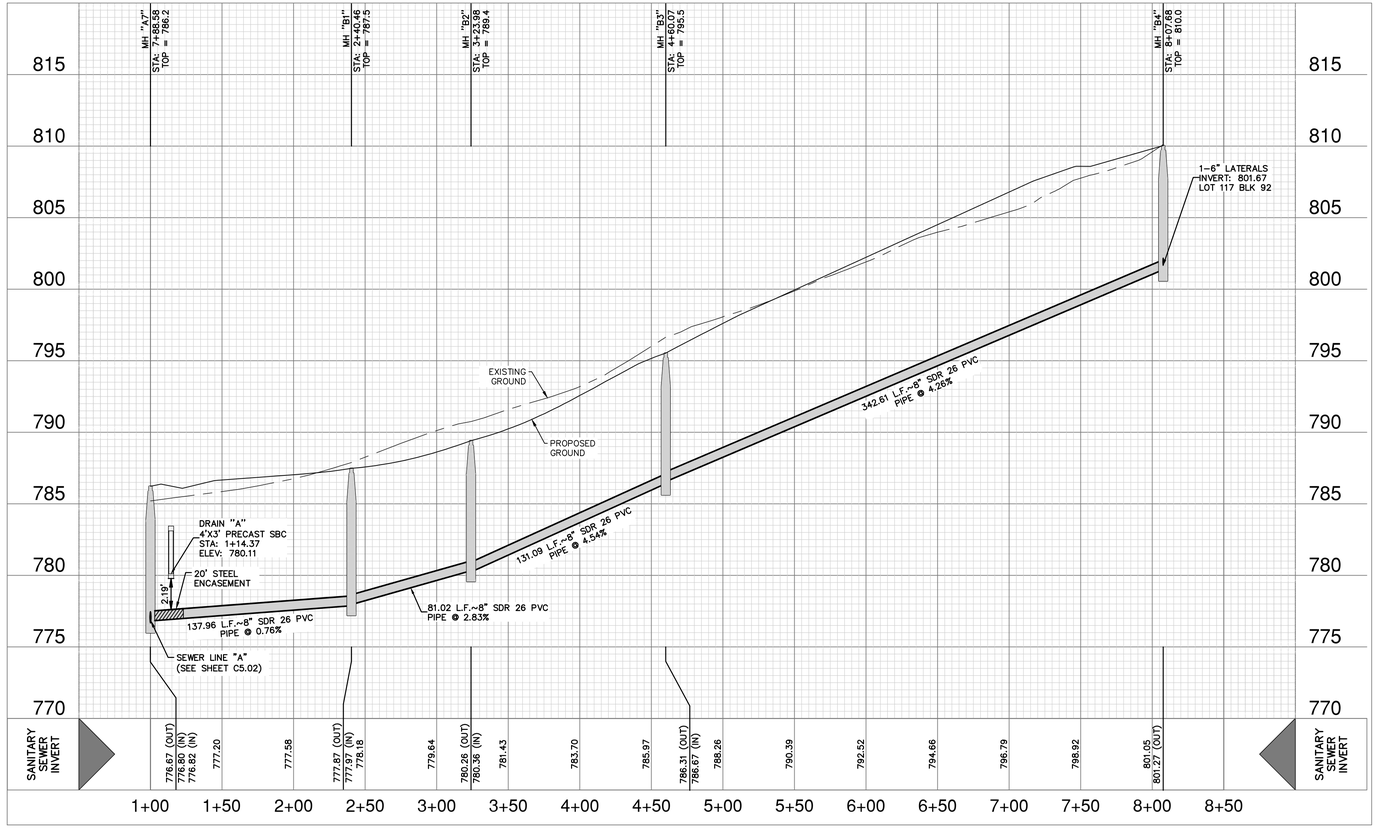
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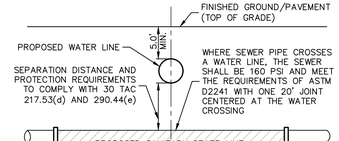
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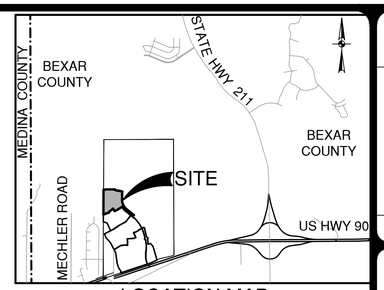
SANITARY SEWER LINE "B"
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'





TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE

SCALE: 1" = 50'

0' 50' 100' 150'

SEWER LEGEND

PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
PROPOSED WATER
PROPOSED WYE & LATERAL
MANHOLE
FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP#_066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO.24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
3/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

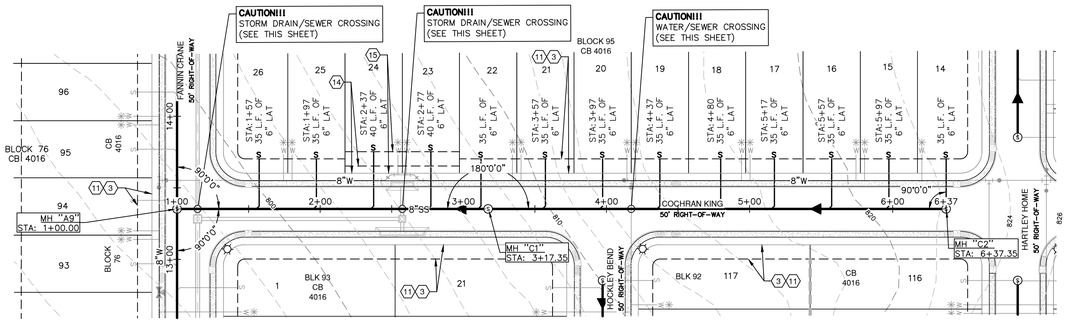
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SAN ANTONIO, TEXAS

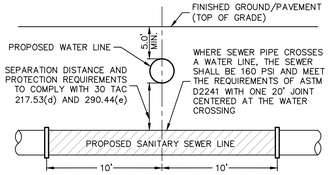
SANITARY SEWER LINE "B" PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.04

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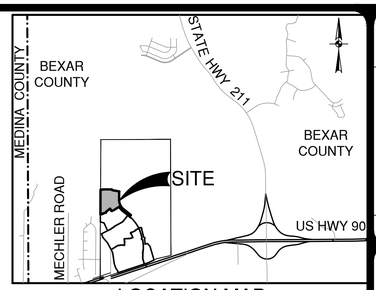
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TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'

SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED WYE & LATERAL

MANHOLE

FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

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(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

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SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.

ADDRESS: 5419 N LOOP 1604 E

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247

PHONE# (210) 496-2668 FAX# (210) 496-2668

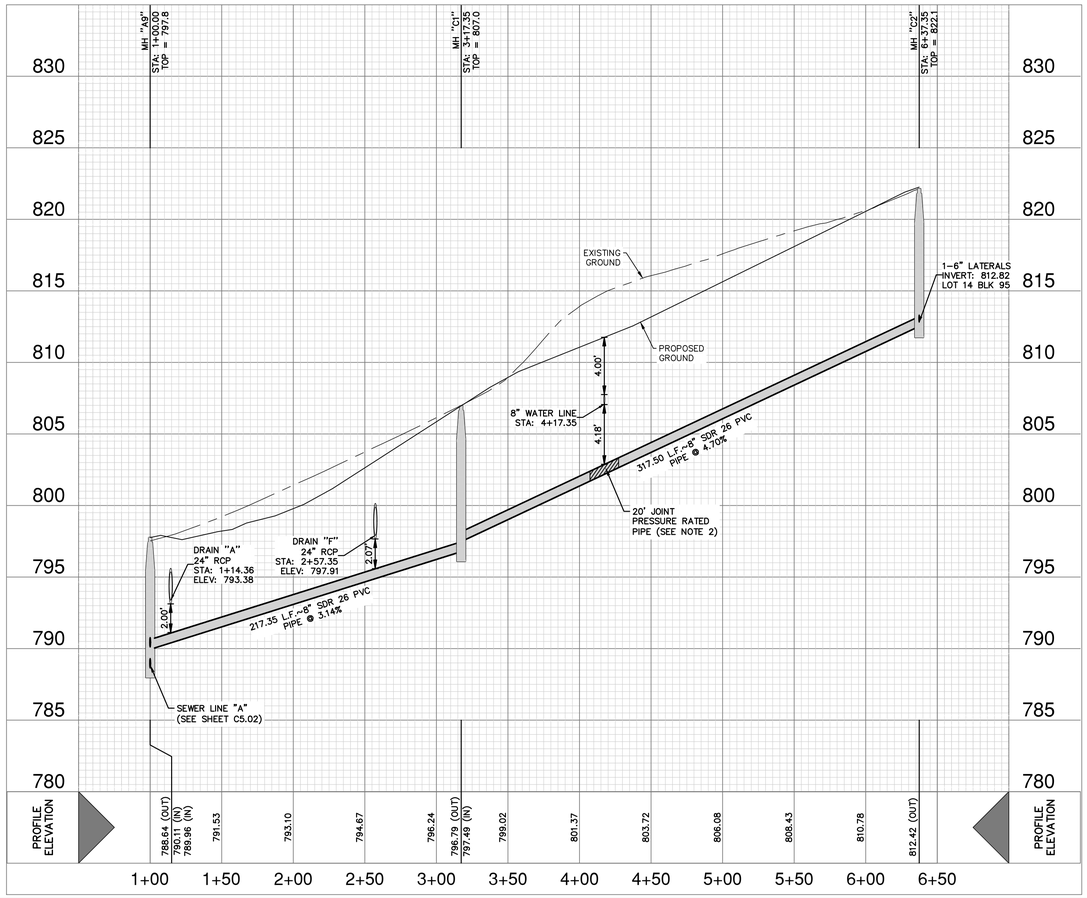
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009

TOTAL LINEAR FOOTAGE OF PIPE: 8"=3,913 LF PLAT NO. 24-11800057

NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

SANITARY SEWER LINE "C"
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
3/20/24

NO.	REVISION	DATE

STONEHILL UNIT-9

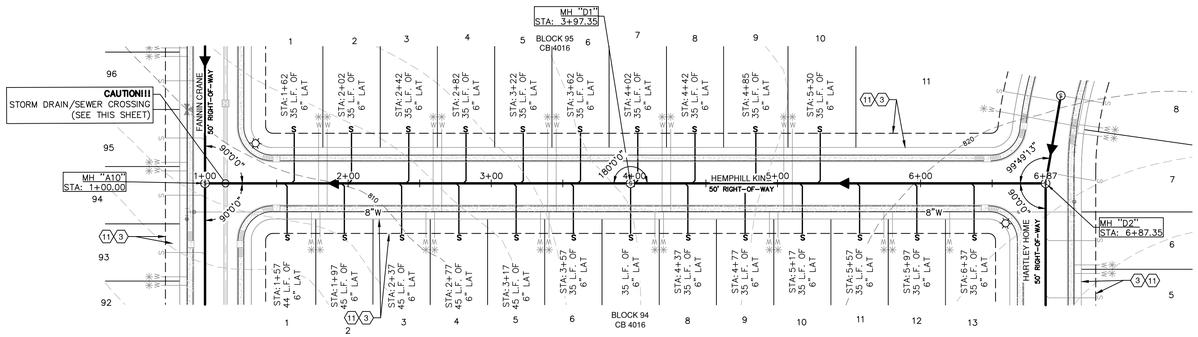
SAN ANTONIO, TEXAS

SANITARY SEWER LINE "C" PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.05

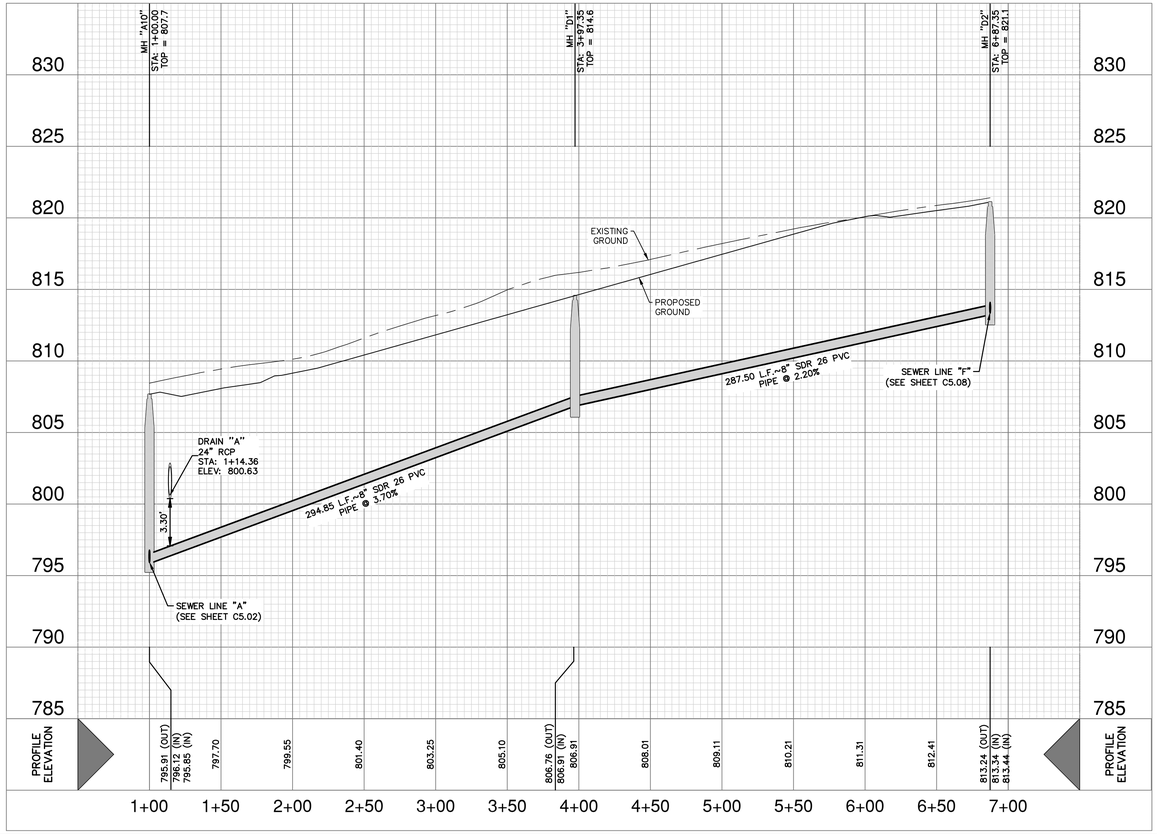
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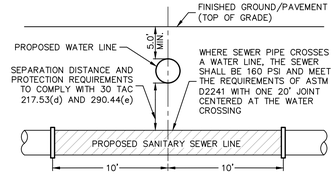
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SANITARY SEWER LINE "D"
STA. 1+00.00 TO END

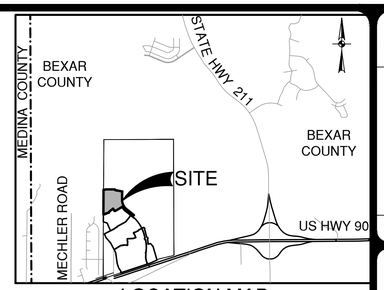
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'





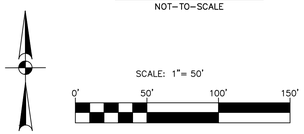
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE



SEWER LEGEND

- PROJECT LIMITS
- EXISTING WATER — W —
- EXISTING SEWER — SS —
- PROPOSED SEWER — SS — MANHOLE
- PROPOSED WATER — W — FIRE HYDRANT
- PROPOSED WYE & LATERAL — S

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

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SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
3/20/24

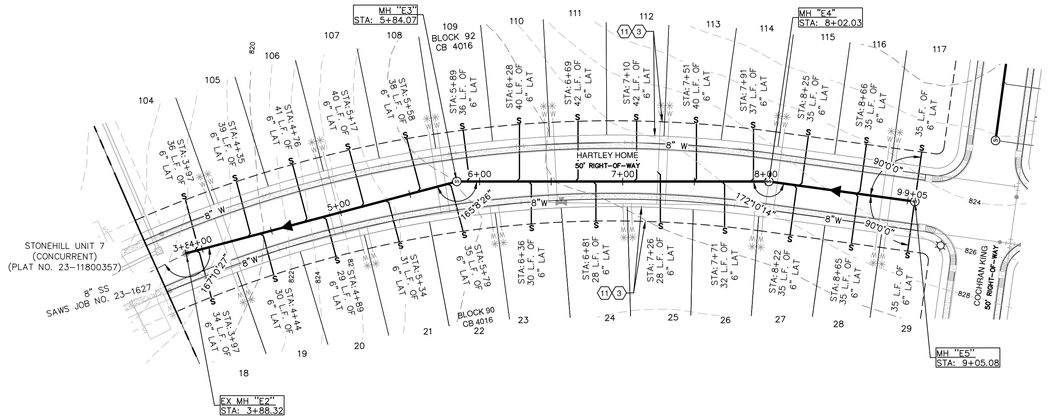
PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

SANITARY SEWER LINE "D" PLAN & PROFILE
STA. 1+00.00 TO END

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.06

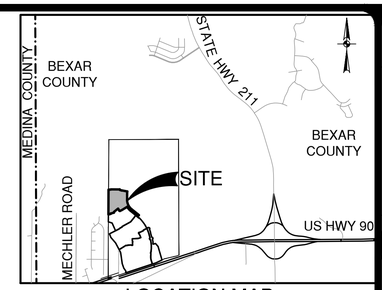
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TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1" = 50'

0' 50' 100' 150'

SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED WYE & LATERAL

MANHOLE

FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

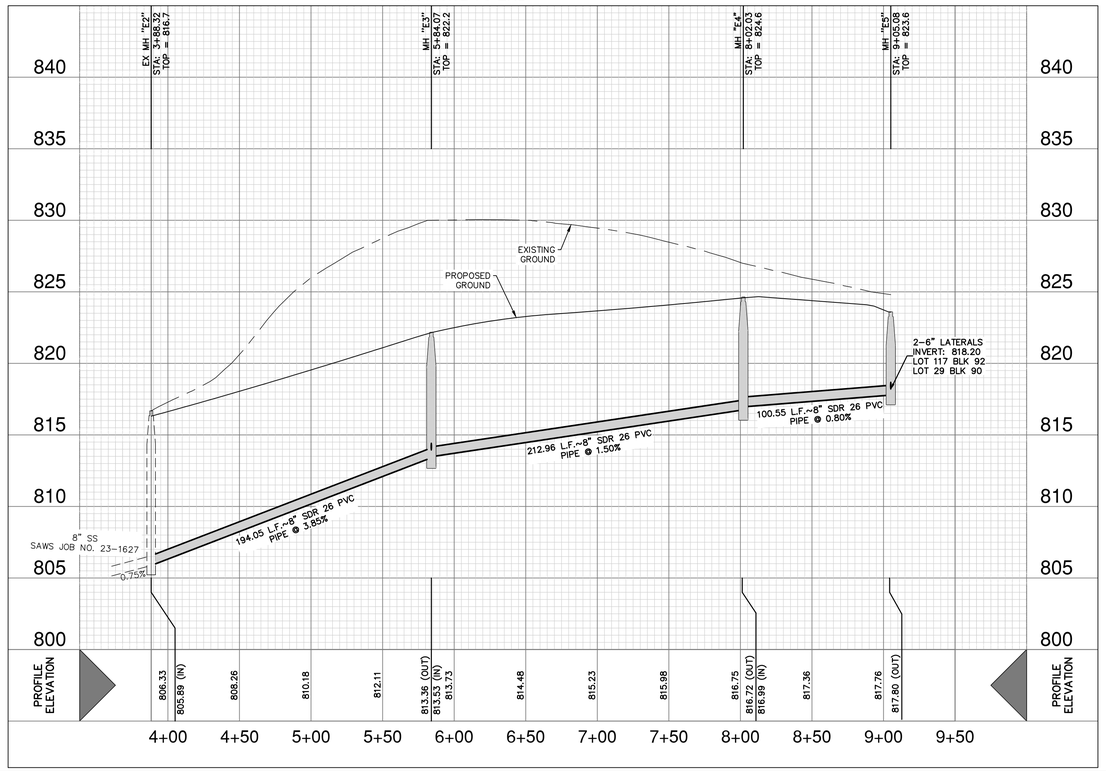
(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

SANITARY SEWER LINE "E"
STA. 3+80.32 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



TRENCH EXCAVATION SAFETY PROTECTION:

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LICENSED
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3/20/24

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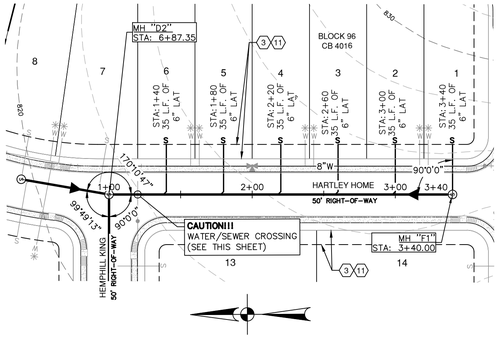
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

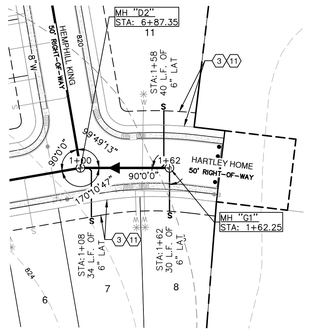
SANITARY SEWER LINE "E" PLAN & PROFILE
STA. 3+88.32 TO END

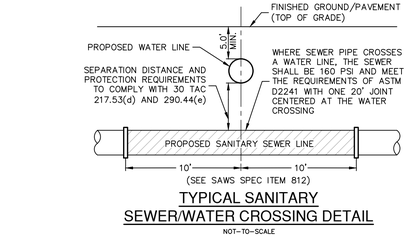
PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.07

Date: Mar 20, 2024, 4:08pm User ID: DDavila
File: P:\124\56\12\Design\Civil\SSPP - 1245612 (E).dwg

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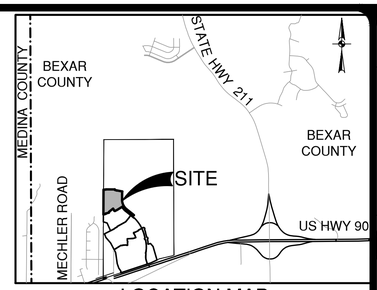






TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'

SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED WYE & LATERAL

MANHOLE

FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(6) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

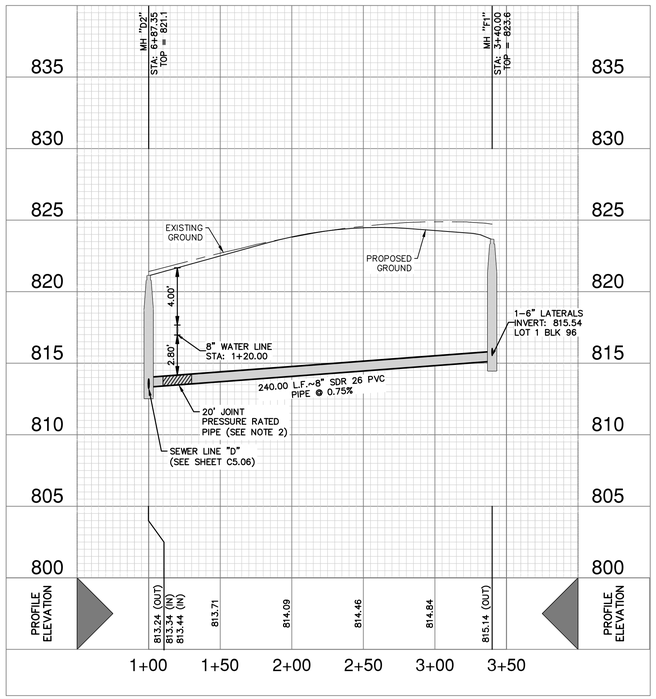
CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

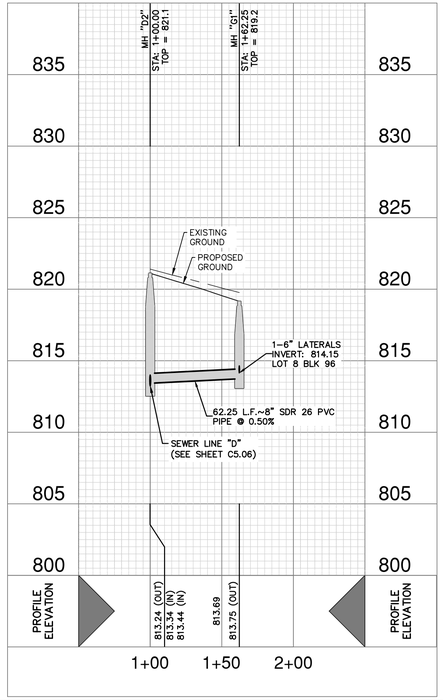
DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

SANITARY SEWER LINE "F"
STA. 1+00.00 TO END



SANITARY SEWER LINE "G"
STA. 1+00.00 TO END

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



DATE

NO. REVISION

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
3/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO I AUSTIN I HOUSTON I FORT WORTH I DALLAS
2000 NW LOOP 410 I SAN ANTONIO, TX 78213 I 210.375.9000
TEXAS ENGINEERING FIRM #470 I TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9

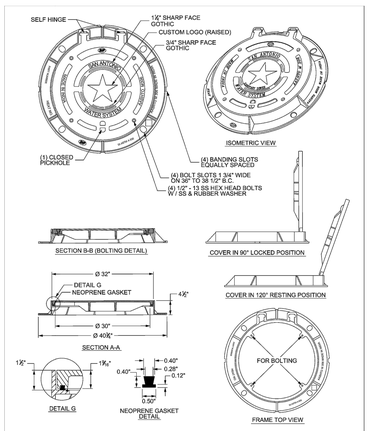
SAN ANTONIO, TEXAS

SANITARY SEWER LINE "F" & "G" PLAN & PROFILE

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.08

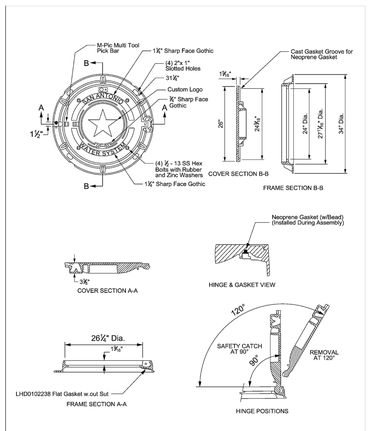
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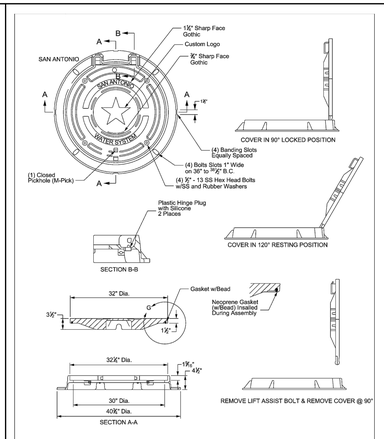
SJP Industries

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	30" MANHOLE RING AND COVER DETAIL	AUG 2019	
		DD 852-07	SHEET 1 OF 5



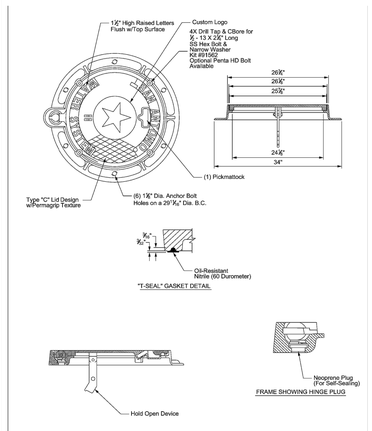
ERGO Assembly

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	MARCH 2008	AUG 2019
		DD 852-07	SHEET 2 OF 5



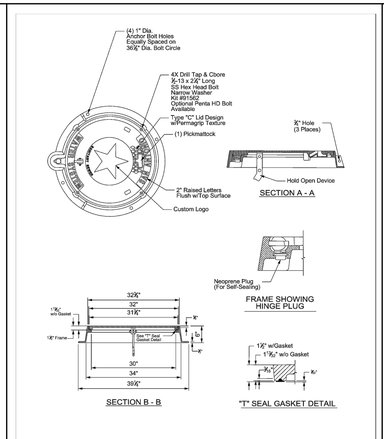
ERGO XL Assembly

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	MARCH 2008	AUG 2019
		DD 852-07	SHEET 3 OF 5



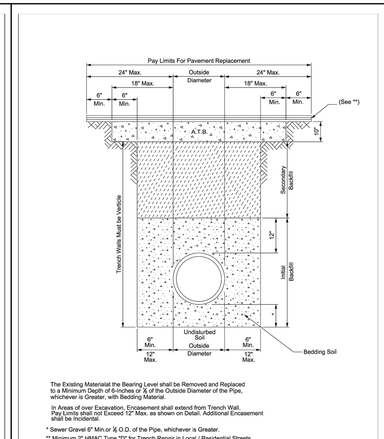
NEENAH FOUNDRY

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	MARCH 2008	AUG 2019
		DD 852-07	SHEET 4 OF 5



NEENAH FOUNDRY

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING AND COVER DETAIL	MARCH 2008	AUG 2019
		DD 852-07	SHEET 5 OF 5

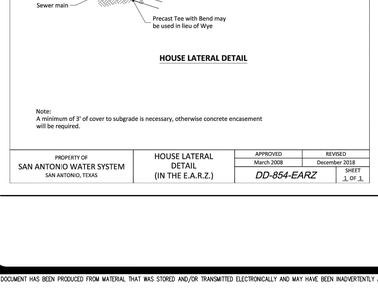


The Existing Materialat the Bearing Level shall be Removed and Replaced to a Minimum Depth of 6-inches or ¼ of the Outside Diameter of the Pipe, whichever is Greater, with Bedding Material.

In Areas of over Excavation, Encasement shall extend from Trench Wall. Pay Limits shall not Exceed 12" Max. as shown on Detail. Additional Encasement shall be incidental.

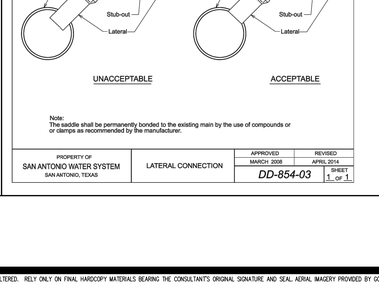
* Sewer Gravel 6" Min.or ¼ O.D. of the Pipe, whichever is Greater.
** Minimum 2" HMAC Type "D" for Trench Repair in Local / Residential Streets.
** Minimum 3" HMAC Type "C" for Trench Repair in Colector / Arterial Streets.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	SANITARY SEWER PIPE LAID IN TRENCH	MARCH 2008	DEC 2018
		DD-804-01	SHEET 1 OF 1



NOTES:
1. The Compaction Report will indicate the Station and the Depth of each Test Point, and will be submitted to the Engineer and SAWS Inspector.
2. Insure Compaction Probe Penetrates to same Depth as Lift.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TRENCH COMPACTION DETAIL	MARCH 2018	DEC 2018
		DD 804-02	SHEET 1 OF 1



Note:
All mandrels must be approved by SAWS Construction Inspections and stamped before use.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL	March 2008	
		DD-848-01	SHEET 1 OF 2

SIZE	A	B*	MANDREL O.D. PVC (SDR-26)	RING O.D. PVC (SDR-26)
6"	4.0"	4.5"	5.50	4.79
8"	5.5"	6"	7.37	6.66
10"	7.0"	7.5"	9.21	8.50
12"	8.0"	9"	10.96	10.25
15"	10.0"	11"	13.42	12.71
18"	12.0"	13.5"	——	——
21"	14.0"	16"	——	——
24"	16.0"	18"	——	——
27"	18.0"	20"	——	——

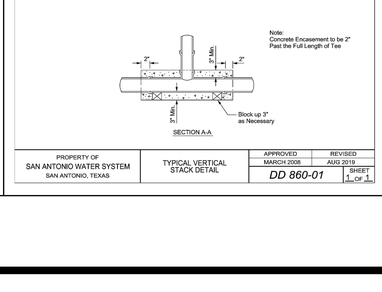
* Minimum Length

CHART

Notes:
PVC pipes and fittings 6" to 15" in diameter shall conform to ASTM D-3034-08.
PVC pipes and fittings 18" to 27" in diameter shall conform to ASTM F-679-08.

This information is provided as a reference. All deflection testing shall be done in accordance with TCEQ Chapter 217.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	GO, NO GO DEFLECTION TESTING MANDREL CHART	MARCH 2008	APRIL 2014
		DD-848-01	SHEET 2 OF 2

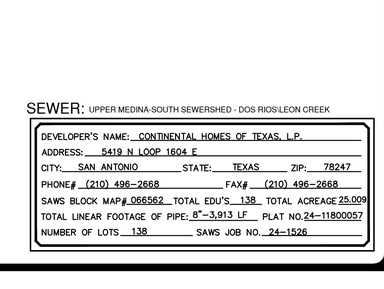


PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD PRECAST MANHOLE	MAY 2013	AUG 2019
		DD-852-01	SHEET 1 OF 2



General Notes:
1. Material for Sanitary Sewer Pipe Must be the Same from Manhole to Manhole. Changes in Type of Pipe May be Made only at Manholes, or Special Structures, Except as Approved by the Project Engineer.
2. Adaptors and Concrete Collars shall be used as approved by the SAWS Project Engineer.
3. Watertight Manhole Rings and Covers shall be Trans-Tex A77 "O" Ring or Approved Equal.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	STANDARD MONOLITHIC MANHOLE	March 2008	AUG 2019
		DD 852-01	SHEET 2 OF 2



NOTE:
1. The Concrete Shall be 4000 PSI Minimum and Reinforced with No. 4 Bars as Shown.
2. The Concrete Shall Extend to Edge of Saw Cut Pavement.
3. Manhole Ring Encasement is Required on all Manholes.
4. Manhole Lid shall Open in the Direction of Traffic or Downstream in Parkway

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	MANHOLE RING ENCASEMENT DETAIL	AUGUST 2009	AUG 2019
		DD 852-03	SHEET 1 OF 2

HOUSE LATERAL DETAIL

Note:
A minimum of 3' of cover to subgrade is necessary, otherwise concrete encasement will be required.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	HOUSE LATERAL DETAIL (IN THE E.A.R.Z.)	March 2008	December 2018
		DD-854-EARZ	SHEET 1 OF 1

Note:
The saddle shall be permanently bonded to the existing main by the use of compounds or clamps as recommended by the manufacturer.

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	LATERAL CONNECTION	MARCH 2008	APRIL 2014
		DD-854-03	SHEET 1 OF 1

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL CONCRETE DETAILS	MARCH 2008	DEC 2018
		DD 858-02	SHEET 1 OF 1

PROPERTY OF		APPROVED	REVISED
SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	TYPICAL VERTICAL STACK DETAIL	MARCH 2008	AUG 2019
		DD 860-01	SHEET 1 OF 1

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP#.066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO.24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

DATE
NO. REVISION

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
3/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
SANITARY SEWER DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.10

Date: Mar 20, 2024, 4:10pm User ID: DDavila
File: P:\124\56\12\Design\Civil\SSD1-124612.dwg

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SAWS CONSTRUCTION NOTES

(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

   A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.
   B. CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".
   C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
   D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
   E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).

2. THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.

3. THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS. UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.

4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.

5. LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.

6. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

   - SAWS UTILITY LOCATES: HTTP://WWW.SAWS.ORG/SERVICE/LOCATES
   - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
   - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
   - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
   - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.

8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.

9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.

10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

    ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.

12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS SEWER NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

   A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.
   B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.
   C. CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.
   D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.
   E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.
   F. MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

   SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.

   NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.

2. IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".

3. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS. THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.

4. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44(E)(4)(B). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.

5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)

6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE REGARDLESS OF SIZE.

7. MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.

8. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

PROJECT SEWER NOTES

1. ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SEPARATE PAY ITEM.
2. CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C5.10
3. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
4. ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
5. WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
6. CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
7. ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED.
8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
11. CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
12. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
13. ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
14. IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
15. ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

SEWER: UPPER MEDINA-SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX# (210) 496-2668
SAWS BLOCK MAP# 066562 TOTAL EDU'S 138 TOTAL ACREAGE 25.009
TOTAL LINEAR FOOTAGE OF PIPE: 8"-3,913 LF PLAT NO. 24-11800057
NUMBER OF LOTS 138 SAWS JOB NO. 24-1526

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
3/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

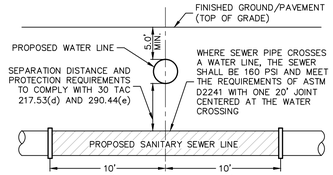
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

SANITARY SEWER NOTES

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE MARCH 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C5.11

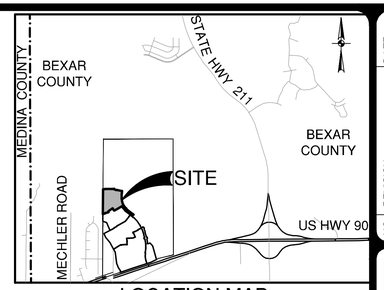
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TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

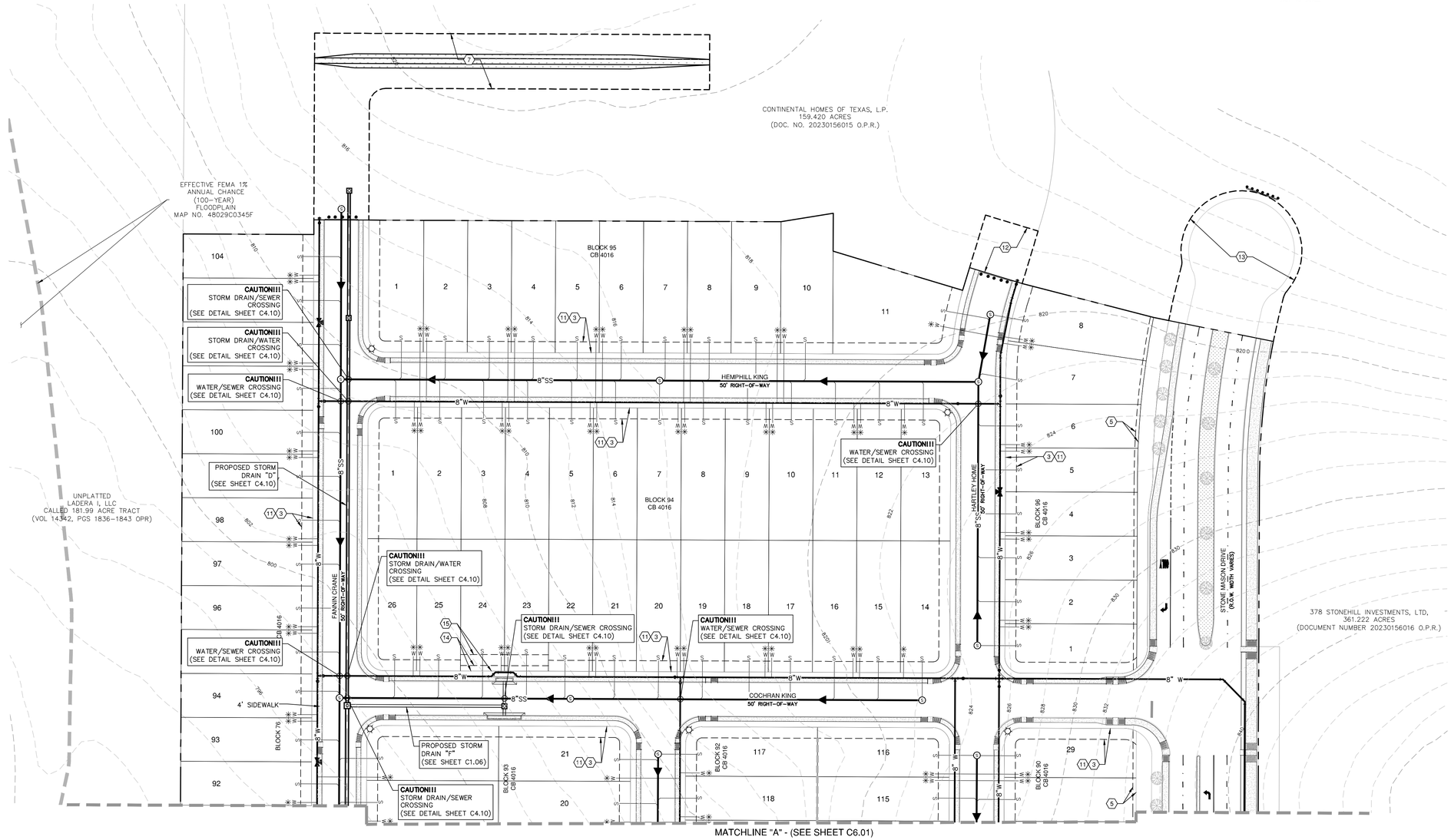


LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'



MATCHLINE "A" - (SEE SHEET C6.01)

UTILITY LEGEND

PROJECT LIMITS	
EXISTING WATER	W
EXISTING SEWER	SS
PROPOSED SEWER	SS MANHOLE
PROPOSED WATER	W FIRE HYDRANT
PROPOSED WYE & LATERAL	W S
SINGLE WATER SERVICE	W
DUAL WATER SERVICE	W W
STREET LIGHTS	SL
GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT	GETCTV

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

CONDUIT NOTES:

1. CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
2. CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 36 INCHES BELOW PROPOSED FINISHED GRADE. SCHEDULE 80 TO BE USED FOR CPS CONDUITS. ALL OTHER CONDUITS ARE SCHEDULE 40.
3. ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
4. ALL CONDUIT SLEEVES TO BE USED FOR ELECTRIC, GAS, OR TELECOMMUNICATION UTILITY CROSSINGS SHALL BE INSTALLED TO MEET OR EXCEED DESIGN REQUIREMENTS FOR THE UTILITY AGENCY WHICH THEY ARE SERVING, INCLUDING BUT NOT LIMITED TO THE DEPTH, TRENCH PLACEMENT, AND PROXIMITY TO OTHER UTILITIES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING AND INSTALLING THE CONDUIT SLEEVES TO MEET THESE SPECIFICATIONS INCLUDING COORDINATING WITH THE UTILITY AGENCY FOR ANY REQUIRED INSPECTIONS

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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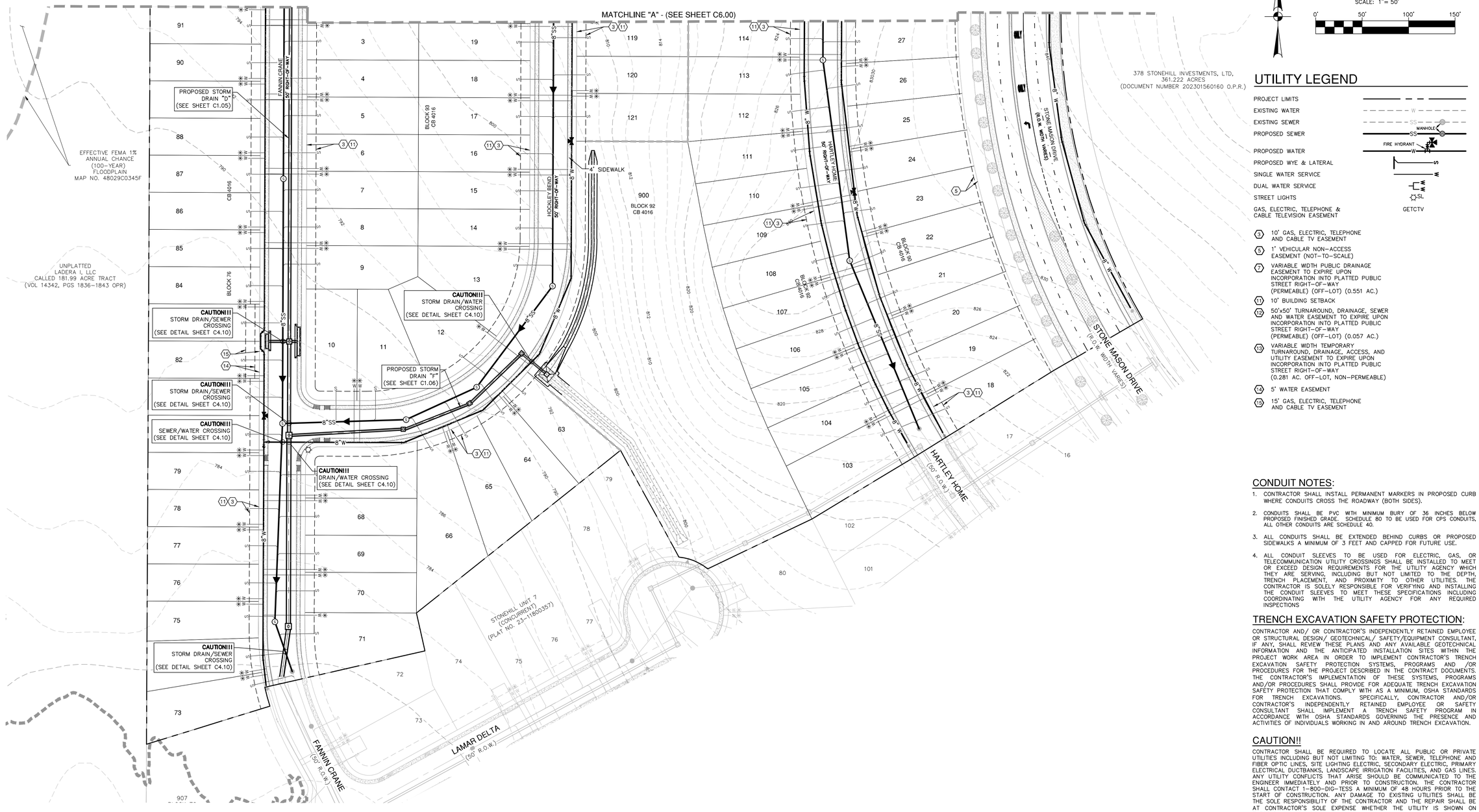
STONEHILL UNIT-9
SAN ANTONIO, TEXAS

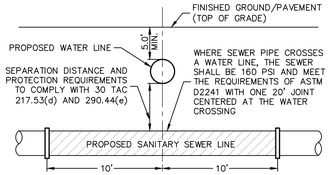
OVERALL UTILITY PLAN
(SHEET 1 OF 2)

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C6.00

Date: Feb 22, 2024, 9:50am User ID: dlevine
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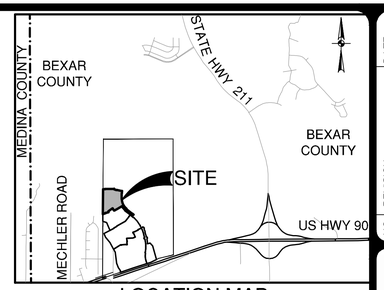
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TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE



LOCATION MAP

NOT-TO-SCALE

SCALE: 1"= 50'

0' 50' 100' 150'

UTILITY LEGEND

- PROJECT LIMITS
- EXISTING WATER
- EXISTING SEWER
- PROPOSED SEWER
- PROPOSED WATER
- PROPOSED WYE & LATERAL
- SINGLE WATER SERVICE
- DUAL WATER SERVICE
- STREET LIGHTS
- GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT (GETCTV)

MANHOLE, FIRE HYDRANT

(3) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

(5) 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)

(7) VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)

(11) 10' BUILDING SETBACK

(12) 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)

(13) VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)

(14) 5' WATER EASEMENT

(15) 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT

CONDUIT NOTES:

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CAUTION!!

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STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9

SAN ANTONIO, TEXAS

OVERALL UTILITY PLAN (SHEET 1 OF 2)

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C6.01

Date: Feb 22, 2024, 9:50am User ID: dlevine
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SWP3 MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

378 STONEHILL INVESTMENTS, LTD.
361.222 ACRES
(DOCUMENT NUMBER 20230156016O O.P.R.)

25.84 TOTAL ACRES
(AREA OF DISTURBANCE)

STONE MASON DRIVE
(R.O.W. WIDTH VARIES)

HARTLEY HOME
50' RIGHT-OF-WAY

HOCKLEY BEND
50' RIGHT-OF-WAY

COCHRAN KING
50' RIGHT-OF-WAY

HEMPHILL KING
50' RIGHT-OF-WAY

FANNIN CRANE
50' RIGHT-OF-WAY

BLOCK 96 CB 4016
BLOCK 90 CB 4016
BLOCK 92 CB 4016
BLOCK 94 CB 4016
BLOCK 95 CB 4016
BLOCK 93 CB 4016
BLOCK 76 CB 4016

CONTINENTAL HOMES OF TEXAS, L.P.
155.420 ACRES
(DOC. NO. 20230156015 O.P.C)

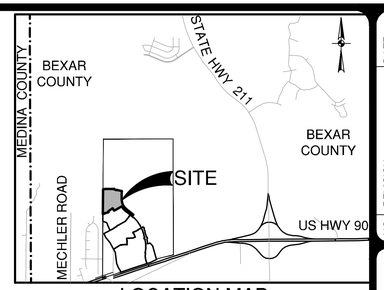
LADERA I, LLC
CALLED 181.99 ACRE TRACT
(VOL. 14342, PGS. 1836-1843 O.P.R.)

STONEHILL UNIT 7
(PLAT NO. 23-11800357)
(CONCURRENT)

LAMAR DELTA
(50' R.O.W.)

KEYED NOTES:

1. 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
2. 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE)
3. VARIABLE WIDTH PUBLIC DRAINAGE AND ACCESS EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.551 AC.)
4. 10' BUILDING SETBACK
5. 50'x50' TURNAROUND, DRAINAGE, SEWER AND WATER EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (PERMEABLE) (OFF-LOT) (0.057 AC.)
6. VARIABLE WIDTH TEMPORARY TURNAROUND, DRAINAGE, ACCESS, AND UTILITY EASEMENT TO EXPIRE UPON INCORPORATION INTO PLATTED PUBLIC STREET RIGHT-OF-WAY (0.281 AC. OFF-LOT, NON-PERMEABLE)
7. 5' WATER EASEMENT
8. 15' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
9. VARIABLE WIDTH PUBLIC DRAINAGE EASEMENT (OFF-LOT) (0.188 TOTAL AC.)
10. 15' PUBLIC DRAINAGE EASEMENT (OFF-LOT) (0.083 TOTAL AC) (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
11. 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
12. 10' BUILDING SETBACK (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
13. 15' PUBLIC DRAINAGE EASEMENT (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)
14. 1' VEHICULAR NON-ACCESS EASEMENT (NOT-TO-SCALE) (STONEHILL UNIT 7 PLAT #23-11800358) (CONCURRENT)



LOCATION MAP
NOT-TO-SCALE

SCALE: 1"= 60'
0' 60' 120' 180'

SWPPP LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR (976)
- PROPOSED CONTOUR (970)
- FLOW ARROW (EXISTING)
- FLOW ARROW (PROPOSED)
- SILT FENCE
- ROCK BERM
- GRAVEL FILTER BAGS
- GRATE INLET PROTECTION
- SEDIMENT CONTROL ROLLS
- LIMITS OF DISTURBED AREA (25.25 AC)
- STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)
- CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)

GENERAL NOTES

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.

2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.

3. STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.

4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.

5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.

6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.

7. STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.

8. AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.

9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT AREAS.

10. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.

11. UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.

12. WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.

13. SHADED AREA ▭ DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES.

14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.

15. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

16. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 2

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED PROFESSIONAL ENGINEER
2/20/24

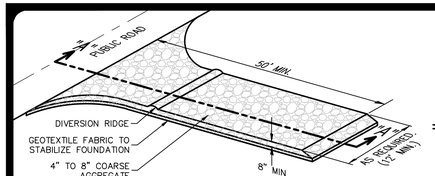
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS
STORMWATER POLLUTION PREVENTION PLAN

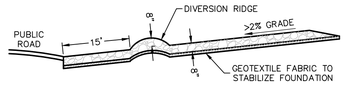
PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C8.00

Date: Feb 22, 2024, 9:52am User ID: dlevine
File: P:\124\56\12\Design\Civil\SWPPP-124561 2.dwg

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SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT



SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

MATERIALS

1. THE AGGREGATE SHOULD CONSIST OF 4–INCH TO 8–INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.

2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8–INCHES.

3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.

4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4–INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.

2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.

3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.

4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6–INCHES TO 8–INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.

5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.

6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.

7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.

8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL–SEDIMENT WASHES ONTO PUBLIC ROAD.

2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.

3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC–EXTEND PAD BEYOND THE MINIMUM 50–FOOT LENGTH AS NECESSARY.

4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

5. UNSTABLE FOUNDATION – USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

INSPECTION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.

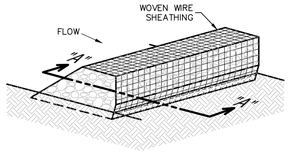
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAY.

4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

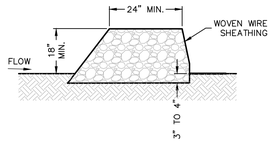
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT–TO–SCALE



ISOMETRIC PLAN VIEW



SECTION "A-A"

ROCK BERMS

THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT–LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE, AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.

2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.

3. REPAIR ANY LOOSE WIRE SHEATHING.

4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.

5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.

6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

MATERIALS

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.

2. CLEAN, OPEN GRADED 3–INCH TO 5–INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5–INCH TO 8–INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.

2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.

3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".

4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.

5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.

6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

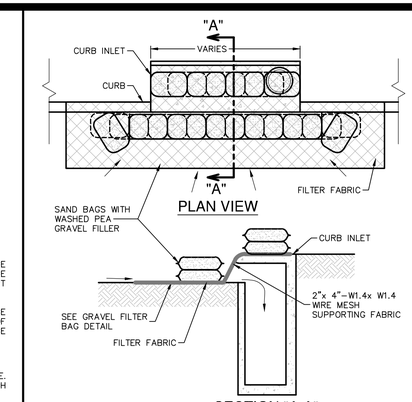
COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).

2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

ROCK BERM DETAIL

NOT–TO–SCALE



PLAN VIEW

SECTION "A-A"

GENERAL NOTES

1. CONTRACTOR TO INSTALL 2"x4"–W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.

2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.

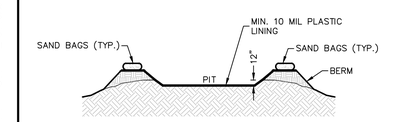
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.

5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT–TO–SCALE

PLAN VIEW



SECTION "A-A"

GENERAL NOTES

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.

2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.

3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.

4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.

5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

MAINTENANCE

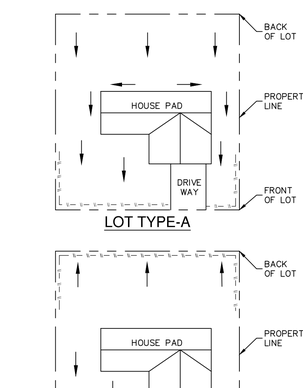
1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.

2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.

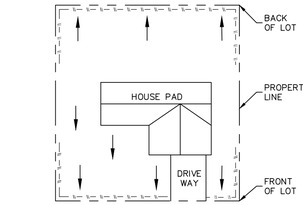
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT PIT DETAIL

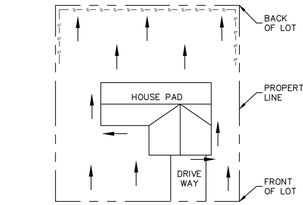
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LOT TYPE–A



LOT TYPE–B



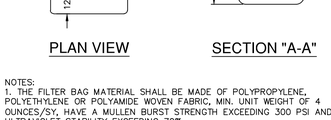
LOT TYPE–C

NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND
SILT FENCE
DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT–TO–SCALE



PLAN VIEW

SECTION "A-A"

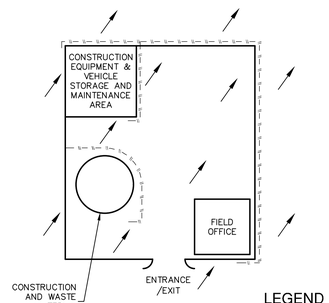
NOTES:
1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.

2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).

3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT–TO–SCALE



LEGEND
SILT FENCE
FLOW ARROWS

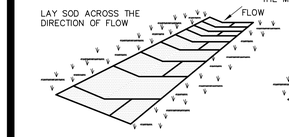
CONSTRUCTION STAGING AREA

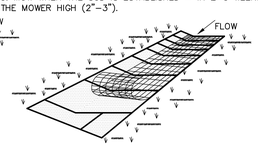
NOT–TO–SCALE

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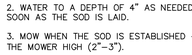
EXHIBIT 3





LAY SOD IN A STAGGERED PATTERN. BUTT THE STRIPS TIGHTLY AGAINST EACH OTHER. DO NOT LEAVE SPACES AND DO NOT OVERLAP. A SHARPENED MASON'S TROWEL IS A HANDY TOOL FOR TUCKING DOWN THE ENDS AND TRIMMING PIECES.

BUTTING – ANGLED ENDS CAUSED BY THE AUTOMATIC SOD CUTTER MUST BE MATCHED CORRECTLY.



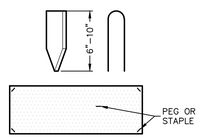
APPEARANCE OF GOOD SOD

NOTES:
1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL.

2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID.

3. MOW WHEN THE SOD IS ESTABLISHED – IN 2–3 WEEKS. SET THE MOWER HIGH (2"–3").

SOD INSTALLATION



USE PEGS OR STAPLES TO FASTEN SOD FIRMLY – AT THE ENDS OF STRIPS AND IN THE CENTER, OR EVERY 3–4 FEET IF THE STRIPS ARE LONG. WHEN READY TO MOW, DRIVE PEGS OR STAPLES FLUSH WITH THE GROUND.

MATERIALS

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.

2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.

3. STANDARD SIZE SECTIONS OF SOD SHOULD BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.

4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION

1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.

2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

3. FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).

2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

GENERAL INSTALLATION (VA. DEPT. OF CONSERVATION, 1992)

1. SOD SHOULD NOT BE CUT OR LAID IN EXCESSIVELY WET OR DRY WEATHER. SOD ALSO SHOULD NOT BE LAID ON SOIL SURFACES THAT ARE FROZEN.

2. DURING PERIODS OF HIGH TEMPERATURE, THE SOIL SHOULD BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD, TO COOL THE SOIL AND REDUCE ROOT BURNING AND DIEBACK.

3. THE FIRST ROW OF SOD SHOULD BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND BUTTING TIGHTLY AGAINST EACH OTHER. LATERAL JOINTS SHOULD BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. CARE SHOULD BE EXERCISED TO ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE DRYING OF THE ROOTS (SEE FIGURE ABOVE).

4. ON SLOPES 3:1 OR GREATER, OR WHEREVER EROSION MAY BE A PROBLEM, SOD SHOULD BE LAID WITH STAGGERED JOINTS AND SECURED BY STAPLING OR OTHER APPROVED METHODS. SOD SHOULD BE INSTALLED WITH THE LENGTH PERPENDICULAR TO THE SLOPE (ON CONTOUR).

5. AS SODDING OF CLEARLY DEFINED AREAS IS COMPLETED, SOD SHOULD BE ROLLED OR TAMPED TO PROVIDE FIRM CONTACT BETWEEN ROOTS AND SOIL.

6. AFTER ROLLING, SOD SHOULD BE IRRIGATED TO A DEPTH SUFFICIENT THAT THE UNDERSIDE OF THE SOD PAD AND THE SOIL 4 INCHES BELOW THE SOD IS THOROUGHLY WET.

7. UNTIL SUCH TIME A GOOD ROOT SYSTEM BECOMES DEVELOPED, IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHOULD BE PERFORMED AS OFTEN AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF AT LEAST 4 INCHES.

8. THE FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL THE SOD IS FIRMLY ROOTED, USUALLY 2–3 WEEKS. NOT MORE THAN ONE THIRD OF THE GRASS LEAF SHOULD BE REMOVED AT ANY ONE CUTTING.

INSPECTION AND MAINTENANCE GUIDELINES

1. SOD SHOULD BE INSPECTED WEEKLY AND AFTER EACH RAIN EVENT TO LOCATE AND REPAIR ANY DAMAGE.

2. DAMAGE FROM STORMS OR NORMAL CONSTRUCTION ACTIVITIES SUCH AS TIRE RUTS OR DISTURBANCE OF SWALE STABILIZATION SHOULD BE REPAIRED AS SOON AS PRACTICAL.

SOD INSTALLATION DETAIL

NOT–TO–SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER–BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN2, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.

2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y–BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINDELL HARDNESS EXCEEDING 140.

3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1–FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER. WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.

2. LAY OUT FENCING DOWN–SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

3. THE TOE OF THE SILT FENCE SHOULD BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWN–SLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED IN (E.G., PAVEMENT OR ROCK OUTCROP), WEIGHT FABRIC FLAP WITH 3 INCHES OF PEA GRAVEL ON UPHILL SIDE TO PREVENT FLOW FROM SEEPING UNDER FENCE.

4. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

5. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHOULD BE A 3–FOOT OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

6. SILT FENCE SHOULD BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

COMMON TROUBLE POINTS

1. FENCE NOT INSTALLED ALONG THE CONTOUR CAUSING WATER TO CONCENTRATE AND FLOW OVER THE FENCE.

2. FABRIC NOT SEATED SECURELY TO GROUND (RUNOFF PASSING UNDER FENCE).

3. FENCE NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND SIDES).

4. FENCE TREATING TOO LARGE AN AREA, OR EXCESSIVE CHANNEL FLOW (RUNOFF OVERTOPS OR COLLAPSES FENCE).

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECT ALL FENCING WEEKLY, AND AFTER RAINFALL.

2. REMOVE SEDIMENT WHEN BUILDUP REACHES 6 INCHES.

3. REPLACE TORN FABRIC OR INSTALL A SECOND LINE OF FENCING PARALLEL TO THE TORN SECTION.

4. REPLACE OR REPAIR SECTIONS CRUSHED OR COLLAPSED IN THE COURSE OF CONSTRUCTION ACTIVITY. IF A SECTION OF FENCE IS OBSTRUCTING VEHICULAR ACCESS, CONSIDER RELOCATING IT TO A SPOT WHERE IT WILL PROVIDE EQUAL PROTECTION, BUT WILL NOT OBSTRUCT VEHICLES. A TRIANGULAR FILTER DIKE MAY BE PREFERABLE TO A SILT FENCE AT COMMON VEHICLE ACCESS POINTS.

5. WHEN CONSTRUCTION IS COMPLETE, THE SEDIMENT SHOULD BE DISPOSED OF IN A MANNER THAT WILL NOT CAUSE ADDITIONAL SILTATION AND THE PRIOR LOCATION OF THE SILT FENCE SHOULD BE REVEGETATED. THE FENCE ITSELF SHOULD BE DISPOSED OF IN AN APPROVED LANDFILL.

SILT FENCE DETAIL

NOT–TO–SCALE

NO.	REVISION	DATE

STATE OF TEXAS
CALEB M. CHANCE
98401
LICENSED
PROFESSIONAL ENGINEER
2/20/24

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

STONEHILL UNIT-9
SAN ANTONIO, TEXAS

STORMWATER POLLUTION PREVENTION PLAN DETAILS

PLAT NO. 24-11800057
JOB NO. 12456-12
DATE FEBRUARY 2024
DESIGNER DL/RG/UV
CHECKED AS DRAWN DD/RD
SHEET C8.10

Date: Feb 22, 2024, 11:39am User ID: dlevine
File: P:\124\456\12\Design\Civil\SWPPP-124561 2.dwg

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