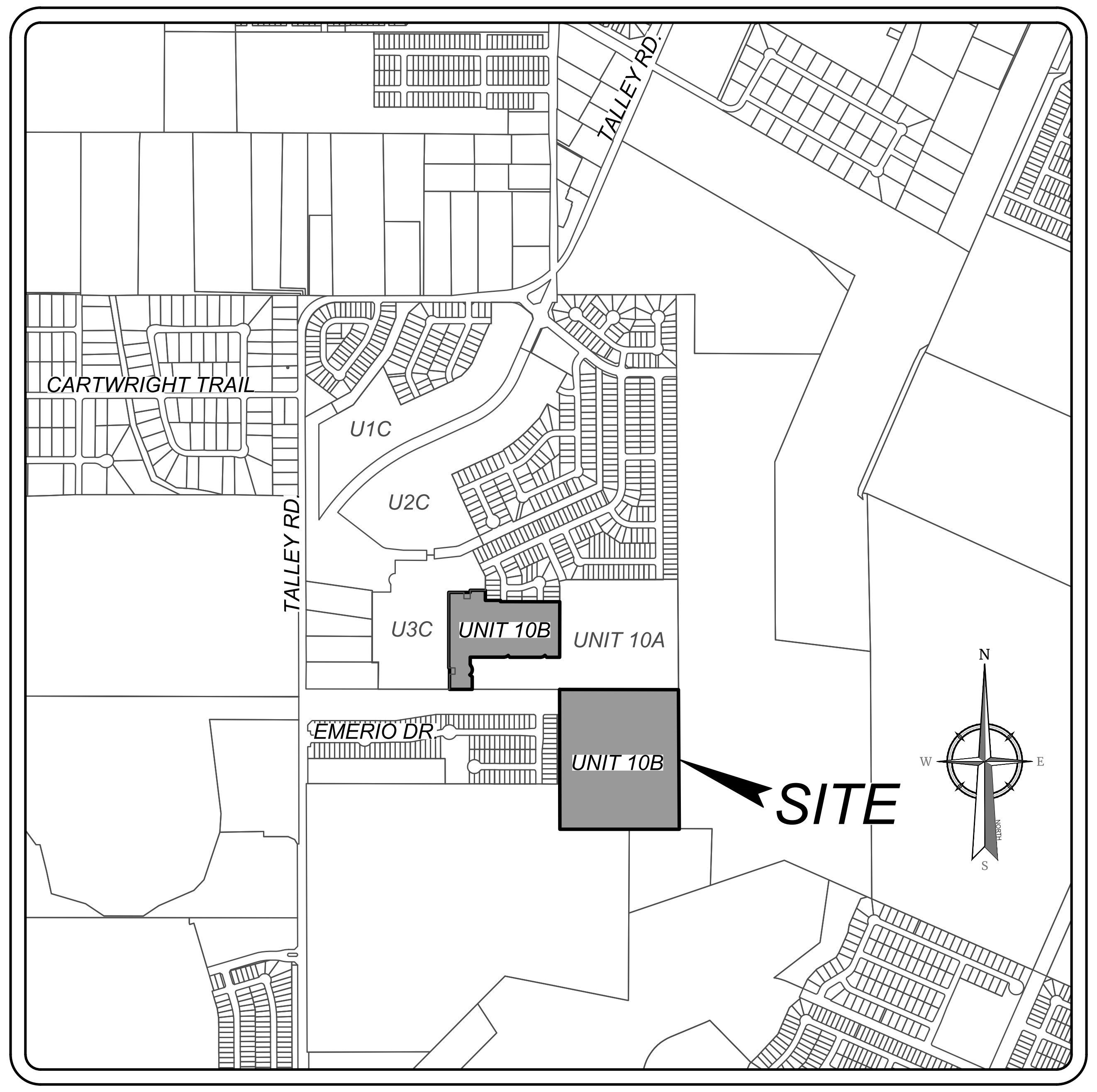
MORGAN MEADOWS, UNIT 10B

BEXAR COUNTY, TEXAS

STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS



LOCATION MAP
NOT-TO-SCALE

OWNER INFORMATION
TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
5210 THOUSAND OAKS, SUITE 1318
SAN ANTONIO, TX 78233

INDEX

Sheet Title	Sheet Number
COVER SHEET	1.1
OVERALL UTILITY PLAN (SHT 1 OF 2)	2.1
OVERALL UTILITY PLAN (SHT 2 OF 2)	2.2
MASTER DRAINAGE PLAN	3.1
OVERALL GRADING PLAN (SHT 1 OF 2)	4.1
OVERALL GRADING PLAN (SHT 2 OF 2)	4.2
PRIVATE DRAIN "A" PLAN & PROFILE	5.1
PRIVATE DRAIN "B" PLAN & PROFILE	5.2
PRIVATE DRAIN "C" PLAN & PROFILE	5.3
PRIVATE DRAIN "F" PLAN & PROFILE	5.4
PRIVATE DRAIN 'G" PLAN & PROFILE	5.5
PRIVATE DRAIN "H" PLAN & PROFILE	5.6
BASIN "B" PLAN & PROFILE	5.7
BASIN "C" PLAN & PROFILE	5.8
BASIN "D" PLAN & PROFILE	5.9
BASIN DETAILS	5.10
DRAIN "I" PLAN & PROFILE	5.11
NORVILLE DR & SHAGGY GRV PLAN & PROFILE	6.1
FREDDIE FIELD & REX RIDGE PLAN & PROFILE	6.2
LONGCOURT DR & DAPHNE HILL PLAN & PROFILE	6.3
LANTERN LP, VELMA VALE, MIDNIGHT DEW PLAN & PROFILE	6.4
MIDNIGHT DEW, STREET "G", LANTERN LP PLAN & PROFILE	6.5
STREET "H" & STREET "K" PLAN & PROFILE	6.6
TYPICAL STREET DETAIL	6.7
WHEELCHAIR RAMP DETAILS (SHT 1 OF 2)	6.8
WHEELCHAIR RAMP DETAILS (SHT 2 OF 2)	6.9
CONCRETE DRIVEWAY DETAILS	6.10
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN (SHT 1 OF 2)	6.11
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN (SHT 2 OF 2)	6.12
TRAFFIC SIGNAGE DETAILS (SHT 1 OF 3)	6.13
TRAFFIC SIGNAGE DETAILS (SHT 2 OF 3)	6.14
TRAFFIC SIGNAGE DETAILS (SHT 3 OF 3)	6.15
SANITARY SEWER COVER SHEET	7.1
OVERALL SANITARY SEWER (SHT 1 OF 2)	7.2
OVERALL SANITARY SEWER (SHT 2 OF 2)	7.3
LINE "A" PLAN & PROFILE	7.4
LINE "D" PLAN & PROFILE	7.5
LINE "F" PLAN & PROFILE	7.6
LINE "G" & LINE "H" PLAN & PROFILE	7.7
LINE "C", LINE "J", & LINE "K" PLAN & PROFILE	7.8
WATER DISTRIBUTION COVER SHEET	8.1
WATER DISTRIBUTION PLAN (SHT 1 OF 2)	8.2
WATER DISTRIBUTION PLAN (SHT 2 OF 2)	8.3
STORM WATER POLLUTION PREVENTION PLAN (SHT 1 OF 2)	9.1
STORM WATER POLLUTION PREVENTION PLAN (SHT 2 OF 2)	9.2
STORM WATER POLLUTION PREVENTION DETAILS	9.3

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	CV2054113

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
1.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

nit 10B\Civil\CV2054113.dwg\1.1 By: BELSETH

TRENCH EXCAVATION SAFETY PROTECTION

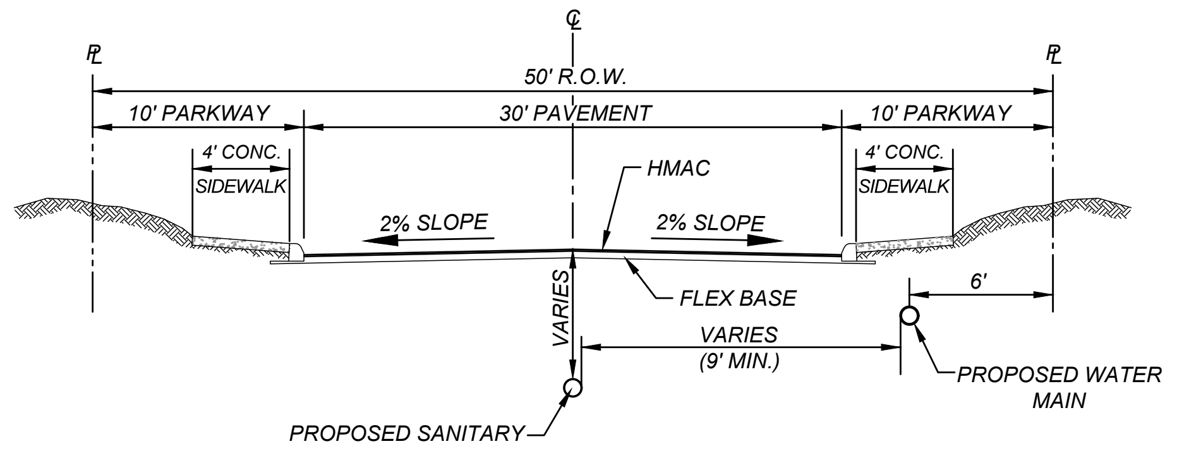
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.

COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

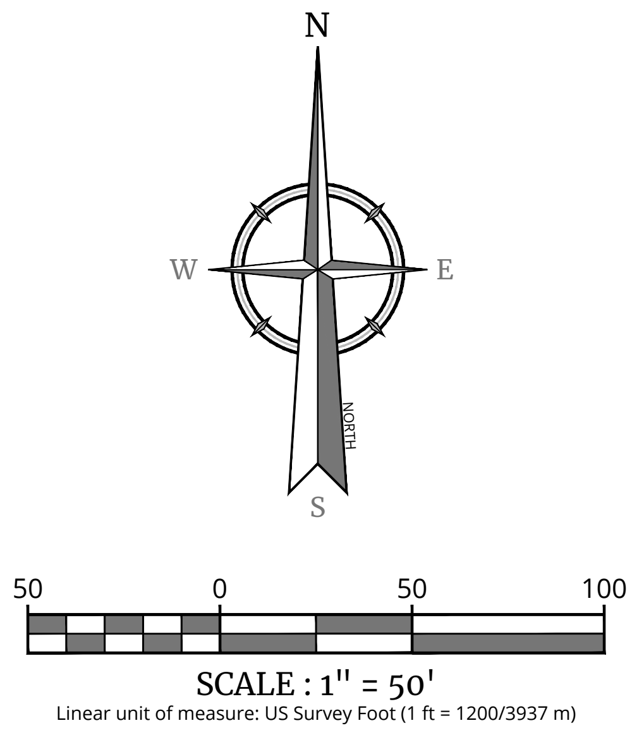
DRY UTILITY CONDUIT NOTE:

CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON THE DRY UTILITY PURVEYOR'S PLAN.


PL
CL
50' R.O.W.
10' PARKWAY
30' PAVEMENT
10' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
VARIES (9' MIN.)
6'
PROPOSED WATER MAIN
PROPOSED SANITARY SEWER MAIN

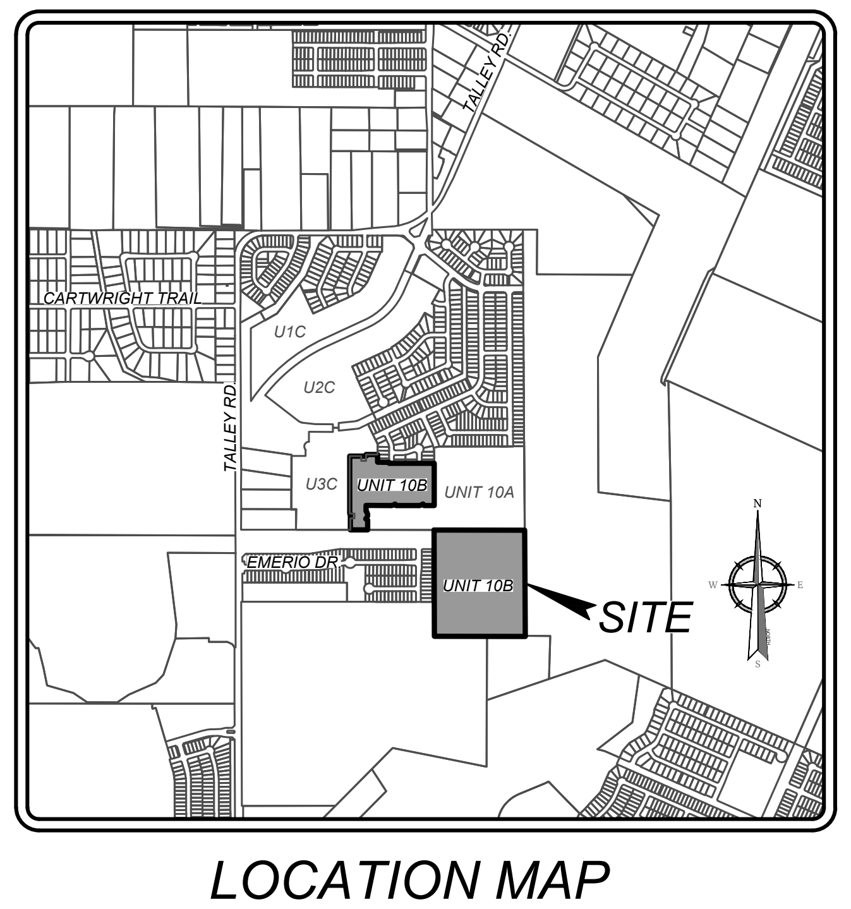
TYPICAL STREET SECTION

N.T.S.


N
S
W
E
NORTH
50
0
50
100

SCALE : 1" = 50'

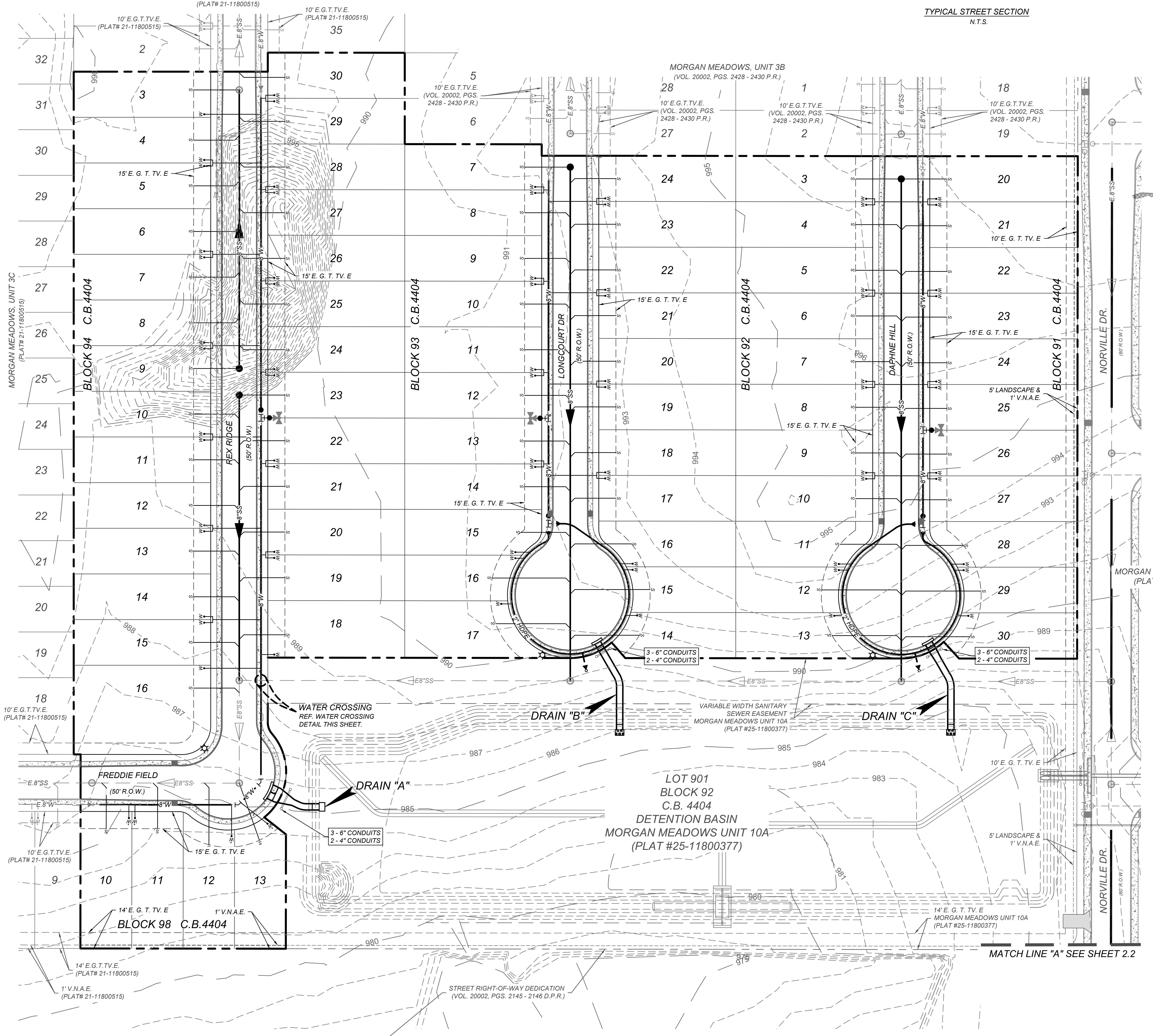
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

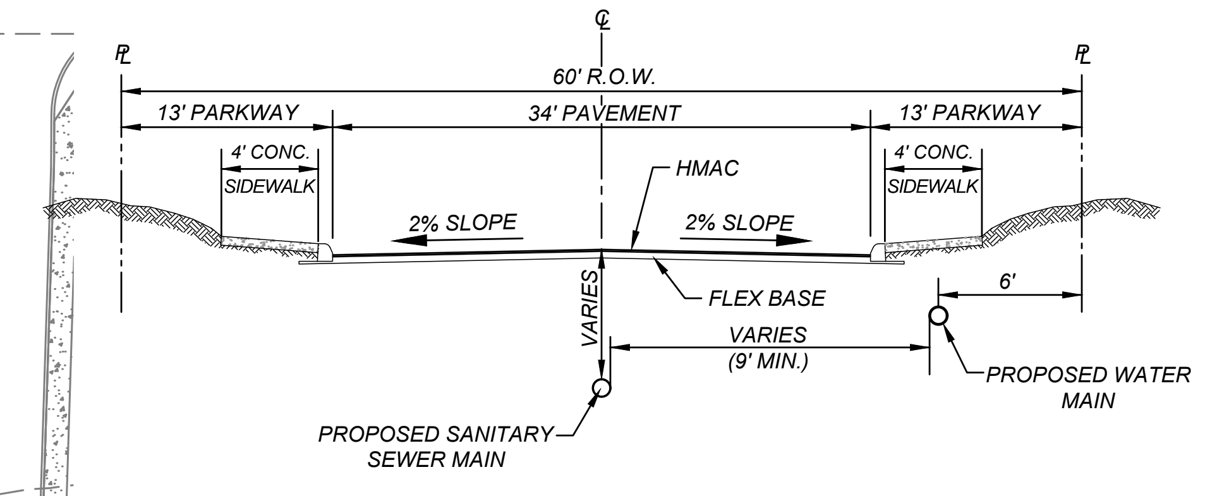

CARTWRIGHT TRAIL
TALLEY RD
U1C
U2C
U3C
UNIT 10A
UNIT 10B
SITE

LOCATION MAP NOT-TO-SCALE

LEGEND

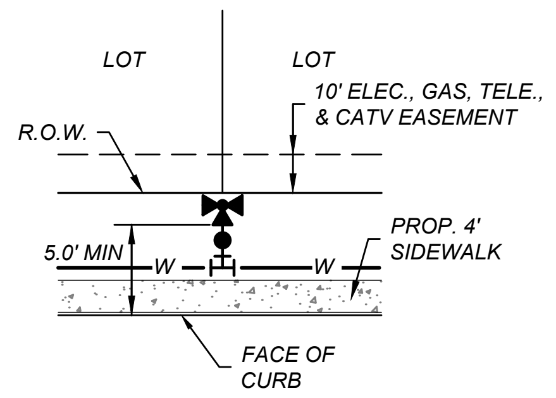
PROPOSED WATER MAIN	=	—— W ——
PROPOSED WATER SERVICE & METER BOX	=	W W
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	=	¾IRR
PROPOSED FIRE HYDRANT	=	⧓
PROPOSED WATER VALVE	=	●
PROPOSED 100W STREETLIGHT	=	☼
PROPOSED SANITARY SEWER MAIN	=	—— SS ——◄——
PROPOSED SANITARY SEWER MANHOLE	=	——●——
PROPOSED SANITARY SEWER LATERAL	=	S
PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT	=	E. G. T. TV. E
EXISTING WATER MAIN	=	— — — E.W — — —
EXISTING FIRE HYDRANT	=	⧖
EXISTING WATER VALVE	=	○
EXISTING SANITARY SEWER MAIN	=	— E.SS — ◁ —
EXISTING SANITARY SEWER MANHOLE	=	— —ⓢⓢ— —
EXISTING OVERHEAD ELECTRIC W/POWER POLE	=	—OHE- - -●- - -OHE—
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	- -▷- - - - -OHE- -


MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
10' E.G.T.TV.E.
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
10' E.G.T.TV.E.
(VOL. 20002, PGS. 2428 - 2430 P.R.)
15' E. G. T. TV. E
10' E. G. T. TV. E
5' LANDSCAPE & 1' V.N.A.E.
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
REX RIDGE
(50' R.O.W.)
LONGCOURT DR
(50' R.O.W.)
DAPHNE HILL
(50' R.O.W.)
NORVILLE DR.
(60' R.O.W.)
FREDDIE FIELD
(50' R.O.W.)
E.8"SS
E.8"W
8"W
8"SS
WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.
DRAIN "A"
DRAIN "B"
DRAIN "C"
3 - 6" CONDUITS
2 - 4" CONDUITS
VARIABLE WIDTH SANITARY SEWER EASEMENT
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
MORGAN MEADOWS, UNIT 10A
(PLAT # 25-11800377)
LOT 901
BLOCK 92
C.B. 4404
DETENTION BASIN
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
14' E.G.T.TV.E
1' V.N.A.E.
BLOCK 98 C.B.4404
14' E. G. T. TV. E
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
14' E.G.T.TV.E.
(PLAT# 21-11800515)
1' V.N.A.E.
(PLAT# 21-11800515)
STREET RIGHT-OF-WAY DEDICATION
(VOL. 20002, PGS. 2145 - 2146 D.P.R.)
MATCH LINE "A" SEE SHEET 2.2


PL
CL
60' R.O.W.
13' PARKWAY
34' PAVEMENT
13' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
VARIES (9' MIN.)
6'
PROPOSED WATER MAIN
PROPOSED SANITARY SEWER MAIN

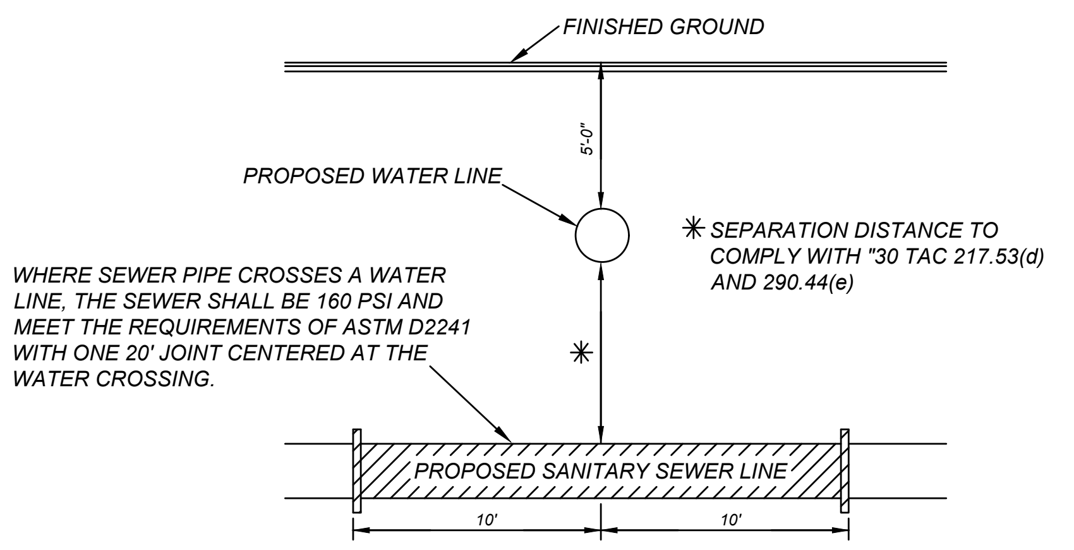
TYPICAL STREET SECTION

N.T.S.


LOT
LOT
R.O.W.
10' ELEC., GAS, TELE., & CATV EASEMENT
5.0' MIN
W
W
PROP. 4' SIDEWALK
FACE OF CURB

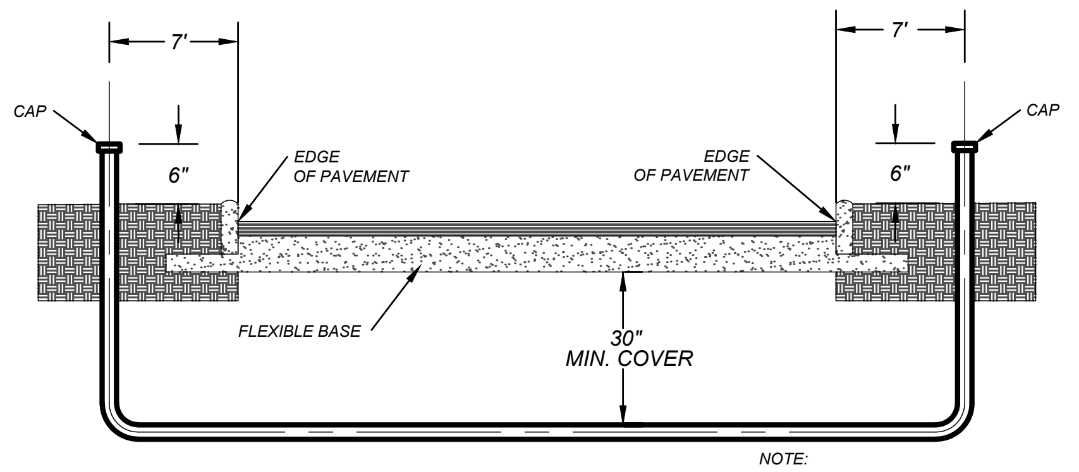
TYPICAL FIRE HYDRANT DETAIL

NOT-TO-SCALE


FINISHED GROUND
PROPOSED WATER LINE
5'-0"
SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL

N.T.S.


7'
7'
CAP
CAP
6"
6"
EDGE OF PAVEMENT
EDGE OF PAVEMENT
FLEXIBLE BASE
30" MIN. COVER

TYPICAL CONDUIT DETAIL

NOT-TO-SCALE

NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH CPS FACILITY AT ALL STREETS AND DRAIN CROSSING IF BUILT AHEAD OF CPS CONSTRUCTION. SLEEVES MUST ALSO BE LOCATED FOR CPS CREWS DURING CONSTRUCTION. (SEPARATE ITEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE.

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
.	.	.	.

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378

FOR

TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

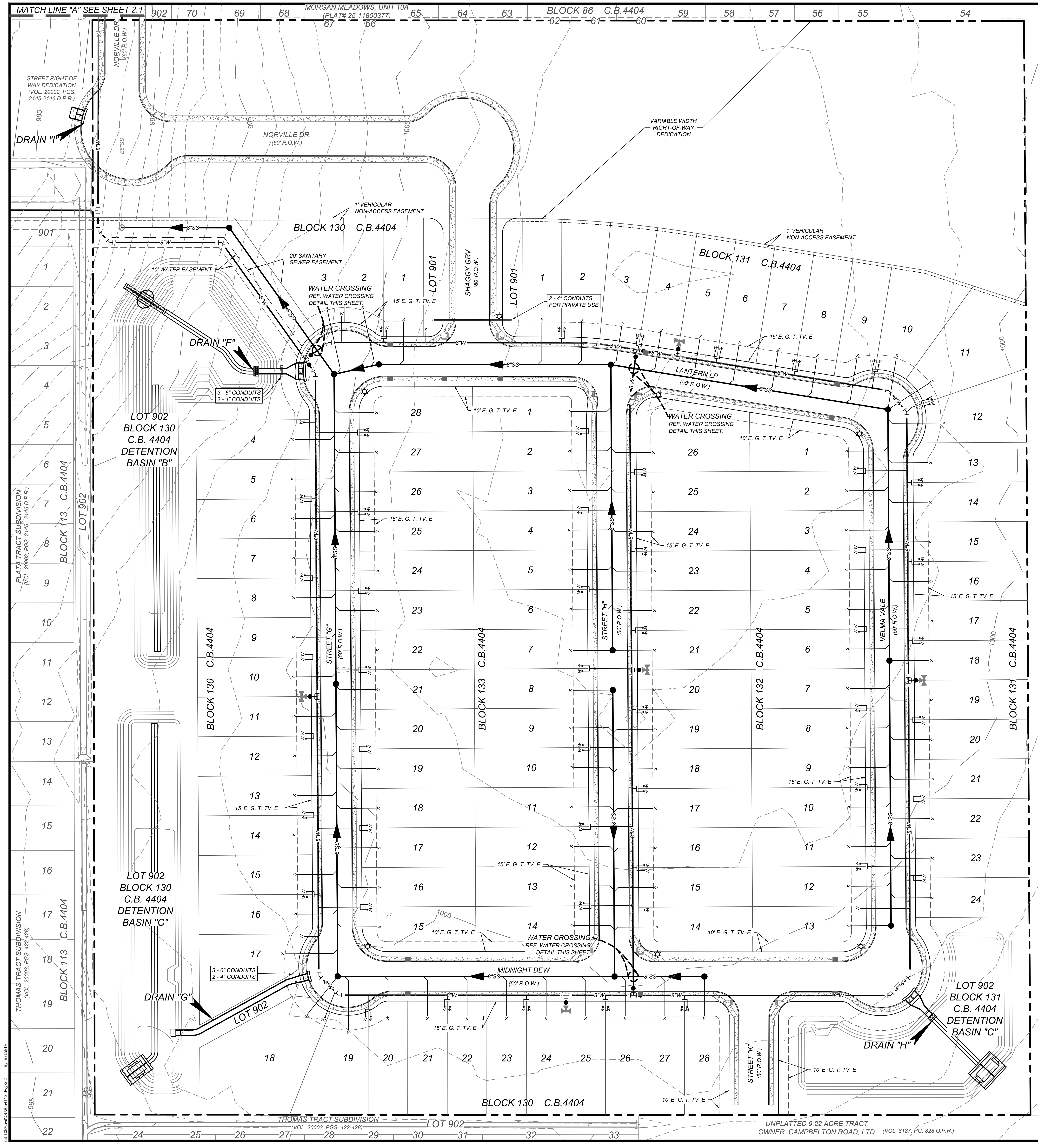
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

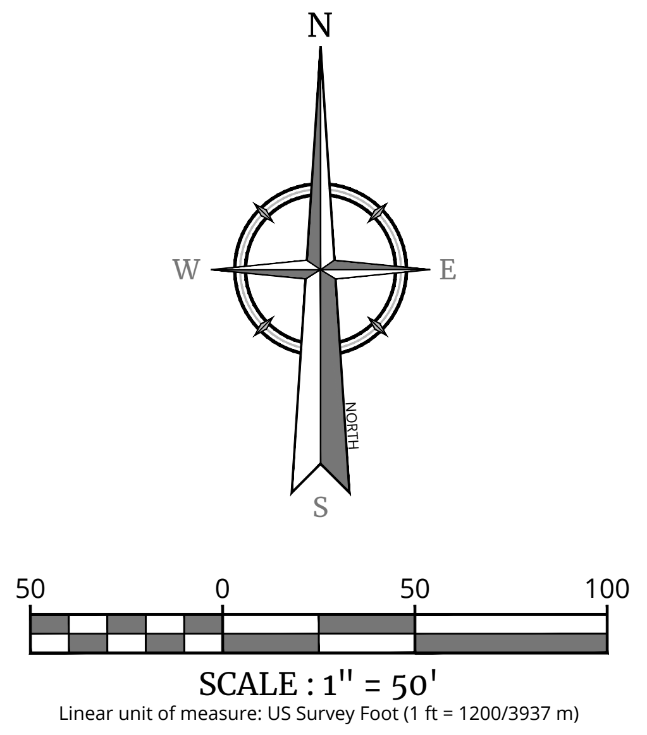
PROJECT NUMBER: 205-41-13
DRAWING NAME: OU2054113

SHEET TITLE:
OVERALL UTILITY PLAN
(SHT 1 OF 2)

SHEET NUMBER:
2.1

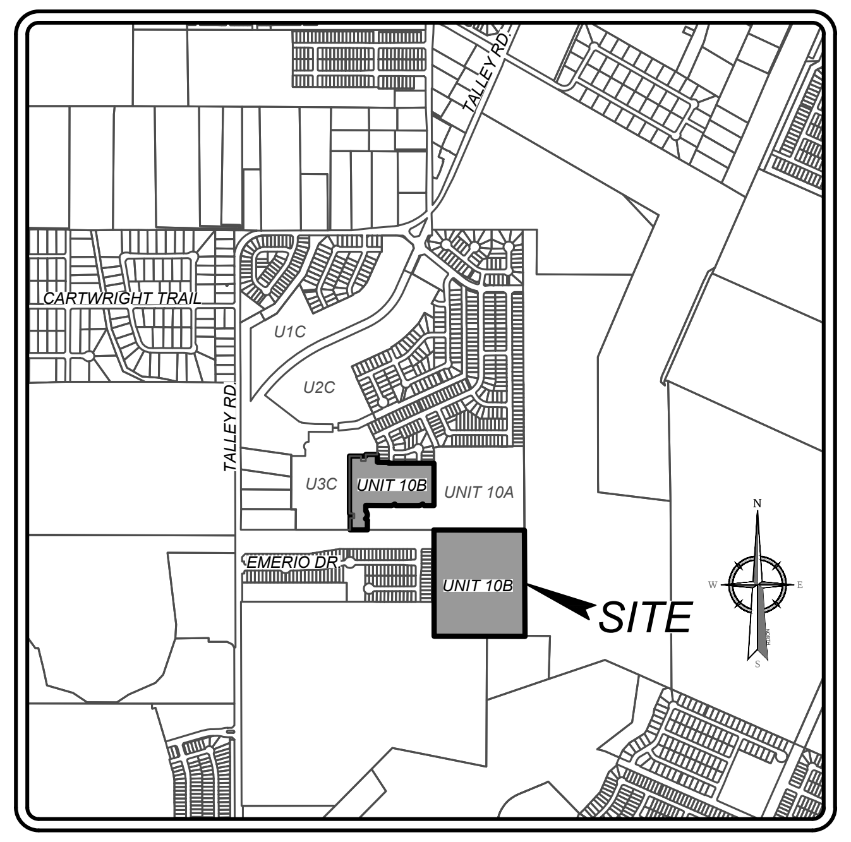
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


MATCH LINE "A" SEE SHEET 2.1
MORGAN MEADOWS, UNIT 10A (PLAT# 25-11800377)
BLOCK 86 C.B.4404
NORVILLE DR. (60' R.O.W.)
STREET RIGHT OF WAY DEDICATION (VOL. 20002, PGS. 2145-2146 D.P.R.)
DRAIN "I"
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
BLOCK 131 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
SHAGGY GRV (60' R.O.W.)
LOT 901
2 - 4" CONDUITS FOR PRIVATE USE
15' E. G. T. TV. E
DRAIN "F"
3 - 6" CONDUITS 2 - 4" CONDUITS
LANTERN LP (50' R.O.W.)
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "B"
PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
BLOCK 113 C.B.4404
LOT 902
STREET "G" (50' R.O.W.)
BLOCK 133 C.B.4404
STREET "H" (50' R.O.W.)
BLOCK 132 C.B.4404
VELMA VALE (50' R.O.W.)
BLOCK 131 C.B.4404
UNPLATTED 157.48 ACRE TRACT OWNER: VISE OAKS I, LTD. (VOL. 9437, PGS. 963 O.P.R.)
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "C"
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
DRAIN "G"
MIDNIGHT DEW (50' R.O.W.)
LOT 902 BLOCK 131 C.B. 4404 DETENTION BASIN "C"
DRAIN "H"
STREET "K" (50' R.O.W.)
10' E. G. T. TV. E
BLOCK 130 C.B.4404
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
LOT 902
UNPLATTED 9.22 ACRE TRACT OWNER: CAMPBELTON ROAD, LTD. (VOL. 8187, PG. 828 O.P.R.)


N
W
E
S
50
0
50
100

SCALE : 1" = 50'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD.
U1C
U2C
U3C
UNIT 10A
SITE

LOCATION MAP
NOT-TO-SCALE

TRENCH EXCAVATION SAFETY PROTECTION

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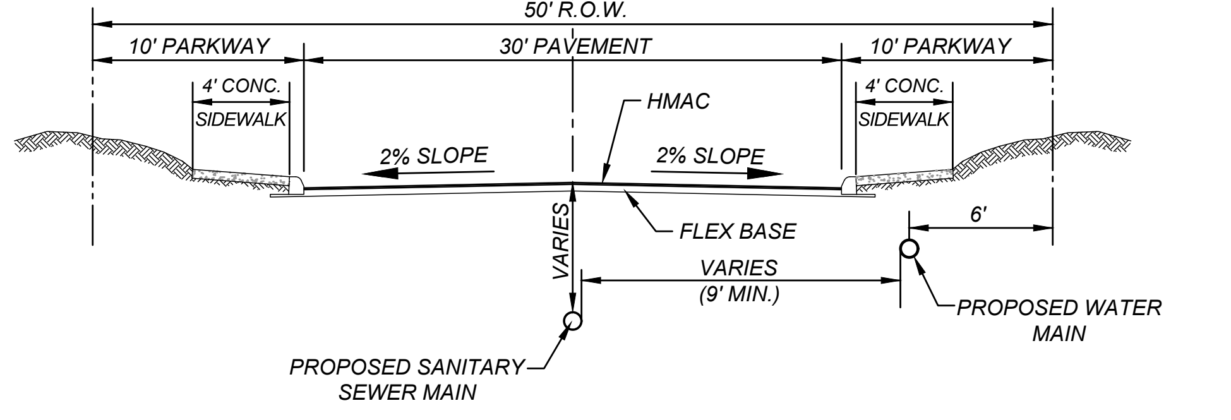
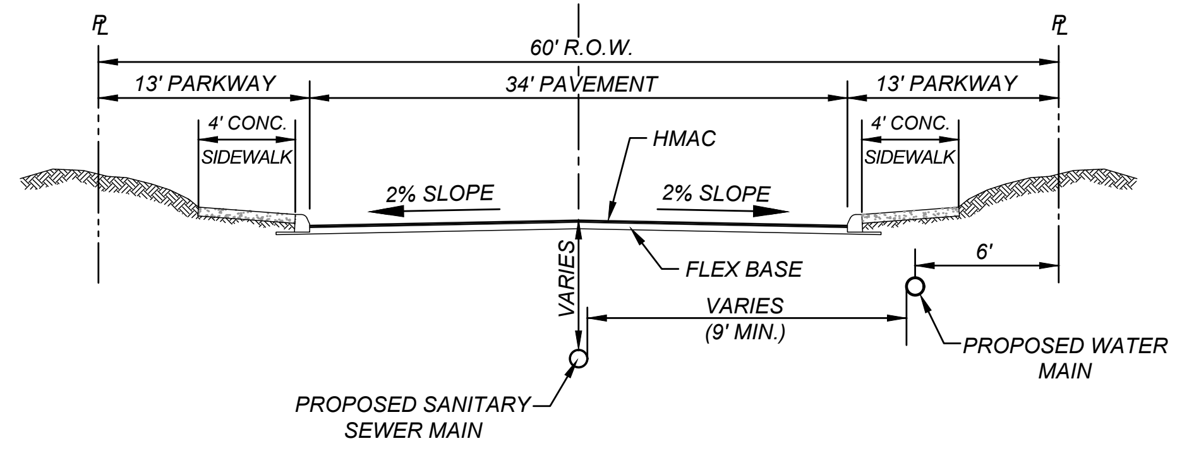
LEGEND

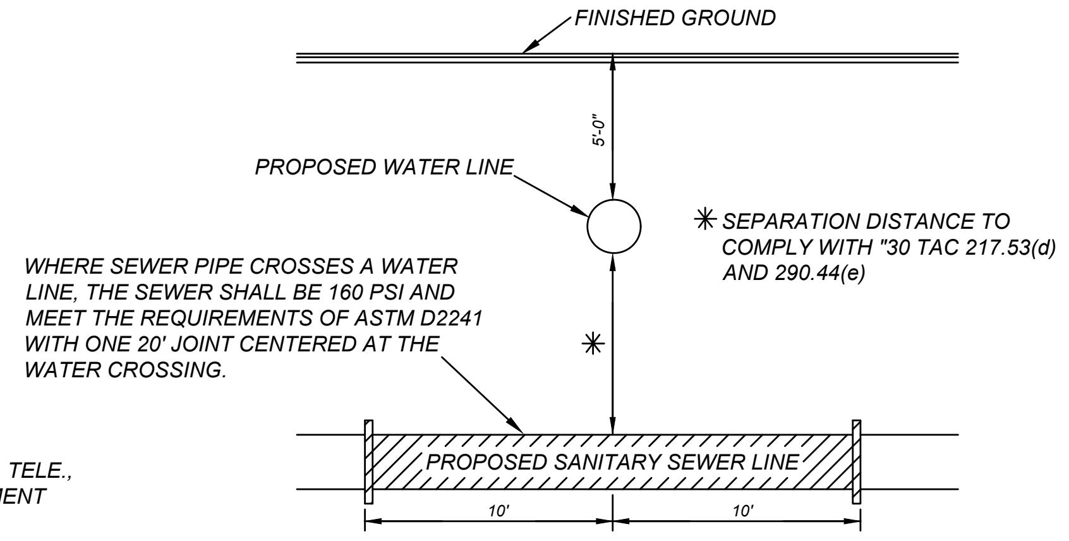
PROPOSED WATER MAIN	=	— W —
PROPOSED WATER SERVICE & METER BOX	=	W W
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	=	¾IRR
PROPOSED FIRE HYDRANT	=	⧓
PROPOSED WATER VALVE	=	● ●
PROPOSED 100W STREETLIGHT	=	☼
PROPOSED SANITARY SEWER MAIN	=	— SS ◀—
PROPOSED SANITARY SEWER MANHOLE	=	—●—
PROPOSED SANITARY SEWER LATERAL	=	╲— S
PROPOSED ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT	=	E. G. T. TV. E
EXISTING WATER MAIN	=	— — — E.W — — —
EXISTING FIRE HYDRANT	=	⧓
EXISTING WATER VALVE	=	○
EXISTING SANITARY SEWER MAIN	=	— E.SS — ◁ —
EXISTING SANITARY SEWER MANHOLE	=	— — SS — —
EXISTING OVERHEAD ELECTRIC W/POWER POLE	=	—OHE— — ● — —OHE—
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	— — ▷ — — — — OHE — —


PL
℄
PL
50' R.O.W.
10' PARKWAY
30' PAVEMENT
10' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
6'
VARIES
VARIES (9' MIN.)
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

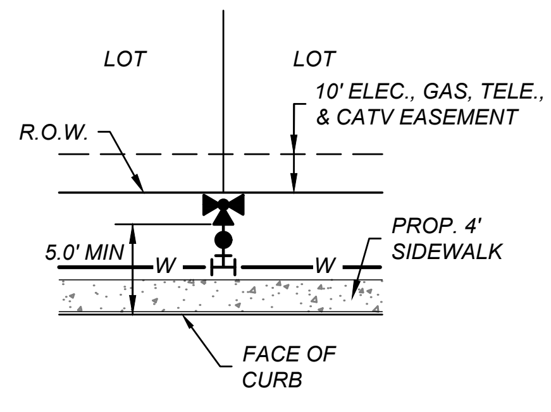
TYPICAL STREET SECTION
N.T.S.


PL
℄
PL
60' R.O.W.
13' PARKWAY
34' PAVEMENT
13' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
6'
VARIES
VARIES (9' MIN.)
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

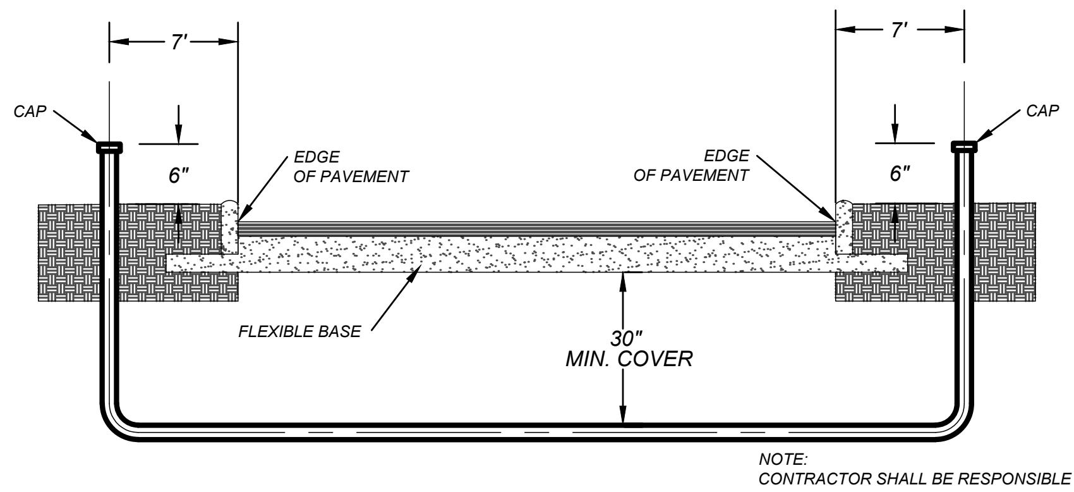
TYPICAL STREET SECTION
N.T.S.


FINISHED GROUND
PROPOSED WATER LINE
5'-0"
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
✳
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.


LOT
LOT
R.O.W.
10' ELEC., GAS, TELE., & CATV EASEMENT
5.0' MIN
W
W
PROP. 4' SIDEWALK
FACE OF CURB

TYPICAL FIRE HYDRANT DETAIL
NOT-TO-SCALE


7'
7'
CAP
CAP
6"
6"
EDGE OF PAVEMENT
EDGE OF PAVEMENT
FLEXIBLE BASE
30" MIN. COVER

TYPICAL CONDUIT DETAIL
NOT-TO-SCALE

NOTE:
CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING CONDUIT SLEEVES FOR EACH CPS FACILITY AT ALL STREETS AND DRAIN CROSSING IF BUILT AHEAD OF CPS CONSTRUCTION. SLEEVES MUST ALSO BE LOCATED FOR CPS CREWS DURING CONSTRUCTION. (SEPARATE ITEM) SEE THIS SHEET FOR CONDUIT CROSSING DETAIL AND SCHEDULE.

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811
Know what's below. Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
.	.	.	.

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

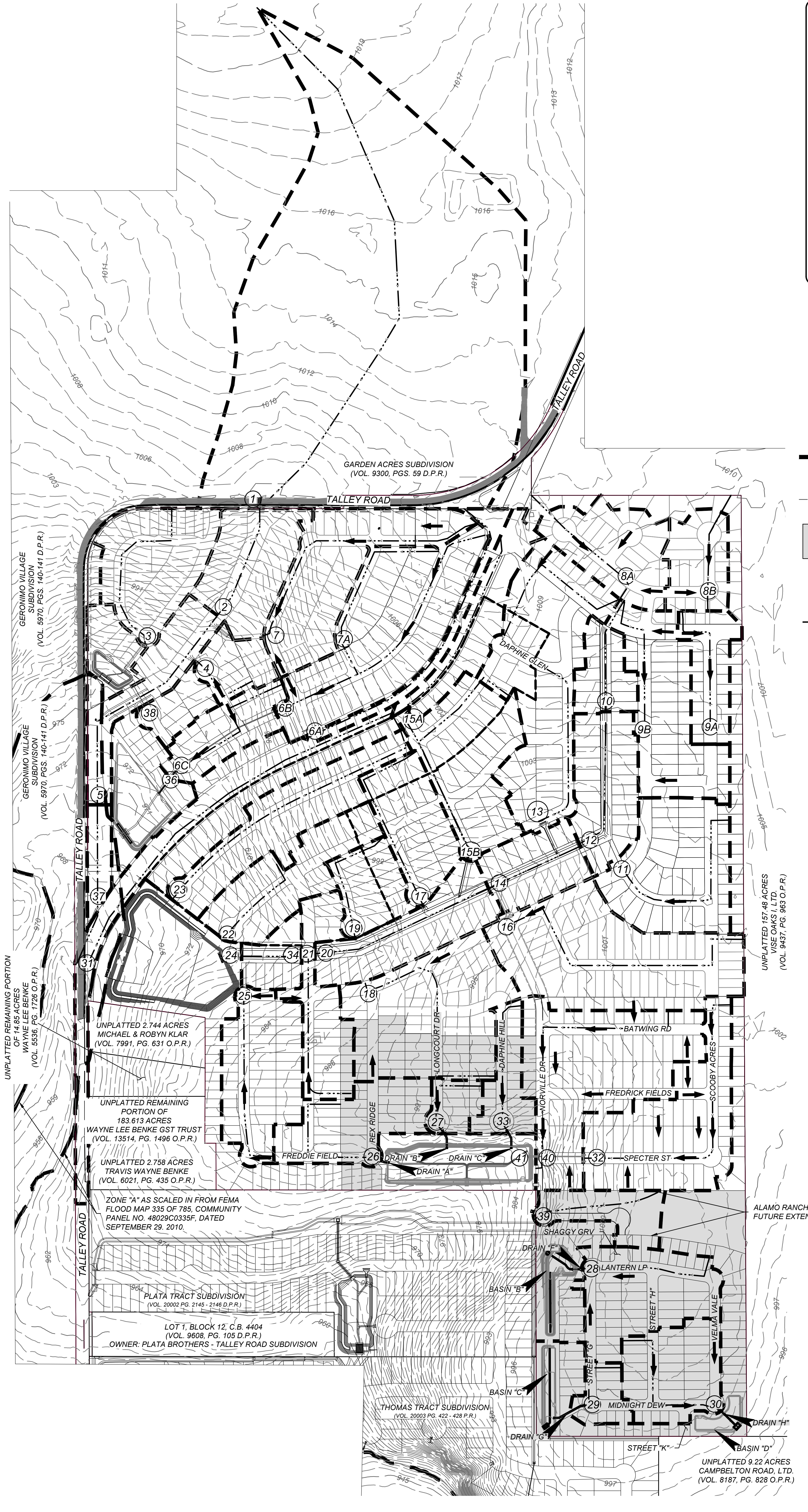
PROJECT NUMBER:	DRAWING NAME:
205-41-13	OU2054113

SHEET TITLE:
OVERALL UTILITY PLAN
(SHT 2 OF 2)

SHEET NUMBER:
2.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

STUDY POINT	AREA	(Acres)	C	Tovrl (min)		Tsc (min)	Tch (min)	Ttot (min)	I5 (in/hr)	I25 (in/hr)	I100 (in/hr)	Q5 (ft3/s)	Q25 (ft3/s)	Q100 (ft3/s)
1	OS-1	50.03	0.68	20.00		10.00	13.00	43	3.042	4.203	5.214	103.48	142.99	177.39
2	OS- 1 + DA-2	54.59	0.68	20.00	CARRYOVER FROM PT. 1	10.00	18.00	48	2.844	3.938	4.894	105.79	146.49	182.07
	DA-2	4.56	0.70											
3	DA-3	5.48	0.77	10.00		1.00	8.00	19	4.664	6.447	8.005	19.68	27.20	33.78
4	DA-4	1.87	0.67	10.00		1.00	2.00	13	5.662	7.888	9.854	7.09	9.88	12.35
5	PT.2+PT.4 +DA-5+DA -7+ BASIN OUTFALL + DA-38	68.39	0.68	20.00	CARRYOVER FROM PT. 2	10.00	34.00	64	2.430	3.390	4.242	126.91	177.53	222.21
	DA-5	3.81	0.67											
6A	DA-6A	1.68	0.95	5.00		0.00	17.00	22	4.329	5.975	7.408	6.91	9.54	11.82
6B	PT. 6A + DA-6B + DA-7A	11.21	0.71	10.00		3.00	8.00	21	4.432	6.120	7.591	35.37	48.84	60.58
	DA-6B	9.53	0.67											
PT. 6B BYPASS		BYPASS FROM ON GRADE CURB INLETS (PT. 6B)										10.42	19.78	28.78
PT. 6B CAPTURED		CAPTURED FROM ON GRADE CURB INLETS (PT.6B)										31.28	38.04	43.20
6C	DA-6C	2.89	0.67	10.00		2.00	6.00	18	4.796	6.633	8.241	9.29	12.84	15.96
	DA-6C+ 6B BYPASS											19.71	32.62	44.74
7	DA-7	6.66	0.67	10.00		2.00	6.00	18	4.796	6.633	8.241	21.40	29.60	36.77
7A	DA-7A	3.85	0.67	10.00		2.00	6.00	18	4.796	6.633	8.241	12.37	17.11	21.26
8A	DA-8A	4.28	0.67	10.00		0.00	5.00	15	5.280	7.320	9.115	15.14	20.99	26.14
8B	DA-8B	2.74	0.67	10.00		0.00	4.00	14	5.468	7.600	9.480	10.04	13.95	17.40
9A	DA-9A + DA-8B	5.43	0.67	10.00		1.00	4.00	15	5.280	7.320	9.115	19.21	26.63	33.16
	DA-9A	2.69	0.67											
9B	DA-9B+ PT. 9A	11.54	0.67	10.00	CARRYOVER FROM PT. 9A	3.00	1.00	14	5.468	7.600	9.480	42.28	58.77	73.30
	DA-9B	6.11	0.67	10.00		1.00	4.00	15	5.280	7.320	9.115	21.61	29.97	37.32
10	PT.8A + DA-10	6.35	0.67	15.00	CARRYOVER FROM PT.8A	0.00	8.00	23	4.233	5.841	7.239	18.01	24.85	30.80
	DA-10	2.07	0.67											
11	DA-11	6.80	0.67	10.00		3.00	5.00	18	4.796	6.633	8.241	21.85	30.22	37.55
12	PT.9B+PT.10+ PT.11 +DA-12	28.99	0.67	10.00	CARRYOVER FROM PT.9B	4.00	9.00	23	4.233	5.841	7.239	82.22	113.44	140.60
	DA-12	4.30	0.67											
13	DA-13	10.98	0.67	20.00		1.00	12.00	33	3.521	4.855	6.010	25.91	35.71	44.22
14	PT.12+PT.13+ DA-14+PT.16	53.25	0.69	10.00	CARRYOVER FROM PT.12	13.00	7.00	30	3.700	5.100	6.314	136.48	188.13	232.90
	DA-14	3.04	0.73											
15A	DA-15A	1.71	0.95	5.00		0.00	13.00	18	4.796	6.633	8.241	7.79	10.78	13.39
15B	DA-15A + DA 15B	8.47	0.73	18.00	CARRYOVER FROM PT.15A	0.00	9.00	27	3.904	5.382	6.665	24.02	33.12	41.01
	DA-15B	6.76	0.67											
16	DA-16	10.24	0.77	10.00		1.00	13.00	24	4.143	5.715	7.081	32.67	45.06	55.83
17	DA-17	3.97	0.67	10.00		1.00	7.00	18	4.796	6.633	8.241	12.76	17.64	21.92
18	DA-18	8.68	0.77	10.00		4.00	6.00	20	4.543	6.277	7.789	30.37	41.95	52.06
19	DA-19	2.54	0.67	10.00		1.00	4.00	15	5.280	7.320	9.115	8.99	12.46	15.51
20	PT.14+PT.15B +PT.17+PT.18 +PT.19+DA-20	81.60	0.71	10.00	CARRYOVER FROM PT.14	20.00	12.00	42	3.084	4.260	5.283	177.94	245.79	304.83
	DA-20	4.69	0.77											
21	DA-21	3.83	0.75	10.00		0.00	8.00	18	4.796	6.633	8.241	13.70	18.95	23.54
22	DA-22	4.66	0.67	10.00		3.00	0.00	13	5.662	7.888	9.854	17.68	24.63	30.77
23	DA-23	5.54	0.67	10.00		4.00	10.00	24	4.143	5.715	7.081	15.38	21.21	26.28
24	DA-24+PT.34	87.03	0.71	10.00	CARRYOVER FROM PT.34	32.00	0.00	42	3.084	4.260	5.283	190.55	263.21	326.43
	DA-24	1.60	0.77											
25	DA-25	5.52	0.77	10.00		4.00	5.00	19	4.664	6.447	8.005	19.82	27.40	34.02
26	DA-26	4.34	0.77	10.00		4.00	3.00	17	4.941	6.838	8.501	16.51	22.85	28.41
27	DA-27	1.22	0.77	10.00		3.00	0.00	13	5.662	7.888	9.854	5.32	7.41	9.26
28	DA-28	5.47	0.77	10.00		4.00	5.00	19	4.664	6.447	8.005	19.64	27.15	33.71
29	DA-29	1.33	0.77	10.00		2.00	1.00	13	5.662	7.888	9.854	5.80	8.08	10.09
30	DA-30	4.19	0.77	10.00		4.00	3.00	17	4.941	6.838	8.501	15.94	22.06	27.43
31	DA-31	8.50	0.90	5.00		5.00	3.00	13	5.662	7.888	9.854	43.31	60.35	75.38
32	DA-32	7.68	0.77	10.00		4.00	8.00	22	4.329	5.975	7.408	25.60	35.33	43.81
PT.32 BYPASS		BYPASS FROM ON GRADE CURB INLETS (PT.32)										6.60	12.37	17.89
PT.32 CAPTURED		CAPTURED FROM ON GRADE CURB INLETS (PT.32)										19.00	22.96	25.92
33	DA-33	2.26	0.77	10.00		4.00	8.00	22	4.329	5.975	7.408	7.53	10.40	12.89
34	PT.20+PT.21	85.43	0.71	10.00	CARRYOVER FROM PT.20	32.00	0.00	42	3.084	4.260	5.283	186.75	257.96	319.92
35	PT.5+PT.6B+PT.23+ PT.24+PT.25+ DA-31	186.19	0.71	10.00	CARRYOVER FROM PT.5	54.00	8.00	72	2.430	3.390	4.242	320.34	446.90	559.17
36	PT. 6B CAPTURED + DA. 6C + PT. 6B BYPASS											50.99	70.66	87.94
37	PT 5 + BASIN OUTFALL											142.65	198.50	248.83
38	DA-38	1.46	0.67	10.00		4.00	0.00	14	5.468	7.600	9.480	5.35	7.43	9.27
39	DA-39	2.38	0.88	10.00		3.00	1.00	14	5.468	7.600	9.480	11.50	15.98	19.93
40	DA-40	9.49	0.77	10.00		4.00	11.00	25	4.059	5.597	6.934	29.66	40.90	50.67
	PT.40 + 32 BYPASS											36.26	53.28	68.56
41	PT.32 + PT.40	17.17	0.77	20.00	CARRYOVER FROM PT. 40	5.00	1.00	26	3.979	5.487	6.795	52.61	72.54	89.84


TALLEY ROAD
GARDEN ACRES SUBDIVISION
(VOL. 9300, PGS. 59 D.P.R.)
GERONIMO VILLAGE SUBDIVISION (VOL. 5970, PGS. 140-141 D.P.R.)
GERONIMO VILLAGE SUBDIVISION (VOL. 5970, PGS. 140-141 D.P.R.)
DAPHNE GLEN
UNPLATTED 157.48 ACRES VISE OAKS I, LTD. (VOL. 9437, PG. 963 O.P.R.)
UNPLATTED REMAINING PORTION OF 14.85 ACRES WAYNE LEE BENKE (VOL. 5536, PG. 1726 O.P.R.)
UNPLATTED 2.744 ACRES MICHAEL & ROBYN KLAR (VOL. 7991, PG. 631 O.P.R.)
UNPLATTED REMAINING PORTION OF 183.613 ACRES WAYNE LEE BENKE GST TRUST (VOL. 13514, PG. 1496 O.P.R.)
UNPLATTED 2.758 ACRES TRAVIS WAYNE BENKE (VOL. 6021, PG. 435 O.P.R.)
ZONE "A" AS SCALED IN FROM FEMA FLOOD MAP 335 OF 785, COMMUNITY PANEL NO. 48029C0335F, DATED SEPTEMBER 29. 2010.
BATWING RD
LONGCOURT DR
DAPHNE HILL
NORVILLE DR
SCOOBY ACRES
FREDRICK FIELDS
REX RIDGE
FREDDIE FIELD
DRAIN "A"
DRAIN "B"
DRAIN "C"
SPECTER ST
ALAMO RANCH PARKWAY FUTURE EXTENSION
SHAGGY GRV
DRAIN "F"
LANTERN LP
BASIN "B"
STREET "H"
VELMA VALE
STREET "G"
BASIN "C"
MIDNIGHT DEW
DRAIN "G"
DRAIN "H"
BASIN "D"
STREET "K"
PLATA TRACT SUBDIVISION (VOL. 20002 PG. 2145 - 2146 D.P.R.)
LOT 1, BLOCK 12, C.B. 4404 (VOL. 9608, PG. 105 D.P.R.) OWNER: PLATA BROTHERS - TALLEY ROAD SUBDIVISION
THOMAS TRACT SUBDIVISION (VOL. 20003 PG. 422 - 428 P.R.)
UNPLATTED 9.22 ACRES CAMPBELTON ROAD, LTD. (VOL. 8187, PG. 828 O.P.R.)
1
2
3
4
5
6A
6B
6C
7
7A
8A
8B
9A
9B
10
11
12
13
14
15A
15B
16
17
18
19
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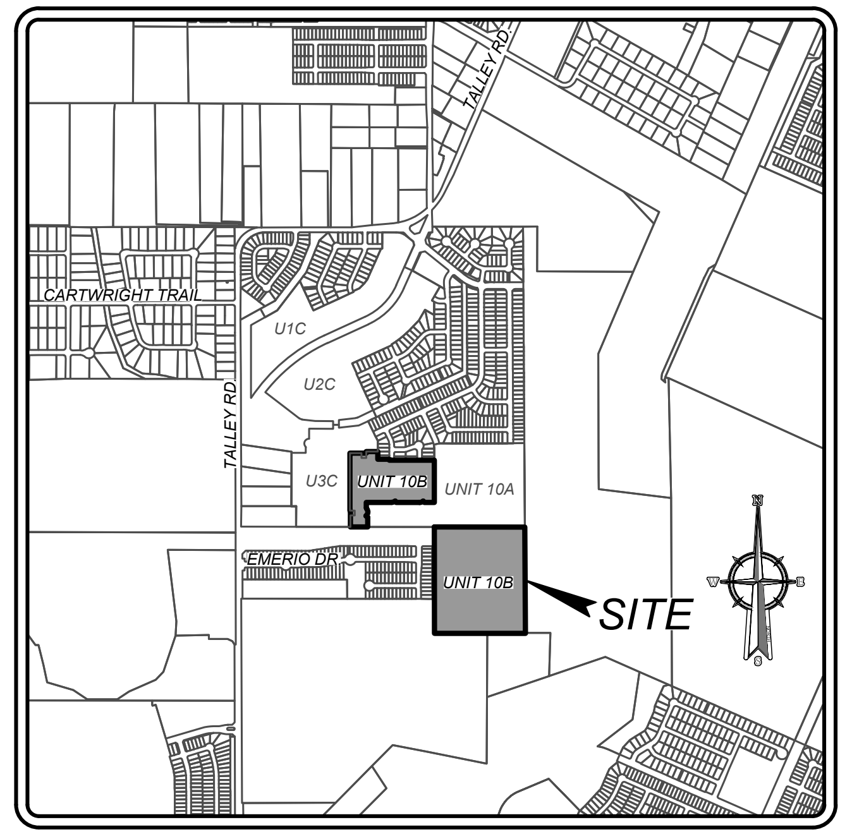
CARTWRIGHT TRAIL
TALLEY RD.
TALLEY RD
U1C
U2C
U3C
UNIT 10B
UNIT 10A
EMERIO DR
UNIT 10B
SITE

LOCATION MAP
NOT-TO-SCALE

LEGEND

①	STUDY POINT
▬ ▬ ▬	DRAINAGE AREA BOUNDARY
— — 802 — —	EXISTING CONTOURS
▨	PROPOSED UNIT
→	FLOW ARROW
—··—··—	FLOW PATH

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

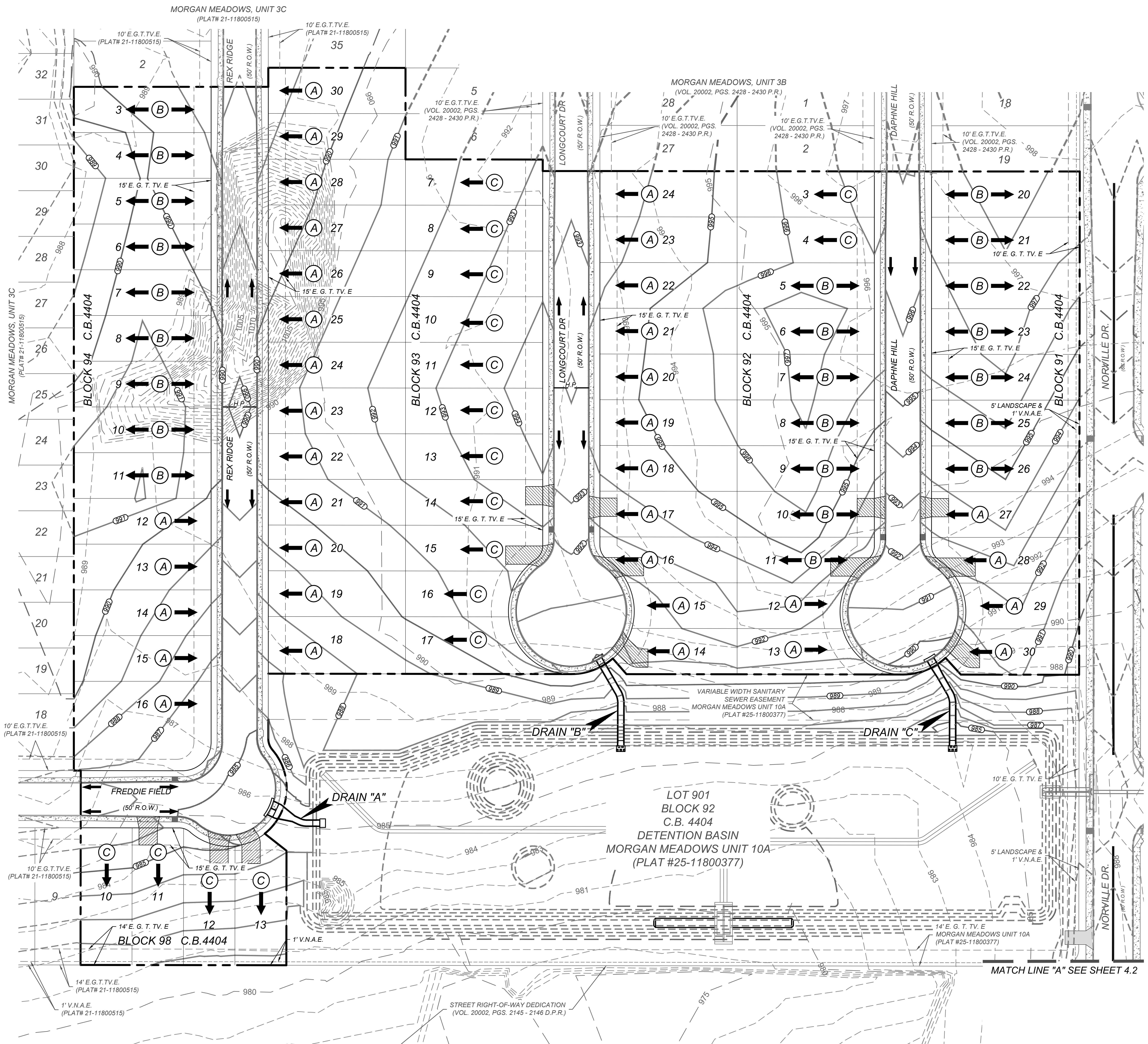
PROJECT NUMBER: 205-41-13
DRAWING NAME: MD2054113

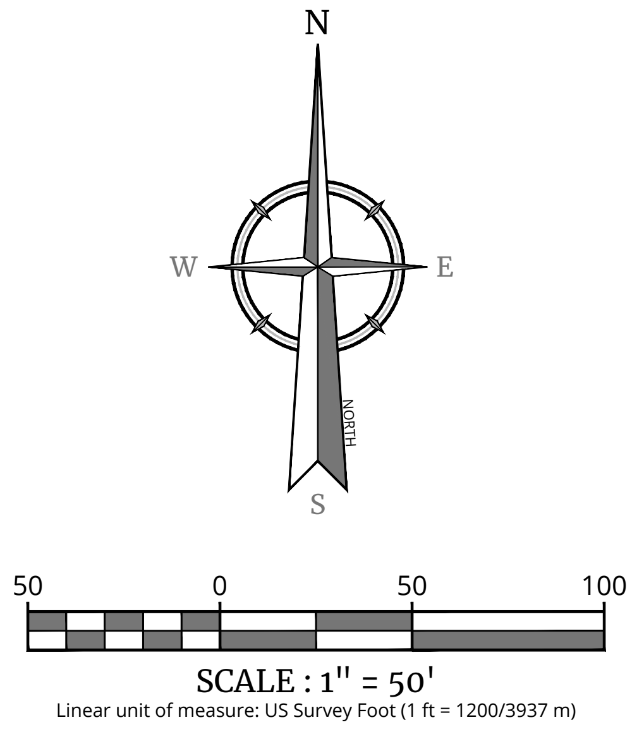
SHEET TITLE:
MASTER DRAINAGE PLAN

SHEET NUMBER:
3.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

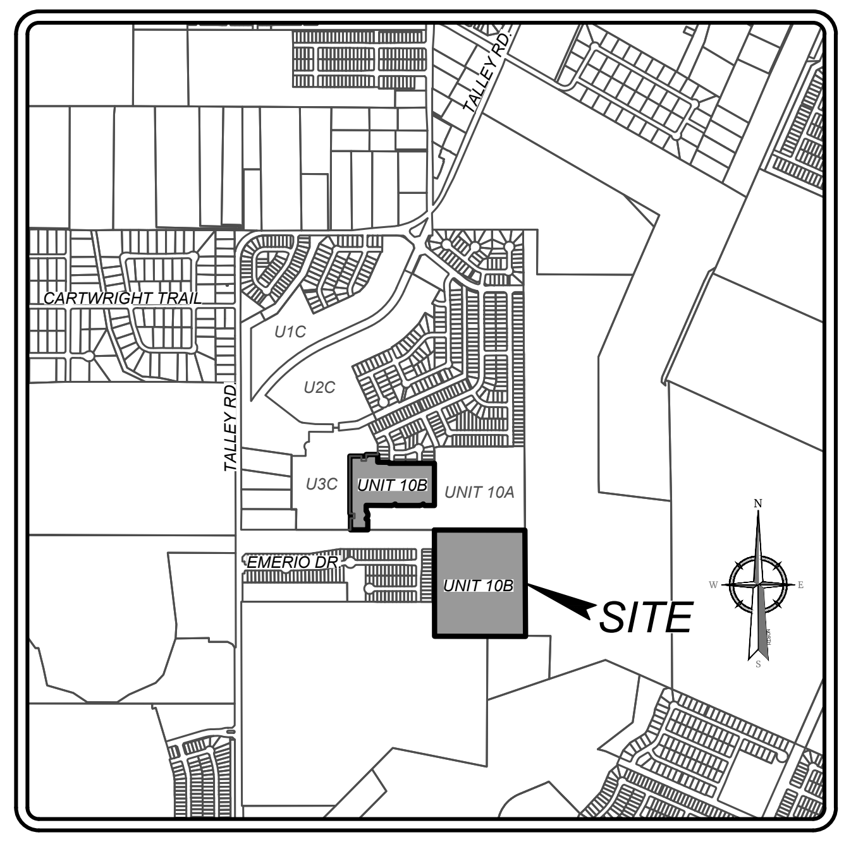
\Civil\MD2054113.dwg\3.1 By: BELSETH


MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
REX RIDGE
(50' R.O.W.)
LONGCOURT DR
DAPHNE HILL
NORVILLE DR.
FREDDIE FIELD
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
BLOCK 98 C.B.4404
15' E. G. T. TV. E
10' E.G.T.TV.E.
5' LANDSCAPE & 1' V.N.A.E.
H.P.
DRAIN "A"
DRAIN "B"
DRAIN "C"
LOT 901
BLOCK 92
C.B. 4404
DETENTION BASIN
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
VARIABLE WIDTH SANITARY SEWER EASEMENT
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
14' E. G. T. TV. E
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
STREET RIGHT-OF-WAY DEDICATION
(VOL. 20002, PGS. 2145 - 2146 D.P.R.)
1' V.N.A.E.
(PLAT# 21-11800515)
MATCH LINE "A" SEE SHEET 4.2


N
E
S
W
50
0
50
100

SCALE : 1" = 50'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
U1C
U2C
U3C
UNIT 10A
SMERIO DR
UNIT 10B
SITE

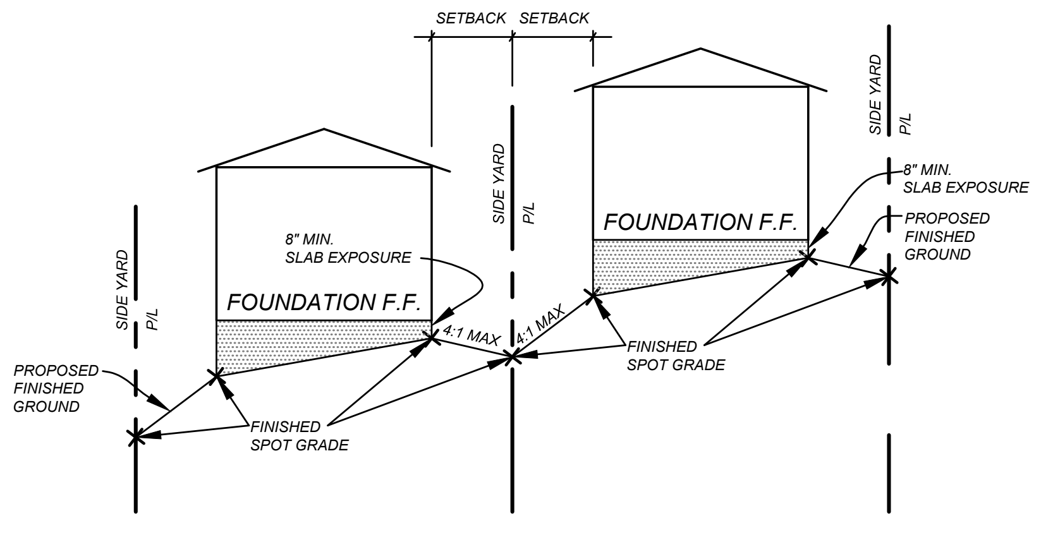
LOCATION MAP
NOT-TO-SCALE

GENERAL NOTES:

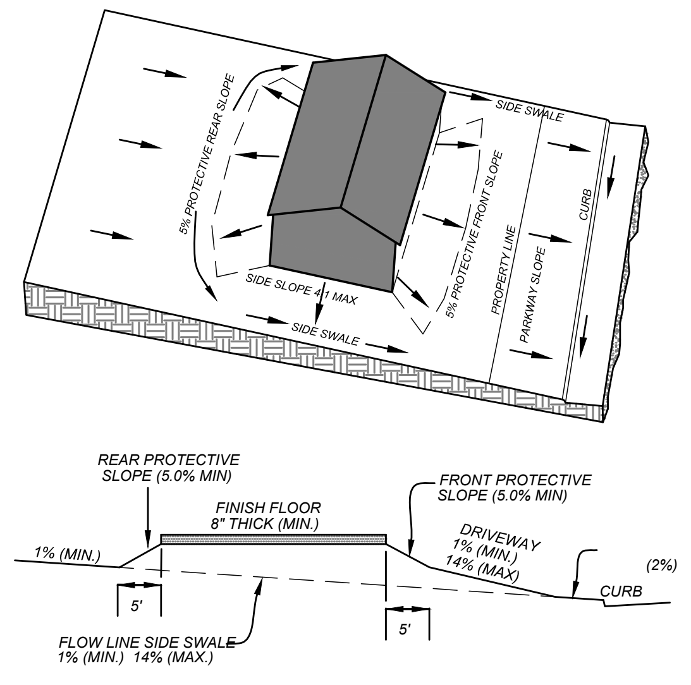
1. ELEVATION SHOWN ON FOUNDATION IS FOR FINISHED FLOOR.
2. CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
3. HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
4. AS SOON AS PRACTICAL HOME BUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SODDING, ETC...) TO PREVENT EROSION FROM OCCURRING.
5. CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
6. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS AND TOWARDS THE PROPER DRAINAGE EASEMENT OR STREET RIGHT OF WAY ACCORDING TO THE MASTER DRAINAGE PLAN FOR THE PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
7. ALL ELEVATIONS AND CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVEMENT, CURBS, AND SIDEWALKS MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
8. GRADING PLAN IS INTENDED FOR USE IN LOT GRADING ONLY. CONTRACTOR SHOULD REFER TO CONSTRUCTION DRAWINGS FOR ALL OTHER GRADES, INCLUDING, BUT NOT LIMITED TO, CHANNELS, ROADS, AND DETENTION PONDS.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.

LEGEND

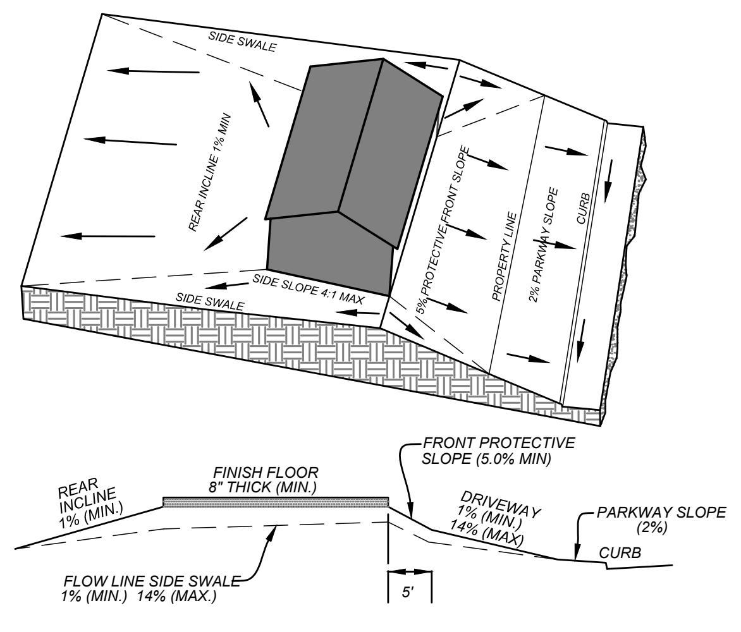
E, G, T, & TV. E.	= GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
➞	= FLOW ARROW
Ⓐ	= LOT GRADE TYPE
▨	= PROPOSED DRIVEWAY LOCATION
H.P.	= HIGH POINT


SETBACK
SETBACK
SIDE YARD P/L
8" MIN SLAB EXPOSURE
FOUNDATION F.F.
PROPOSED FINISHED GROUND
FINISHED SPOT GRADE
4:1 MAX
SIDE YARD P/L

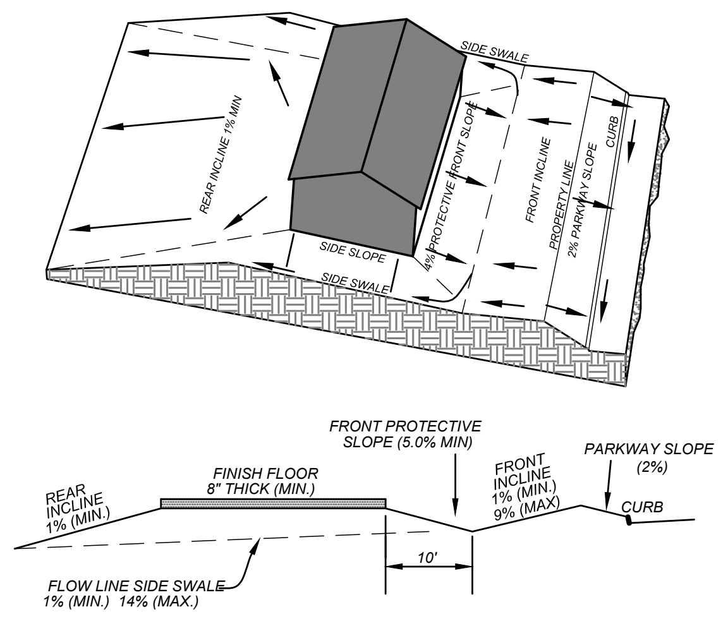
TYPICAL SIDE YARD GRADING
N.T.S.


REAR PROTECTIVE SLOPE (5.0% MIN)
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
DRIVEWAY 1% (MIN.) 14% (MAX.)
CURB
(2%)
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)

TYPE 'A' LOT GRADING


REAR INCLINE 1% (MIN.)
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
DRIVEWAY 1% (MIN.) 14% (MAX.)
PARKWAY SLOPE (2%)
CURB
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)

TYPE 'B' LOT GRADING


REAR INCLINE 1% (MIN.)
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
FRONT INCLINE 1% (MIN.) 9% (MAX.)
PARKWAY SLOPE (2%)
CURB
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)

TYPE 'C' LOT GRADING

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Know what's below.
Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

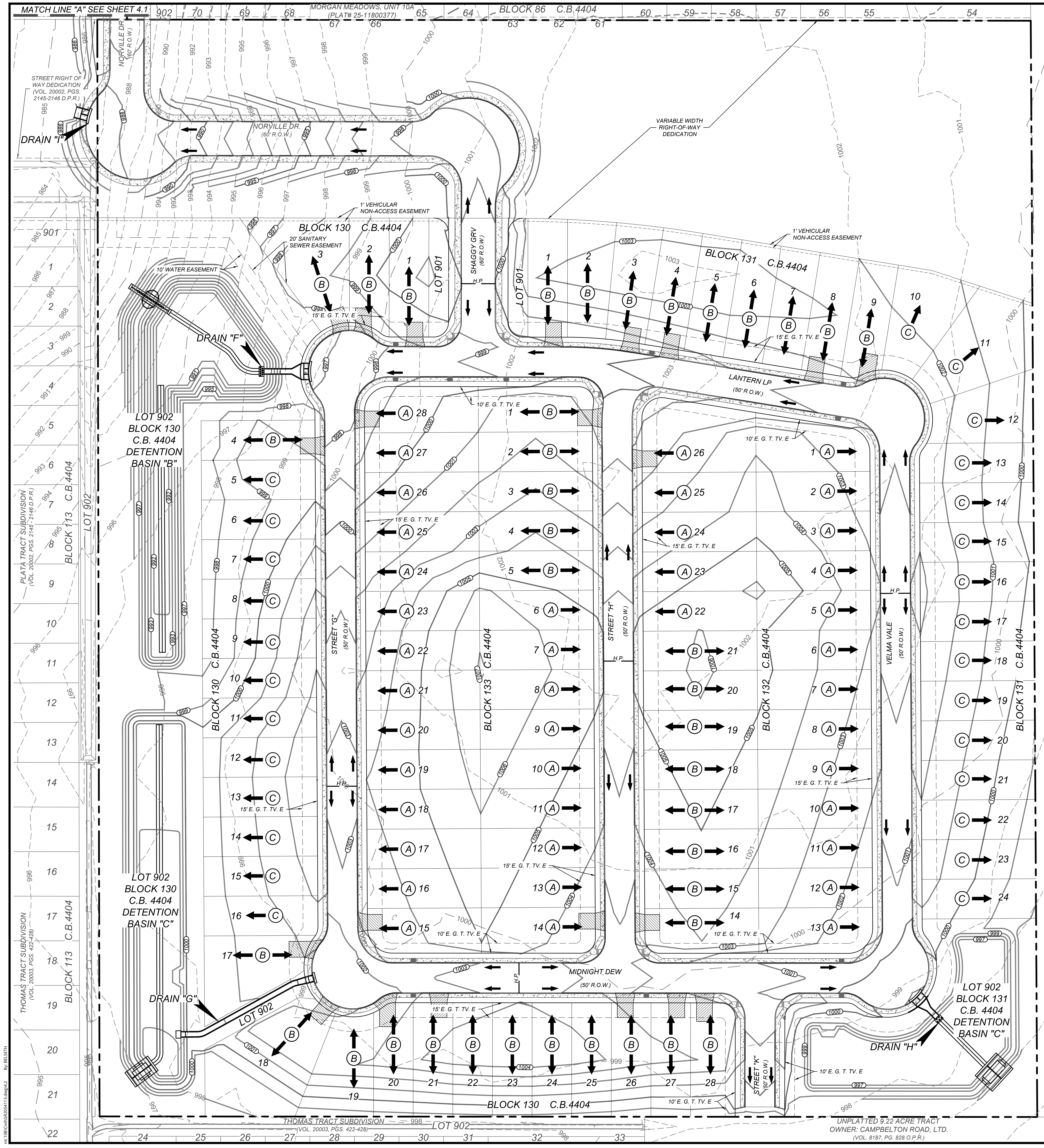
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

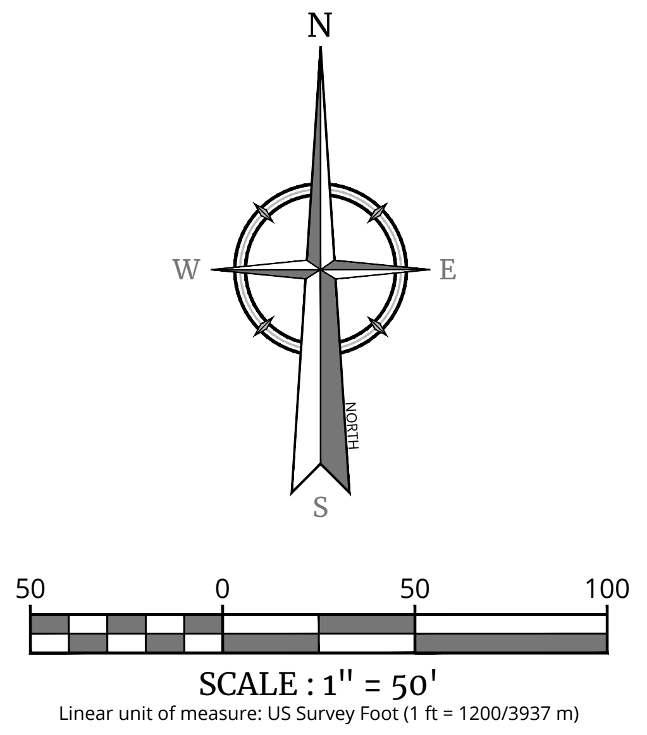
PROJECT NUMBER: 205-41-13
DRAWING NAME: GR2054113

SHEET TITLE:
OVERALL GRADING PLAN (SHT 1 OF 2)

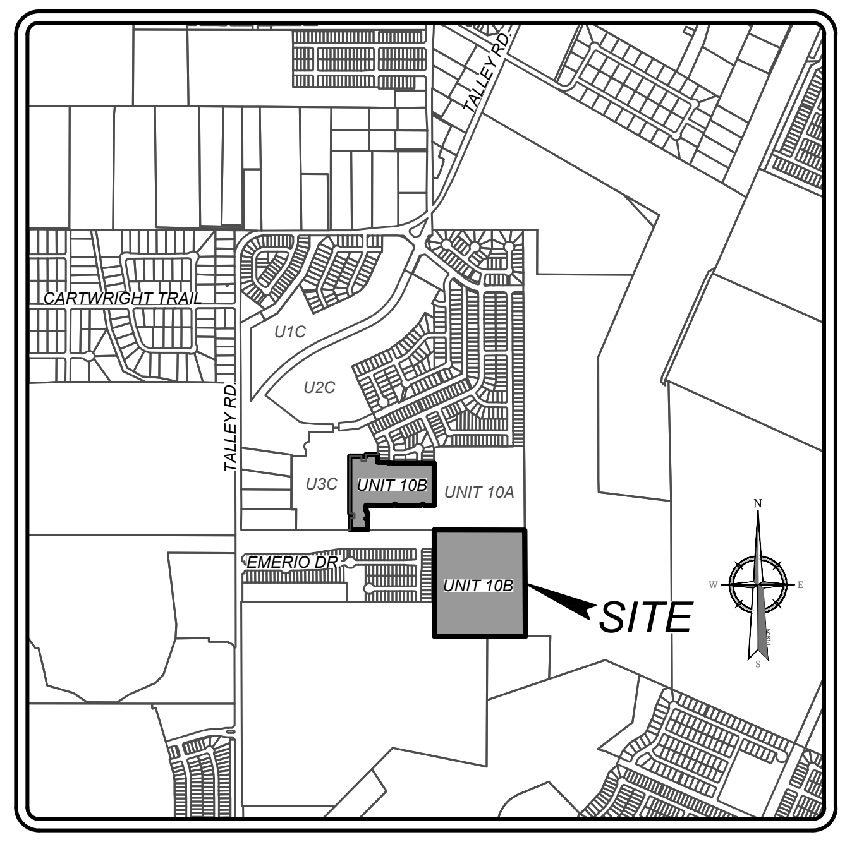
SHEET NUMBER:
4.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


MATCH LINE "A" SEE SHEET 4.1
MORGAN MEADOWS, UNIT 10A
(PLAT# 25-11800377)
BLOCK 86 C.B.4404
NORVILLE DR.
(60' R.O.W.)
STREET RIGHT OF WAY DEDICATION (VOL. 20002, PGS. 2145-2146 D.P.R.)
DRAIN "I"
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
SHAGGY GRV (60' R.O.W.)
LOT 901
BLOCK 131 C.B.4404
DRAIN "F"
15' E. G. T. TV. E
LANTERN LP (50' R.O.W.)
10' E. G. T. TV. E
LOT 902
BLOCK 130
C.B. 4404
DETENTION BASIN "B"
PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
BLOCK 113 C.B.4404
LOT 902
STREET "G" (50' R.O.W.)
BLOCK 133 C.B.4404
STREET "H" (50' R.O.W.)
BLOCK 132 C.B.4404
VELMA VALE (50' R.O.W.)
BLOCK 131 C.B.4404
UNPLATTED 157.48 ACRE TRACT OWNER: VISE OAKS I, LTD. (VOL. 9437, PGS. 963 O.P.R.)
H.P.
BLOCK 130 C.B.4404
LOT 902
BLOCK 130
C.B. 4404
DETENTION BASIN "C"
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
DRAIN "G"
MIDNIGHT DEW (50' R.O.W.)
LOT 902
BLOCK 131
C.B. 4404
DETENTION BASIN "C"
DRAIN "H"
STREET "K" (50' R.O.W.)
BLOCK 130 C.B.4404
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
LOT 902
UNPLATTED 9.22 ACRE TRACT OWNER: CAMPBELTON ROAD, LTD. (VOL. 8187, PG. 828 O.P.R.)


N
S
E
W
50 0 50 100

SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
U1C
U2C
U3C
UNIT 10A
SEMERIO DR
UNIT 10B
SITE

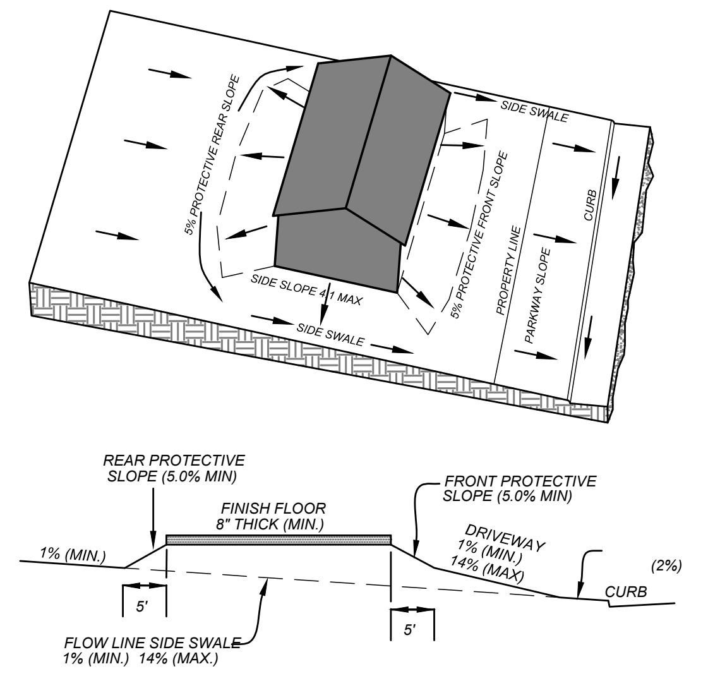
LOCATION MAP
NOT-TO-SCALE

LEGEND

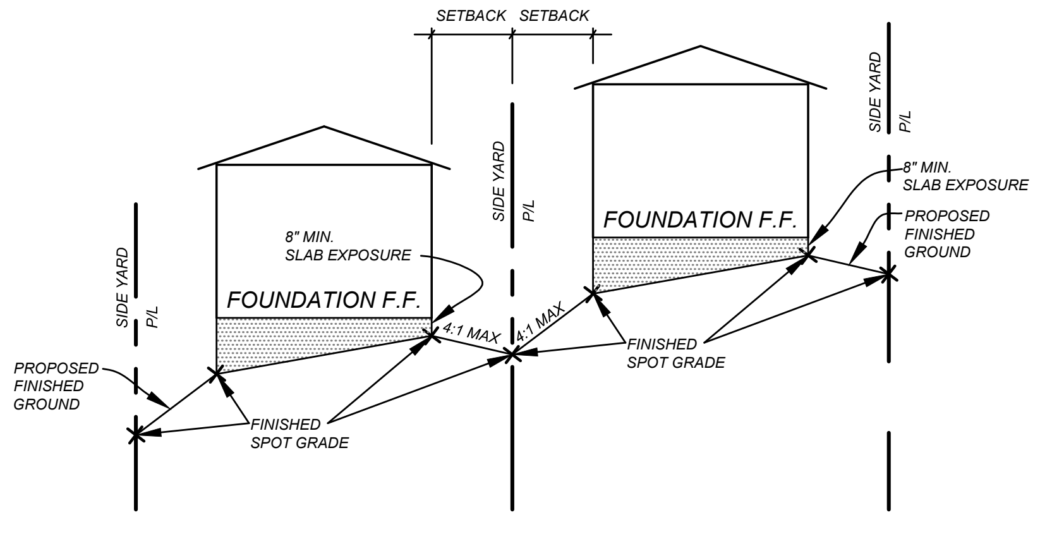
E, G, T, & TV. E.	=	GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
➡	=	FLOW ARROW
Ⓐ	=	LOT GRADE TYPE
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT

GENERAL NOTES:

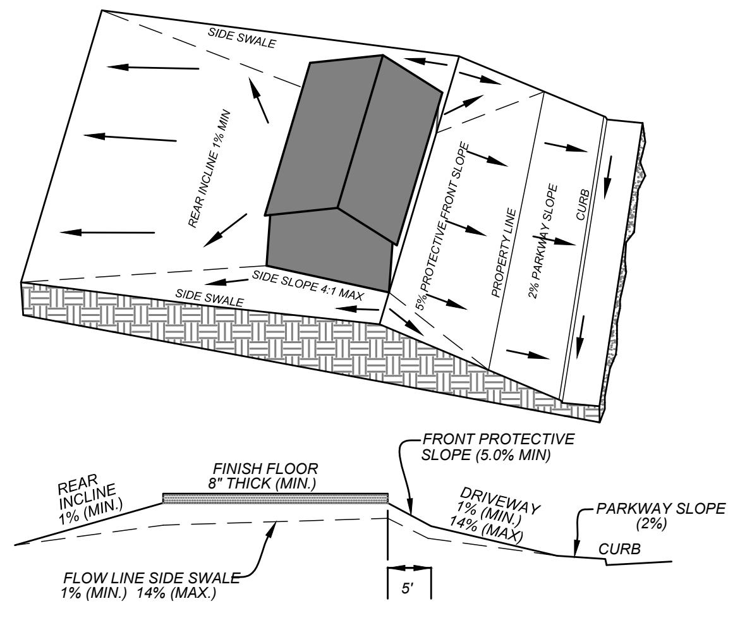
1. ELEVATION SHOWN ON FOUNDATION IS FOR FINISHED FLOOR.
2. CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
3. HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
4. AS SOON AS PRACTICAL HOME BUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SODDING, ETC...) TO PREVENT EROSION FROM OCCURRING.
5. CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
6. POSITIVE DRAINAGE SHALL BE MAINTAINED ON ALL SURFACE AREAS WITHIN THE SCOPE OF THIS PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS AND TOWARDS THE PROPER DRAINAGE EASEMENT OR STREET RIGHT OF WAY ACCORDING TO THE MASTER DRAINAGE PLAN FOR THE PROJECT. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW PONDING OF WATER.
7. ALL ELEVATIONS AND CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES._THE THICKNESS OF PAVEMENT, CURBS, AND SIDEWALKS MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
8. GRADING PLAN IS INTENDED FOR USE IN LOT GRADING ONLY. CONTRACTOR SHOULD REFER TO CONSTRUCTION DRAWINGS FOR ALL OTHER GRADES, INCLUDING, BUT NOT LIMITED TO, CHANNELS, ROADS, AND DETENTION PONDS.
9. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.


REAR PROTECTIVE SLOPE (5.0% MIN)
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
DRIVEWAY 1% (MIN.) 14% (MAX.)
(2%)
CURB
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)
5'

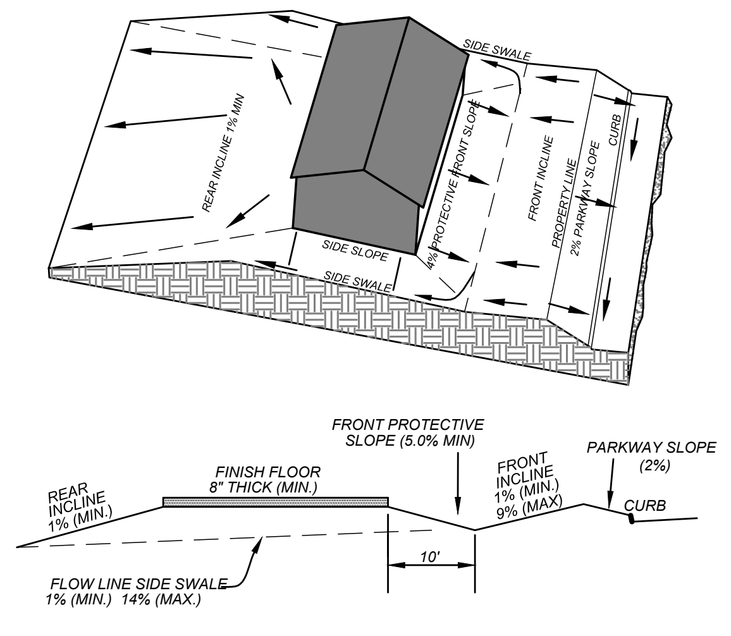
TYPE 'A' LOT GRADING


SETBACK SETBACK
SIDE YARD P/L
8" MIN. SLAB EXPOSURE
FOUNDATION F.F.
PROPOSED FINISHED GROUND
FINISHED SPOT GRADE
4:1 MAX
4:1 MAX

TYPICAL SIDE YARD GRADING
N.T.S.


REAR INCLINE
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
DRIVEWAY 1% (MIN.) 14% (MAX.)
PARKWAY SLOPE (2%)
CURB
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)
5'

TYPE 'B' LOT GRADING


REAR INCLINE
FINISH FLOOR 8" THICK (MIN.)
FRONT PROTECTIVE SLOPE (5.0% MIN)
FRONT INCLINE 1% (MIN.) 14% (MAX.)
PARKWAY SLOPE (2%)
CURB
FLOW LINE SIDE SWALE 1% (MIN.) 14% (MAX.)
10'

TYPE 'C' LOT GRADING

Colliers
Engineering
& Design

www.colliersengineering.com

Formerly Known as KFW ENGINEERS + SURVEYING

811 Know what's below. Call before you dig.
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FOR
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TBPE Firm#: F-14909
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	GR2054113

SHEET TITLE:
OVERALL GRADING PLAN
(SHT 2 OF 2)

SHEET NUMBER:
4.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

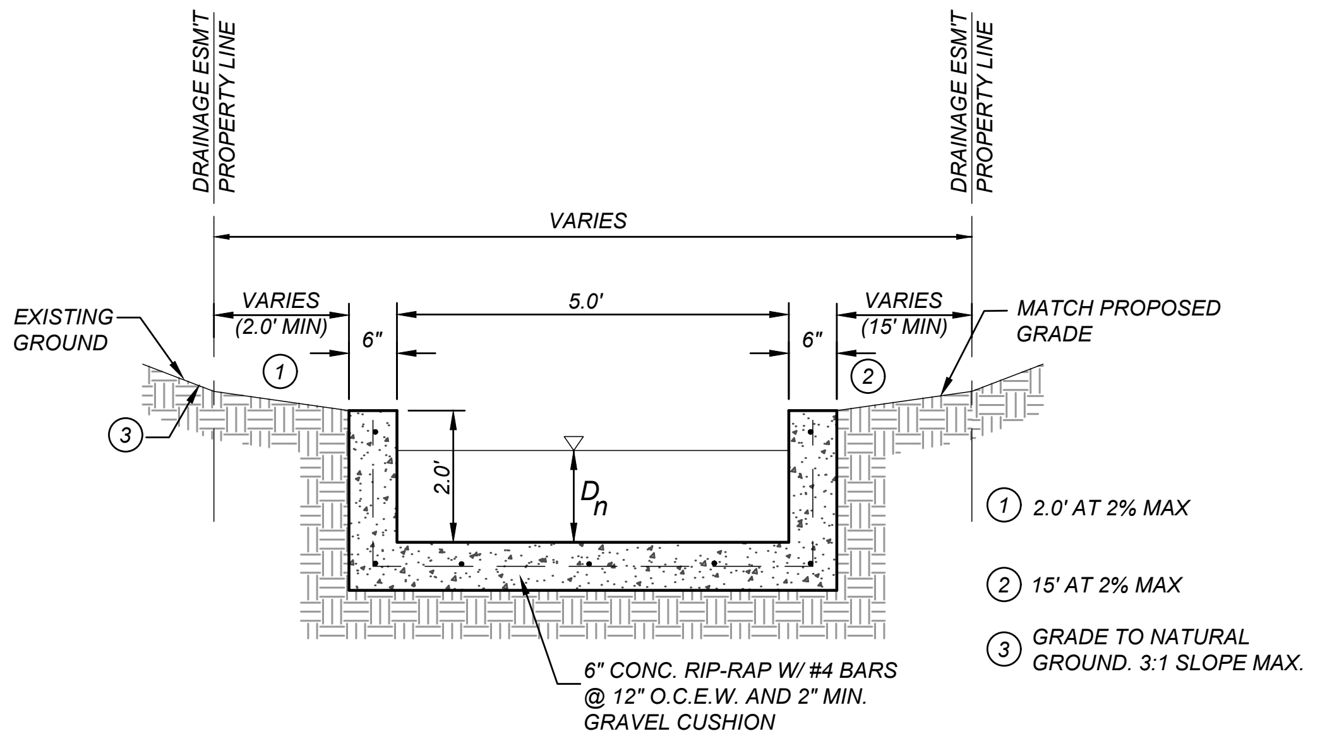
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

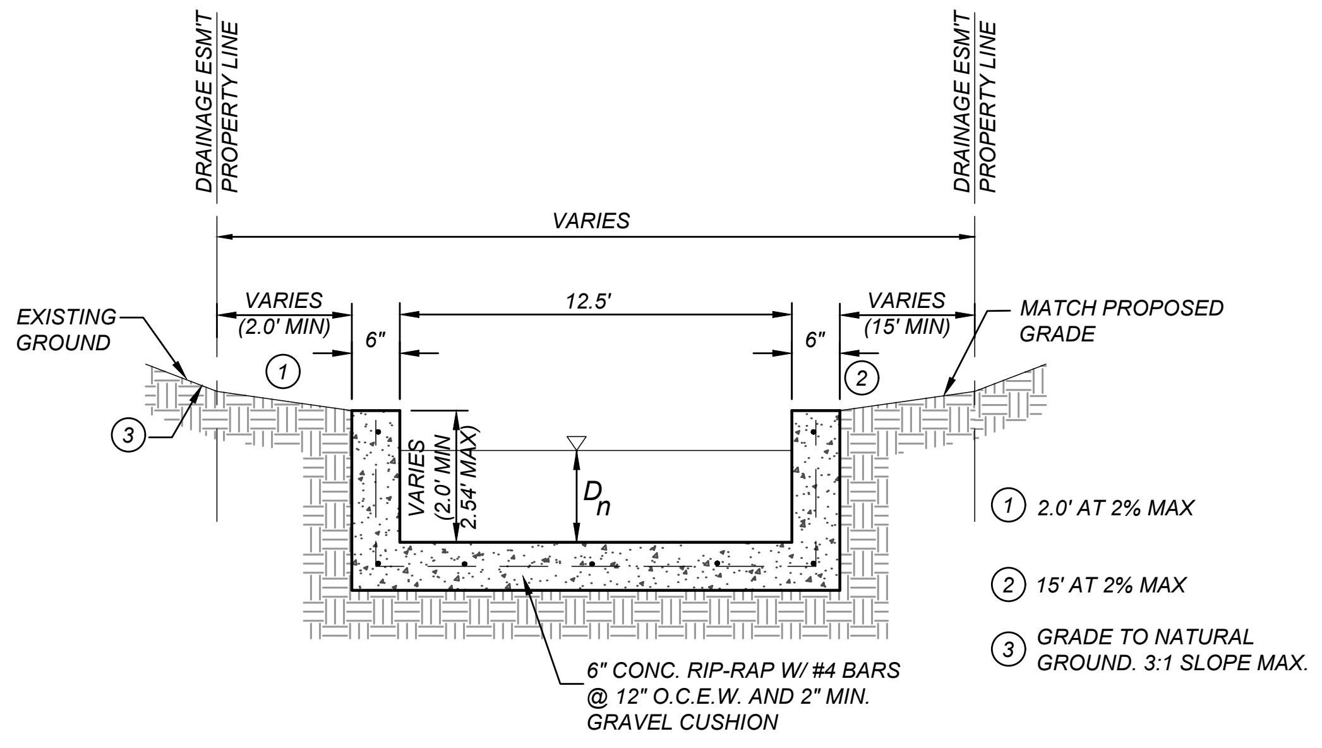
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST 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.

NOTE:

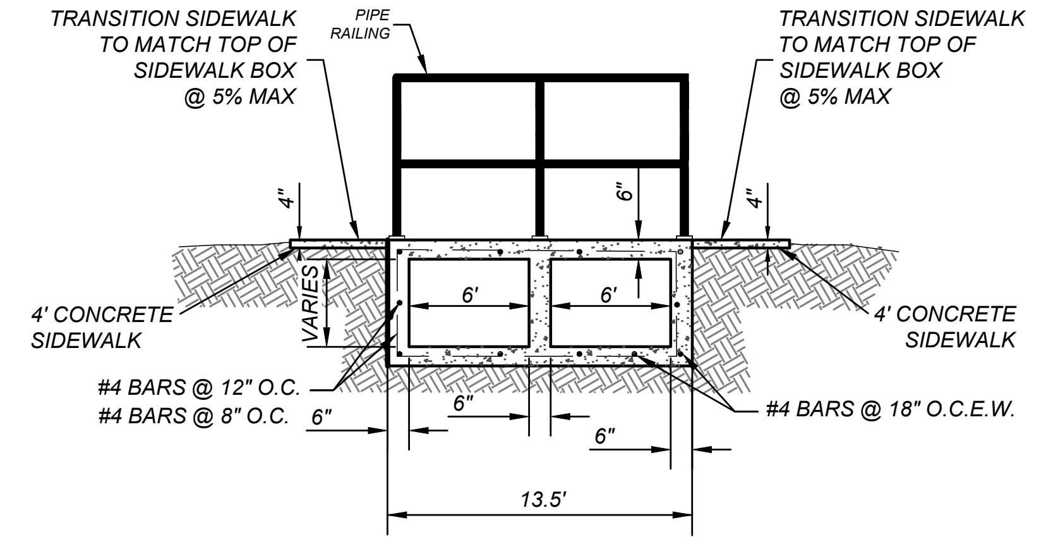
1. *ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.*
2. *ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.*


DRAINAGE ESM'T
PROPERTY LINE
VARIES
EXISTING GROUND
VARIES (2.0' MIN)
6"
5.0'
6"
VARIES (15' MIN)
MATCH PROPOSED GRADE
2.0'
Dn
① 2.0' AT 2% MAX
② 15' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

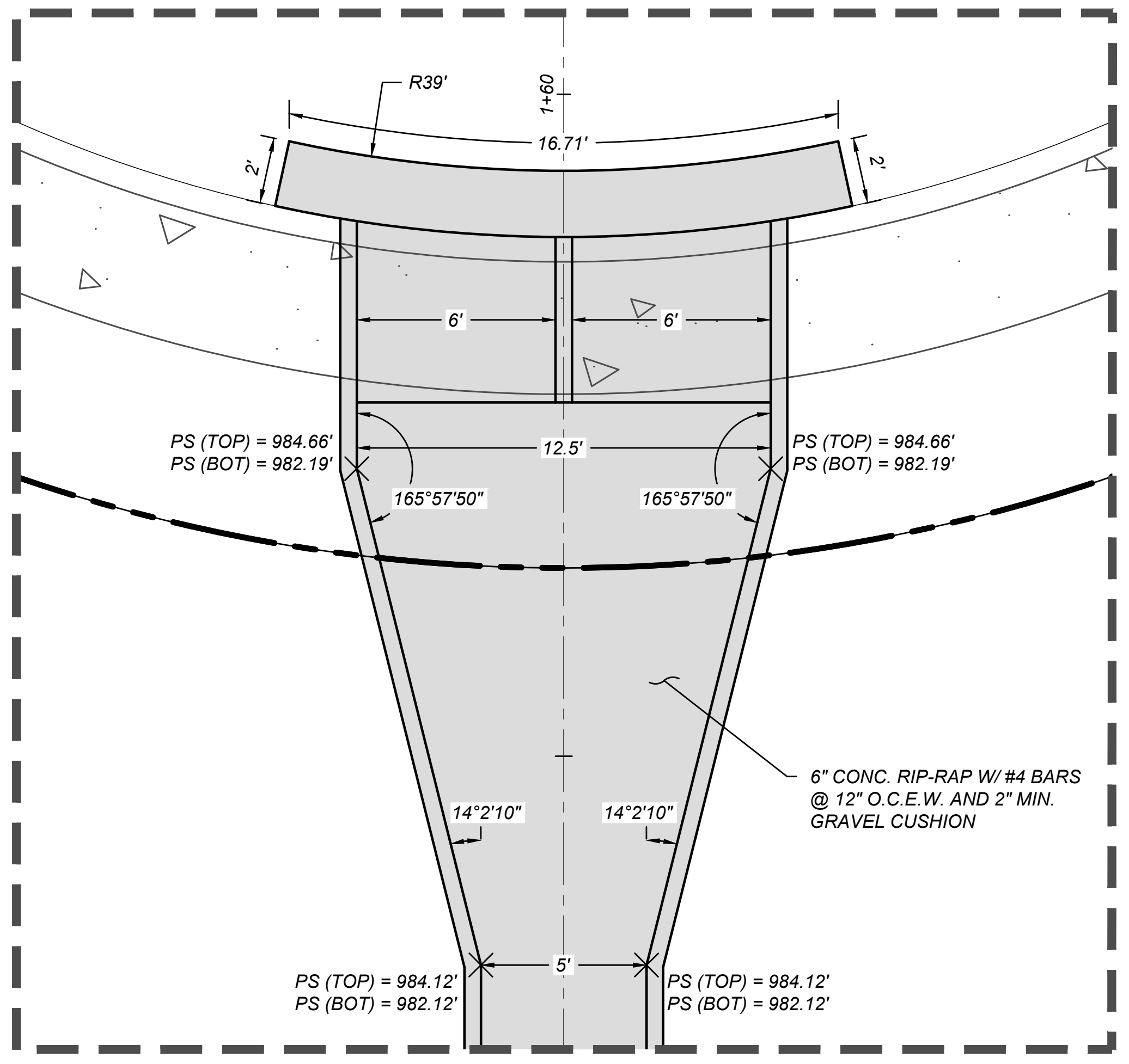
SECTION "A1-A1"
STA. 1+16.09 - STA. 1+33.69
N.T.S.


DRAINAGE ESM'T
PROPERTY LINE
VARIES
EXISTING GROUND
VARIES (2.0' MIN)
6"
12.5'
6"
VARIES (15' MIN)
MATCH PROPOSED GRADE
VARIES (2.0' MIN 2.54' MAX)
Dn
① 2.0' AT 2% MAX
② 15' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

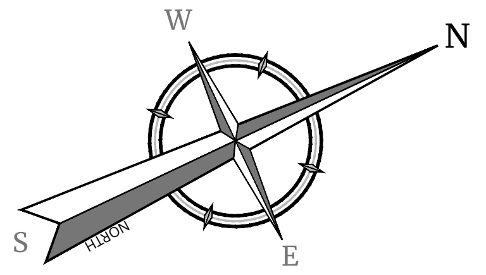
SECTION "A2-A2"
STA. 1+48.69 - STA. 1+50.69
N.T.S.

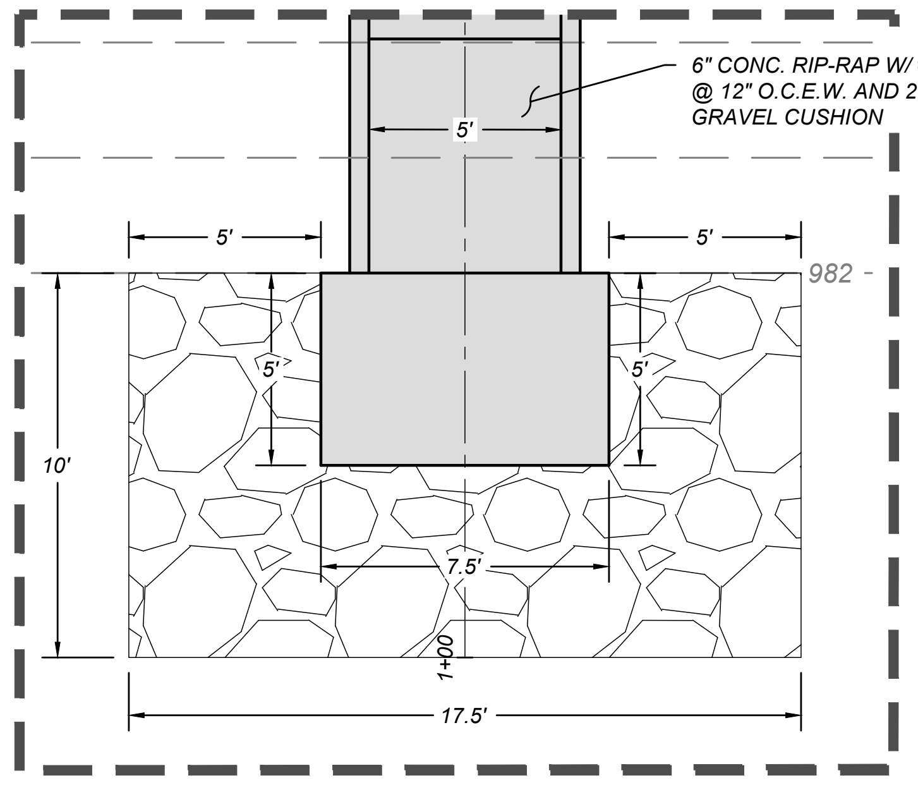

TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
PIPE RAILING
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
4"
6"
4"
VARIES
6'
6'
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
6"
6"
6"
#4 BARS @ 18" O.C.E.W.
13.5'

SECTION "A3-A3"
N.T.S.

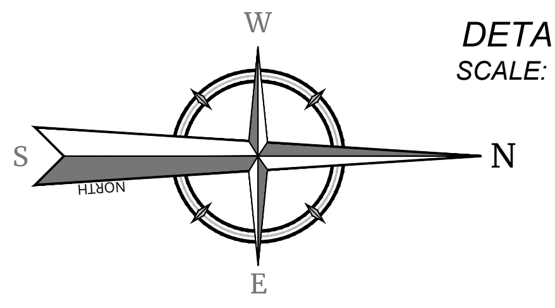

R39'
1+60
16.71'
2'
6'
6'
12.5'
PS (TOP) = 984.66'
PS (BOT) = 982.19'
PS (TOP) = 984.66'
PS (BOT) = 982.19'
165°57'50"
165°57'50"
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
14°2'10"
14°2'10"
5'
PS (TOP) = 984.12'
PS (BOT) = 982.12'
PS (TOP) = 984.12'
PS (BOT) = 982.12'

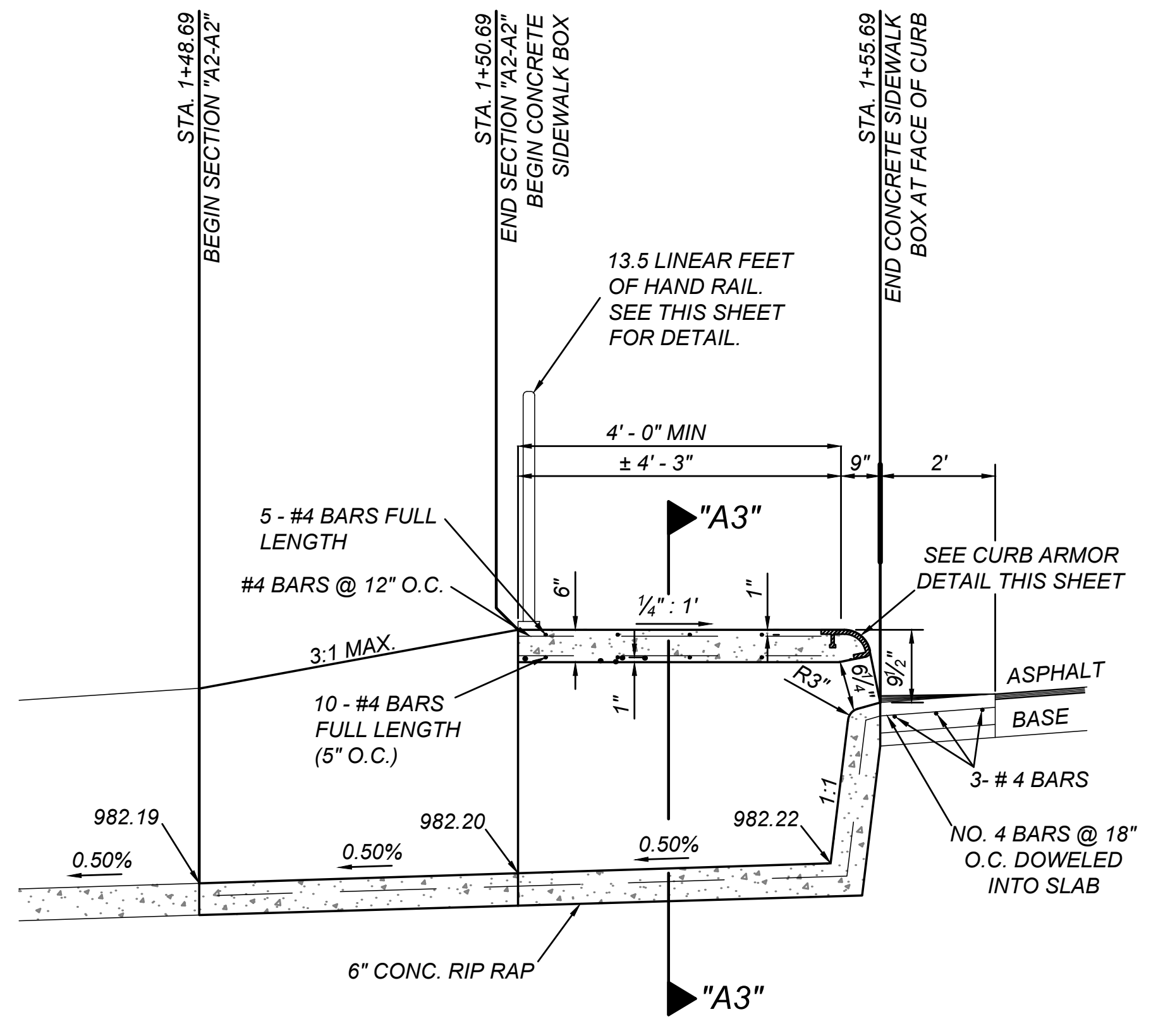
DETAIL "A"
SCALE: 1" = 5'



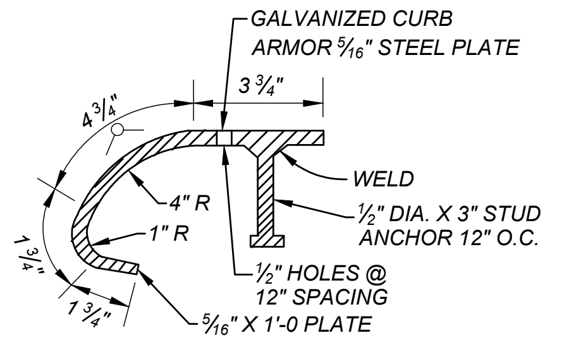

6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
5'
5'
5'
982
5'
5'
10'
7.5'
1+00
17.5'

DETAIL "B"
SCALE: 1" = 5'

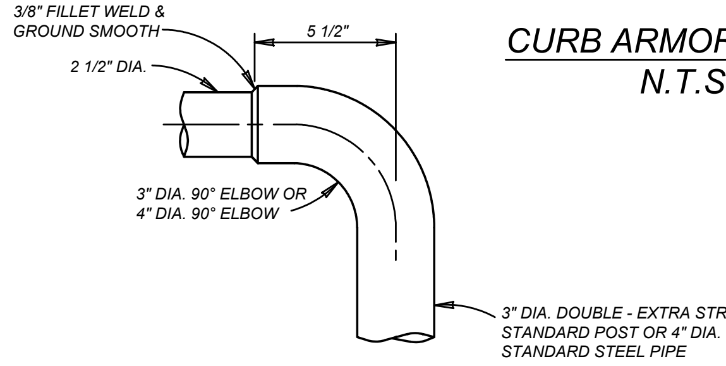



STA. 1+48.69
BEGIN SECTION "A2-A2"
STA. 1+50.69
END SECTION "A2-A2"
BEGIN CONCRETE SIDEWALK BOX
STA. 1+55.69
END CONCRETE SIDEWALK BOX AT FACE OF CURB
13.5 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
"A3"
#4 BARS @ 12" O.C.
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX
10 - #4 BARS FULL LENGTH (5" O.C.)
ASPHALT
BASE
3- # 4 BARS
982.19
0.50%
982.20
0.50%
982.22
0.50%
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
6" CONC. RIP RAP
"A3"

SIDEWALK BOX DETAIL
N.T.S.

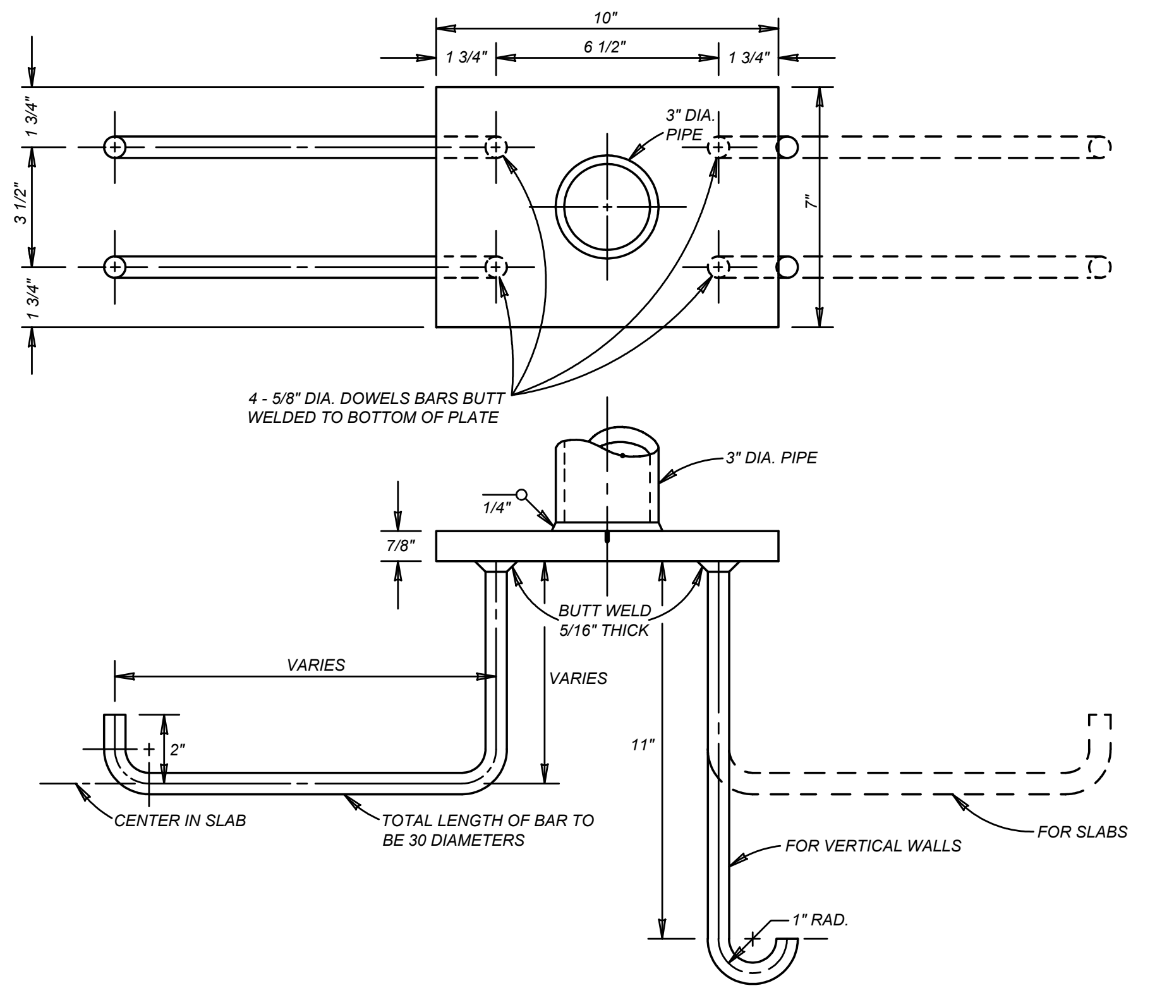

GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 ¾"
WELD
½" DIA. X 3" STUD ANCHOR 12" O.C.
4" R
1" R
½" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE

CURB ARMOR DETAIL
N.T.S.

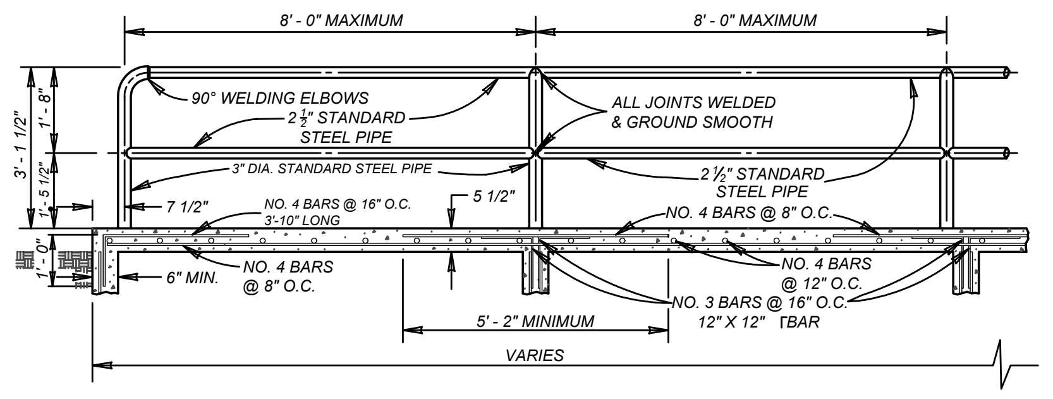

3/8" FILLET WELD & GROUND SMOOTH
2 1/2" DIA.
5 1/2"
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS
N.T.S.

* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


10"
6 1/2"
1 3/4"
1 3/4"
3" DIA. PIPE
3 1/2"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
1/4"
7/8"
BUTT WELD 5/16" THICK
VARIES
VARIES
11"
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR SLABS
FOR VERTICAL WALLS
1" RAD.

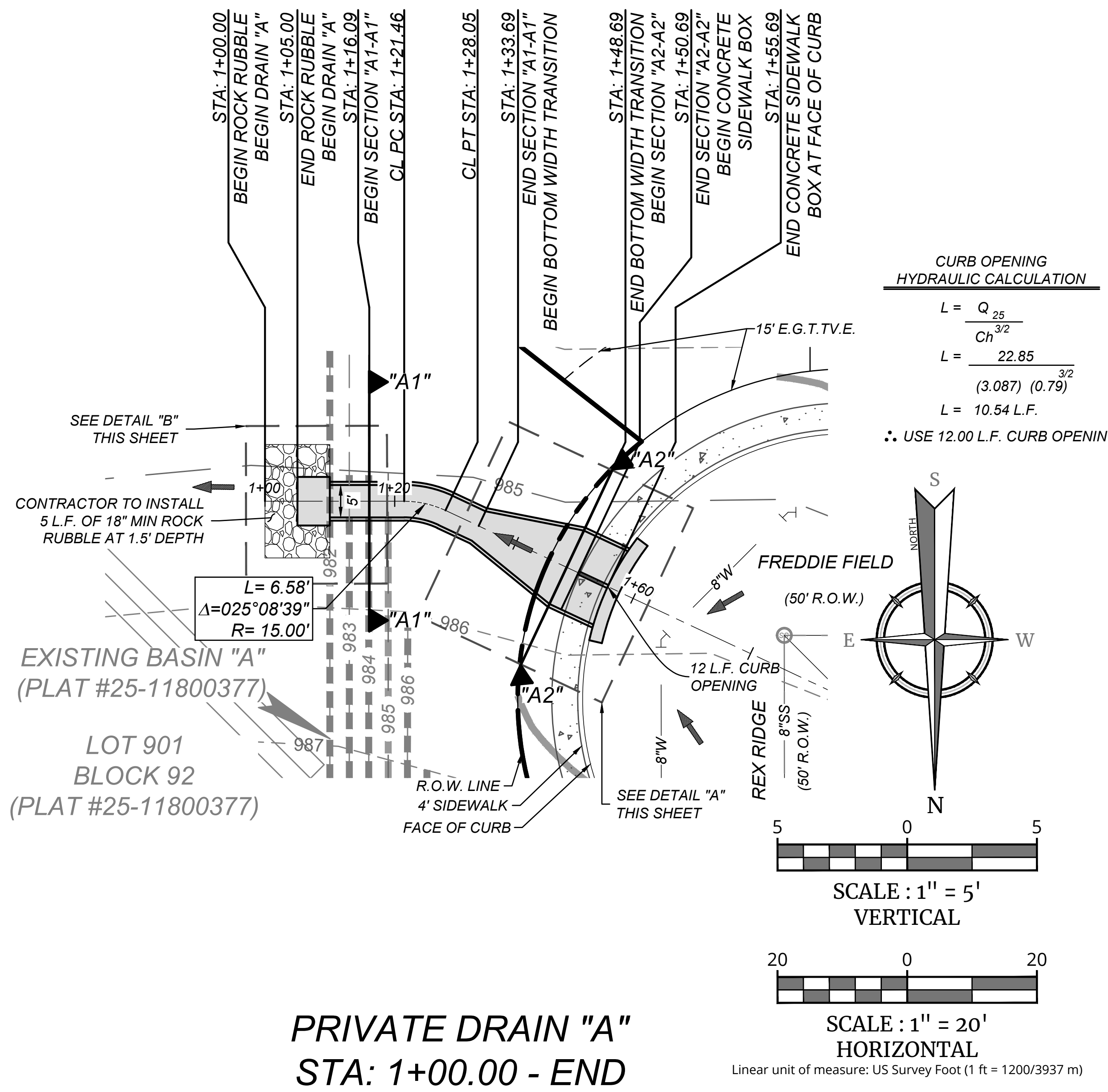
PIPE ANCHORAGE DETAILS
N.T.S.


8' - 0" MAXIMUM
8' - 0" MAXIMUM
90° WELDING ELBOWS
2 ½" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
2 ½" STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 2'-10" LONG
5 1/2"
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 12" O.C.
6" MIN.
NO. 3 BARS @ 18" O.C. 12" X 12" TBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
N.T.S.

LEGEND

— — 735 — —	=	EXISTING CONTOUR
(735)	=	PROPOSED CONTOUR
←	=	FLOW ARROW


STA: 1+00.00
BEGIN ROCK RUBBLE
BEGIN DRAIN "A"
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "A"
STA: 1+16.09
BEGIN SECTION "A1-A1"
CL PC STA: 1+21.46
CL PT STA: 1+28.05
STA: 1+33.69
END SECTION "A1-A1"
BEGIN BOTTOM WIDTH TRANSITION
STA: 1+48.69
END BOTTOM WIDTH TRANSITION
BEGIN SECTION "A2-A2"
STA: 1+50.69
END SECTION "A2-A2"
BEGIN CONCRETE SIDEWALK BOX
STA: 1+55.69
END CONCRETE SIDEWALK BOX AT FACE OF CURB
15' E.G.T.TV.E.
SEE DETAIL "B" THIS SHEET
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
1+00
1+20
5'
"A1"
"A1"
"A2"
"A2"
985
986
987
982
983
984
985
986
L= 6.58'
Δ=025°08'39"
R= 15.00'
EXISTING BASIN "A"
(PLAT #25-11800377)
LOT 901
BLOCK 92
(PLAT #25-11800377)
1+60
8"W
FREDDIE FIELD
(50' R.O.W.)
12 L.F. CURB OPENING
8"W
REX RIDGE
8"SS
(50' R.O.W.)
R.O.W. LINE
4' SIDEWALK
FACE OF CURB
SEE DETAIL "A" THIS SHEET
S
E
W
N
NORTH
5
0
5
SCALE : 1" = 5'
VERTICAL
20
0
20
SCALE : 1" = 20'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

CURB OPENING
HYDRAULIC CALCULATION

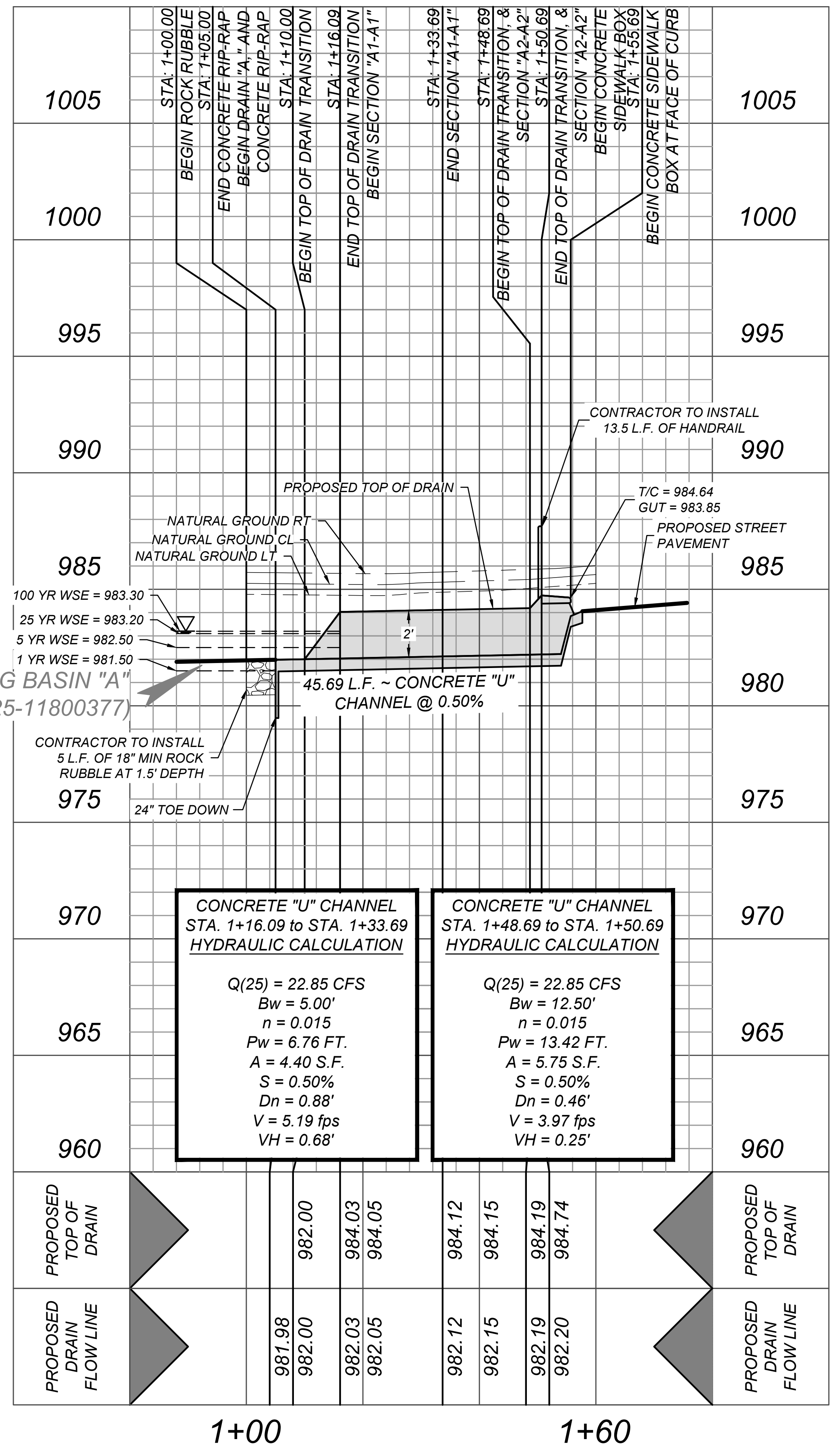
$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{22.85}{(3.087)\ (0.79)^{3/2}}$$

$$L = 10.54\ \text{L.F.}$$

∴ USE 12.00 L.F. CURB OPENING

PRIVATE DRAIN "A"
STA: 1+00.00 - END


1005
1000
995
990
985
980
975
970
965
960
STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END CONCRETE RIP-RAP
BEGIN DRAIN "A" AND
CONCRETE RIP-RAP
STA: 1+10.00
BEGIN TOP OF DRAIN TRANSITION
STA: 1+16.09
END TOP OF DRAIN TRANSITION
BEGIN SECTION "A1-A1"
STA: 1+33.69
END SECTION "A1-A1"
STA: 1+48.69
BEGIN TOP OF DRAIN TRANSITION, &
SECTION "A2-A2"
STA: 1+50.69
END TOP OF DRAIN TRANSITION, &
SECTION "A2-A2"
BEGIN CONCRETE
SIDEWALK BOX
STA: 1+55.69
BEGIN CONCRETE SIDEWALK
BOX AT FACE OF CURB
CONTRACTOR TO INSTALL 13.5 L.F. OF HANDRAIL
PROPOSED TOP OF DRAIN
T/C = 984.64
GUT = 983.85
PROPOSED STREET PAVEMENT
NATURAL GROUND RT
NATURAL GROUND CL
NATURAL GROUND LT
100 YR WSE = 983.30
25 YR WSE = 983.20
5 YR WSE = 982.50
1 YR WSE = 981.50
2'
EXISTING BASIN "A"
(PLAT #25-11800377)
45.69 L.F. ~ CONCRETE "U" CHANNEL @ 0.50%
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
24" TOE DOWN
PROPOSED TOP OF DRAIN
982.00
984.03
984.05
984.12
984.15
984.19
984.74
PROPOSED DRAIN FLOW LINE
981.98
982.00
982.03
982.05
982.12
982.15
982.19
982.20
1+00
1+60

CONCRETE "U" CHANNEL
STA. 1+16.09 to STA. 1+33.69
HYDRAULIC CALCULATION

Q(25) = 22.85 CFS
Bw = 5.00'
n = 0.015
Pw = 6.76 FT.
A = 4.40 S.F.
S = 0.50%
Dn = 0.88'
V = 5.19 fps
VH = 0.68'

CONCRETE "U" CHANNEL
STA. 1+48.69 to STA. 1+50.69
HYDRAULIC CALCULATION

Q(25) = 22.85 CFS
Bw = 12.50'
n = 0.015
Pw = 13.42 FT.
A = 5.75 S.F.
S = 0.50%
Dn = 0.46'
V = 3.97 fps
VH = 0.25'

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	DR2054113

SHEET TITLE:
PRIVATE DRAIN "A"
PLAN & PROFILE

SHEET NUMBER:
5.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

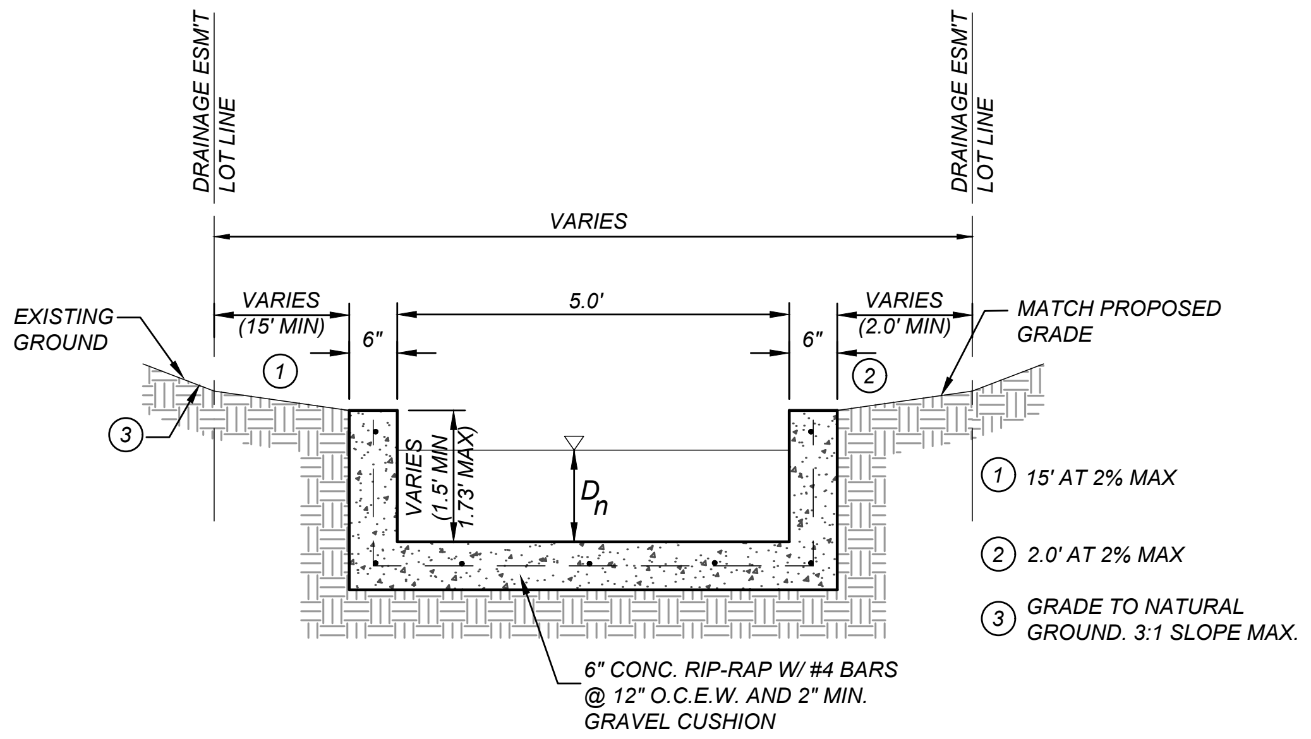
NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

LEGEND

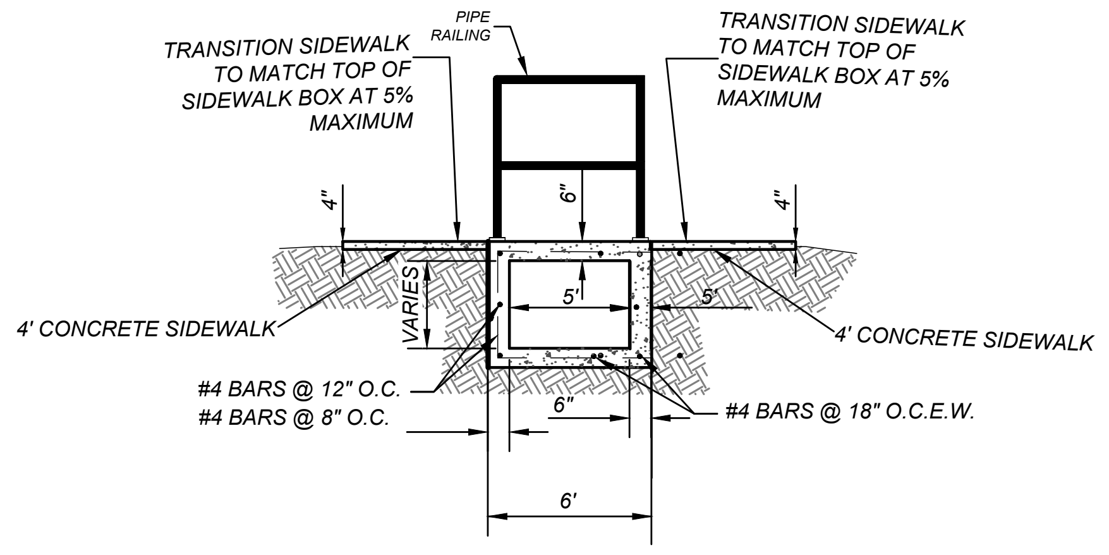
— — 735 — —	=	EXISTING CONTOUR
—(735)—	=	PROPOSED CONTOUR
⬅	=	FLOW ARROW


DRAINAGE ESM'T
LOT LINE
DRAINAGE ESM'T
LOT LINE
VARIES
VARIES
(15' MIN)
5.0'
VARIES
(2.0' MIN)
6"
6"
EXISTING GROUND
MATCH PROPOSED GRADE
①
②
③
VARIES
(1.5' MIN
1.73' MAX)
D_n
① 15' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

SECTION "B1-B1"

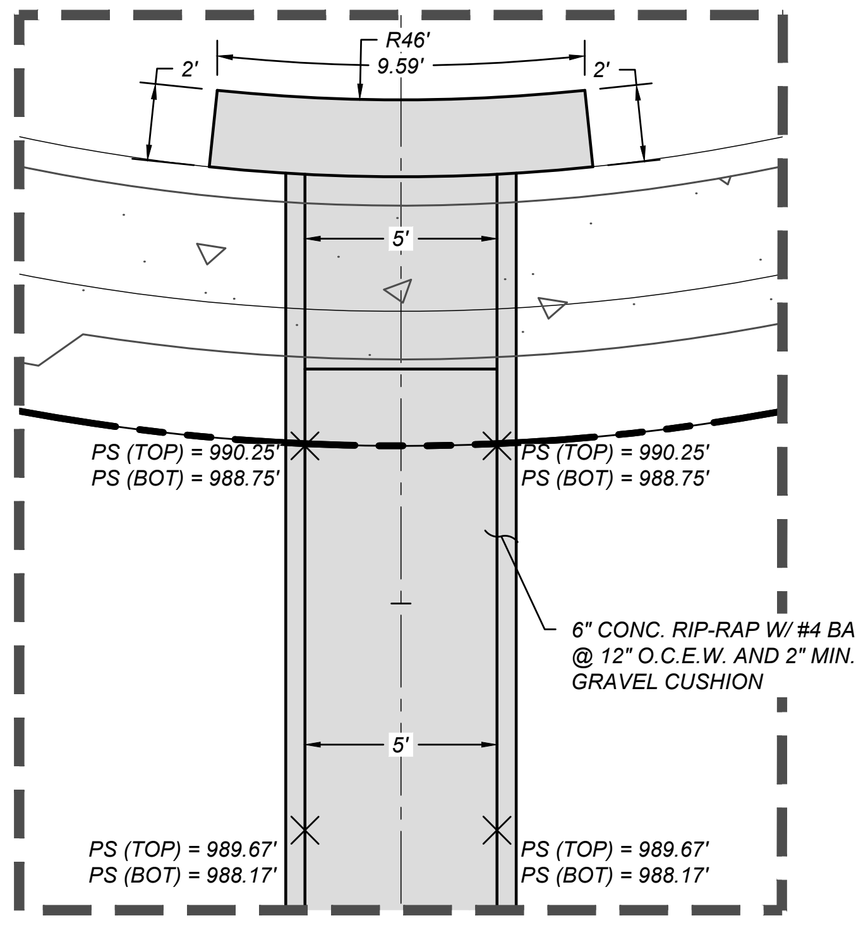
STA. 1+14.57 - STA. 1+86.10

N.T.S.


PIPE RAILING
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX AT 5% MAXIMUM
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX AT 5% MAXIMUM
4"
6"
4"
VARIES
5'
5'
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
6"
#4 BARS @ 18" O.C.E.W.
6'

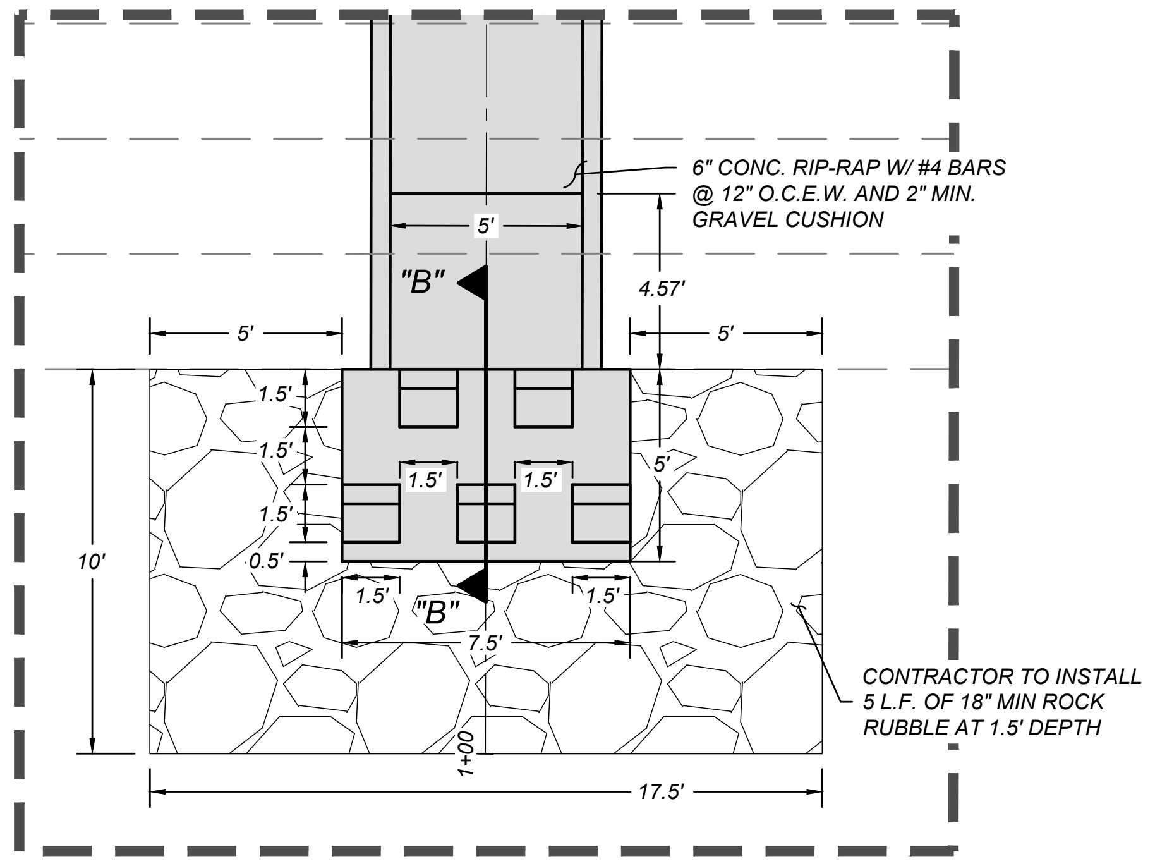
SECTION "B3-B3"

N.T.S.


R46'
9.59'
2'
2'
5'
5'
PS (TOP) = 990.25'
PS (BOT) = 988.75'
PS (TOP) = 990.25'
PS (BOT) = 988.75'
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
PS (TOP) = 989.67'
PS (BOT) = 988.17'
PS (TOP) = 989.67'
PS (BOT) = 988.17'

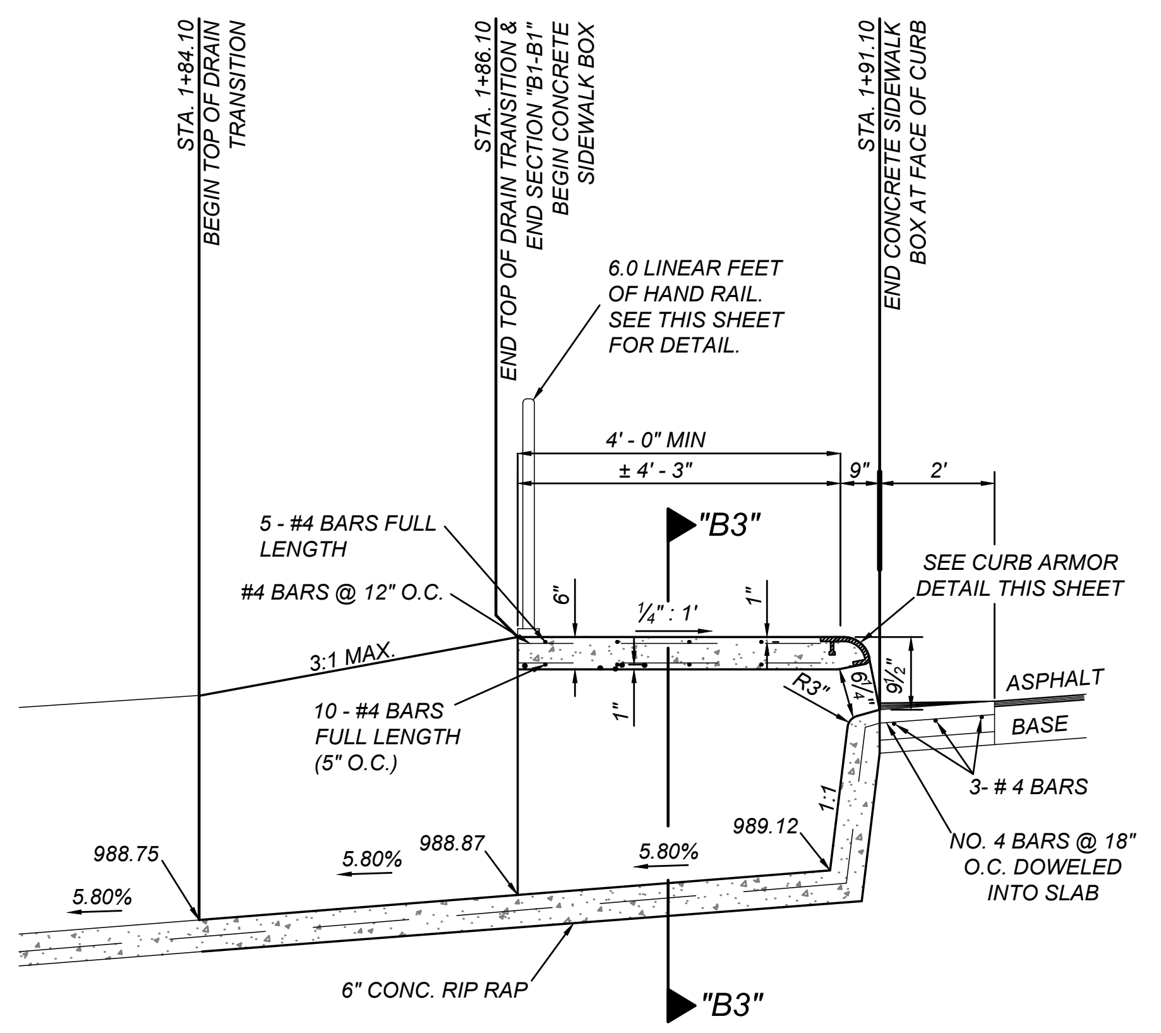
DETAIL "A"

SCALE: 1" = 5'


6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
5'
"B"
4.57'
5'
5'
1.5'
1.5'
1.5'
1.5'
1.5'
0.5'
5'
10'
1.5'
"B"
1.5'
7.5'
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
1+00
17.5'

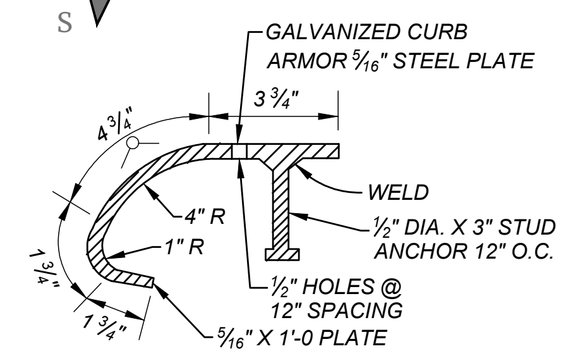
DETAIL "B"

SCALE: 1" = 5'


STA. 1+84.10
BEGIN TOP OF DRAIN TRANSITION
STA. 1+86.10
END TOP OF DRAIN TRANSITION & END SECTION "B1-B1" BEGIN CONCRETE SIDEWALK BOX
STA. 1+91.10
END CONCRETE SIDEWALK BOX AT FACE OF CURB
6.0 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
"B3"
#4 BARS @ 12" O.C.
6"
1/4" : 1'
1"
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX.
R3"
6 1/4"
9 1/2"
ASPHALT
BASE
10 - #4 BARS FULL LENGTH (5" O.C.)
1"
3- # 4 BARS
1:1
988.75
5.80%
988.87
5.80%
5.80%
989.12
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
6" CONC. RIP RAP
"B3"

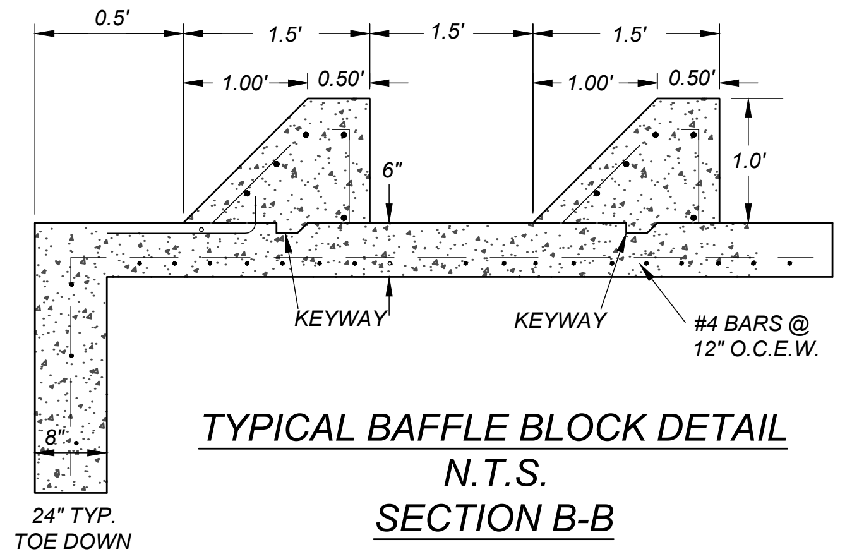
SIDEWALK BOX DETAIL

N.T.S.


GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 3/4"
4 3/4"
WELD
4" R
1" R
1/2" DIA. X 3" STUD ANCHOR 12" O.C.
1 3/4"
1 3/4"
1/2" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE

CURB ARMOR DETAIL

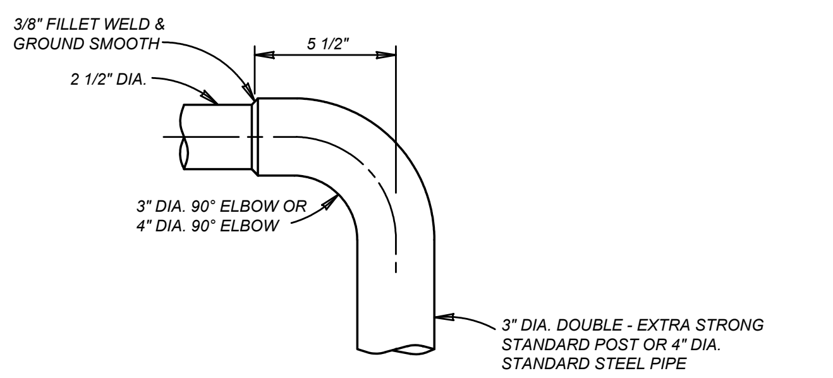
N.T.S.


0.5'
1.5'
1.5'
1.5'
1.00'
0.50'
1.00'
0.50'
6"
1.0'
KEYWAY
KEYWAY
#4 BARS @ 12" O.C.E.W.
8"
24" TYP. TOE DOWN

TYPICAL BAFFLE BLOCK DETAIL

N.T.S.

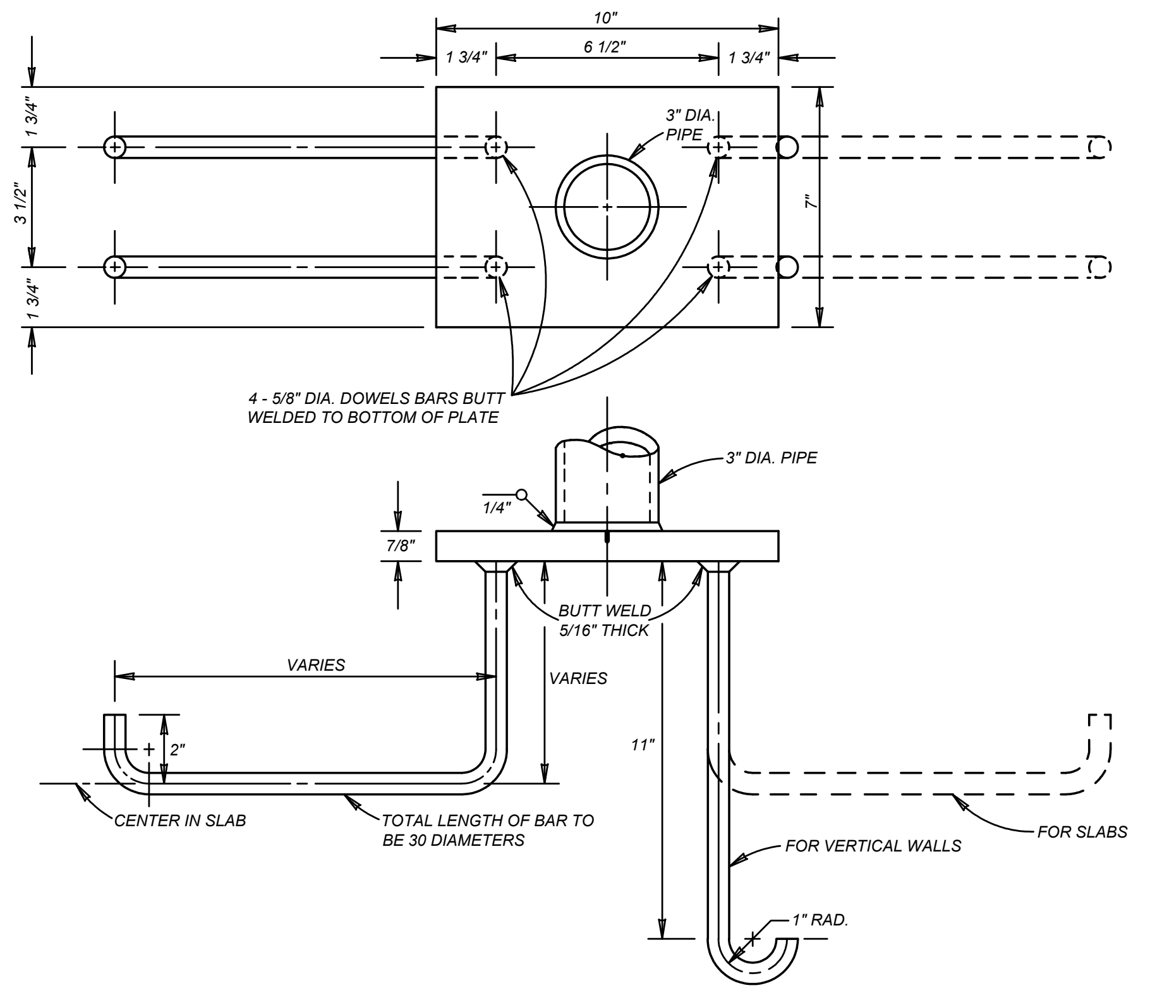
SECTION B-B


3/8" FILLET WELD & GROUND SMOOTH
5 1/2"
2 1/2" DIA.
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS

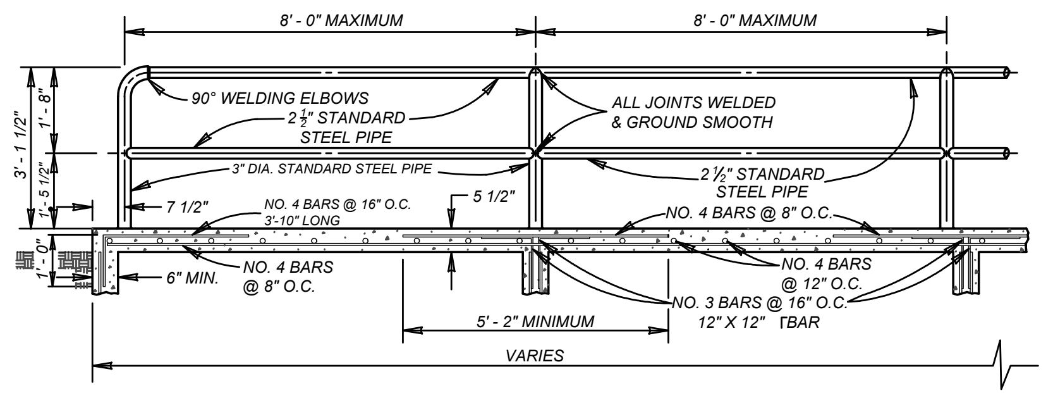
N.T.S.

* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


10"
1 3/4"
6 1/2"
1 3/4"
1 3/4"
3 1/2"
1 3/4"
3" DIA. PIPE
7"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
1/4"
7/8"
BUTT WELD 5/16" THICK
VARIES
VARIES
11"
2"
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS

N.T.S.


8' - 0" MAXIMUM
8' - 0" MAXIMUM
3' - 1 1/2"
1' - 8"
1' - 5 1/2"
1' - 0"
90° WELDING ELBOWS
2 1/2" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
2 1/2" STANDARD STEEL PIPE
7 1/2"
NO. 4 BARS @ 16" O.C. 3'-10" LONG
5 1/2"
NO. 4 BARS @ 8" O.C.
6" MIN.
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 12" O.C.
NO. 3 BARS @ 16" O.C. 12" X 12" ΓBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION

N.T.S.

BAFFLE BLOCK CALCULATIONS
(ST. ANTHONY FALLS METHOD)

Q(25) = 7.41 CFS
BOTTOM WIDTH UPSTREAM = 5.0 FT
BOTTOM WIDTH DOWNSTREAM = 7.5 FT
Y1 = 0.12' (DEPTH BEFORE JUMP)
Y2 = 0.81' (DEPTH AFTER JUMP)

WIDTH OF BLOCKS = 0.75(Y1) = 0.09 FT. (USE 1.5 FT.)
SPACE BETWEEN BLOCKS = 0.75(Y1) = 0.09 FT. (USE 1.5 FT.)
HEIGHT OF BLOCKS = Y1 = 0.15 FT. (USE 1.5 FT.)
# OF BLOCKS ACROSS BOTTOM = 2

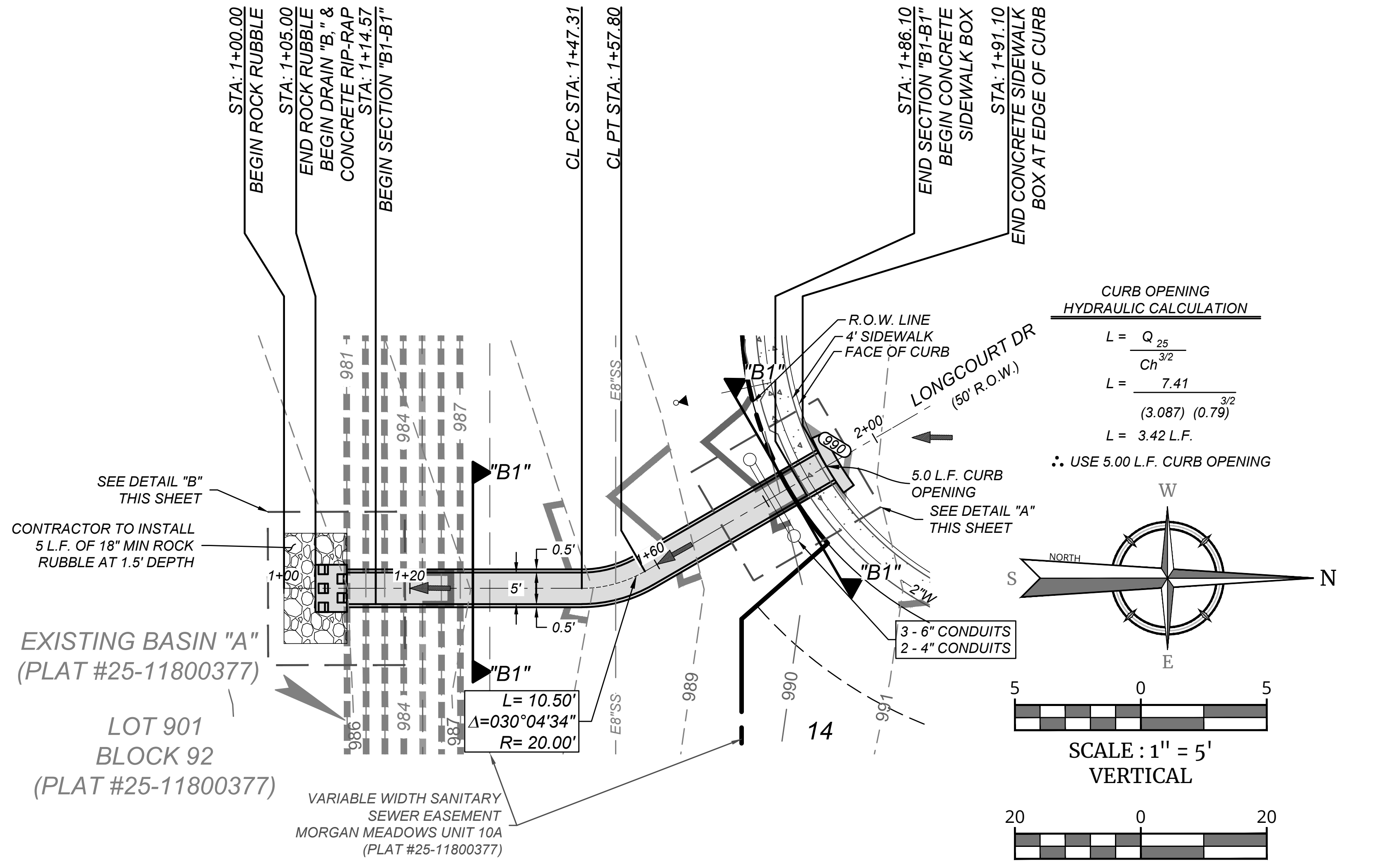
% OF FLOOR COVERED WITH BLOCKS = 2 (1.5 FT) /7.5 FT = 40%
(% MUST BE BETWEEN 40% AND 55%)

DEPTH OF TAILWATER (Y2) = 0.81 FT.
FROUDE NUMBER BEFORE JUMP = F1 = 6.28
FROUDE NUMBER AFTER JUMP = F2 = 0.24
LENGTH OF BASIN = LB = 4.5(Y2)/F1^0.76 = 0.13 FT. (USE 9.57 FT.)

DISTANCE TO FLOOR BLOCKS = LB/3 = 0.04 FT. (USE 4.57 FT.)

HEIGHT OF MAX TAILWATER DEPTH:
Z = Y2/3 = 0.27 FT.
Y2' = 0.85 * Y2 ; H = Z + Y2' = 0.96 FT.

VELOCITY AFTER JUMP:
V = Q/A
A = Y2 * [(B + T) / 2]
A = 0.81' * [(5.0 + 7.5) / 2] = 5.05 SQ. FT.
V = 7.41 / 5.05 = 1.47 F.P.S.


STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "B," &
CONCRETE RIP-RAP
STA: 1+14.57
BEGIN SECTION "B1-B1"
CL PC STA: 1+47.31
CL PT STA: 1+57.80
STA: 1+86.10
END SECTION "B1-B1"
BEGIN CONCRETE
SIDEWALK BOX
STA: 1+91.10
END CONCRETE SIDEWALK
BOX AT EDGE OF CURB
R.O.W. LINE
4' SIDEWALK
FACE OF CURB
LONGCOURT DR
(50' R.O.W.)
2+00
990
"B1"
"B1"
"B1"
"B1"
SEE DETAIL "B" THIS SHEET
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
1+00
1+20
1+60
5'
0.5'
0.5'
5.0 L.F. CURB OPENING
SEE DETAIL "A" THIS SHEET
3 - 6" CONDUITS
2 - 4" CONDUITS
2"W
981
984
987
986
984
987
989
990
991
E8"SS
E8"SS
L= 10.50'
Δ=030°04'34"
R= 20.00'
EXISTING BASIN "A"
(PLAT #25-11800377)
LOT 901
BLOCK 92
(PLAT #25-11800377)
VARIABLE WIDTH SANITARY SEWER EASEMENT
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
14
W
NORTH
S
N
E
5
0
5
SCALE : 1" = 5'
VERTICAL
20
0
20
SCALE : 1" = 20'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

CURB OPENING
HYDRAULIC CALCULATION

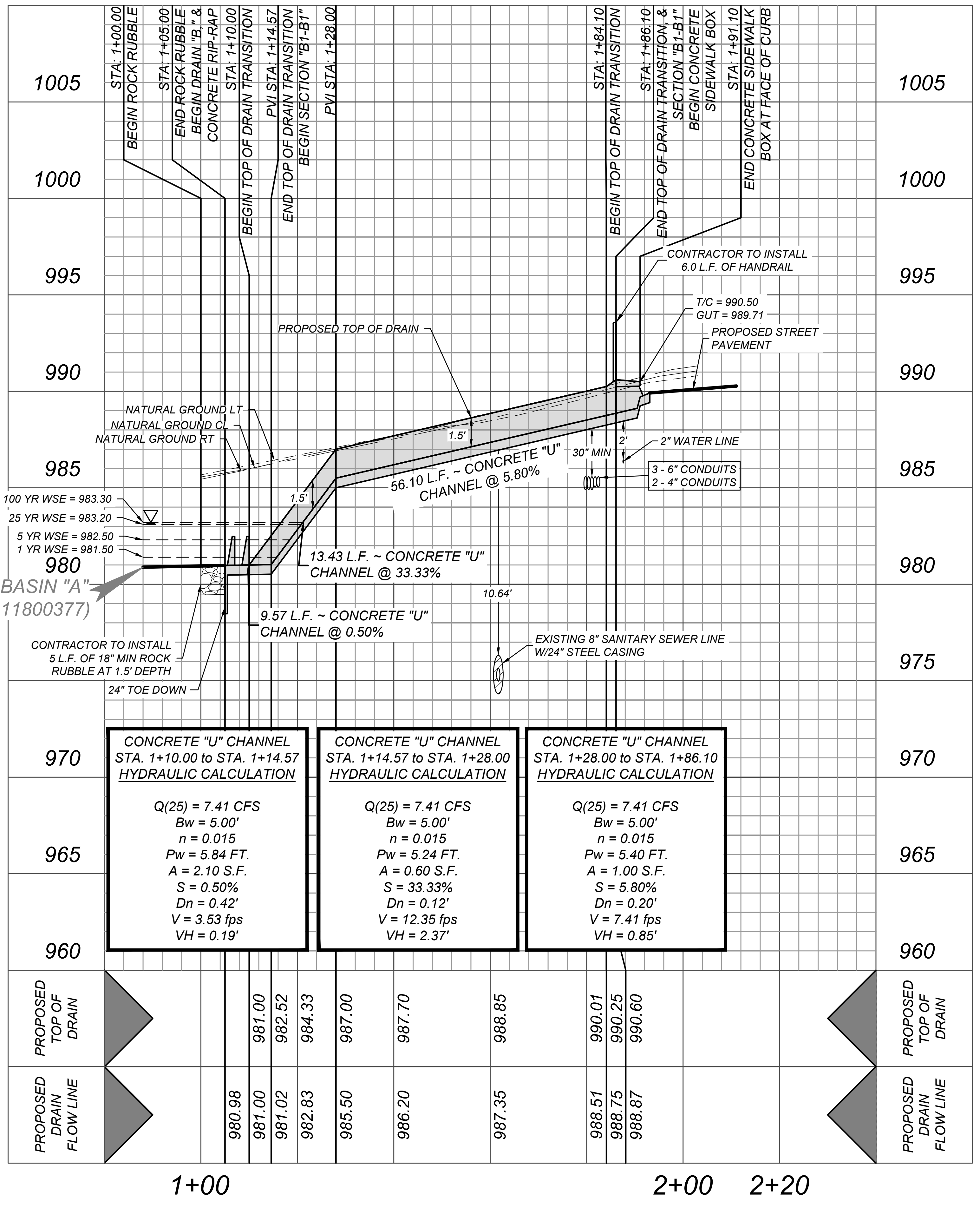
$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{7.41}{(3.087)\ (0.79)^{3/2}}$$

$$L = 3.42 \text{ L.F.}$$

∴ USE 5.00 L.F. CURB OPENING

PRIVATE DRAIN "B"
STA: 1+00.00 - END


1005
1000
995
990
985
980
975
970
965
960
STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "B," &
CONCRETE RIP-RAP
STA: 1+10.00
BEGIN TOP OF DRAIN TRANSITION
PVI STA: 1+14.57
END TOP OF DRAIN TRANSITION
BEGIN SECTION "B1-B1"
PVI STA: 1+28.00
STA: 1+84.10
BEGIN TOP OF DRAIN TRANSITION
STA: 1+86.10
END TOP OF DRAIN TRANSITION, &
SECTION "B1-B1"
BEGIN CONCRETE
SIDEWALK BOX
STA: 1+91.10
END CONCRETE SIDEWALK
BOX AT FACE OF CURB
CONTRACTOR TO INSTALL 6.0 L.F. OF HANDRAIL
T/C = 990.50
GUT = 989.71
PROPOSED STREET PAVEMENT
PROPOSED TOP OF DRAIN
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
1.5'
1.5'
2'
30" MIN
2" WATER LINE
3 - 6" CONDUITS
2 - 4" CONDUITS
56.10 L.F. ~ CONCRETE "U" CHANNEL @ 5.80%
100 YR WSE = 983.30
25 YR WSE = 983.20
5 YR WSE = 982.50
1 YR WSE = 981.50
13.43 L.F. ~ CONCRETE "U" CHANNEL @ 33.33%
EXISTING BASIN "A"
(PLAT #25-11800377)
10.64'
9.57 L.F. ~ CONCRETE "U" CHANNEL @ 0.50%
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
24" TOE DOWN
EXISTING 8" SANITARY SEWER LINE W/24" STEEL CASING
1+00
2+00
2+20

CONCRETE "U" CHANNEL STA. 1+10.00 to STA. 1+14.57 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+14.57 to STA. 1+28.00 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+28.00 to STA. 1+86.10 HYDRAULIC CALCULATION
Q(25) = 7.41 CFS	Q(25) = 7.41 CFS	Q(25) = 7.41 CFS
Bw = 5.00'	Bw = 5.00'	Bw = 5.00'
n = 0.015	n = 0.015	n = 0.015
Pw = 5.84 FT.	Pw = 5.24 FT.	Pw = 5.40 FT.
A = 2.10 S.F.	A = 0.60 S.F.	A = 1.00 S.F.
S = 0.50%	S = 33.33%	S = 5.80%
Dn = 0.42'	Dn = 0.12'	Dn = 0.20'
V = 3.53 fps	V = 12.35 fps	V = 7.41 fps
VH = 0.19'	VH = 2.37'	VH = 0.85'

PROPOSED TOP OF DRAIN		981.00	982.52	984.33	987.00	987.70	988.85	990.01	990.25	990.60
PROPOSED DRAIN FLOW LINE	980.98	981.00	981.02	982.83	985.50	986.20	987.35	988.51	988.75	988.87

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378

FOR

TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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SAN ANTONIO (KFW)
3421 Paesanos
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	DR2054113

SHEET TITLE:
PRIVATE DRAIN "B"
PLAN & PROFILE

SHEET NUMBER:
5.2

nit 10B\Civil\Drains\DR2054113.dwg\5.2 By: BELSETH

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

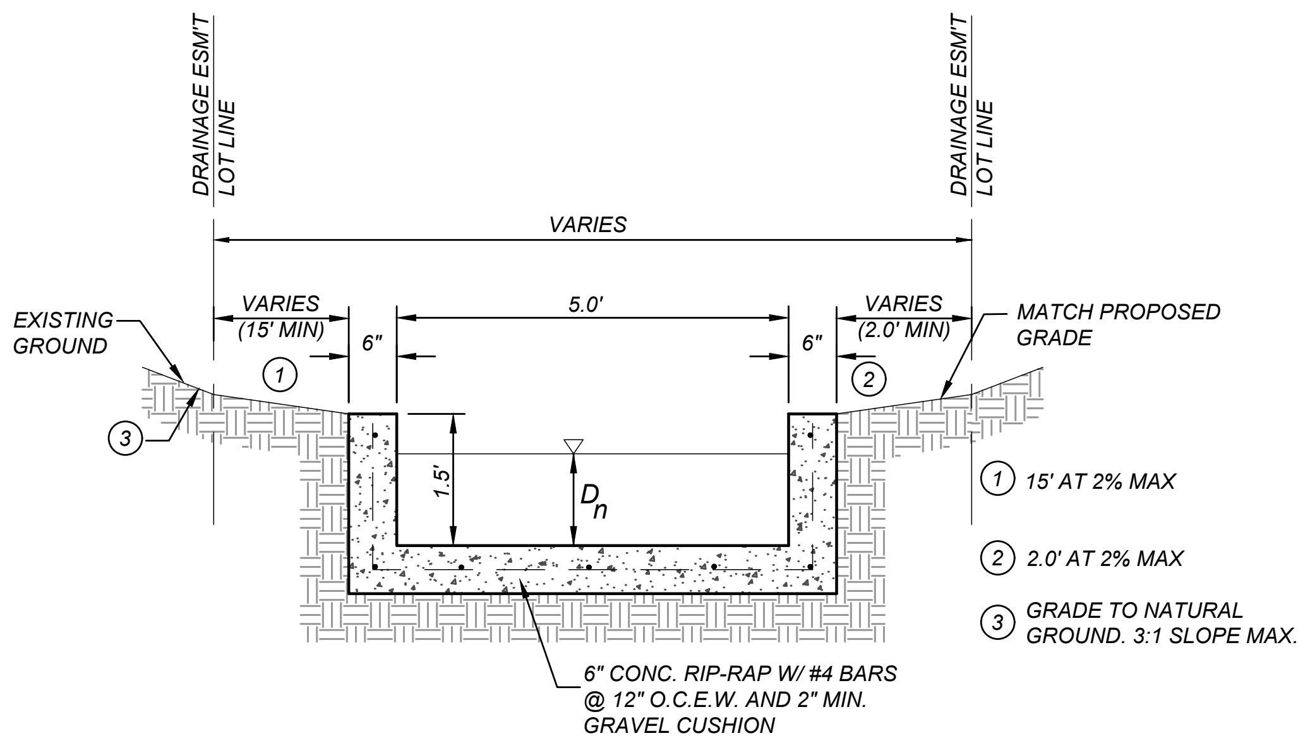
NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

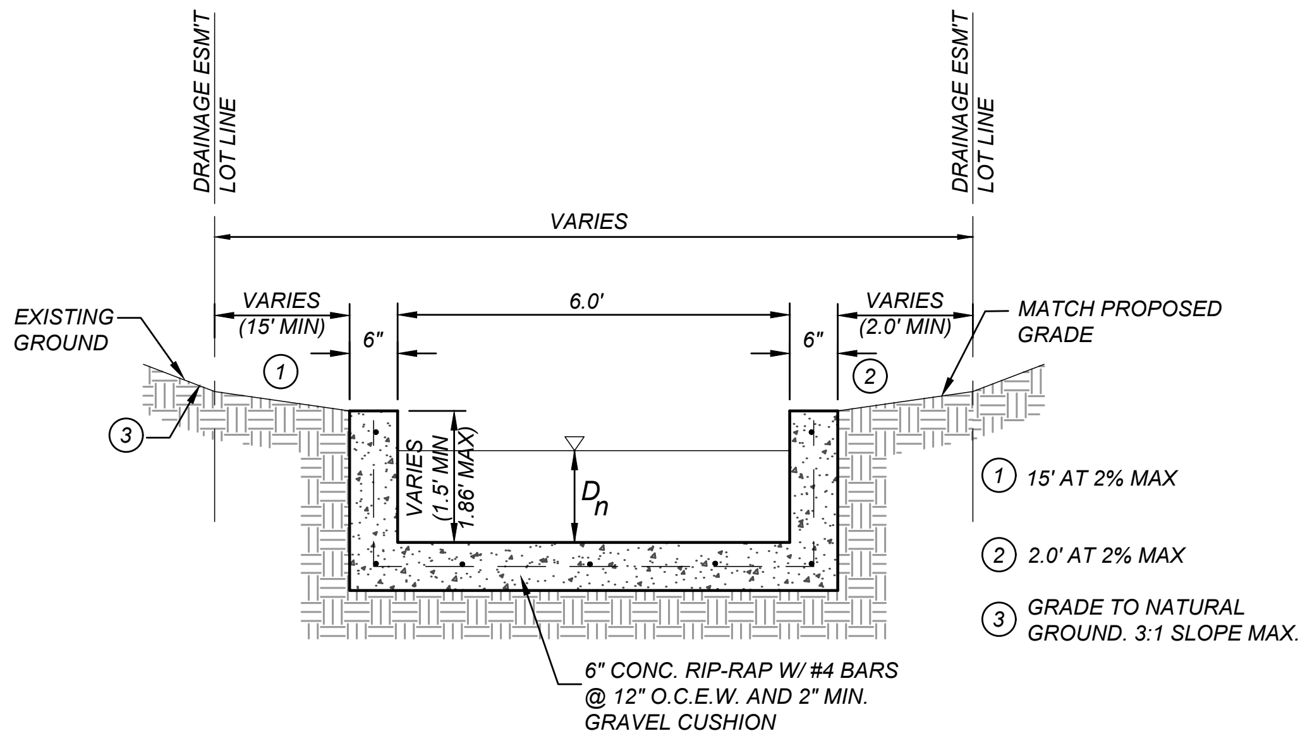
2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

LEGEND

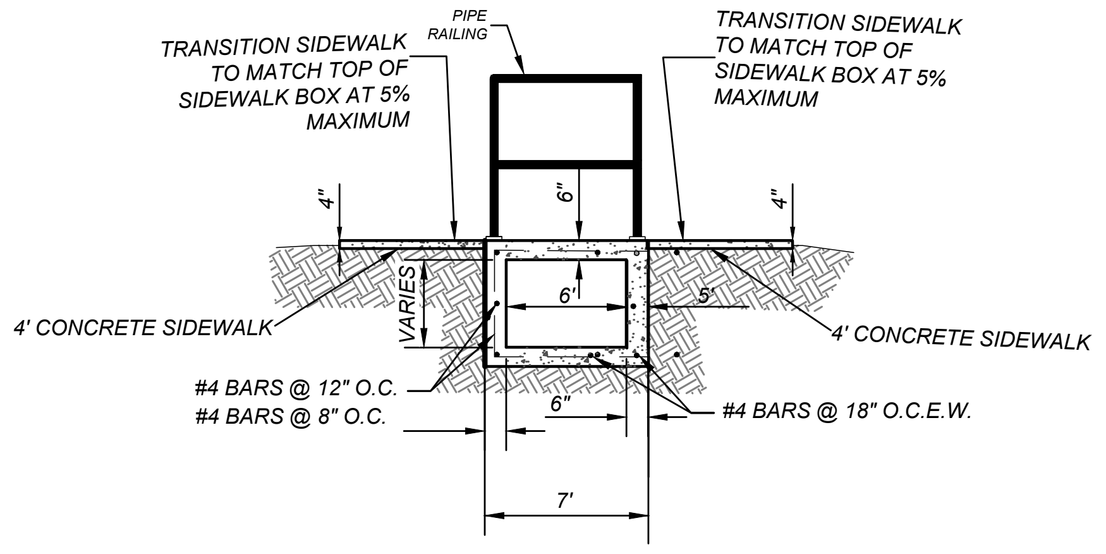
— 735 — (dashed)	=	EXISTING CONTOUR
(735)	=	PROPOSED CONTOUR
←	=	FLOW ARROW


DRAINAGE ESM'T
LOT LINE
VARIES
EXISTING GROUND
VARIES (15' MIN)
5.0'
6"
VARIES (2.0' MIN)
MATCH PROPOSED GRADE
1.5'
Dn
③
①
②
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
① 15' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.

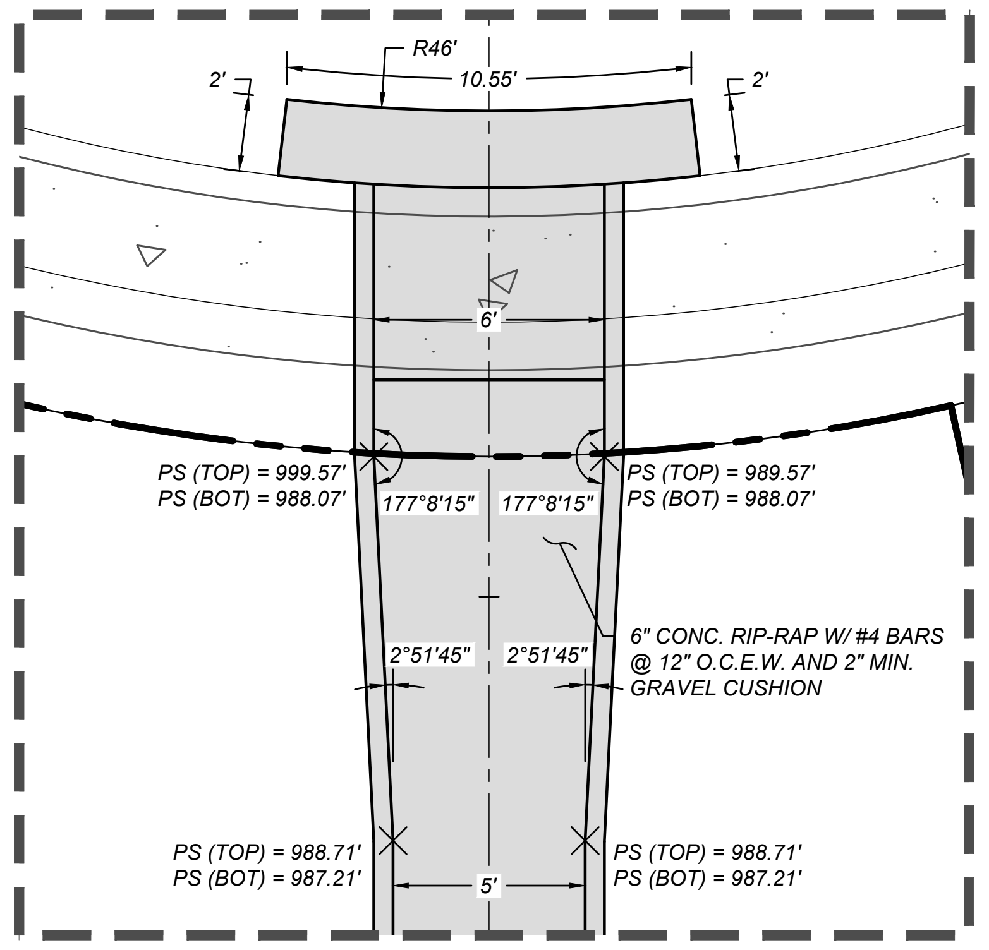
SECTION "C1-C1"
STA. 1+14.57 - STA. 1+73.65
N.T.S.


DRAINAGE ESM'T
LOT LINE
VARIES
EXISTING GROUND
VARIES (15' MIN)
6.0'
6"
VARIES (2.0' MIN)
MATCH PROPOSED GRADE
VARIES 1.5' MIN 1.85' MAX
Dn
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
① 15' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.

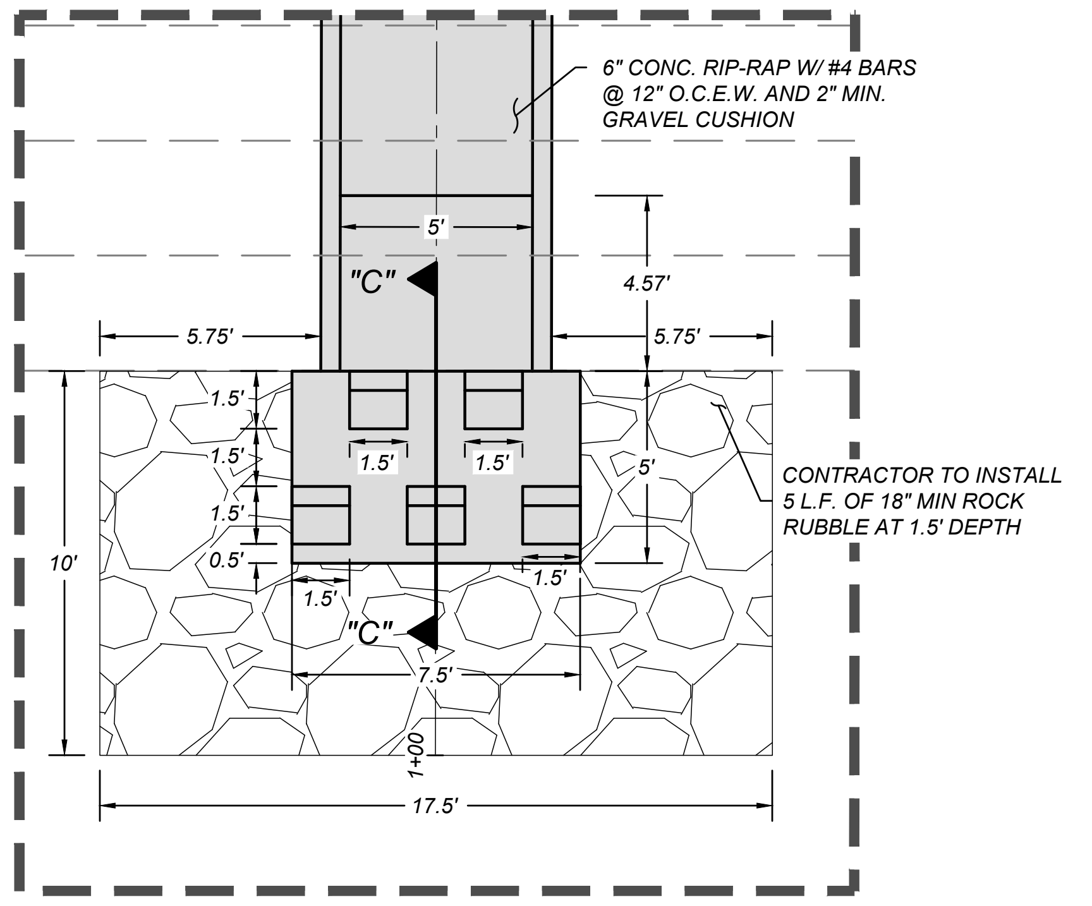
SECTION "C2-C2"
STA. 1+83.65 - STA. 1+85.65
N.T.S.


PIPE RAILING
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX AT 5% MAXIMUM
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX AT 5% MAXIMUM
4'
6"
4'
VARIES
6"
5'
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
6"
#4 BARS @ 18" O.C.E.W.
7'

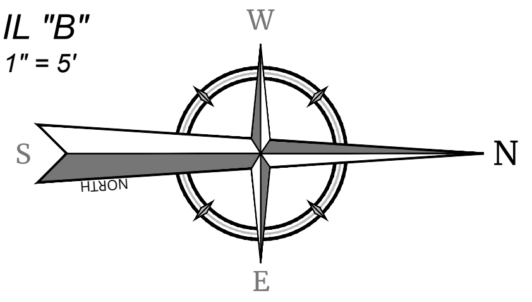
SECTION "C3-C3"
N.T.S.

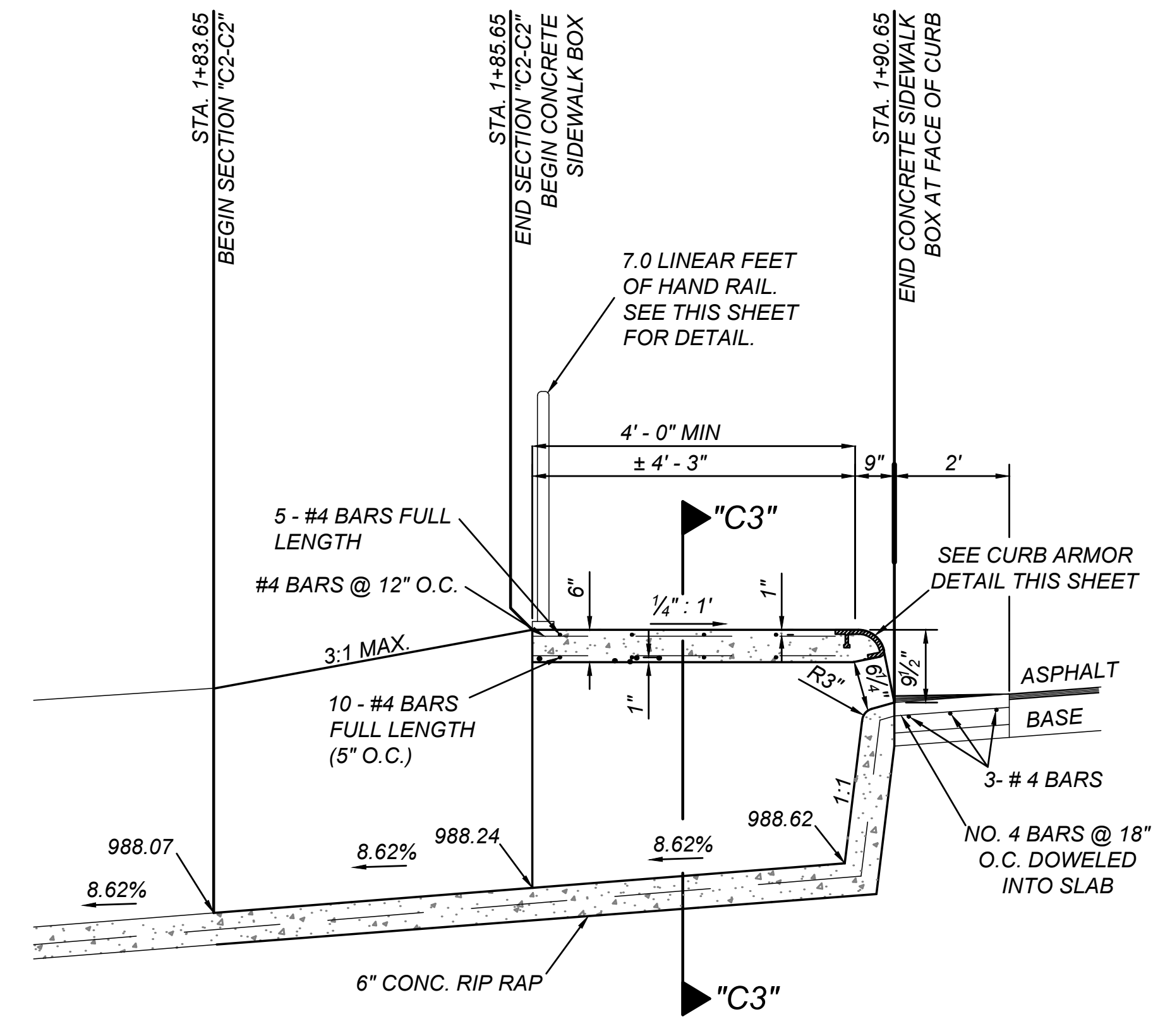

R46'
2'
10.55'
2'
6'
PS (TOP) = 999.57'
PS (BOT) = 988.07'
PS (TOP) = 989.57'
PS (BOT) = 988.07'
177°8'15"
177°8'15"
2°51'45"
2°51'45"
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
PS (TOP) = 988.71'
PS (BOT) = 987.21'
PS (TOP) = 988.71'
PS (BOT) = 987.21'
5'

DETAIL "A"
SCALE: 1" = 5'

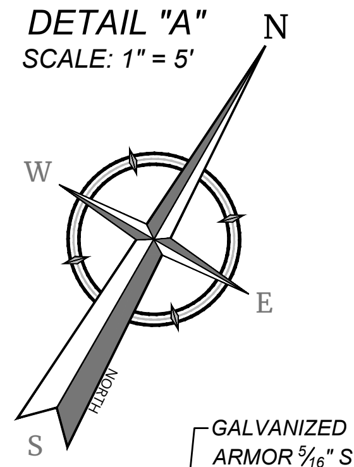

6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
5'
"C"
4.57'
5.75'
5.75'
1.5'
1.5'
1.5'
1.5'
1.5'
5'
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
10'
1.5'
0.5'
1.5'
1+00
"C"
7.5'
17.5'

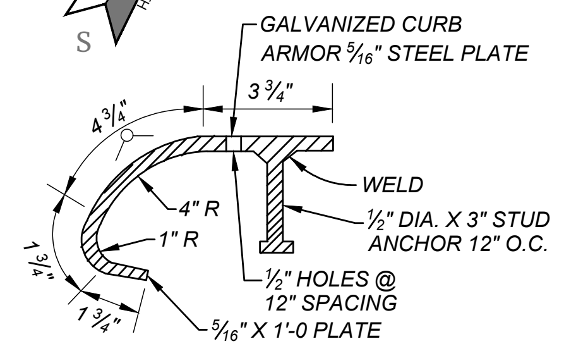
DETAIL "B"
SCALE: 1" = 5'



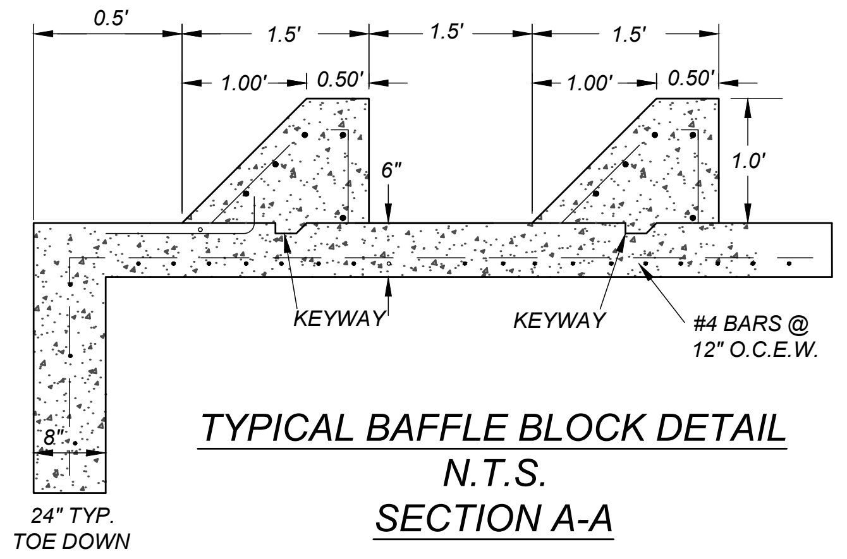

STA. 1+83.65
BEGIN SECTION "C2-C2"
STA. 1+85.65
END SECTION "C2-C2"
BEGIN CONCRETE SIDEWALK BOX
STA. 1+90.65
END CONCRETE SIDEWALK BOX AT FACE OF CURB
7.0 LINEAR FEET OF HAND RAIL SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
"C3"
#4 BARS @ 12" O.C.
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX
10 - #4 BARS FULL LENGTH (5" O.C.)
ASPHALT
BASE
3- # 4 BARS
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
988.07
8.62%
8.62%
988.24
8.62%
988.62
6" CONC. RIP RAP
"C3"

SIDEWALK BOX DETAIL
N.T.S.

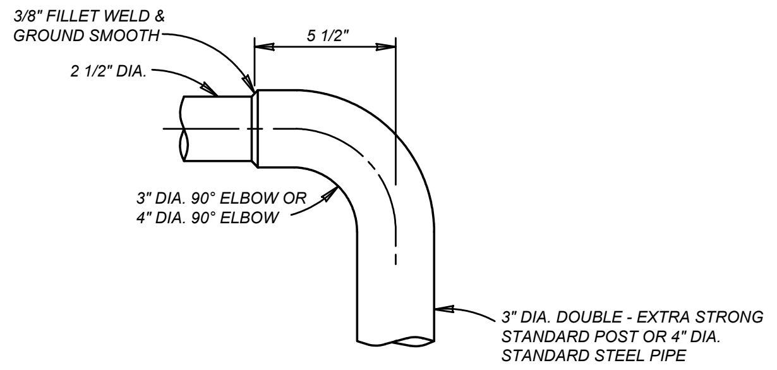



GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 1/4"
4 1/2"
WELD
4" R
1" R
1/2" DIA. X 3" STUD ANCHOR 12" O.C.
1/2" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE

CURB ARMOR DETAIL
N.T.S.

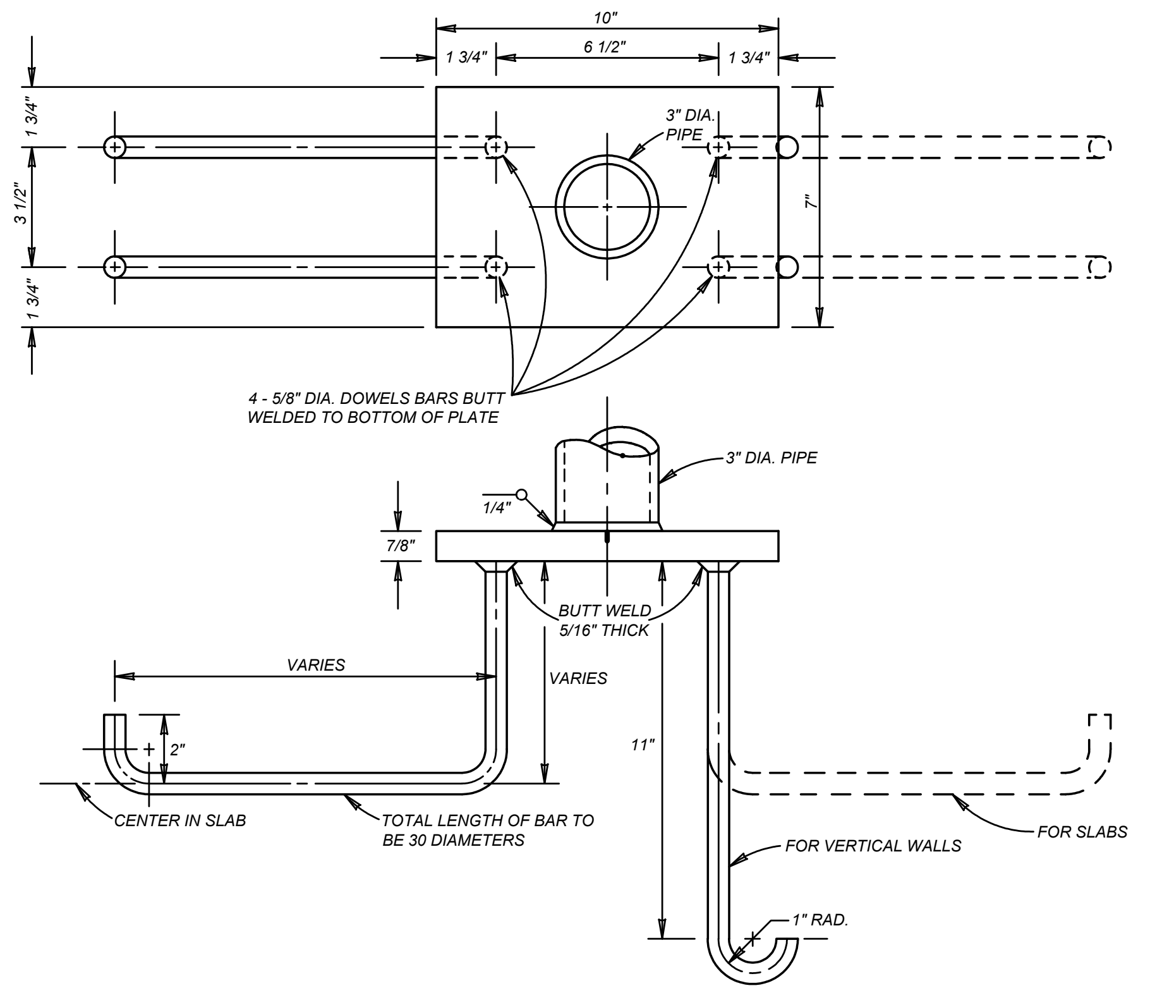

0.5'
1.5'
1.5'
1.5'
1.00'
0.50'
1.00'
0.50'
6"
1.0'
KEYWAY
KEYWAY
#4 BARS @ 12" O.C.E.W.
24" TYP. TOE DOWN

TYPICAL BAFFLE BLOCK DETAIL
N.T.S.
SECTION A-A

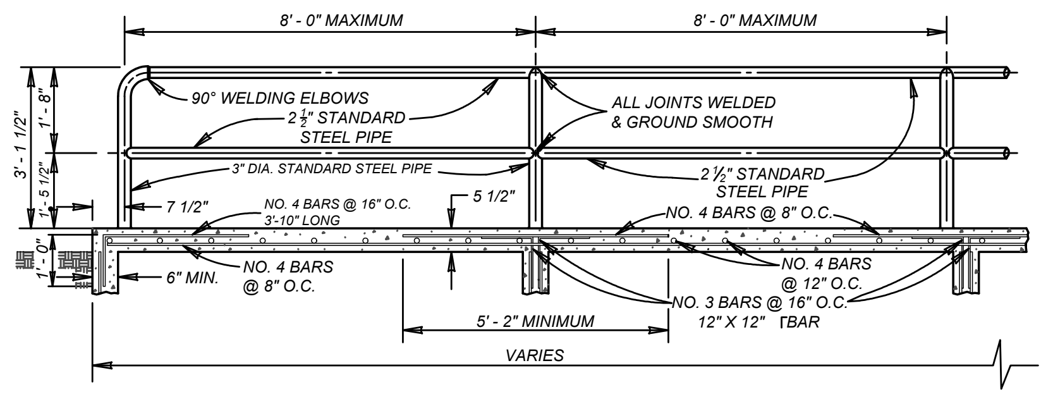

3/8" FILLET WELD & GROUND SMOOTH
2 1/2" DIA
5 1/2"
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS
N.T.S.

* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


10"
1 3/4"
6 1/2"
1 3/4"
3" DIA. PIPE
3 1/2"
7"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
1/4"
7/8"
BUTT WELD 5/16" THICK
VARIES
2"
11"
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS
N.T.S.


8' - 0" MAXIMUM
8' - 0" MAXIMUM
90° WELDING ELBOWS
2 1/2" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
2 1/2" STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 7'-10" LONG
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 18" O.C.
NO. 3 BARS @ 18" O.C.
6" MIN.
12" X 12" TBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
N.T.S.

BAFFLE BLOCK CALCULATIONS
(ST. ANTHONY FALLS METHOD)

Q(25) = 10.40 CFS
BOTTOM WIDTH UPSTREAM = 5.0 FT
BOTTOM WIDTH DOWNSTREAM = 7.50 FT
Y1 = 0.14' (DEPTH BEFORE JUMP)
Y2 = 1.07' (DEPTH AFTER JUMP)

WIDTH OF BLOCKS = 0.75(Y1) = 0.11 FT. (USE 1.5 FT.)
SPACE BETWEEN BLOCKS = 0.75(Y1) = 0.11 FT. (USE 1.5 FT.)
HEIGHT OF BLOCKS = Y1 = 0.14 FT. (USE 1.5 FT.)
# OF BLOCKS ACROSS BOTTOM = 2

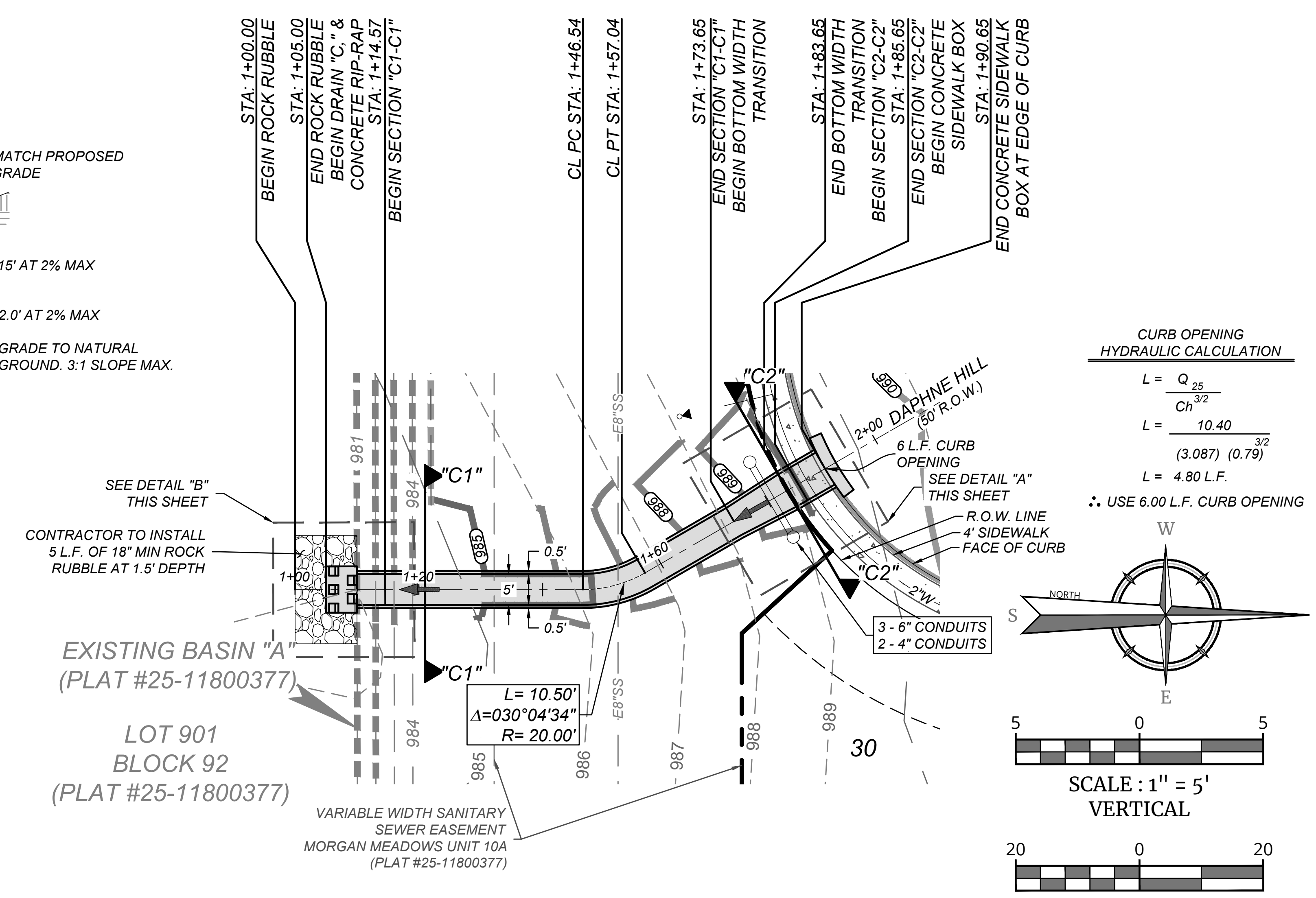
% OF FLOOR COVERED WITH BLOCKS = 2 (1.5 FT) /7.50 FT = 40%
(% MUST BE BETWEEN 40% AND 55%)

DEPTH OF TAILWATER (Y2) = 1.07 FT.
FROUDE NUMBER BEFORE JUMP = F1 = 7.00
FROUDE NUMBER AFTER JUMP = F2 = 0.22
LENGTH OF BASIN = LB = 4.5(Y2)/F1^0.76 = 0.14 FT. (USE 9.57 FT.)

DISTANCE TO FLOOR BLOCKS = LB/3 = 0.05 FT. (USE 4.57 FT.)

HEIGHT OF MAX TAILWATER DEPTH:
Z = Y2/3 = 0.36 FT.
Y2' = 0.85 * Y2 ; H = Z + Y2' = 1.26 FT.

VELOCITY AFTER JUMP:
V = Q/A
A = Y2 * [(B + T) / 2]
A = 1.07 * [(5.0 + 7.50) / 2] = 6.68 SQ. FT.
V = 10.40/6.68 = 1.56 F.P.S.


STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "C," & CONCRETE RIP-RAP
STA: 1+14.57
BEGIN SECTION "C1-C1"
CL PC STA: 1+46.54
CL PT STA: 1+57.04
STA: 1+73.65
END SECTION "C1-C1"
BEGIN BOTTOM WIDTH TRANSITION
STA: 1+83.65
END BOTTOM WIDTH TRANSITION
BEGIN SECTION "C2-C2"
STA: 1+85.65
END SECTION "C2-C2"
BEGIN CONCRETE SIDEWALK BOX
STA: 1+90.65
END CONCRETE SIDEWALK BOX AT EDGE OF CURB
SEE DETAIL "B" THIS SHEET
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
EXISTING BASIN "A" (PLAT #25-11800377)
LOT 901
BLOCK 92
(PLAT #25-11800377)
"C1"
"C1"
1+00
1+20
1+60
2+00
0.5'
5'
0.5'
L= 10.50'
Δ=030°04'34"
R= 20.00'
E8"SS
981
984
985
986
987
988
989
990
30
VARIABLE WIDTH SANITARY SEWER EASEMENT MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
"C2"
"C2"
DAPHNE HILL (50' R.O.W.)
6 L.F. CURB OPENING
SEE DETAIL "A" THIS SHEET
R.O.W. LINE
4' SIDEWALK
FACE OF CURB
2"W
3 - 6" CONDUITS
2 - 4" CONDUITS
W
S
NORTH
N
E

CURB OPENING HYDRAULIC CALCULATION

$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{10.40}{(3.087)\ (0.79)^{3/2}}$$

L = 4.80 L.F.

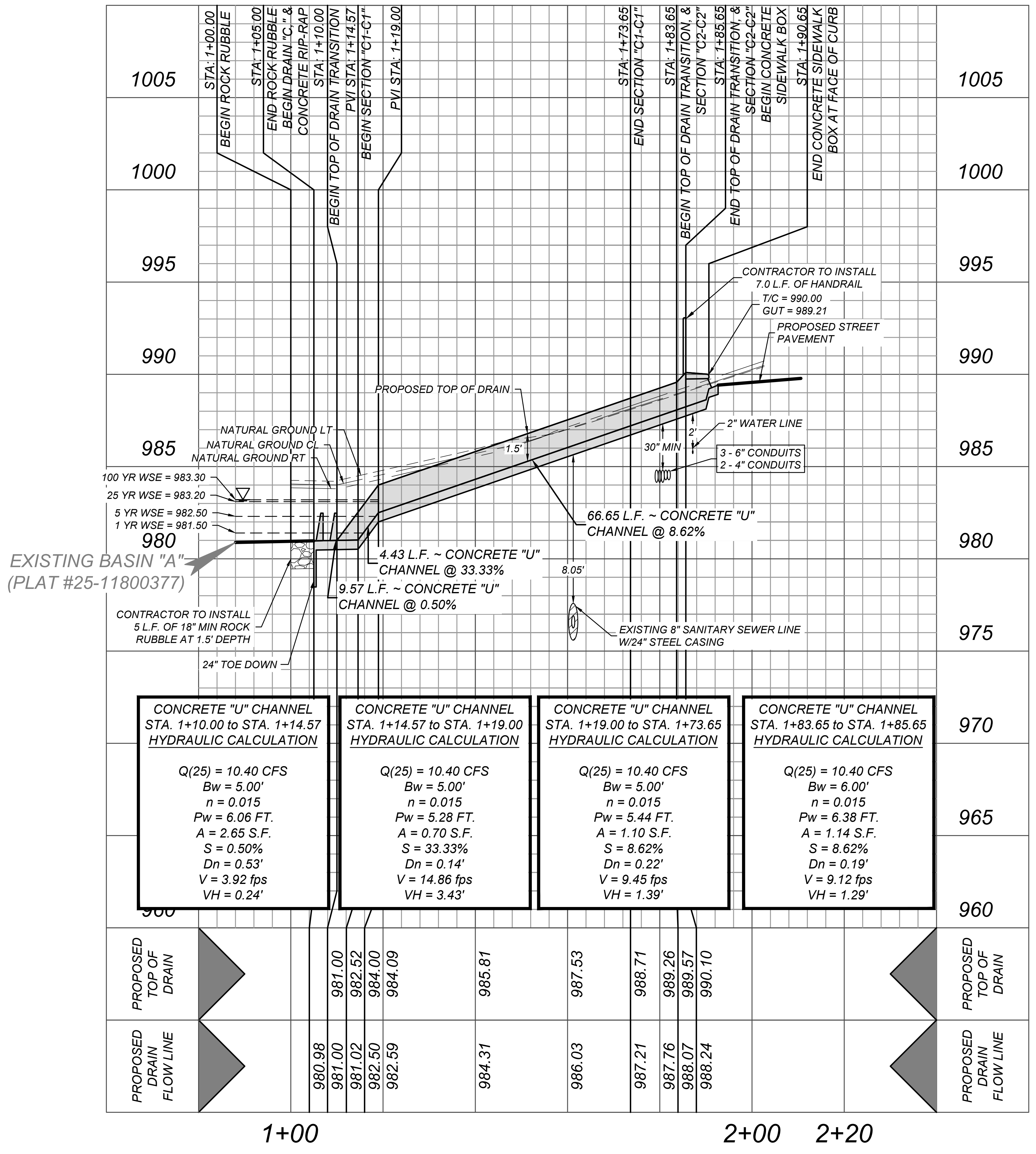
∴ USE 6.00 L.F. CURB OPENING

SCALE : 1" = 5'
VERTICAL

SCALE : 1" = 20'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

PRIVATE DRAIN "C"
STA: 1+00.00 - END


1005
1000
995
990
985
980
975
970
965
960
STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "C," &
CONCRETE RIP-RAP
STA: 1+10.00
BEGIN TOP OF DRAIN TRANSITION
PVI STA: 1+14.57
BEGIN SECTION "C1-C1"
PVI STA: 1+19.00
STA: 1+73.65
END SECTION "C1-C1"
STA: 1+83.65
BEGIN TOP OF DRAIN TRANSITION, & SECTION "C2-C2"
STA: 1+85.65
END TOP OF DRAIN TRANSITION, & SECTION "C2-C2"
BEGIN CONCRETE SIDEWALK BOX
STA: 1+90.65
END CONCRETE SIDEWALK BOX AT FACE OF CURB
CONTRACTOR TO INSTALL 7.0 L.F. OF HANDRAIL
T/C = 990.00
GUT = 989.21
PROPOSED STREET PAVEMENT
PROPOSED TOP OF DRAIN
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
100 YR WSE = 983.30
25 YR WSE = 983.20
5 YR WSE = 982.50
1 YR WSE = 981.50
1.5'
30" MIN
2'
2" WATER LINE
3 - 6" CONDUITS
2 - 4" CONDUITS
66.65 L.F. ~ CONCRETE "U" CHANNEL @ 8.62%
4.43 L.F. ~ CONCRETE "U" CHANNEL @ 33.33%
9.57 L.F. ~ CONCRETE "U" CHANNEL @ 0.50%
8.05'
EXISTING BASIN "A" (PLAT #25-11800377)
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
24" TOE DOWN
EXISTING 8" SANITARY SEWER LINE W/24" STEEL CASING
PROPOSED TOP OF DRAIN
PROPOSED DRAIN FLOW LINE
1+00
2+00
2+20

CONCRETE "U" CHANNEL
STA. 1+10.00 to STA. 1+14.57
HYDRAULIC CALCULATION

Q(25) = 10.40 CFS
Bw = 5.00'
n = 0.015
Pw = 6.06 FT.
A = 2.65 S.F.
S = 0.50%
Dn = 0.53'
V = 3.92 fps
VH = 0.24'

CONCRETE "U" CHANNEL
STA. 1+14.57 to STA. 1+19.00
HYDRAULIC CALCULATION

Q(25) = 10.40 CFS
Bw = 5.00'
n = 0.015
Pw = 5.28 FT.
A = 0.70 S.F.
S = 33.33%
Dn = 0.14'
V = 14.86 fps
VH = 3.43'

CONCRETE "U" CHANNEL
STA. 1+19.00 to STA. 1+73.65
HYDRAULIC CALCULATION

Q(25) = 10.40 CFS
Bw = 5.00'
n = 0.015
Pw = 5.44 FT.
A = 1.10 S.F.
S = 8.62%
Dn = 0.22'
V = 9.45 fps
VH = 1.39'

CONCRETE "U" CHANNEL
STA. 1+83.65 to STA. 1+85.65
HYDRAULIC CALCULATION

Q(25) = 10.40 CFS
Bw = 6.00'
n = 0.015
Pw = 6.38 FT.
A = 1.14 S.F.
S = 8.62%
Dn = 0.19'
V = 9.12 fps
VH = 1.29'

PROPOSED TOP OF DRAIN		981.00	982.52	984.00	984.09	985.81	987.53	988.71	989.26	989.57	990.10	PROPOSED TOP OF DRAIN
PROPOSED DRAIN FLOW LINE	980.98	981.00	981.02	982.50	982.59	984.31	986.03	987.21	987.76	988.07	988.24	PROPOSED DRAIN FLOW LINE

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VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	DR2054113

SHEET TITLE:
PRIVATE DRAIN "C"
PLAN & PROFILE

SHEET NUMBER:
5.3

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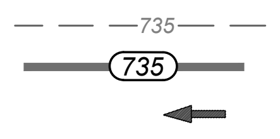
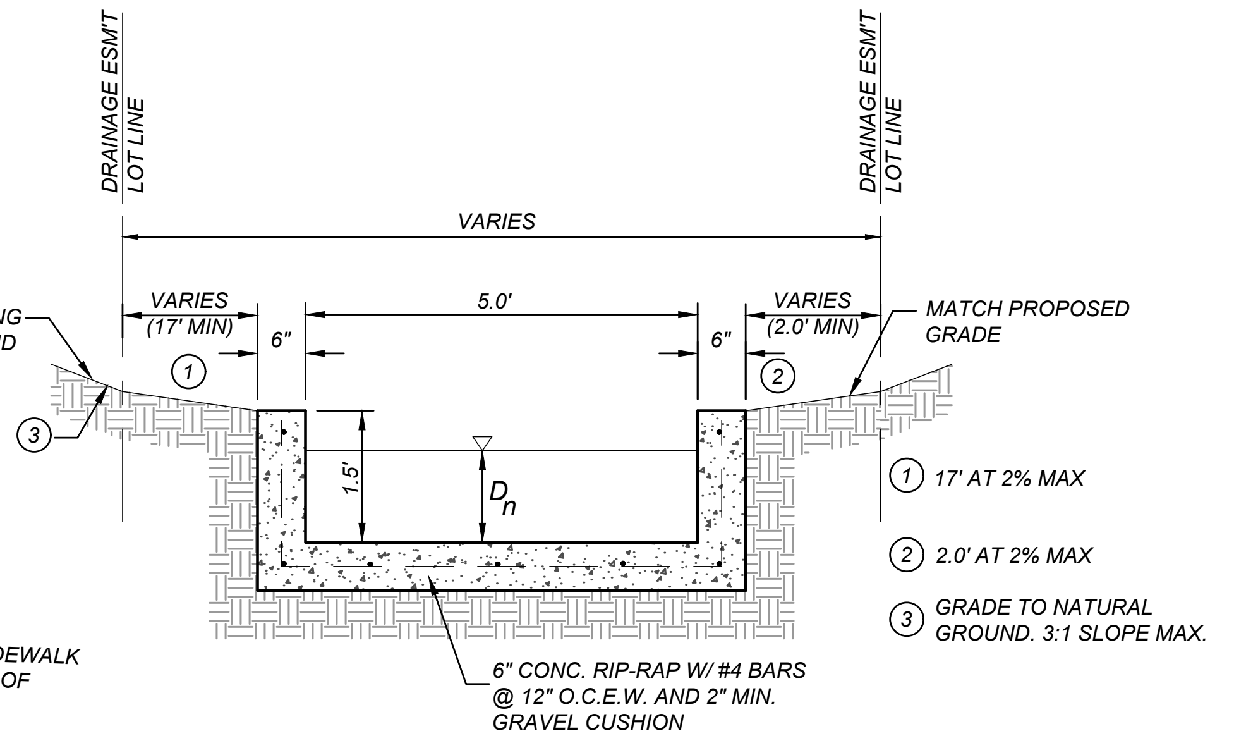
LEGEND



—735—	=	EXISTING CONTOUR
(735)	=	PROPOSED CONTOUR
←	=	FLOW ARROW

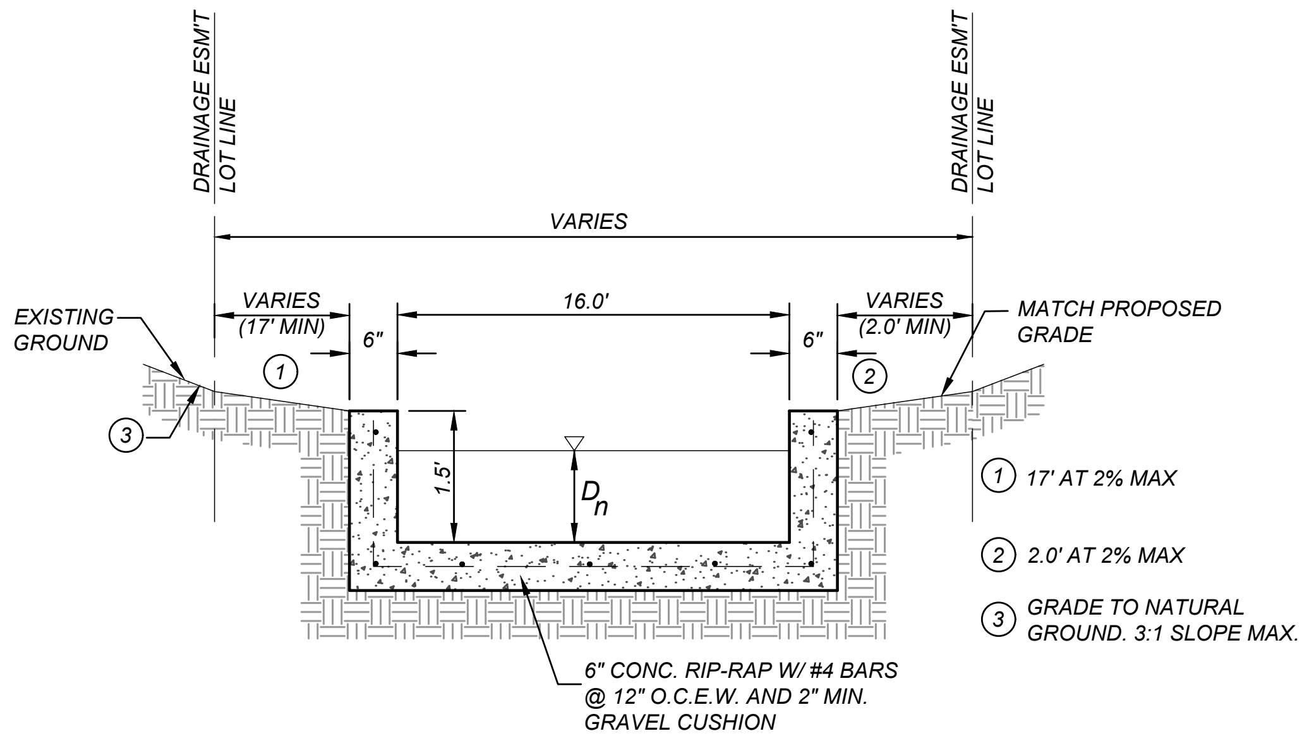


DRAINAGE ESM'T
LOT LINE
VARIES
EXISTING GROUND
VARIES (17' MIN)
5.0'
6"
VARIES (2.0' MIN)
MATCH PROPOSED GRADE
1.5'
Dn
① 17' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

SECTION "F1-F1"

STA. 1+14.58 - STA. 1+38.00

N.T.S.

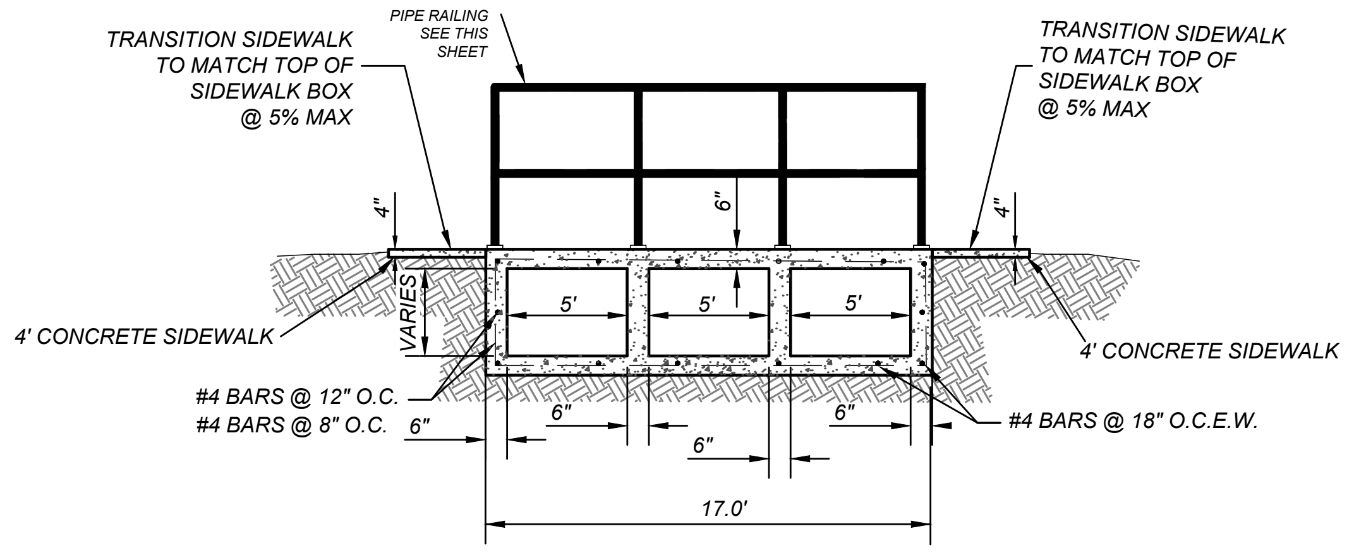


DRAINAGE ESM'T
LOT LINE
VARIES
EXISTING GROUND
VARIES (17' MIN)
16.0'
6"
VARIES (2.0' MIN)
MATCH PROPOSED GRADE
1.5'
Dn
① 17' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

SECTION "F2-F2"

STA. 1+48.00 - STA. 1+50.00

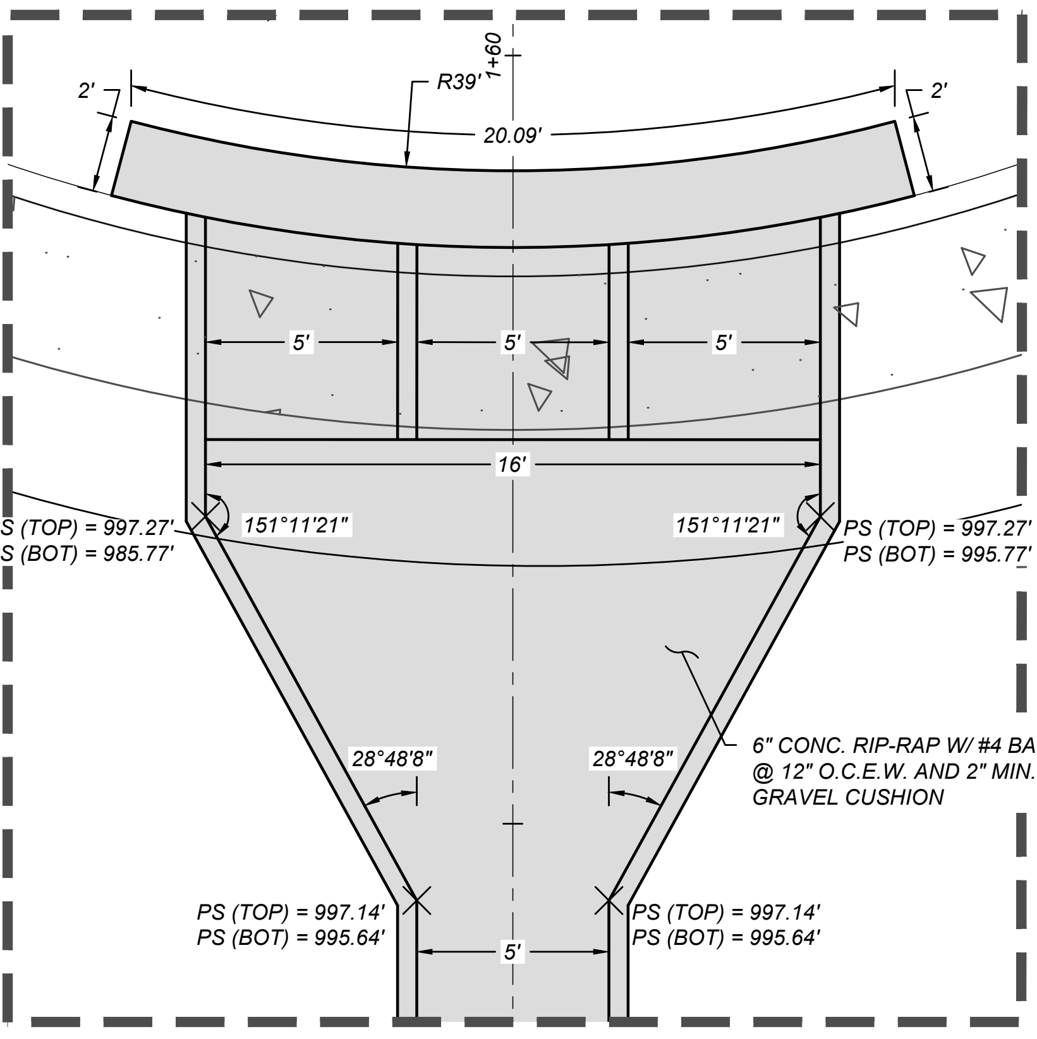
N.T.S.



PIPE RAILING SEE THIS SHEET
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
VARIES
5'
6"
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
#4 BARS @ 18" O.C.E.W.
17.0'

SECTION "F3-F3"

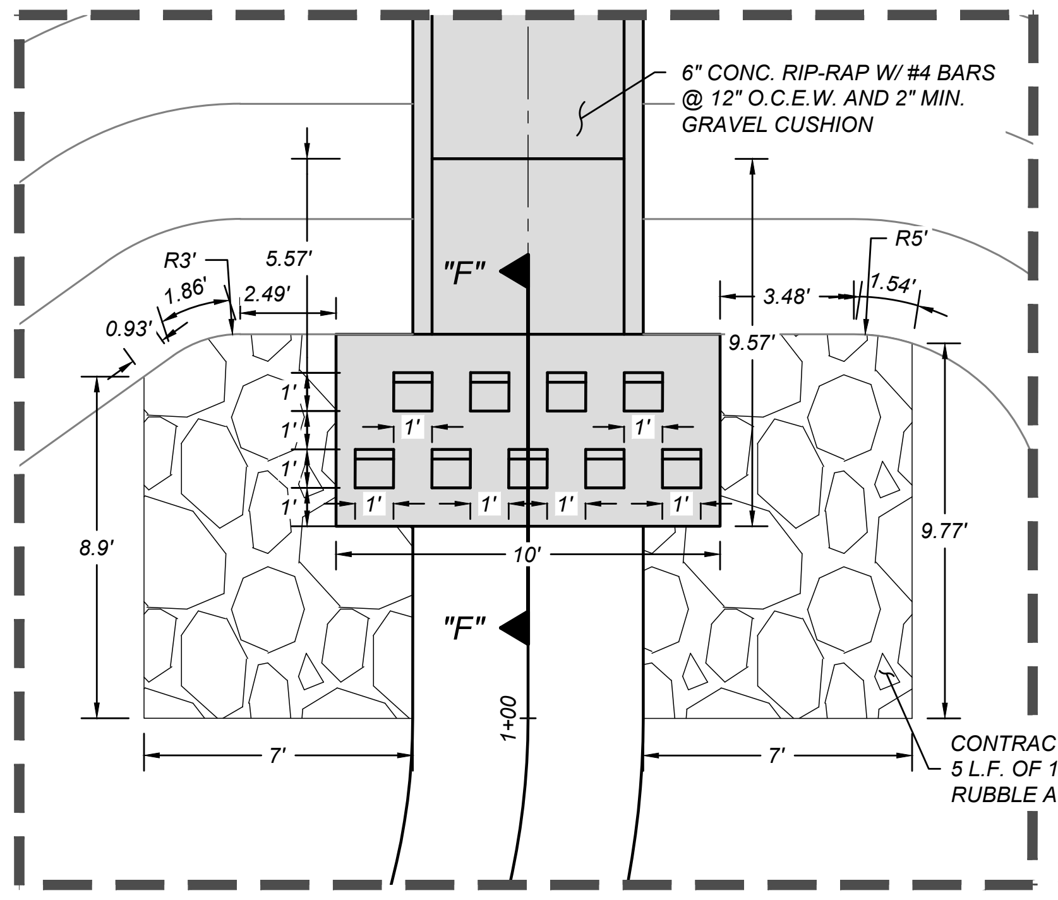
N.T.S.



R39'
2'
20.09'
1+50
5'
16'
PS (TOP) = 997.27'
PS (BOT) = 985.77'
PS (TOP) = 997.27'
PS (BOT) = 995.77'
151°11'21"
28°48'8"
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
PS (TOP) = 997.14'
PS (BOT) = 995.64'

DETAIL "A"

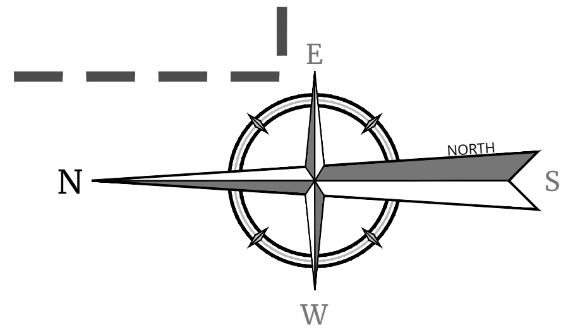
SCALE: 1" = 5'

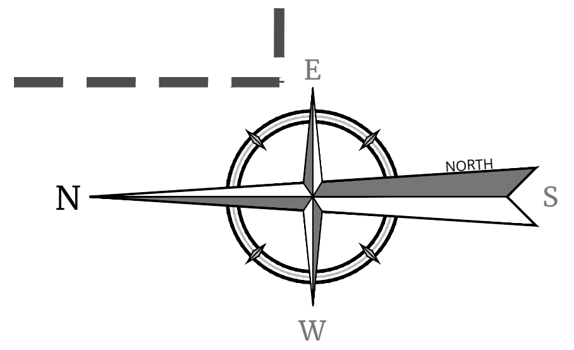


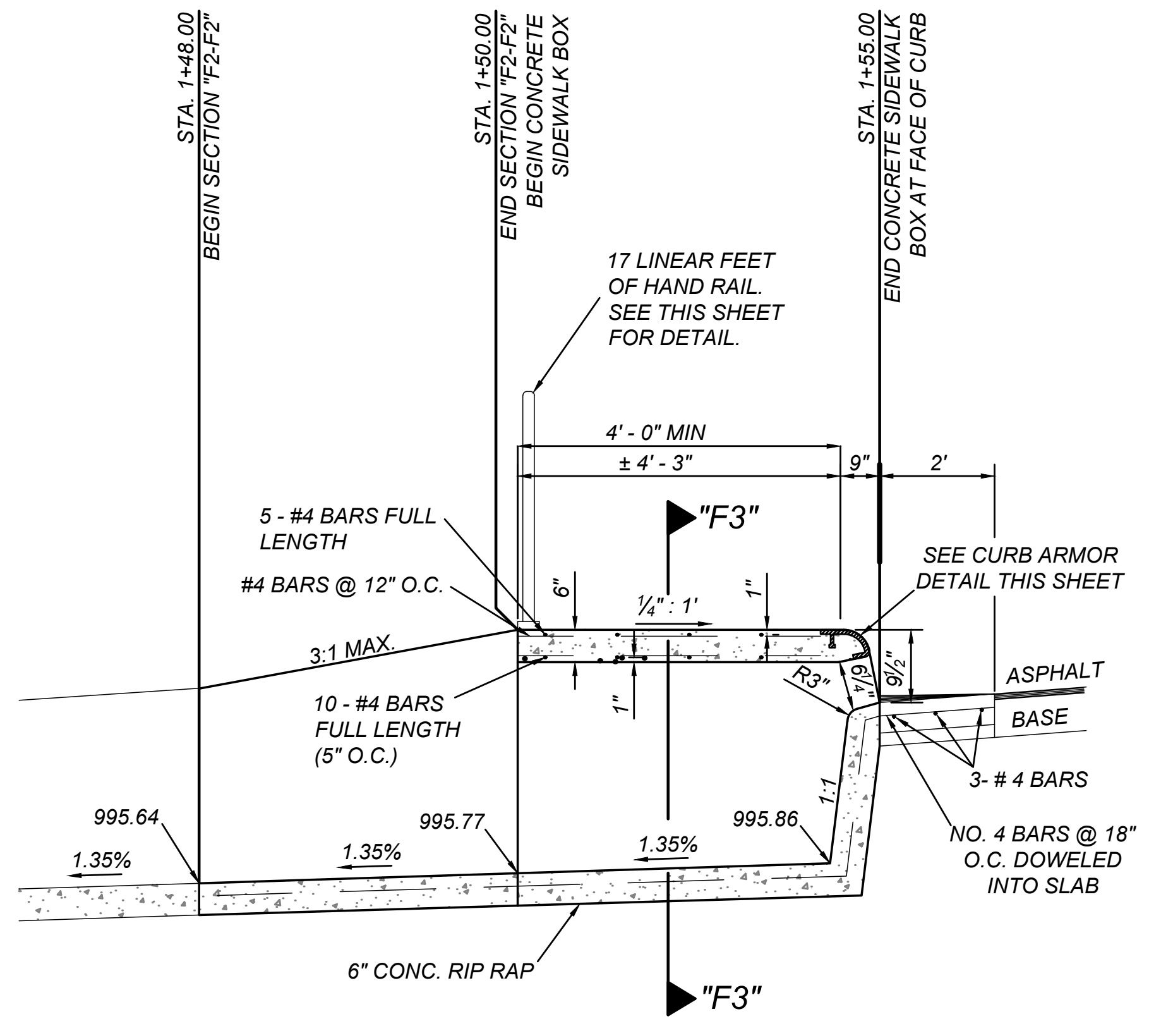
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
R3'
5.57'
1.86'
2.49'
0.93'
3.48'
R5'
1.54'
9.57'
"F"
1'
10'
8.9'
9.77'
1+00
7'
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH

DETAIL "B"

SCALE: 1" = 5'



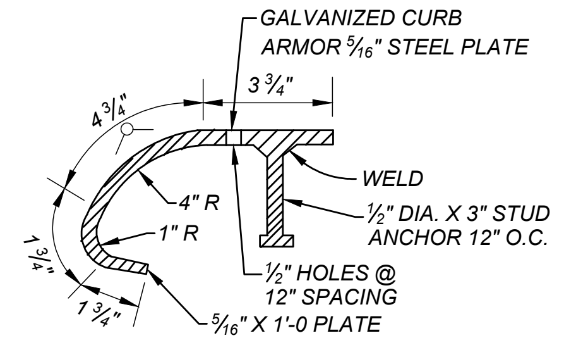




STA. 1+48.00
BEGIN SECTION "F2-F2"
STA. 1+50.00
END SECTION "F2-F2"
BEGIN CONCRETE SIDEWALK BOX
STA. 1+55.00
END CONCRETE SIDEWALK BOX AT FACE OF CURB
17 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
#4 BARS @ 12" O.C.
"F3"
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX
10 - #4 BARS FULL LENGTH (5" O.C.)
ASPHALT
BASE
3- # 4 BARS
995.64
995.77
995.86
1.35%
1.35%
1.35%
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
6" CONC. RIP RAP
"F3"

SIDEWALK BOX DETAIL

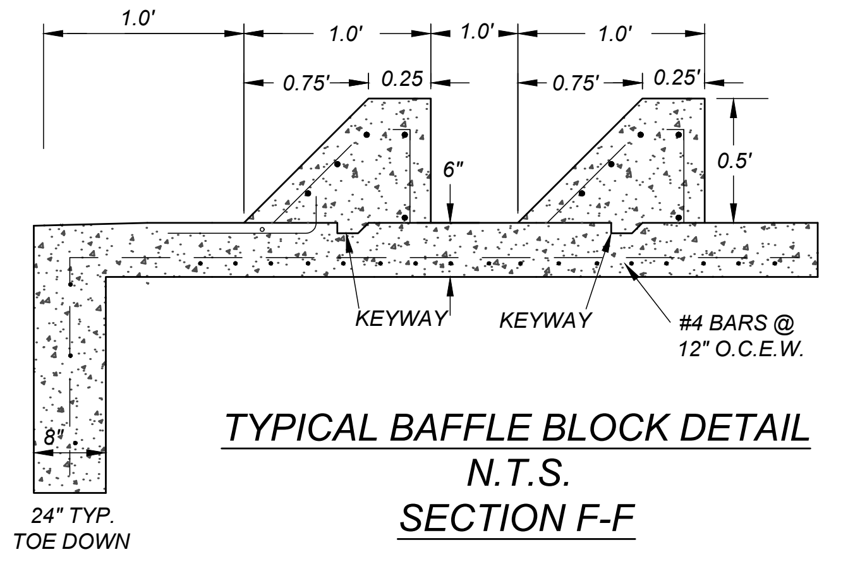
N.T.S.



GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 3/4"
4 1/2"
WELD
4" R
1" R
1/2" DIA. X 3" STUD ANCHOR 12" O.C.
1/2" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE
1 3/4"

CURB ARMOR DETAIL

N.T.S.

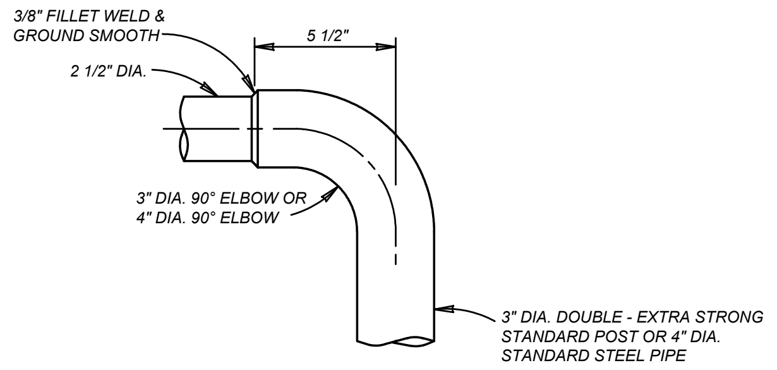


1.0'
1.0'
1.0'
0.75'
0.25
0.75'
0.25'
0.5'
6"
KEYWAY
KEYWAY
#4 BARS @ 12" O.C.E.W.
8"
24" TYP. TOE DOWN

TYPICAL BAFFLE BLOCK DETAIL

N.T.S.

SECTION F-F

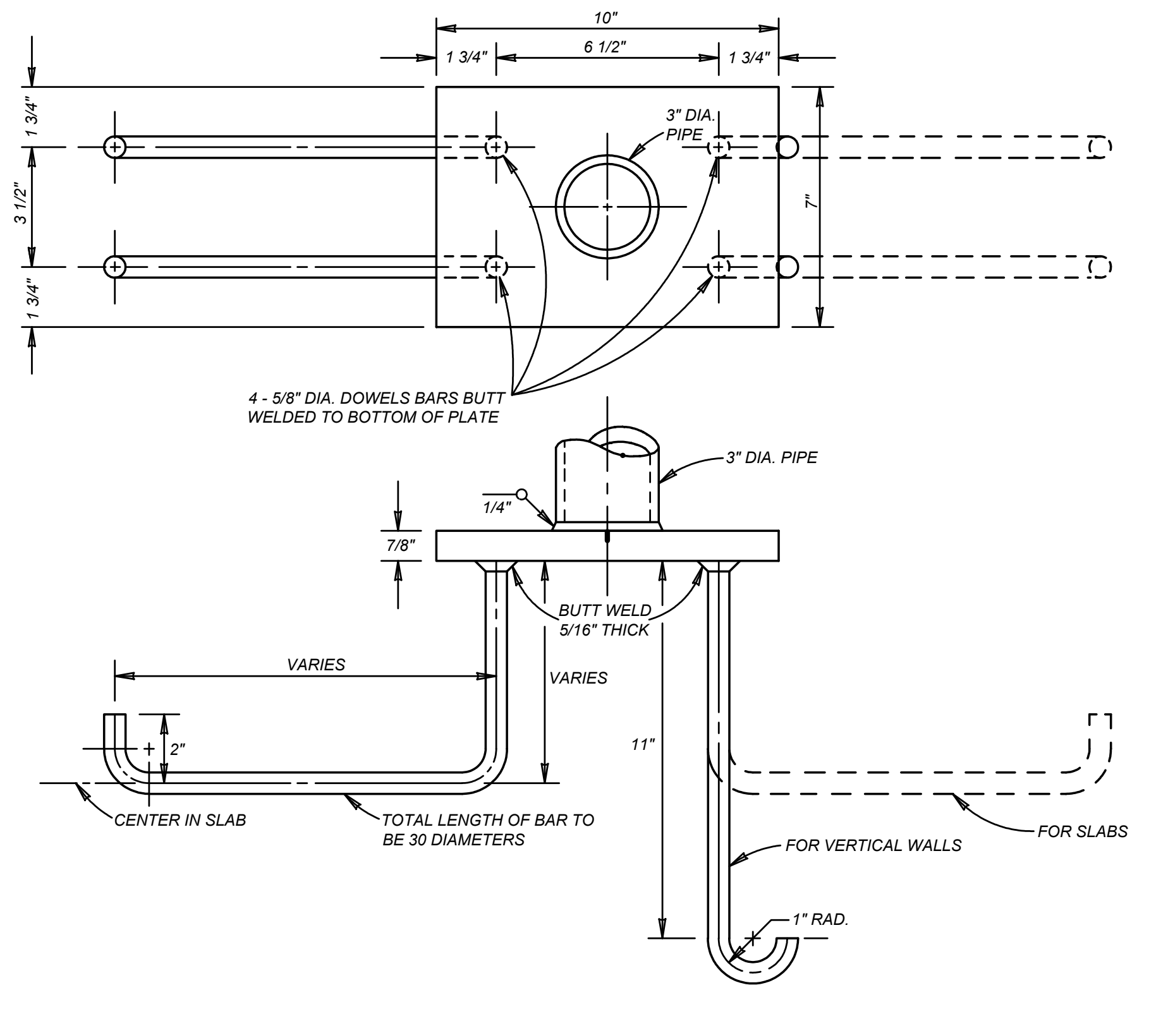


3/8" FILLET WELD & GROUND SMOOTH
2 1/2" DIA.
5 1/2"
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS

N.T.S.

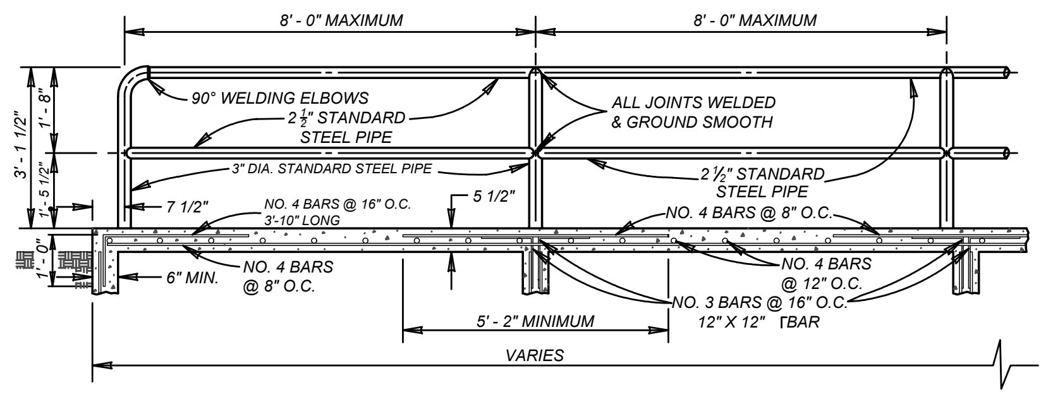
* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.



10"
6 1/2"
1 3/4"
1 3/4"
3" DIA. PIPE
3 1/2"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
7/8"
1/4"
BUTT WELD 5/16" THICK
VARIES
VARIES
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
11"
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS

N.T.S.



8' - 0" MAXIMUM
8' - 0" MAXIMUM
90° WELDING ELBOWS
2 1/2" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
2 1/2" STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 3'-10" LONG
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 8" O.C.
NO. 3 BARS @ 18" O.C. 12" X 12" TBAR
6" MIN.
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION

N.T.S.

BAFFLE BLOCK CALCULATIONS (ST. ANTHONY FALLS METHOD)

Q(25) = 27.15 CFS
BOTTOM WIDTH UPSTREAM = 5.0 FT
BOTTOM WIDTH DOWNSTREAM = 10.0 FT
Y1 = 0.26' (DEPTH BEFORE JUMP)
Y2 = 1.81' (DEPTH AFTER JUMP)

WIDTH OF BLOCKS = 0.75(Y1) = 0.20 FT. (USE 1.0 FT.)
SPACE BETWEEN BLOCKS = 0.75(Y1) = 0.20 FT. (USE 1.0 FT.)
HEIGHT OF BLOCKS = Y1 = 0.26 FT. (USE 1.0 FT.)
# OF BLOCKS ACROSS BOTTOM = 4

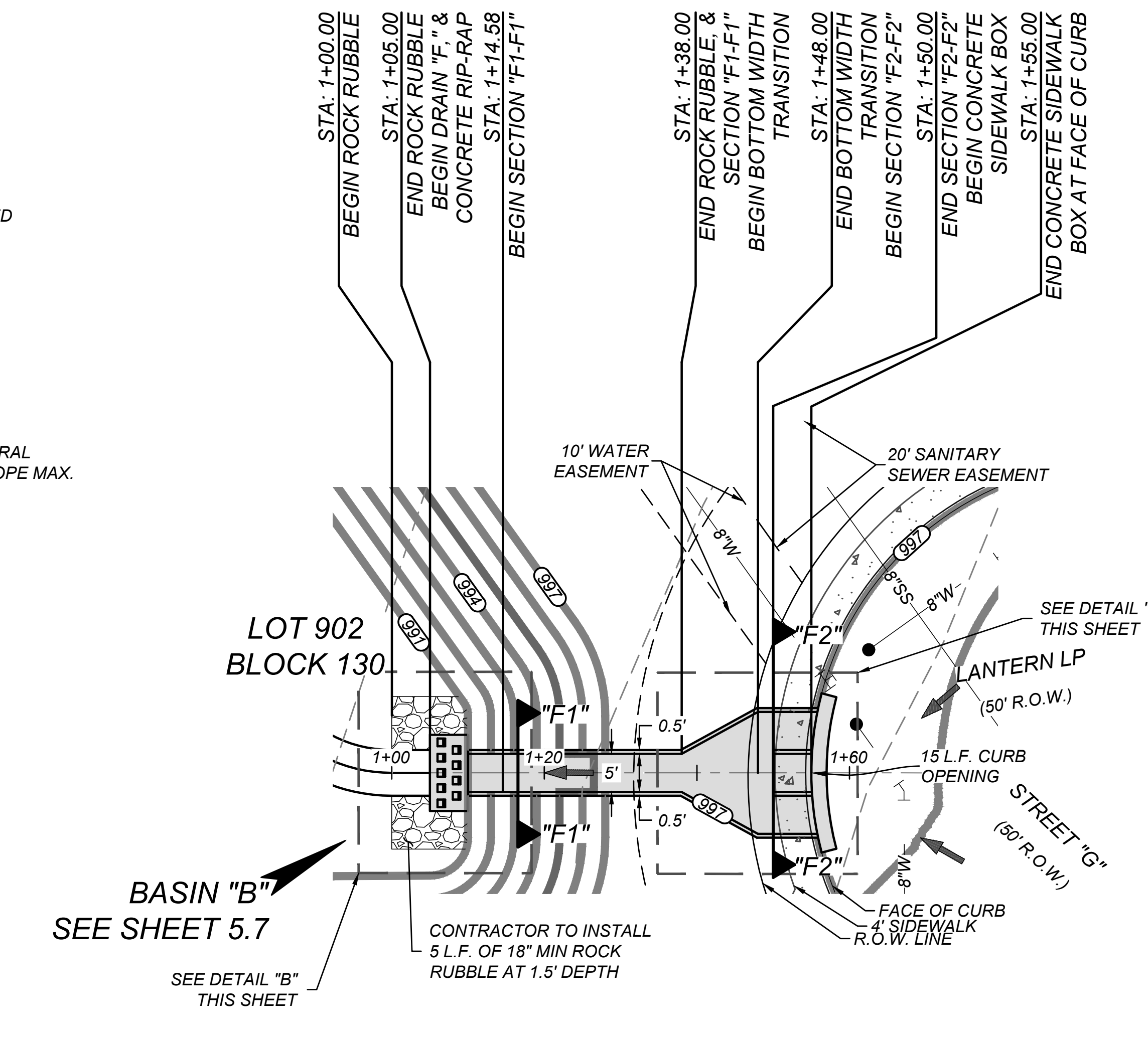
% OF FLOOR COVERED WITH BLOCKS = 4 (1.0 FT) /15.0 FT = 40%
(% MUST BE BETWEEN 40% AND 55%)

DEPTH OF TAILWATER (Y2) = 1.81 FT.
FROUDE NUMBER BEFORE JUMP = F1 = 7.22
FROUDE NUMBER AFTER JUMP = F2 = 0.20
LENGTH OF BASIN = LB = 4.5(Y2)/F1^0.76 = 0.26 FT. (USE 9.58 FT.)

DISTANCE TO FLOOR BLOCKS = LB/3 = 0.09 FT. (USE 1.0 FT.)

HEIGHT OF MAX TAILWATER DEPTH:
Z = Y2/3 = 0.60 FT.
Y2' = 0.85 * Y2 ; H = Z + Y2' = 2.14 FT.

VELOCITY AFTER JUMP:
V = Q/A
A = Y2 * [(B + T) / 2]
A = 1.81' * [(5.0 + 10.0) / 2] = 13.57 SQ. FT.
V = 27.15 / 13.57 = 2.00 F.P.S.



STA: 1+00.00
BEGIN ROCK RUBBLE
STA: 1+05.00
END ROCK RUBBLE
BEGIN DRAIN "F," &
CONCRETE RIP-RAP
STA: 1+14.58
BEGIN SECTION "F1-F1"
STA: 1+38.00
END ROCK RUBBLE, &
SECTION "F1-F1"
BEGIN BOTTOM WIDTH TRANSITION
STA: 1+48.00
END BOTTOM WIDTH TRANSITION
BEGIN SECTION "F2-F2"
STA: 1+50.00
END SECTION "F2-F2"
BEGIN CONCRETE SIDEWALK BOX
STA: 1+55.00
END CONCRETE SIDEWALK BOX AT FACE OF CURB
10' WATER EASEMENT
20' SANITARY SEWER EASEMENT
8"W
8"SS
997
994
991
LOT 902
BLOCK 130
"F1"
"F1"
"F2"
"F2"
1+00
1+20
1+60
5'
0.5'
0.5'
SEE DETAIL "A" THIS SHEET
LANTERN LP
(50' R.O.W.)
15 L.F. CURB OPENING
STREET "G"
(50' R.O.W.)
FACE OF CURB
4' SIDEWALK
R.O.W. LINE
BASIN "B"
SEE SHEET 5.7
SEE DETAIL "B" THIS SHEET
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH

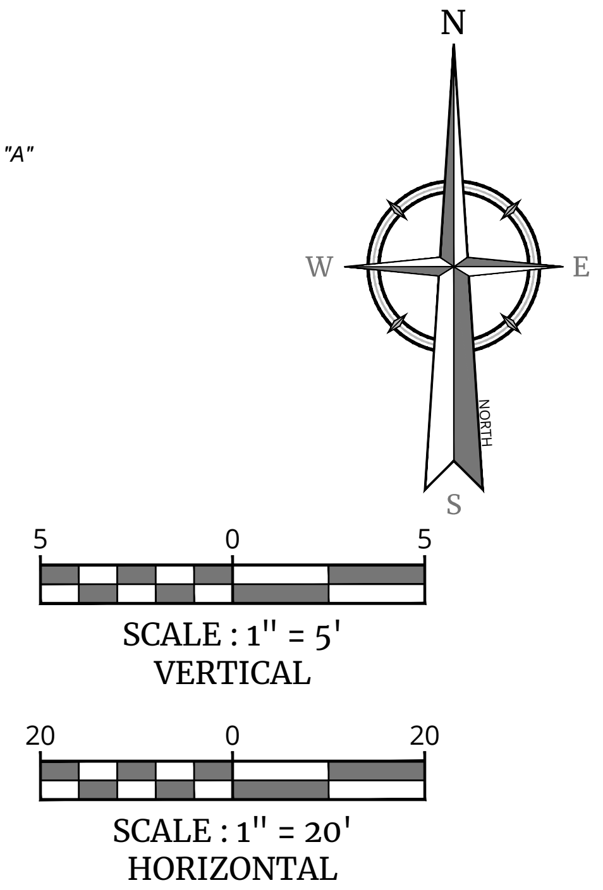
CURB OPENING HYDRAULIC CALCULATION

$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{27.15}{(3.087)\ (0.79)^{3/2}}$$

$L = 12.53$ L.F.

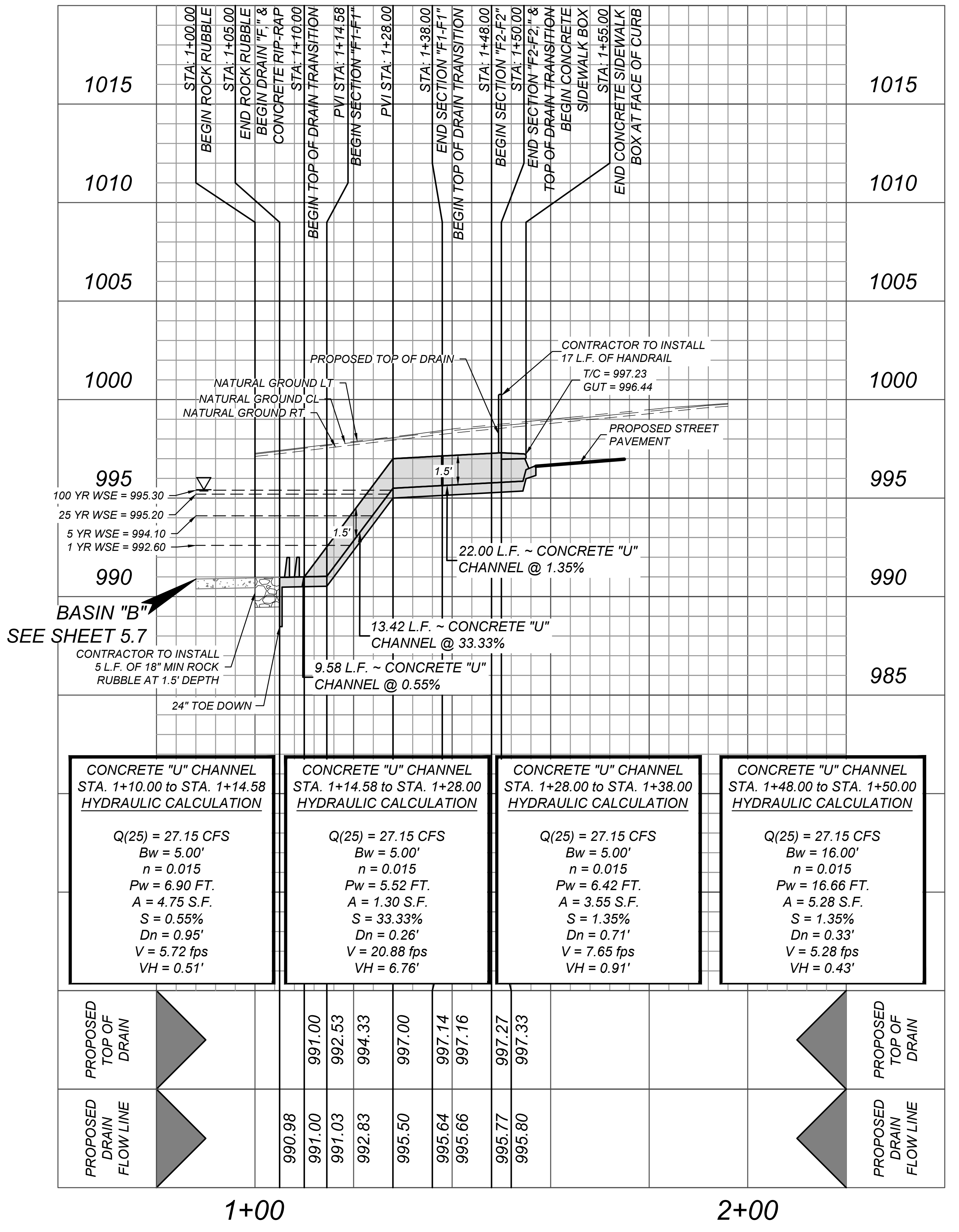
∴ USE 15.00 L.F. CURB OPENING



N
W
E
S
NORTH
5
0
5
SCALE : 1" = 5'
VERTICAL
20
0
20
SCALE : 1" = 20'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

PRIVATE DRAIN "F"
STA: 1+00.00 - END



CONCRETE "U" CHANNEL STA. 1+10.00 to STA. 1+14.58 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+14.58 to STA. 1+28.00 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+28.00 to STA. 1+38.00 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+48.00 to STA. 1+50.00 HYDRAULIC CALCULATION
Q(25) = 27.15 CFS	Q(25) = 27.15 CFS	Q(25) = 27.15 CFS	Q(25) = 27.15 CFS
Bw = 5.00'	Bw = 5.00'	Bw = 5.00'	Bw = 16.00'
n = 0.015	n = 0.015	n = 0.015	n = 0.015
Pw = 6.90 FT.	Pw = 5.52 FT.	Pw = 6.42 FT.	Pw = 16.66 FT.
A = 4.75 S.F.	A = 1.30 S.F.	A = 3.55 S.F.	A = 5.28 S.F.
S = 0.55%	S = 33.33%	S = 1.35%	S = 1.35%
Dn = 0.95'	Dn = 0.26'	Dn = 0.71'	Dn = 0.33'
V = 5.72 fps	V = 20.88 fps	V = 7.65 fps	V = 5.28 fps
VH = 0.51'	VH = 6.76'	VH = 0.91'	VH = 0.43'

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
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San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: DR2054113

SHEET TITLE:
PRIVATE DRAIN "F"
PLAN & PROFILE

SHEET NUMBER:
5.4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

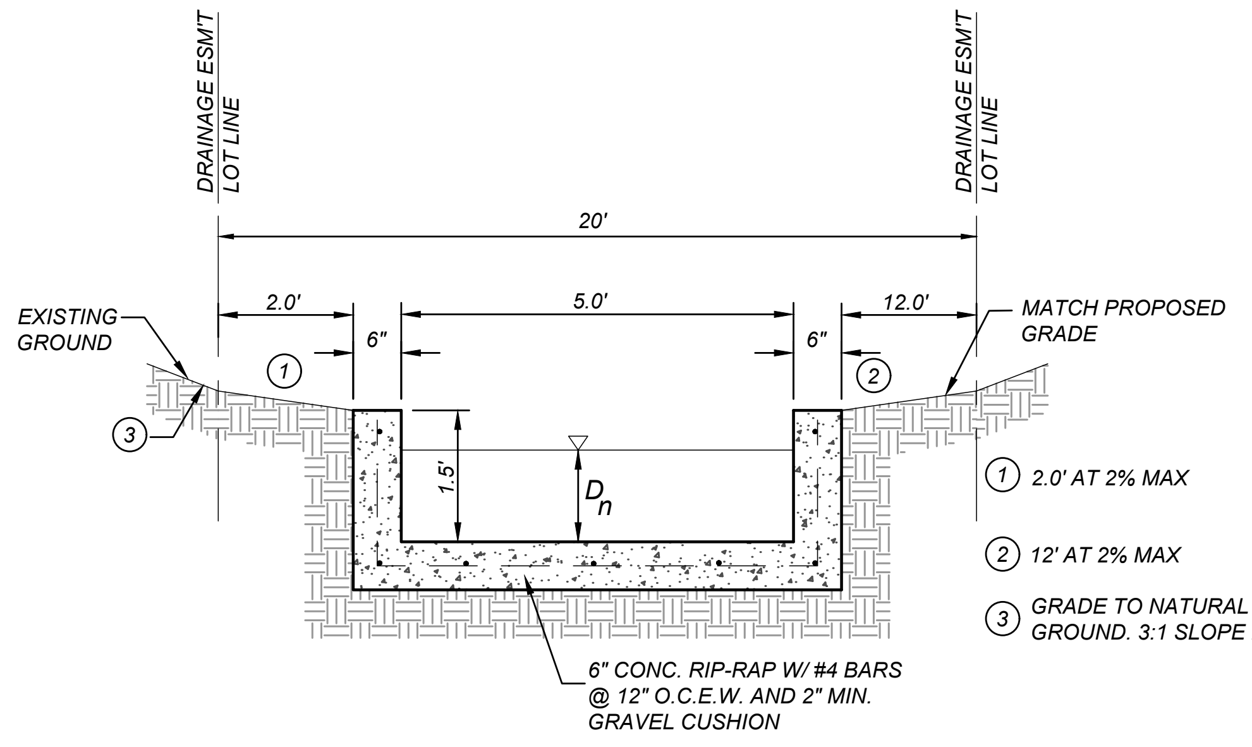
CAUTION!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

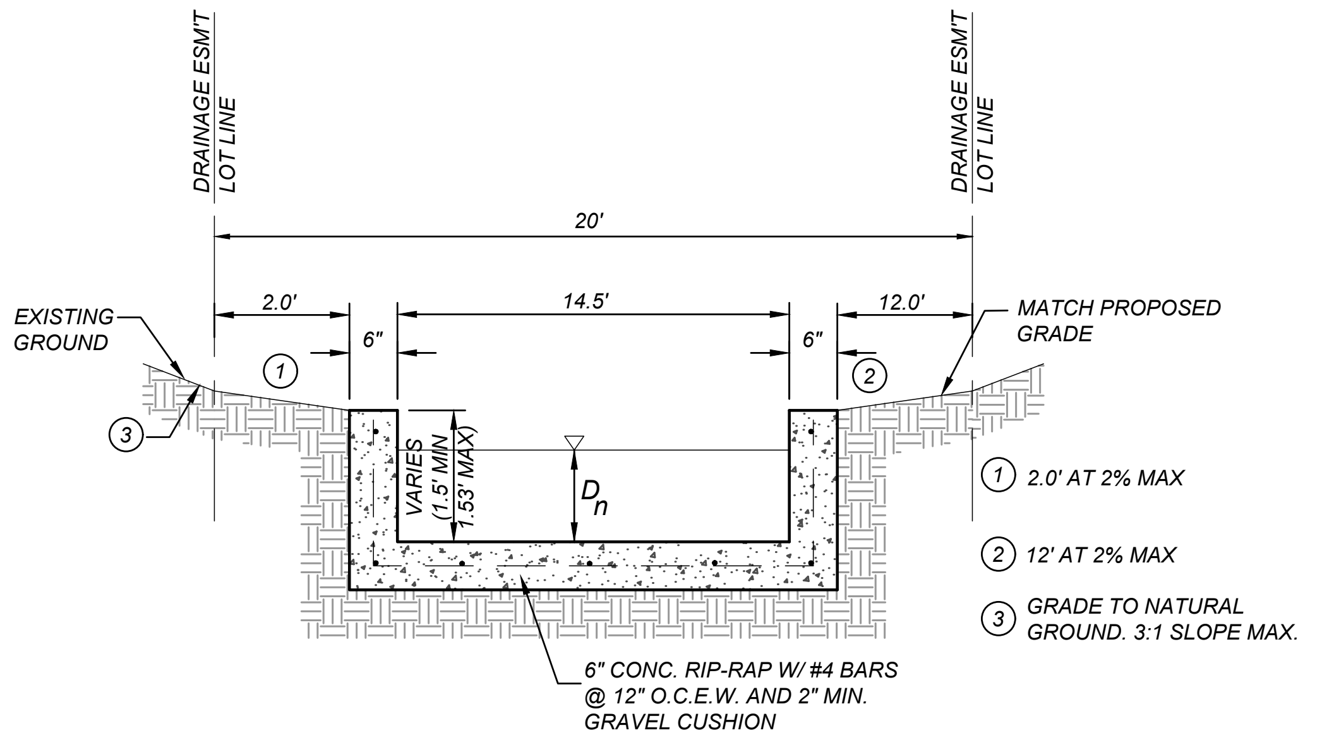
NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

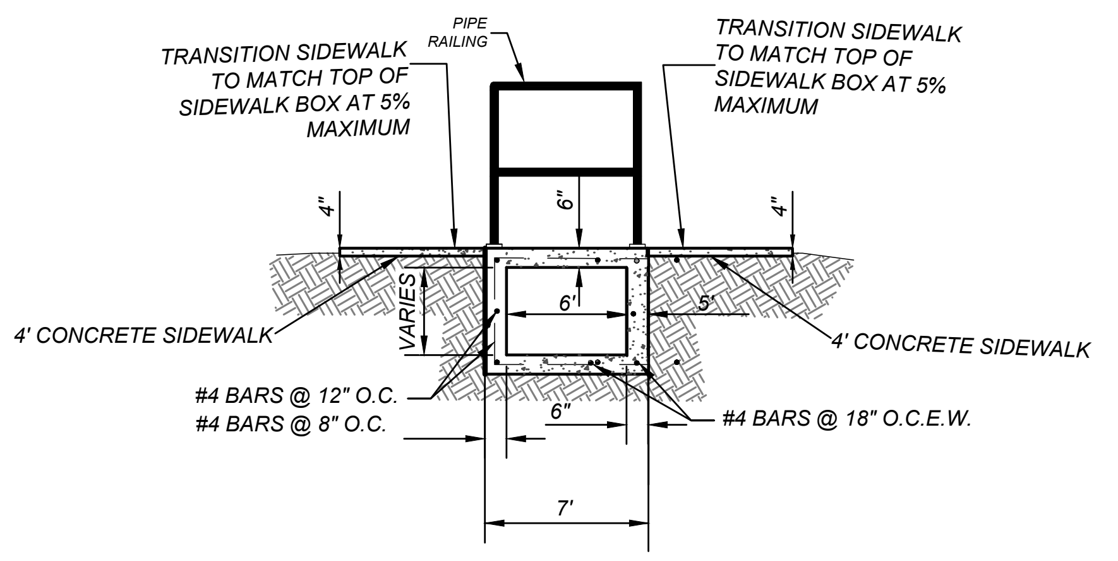
2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.


DRAINAGE ESM'T
LOT LINE
20'
2.0'
6"
5.0'
12.0'
EXISTING GROUND
MATCH PROPOSED GRADE
1.5'
Dn
① 2.0' AT 2% MAX
② 12' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

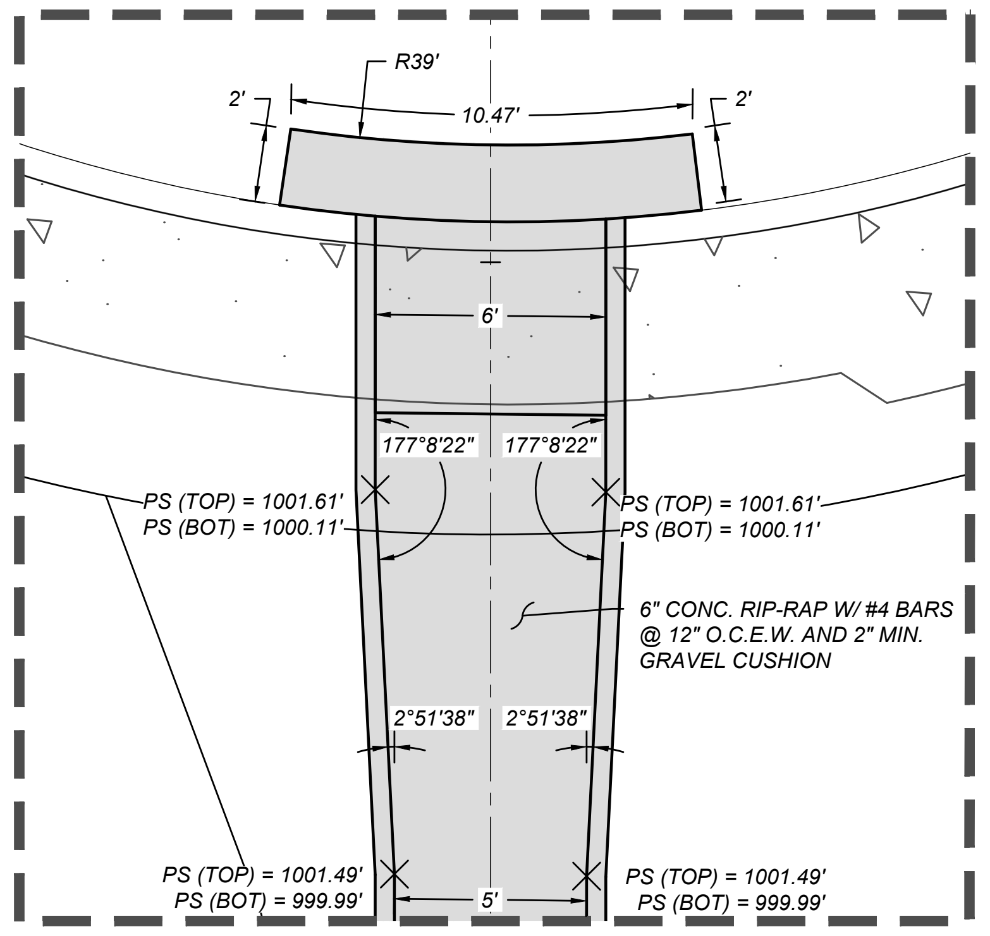
SECTION "G1-G1"
STA. 1+46.40 - STA. 2+44.08
N.T.S.


DRAINAGE ESM'T
LOT LINE
20'
2.0'
6"
14.5'
12.0'
EXISTING GROUND
MATCH PROPOSED GRADE
VARIES (1.5' MIN 1.53' MAX)
Dn
① 2.0' AT 2% MAX
② 12' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

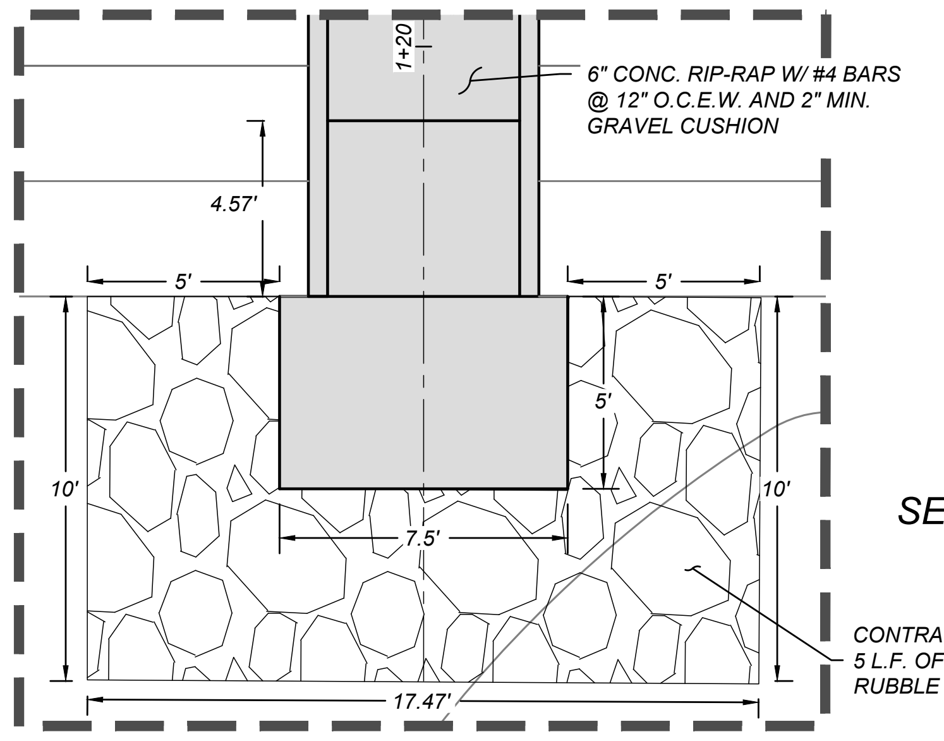
SECTION "G2-G2"
STA. 2+54.05 - STA. 2+56.05
N.T.S.


TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX AT 5% MAXIMUM
PIPE RAILING
4'
6"
4' CONCRETE SIDEWALK
VARIES
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
#4 BARS @ 18" O.C.E.W.
7'

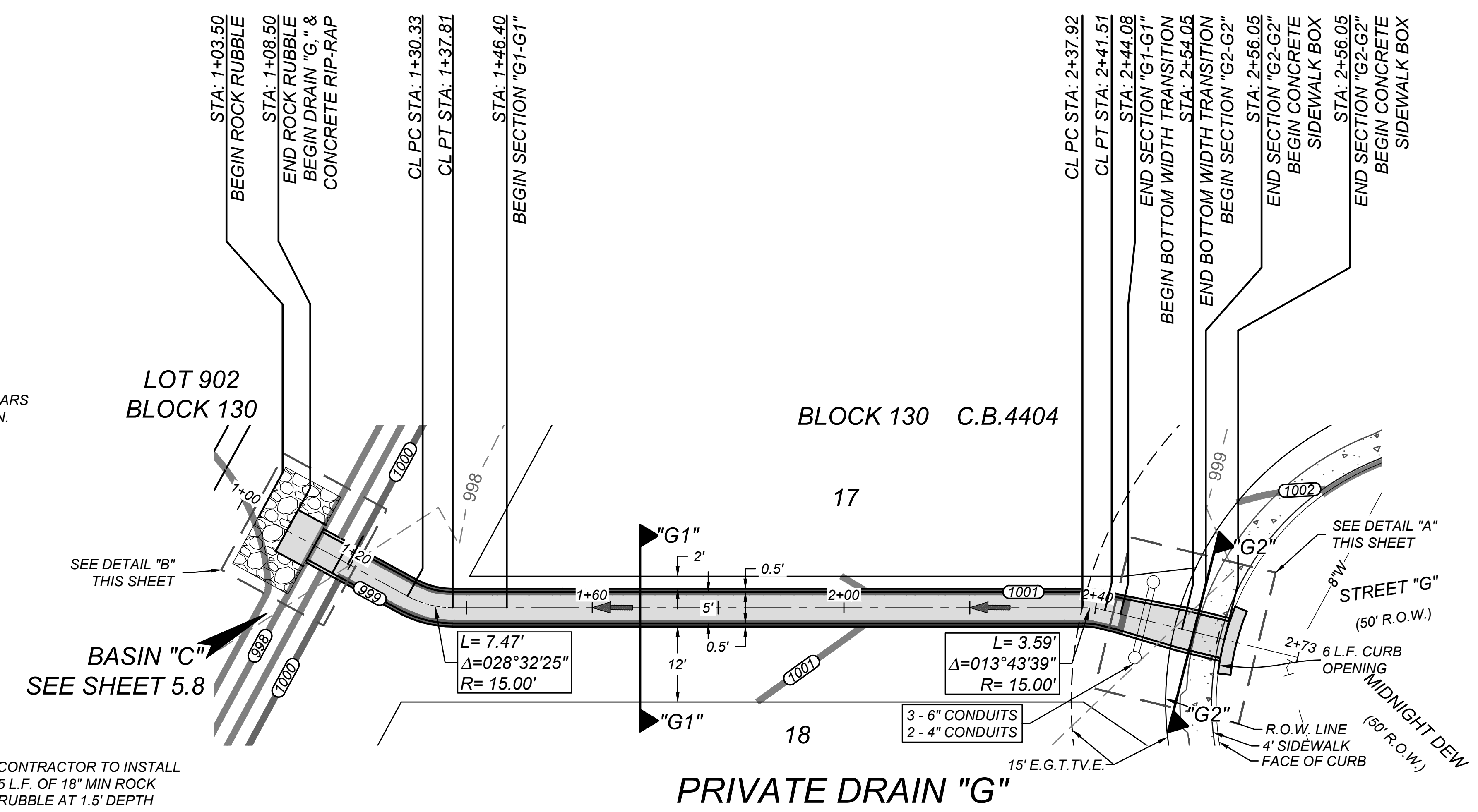
SECTION "G3-G3"
N.T.S.


R39'
10.47'
2'
6'
177°8'22"
PS (TOP) = 1001.61'
PS (BOT) = 1000.11'
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
2°51'38"
PS (TOP) = 1001.49'
PS (BOT) = 999.99'
5'

DETAIL "A"
SCALE: 1" = 5'


1+20
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION
4.57'
5'
10'
7.5'
17.47'
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH

DETAIL "B"
SCALE: 1" = 5'


STA. 1+03.50 BEGIN ROCK RUBBLE
STA. 1+08.50 END ROCK RUBBLE BEGIN DRAIN "G" & CONCRETE RIP-RAP
CL PC STA: 1+30.33
CL PT STA: 1+37.81
STA. 1+46.40 BEGIN SECTION "G1-G1"
CL PC STA: 2+37.92
CL PT STA: 2+41.51
STA. 2+44.08 END SECTION "G1-G1" BEGIN BOTTOM WIDTH TRANSITION
STA. 2+54.05 END BOTTOM WIDTH TRANSITION BEGIN SECTION "G2-G2"
STA. 2+56.05 END SECTION "G2-G2" BEGIN CONCRETE SIDEWALK BOX
LOT 902 BLOCK 130
BLOCK 130 C.B.4404
17
18
SEE DETAIL "B" THIS SHEET
BASIN "C" SEE SHEET 5.8
L= 7.47' Δ=028°32'25" R= 15.00'
L= 3.59' Δ=013°43'39" R= 15.00'
3 - 6" CONDUITS
2 - 4" CONDUITS
15' E.G.T.TV.E.
SEE DETAIL "A" THIS SHEET
STREET "G" (50' R.O.W.)
6 L.F. CURB OPENING
MIDNIGHT DEW (50' R.O.W.)
R.O.W. LINE
4' SIDEWALK
FACE OF CURB
"G1"
"G2"
1+60
2+00
0.5'
5'
12'

LEGEND

— — 735 — —	= EXISTING CONTOUR
——(735)——	= PROPOSED CONTOUR
←	= FLOW ARROW

CURB OPENING
HYDRAULIC CALCULATION

$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{8.08}{(3.087)\ (0.79)^{3/2}}$$

$$L = 3.73\ \text{L.F.}$$

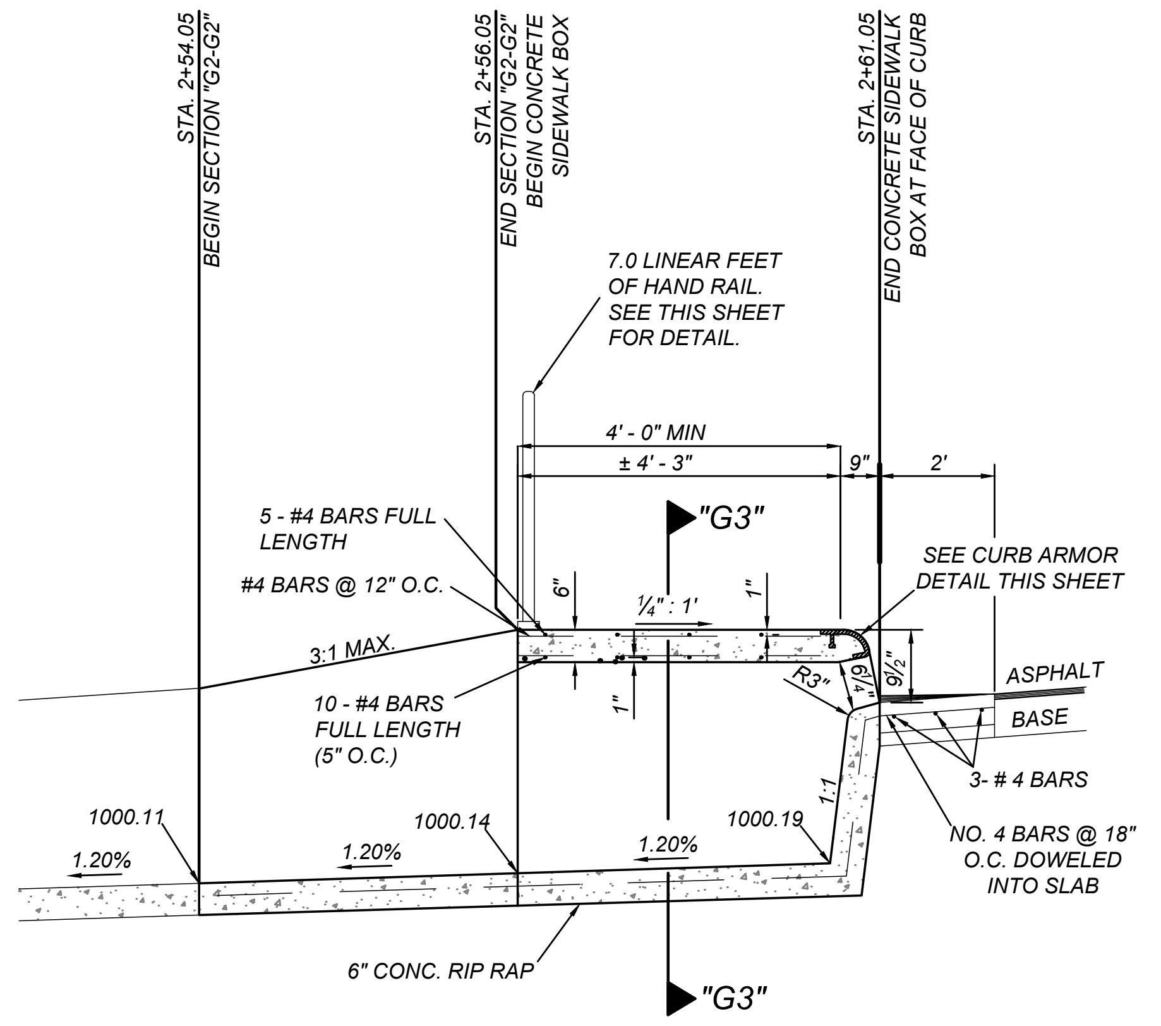
∴ USE 6.00 L.F. CURB OPENING

SCALE : 1" = 5'
VERTICAL

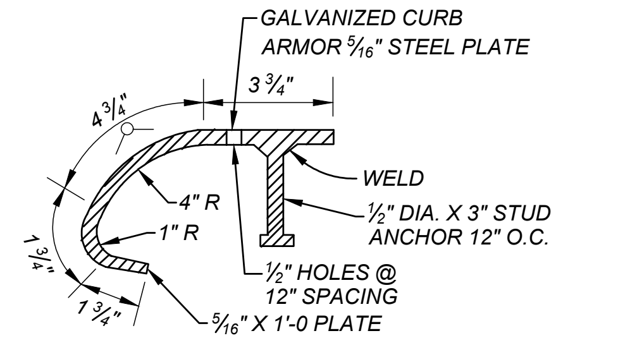
SCALE : 1" = 20'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

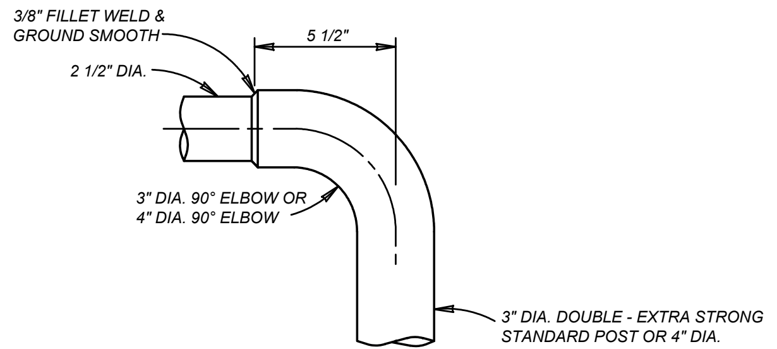
PRIVATE DRAIN "G"
STA: 1+03.50 - END


STA. 2+54.05 BEGIN SECTION "G2-G2"
STA. 2+56.05 END SECTION "G2-G2" BEGIN CONCRETE SIDEWALK BOX
STA. 2+61.05 END CONCRETE SIDEWALK BOX AT FACE OF CURB
7.0 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
#4 BARS @ 12" O.C.
"G3"
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX
10 - #4 BARS FULL LENGTH (5" O.C.)
ASPHALT
BASE
3- # 4 BARS
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
1000.11
1.20%
1000.14
1.20%
1000.19
1.20%
6" CONC. RIP RAP

SIDEWALK BOX DETAIL
N.T.S.

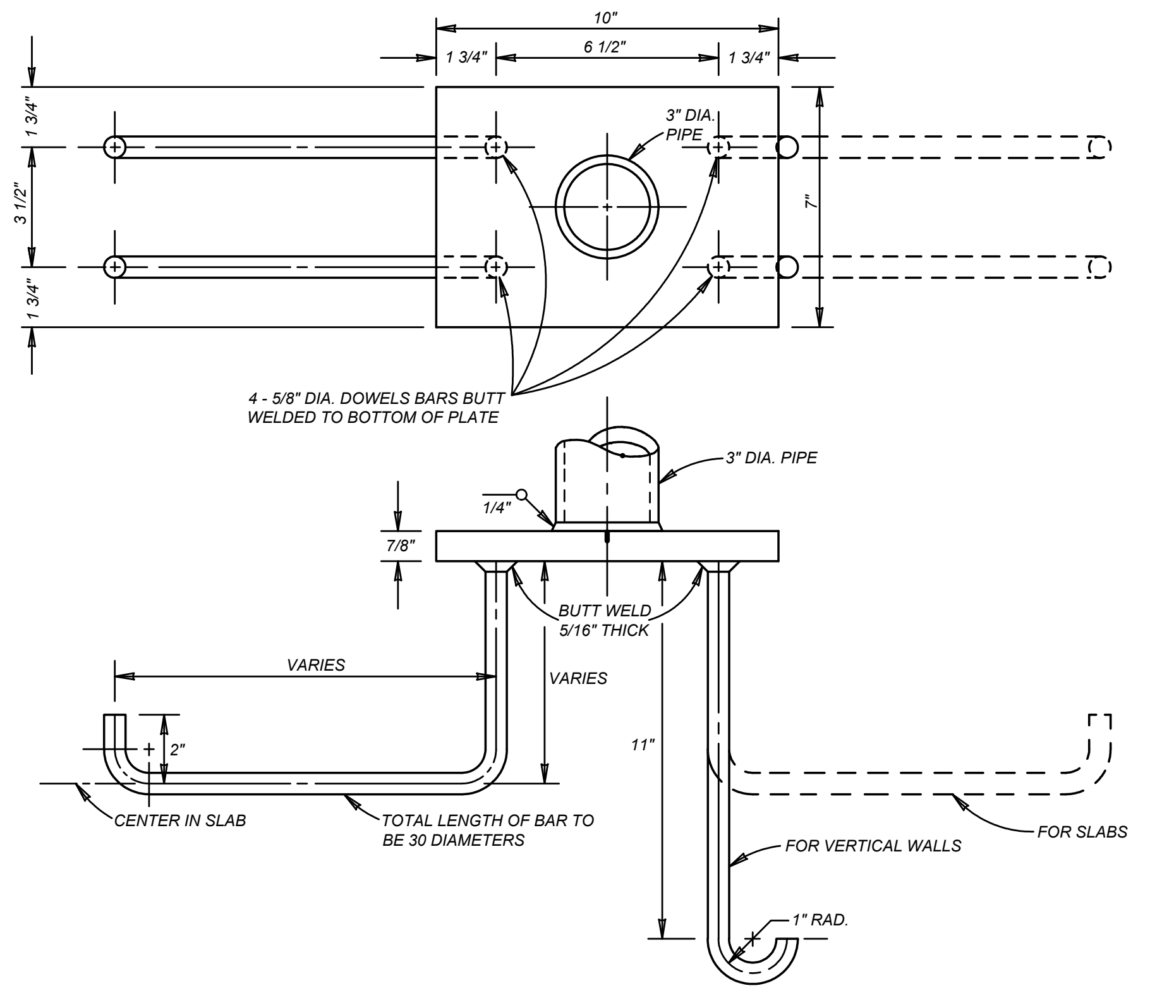

GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 3/4"
4 1/2"
WELD
4" R
1" R
1/2" DIA. X 3" STUD ANCHOR 12" O.C.
1/2" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE

CURB ARMOR DETAIL
N.T.S.

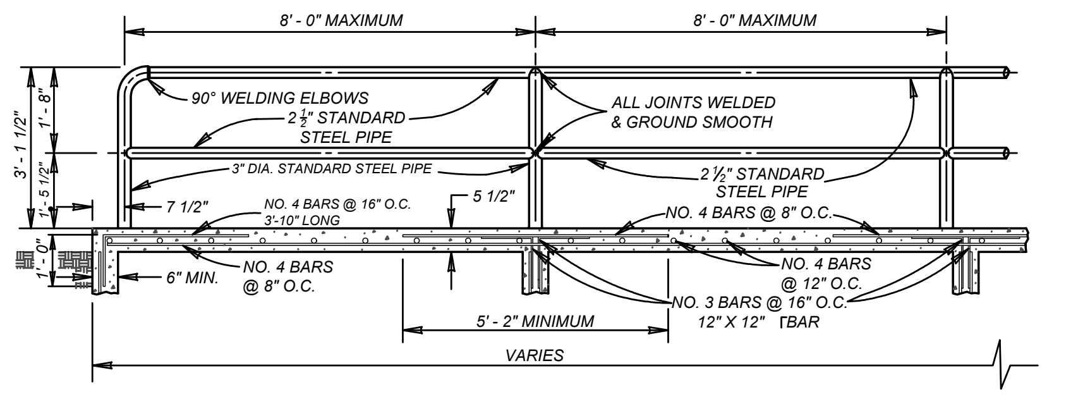

3/8" FILLET WELD & GROUND SMOOTH
5 1/2"
2 1/2" DIA.
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS
N.T.S.

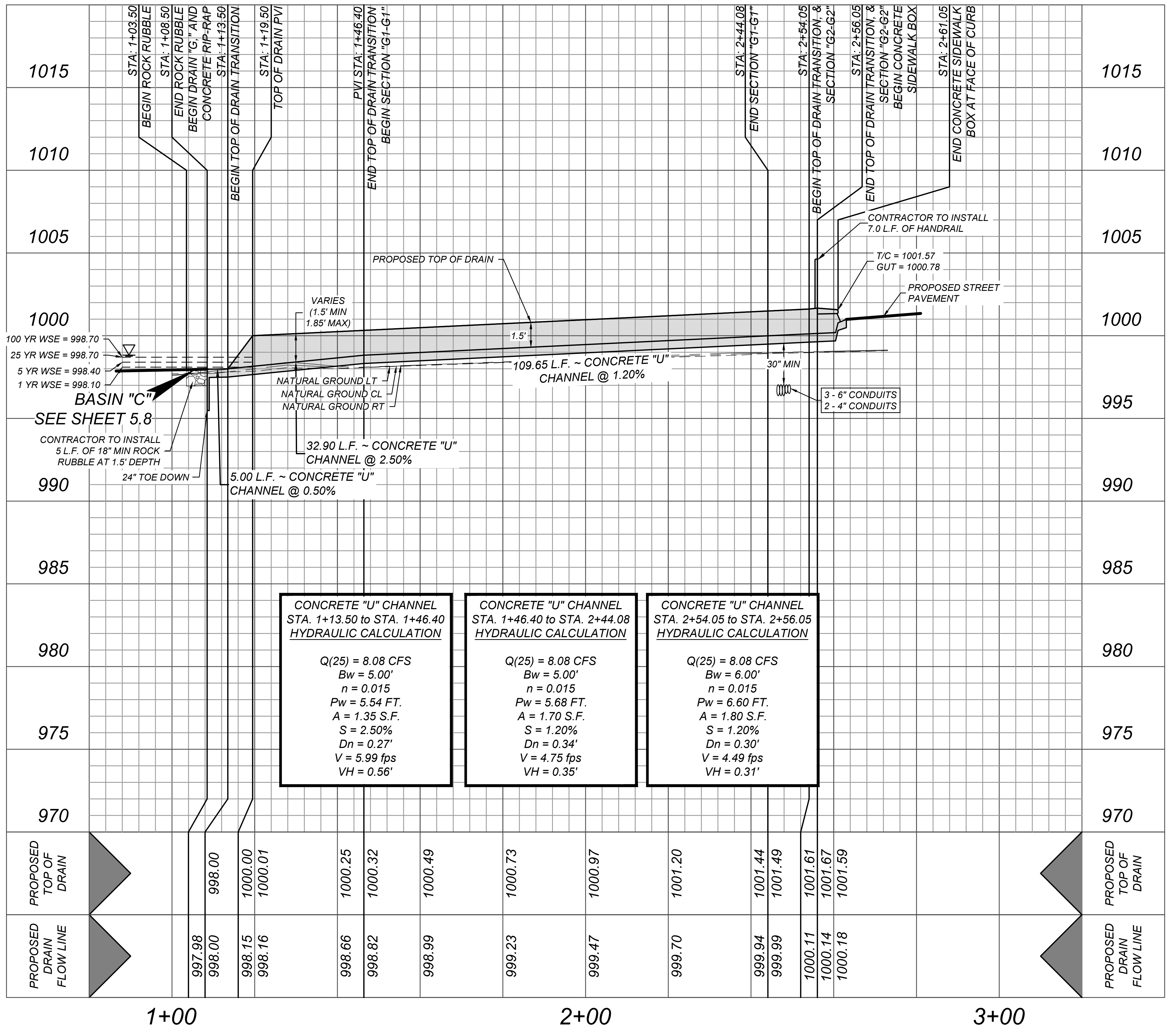
* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


10"
1 3/4"
6 1/2"
3" DIA. PIPE
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
7/8"
1/4"
BUTT WELD 5/16" THICK
VARIES
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS
N.T.S.


8' - 0" MAXIMUM
90° WELDING ELBOWS
2 1/2" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 3'-10" LONG
NO. 4 BARS @ 8" O.C.
NO. 3 BARS @ 18" O.C. 12" X 12" TBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
N.T.S.


1015
1010
1005
1000
995
990
985
980
975
970
STA. 1+03.50 BEGIN ROCK RUBBLE
STA. 1+08.50 END ROCK RUBBLE BEGIN DRAIN "G" AND CONCRETE RIP-RAP
STA. 1+13.50 BEGIN TOP OF DRAIN TRANSITION
STA. 1+19.50 TOP OF DRAIN PVI
PVI STA: 1+46.40 END TOP OF DRAIN TRANSITION BEGIN SECTION "G1-G1"
STA. 2+44.08 END SECTION "G1-G1"
STA. 2+54.05 BEGIN TOP OF DRAIN TRANSITION & END TOP OF DRAIN TRANSITION & SECTION "G2-G2"
STA. 2+56.05 END SECTION "G2-G2" BEGIN CONCRETE SIDEWALK BOX
STA. 2+61.05 END CONCRETE SIDEWALK BOX AT FACE OF CURB
PROPOSED TOP OF DRAIN
VARIES (1.5' MIN 1.85' MAX)
1.5'
CONTRACTOR TO INSTALL 7.0 L.F. OF HANDRAIL
T/C = 1001.57
GUT = 1000.78
PROPOSED STREET PAVEMENT
100 YR WSE = 998.70
25 YR WSE = 998.70
5 YR WSE = 998.40
1 YR WSE = 998.10
109.65 L.F. ~ CONCRETE "U" CHANNEL @ 1.20%
30" MIN
3 - 6" CONDUITS
2 - 4" CONDUITS
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
BASIN "C" SEE SHEET 5.8
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
24" TOE DOWN
32.90 L.F. ~ CONCRETE "U" CHANNEL @ 2.50%
5.00 L.F. ~ CONCRETE "U" CHANNEL @ 0.50%
PROPOSED TOP OF DRAIN
998.00 1000.00 1000.01 1000.25 1000.32 1000.49 1000.73 1000.97 1001.20 1001.44 1001.49 1001.61 1001.67 1001.59
PROPOSED DRAIN FLOW LINE
997.98 998.00 998.15 998.16 998.66 998.82 998.99 999.23 999.47 999.70 999.94 999.99 1000.11 1000.14 1000.18
1+00
2+00
3+00

CONCRETE "U" CHANNEL
STA. 1+13.50 to STA. 1+46.40
HYDRAULIC CALCULATION

Q(25) = 8.08 CFS
Bw = 5.00'
n = 0.015
Pw = 5.54 FT.
A = 1.35 S.F.
S = 2.50%
Dn = 0.27'
V = 5.99 fps
VH = 0.56'

CONCRETE "U" CHANNEL
STA. 1+46.40 to STA. 2+44.08
HYDRAULIC CALCULATION

Q(25) = 8.08 CFS
Bw = 5.00'
n = 0.015
Pw = 5.68 FT.
A = 1.70 S.F.
S = 1.20%
Dn = 0.34'
V = 4.75 fps
VH = 0.35'

CONCRETE "U" CHANNEL
STA. 2+54.05 to STA. 2+56.05
HYDRAULIC CALCULATION

Q(25) = 8.08 CFS
Bw = 6.00'
n = 0.015
Pw = 6.60 FT.
A = 1.80 S.F.
S = 1.20%
Dn = 0.30'
V = 4.49 fps
VH = 0.31'

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	DR2054113

SHEET TITLE:
PRIVATE DRAIN 'G''
PLAN & PROFILE

SHEET NUMBER:
5.5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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.

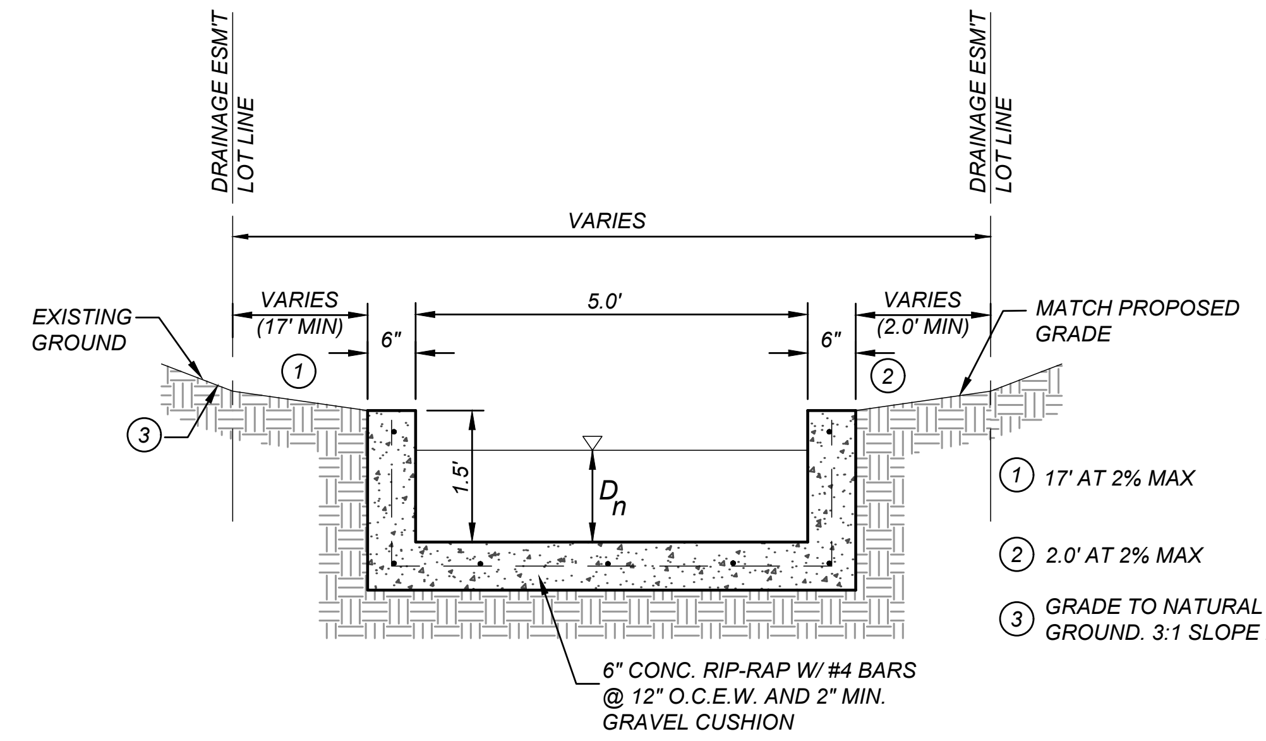
CAUTION!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

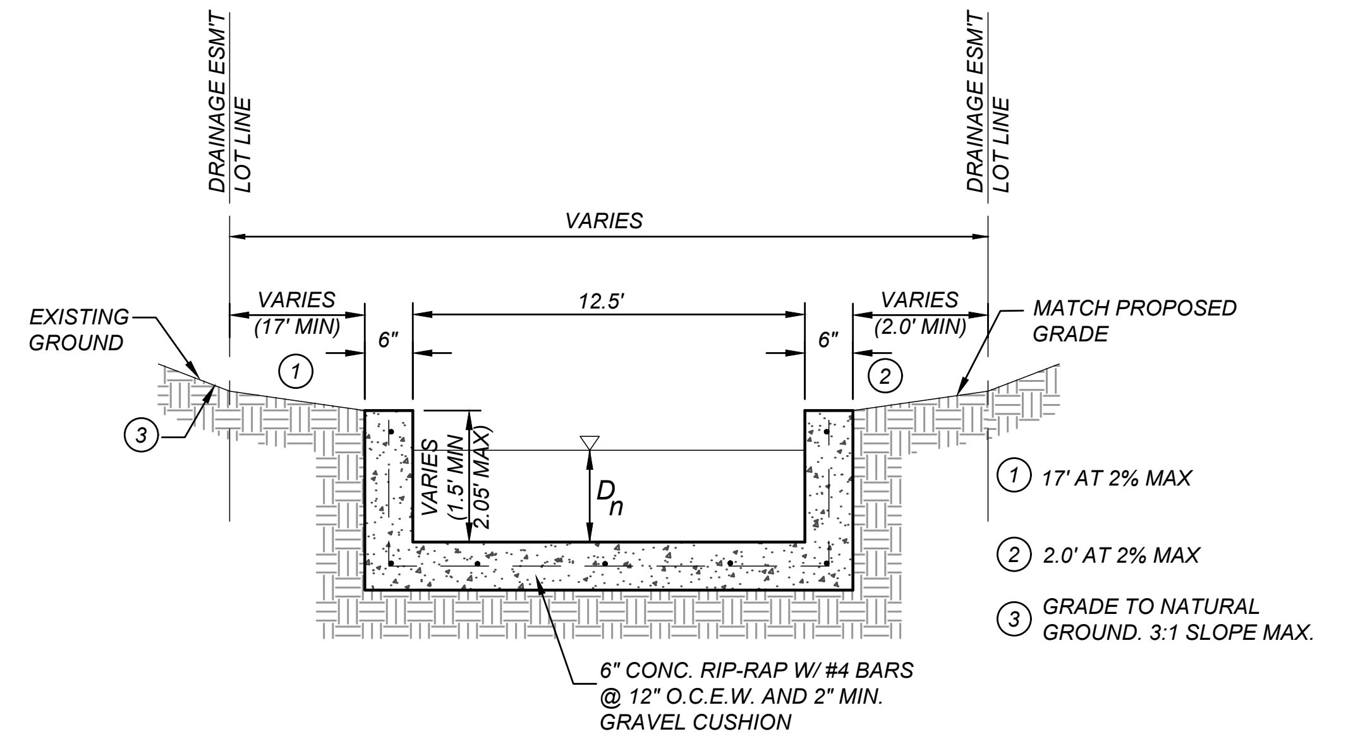
NOTE:

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

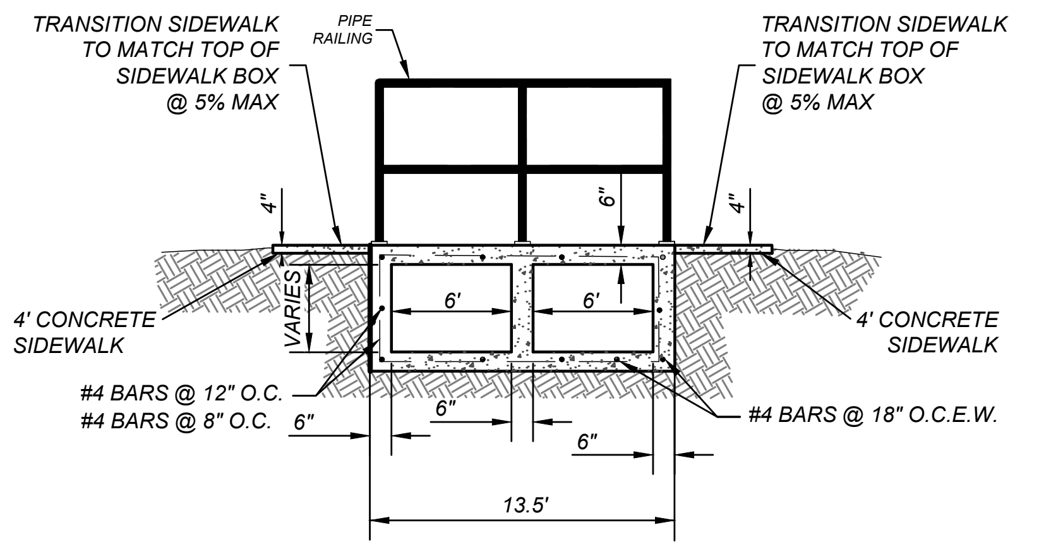
2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.


DRAINAGE ESM'T
LOT LINE
VARIES
VARIES (17' MIN)
5.0'
VARIES (2.0' MIN)
6"
EXISTING GROUND
MATCH PROPOSED GRADE
1.5'
Dn
① 17' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

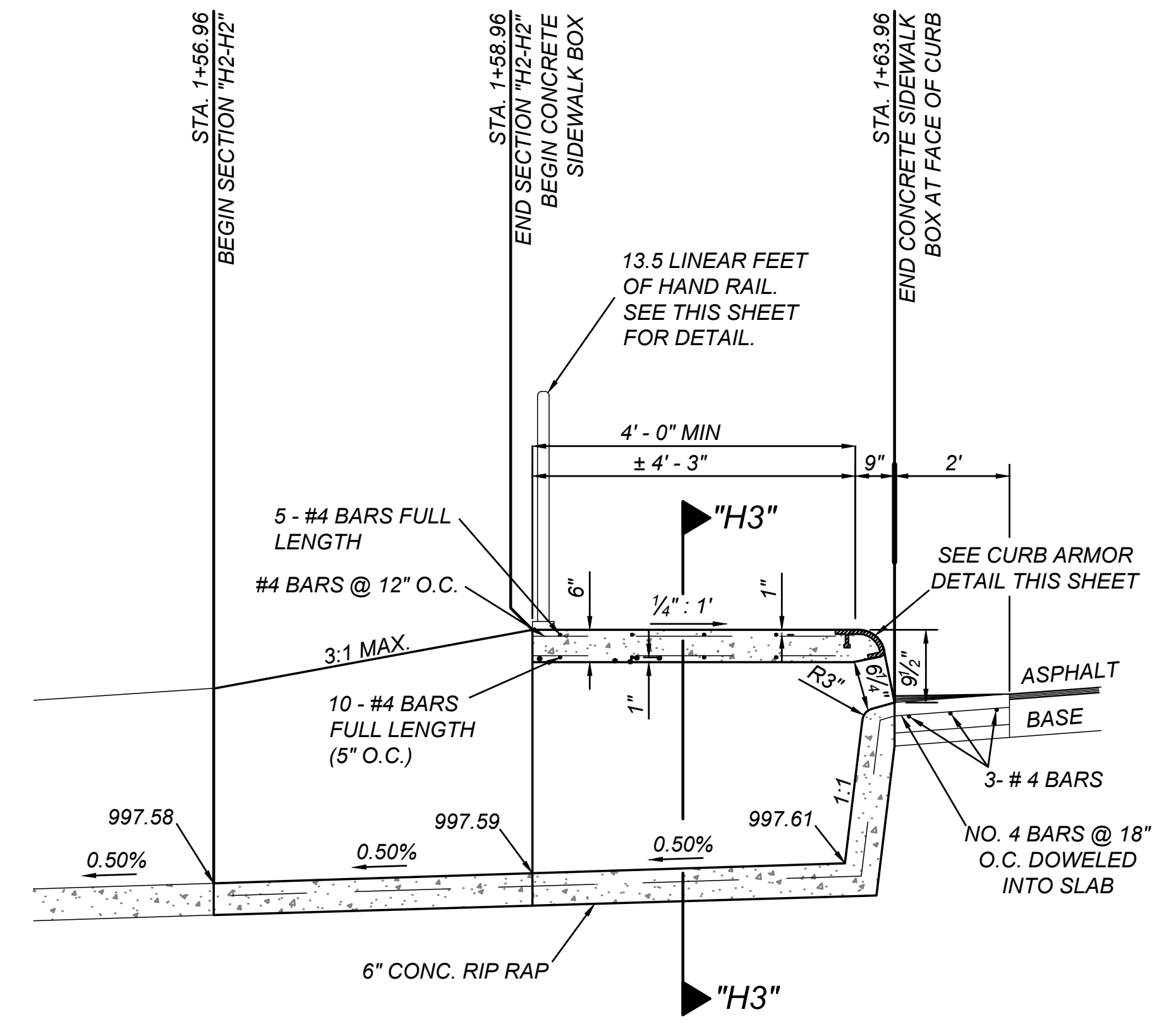
SECTION "H1-H1"
STA. 1+39.53 - STA. 1+46.96
N.T.S.


DRAINAGE ESM'T
LOT LINE
VARIES
VARIES (17' MIN)
12.5'
VARIES (2.0' MIN)
6"
EXISTING GROUND
MATCH PROPOSED GRADE
VARIES (1.5' MIN 2.05' MAX)
Dn
① 17' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

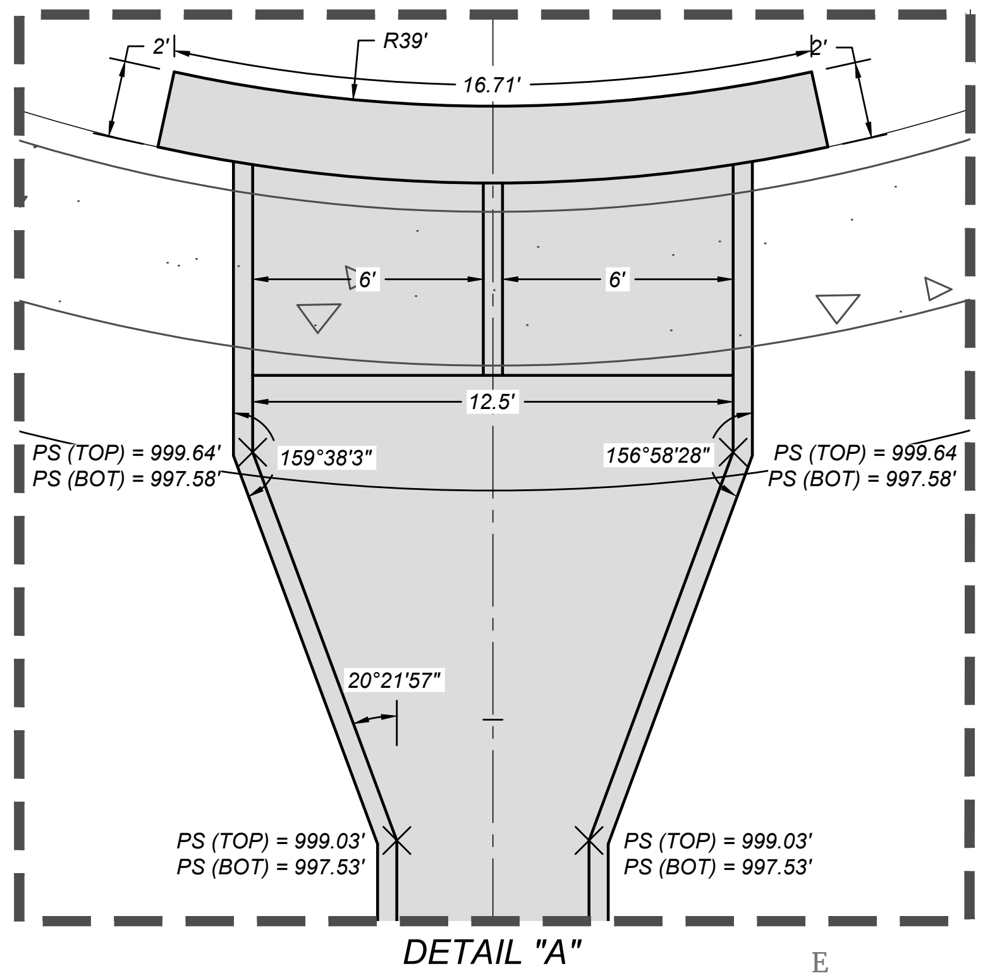
SECTION "H2-H2"
STA. 1+56.96 - STA. 1+58.96
N.T.S.


TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
PIPE RAILING
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
4'
6'
6'
6"
VARIES
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
6"
6"
#4 BARS @ 18" O.C.E.W.
13.5'

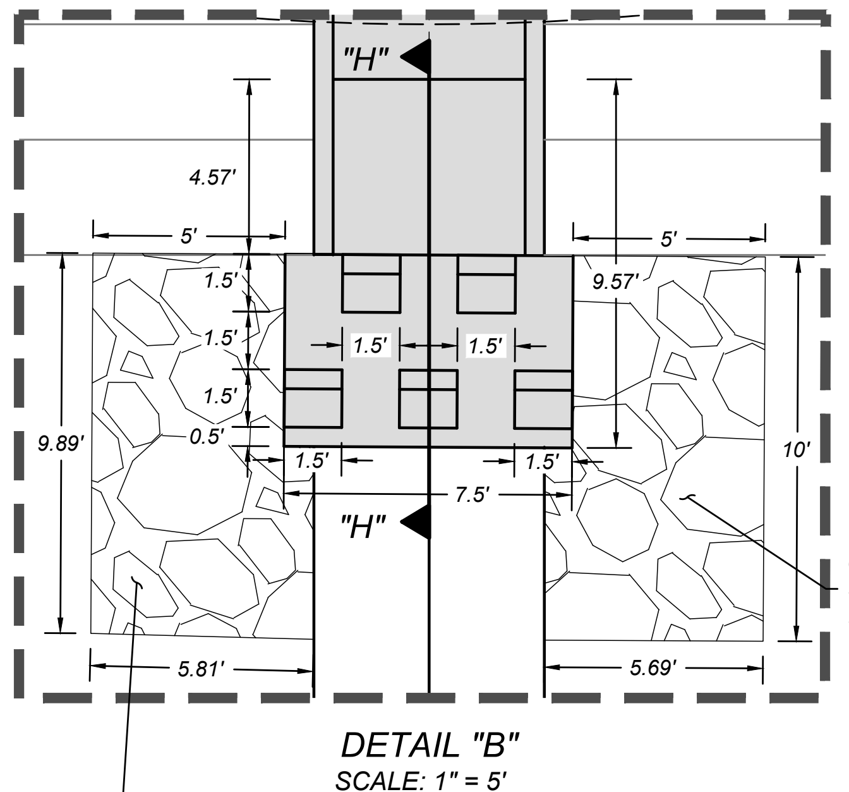
SECTION "H3-H3"
N.T.S.


STA. 1+56.96
BEGIN SECTION "H2-H2"
STA. 1+58.96
END SECTION "H2-H2"
BEGIN CONCRETE SIDEWALK BOX
STA. 1+63.96
END CONCRETE SIDEWALK BOX AT FACE OF CURB
13.5 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
4' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
#4 BARS @ 12" O.C.
"H3"
SEE CURB ARMOR DETAIL THIS SHEET
3:1 MAX
10 - #4 BARS FULL LENGTH (5" O.C.)
ASPHALT
BASE
3- # 4 BARS
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
997.58
0.50%
997.59
0.50%
0.50%
997.61
6" CONC. RIP RAP
"H3"

SIDEWALK BOX DETAIL
N.T.S.


R39'
2'
16.71'
6'
6'
12.5'
PS (TOP) = 999.64'
PS (BOT) = 997.58'
159°38'3"
156°58'28"
PS (TOP) = 999.64'
PS (BOT) = 997.58'
20°21'57"
PS (TOP) = 999.03'
PS (BOT) = 997.53'
PS (TOP) = 999.03'
PS (BOT) = 997.53'

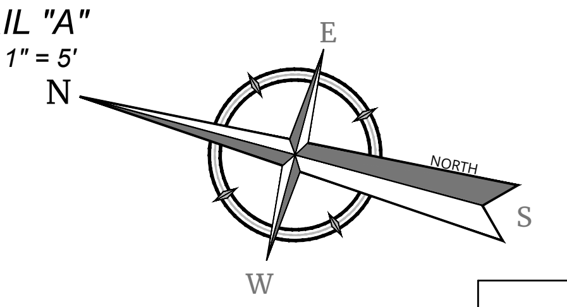
DETAIL "A"
SCALE: 1" = 5'

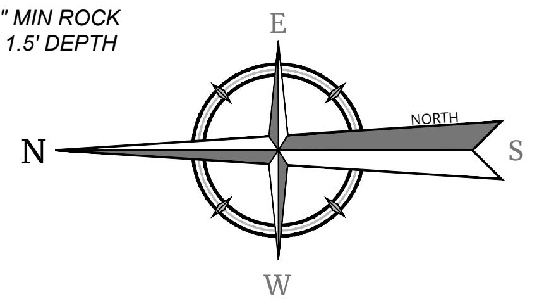

"H"
4.57'
5'
5'
1.5'
1.5'
1.5'
1.5'
1.5'
9.57'
9.89'
0.5'
1.5'
1.5'
7.5'
10'
"H"
5.81'
5.69'

CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH

DETAIL "B"
SCALE: 1" = 5'

CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH





BAFFLE BLOCK CALCULATIONS (ST. ANTHONY FALLS METHOD)

Q(25) = 22.06 CFS
BOTTOM WIDTH UPSTREAM = 5.0 FT
BOTTOM WIDTH DOWNSTREAM = 7.5 FT
Y1 = 0.23' (DEPTH BEFORE JUMP)
Y2 = 1.79' (DEPTH AFTER JUMP)

WIDTH OF BLOCKS = 0.75(Y1) = 0.17 FT. (USE 1.5 FT.)
SPACE BETWEEN BLOCKS = 0.75(Y1) = 0.17 FT. (USE 1.5 FT.)
HEIGHT OF BLOCKS = Y1 = 0.23 FT. (USE 1.5 FT.)
# OF BLOCKS ACROSS BOTTOM = 2

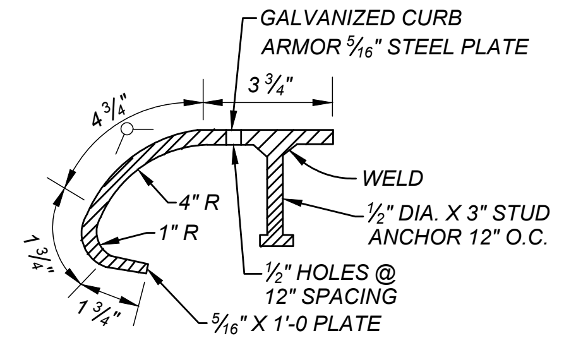
% OF FLOOR COVERED WITH BLOCKS = 2 (1.0 FT) /5.0 FT = 40%
(% MUST BE BETWEEN 40% AND 55%)

DEPTH OF TAILWATER (Y2) = 1.79 FT.
FROUDE NUMBER BEFORE JUMP = F1 = 7.05
FROUDE NUMBER AFTER JUMP = F2 = 0.22
LENGTH OF BASIN = LB = 4.5(Y2)/F1^0.76 = 0.13 FT. (USE 9.57 FT.)

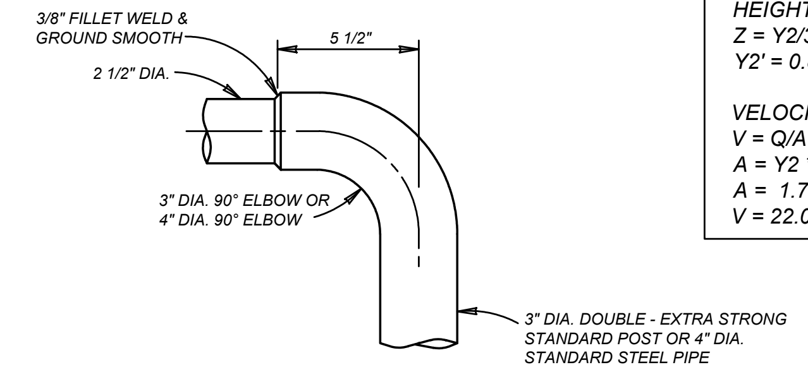
DISTANCE TO FLOOR BLOCKS = LB/3 = 0.08 FT. (USE 4.57 FT.)

HEIGHT OF MAX TAILWATER DEPTH:
Z = Y2/3 = 0.60 FT.
Y2' = 0.85 * Y2 ; H = Z + Y2' = 2.12 FT.

VELOCITY AFTER JUMP:
V = Q/A
A = Y2 * [(B + T) / 2]
A = 1.79' * [(5.0 + 7.5) / 2] = 11.18 SQ. FT.
V = 22.06 / 11.18 = 1.97 F.P.S.

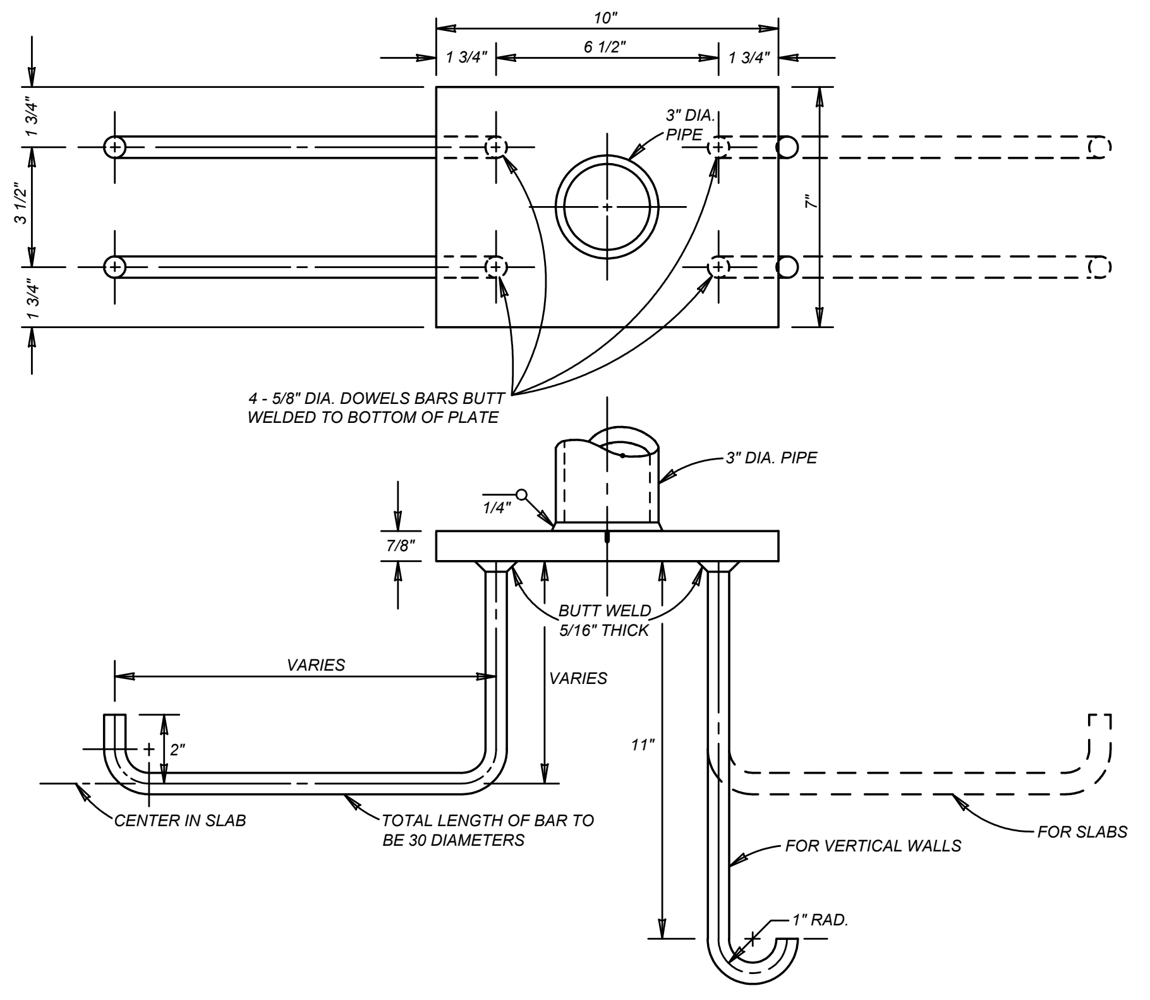

GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 1/4"
4 1/2"
WELD
4" R
1" R
1/2" DIA. X 3" STUD ANCHOR 12" O.C.
1/2" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE

CURB ARMOR DETAIL
N.T.S.

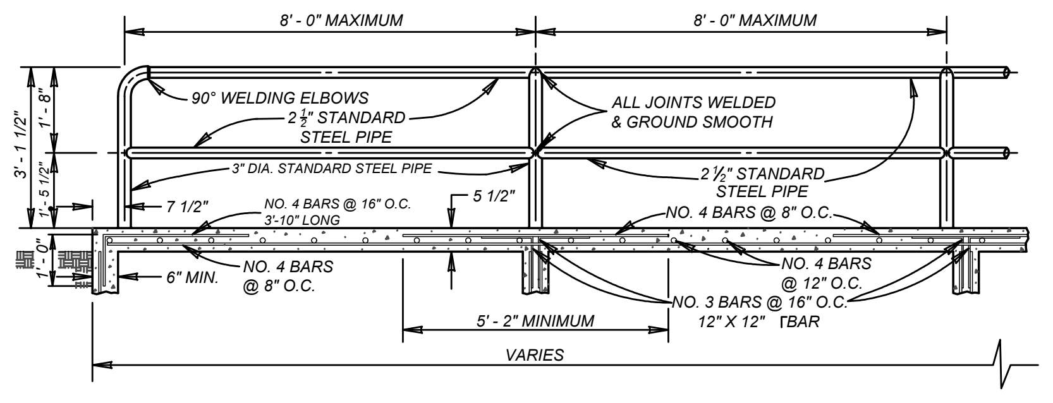

3/8" FILLET WELD & GROUND SMOOTH
5 1/2"
2 1/2" DIA.
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS
N.T.S.

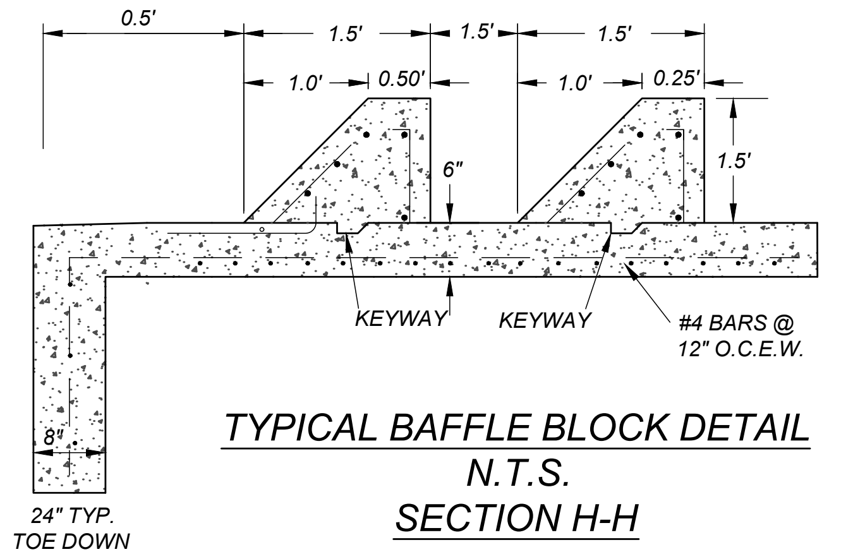
* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


10"
1 3/4"
6 1/2"
1 3/4"
3" DIA. PIPE
3 1/2"
7"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
1/4"
7/8"
BUTT WELD 5/16" THICK
VARIES
VARIES
11"
2"
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS
N.T.S.


8' - 0" MAXIMUM
8' - 0" MAXIMUM
90° WELDING ELBOWS
2 1/2" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
2 1/2" STANDARD STEEL PIPE
3" DIA. STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 3'-10" LONG
NO. 4 BARS @ 8" O.C.
5 1/2"
7 1/2"
6" MIN.
NO. 4 BARS @ 8" O.C.
NO. 3 BARS @ 12" O.C. 12" X 12" TBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
N.T.S.


0.5'
1.5'
1.5'
1.5'
1.0'
0.50'
1.0'
0.25'
6"
1.5'
8"
KEYWAY
KEYWAY
#4 BARS @ 12" O.C.E.W.
24" TYP. TOE DOWN

TYPICAL BAFFLE BLOCK DETAIL
N.T.S.
SECTION H-H

LEGEND

735 = EXISTING CONTOUR
735 = PROPOSED CONTOUR
= FLOW ARROW

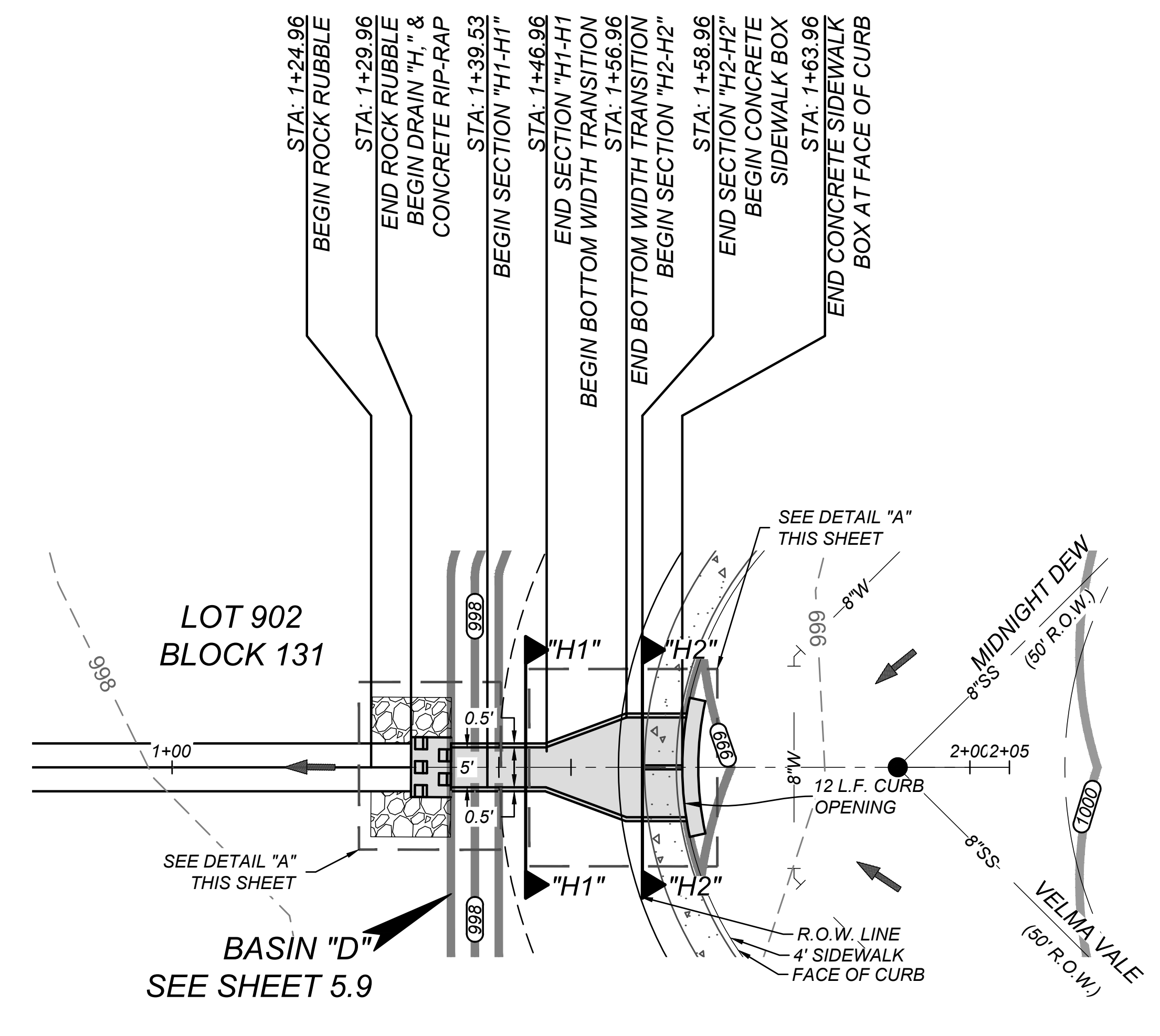
CURB OPENING HYDRAULIC CALCULATION

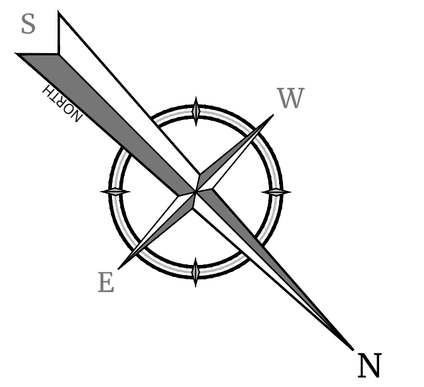
$$L = \frac{Q_{25}}{Ch^{3/2}}$$

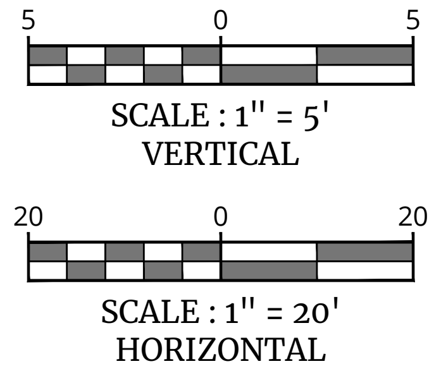
$$L = \frac{22.06}{(3.087)\ (0.79)^{3/2}}$$

$$L = 10.18\ L.F.$$

∴ USE 12.00 L.F. CURB OPENING

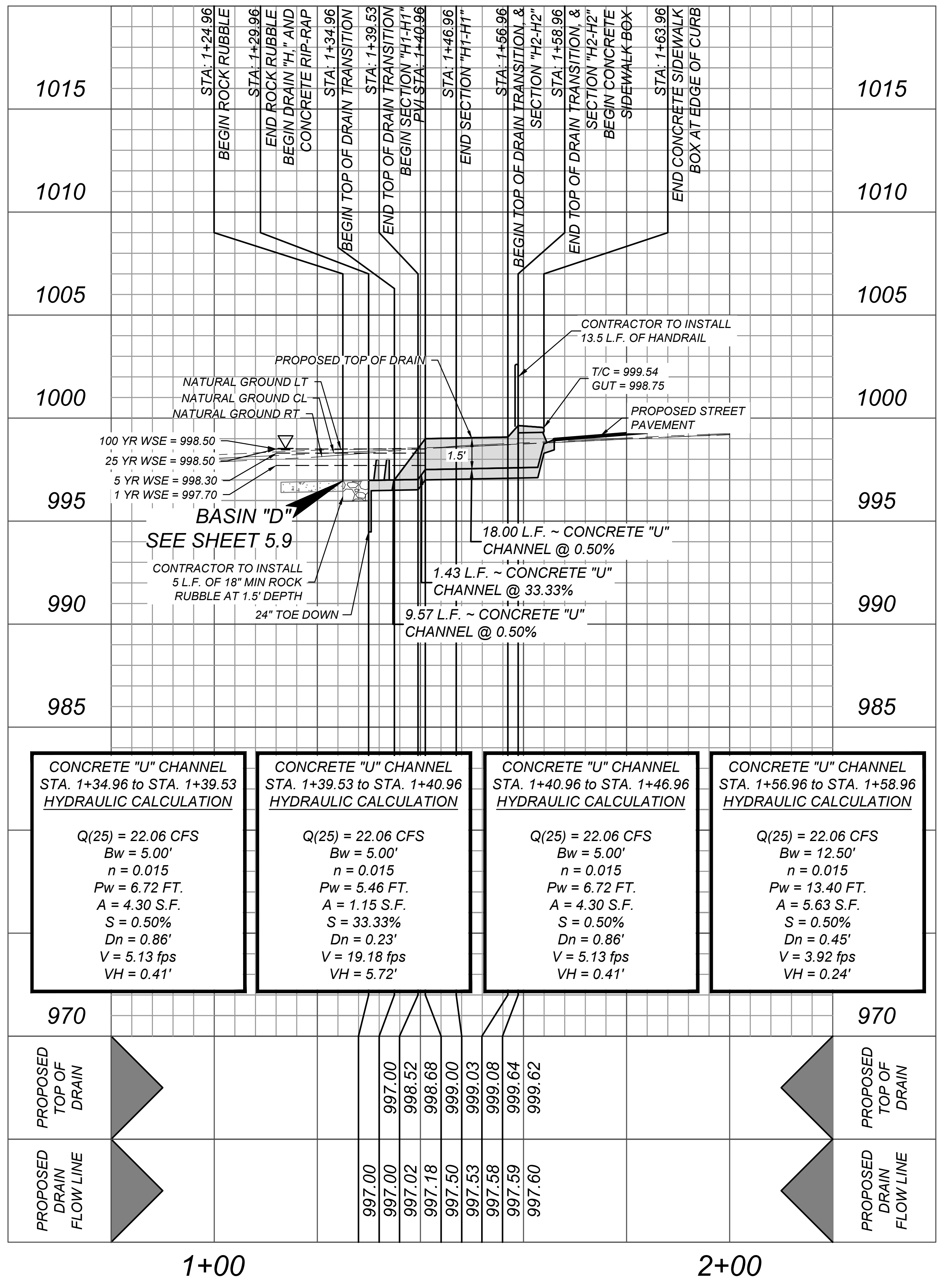

STA. 1+24.96
BEGIN ROCK RUBBLE
STA. 1+29.96
END ROCK RUBBLE
BEGIN DRAIN "H" & CONCRETE RIP-RAP
STA. 1+39.53
BEGIN SECTION "H1-H1"
STA. 1+46.96
END SECTION "H1-H1"
BEGIN BOTTOM WIDTH TRANSITION
STA. 1+56.96
END BOTTOM WIDTH TRANSITION
BEGIN SECTION "H2-H2"
STA. 1+58.96
END SECTION "H2-H2"
BEGIN CONCRETE SIDEWALK BOX
STA. 1+63.96
END CONCRETE SIDEWALK BOX AT FACE OF CURB
SEE DETAIL "A" THIS SHEET
LOT 902
BLOCK 131
998
"H1"
"H2"
1+00
2+00
2+0€2+05
12 L.F. CURB OPENING
MIDNIGHT DEW
(50' R.O.W.)
8"SS
8"W
SEE DETAIL "A" THIS SHEET
"H1"
"H2"
BASIN "D"
SEE SHEET 5.9
R.O.W. LINE
4' SIDEWALK
FACE OF CURB
VELMA VALE
(50' R.O.W.)




5
0
5
SCALE : 1" = 5'
VERTICAL
20
0
20
SCALE : 1" = 20'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

PRIVATE DRAIN "H"
STA: 1+24.96 - END



CONCRETE "U" CHANNEL STA. 1+34.96 to STA. 1+39.53 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+39.53 to STA. 1+40.96 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+40.96 to STA. 1+46.96 HYDRAULIC CALCULATION	CONCRETE "U" CHANNEL STA. 1+56.96 to STA. 1+58.96 HYDRAULIC CALCULATION
Q(25) = 22.06 CFS	Q(25) = 22.06 CFS	Q(25) = 22.06 CFS	Q(25) = 22.06 CFS
Bw = 5.00'	Bw = 5.00'	Bw = 5.00'	Bw = 12.50'
n = 0.015	n = 0.015	n = 0.015	n = 0.015
Pw = 6.72 FT.	Pw = 5.46 FT.	Pw = 6.72 FT.	Pw = 13.40 FT.
A = 4.30 S.F.	A = 1.15 S.F.	A = 4.30 S.F.	A = 5.63 S.F.
S = 0.50%	S = 33.33%	S = 0.50%	S = 0.50%
Dn = 0.86'	Dn = 0.23'	Dn = 0.86'	Dn = 0.45'
V = 5.13 fps	V = 19.18 fps	V = 5.13 fps	V = 3.92 fps
VH = 0.41'	VH = 5.72'	VH = 0.41'	VH = 0.24'

PROPOSED TOP OF DRAIN	PROPOSED DRAIN FLOW LINE
	997.00
997.00	997.00
998.52	997.02
998.68	997.18
999.00	997.50
999.03	997.53
999.08	997.58
999.64	997.59
999.62	997.60

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: DR2054113

SHEET TITLE:
PRIVATE DRAIN "H"
PLAN & PROFILE

SHEET NUMBER:
5.6

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.

NOTES:

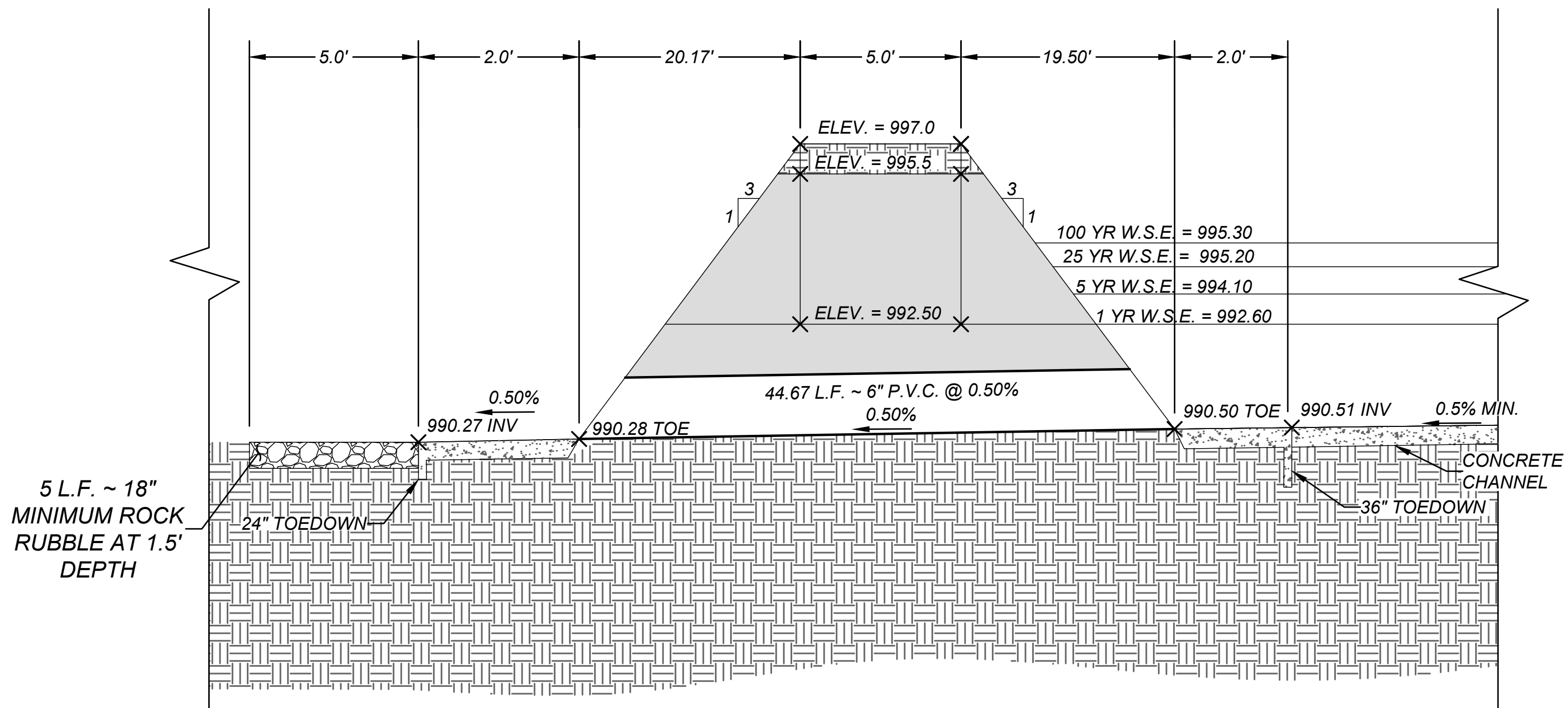
1. *ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.*
2. *ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.*
3. *CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPS TO MITIGATE INTERIM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.*
4. *DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX, BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.*

STAGE(FT)	STORAGE (SQFT)	ELEVATION	DISCHARGE (CFS)
0.50	0.0	990.50	0.00
1.00	0.0	991.00	0.40
2.00	13,068.0	992.00	0.90
3.00	26,136.0	993.00	2.30
4.00	42,253.20	994.00	6.87
5.00	60,984.0	995.00	16.60
5.30	65,340.0	995.30	20.50

PROPOSED DISCHARGE										
Q1	=	1.10		WSEL1	=	992.60		VEL1	=	5.60
Q5	=	8.70		WSEL5	=	994.10		VEL5	=	3.56
Q25	=	18.60		WSEL25	=	995.2		VEL25	=	4.54
Q100	=	20.50		WSEL100	=	995.3		VEL100	=	4.83
Q100 (6HR)	=	12.70		WSEL100	=	994.6		VEL100	=	3.97

Point Table

Point #	Elevation	Northing	Easting
2001	993.00	13728454.68	2038326.17
2002	993.00	13728457.68	2038323.16
2003	992.00	13728498.10	2038328.92
2004	992.00	13728501.09	2038326.07
2005	991.00	13728698.58	2038331.26
2006	991.00	13728701.55	2038328.66
2007	991.00	13728787.02	2038328.48
2008	991.00	13728788.67	2038328.97
2009	991.00	13728820.96	2038350.16
2010	991.00	13728822.32	2038352.67
2011	991.00	13728822.28	2038385.10
2012	991.00	13728821.02	2038387.54
2013	991.00	13728752.47	2038436.60
2014	991.00	13728750.72	2038437.16
2015	991.00	13728734.74	2038437.16
2016	991.00	13728729.74	2038432.19
2017	991.00	13728729.60	2038401.26
2018	991.00	13728753.51	2038386.55
2019	991.00	13728753.45	2038374.55
2020	991.00	13728729.37	2038360.02
2021	991.00	13728729.28	2038342.37
2022	991.00	13728724.25	2038337.40
2023	991.00	13728701.23	2038337.54
2024	991.00	13728698.22	2038334.23
2025	992.00	13728500.76	2038341.73
2026	992.00	13728497.74	2038338.67
2027	993.00	13728457.73	2038344.98
2028	993.00	13728454.71	2038341.99
2029	990.85	13728729.26	2038332.93
2030	991.00	13728698.36	2038333.11
2031	992.00	13728497.90	2038334.31
2032	992.19	13728459.70	2038334.53
2033	990.51	13728802.90	2038342.49
2034	990.85	13728765.75	2038399.11
2035	990.89	13728760.67	2038404.40
2036	990.94	13728751.59	2038410.90
2037	990.96	13728743.23	2038427.16
2038	990.98	13728743.23	2038432.16


5.0'
2.0'
20.17'
5.0'
19.50'
2.0'
ELEV. = 997.0
ELEV. = 995.5
ELEV. = 992.50
3
1
100 YR W.S.E. = 995.30
25 YR W.S.E. = 995.20
5 YR W.S.E. = 994.10
1 YR W.S.E. = 992.60
44.67 L.F. ~ 6" P.V.C. @ 0.50%
0.50%
990.27 INV
990.28 TOE
990.50 TOE
990.51 INV
0.5% MIN.
CONCRETE PILOT CHANNEL
36" TOEDOWN
24" TOEDOWN
5 L.F. ~ 18" MINIMUM ROCK RUBBLE AT 1.5' DEPTH

SECTION "B-B"
NOT-TO-SCALE

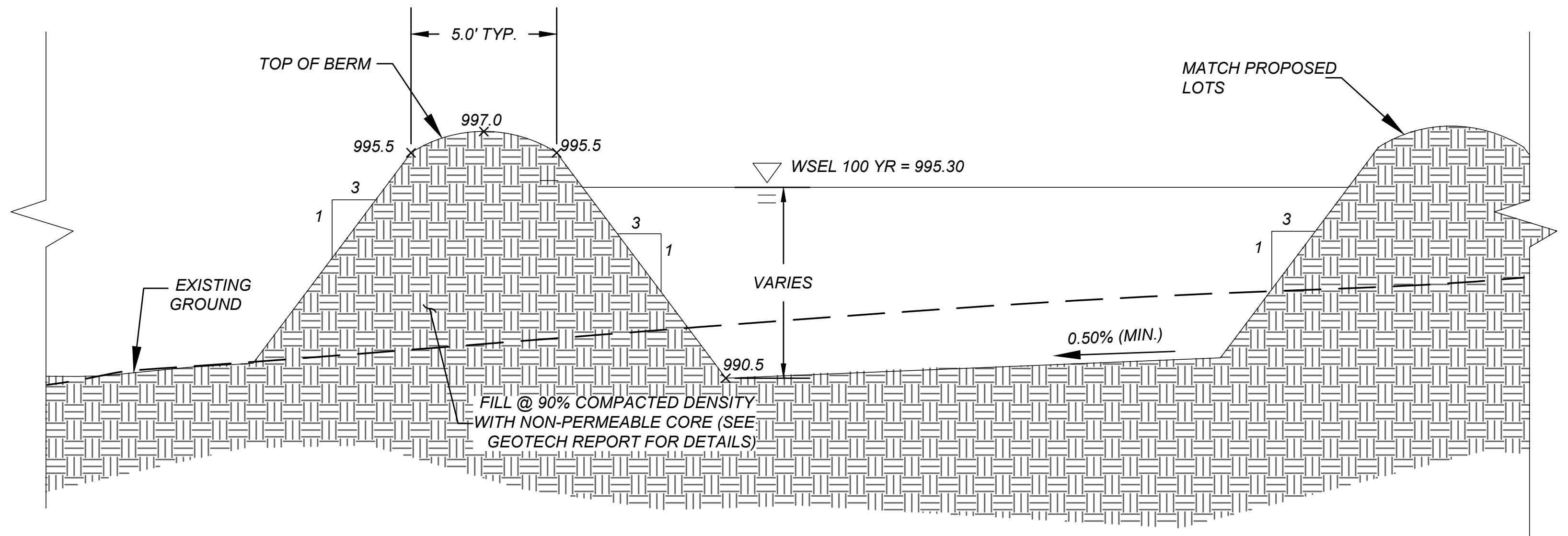
EMERGENCY SPILLWAY CALCULATION

$$L = \frac{Q_{100}}{CH^{3/2}}$$

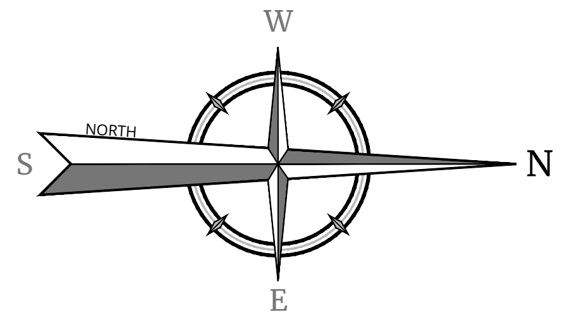
$$L = \frac{40.70\ cfs}{(3.087)(1.5)^{3/2}}$$

$$L_{REQ.} = 7.18\ FEET$$

$$L_{USED} = 19.00\ FEET$$


5.0' TYP.
TOP OF BERM
997.0
995.5
995.5
WSEL 100 YR = 995.30
MATCH PROPOSED LOTS
3
1
VARIES
EXISTING GROUND
990.5
0.50% (MIN.)
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR DETAILS)

SECTION "A-A"
NOT-TO-SCALE

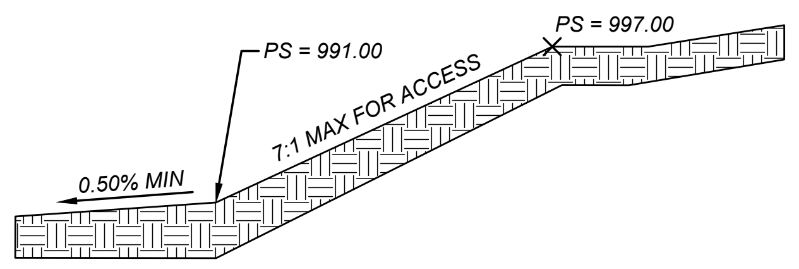


30 0 30 60

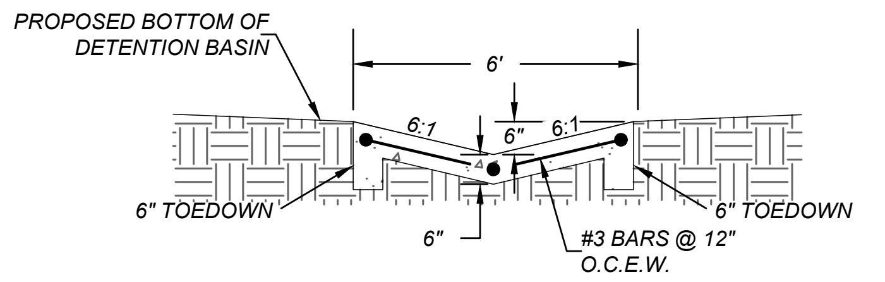
SCALE : 1'' = 30'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LEGEND

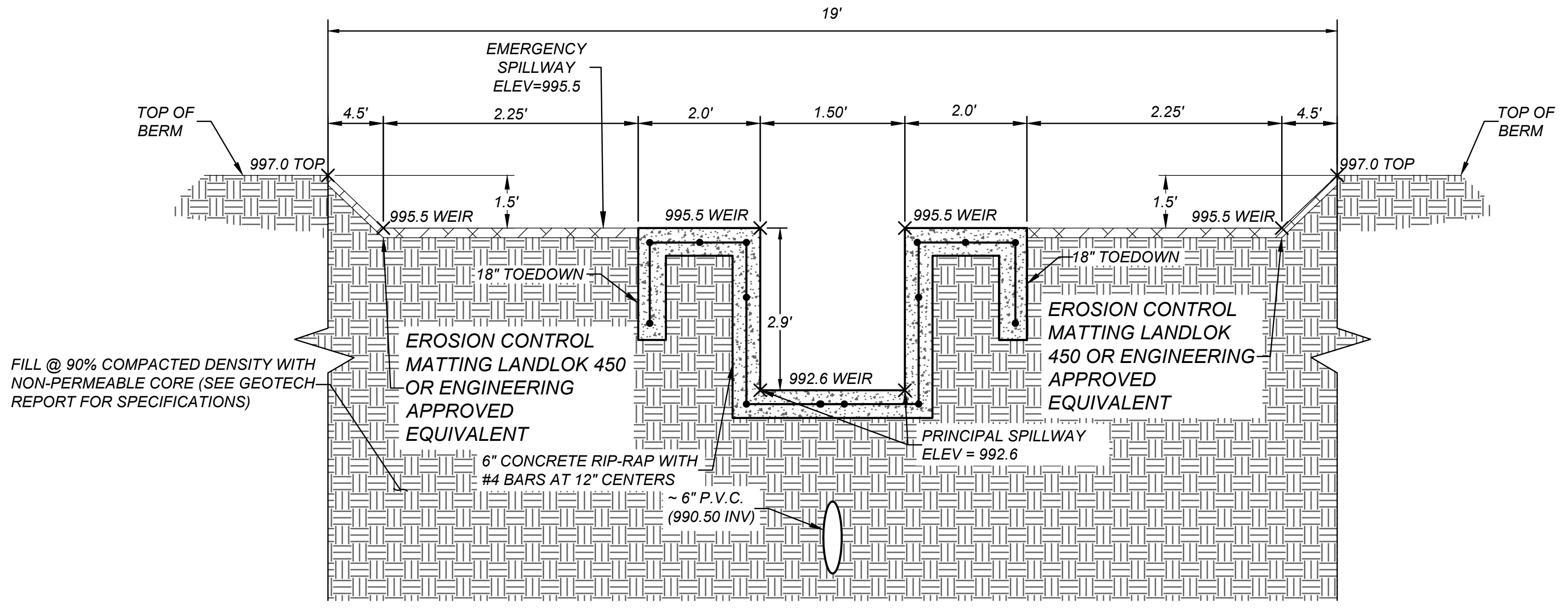
←	*FLOW ARROW*
— — —	*EXISTING CONTOURS*
—(707)—	*PROPOSED CONTOURS*
━━━	*PROPERTY LINE*
POINT # 707.00 TOE	*PROPOSED SPOT ELEVATION (TOE OF SLOPE)*
POINT # 707.00 INV	*PROPOSED SPOT ELEVATION (INVERT OF PILOT CHANNEL)*
▨	*EMERGENCY SPILLWAY*


PS = 997.00
PS = 991.00
7:1 MAX FOR ACCESS
0.50% MIN

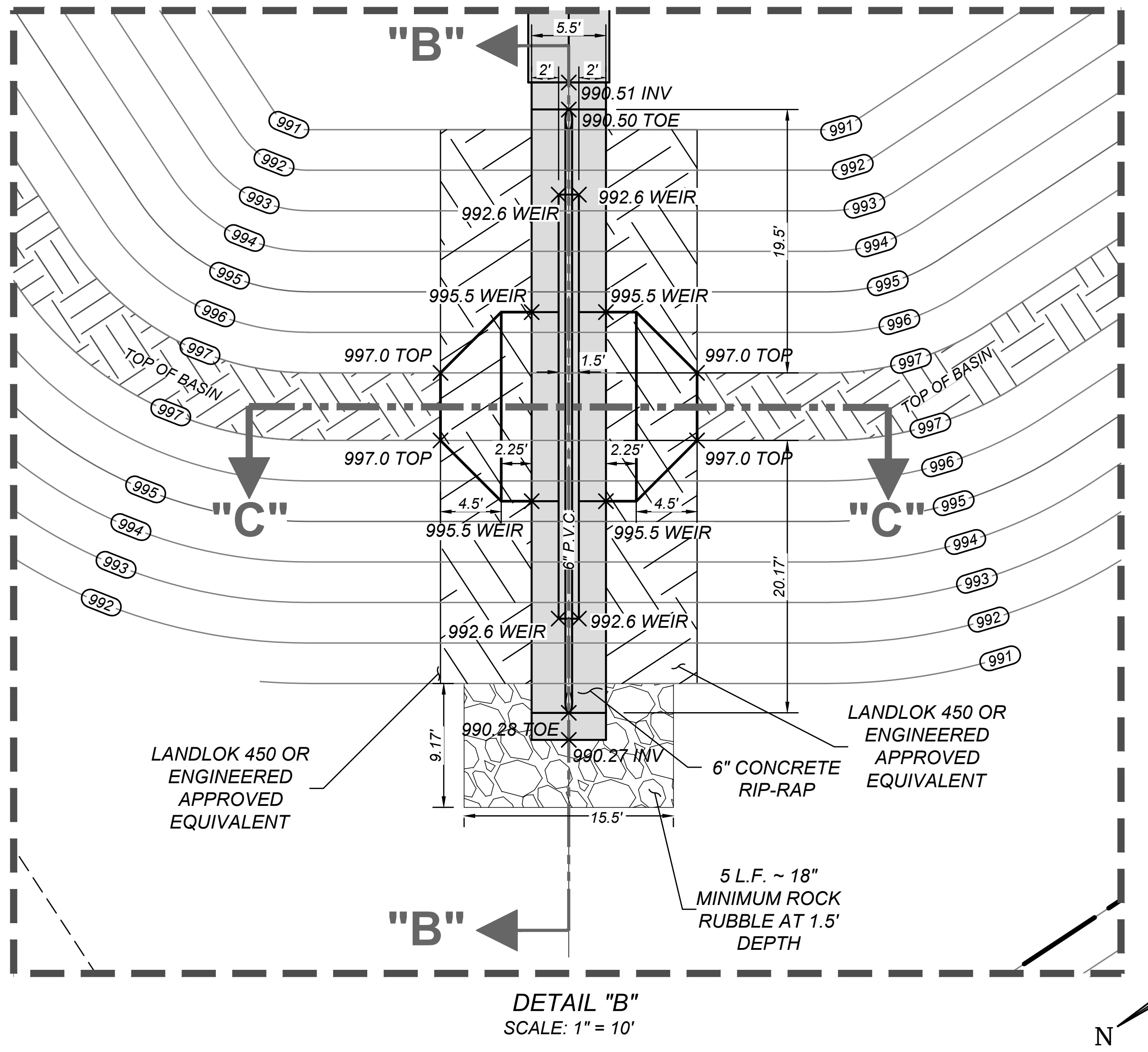
SECTION "D-D"
NOT-TO-SCALE


PROPOSED BOTTOM OF DETENTION BASIN
6'
6:1
6"
6:1
6" TOEDOWN
6" TOEDOWN
6"
#3 BARS @ 12" O.C.E.W.

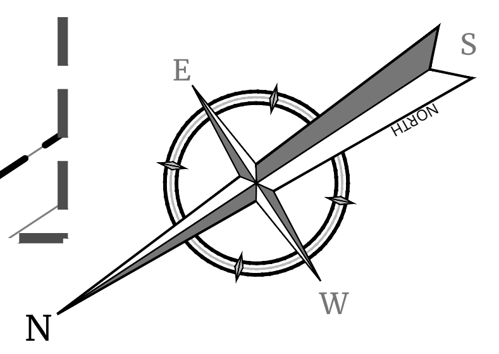
TYPICAL PILOT CHANNEL
NOT-TO-SCALE

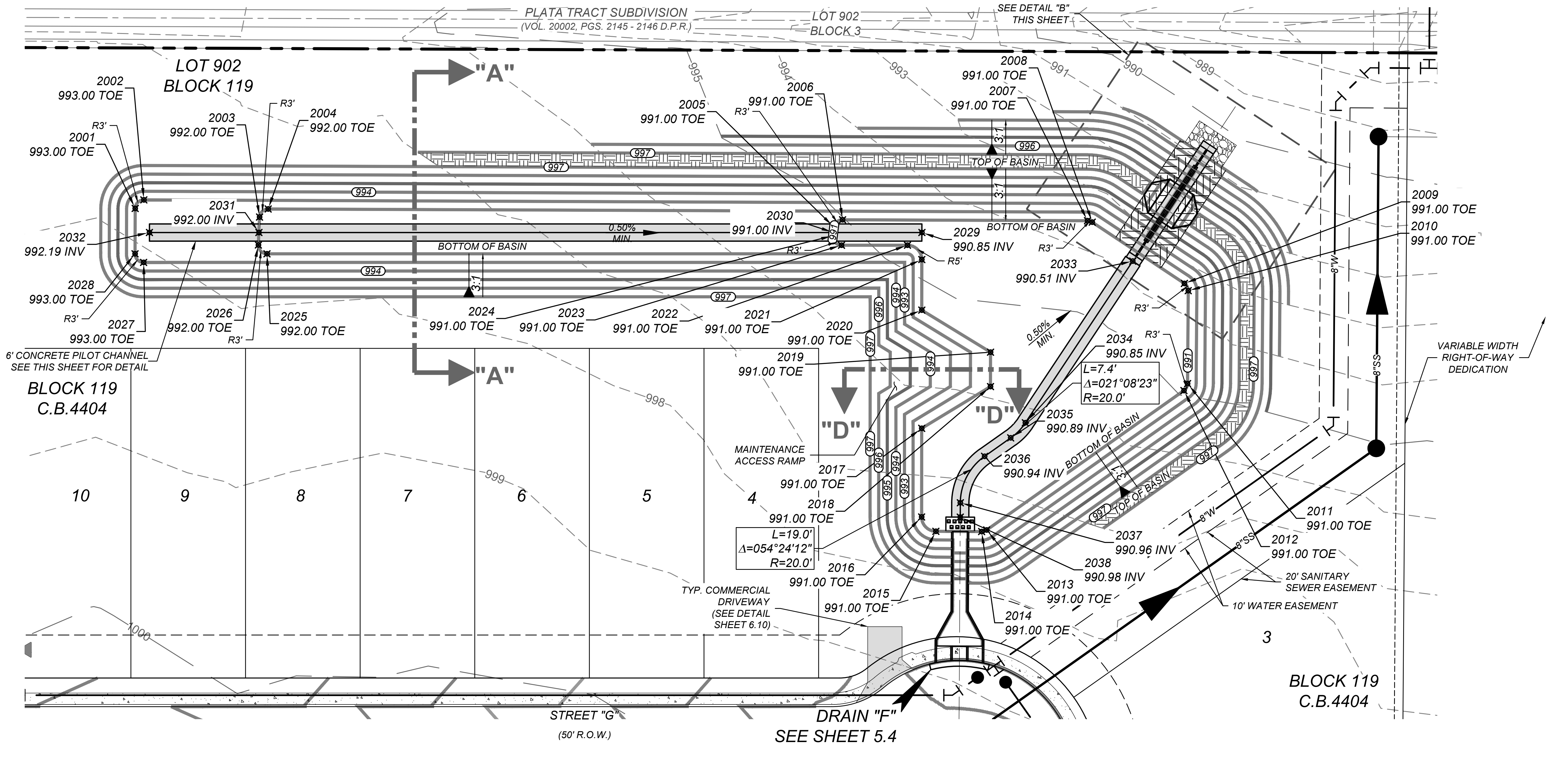

19'
EMERGENCY SPILLWAY ELEV=995.5
TOP OF BERM
4.5'
2.25'
2.0'
1.50'
2.0'
2.25'
4.5'
TOP OF BERM
997.0 TOP
997.0 TOP
1.5'
1.5'
995.5 WEIR
995.5 WEIR
995.5 WEIR
995.5 WEIR
18" TOEDOWN
18" TOEDOWN
2.9'
992.6 WEIR
EROSION CONTROL MATTING LANDLOK 450 OR ENGINEERING APPROVED EQUIVALENT
EROSION CONTROL MATTING LANDLOK 450 OR ENGINEERING APPROVED EQUIVALENT
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR SPECIFICATIONS)
6" CONCRETE RIP-RAP WITH #4 BARS AT 12" CENTERS
PRINCIPAL SPILLWAY ELEV = 992.6
~ 6" P.V.C. (990.50 INV)

SECTION "C-C"
NOT-TO-SCALE


"B"
5.5'
2'
2'
990.51 INV
990.50 TOE
992.6 WEIR
992.6 WEIR
19.5'
995.5 WEIR
995.5 WEIR
997.0 TOP
997.0 TOP
1.5'
TOP OF BASIN
TOP OF BASIN
"C"
"C"
997.0 TOP
997.0 TOP
2.25'
2.25'
4.5'
4.5'
995.5 WEIR
995.5 WEIR
6" P.V.C.
20.17'
992.6 WEIR
992.6 WEIR
990.28 TOE
990.27 INV
9.17'
15.5'
991
992
993
994
995
996
997
LANDLOK 450 OR ENGINEERED APPROVED EQUIVALENT
6" CONCRETE RIP-RAP
LANDLOK 450 OR ENGINEERED APPROVED EQUIVALENT
5 L.F. ~ 18" MINIMUM ROCK RUBBLE AT 1.5' DEPTH
"B"

DETAIL "B"
SCALE: 1" = 10'




PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
LOT 902 BLOCK 3
SEE DETAIL "B" THIS SHEET
LOT 902 BLOCK 119
"A"
"A"
2002 993.00 TOE
2001 993.00 TOE
2003 992.00 TOE
2004 992.00 TOE
2005 991.00 TOE
2006 991.00 TOE
2007 991.00 TOE
2008 991.00 TOE
2009 991.00 TOE
2010 991.00 TOE
2031 992.00 INV
2032 992.19 INV
2028 993.00 TOE
2027 993.00 TOE
2026 992.00 TOE
2025 992.00 TOE
2024 991.00 TOE
2023 991.00 TOE
2022 991.00 TOE
2021 991.00 TOE
2020 991.00 TOE
2019 991.00 TOE
2030 991.00 INV
2029 990.85 INV
2033 990.51 INV
2034 990.85 INV
2035 990.89 INV
2036 990.94 INV
2037 990.96 INV
2038 990.98 INV
2011 991.00 TOE
2012 991.00 TOE
2013 991.00 TOE
2014 991.00 TOE
2015 991.00 TOE
2016 991.00 TOE
2017 991.00 TOE
2018 991.00 TOE
R3'
R5'
TOP OF BASIN
BOTTOM OF BASIN
0.50% MIN
6' CONCRETE PILOT CHANNEL SEE THIS SHEET FOR DETAIL
BLOCK 119 C.B.4404
"D"
"D"
L=7.4' Δ=021°08'23" R=20.0'
L=19.0' Δ=054°24'12" R=20.0'
MAINTENANCE ACCESS RAMP
TYP. COMMERCIAL DRIVEWAY (SEE DETAIL SHEET 6.10)
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
10 9 8 7 6 5 4 3
BLOCK 119 C.B.4404
STREET "G" (50' R.O.W.)
DRAIN "F" SEE SHEET 5.4
991 992 993 994 995 996 997 998 999 1000

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
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PLAT# 25-11800378
FOR
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TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	BA2054113

SHEET TITLE:
BASIN "B" PLAN & PROFILE

SHEET NUMBER:
5.7

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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NOTES:

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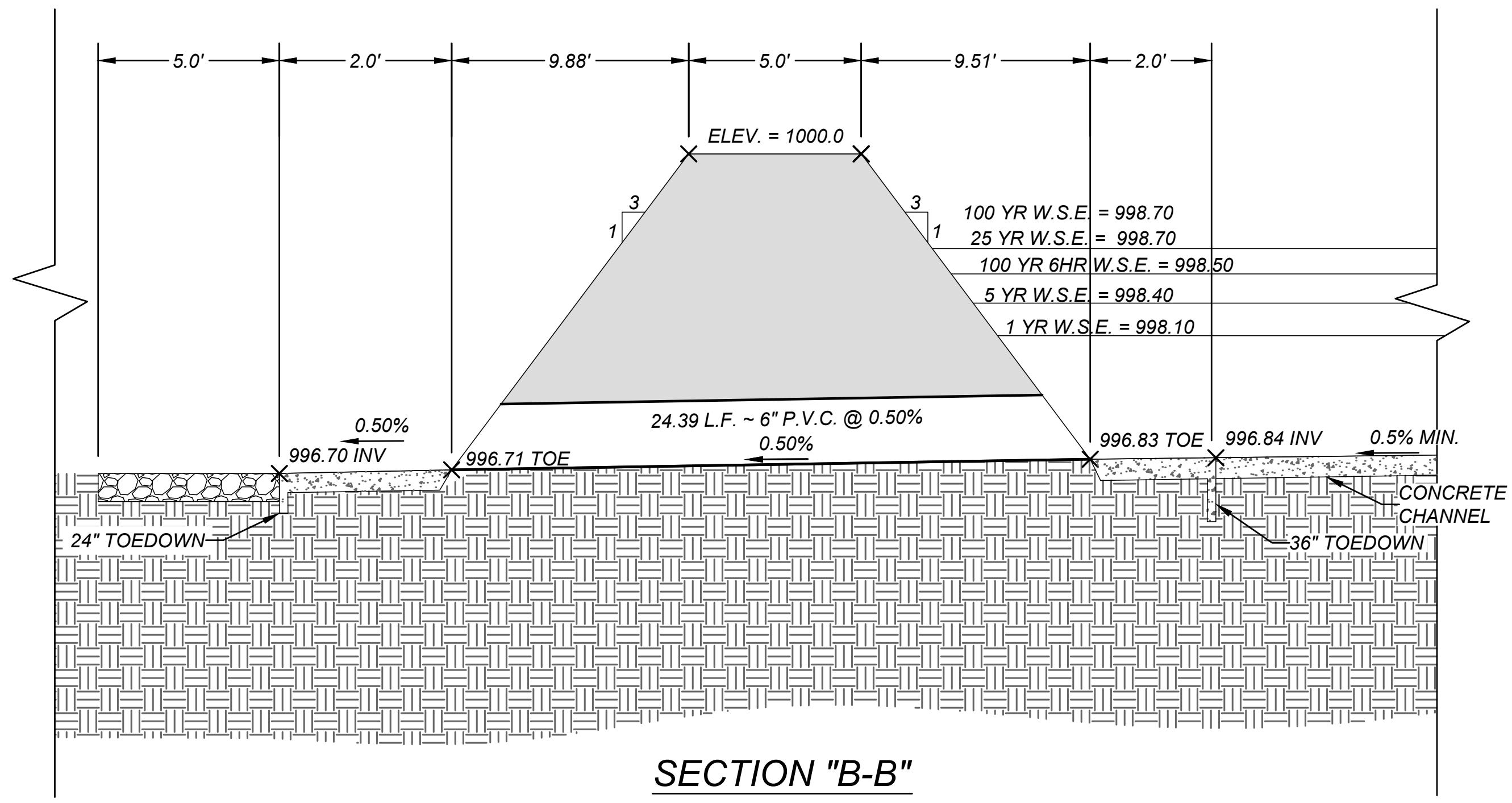
4. DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX, BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.

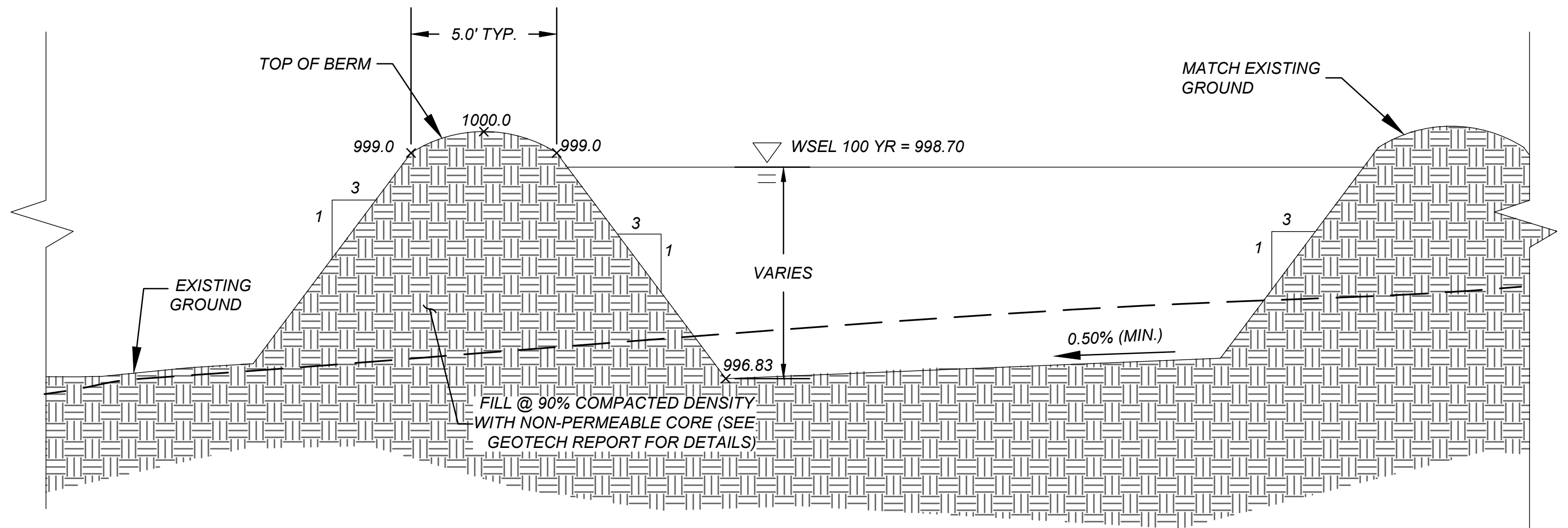
STAGE(FT)	STORAGE (SQFT)	ELEVATION	DISCHARGE (CFS)
0.83	0.0	996.83	0.00
1.00	0.0	997.00	0.20
2.00	4,356.0	998.00	1.00
2.60	13,068.0	998.60	16.36

CAUTION!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.


5.0'
2.0'
9.88'
5.0'
9.51'
2.0'
ELEV. = 1000.0
3
1
100 YR W.S.E. = 998.70
25 YR W.S.E. = 998.70
100 YR 6HR W.S.E. = 998.50
5 YR W.S.E. = 998.40
1 YR W.S.E. = 998.10
24.39 L.F. ~ 6" P.V.C. @ 0.50%
0.50%
996.70 INV
996.71 TOE
996.83 TOE
996.84 INV
0.5% MIN.
24" TOEDOWN
36" TOEDOWN
CONCRETE PILOT CHANNEL

SECTION "B-B"
NOT-TO-SCALE


5.0' TYP.
TOP OF BERM
1000.0
999.0
999.0
3
1
WSEL 100 YR = 998.70
VARIES
EXISTING GROUND
996.83
0.50% (MIN.)
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR DETAILS)
MATCH EXISTING GROUND

SECTION "A-A"
NOT-TO-SCALE

EMERGENCY SPILLWAY CALCULATION

$$L = \frac{Q_{100}}{CH^{3/2}}$$

$$L = \frac{19.10\ cfs}{(3.087)(1.0)^{3/2}}$$

$L_{REQ.}$ = 6.18 FEET

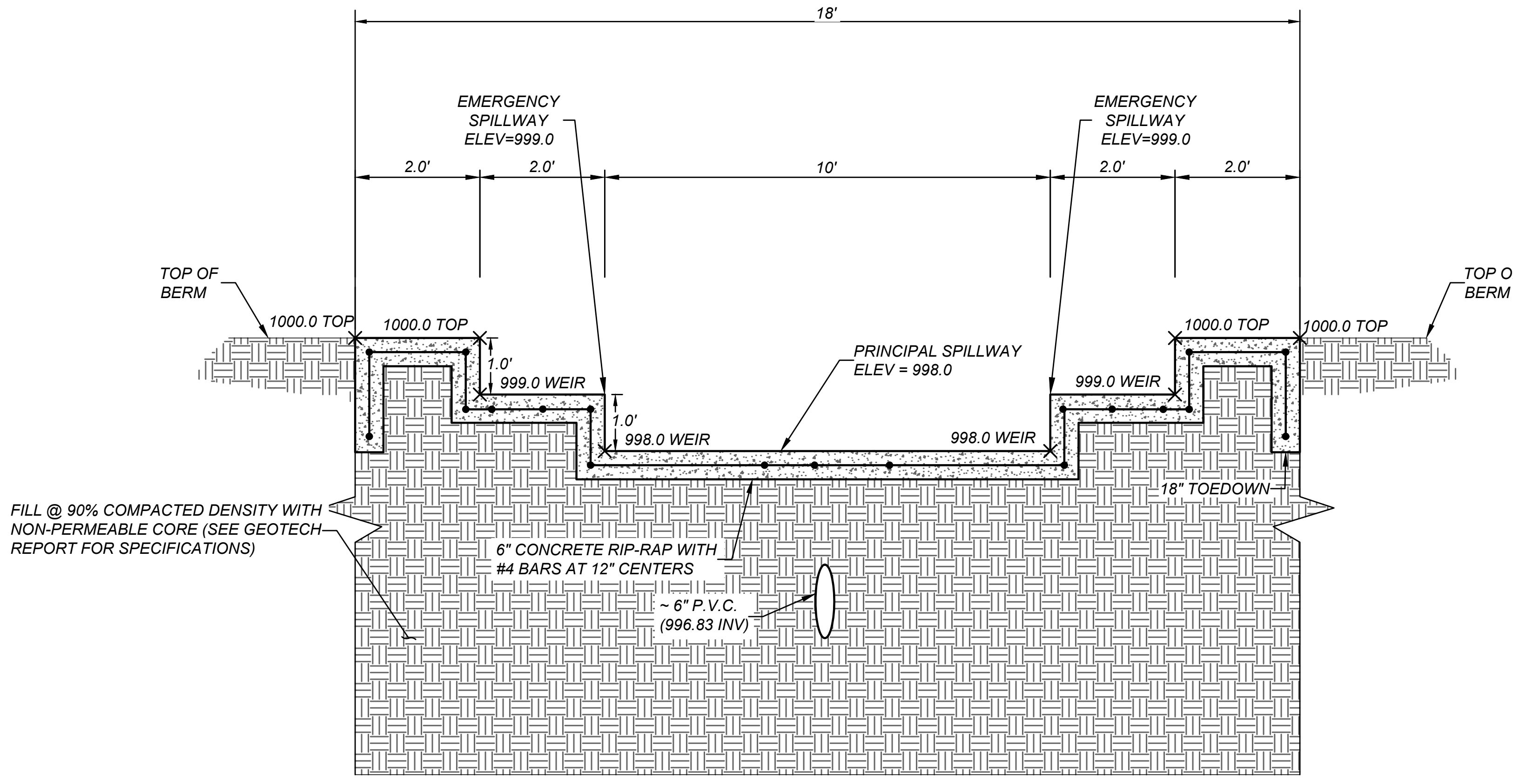
L_{USED} = 18.00 FEET

PROPOSED DISCHARGE										
Q1	=	1.60		WSEL1	=	998.1		VEL1	=	1.38
Q5	=	8.40		WSEL5	=	998.4		VEL5	=	2.00
Q25	=	15.20		WSEL25	=	998.7		VEL25	=	2.11
Q100	=	16.36		WSEL100	=	998.7		VEL100	=	2.27
Q100 (6HR)	=	11.10		WSEL100	=	998.50		VEL100	=	2.14

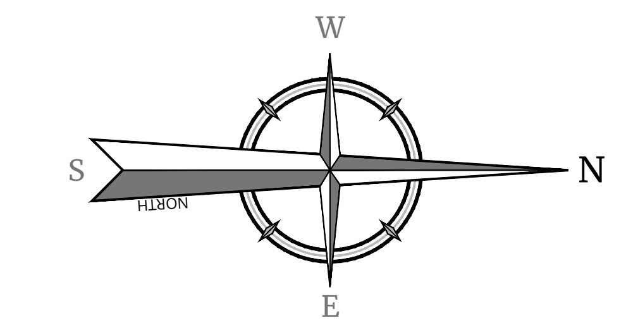
Point Table

Point #	Elevation	Northing	Easting
3001	997.00	13728077.73	2038314.95
3002	997.00	13728080.72	2038317.65
3003	998.00	13728277.80	2038311.54
3004	998.00	13728280.80	2038314.45
3005	999.00	13728384.64	2038308.32
3006	999.00	13728387.64	2038311.31
3007	999.00	13728387.73	2038351.42
3008	999.00	13728384.75	2038354.43
3009	998.00	13728279.18	2038349.43
3010	998.00	13728276.22	2038352.06
3011	998.00	13728143.36	2038352.85
3012	998.00	13728138.58	2038344.88
3013	998.00	13728126.58	2038344.95
3014	998.00	13728121.89	2038352.98
3015	997.00	13728065.06	2038349.86
3016	997.00	13728063.48	2038350.32
3017	997.00	13728035.34	2038350.49
3018	997.00	13728032.32	2038347.49
3019	997.00	13728032.46	2038332.79

Point #	Elevation	Northing	Easting
3020	997.00	13728033.51	2038330.34
3021	997.00	13728053.56	2038315.59
3022	997.00	13728055.33	2038315.00
3023	996.84	13728045.02	2038324.99
3024	996.86	13728047.25	2038328.01
3025	996.91	13728055.33	2038332.09
3026	997.00	13728079.10	2038332.03
3027	998.00	13728280.66	2038331.60
3028	998.98	13728386.69	2038331.37


18'
EMERGENCY SPILLWAY ELEV=999.0
EMERGENCY SPILLWAY ELEV=999.0
2.0'
2.0'
10'
2.0'
2.0'
TOP OF BERM
1000.0 TOP
1000.0 TOP
1000.0 TOP
1000.0 TOP
TOP OF BERM
1.0'
999.0 WEIR
999.0 WEIR
1.0'
998.0 WEIR
998.0 WEIR
PRINCIPAL SPILLWAY ELEV = 998.0
18" TOEDOWN
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR SPECIFICATIONS)
6" CONCRETE RIP-RAP WITH #4 BARS AT 12" CENTERS
~ 6" P.V.C. (996.83 INV)

SECTION "C-C"
NOT-TO-SCALE



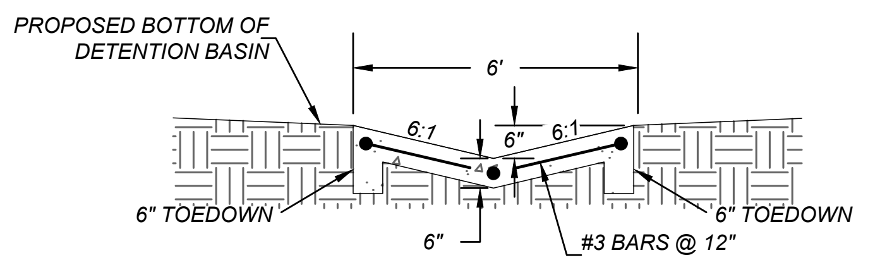
30 0 30 60

SCALE : 1'' = 30'

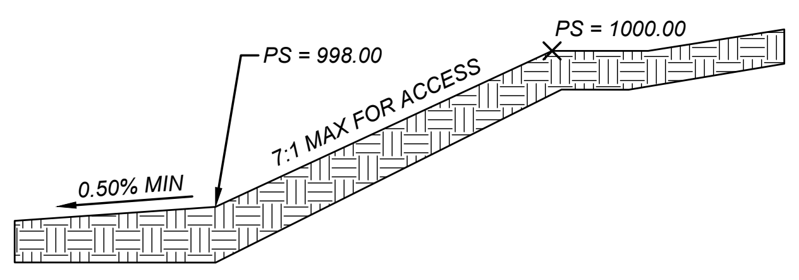
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LEGEND

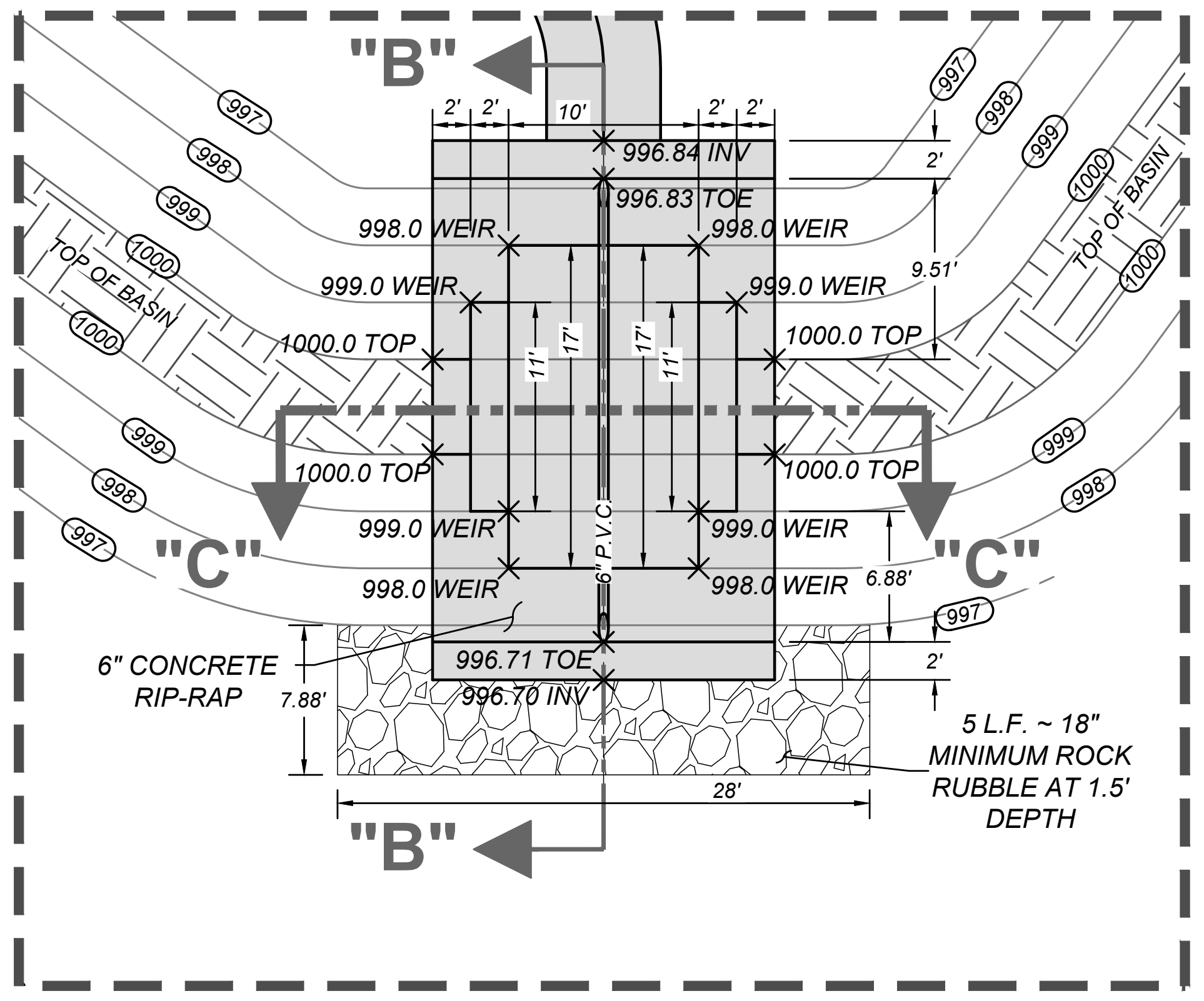
←	FLOW ARROW
— — — —	EXISTING CONTOURS
—(707)—	PROPOSED CONTOURS
━━━	PROPERTY LINE
POINT # 707.00 TOE ⌖	PROPOSED SPOT ELEVATION (TOE OF SLOPE)
POINT # 707.00 INV ⌖	PROPOSED SPOT ELEVATION (INVERT OF PILOT CHANNEL)
▨	EMERGENCY SPILLWAY


PROPOSED BOTTOM OF DETENTION BASIN
6'
6:1
6:1
6"
6"
6" TOEDOWN
6" TOEDOWN
#3 BARS @ 12" O.C.E.W.

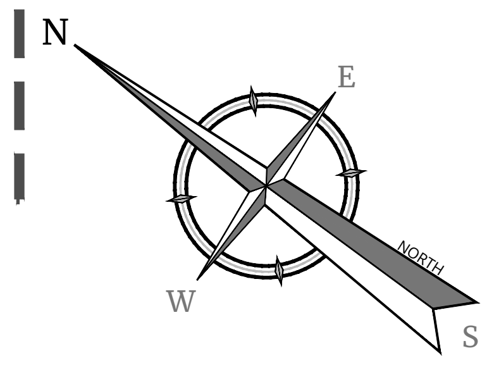
TYPICAL PILOT CHANNEL
NOT-TO-SCALE

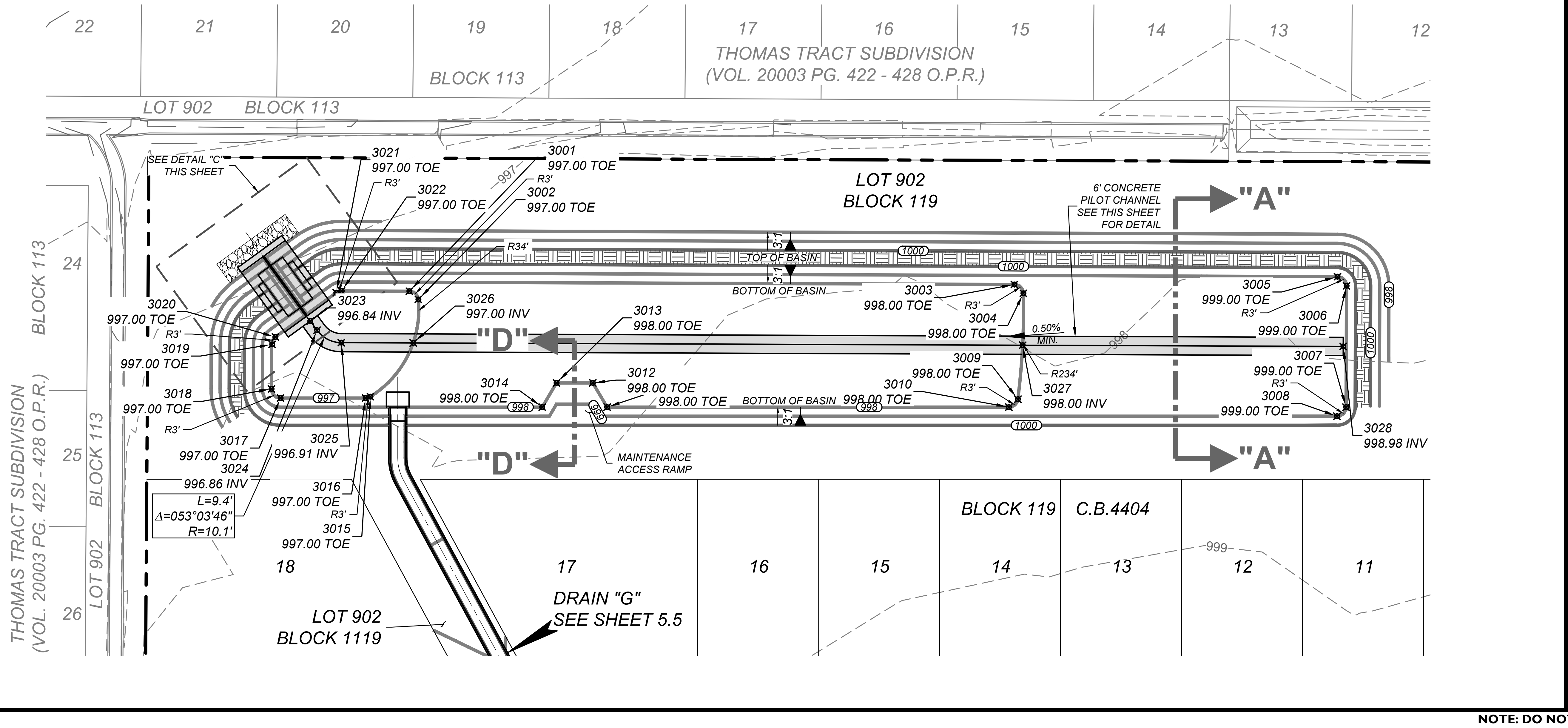

PS = 998.00
PS = 1000.00
7:1 MAX FOR ACCESS
0.50% MIN

SECTION "D-D"
NOT-TO-SCALE


"B"
"B"
"C"
"C"
2' 2' 10' 2' 2'
996.84 INV
996.83 TOE
998.0 WEIR
998.0 WEIR
999.0 WEIR
999.0 WEIR
1000.0 TOP
1000.0 TOP
1000.0 TOP
1000.0 TOP
999.0 WEIR
999.0 WEIR
998.0 WEIR
998.0 WEIR
996.71 TOE
996.70 INV
9.51'
6.88'
7.88'
28'
17'
17'
TOP OF BASIN
997
998
999
1000
6" CONCRETE RIP-RAP
5 L.F. ~ 18" MINIMUM ROCK RUBBLE AT 1.5' DEPTH
6" P.V.C.

DETAIL "C"
SCALE: 1" = 10'




22
21
20
19
18
17
16
15
14
13
12
THOMAS TRACT SUBDIVISION (VOL. 20003 PG. 422 - 428 O.P.R.)
BLOCK 113
LOT 902 BLOCK 113
SEE DETAIL "C" THIS SHEET
3021 997.00 TOE
3022 997.00 TOE
3001 997.00 TOE
3002 997.00 TOE
LOT 902 BLOCK 119
6' CONCRETE PILOT CHANNEL SEE THIS SHEET FOR DETAIL
"A"
"A"
R34'
TOP OF BASIN
BOTTOM OF BASIN
3003 998.00 TOE
3004 998.00 TOE
3005 999.00 TOE
3006 999.00 TOE
3007 999.00 TOE
3008 999.00 TOE
3028 998.98 INV
3020 997.00 TOE
3019 997.00 TOE
3018 997.00 TOE
3023 996.84 INV
3026 997.00 INV
3013 998.00 TOE
"D"
"D"
0.50% MIN
3009 998.00 TOE
3010 998.00 TOE
3027 998.00 INV
R234'
3014 998.00 TOE
3012 998.00 TOE
998.00 TOE
BOTTOM OF BASIN
998.00 TOE
3017 997.00 TOE
3024 996.86 INV
3025 996.91 INV
L=9.4' Δ=053°03'46" R=10.1'
3016 997.00 TOE
3015 997.00 TOE
MAINTENANCE ACCESS RAMP
R3'
24
25
26
THOMAS TRACT SUBDIVISION (VOL. 20003 PG. 422 - 428 O.P.R.)
BLOCK 113
LOT 902
BLOCK 119 C.B.4404
18
17
16
15
14
13
12
11
LOT 902 BLOCK 1119
DRAIN "G" SEE SHEET 5.5
997
998
999
1000

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PROTECT YOURSELF

ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13

DRAWING NAME: BA2054113

SHEET TITLE: BASIN "C" PLAN & PROFILE

SHEET NUMBER: 5.8

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED 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.

NOTES:

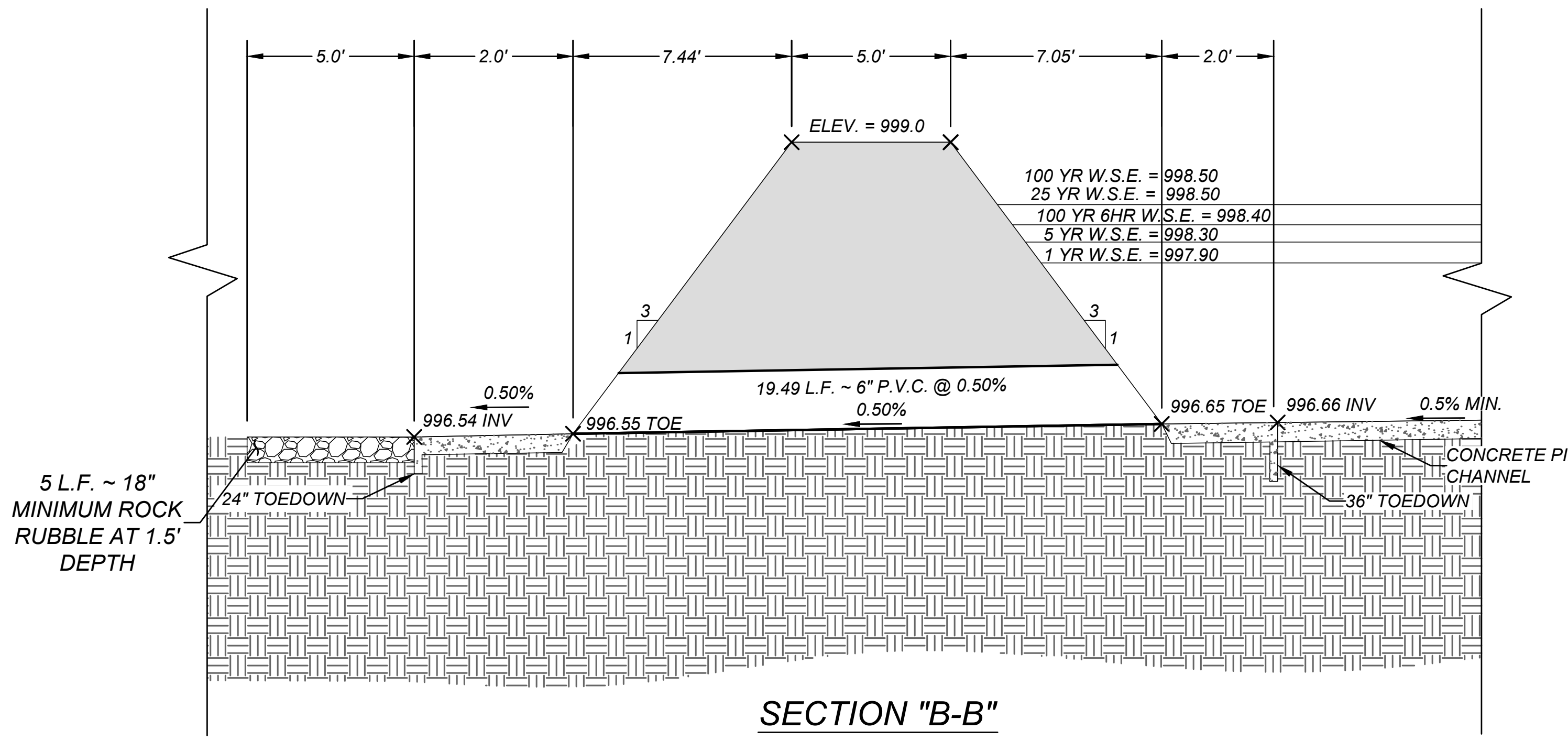
1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.

2. ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

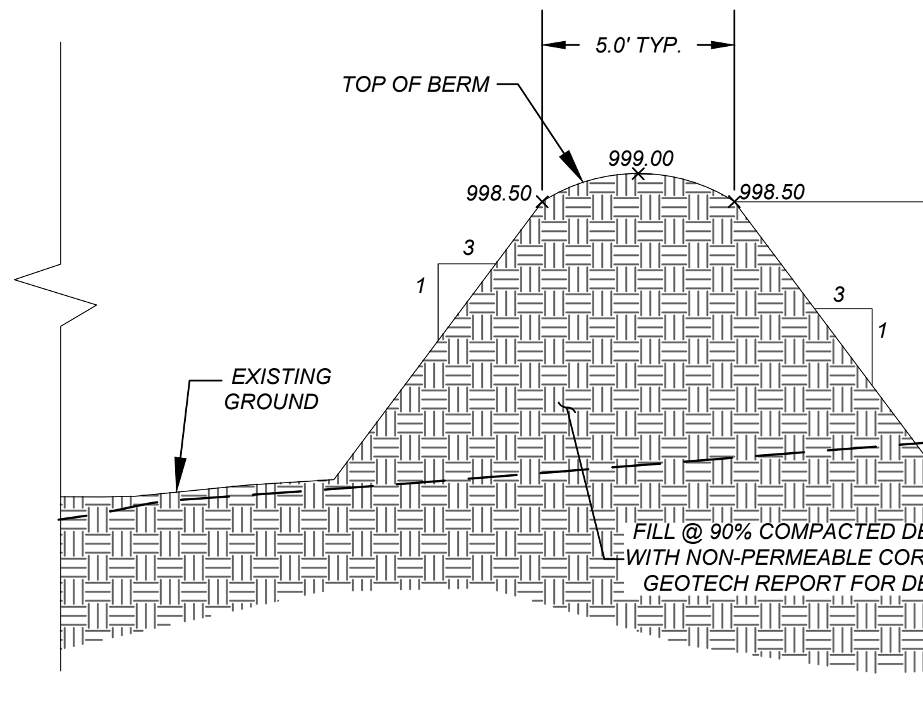
3. CONTRACTOR SHALL PHASE CONSTRUCTION AND/OR PROVIDE NECESSARY BMPS TO MITIGATE INTERIM CONDITIONS RUNOFF DURING CONSTRUCTION DUE TO CLEARING, GRADING, SUBGRADE PREPARATION, PAVING, BUILDINGS, ETC., AND TO PREVENT ADVERSE IMPACTS TO OTHER PROPERTY, STRUCTURES, AND INFRASTRUCTURE DURING CONSTRUCTION.

4. DETENTION POND EXCAVATION AND/OR EMBANKMENT NECESSARY FOR PROVIDING STORAGE MUST BE SUBSTANTIALLY COMPLETE PRIOR TO CITY INSPECTION OF STREET SUBGRADE, CURB, FLEX, BASE, AND PAVEMENT WITHIN THE WATERSHED DRAINING TO THE DETENTION POND.

STAGE(FT)	STORAGE (SQFT)	ELEVATION	DISCHARGE (CFS)
0.65	0.00	996.65	0.00
1.00	4,356.0	997.0	0.30
2.00	17,424.0	998.0	2.30
2.50	26,136.0	998.5	24.70


5.0'
2.0'
7.44'
5.0'
7.05'
2.0'
ELEV. = 999.0
100 YR W.S.E. = 998.50
25 YR W.S.E. = 998.50
100 YR 6HR W.S.E. = 998.40
5 YR W.S.E. = 998.30
1 YR W.S.E. = 997.90
3
1
19.49 L.F. ~ 6" P.V.C. @ 0.50%
0.50%
0.50%
996.54 INV
996.55 TOE
996.65 TOE
996.66 INV
0.5% MIN.
CONCRETE PILOT CHANNEL
24" TOEDOWN
36" TOEDOWN
5 L.F. ~ 18" MINIMUM ROCK RUBBLE AT 1.5' DEPTH

SECTION "B-B"
NOT-TO-SCALE


5.0' TYP.
TOP OF BERM
999.00
998.50
998.50
WSEL 100 YR = 998.50
MATCH EXISTING GROUND
3
1
VARIES
EXISTING GROUND
996.65
0.50% (MIN.)
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR DETAILS)

SECTION "A-A"
NOT-TO-SCALE

EMERGENCY SPILLWAY CALCULATION

$$L = \frac{Q_{100}}{CH^{3/2}}$$

$$L = \frac{27.60\ cfs}{(3.087)(0.5)^{3/2}}$$

$$L_{REQ} = 25.29\ FEET$$

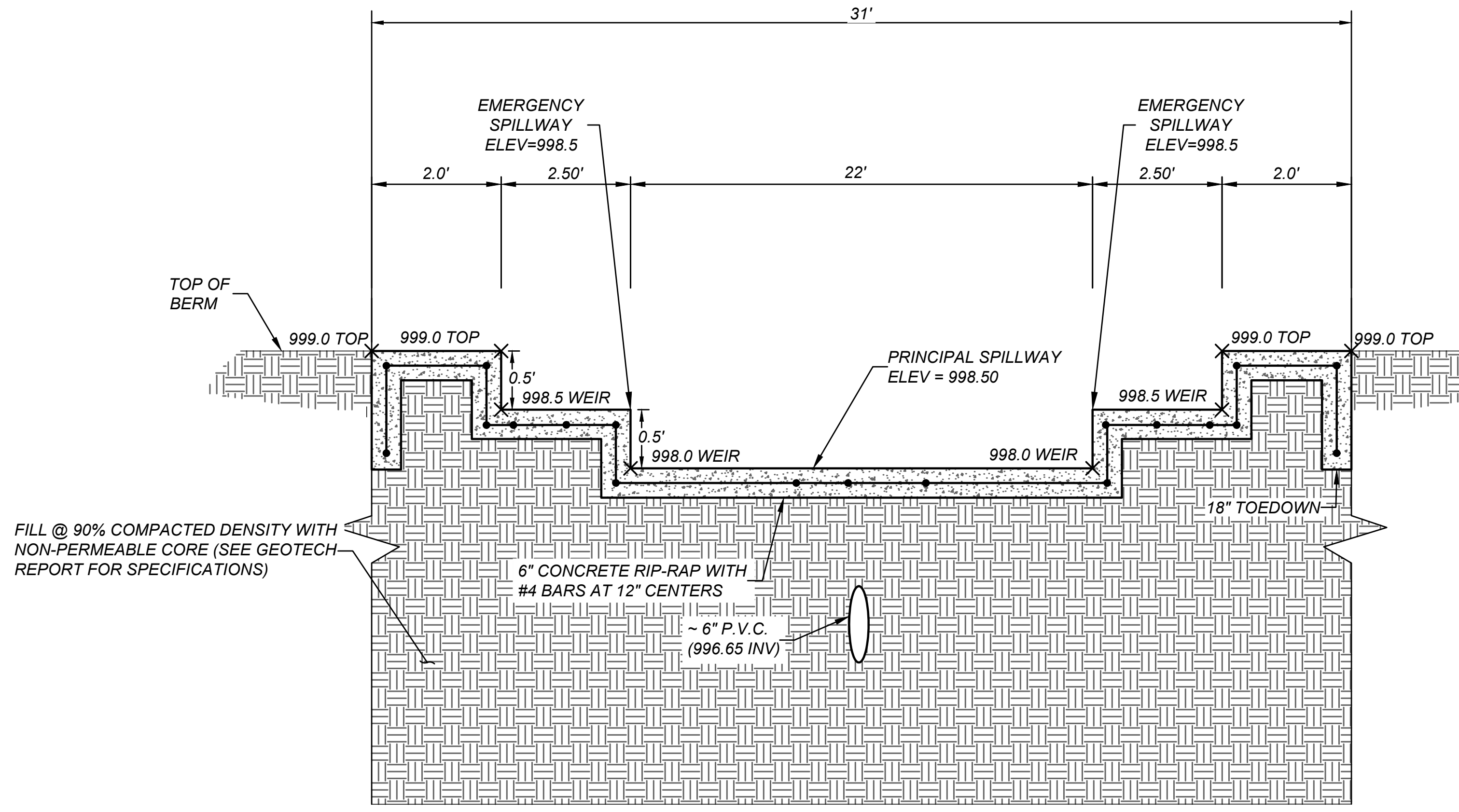
$$L_{USED} = 31.00\ FEET$$

PROPOSED DISCHARGE										
Q1	=	0.80		WSEL1	=	997.9		VEL1	=	5.19
Q5	=	12.40		WSEL5	=	998.3		VEL5	=	1.82
Q25	=	23.50		WSEL25	=	998.5		VEL25	=	2.10
Q100	=	25.00		WSEL100	=	998.5		VEL100	=	2.23
Q100 (6HR)	=	17.40		WSEL100	=	998.4		VEL100	=	1.93

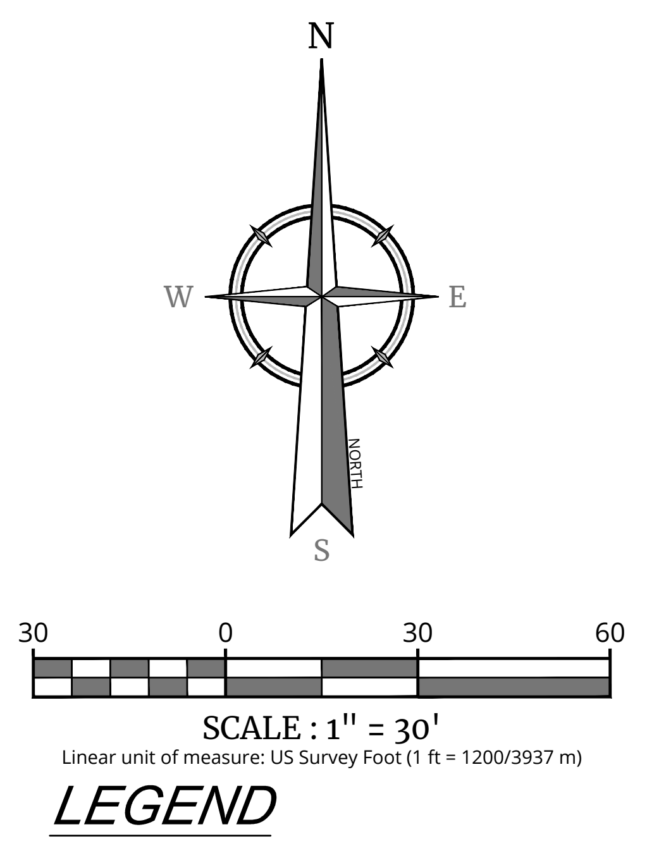
Point Table

Point #	Elevation	Northing	Easting
4001	997.00	13728022.90	2038991.84
4002	997.00	13728025.91	2038988.84
4003	997.00	13728076.91	2038988.94
4004	997.00	13728079.90	2038991.94
4005	997.00	13728079.83	2038996.02
4006	997.00	13728071.74	2039000.60
4007	997.00	13728071.52	2039012.60
4008	997.00	13728079.43	2039017.48
4009	997.00	13728079.35	2039021.55
4010	997.00	13728078.81	2039023.22
4011	997.00	13728072.63	2039097.27
4012	997.00	13728074.42	2039099.79
4013	997.00	13728109.36	2039134.55
4014	997.00	13728112.26	2039136.48
4015	997.00	13728165.87	2039138.26
4016	997.00	13728169.84	2039141.09
4017	997.00	13728170.08	2039181.71
4018	997.00	13728167.10	2039184.72
4019	997.00	13728062.22	2039185.35
4020	997.00	13728060.17	2039184.56

Point #	Elevation	Northing	Easting
4021	997.00	13728023.77	2039151.09
4022	997.00	13728022.81	2039148.88
4023	996.66	13728043.33	2039164.93
4024	996.98	13728087.83	2039120.19


31'
EMERGENCY SPILLWAY ELEV=998.5
EMERGENCY SPILLWAY ELEV=998.5
2.0'
2.50'
22'
2.50'
2.0'
TOP OF BERM
TOP OF BERM
999.0 TOP
999.0 TOP
999.0 TOP
999.0 TOP
PRINCIPAL SPILLWAY ELEV = 998.50
0.5'
998.5 WEIR
998.5 WEIR
0.5'
998.0 WEIR
998.0 WEIR
18" TOEDOWN
FILL @ 90% COMPACTED DENSITY WITH NON-PERMEABLE CORE (SEE GEOTECH REPORT FOR SPECIFICATIONS)
6" CONCRETE RIP-RAP WITH #4 BARS AT 12" CENTERS
~ 6" P.V.C. (996.65 INV)

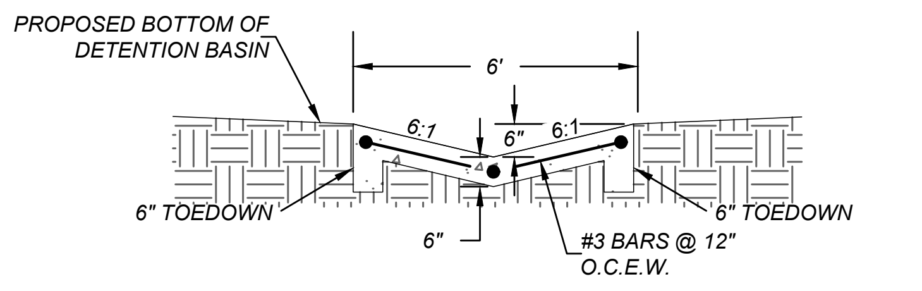
SECTION "C-C"
NOT-TO-SCALE


N
S
E
W
30
0
30
60

SCALE : 1" = 30'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

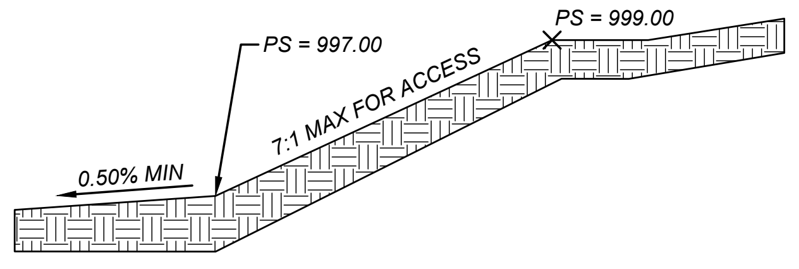
LEGEND

←	FLOW ARROW
— — —	EXISTING CONTOURS
(707)	PROPOSED CONTOURS
——	PROPERTY LINE
POINT # 707.00 TOE ⊠	PROPOSED SPOT ELEVATION (TOE OF SLOPE)
POINT # 707.00 INV ⊠	PROPOSED SPOT ELEVATION (INVERT OF PILOT CHANNEL)
▨	EMERGENCY SPILLWAY

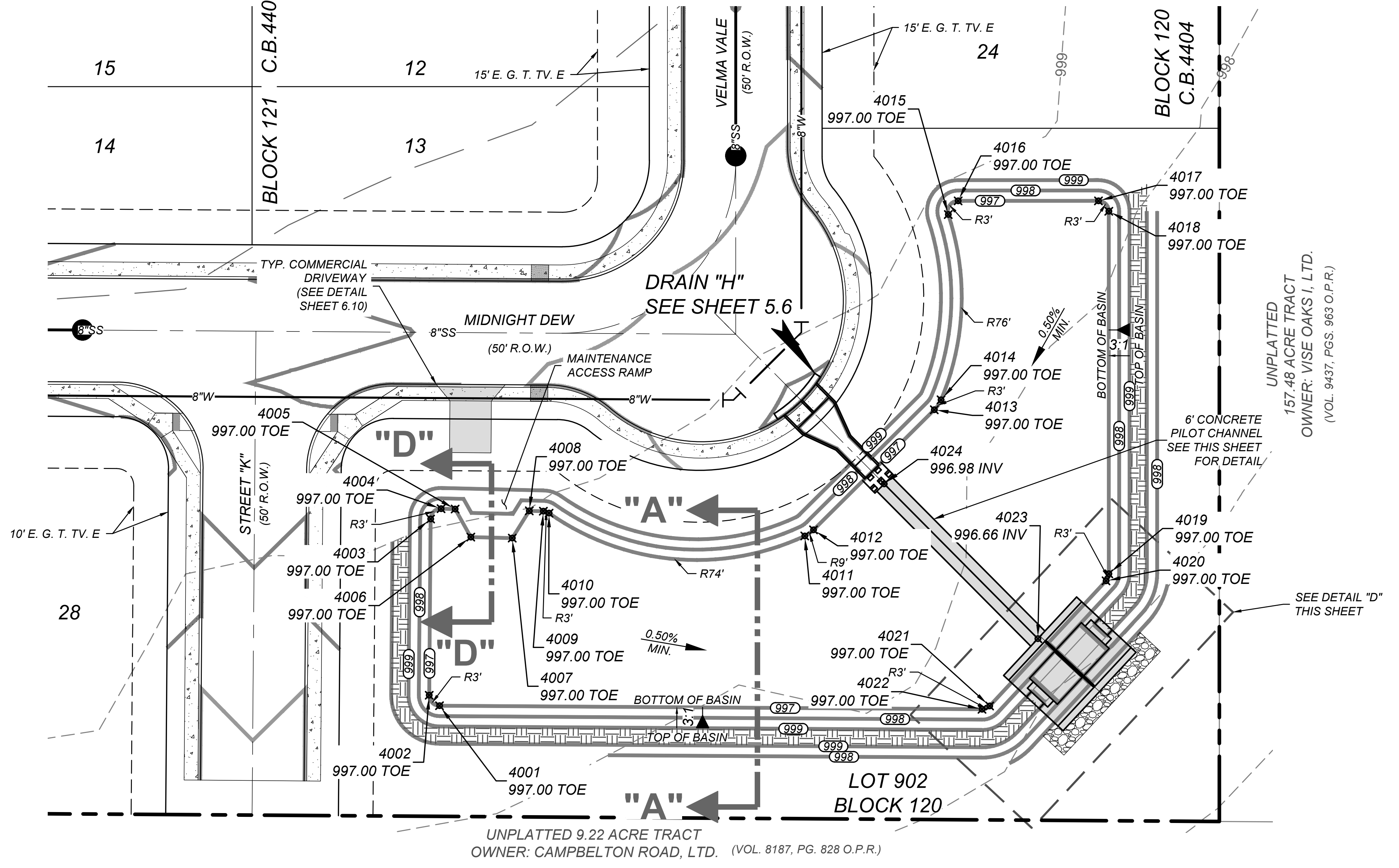

PROPOSED BOTTOM OF DETENTION BASIN
6'
6:1
6:1
6"
6"
6" TOEDOWN
6" TOEDOWN
#3 BARS @ 12" O.C.E.W.

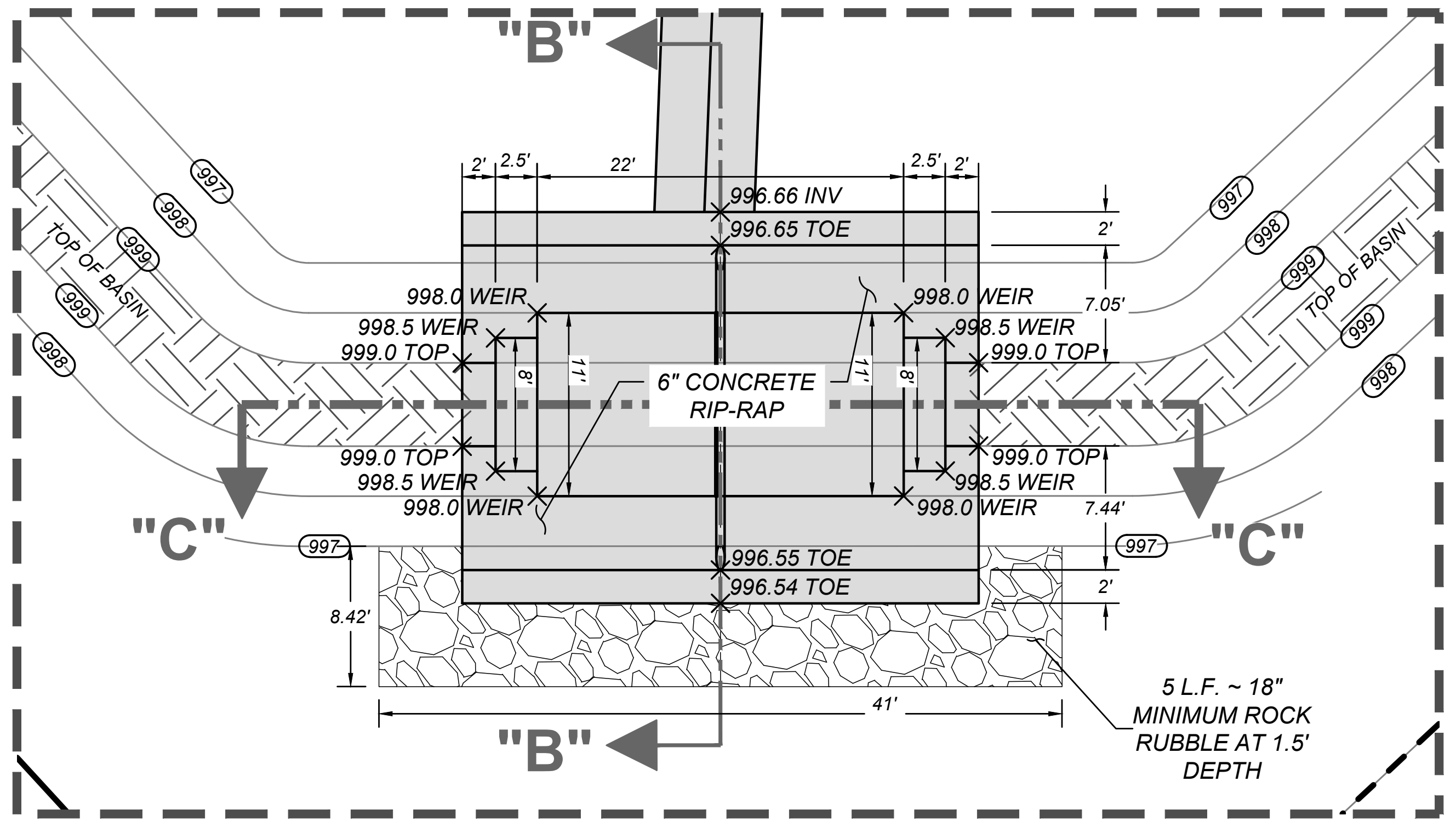
TYPICAL PILOT CHANNEL
NOT-TO-SCALE

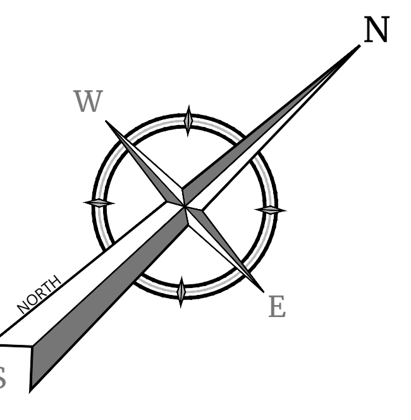
BID SET
NOT FOR
CONSTRUCTION


PS = 997.00
PS = 999.00
7:1 MAX FOR ACCESS
0.50% MIN

SECTION "D-D"
NOT-TO-SCALE


15
12
14
13
24
28
BLOCK 121 C.B.4404
BLOCK 120 C.B.4404
15' E. G. T. TV. E
15' E. G. T. TV. E
10' E. G. T. TV. E
VELMA VALE (50' R.O.W.)
MIDNIGHT DEW (50' R.O.W.)
STREET "K" (50' R.O.W.)
TYP. COMMERCIAL DRIVEWAY (SEE DETAIL SHEET 6.10)
MAINTENANCE ACCESS RAMP
DRAIN "H" SEE SHEET 5.6
8"SS
8"W
4015 997.00 TOE
4016 997.00 TOE
4017 997.00 TOE
4018 997.00 TOE
4014 997.00 TOE
4013 997.00 TOE
4024 996.98 INV
4023 996.66 INV
4012 997.00 TOE
4011 997.00 TOE
4019 997.00 TOE
4020 997.00 TOE
4021 997.00 TOE
4022 997.00 TOE
4005 997.00 TOE
4004 997.00 TOE
4003 997.00 TOE
4006 997.00 TOE
4008 997.00 TOE
4010 997.00 TOE
4009 997.00 TOE
4007 997.00 TOE
4002 997.00 TOE
4001 997.00 TOE
R3'
R76'
R74'
0.50% MIN
BOTTOM OF BASIN
TOP OF BASIN
6" CONCRETE PILOT CHANNEL SEE THIS SHEET FOR DETAIL
SEE DETAIL "D" THIS SHEET
"A"
"A"
"D"
"D"
UNPLATTED 157.48 ACRE TRACT OWNER: VISE OAKS I, LTD. (VOL. 9437, PGS. 963 O.P.R.)
LOT 902 BLOCK 120
UNPLATTED 9.22 ACRE TRACT OWNER: CAMPBELTON ROAD, LTD. (VOL. 8187, PG. 828 O.P.R.)


"B"
"B"
"C"
"C"
2'
2.5'
22'
2.5'
2'
996.66 INV
996.65 TOE
998.0 WEIR
998.5 WEIR
999.0 TOP
6" CONCRETE RIP-RAP
999.0 TOP
998.5 WEIR
998.0 WEIR
996.55 TOE
996.54 INV
7.05'
7.44'
8.42'
41'
TOP OF BASIN
997
998
999
5 L.F. ~ 18" MINIMUM ROCK RUBBLE AT 1.5' DEPTH



DETAIL "D"
SCALE: 1" = 10'

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811 Know what's below. Call before you dig.
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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
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REV	DATE	DRAWN BY	DESCRIPTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: BA2054113

SHEET TITLE:
BASIN "D" PLAN & PROFILE

SHEET NUMBER:
5.9

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Installation Guidelines for Landlok® 450

Turf Reinforcement Mat (TRM)

Thank you for purchasing the Landlok® 450 Turf Reinforcement Mat (TRM) by Propex Operating Company, LLC (Propex). This document provides installation and maintenance guidelines for Landlok 450 used as slope armoring to increase earthen slope resiliency. Landlok 450 provides permanent erosion protection on either the flood side and/ or protected side of an earthen slope.

Temporary securing pins (pins) are used during installation to hold Landlok 450 in place. Pins also promote vegetation establishment keeping Landlok 450 in intimate contact with the soil.

Landlok 450 is an engineered solution with a unique design for each specific project. While Propex has made every effort to ensure general validity, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability, and accuracy. The information provided herein is for general information only, and is intended to present installation guidance. Project specific contract documents take precedence when pin placements are different than what is represented in this document. Depending upon the critical nature of the structure to be armored, work restrictions may be in place such as limiting work based on growing seasons, weather patterns, etc. Work should be performed under the provisions set forth for the specific project. Propex Engineering Services is available for support during installation to consult for solving constructability issues encountered in specific applications. Please feel free to call our techincal support hotline at (423) 553-2450.

BEFORE INSTALLATION BEGINS

- *Coordinate with a Propex Representative:* A pre-construction meeting is suggested with the construction team and a representative from Propex. This meeting should be scheduled by the contractor with at least a two week notice.
- *Gather the Tools Needed:* Tools that you will need to install Landlok 450 include a pair of industrial shears to cut Landlok 450, tape measure, and mallet or hammer.
- *Determine how to Establish Vegetation:* The method of vegetation establishment should be determined prior to the start of installation. Different vegetation establishment methods require different orders of installation. Refer to *Establish Vegetation* for further guidance.

PREPARE THE SITE

It is recommended during all stages of site preparation that disturbed soils remain unprotected for not more than a single day. Depending on project size this may require progressive site preparation during installation.

1. Grade and compact the area on the slope where Landlok 450 will be installed. The slope surface should be uniform and smooth, having all rocks, clods, vegetation or other objects removed so that during *Landlok 450 Laydown*, Landlok 450 comes in direct, intimate contact with the slope surface.
2. Prepare the area to be armored with Landlok 450 by loosening the topsoil to promote better vegetation establishment. This may be accomplished with a rotary tiller on slopes 3:1 or flatter. For slopes greater than 3:1, prepare topsoil in a safe manner.
3. Excavate a Crest of Slope (COS) trench 12 in x 12 in (300 mm x 300 mm) minimum at a distance of 3 ft (900 mm) from the crest of the slope. (Figure 1).

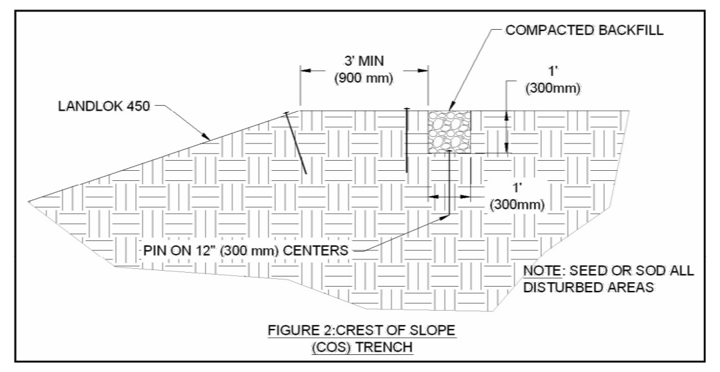

Figure 1: Crest of Slope (COS) Trench

4. Excavate a Toe of Slope (TOS) trench 12 in x 12 in (300 mm x 300 mm) minimum at a minimum distance of 5 ft (1.5 m) from the toe of the slope. (Figure 2)
5. If seeding, refer to *Vegetation Establishment* for additional considerations during site preparation.

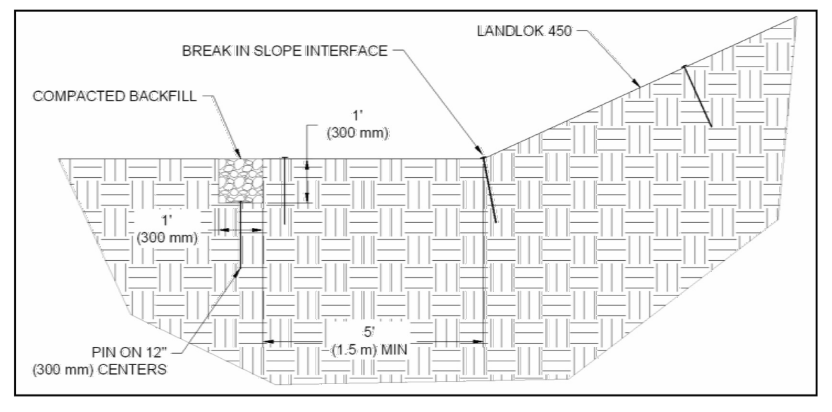

Figure 2: Toe of Slope (TOS) Trench

LANDLOK 450 LAYDOWN

1. Begin the Landlok 450 laydown process by starting with the downstream / downwind end of the site. To ensure proper pining of the overlapped areas the proceeding roll width must be laid out before the current roll width can be pinned with exception to the final roll width. For straight sections of a slope, Landlok 450 panel lengths should be long enough to construct COS and TOS trenches while also covering the surface of the slope being armored (Figure 12). Panel edges should rest approximately perpendicular to the slope center line. For best results, panels of Landlok 450 should be continuous and free from seams or roll end overlaps that are parallel to the centerline of the slope. Panel edge overlapping should follow a pattern of placing each proceeding panel's edge overtop the previous panel edge, shingling the panels in the direction of the water flow or prevailing wind.
2. Starting at the COS trench, lay Landlok 450 roll so that the roll ends point towards the crest of the slope (Figure 3), with a 3 inch (75 mm) overlap created at adjacent panel edge locations. Ensure that adjacent panel edges maintain a minimum 3 inch overlap during *Landlok 450 laydown.* (Figure 8)

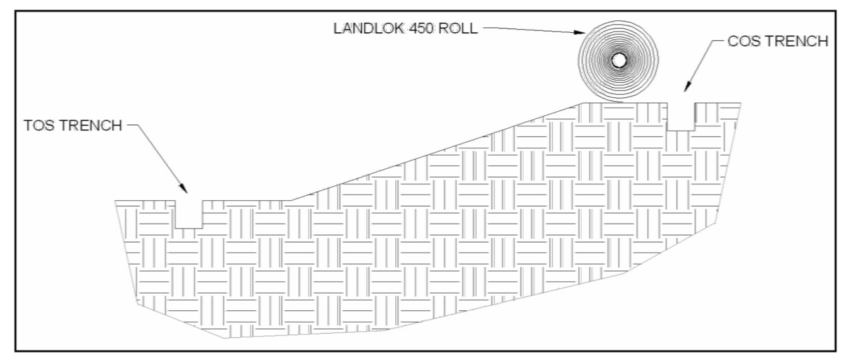

Figure 3: Crest of Slope (COS) Trench Alignment

3. Secure Landlok 450 with pins in the COS trench. Pins should be made of steel with a 0.20 in (5 mm) minimum diameter, having a 1.5 in (38mm) diameter washer at the head, and a length between 12 and 24 in (300-600 mm) with sufficient ground penetration to resist pullout (Figure 4). Longer pins may be required for looser soils. Heaver metal stakes may be required in rocky soils. Suggested placement of pins for the COS trench is along the bottom of the trench with pins on 12 in (300 mm) centers. Pins should also be installed on panel edge overlaps in the COS trench.

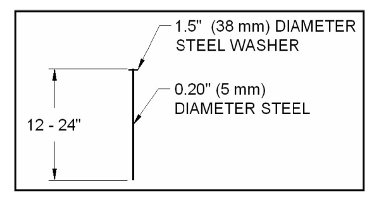
1.5" (38 mm) DIAMETER STEEL WASHER
0.20" (5 mm) DIAMETER STEEL
12 - 24"

Figure 4: Securing Pin

4. Backfill and compact the COS trench in the location of the first Landlok 450 panel only (Figure 5).

- For slope lengths greater than 45 ft (13.7 m), install simulated check slots. This method includes placing two rows of pins 12 in (300 mm) apart on 12 in (300 mm) centers at 45 ft (13.7 m) maximum intervals or across the midpoint of the slope for slope lengths less than 60 ft (18.2 m) (Figure 10).
- At the break in slope interface towards the TOS, it is suggested that pins be installed on 4 ft (1.2 m) centers (Figure 11).

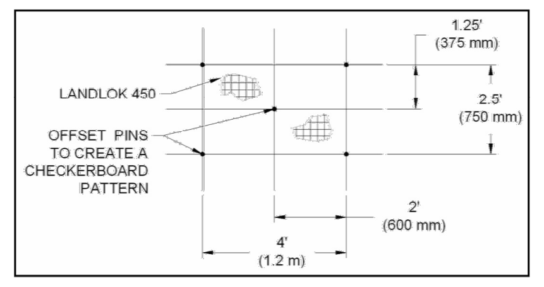

Figure 7: Example Pin Pattern

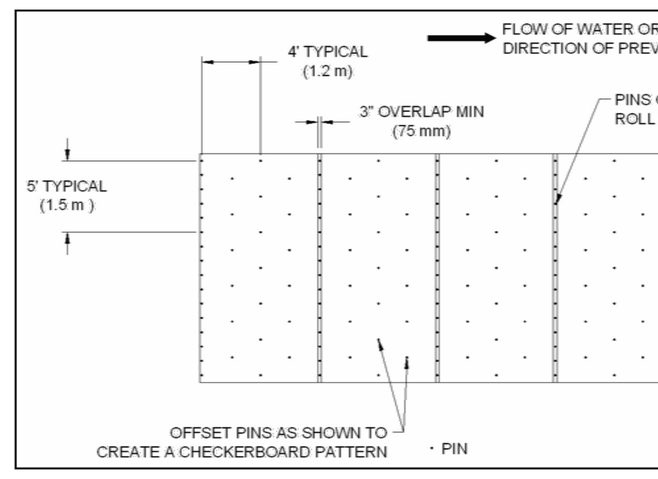
FLOW OF WATER OR DIRECTION OF PREVAILING WIND
4' TYPICAL
(1.2 m)
3" OVERLAP MIN
(75 mm)
PINS ON 12" CENTERS ON ROLL EDGE OVERLAPS
5' TYPICAL
(1.5 m)
OFFSET PINS AS SHOWN TO CREATE A CHECKERBOARD PATTERN
· PIN

Figure 8: Example of Panel Overlap

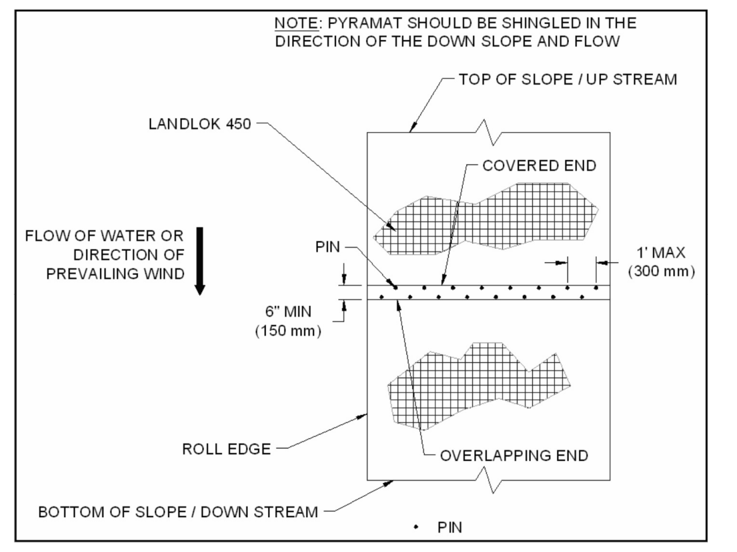
NOTE: PYRAMAT SHOULD BE SHINGLED IN THE DIRECTION OF THE DOWN SLOPE AND FLOW
TOP OF SLOPE / UP STREAM
LANDLOK 450
COVERED END
FLOW OF WATER OR DIRECTION OF PREVAILING WIND
PIN
1' MAX
(300 mm)
6" MIN
(150 mm)
ROLL EDGE
OVERLAPPING END
BOTTOM OF SLOPE / DOWN STREAM
• PIN

Figure 9: Roll End Overlap

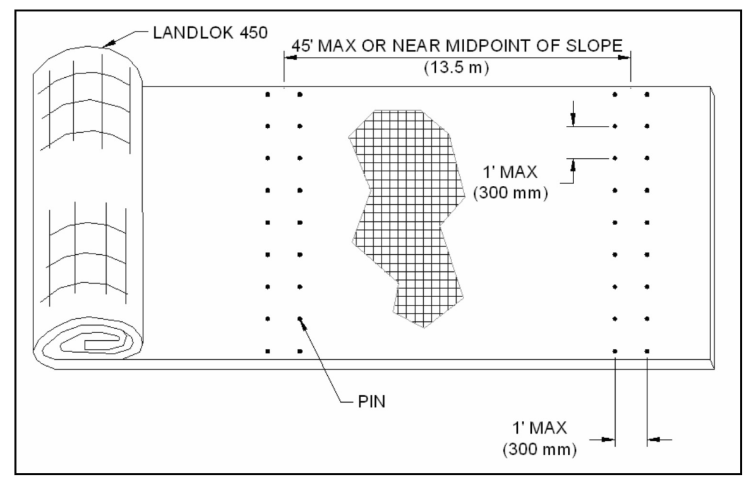

Figure 10: Simulated Check Slot

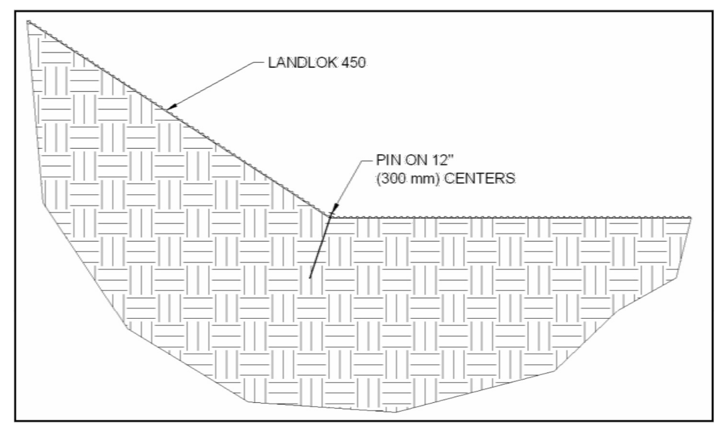

Figure 11: Break in Slope Interface

7. Secure Landlok 450 with pins in the TOS trench. Suggested placement of pins for the TOS trench is along the bottom of the trench with pins on 12 in (300 mm) centers (Figure 12).

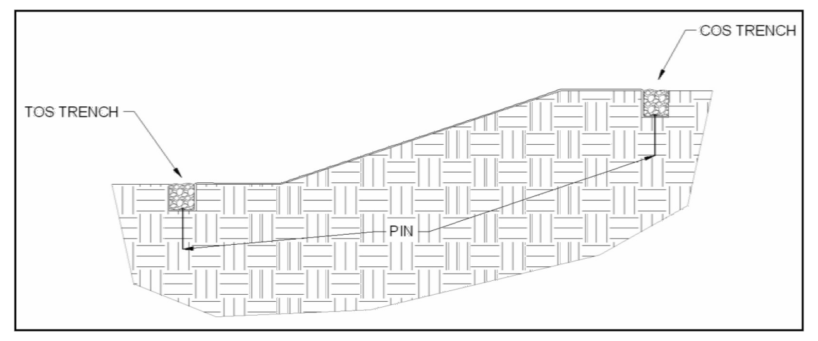

Figure 12: Crest of Slope (COS) Trench and Toe of Slope (TOS) Trench Complete

8. Backfill and compact the TOS trench. (Figure 12)
9. Continue to work down the length of the slope by repeating steps 1 through 8 overlapping each adjacent Landlok 450 panel by 3 inches (75 mm) (Figure 8). The last Landlok 450 panel should terminate on the Slope Armoring Edge (SAE) with pins on 12 in (300 mm) centers. At a minimum, Landlok 450 panels should be pinned entirely across the slope surface, pins should be installed in the trenches, and the trenches should be backfilled and compacted at the end of each day to minimize rework in the case of a major rain event. Specific project conditions may warrant further evaluation of installation order for ease.

An example isometric view (Figure 13) of a slope armored with Landlok 450 can be seen below for overall reference. Consult Propex Engineering Services at (423) 553-2450 with any questions that you may have.

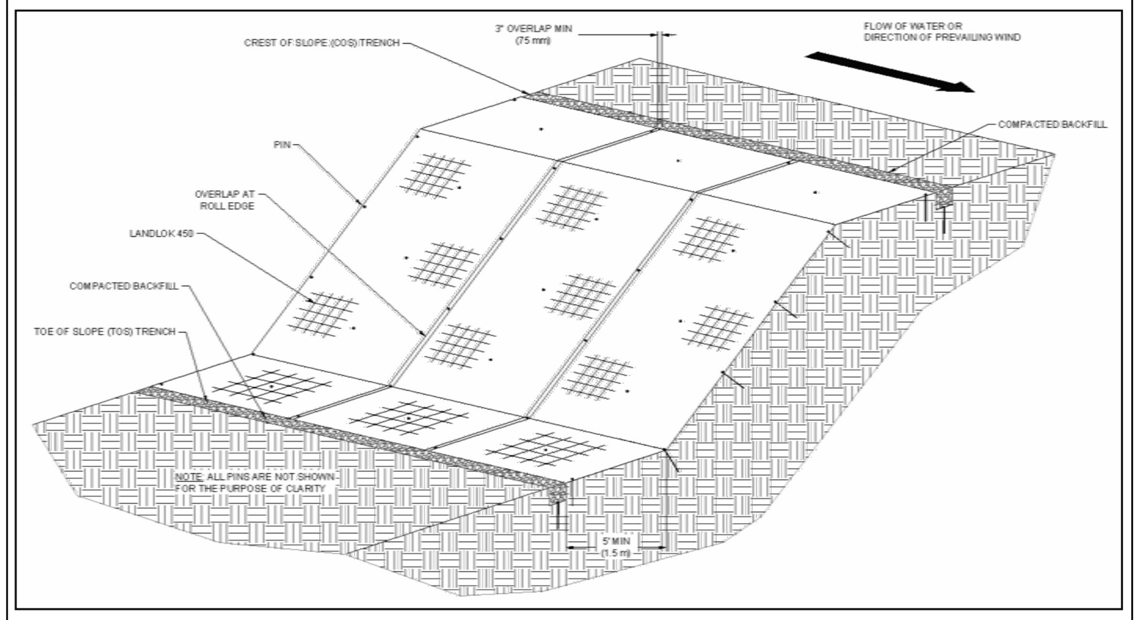
CREST OF SLOPE (COS) TRENCH
3" OVERLAP MIN
(75 mm)
FLOW OF WATER OR DIRECTION OF PREVAILING WIND
COMPACTED BACKFILL
PIN
OVERLAP AT ROLL EDGE
LANDLOK 450
COMPACTED BACKFILL
TOE OF SLOPE (TOS) TRENCH
NOTE: ALL PINS ARE NOT SHOWN FOR THE PURPOSE OF CLARITY
5' MIN
(1.5 m)

Figure 13: Completed Slope Isometric View

ESTABLISH VEGETATION

Vegetation can be established with Landlok 450 by broadcast seeding, hydraulic seed application (hydroseeding), or sodding. Seed application rate, seed type, sod type, and irrigation rate should be selected based on local or site specific knowledge and time of year. For best results, consider having a site specific soil test performed to help determine what soil amendments, such as lime and fertilizer, need to be incorporated into the soil to promote healthy vegetation.

WITH SEED

1. Determine the seed location. Seed can be placed entirely on top of soil filled Landlok 450, or alternatively 50% below Landlok 450 prior to pinning, with the remainder placed on top of soil filled Landlok 450. If a rain event occurs prior to vegetation establishment, having 50% of the seed below Landlok 450 ensures that some seed remains in place. Seed placed entirely on top of soil filled Landlok 450 will allow for faster vegetation establishment.
2. If seeding below Landlok 450, ensure 50% of the seed is placed prior to the installation of Landlok 450.
3. Once Landlok 450 is in place, distribute soil on top by filling the pyramid like projections of Landlok 450. The proper amount can be visually measured by making the top ridges of the pyramid projections barely visible, or is approximately 1 inch thick when measured. Soil filling can be accomplished manually or by using a small piece of equipment. Do not place excessive soil above Landlok 450. See *Consider Project Specific Needs* for guidance on driving equipment across Landlok 450.
4. After seed has been placed, for added protection, install a Landlok Erosion Control Blanket (ECB) above the soil-filled Landlok 450.
5. Irrigate as necessary to establish and maintain vegetation until 75% of vegetation has established and has reached a height of 2 inches. Frequent, light irrigation will need to be applied to seeded areas if natural rain events have not occurred within two weeks of seeding. When watering seeded areas, use a fine spray to prevent erosion of seeds or soil. Do not over irrigate. Proper irrigation guidance is provided under the Maintenance portion of this document.

WITH SOD

1. Sod will be always placed on top of Landlok 450.
2. Sod staples should be used to secure the sod against Landlok 450. During the placement of the sod, ensure that Landlok 450 is 100% covered by tightly adjoining rolls or squares of sod along edges. Any voids in between sod pieces should be filled with clean loose soil.
3. Irrigate as necessary. Proper irrigation guidance is provided under the Maintenance portion of this document.
4. Monitor to identify areas where browned/dead sod emerges. These areas may need to be addressed to ensure proper sod establishment.

CONSIDER PROJECT SPECIFIC NEEDS

1. For applications that require special transitions (i.e. connections to riprap, concrete, T-walls, etc.), refer to the project specific drawings or consult with Propex Engineering Services at (423) 553-2450.
2. A deeper terminal trench and/or hard armoring may be required when slopes have severe scour potential at the toe location.
3. For installing Landlok 450 panels around curved sections of a slope, trim panels at an angle so that no more than two layers of Landlok 450 overlap at any point in time. Additional pins may be needed to secure panel edges towards the toe of the slope depending upon the radius of the curved slope. Install pins as necessary to securely fasten Landlok 450 to the ground.
4. Allowable Vehicle Traffic:
   - A. If using equipment on Landlok 450, it should be of the rubber-tired type and should avoid sharp turns. Tracked equipment is not permitted to drive over the Landlok 450 without vegetation at any time.
   - B. Avoid any traffic over Landlok 450 if loose or wet soil conditions exist.
5. Disturbed areas should be reseeded. If ruts or depressions develop for any reason, rework soil until smooth and reseed such areas.
6. Do not mulch areas where Landlok 450 is to be placed.

SHORT-TERM AND LONG-TERM MAINTENANCE OF LANDLOK 450

The purpose of this section is to provide some general guidelines for performing short-term and long-term maintenance of Landlok 450 with respect to maintaining vegetation reinforced with Landlok 450, and patching of Landlok 450 (in the event it needs to be removed or replaced). These procedures are to be considered minimum guidelines for proper maintenance, and further maintenance techniques may be appropriate considering local practices and procedures.

LANDLOK 450 PROTECTED SLOPES

For Landlok 450 to be most effective, it is important to ensure that it is properly maintained both during construction and after construction. Identifying trouble areas is easy with Landlok 450, and it can make identifying potential threats much simpler and manageable. Look for areas with sparse, dying, or no vegetation as these are obvious signs that Landlok 450 is losing intimate contact with the slope surface. If loss of ground surface occurs, Landlok 450 will need to be removed and reinstalled as described in *Patching and Repairs* Section after the eroded area is backfilled with compacted soil that is similar to material of the slope. After Landlok 450 is reinstalled, re-establish vegetation on the newly installed Landlok 450 and disturbed areas. Monitor the sites to determine if frequent watering may be required to establish vegetation.

To minimize exposure to unwanted maintenance and repair, Landlok 450 armored slopes should be free of unauthorized vehicular traffic. Routine maintenance and slope inspections should be performed with rubber tired vehicles. Tracked equipment such as skid steers, excavators, or dozers should only be allowed to traffic over Landlok 450 in times of emergency after vegetation establishment is complete. Failure to control unauthorized traffic can result in Landlok 450 being damaged resulting in erosion below Landlok 450 during storm events. In addition, routine mowing maintenance should be used to keep the protected area free of unwanted brush, saplings, and trees. Selective herbicides that target only the unwanted plants can be used as long as the vegetation established with Landlok 450 is not impaired. Failure to control the sapling and tree growth can result in the trees being uprooted during a flood.

MAINTAINING VEGETATION

Good vegetative cover will ensure maximum performance of Landlok 450. Vegetative cover care starts before a project is complete and is ongoing until all Landlok 450 is installed. Vegetative cover should be given every opportunity to grow and establish well. This will require that a contractor periodically fertilize, water, and mow the grasses as needed until a project is complete in the short-term, with the owner of the slope fulfilling the maintenance of the slope in a similar fashion for the long-term. For the entire lifecycle of Landlok 450, every effort must be made to prevent unauthorized encroachments, grazing, vehicle traffic, the misuse of chemicals, or burning during inappropriate seasons.

1. After the installation of vegetation is complete, immediately water and soak the entire area using a fine spray to prevent erosion and loss of seeds. A suggested amount of water is identified below. Prior to installation if using sod, the sod pads in storage should be kept moist at all times and not stored for more than 24 hours from site arrival to installation. Warmer weather will necessitate more frequent applications than listed below.
   - A. For each reach/segment of installed vegetation, watering shall be conducted immediately after each installation or the day's work.

   - B. First 30 days, completed segments shall be watered daily with a minimum of 0.75 and a maximum of 1.0 inches per square foot per day (20,364 gallons minimum, 27,152 gallons maximum per acre per day).
   - C. Second 30 days, the watering may be reduced to 0.50 inches per square foot per day (13,576 gallons maximum per acre per day) or as required based upon the condition of the sod.
   - D. Avoid excessive application of water, so that surface runoff does not occur. Runoff should be prohibited. However, additional watering may be required for repaired or damaged areas.
4. Initial fertilizing should be applied 14 days after vegetation is placed, using 25-lbs per acre ammonium nitrate or ammonium sulfate. Post-fertilization should be conducted 30 to 45 days after installation, using an application rate of 25-lbs per acre (ammonium nitrate or ammonium sulfate). Application example: in order to apply ammonium nitrate or ammonium sulfate at a rate of 25-lbs per acre, 75 lbs of 33-0-0 is required.
5. Implement best practices for mowing over Landlok 450. While Landlok 450 is designed to withstand non-hydraulic stresses such as mowing, there are procedures to minimize exposure to unwanted damage.
   - A. Immediately after installation, signage and post shall be installed stating that "Vehicles and Pedestrians are Prohibited from Access" on the slopes and the newly installed vegetation. Signage shall be posted every 1,500 lineal feet.
   - B. Vegetated areas should be mowed to a height no less than 6 inches and no greater than 12 inches from natural ground after a period of 60 days of growth. The excessive grass clippings created from mowing shall be evenly spread on the slope section outside of the armored area. Periodic and final grass mowing should be performed until final inspection and acceptance of slope work. Monitor the vegetated areas throughout winter months and generate reports as needed, noting any issues that should be addressed.
   - C. To prevent damage to the newly established vegetation, the mowing tractor should be fitted with 3-rib agriculture tires. Note that tractors with 8-foot flail mowers provide best results. Tractors with 15-foot brush hogs should avoid sharp turns up the slope to prevent damage to vegetation.
   - D. Mowing should not take place for a minimum of 48 hours after a rainfall event of 2 inches or more to minimize the potential for rutting and/or damage to the slope surface. Maintenance mowing of the slope should be done on a consistent basis to prevent vegetation growing to more than 3 feet in height. This will minimize thatch thickness and potential damage to Landlok 450. If turn-around pads are present, operate mowing equipment utilizing the turn-around pads to the fullest extent. The mowing blade height over Landlok 450 should be a minimum of 8 inches. However, should vegetation grow to more than 3 feet in height, the mowing blade height for the condition should be a minimum of 12 inches.
6. Some special circumstances may exist. When mowing the crown of a slope with a crown or crest equal to or exceeding 20%, it should be mowed with an articulating arm mower to minimize the potential for the mower blades to catch Landlok 450 at the slope surface. The articulating arm mower should be level on the surface with the articulating arm extending over the crown. **Pay close attention to areas where the slope changes.** The mower blades should be set at a minimum height of 8 inches. If Landlok 450 is damaged by the mowing blades at any time, mowing should stop immediately and further direction should be obtained to continue activity. Repair the damaged area as described in the *Patching and Repairs* section below.
7. Landlok 450 protected slopes are not as susceptible to animal burrowing due the tenacity of the Landlok 450; however, inspections to detect the presence of burrowing animal activity are generally most effective immediately after the slope has been mowed. Animal burrows that are identified should be thoroughly excavated and inspected, backfilled with compacted soil that is similar to material of the slope, and vegetation re-established. This will avoid the possibility of water piping through unfilled portions of the burrows. Should Landlok 450 be damaged, it is to be repaired as described *Patching and Repairs* section below.

PATCHING AND REPAIRS

Landlok 450 may require localized repair at times. For emergency repairs, an adequate supply of Landlok 450 should be maintained in inventory with the necessary tools to install. This will allow for a timely, initial repair of the system.

1. In order to identify areas in need of repair, the site should be patrolled immediately after mowing and after rain events of 2 inches or more. When patrolling look for areas of sparse vegetation, exposed edges of Landlok 450, and areas where direct contact between Landlok 450 and the slope surface is compromised. Landlok 450 should be rated as *Acceptable, Minimally Acceptable*, or *Unacceptable* during inspection.
   - A. *Acceptable* (A) - The rated area is in satisfactory, acceptable condition, and will function as designed and intended during the rain event. Landlok 450 has no exposed edges, is installed tightly by maintaining direct contact to the slope surface with no rilling beneath, and has over 90% vegetation cover. There is no noticeable damage present.
   - B. *Minimally Acceptable* (M) - The rated area has a minor deficiency that needs to be corrected. The minor deficiency will not seriously impair the functioning of the area during the next rain event; however, the overall reliability of the project will be lowered because of the minor deficiency. Landlok 450 has 75% vegetation cover with un-vegetated patches as large as one square yard. Edges of Landlok 450 are exposed with noticeable damage. Minimal erosion has occurred underneath Landlok 450.
   - C. *Unacceptable* (U) - The rated area is unsatisfactory. The deficiency is so serious that the area will not adequately function in the next rain event. Landlok 450 has been physically torn, ripped, or lifted from the slope surface. Less than 75% vegetation cover is present with un-vegetated patches being greater than 1 square yard, and there is evidence that erosion is occurring beneath Landlok 450.
2. Repair any raised or exposed edges of Landlok 450 by driving existing and additional pins along the edges as necessary to securely fasten to the ground. Inspect areas where the vegetation is not growing on top of Landlok 450. Many times this is an indicator that Landlok 450 has lost contact with the ground beneath. Check for voids beneath Landlok 450 and fill any holes, gullies, etc. with compacted fill material if possible. Replace Landlok 450 as described below.
3. To repair Landlok 450, cut out and remove damaged areas in a square configuration a minimum size of 2 ft by 2 ft. Remove all vegetation and debris atop of Landlok 450. Loosen the top 1 to 2 in of soil in the patch area then seed. The subgrade of area to be patched shall be prepared to be smooth and uniform and transition smoothly into the in-situ area. Cut a square Landlok 450 patch a minimum of 12 in greater than the damaged area for all four sides of the patch. Overlap the patch area in all directions a minimum of 12 in. The patch overlaps shall be tucked under the existing damaged Landlok 450 material (Figure 14 and Figure 15)

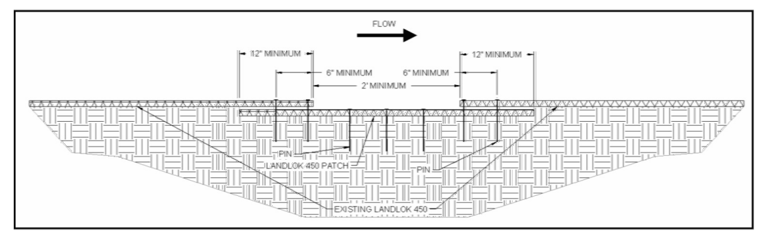

Figure 14: Landlok 450 Patch Cross Section

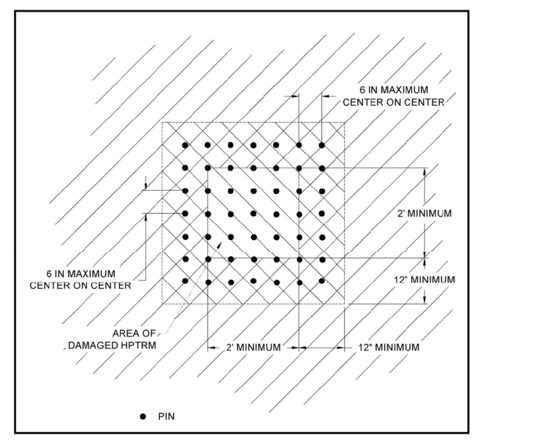

Figure 15: Landlok 450 Patch Plan View

4. Install pins on 6 in (150 mm) (max) centers. For larger areas of damage, pins should be installed to match existing pin pattern. Once Landlok 450 is in place, vegetate per project specifications.

SUMMARY

Maintenance should consist of watering and weeding, repair of all erosion, and any re-seeding as necessary to establish a uniform stand of vegetation during construction and beyond. A minimum of 70% of the armored area should be covered with no bare or dead spots greater than 10 ft² (1 m²). Establishing vegetation should not be mowed prior to 70% vegetative density and a minimum grass growth of 4 in (100 mm). Throughout the duration of the project, the contractor should be responsible for mowing to facilitate growth and should not let the vegetation in the armored areas exceed 18 in (450 mm). In addition, the Contractor should water all grassed areas as often as necessary to establish satisfactory growth and to maintain its growth throughout the duration of the project. After the project is complete, it is the responsibility of the Owner to maintain and upkeep all Landlok 450 installed areas for long term performance and best results as described herein for superior slope armoring.

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PH: 423 899 0444
PH: 800 621 1273
FAX: 423 899 5005
www.propexglobal.com

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Formerly Known as KFW ENGINEERS + SURVEYING

811 Know what's below. Call before you dig.
PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
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BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: BA2054113

SHEET TITLE:
BASIN DETAILS

SHEET NUMBER:
5.10

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

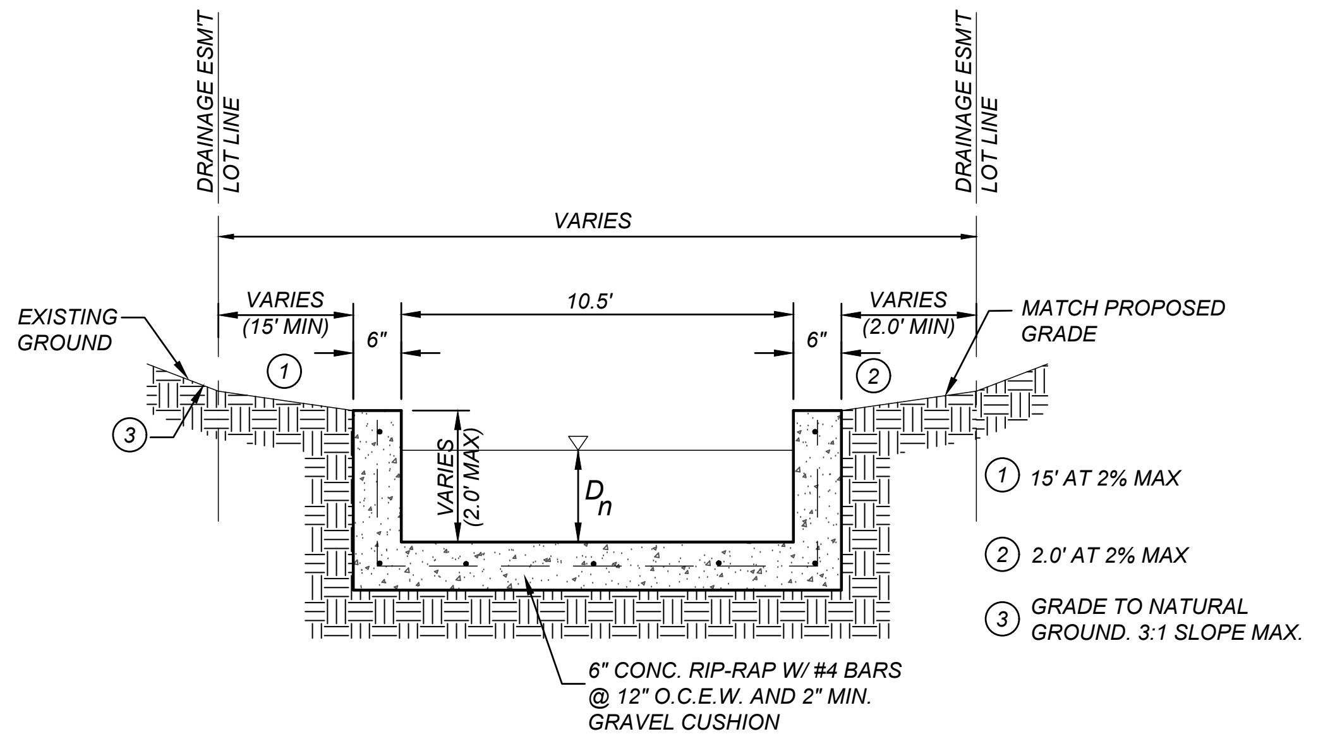
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

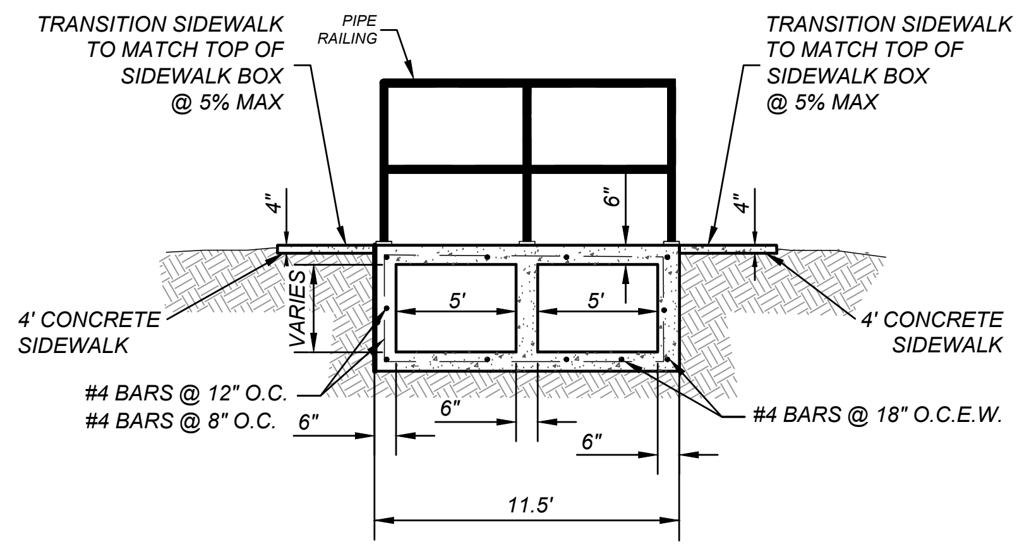
THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST 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.

NOTE:

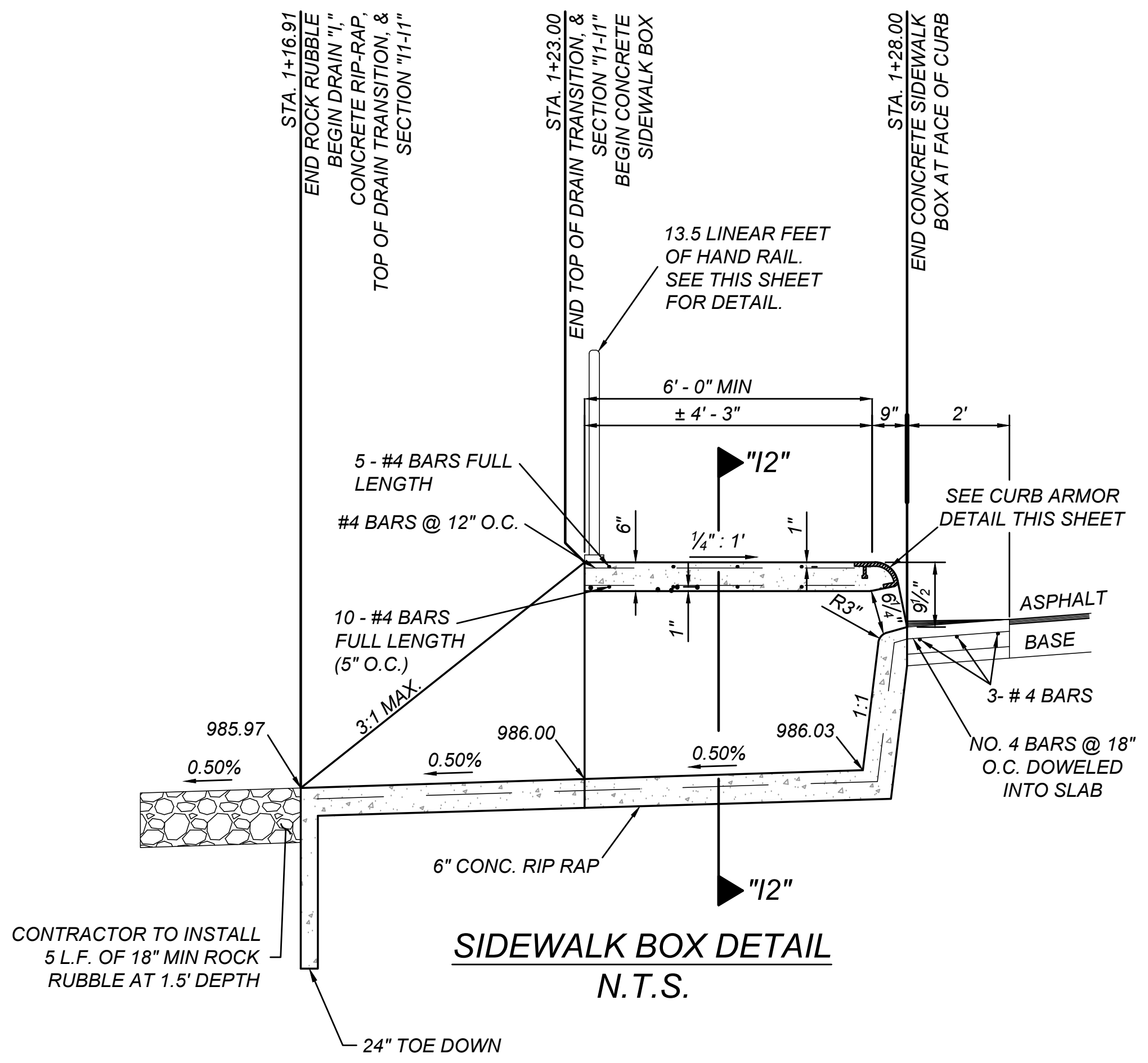
1. *ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI IN 28 DAYS.*
2. *ANY DISTURBED AREAS WILL BE VEGETATED BY SEEDING OR SODDING. EIGHTY-FIVE PERCENT OF THE DISTURBED SURFACE AREA MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.*


DRAINAGE ESM'T
LOT LINE
DRAINAGE ESM'T
LOT LINE
VARIES
VARIES (15' MIN)
10.5'
VARIES (2.0' MIN)
EXISTING GROUND
MATCH PROPOSED GRADE
6"
6"
VARIES (2.0' MAX)
Dn
① 15' AT 2% MAX
② 2.0' AT 2% MAX
③ GRADE TO NATURAL GROUND. 3:1 SLOPE MAX.
6" CONC. RIP-RAP W/ #4 BARS @ 12" O.C.E.W. AND 2" MIN. GRAVEL CUSHION

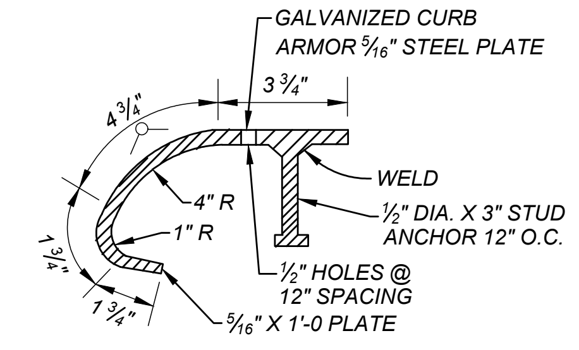
SECTION "I1-I1"
STA. 1+16.91 - STA. 1+23.00
N.T.S.


TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
PIPE RAILING
TRANSITION SIDEWALK TO MATCH TOP OF SIDEWALK BOX @ 5% MAX
4"
6"
4"
VARIES
5'
5'
4' CONCRETE SIDEWALK
4' CONCRETE SIDEWALK
#4 BARS @ 12" O.C.
#4 BARS @ 8" O.C.
6"
6"
#4 BARS @ 18" O.C.E.W.
11.5'

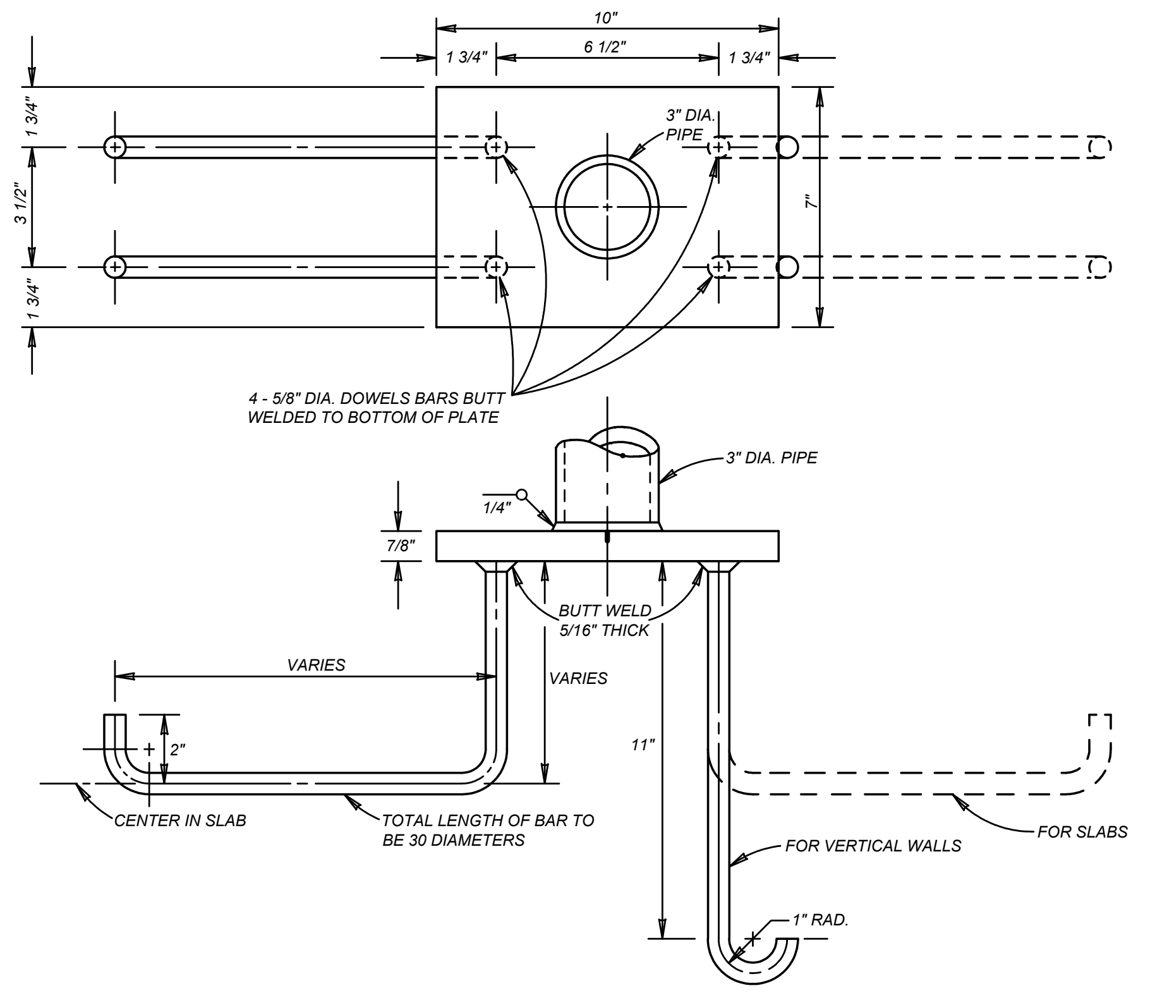
SECTION "I2-I2"
N.T.S.


STA. 1+16.91
END ROCK RUBBLE
BEGIN DRAIN "I"
CONCRETE RIP-RAP,
TOP OF DRAIN TRANSITION, &
SECTION "I1-I1"
STA. 1+23.00
END TOP OF DRAIN TRANSITION, &
SECTION "I1-I1"
BEGIN CONCRETE
SIDEWALK BOX
STA. 1+28.00
END CONCRETE SIDEWALK
BOX AT FACE OF CURB
13.5 LINEAR FEET OF HAND RAIL. SEE THIS SHEET FOR DETAIL.
6' - 0" MIN
± 4' - 3"
9"
2'
5 - #4 BARS FULL LENGTH
"I2"
#4 BARS @ 12" O.C.
SEE CURB ARMOR DETAIL THIS SHEET
¼" - 1'
6"
1"
1"
ASPHALT
BASE
10 - #4 BARS FULL LENGTH (5" O.C.)
3- # 4 BARS
3:1 MAX
985.97
0.50%
986.00
0.50%
0.50%
986.03
1:1
NO. 4 BARS @ 18" O.C. DOWELED INTO SLAB
6" CONC. RIP RAP
"I2"
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
24" TOE DOWN

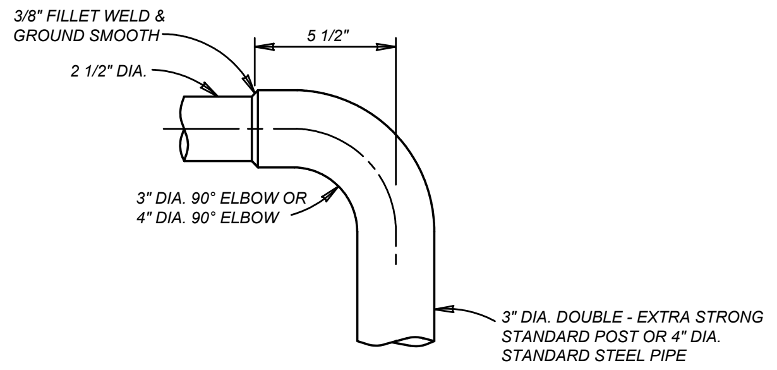
SIDEWALK BOX DETAIL
N.T.S.


GALVANIZED CURB ARMOR 5/16" STEEL PLATE
3 ¾"
4 ¾"
WELD
4" R
1" R
½" DIA. X 3" STUD ANCHOR 12" O.C.
½" HOLES @ 12" SPACING
5/16" X 1'-0 PLATE
1 ¾"
1 ½"

CURB ARMOR DETAIL
N.T.S.

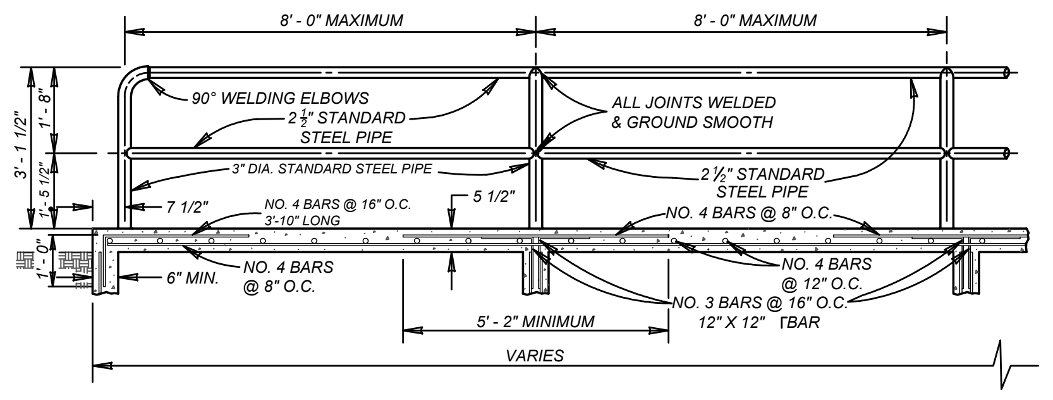

10"
1 3/4"
6 1/2"
1 3/4"
3" DIA. PIPE
1 3/4"
3 1/2"
1 3/4"
7"
4 - 5/8" DIA. DOWELS BARS BUTT WELDED TO BOTTOM OF PLATE
3" DIA. PIPE
1/4"
7/8"
BUTT WELD
5/16" THICK
VARIES
VARIES
2"
11"
CENTER IN SLAB
TOTAL LENGTH OF BAR TO BE 30 DIAMETERS
FOR VERTICAL WALLS
FOR SLABS
1" RAD.

PIPE ANCHORAGE DETAILS
N.T.S.

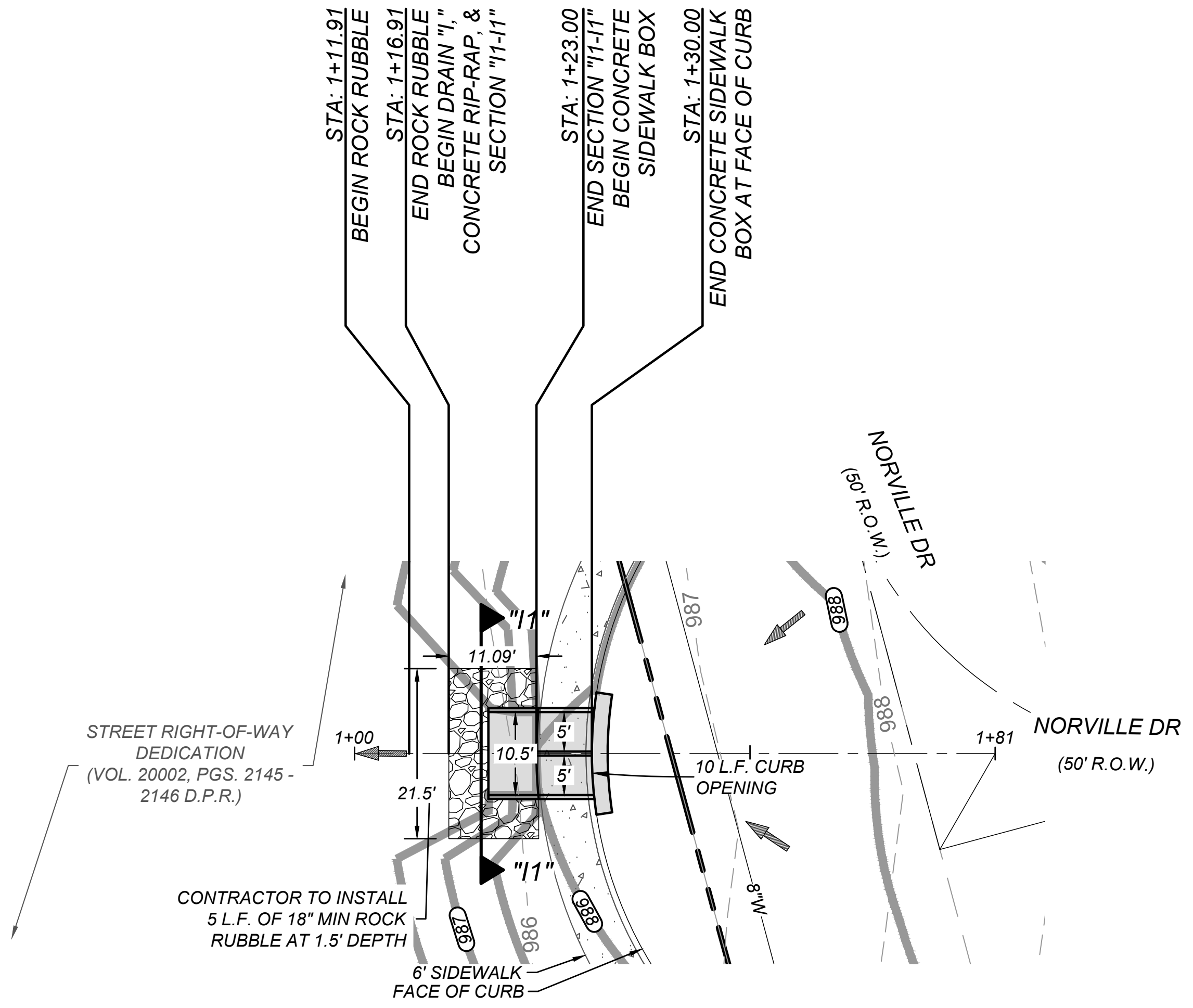

3/8" FILLET WELD & GROUND SMOOTH
5 1/2"
2 1/2" DIA.
3" DIA. 90° ELBOW OR 4" DIA. 90° ELBOW
3" DIA. DOUBLE - EXTRA STRONG STANDARD POST OR 4" DIA. STANDARD STEEL PIPE

DETAIL OF 90° WELDING ELBOWS
N.T.S.

* A NEAT END SECTION, SATISFACTORY TO THE ENGINEER, FROM SUBMITTED SHOP DRAWINGS, MAY BE USED IN LIEU OF THE 90° WELDING ELBOW SHOWN.


8' - 0" MAXIMUM
8' - 0" MAXIMUM
90° WELDING ELBOWS
2 ½" STANDARD STEEL PIPE
ALL JOINTS WELDED & GROUND SMOOTH
3" DIA. STANDARD STEEL PIPE
2 ½" STANDARD STEEL PIPE
NO. 4 BARS @ 18" O.C. 3'-10" LONG
5 1/2"
NO. 4 BARS @ 8" O.C.
7 1/2"
6" MIN.
NO. 4 BARS @ 8" O.C.
NO. 4 BARS @ 12" O.C.
NO. 3 BARS @ 18" O.C. 12" X 12" TBAR
5' - 2" MINIMUM
VARIES

TYPICAL SIDEWALK BRIDGE & SIDEWALK PIPE RAILING SECTION
N.T.S.


STA. 1+11.91
BEGIN ROCK RUBBLE
STA. 1+16.91
END ROCK RUBBLE
BEGIN DRAIN "I"
CONCRETE RIP-RAP, &
SECTION "I1-I1"
STA. 1+23.00
END SECTION "I1-I1"
BEGIN CONCRETE
SIDEWALK BOX
STA. 1+30.00
END CONCRETE SIDEWALK
BOX AT FACE OF CURB
NORVILLE DR
(50' R.O.W.)
NORVILLE DR
(50' R.O.W.)
"I1"
"I1"
11.09'
10.5'
21.5'
1+00
1+81
987
986
988
988
986
STREET RIGHT-OF-WAY DEDICATION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
10 L.F. CURB OPENING
CONTRACTOR TO INSTALL 5 L.F. OF 18" MIN ROCK RUBBLE AT 1.5' DEPTH
6' SIDEWALK
FACE OF CURB
W-8

PRIVATE DRAIN "I"
STA: 1+11.91 - END

LEGEND

— — —735— —	=	EXISTING CONTOUR
(735)	=	PROPOSED CONTOUR
⟵	=	FLOW ARROW

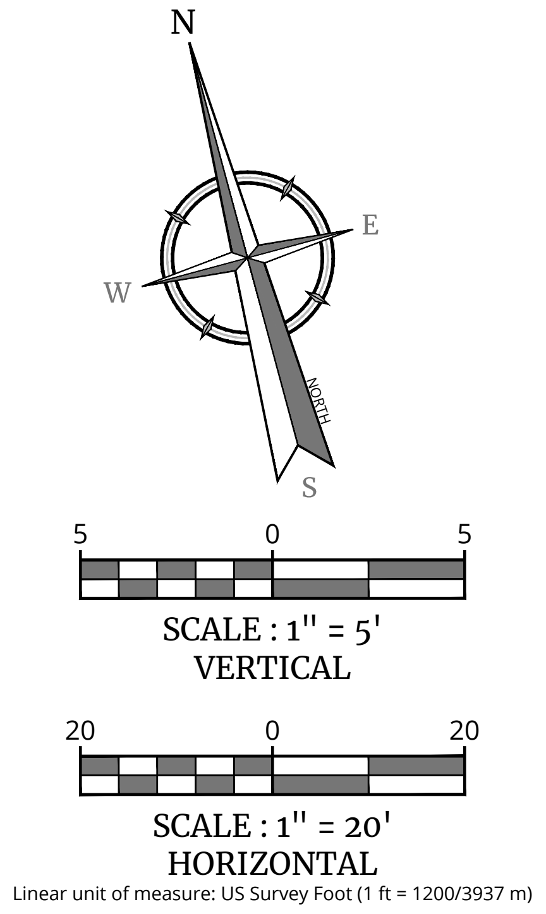
CURB OPENING
HYDRAULIC CALCULATION

$$L = \frac{Q_{25}}{Ch^{3/2}}$$

$$L = \frac{15.98}{(3.087)\ (0.79)^{3/2}}$$

$L = 7.37$ L.F.

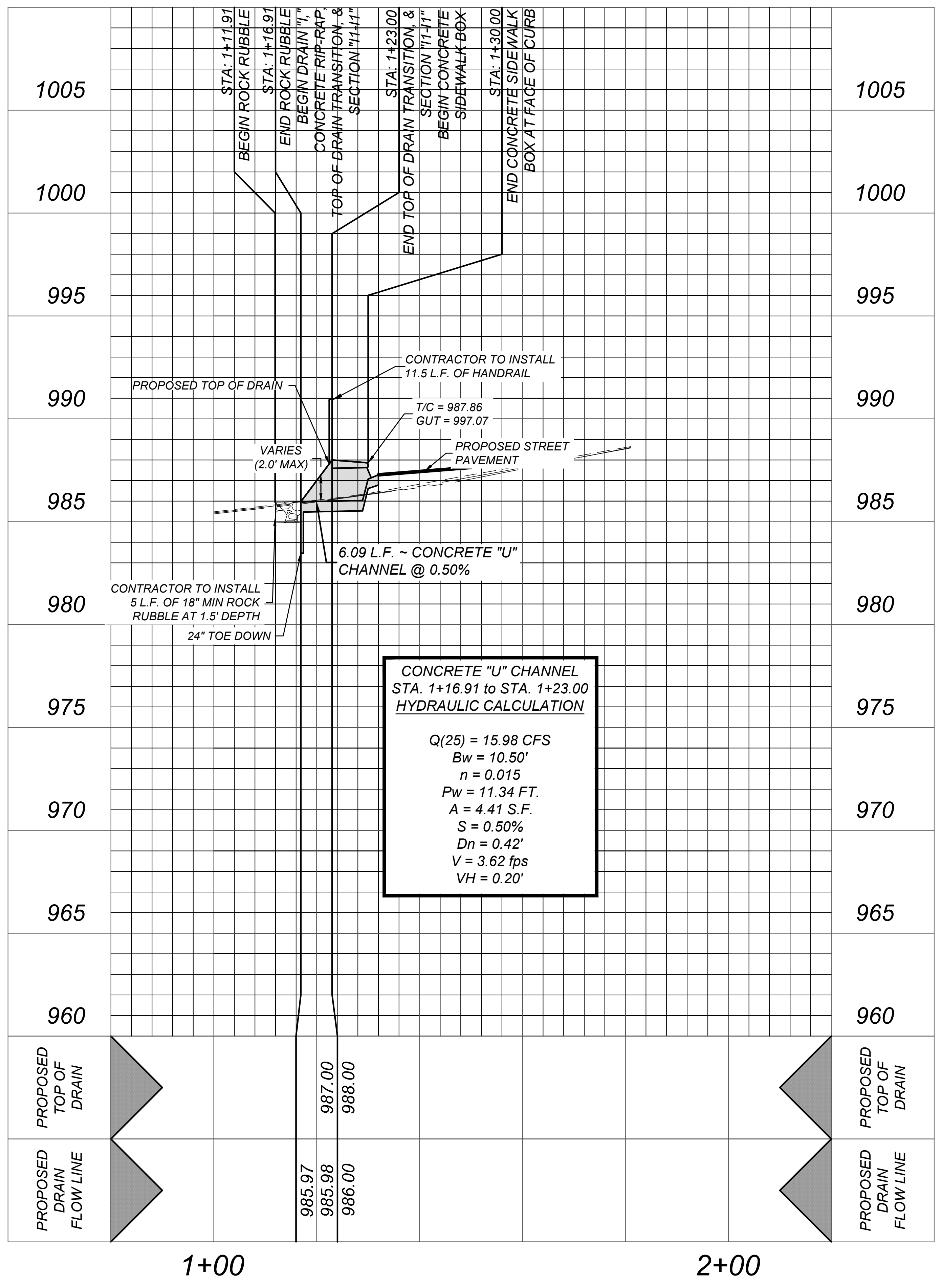
∴ USE 10.00 L.F. CURB OPENING


N
E
S
W
5
0
5
20
0
20

SCALE : 1" = 5'
VERTICAL

SCALE : 1" = 20'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)



CONCRETE "U" CHANNEL
STA. 1+16.91 to STA. 1+23.00
HYDRAULIC CALCULATION

Q(25) = 15.98 CFS
Bw = 10.50'
n = 0.015
Pw = 11.34 FT.
A = 4.41 S.F.
S = 0.50%
Dn = 0.42'
V = 3.62 fps
VH = 0.20'

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
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MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

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Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	DR2054113

SHEET TITLE:
DRAIN "I" PLAN & PROFILE

SHEET NUMBER:
5.11

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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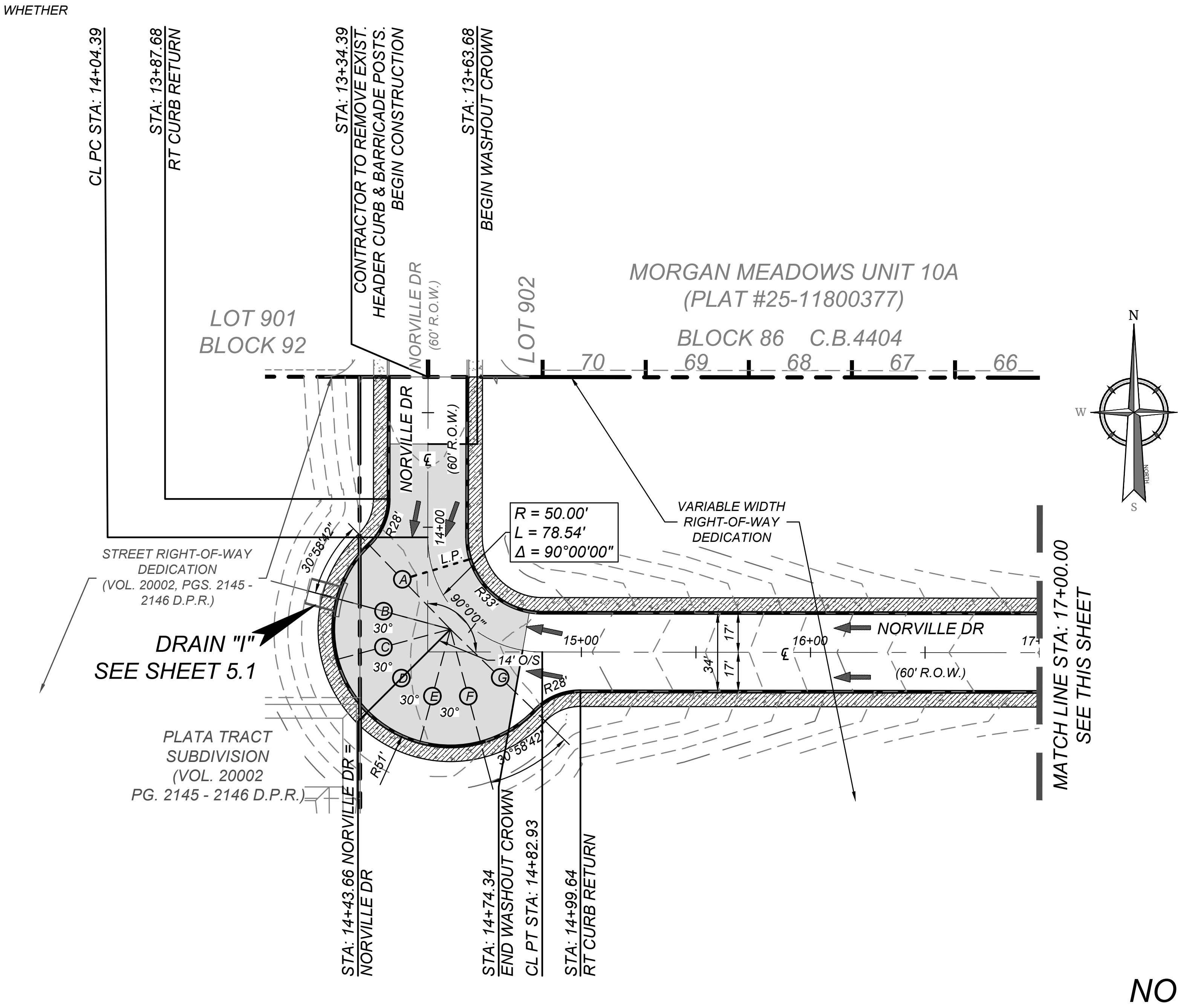
BEXAR COUNTY R.O.W. NOTE

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

KNUCKLESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	988.39
B	987.86
C	987.96
D	988.18
E	988.51
F	988.95
G	989.50

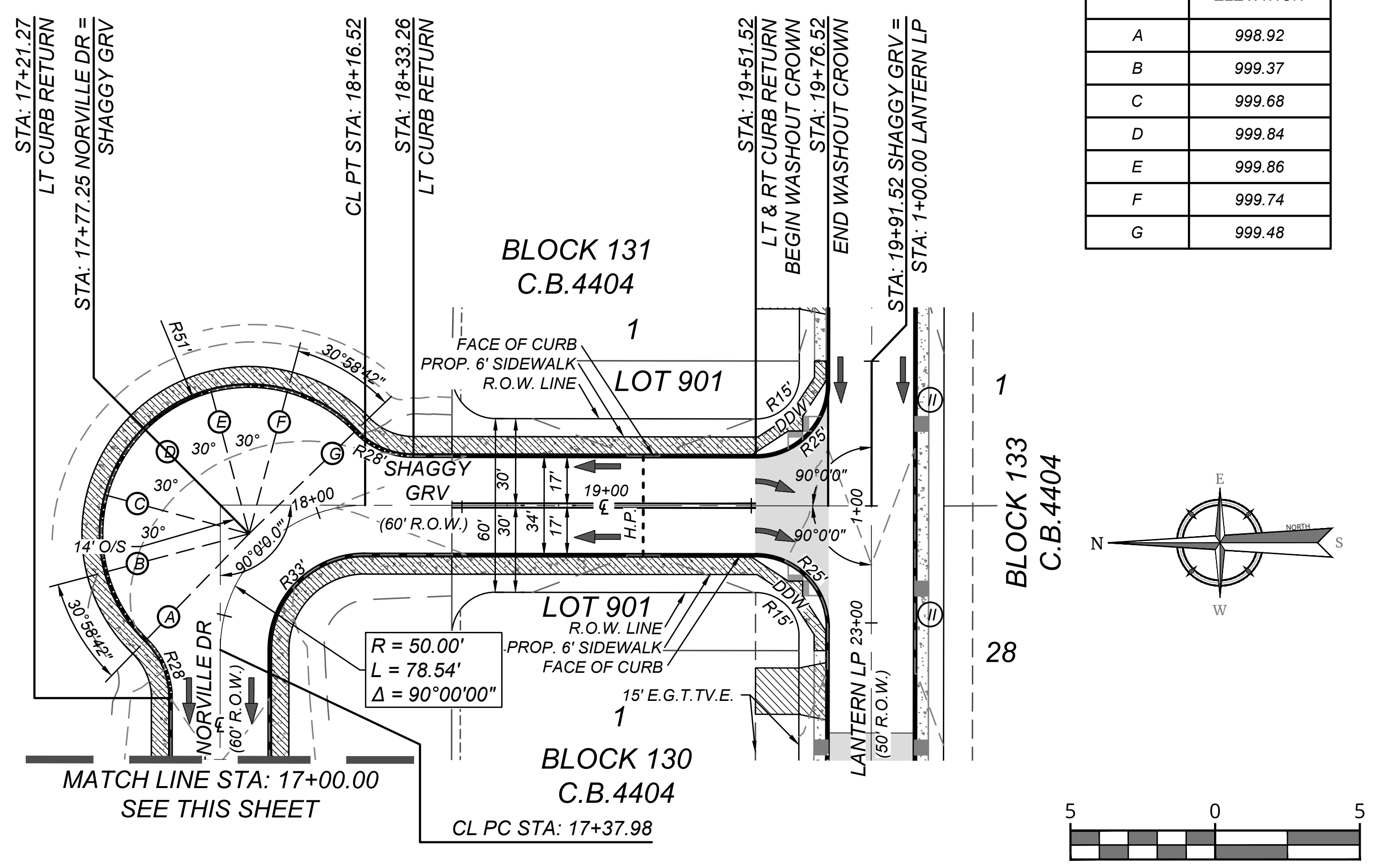

CL PC STA: 14+04.39
STA: 13+87.68 RT CURB RETURN
STA: 13+34.39 CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS. BEGIN CONSTRUCTION
STA: 13+63.68 BEGIN WASHOUT CROWN
LOT 901
BLOCK 92
LOT 902
NORVILLE DR (60' R.O.W.)
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
BLOCK 86 C.B.4404
70
69
68
67
66
R = 50.00'
L = 78.54'
Δ = 90°00'00"
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
STREET RIGHT-OF-WAY DEDICATION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
DRAIN "I" SEE SHEET 5.1
NORVILLE DR
(60' R.O.W.)
15+00
16+00
14' O/S
PLATA TRACT SUBDIVISION (VOL. 20002 PG. 2145 - 2146 D.P.R.)
MATCH LINE STA: 17+00.00 SEE THIS SHEET
STA: 14+43.66 NORVILLE DR = NORVILLE DR
STA: 14+74.34 END WASHOUT CROWN
CL PT STA: 14+82.93
STA: 14+99.64 RT CURB RETURN

LEGEND

R.O.W. = RIGHT OF WAY
E.G.T.TV.E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡ = FLOW ARROW
▭ = WASHOUT CROWN
SDW = SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW = DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
Ⓘ = WHEELCHAIR RAMP TYPE II SEE SHEET 6.8
▨ = SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭ = SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨ = PROPOSED DRIVEWAY LOCATION
H.P. = HIGH POINT
L.P. = LOW POINT

KNUCKLESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	998.92
B	999.37
C	999.68
D	999.84
E	999.86
F	999.74
G	999.48

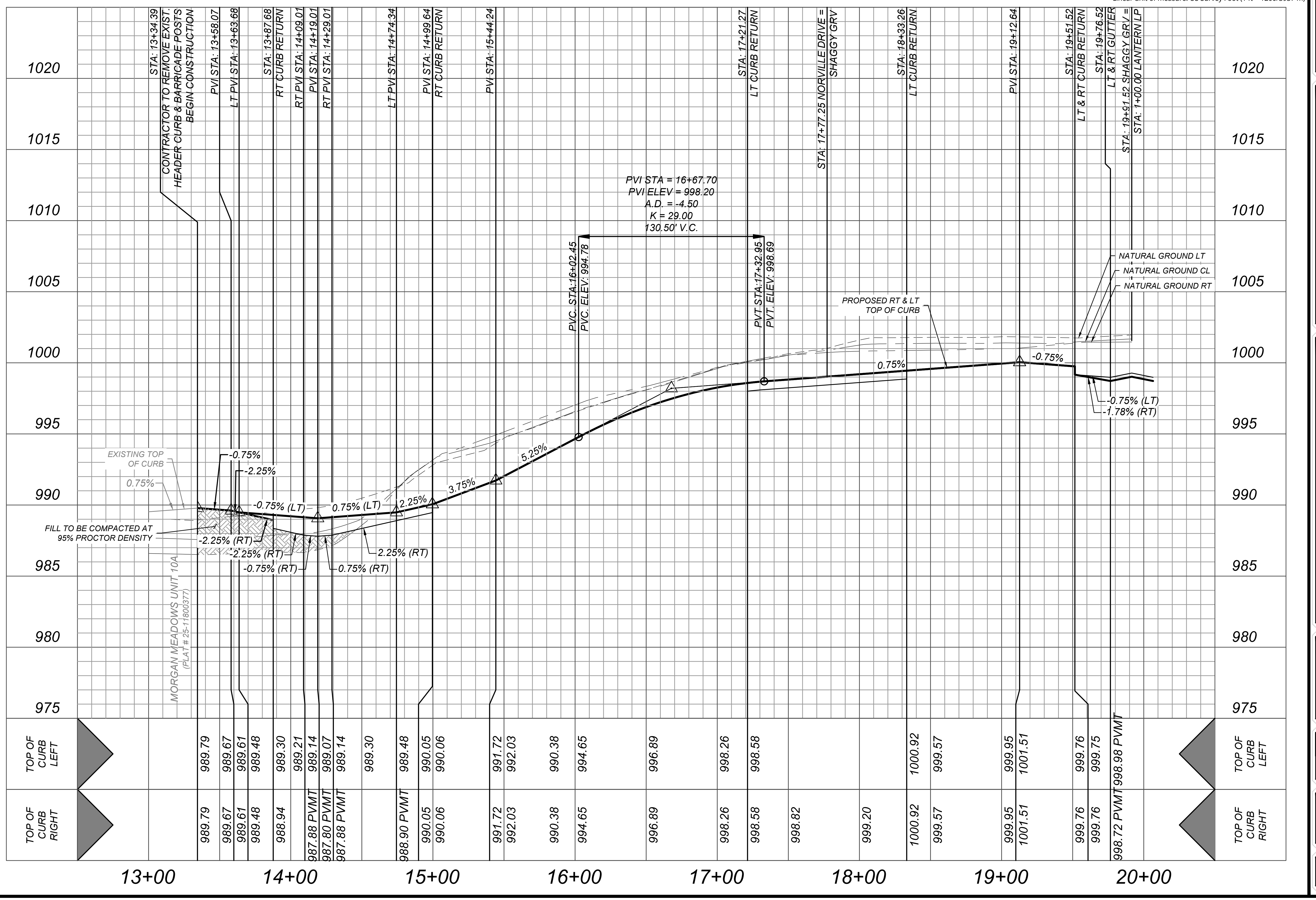

STA: 17+21.27 LT CURB RETURN
STA: 17+77.25 NORVILLE DR = SHAGGY GRV
CL PT STA: 18+16.52
STA: 18+33.26 LT CURB RETURN
STA: 19+51.52 LT & RT CURB RETURN BEGIN WASHOUT CROWN
STA: 19+76.52 END WASHOUT CROWN
STA: 19+51.52 SHAGGY GRV = STA: 1+00.00 LANTERN LP
BLOCK 131
C.B.4404
1
FACE OF CURB
PROP. 6' SIDEWALK
R.O.W. LINE
LOT 901
SHAGGY GRV
(60' R.O.W.)
19+00
BLOCK 133
C.B.4404
1
28
LOT 901
R.O.W. LINE
PROP. 6' SIDEWALK
FACE OF CURB
R = 50.00'
L = 78.54'
Δ = 90°00'00"
15' E.G.T.TV.E.
BLOCK 130
C.B.4404
1
LANTERN LP (50' R.O.W.)
NORVILLE DR (60' R.O.W.)
MATCH LINE STA: 17+00.00 SEE THIS SHEET
CL PC STA: 17+37.98
N
E
S
W

SCALE : 1" = 5'
VERTICAL

SCALE : 1" = 50'
HORIZONTAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

NORVILLE DR/SHAGGY GRV
STA: 13+34.39 - END


1020
1015
1010
1005
1000
995
990
985
980
975
STA: 13+34.39 CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS BEGIN CONSTRUCTION
PVI STA: 13+58.07
LT PVI STA: 13+63.68
STA: 13+87.68 RT CURB RETURN
RT PVI STA: 14+09.01
PVI STA: 14+19.01
RT PVI STA: 14+29.01
LT PVI STA: 14+74.34
PVI STA: 14+99.64 RT CURB RETURN
PVI STA: 15+44.24
STA: 17+21.27 LT CURB RETURN
STA: 17+77.25 NORVILLE DRIVE = SHAGGY GRV
STA: 18+33.26 LT CURB RETURN
PVI STA: 19+12.64
STA: 19+51.52 LT & RT CURB RETURN
STA: 19+76.52 LT & RT GUTTER
STA: 19+51.52 SHAGGY GRV = STA: 1+00.00 LANTERN LP
PVI STA = 16+67.70
PVI ELEV = 998.20
A.D. = -4.50
K = 29.00
130.50' V.C.
PVC STA:16+02.45
PVC ELEV: 994.78
PVT STA:17+32.95
PVT ELEV: 998.69
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
PROPOSED RT & LT TOP OF CURB
0.75%
-0.75%
-0.75% (LT)
-1.78% (RT)
EXISTING TOP OF CURB
0.75%
-0.75%
-2.25%
-0.75% (LT)
0.75% (LT)
2.25%
3.75%
5.25%
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
-2.25% (RT)
2.25% (RT)
-0.75% (RT)
-2.25% (RT)
0.75% (RT)
MORGAN MEADOWS UNIT 10A (PLAT # 25-11800377)
TOP OF CURB LEFT
989.79
989.67
989.61
989.48
989.30
989.21
989.14
989.07
989.14
989.30
989.48
990.05
990.06
991.72
992.03
990.38
994.65
996.89
998.26
998.58
1000.92
999.57
999.95
1001.51
999.76
999.75
TOP OF CURB RIGHT
989.79
989.67
989.61
989.48
988.94
989.21
987.88 PVMT
987.80 PVMT
987.88 PVMT
988.90 PVMT
990.05
990.06
991.72
992.03
990.38
994.65
996.89
998.26
998.58
998.82
999.20
1000.92
999.57
999.95
1001.51
999.76
999.75
998.72 PVMT 998.98 PVMT
13+00
14+00
15+00
16+00
17+00
18+00
19+00
20+00

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Engineering & Design
www.colliersengineering.com

Formerly Known as KFW ENGINEERS + SURVEYING

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
-	-	-	-

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering & Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: ST2054113

SHEET TITLE:
NORVILLE DR & SHAGGY GRV PLAN & PROFILE

SHEET NUMBER:
6.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

BEXAR COUNTY R.O.W. NOTE

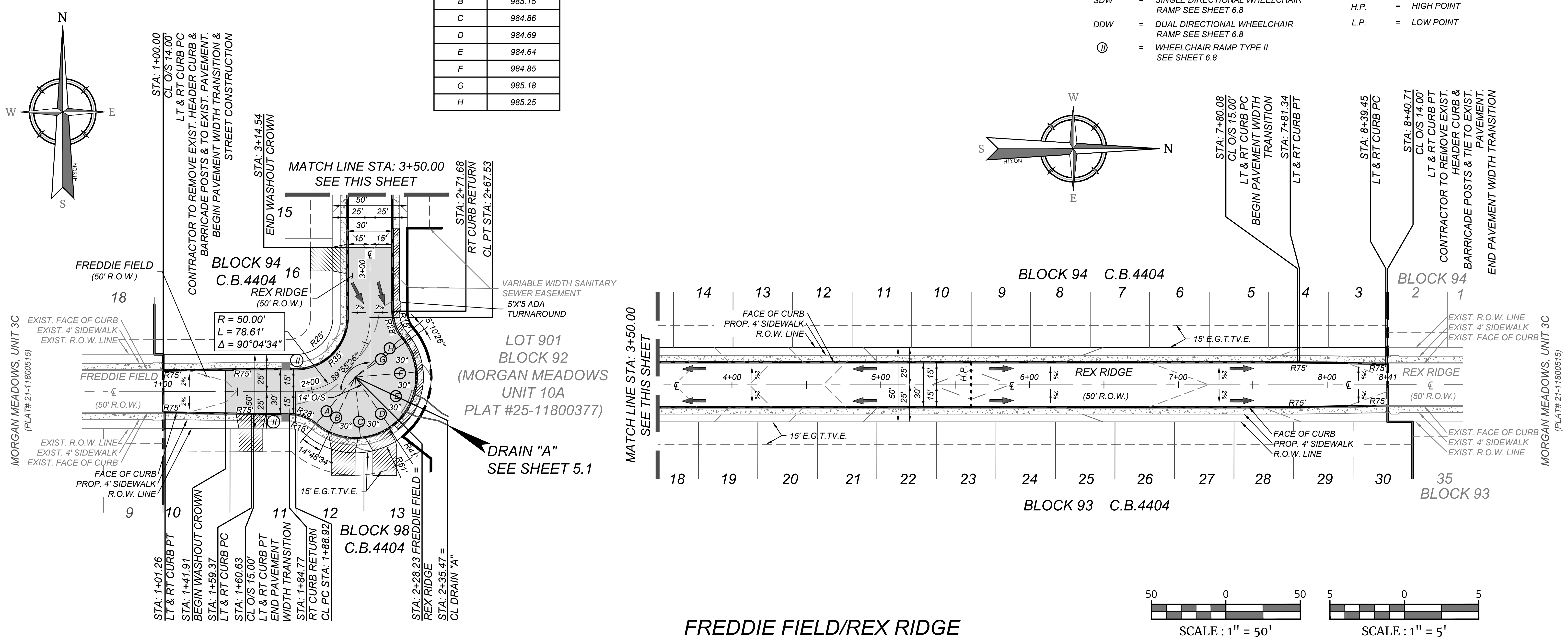
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

KNUCKLESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	985.33
B	985.15
C	984.86
D	984.69
E	984.64
F	984.85
G	985.18
H	985.25

LEGEND

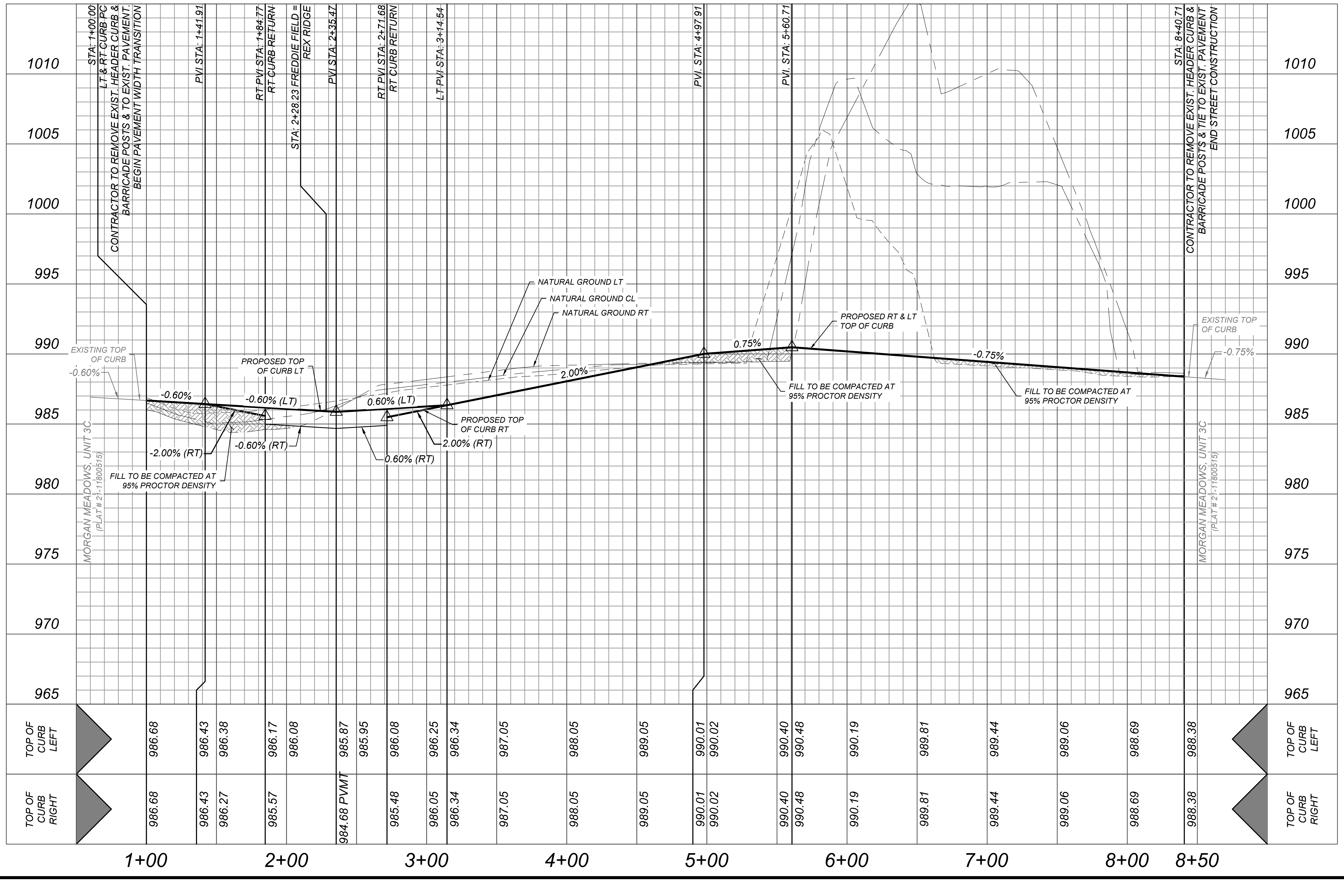
R.O.W.	=	RIGHT OF WAY
E.G.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡	=	FLOW ARROW
▭	=	WASHOUT CROWN
SDW	=	SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW	=	DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
(II)	=	WHEELCHAIR RAMP TYPE II SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT
L.P.	=	LOW POINT


N
S
W
E
MATCH LINE STA: 3+50.00
SEE THIS SHEET
STA: 1+00.00
CL O/S 14.00'
LT & RT CURB PC
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TO EXIST. PAVEMENT. BEGIN PAVEMENT WIDTH TRANSITION & STREET CONSTRUCTION
STA: 3+14.54
END WASHOUT CROWN
STA: 2+71.68
RT CURB RETURN
CL PT STA: 2+67.53
FREDDIE FIELD
(50' R.O.W.)
BLOCK 94
C.B.4404
REX RIDGE
(50' R.O.W.)
R = 50.00'
L = 78.61'
Δ = 90°04'34"
VARIABLE WIDTH SANITARY SEWER EASEMENT
5'X5 ADA TURNAROUND
LOT 901
BLOCK 92
(MORGAN MEADOWS UNIT 10A PLAT #25-11800377)
DRAIN "A"
SEE SHEET 5.1
EXIST. FACE OF CURB
EXIST. 4' SIDEWALK
EXIST. R.O.W. LINE
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
BLOCK 98
C.B.4404
STA: 1+01.26
LT & RT CURB PT
STA: 1+41.91
BEGIN WASHOUT CROWN
STA: 1+59.37
LT & RT CURB PC
STA: 1+60.63
CL O/S 15.00'
LT & RT CURB PT
END PAVEMENT WIDTH TRANSITION
STA: 1+84.77
RT CURB RETURN
CL PC STA: 1+88.92
STA: 2+28.23 FREDDIE FIELD = REX RIDGE
STA: 2+35.47 =
CL DRAIN "A"
STA: 7+80.08
CL O/S 15.00'
LT & RT CURB PC
BEGIN PAVEMENT WIDTH TRANSITION
STA: 7+81.34
LT & RT CURB PT
STA: 8+39.45
LT & RT CURB PC
STA: 8+40.71
CL O/S 14.00'
LT & RT CURB PT
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TIE TO EXIST. PAVEMENT. END PAVEMENT WIDTH TRANSITION
MATCH LINE STA: 3+50.00
SEE THIS SHEET
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 94
BLOCK 93
REX RIDGE
(50' R.O.W.)
H.P.
4+00
5+00
6+00
7+00
8+00
8+41
R75'
15' E.G.T.TV.E.

SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

SCALE : 1" = 5'
VERTICAL

FREDDIE FIELD/REX RIDGE
STA: 1+00.00 - END


1010
1005
1000
995
990
985
980
975
970
965
STA: 1+00.00
LT & RT CURB PC
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TO EXIST. PAVEMENT. BEGIN PAVEMENT WIDTH TRANSITION
PVI STA: 1+41.91
RT PVI STA: 1+84.77
RT CURB RETURN
STA: 2+28.23 FREDDIE FIELD = REX RIDGE
PVI STA: 2+35.47
RT PVI STA: 2+71.68
RT CURB RETURN
LT PVI STA: 3+14.54
PVI STA: 4+97.91
PVI STA: 5+60.71
STA: 8+40.71
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TIE TO EXIST. PAVEMENT. END STREET CONSTRUCTION
EXISTING TOP OF CURB
-0.60%
-0.60%
PROPOSED TOP OF CURB LT
-0.60% (LT)
-2.00% (RT)
-0.60% (RT)
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
0.60% (LT)
0.60% (RT)
2.00% (RT)
PROPOSED TOP OF CURB RT
2.00%
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
0.75%
PROPOSED RT & LT TOP OF CURB
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
-0.75%
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
EXISTING TOP OF CURB
-0.75%
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
8+50

TOP OF CURB LEFT	986.68	986.43	986.38	986.17	986.08	985.87	985.95	986.08	986.25	986.34	987.05	988.05	989.05	990.01	990.02	990.40	990.48	990.19	989.81	989.44	989.06	988.69	988.38
TOP OF CURB RIGHT	986.68	986.43	986.27	985.57		984.68 PVMT		985.48	986.05	986.34	987.05	988.05	989.05	990.01	990.02	990.40	990.48	990.19	989.81	989.44	989.06	988.69	988.38

Colliers

Engineering
& Design

www.colliersengineering.com

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ENGINEERS + SURVEYING

811
Know what's below.
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PROTECT YOURSELF
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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378

FOR

TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	ST2054113

SHEET TITLE:
FREDDIE FIELD & REX
RIDGE PLAN & PROFILE

SHEET NUMBER:
6.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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BEXAR COUNTY R.O.W. NOTE

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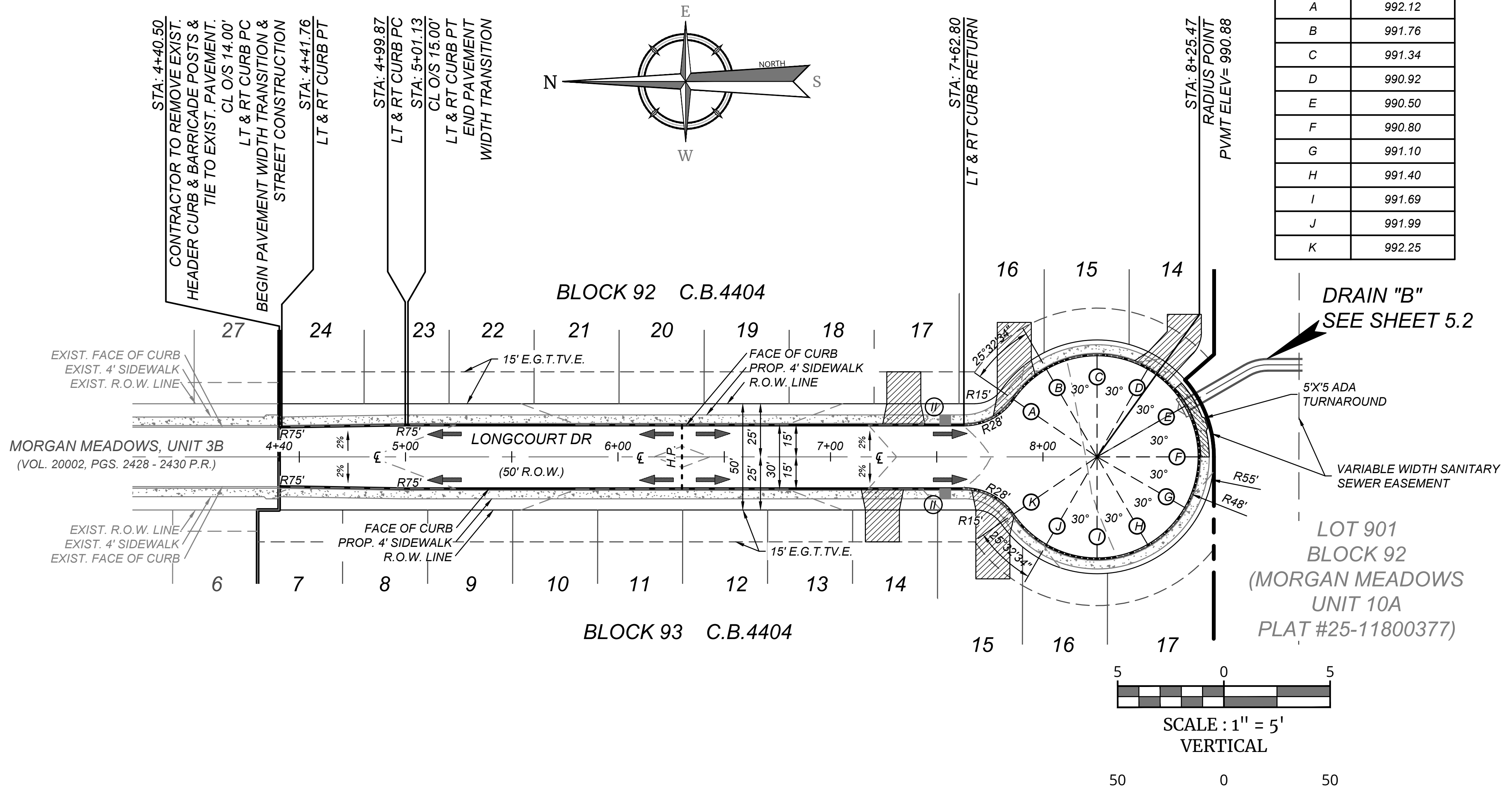
CULDESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	992.12
B	991.76
C	991.34
D	990.92
E	990.50
F	990.80
G	991.10
H	991.40
I	991.69
J	991.99
K	992.25



STA: 4+40.50
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TIE TO EXIST. PAVEMENT.
CL O/S 14.00'
LT & RT CURB PC
BEGIN PAVEMENT WIDTH TRANSITION & STREET CONSTRUCTION
STA: 4+41.76
LT & RT CURB PT
STA: 4+99.87
LT & RT CURB PC
STA: 5+01.13
CL O/S 15.00'
LT & RT CURB PT
END PAVEMENT WIDTH TRANSITION
STA: 7+62.80
LT & RT CURB RETURN
STA: 8+25.47
RADIUS POINT
PVMT ELEV= 990.88
N
E
S
W
NORTH
BLOCK 92 C.B.4404
BLOCK 93 C.B.4404
DRAIN "B"
SEE SHEET 5.2
5'X'5 ADA TURNAROUND
VARIABLE WIDTH SANITARY SEWER EASEMENT
LOT 901
BLOCK 92
(MORGAN MEADOWS UNIT 10A
PLAT #25-11800377)
EXIST. FACE OF CURB
EXIST. 4' SIDEWALK
EXIST. R.O.W. LINE
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
LONGCOURT DR
(50' R.O.W.)
27
24
23
22
21
20
19
18
17
16
15
14
6
7
8
9
10
11
12
13
14
15
16
17
R75'
R15'
R28'
R55'
R48'
30°

SCALE : 1" = 5'
VERTICAL

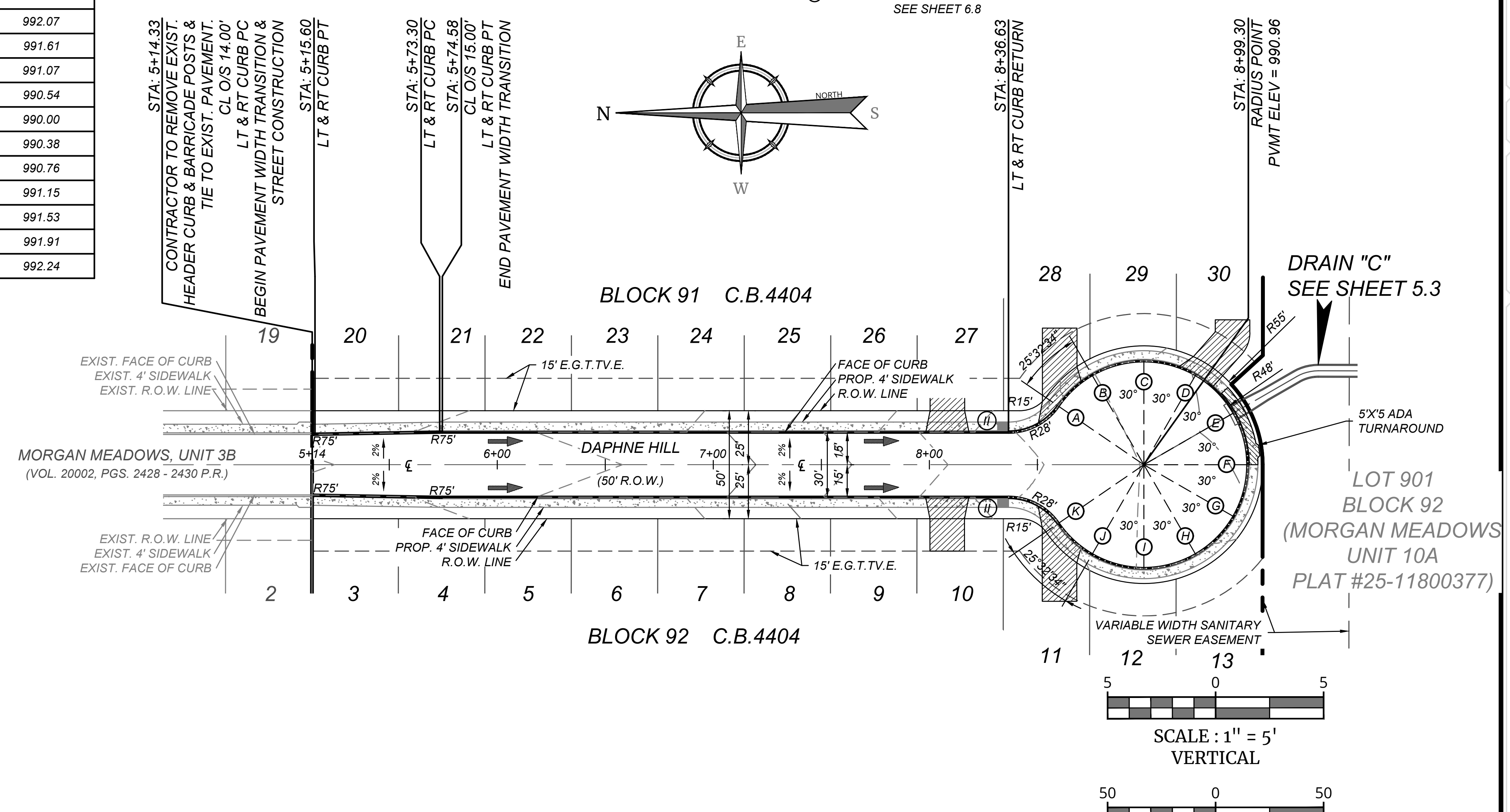
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LEGEND

R.O.W.	=	RIGHT OF WAY
E.G.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡	=	FLOW ARROW
▭	=	WASHOUT CROWN
SDW	=	SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW	=	DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
(II)	=	WHEELCHAIR RAMP TYPE II SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT
L.P.	=	LOW POINT

CULDESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	992.07
B	991.61
C	991.07
D	990.54
E	990.00
F	990.38
G	990.76
H	991.15
I	991.53
J	991.91
K	992.24

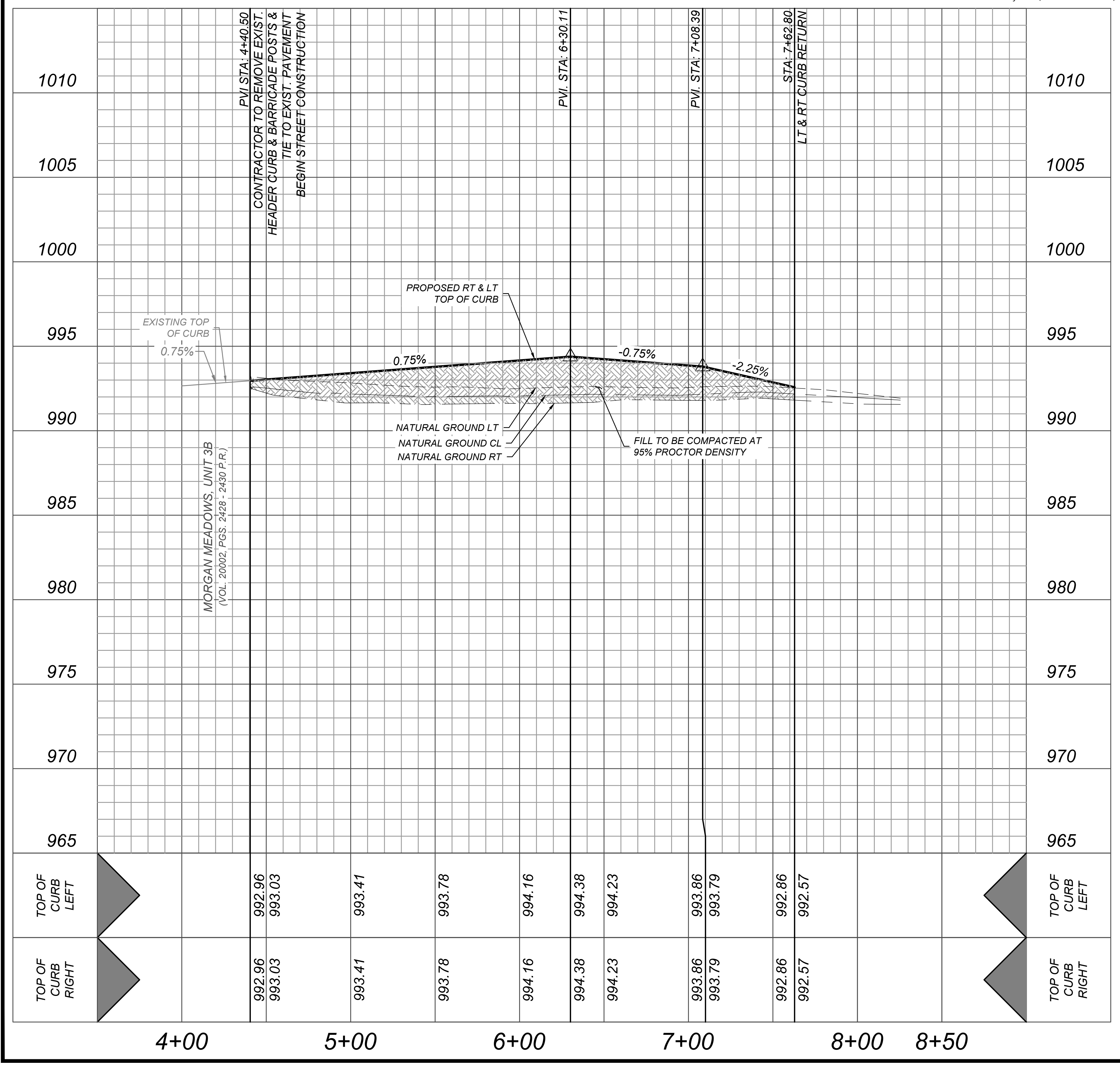


STA: 5+14.33
CONTRACTOR TO REMOVE EXIST. HEADER CURB & BARRICADE POSTS & TIE TO EXIST. PAVEMENT.
CL O/S 14.00'
LT & RT CURB PC
BEGIN PAVEMENT WIDTH TRANSITION & STREET CONSTRUCTION
STA: 5+15.60
LT & RT CURB PT
STA: 5+73.30
LT & RT CURB PC
STA: 5+74.58
CL O/S 15.00'
LT & RT CURB PT
END PAVEMENT WIDTH TRANSITION
STA: 8+36.63
LT & RT CURB RETURN
STA: 8+99.30
RADIUS POINT
PVMT ELEV = 990.96
N
E
S
W
NORTH
BLOCK 91 C.B.4404
BLOCK 92 C.B.4404
DRAIN "C"
SEE SHEET 5.3
5'X5 ADA TURNAROUND
VARIABLE WIDTH SANITARY SEWER EASEMENT
LOT 901
BLOCK 92
(MORGAN MEADOWS
UNIT 10A
PLAT #25-11800377)
EXIST. FACE OF CURB
EXIST. 4' SIDEWALK
EXIST. R.O.W. LINE
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
DAPHNE HILL
(50' R.O.W.)
19
20
21
22
23
24
25
26
27
28
29
30
2
3
4
5
6
7
8
9
10
11
12
13
R75'
R15'
R28'
R55'
R48'
30°

SCALE : 1" = 5'
VERTICAL

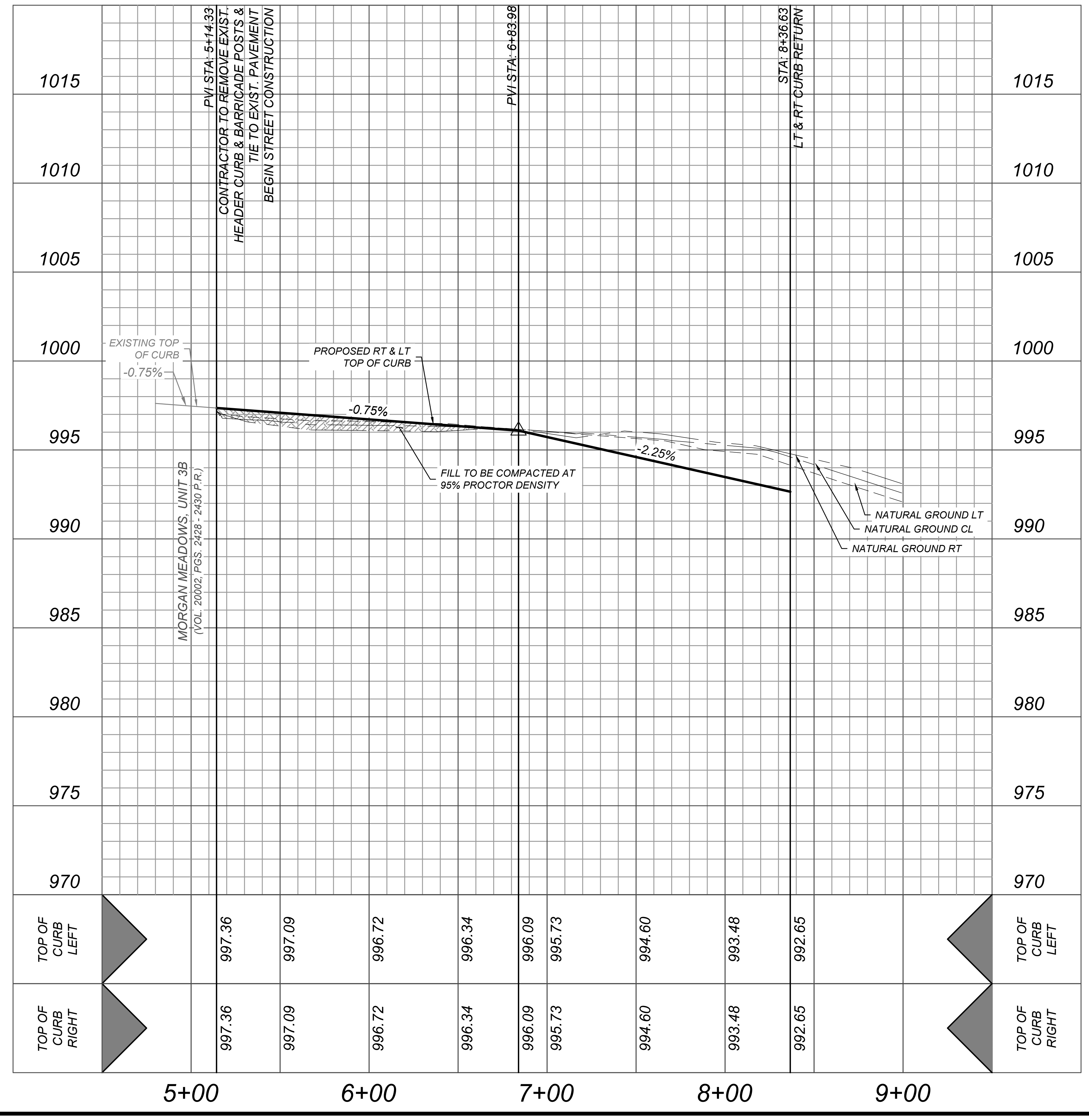
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LONGCOURT DR.
STA: 4+40.50 - END



TOP OF CURB LEFT	992.96	993.03	993.41	993.78	994.16	994.38	994.23	993.86	993.79	992.86	992.57
TOP OF CURB RIGHT	992.96	993.03	993.41	993.78	994.16	994.38	994.23	993.86	993.79	992.86	992.57

DAPHNE HILL
STA: 5+14.33 - END



TOP OF CURB LEFT	997.36	997.09	996.72	996.34	996.09	995.73	994.60	993.48	992.65
TOP OF CURB RIGHT	997.36	997.09	996.72	996.34	996.09	995.73	994.60	993.48	992.65

Colliers
Engineering
& Design

www.colliersengineering.com

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

SAN ANTONIO (KFW)
3421 Paesanos
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San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	ST2054113

SHEET TITLE:
LONGCOURT DR & DAPHNE HILL PLAN & PROFILE

SHEET NUMBER:
6.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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BEXAR COUNTY R.O.W. NOTE

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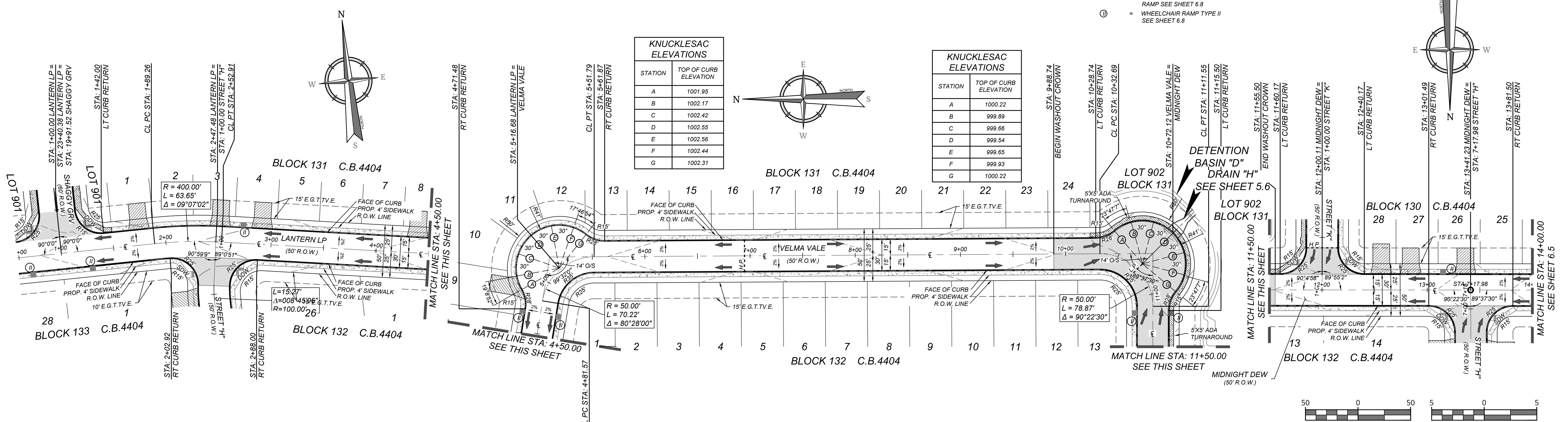
LEGEND

R.O.W.	=	RIGHT OF WAY
E.G.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡	=	FLOW ARROW
▭	=	WASHOUT CROWN
SDW	=	SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW	=	DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
Ⓘⓘ	=	WHEELCHAIR RAMP TYPE II SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT
L.P.	=	LOW POINT



BLOCK 131 C.B.4404
BLOCK 132 C.B.4404
BLOCK 133 C.B.4404
BLOCK 130 C.B.4404
LOT 901
LOT 902 BLOCK 131
LANTERN LP (50' R.O.W.)
VELMA VALE (50' R.O.W.)
STREET "H" (50' R.O.W.)
STREET "K" (50' R.O.W.)
SHAGGY GRV (50' R.O.W.)
MIDNIGHT DEW (50' R.O.W.)
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
10' E.G.T.TV.E.
R = 400.00' L = 63.65' Δ = 09°07'02"
L=15.27' Δ=008°45'06" R=100.00'
R = 50.00' L = 70.22' Δ = 80°28'00"
R = 50.00' L = 78.87' Δ = 90°22'30"
5'X5' ADA TURNAROUND
DETENTION BASIN "D" DRAIN "H" SEE SHEET 5.6
MATCH LINE STA: 4+50.00 SEE THIS SHEET
MATCH LINE STA: 11+50.00 SEE THIS SHEET
MATCH LINE STA: 14+00.00 SEE SHEET 6.5
STA: 1+00.00 LANTERN LP = STA: 23+40.38 LANTERN LP = STA: 19+91.52 SHAGGY GRV
STA: 1+42.00 LT CURB RETURN
CL PC STA: 1+89.26
STA: 2+02.92 RT CURB RETURN
STA: 2+47.48 LANTERN LP = STA: 1+00.00 STREET "H"
CL PT STA: 2+52.91
STA: 2+88.00 RT CURB RETURN
STA: 4+71.48 RT CURB RETURN
STA: 5+16.68 LANTERN LP = VELMA VALE
CL PC STA: 4+81.57
CL PT STA: 5+51.79
STA: 5+61.87 RT CURB RETURN
STA: 9+88.74 BEGIN WASHOUT CROWN
STA: 10+28.74 LT CURB RETURN
CL PC STA: 10+32.69
STA: 10+72.12 VELMA VALE = MIDNIGHT DEW
CL PT STA: 11+11.55
STA: 11+15.50 LT CURB RETURN
STA: 11+55.50 END WASHOUT CROWN
STA: 11+60.17 LT CURB RETURN
STA: 12+00.11 MIDNIGHT DEW = STA: 1+00.00 STREET "K"
STA: 12+40.17 LT CURB RETURN
STA: 13+01.49 RT CURB RETURN
STA: 13+41.23 MIDNIGHT DEW = STA: 7+17.98 STREET "H"
STA: 13+81.50 RT CURB RETURN

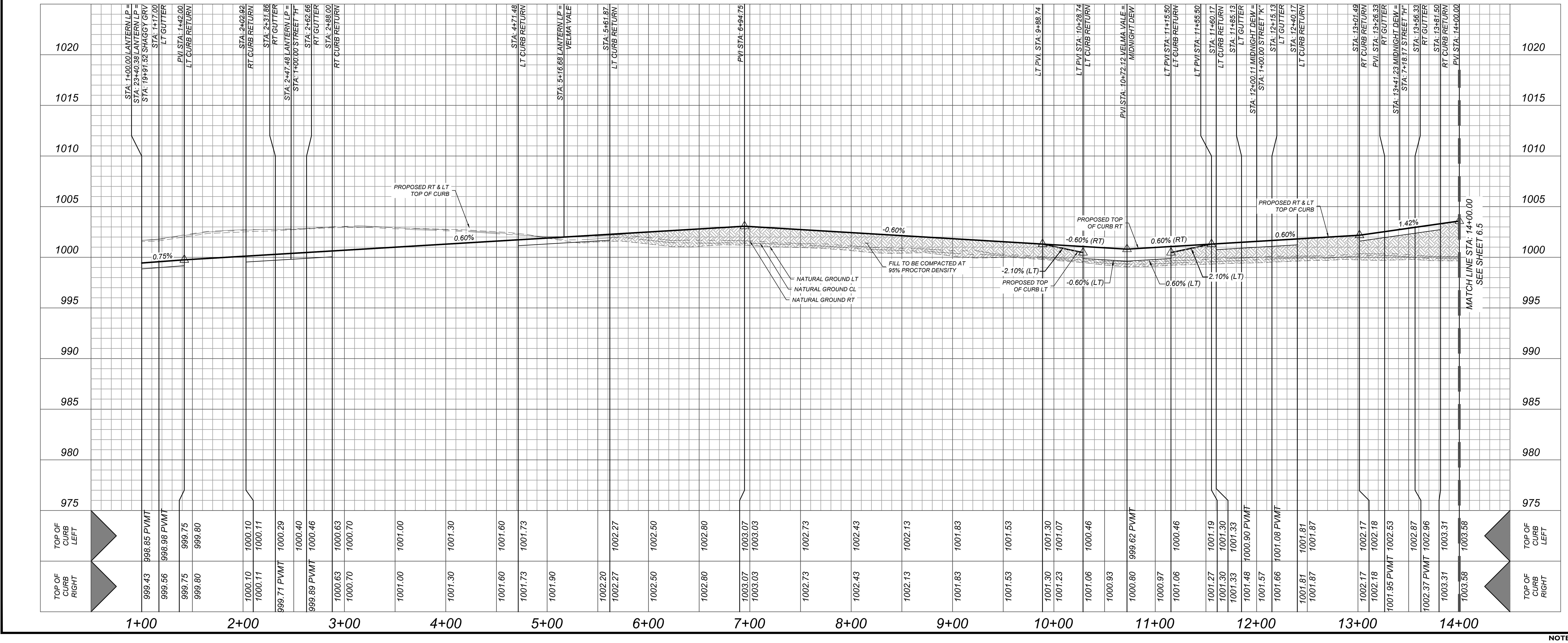
KNUCKLESAC ELEVATIONS	
STATION	TOP OF CURB ELEVATION
A	1001.95
B	1002.17
C	1002.42
D	1002.55
E	1002.56
F	1002.44
G	1002.31

KNUCKLESAC ELEVATIONS	
STATION	TOP OF CURB ELEVATION
A	1000.22
B	999.89
C	999.66
D	999.54
E	999.65
F	999.93
G	1000.22

SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

SCALE : 1" = 5'
VERTICAL

LANTERN LP/VELMA VALE/MIDNIGHT DEW
STA: 1+00.00 - STA: 14+00.00



1020
1015
1010
1005
1000
995
990
985
980
975
PROPOSED RT & LT TOP OF CURB
0.75%
0.60%
-0.60%
-0.60% (RT)
0.60% (RT)
0.60%
1.42%
PROPOSED TOP OF CURB RT
-2.10% (LT)
PROPOSED TOP OF CURB LT
-0.60% (LT)
0.60% (LT)
2.10% (LT)
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
PVI STA: 6+94.75
MATCH LINE STA: 14+00.00 SEE SHEET 6.5
TOP OF CURB LEFT
TOP OF CURB RIGHT
1+00
2+00
3+00
4+00
5+00
6+00
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	ST2054113

SHEET TITLE:
LANTERN LP, VELMA VALE,
MIDNIGHT DEW PLAN & PROFILE

SHEET NUMBER:
6.4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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 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. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES 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!!:

THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

BEXAR COUNTY R.O.W. NOTE

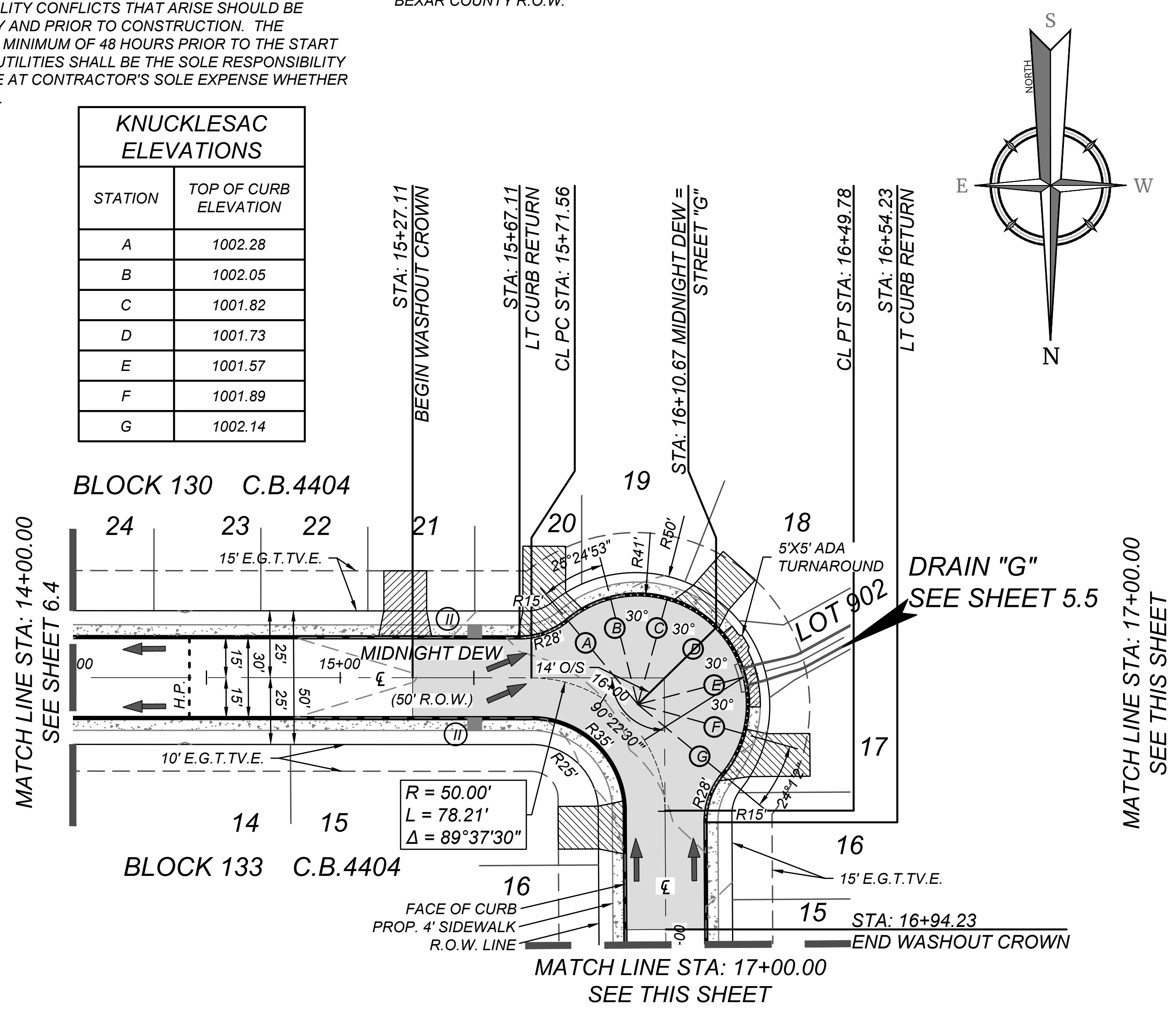
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

LEGEND

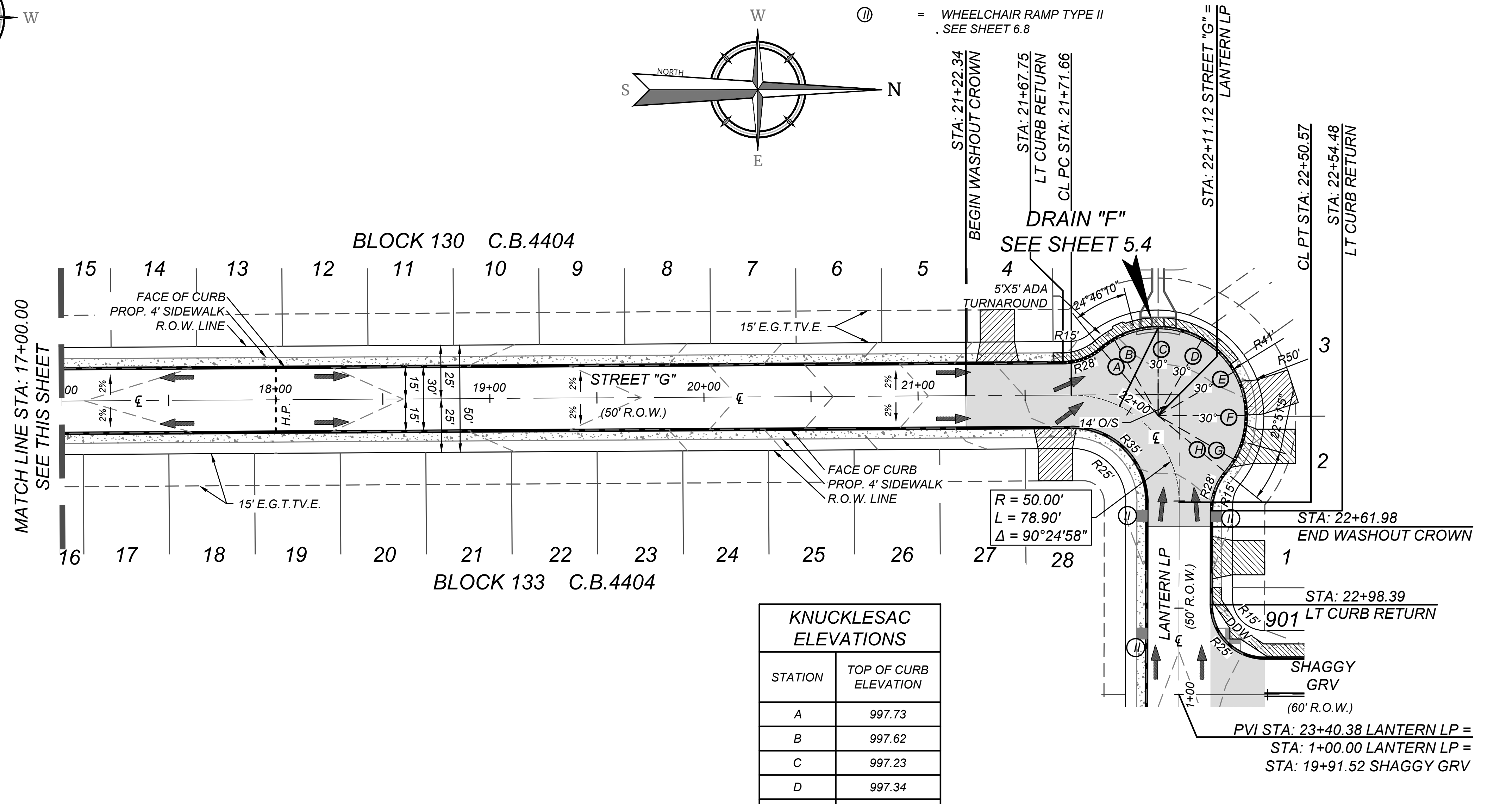
R.O.W.	=	RIGHT OF WAY
E.G.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡	=	FLOW ARROW
▭	=	WASHOUT CROWN
SDW	=	SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW	=	DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
(II)	=	WHEELCHAIR RAMP TYPE II , SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT
L.P.	=	LOW POINT

KNUCKLESAC ELEVATIONS

STATION	TOP OF CURB ELEVATION
A	1002.28
B	1002.05
C	1001.82
D	1001.73
E	1001.57
F	1001.89
G	1002.14



N
S
E
W
STA: 15+27.11 BEGIN WASHOUT CROWN
STA: 15+67.11 LT CURB RETURN
CL PC STA: 15+71.56
STA: 16+10.67 MIDNIGHT DEW = STREET "G"
CL PT STA: 16+49.78
STA: 16+54.23 LT CURB RETURN
BLOCK 130 C.B.4404
24
23
22
21
20
19
18
17
16
15
14
15' E.G.T.TV.E.
10' E.G.T.TV.E.
MIDNIGHT DEW
(50' R.O.W.)
15+00
H.P.
5'X5' ADA TURNAROUND
LOT 902
DRAIN "G" SEE SHEET 5.5
14' O/S
R = 50.00'
L = 78.21'
Δ = 89°37'30"
BLOCK 133 C.B.4404
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
STA: 16+94.23 END WASHOUT CROWN
MATCH LINE STA: 17+00.00 SEE THIS SHEET
MATCH LINE STA: 14+00.00 SEE SHEET 6.4



W
E
S
N
NORTH
STA: 21+22.34 BEGIN WASHOUT CROWN
STA: 21+67.75 LT CURB RETURN
CL PC STA: 21+71.66
STA: 22+11.12 STREET "G" = LANTERN LP
CL PT STA: 22+50.57
STA: 22+54.48 LT CURB RETURN
DRAIN "F" SEE SHEET 5.4
BLOCK 130 C.B.4404
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
5'X5' ADA TURNAROUND
STREET "G"
(50' R.O.W.)
18+00
19+00
20+00
21+00
H.P.
14' O/S
R = 50.00'
L = 78.90'
Δ = 90°24'58"
16
17
18
19
20
21
22
23
24
25
26
27
28
BLOCK 133 C.B.4404
MATCH LINE STA: 17+00.00 SEE THIS SHEET
LANTERN LP
(60' R.O.W.)
STA: 22+61.98 END WASHOUT CROWN
STA: 22+98.39 LT CURB RETURN
901
SHAGGY GRV
(60' R.O.W.)
1+00
PVI STA: 23+40.38 LANTERN LP = STA: 1+00.00 LANTERN LP = STA: 19+91.52 SHAGGY GRV

KNUCKLESAC ELEVATIONS

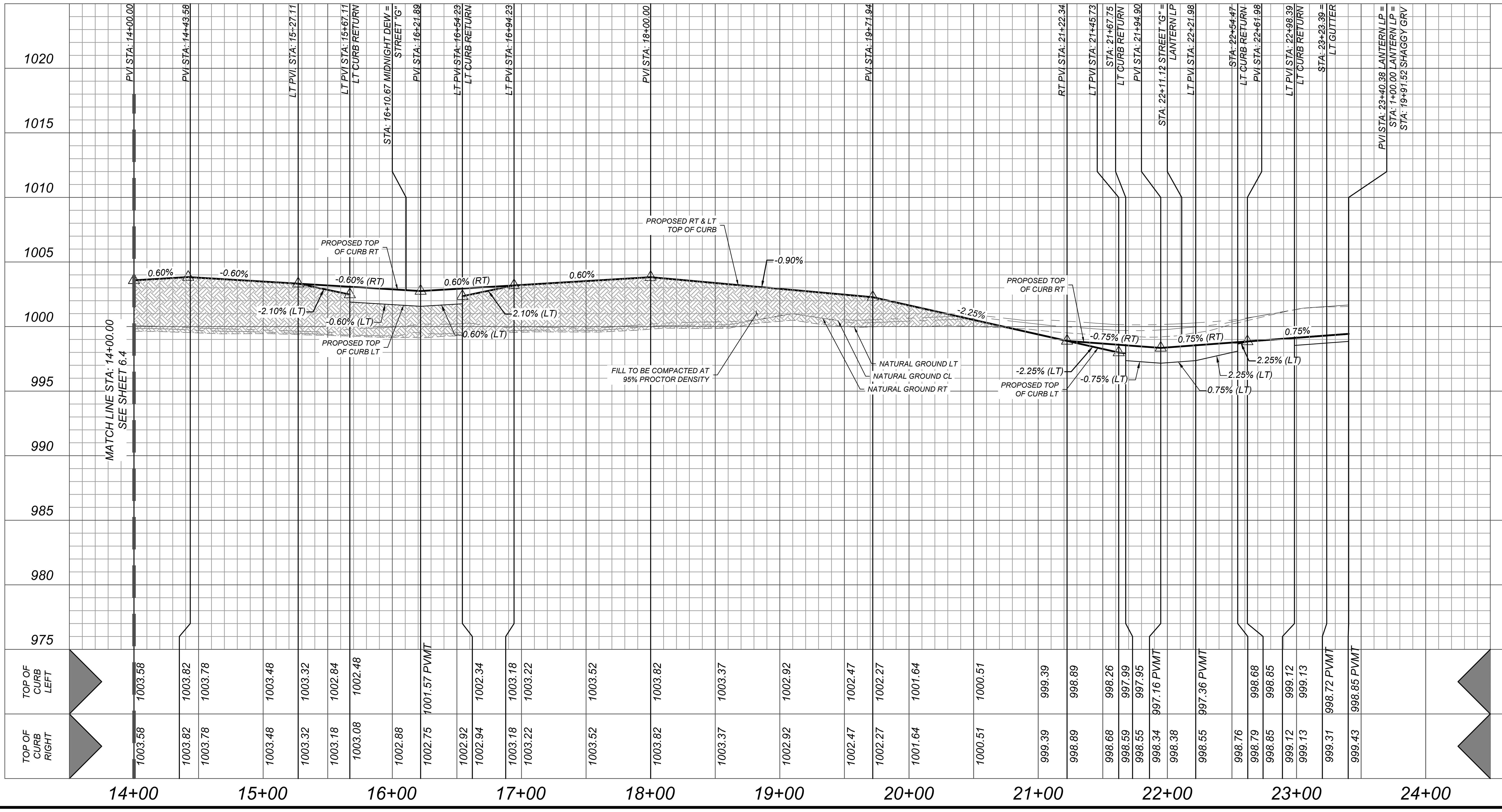
STATION	TOP OF CURB ELEVATION
A	997.73
B	997.62
C	997.23
D	997.34
E	997.42
F	997.68
G	998.10
H	998.23

50 0 50
SCALE : 1" = 50'
HORIZONTAL

5 0 5
SCALE : 1" = 5'
VERTICAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

MIDNIGHT DEW/STREET "G"/LANTERN LP
STA: 14+00.00 - END



PVI STA: 14+00.00
PVI STA: 14+43.58
LT PVI STA: 15+27.11
LT PVI STA: 15+67.11 LT CURB RETURN
STA: 16+10.67 MIDNIGHT DEW = STREET "G"
PVI STA: 16+21.89
LT PVI STA: 16+54.23 LT CURB RETURN
LT PVI STA: 16+94.23
PVI STA: 18+00.00
PVI STA: 19+71.94
RT PVI STA: 21+22.34
LT PVI STA: 21+45.73
STA: 21+67.75 LT CURB RETURN
PVI STA: 21+94.90
STA: 22+11.12 STREET "G" = LANTERN LP
LT PVI STA: 22+21.98
STA: 22+54.47 LT CURB RETURN
STA: 22+61.98
LT PVI STA: 22+98.39 LT CURB RETURN
STA: 23+23.39 LT GUTTER
PVI STA: 23+40.38 LANTERN LP = STA: 1+00.00 LANTERN LP = STA: 19+91.52 SHAGGY GRV
1020
1015
1010
1005
1000
995
990
985
980
975
0.60%
-0.60%
-0.60% (RT)
0.60% (RT)
0.60%
-0.90%
-2.10% (LT)
-0.60% (LT)
0.60% (LT)
2.10% (LT)
-2.25%
-0.75% (RT)
0.75% (RT)
0.75%
-2.25% (LT)
-0.75% (LT)
2.25% (LT)
2.25% (LT)
0.75% (LT)
PROPOSED TOP OF CURB RT
PROPOSED TOP OF CURB LT
PROPOSED RT & LT TOP OF CURB
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
MATCH LINE STA: 14+00.00 SEE SHEET 6.4
TOP OF CURB LEFT
1003.58
1003.82
1003.78
1003.48
1003.32
1002.84
1002.48
1001.57 PVMT
1002.34
1003.18
1003.22
1003.52
1003.82
1003.37
1002.92
1002.47
1002.27
1001.64
1000.51
999.39
998.89
998.26
997.99
997.95
997.16 PVMT
997.36 PVMT
998.68
998.85
999.12
999.13
998.72 PVMT
998.85 PVMT
TOP OF CURB RIGHT
1003.58
1003.82
1003.78
1003.48
1003.32
1003.18
1003.08
1002.88
1002.75
1002.92
1002.94
1003.18
1003.22
1003.52
1003.82
1003.37
1002.92
1002.47
1002.27
1001.64
1000.51
999.39
998.89
998.68
998.59
998.55
998.34
998.38
998.55
998.76
998.79
998.85
999.12
999.13
999.31
999.43
14+00
15+00
16+00
17+00
18+00
19+00
20+00
21+00
22+00
23+00
24+00

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering & Design
SAN ANTONIO (KFW)
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Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: ST2054113

SHEET TITLE:
MIDNIGHT DEW, STREET "G",
LANTERN LP PLAN & PROFILE

SHEET NUMBER:
6.5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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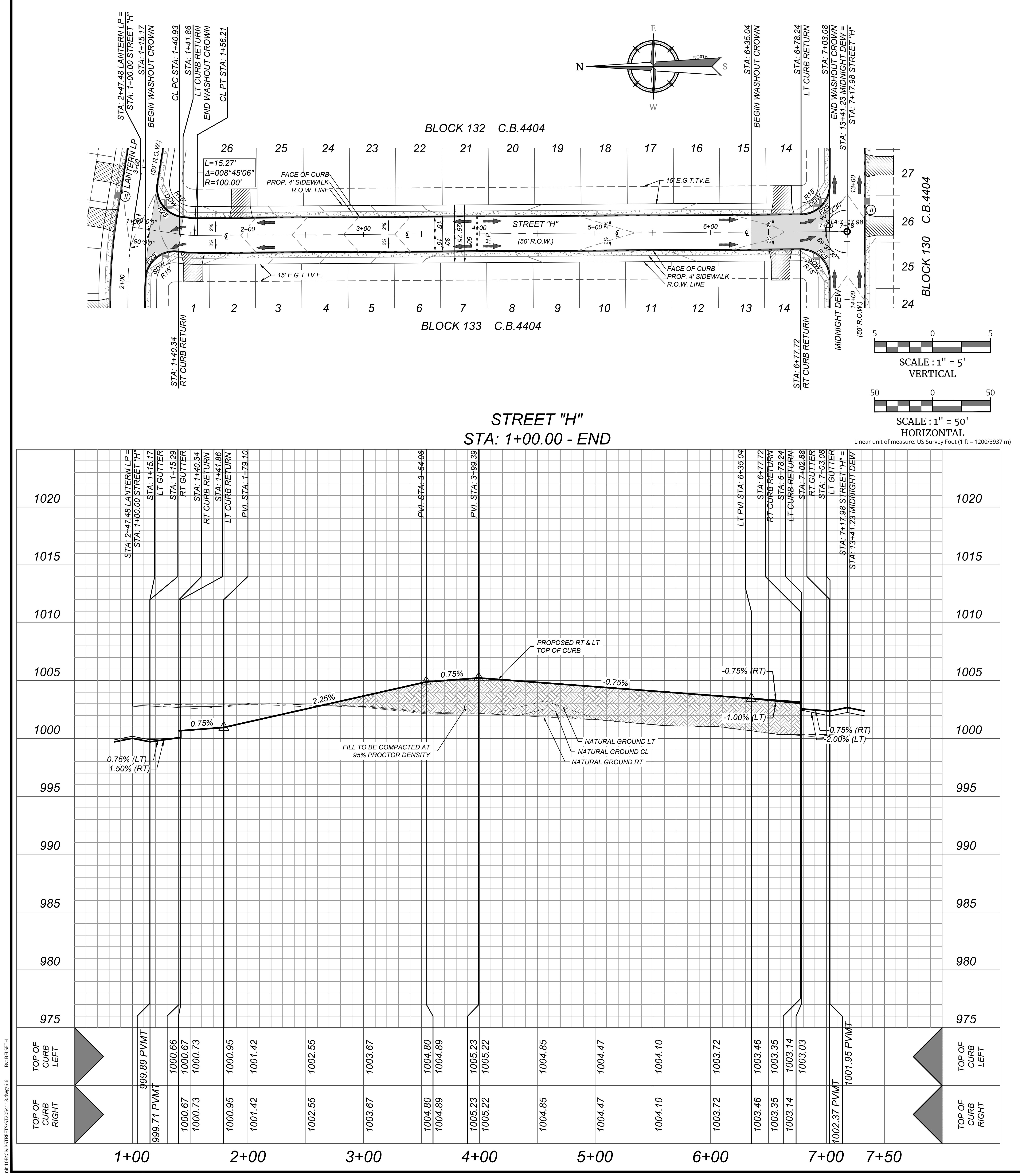
BEXAR COUNTY R.O.W. NOTE

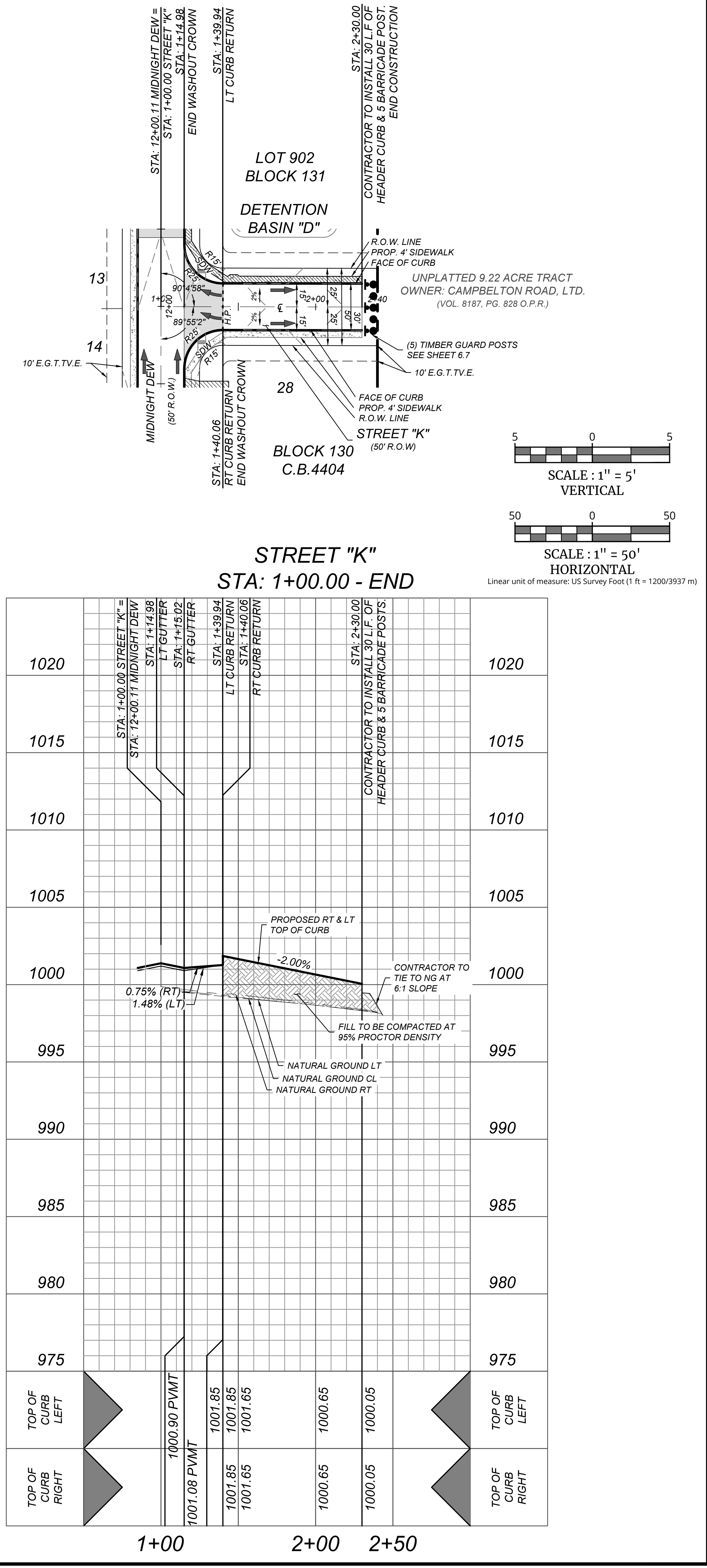
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY R.O.W.

LEGEND

R.O.W.	=	RIGHT OF WAY
E.G.T.TV.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
➡	=	FLOW ARROW
▭	=	WASHOUT CROWN
SDW	=	SINGLE DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
DDW	=	DUAL DIRECTIONAL WHEELCHAIR RAMP SEE SHEET 6.8
Ⓘⅰ	=	WHEELCHAIR RAMP TYPE II SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION
H.P.	=	HIGH POINT
L.P.	=	LOW POINT


STA: 2+47.48 LANTERN LP =
STA: 1+00.00 STREET "H"
STA: 1+15.17
BEGIN WASHOUT CROWN
CL PC STA: 1+40.93
STA: 1+41.86
LT CURB RETURN
END WASHOUT CROWN
CL PT STA: 1+56.21
STA: 6+35.04
BEGIN WASHOUT CROWN
STA: 6+78.24
LT CURB RETURN
STA: 7+03.08
END WASHOUT CROWN
STA: 13+41.23 MIDNIGHT DEW =
STA: 7+17.98 STREET "H"
N
E
S
W
NORTH
BLOCK 132 C.B.4404
BLOCK 133 C.B.4404
BLOCK 130 C.B.4404
LANTERN LP
(50' R.O.W.)
L=15.27'
Δ=008°45'06"
R=100.00'
FACE OF CURB
PROP. 4' SIDEWALK
R.O.W. LINE
15' E.G.T.TV.E.
STREET "H"
(50' R.O.W.)
H.P.
MIDNIGHT DEW
STA: 1+40.34
RT CURB RETURN
STA: 6+77.72
RT CURB RETURN
5 0 5
SCALE : 1" = 5'
VERTICAL
50 0 50
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)
PROPOSED RT & LT TOP OF CURB
2.25%
0.75%
-0.75%
-0.75% (RT)
-1.00% (LT)
-0.75% (RT)
-2.00% (LT)
0.75% (LT)
1.50% (RT)
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
PVI: STA: 3+54.06
PVI: STA: 3+99.39
LT PVI STA: 6+35.04
TOP OF CURB LEFT
999.89 PVMT
1000.66
1000.67
1000.73
1000.95
1001.42
1002.55
1003.67
1004.80
1004.89
1005.23
1005.22
1004.85
1004.47
1004.10
1003.72
1003.46
1003.35
1003.14
1003.03
1001.95 PVMT
TOP OF CURB RIGHT
999.71 PVMT
1000.67
1000.73
1000.95
1001.42
1002.55
1003.67
1004.80
1004.89
1005.23
1005.22
1004.85
1004.47
1004.10
1003.72
1003.46
1003.35
1003.14
1003.03
1002.37 PVMT
1+00
2+00
3+00
4+00
5+00
6+00
7+00
7+50
1020
1015
1010
1005
1000
995
990
985
980
975

STREET "H"
STA: 1+00.00 - END


STA: 12+00.11 MIDNIGHT DEW =
STA: 1+00.00 STREET "K"
STA: 1+14.98
END WASHOUT CROWN
STA: 1+39.94
LT CURB RETURN
STA: 2+30.00
CONTRACTOR TO INSTALL 30 L.F OF HEADER CURB & 5 BARRICADE POST.
END CONSTRUCTION
LOT 902
BLOCK 131
DETENTION BASIN "D"
UNPLATTED 9.22 ACRE TRACT
OWNER: CAMPBELTON ROAD, LTD.
(VOL. 8187, PG. 828 O.P.R.)
R.O.W. LINE
PROP. 4' SIDEWALK
FACE OF CURB
(5) TIMBER GUARD POSTS SEE SHEET 6.7
10' E.G.T.TV.E.
STREET "K"
(50' R.O.W)
BLOCK 130
C.B.4404
MIDNIGHT DEW
STA: 1+40.06
RT CURB RETURN
END WASHOUT CROWN
5 0 5
SCALE : 1" = 5'
VERTICAL
50 0 50
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)
PROPOSED RT & LT TOP OF CURB
-2.00%
0.75% (RT)
1.48% (LT)
CONTRACTOR TO TIE TO NG AT 6:1 SLOPE
FILL TO BE COMPACTED AT 95% PROCTOR DENSITY
NATURAL GROUND LT
NATURAL GROUND CL
NATURAL GROUND RT
TOP OF CURB LEFT
1000.90 PVMT
1001.85
1001.85
1001.65
1000.65
1000.05
TOP OF CURB RIGHT
1001.08 PVMT
1001.85
1001.85
1001.65
1000.65
1000.05
1+00
2+00
2+50
1020
1015
1010
1005
1000
995
990
985
980
975

STREET "K"
STA: 1+00.00 - END

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

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UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
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3421 Paesanos
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

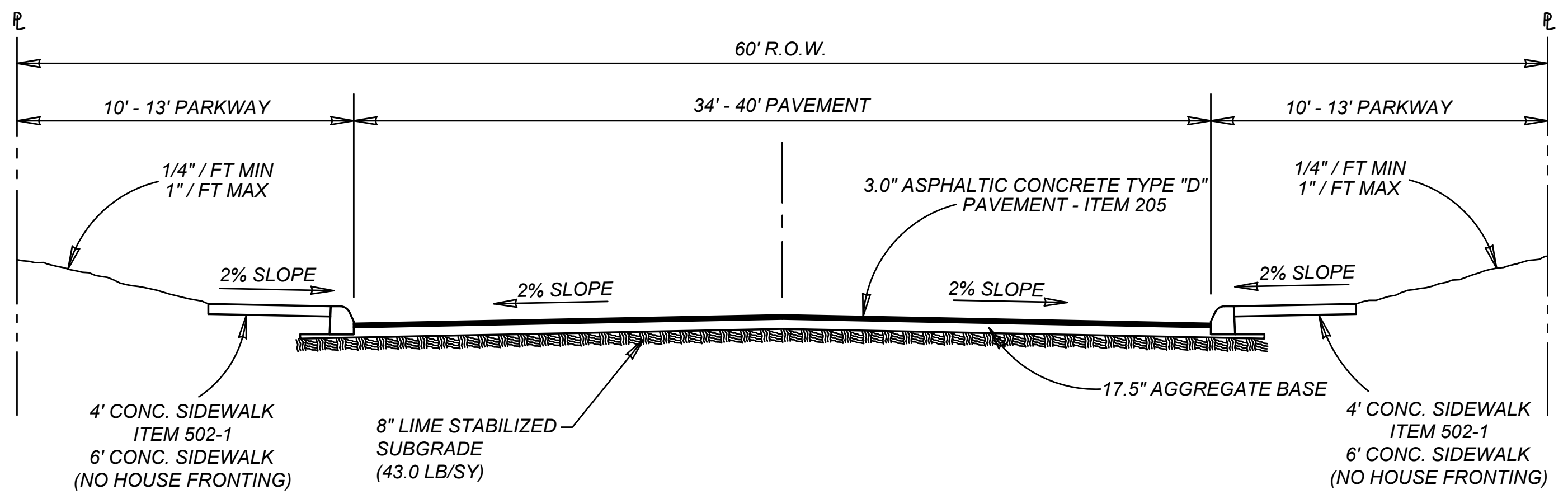
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	ST2054113

SHEET TITLE:
STREET "H" & STREET "K"
PLAN & PROFILE

SHEET NUMBER:
6.6

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


℄
℄
60' R.O.W.
10' - 13' PARKWAY
34' - 40' PAVEMENT
10' - 13' PARKWAY
1/4" / FT MIN
1" / FT MAX
3.0" ASPHALTIC CONCRETE TYPE "D"
PAVEMENT - ITEM 205
1/4" / FT MIN
1" / FT MAX
2% SLOPE
2% SLOPE
2% SLOPE
2% SLOPE
4' CONC. SIDEWALK
ITEM 502-1
6' CONC. SIDEWALK
(NO HOUSE FRONTING)
8" LIME STABILIZED
SUBGRADE
(43.0 LB/SY)
17.5" AGGREGATE BASE
4' CONC. SIDEWALK
ITEM 502-1
6' CONC. SIDEWALK
(NO HOUSE FRONTING)

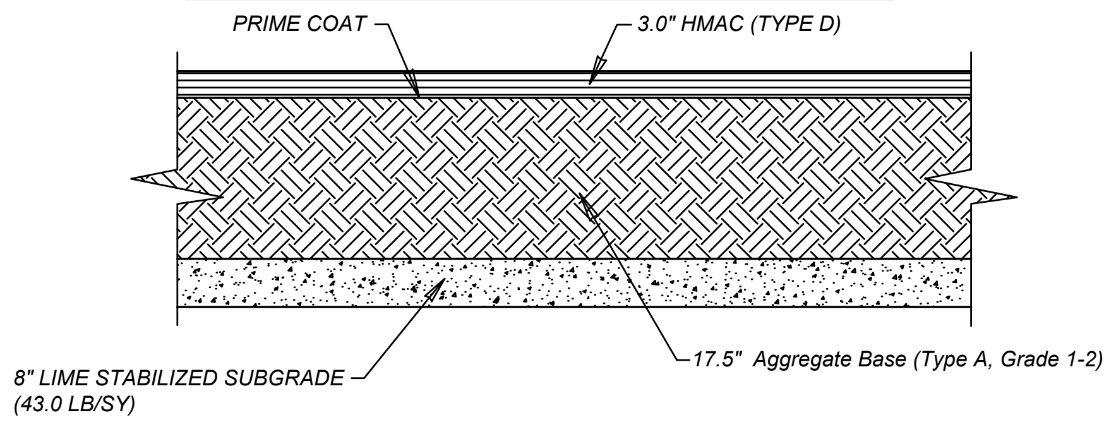
TYPICAL LOCAL "B" STREET SECTION

NOT TO SCALE

USE LOCAL "B" STREET SECTION FOR STREETS BELOW:

NORVILLE DR.: STA: 13+34.39 - 17+77.25
SHAGGY GRV: STA: 17+77.25 - END

Pavement Section
3.0" HMAC Type "D"
17.5" Aggregate Base (Type A, Grade 1-2)
8.0" Lime Stablized Subgrade (43 LBS/SY)
Total: 28.5"
Structural No: 4.41
CBR: 3.0


PRIME COAT
3.0" HMAC (TYPE D)
8" LIME STABILIZED SUBGRADE
(43.0 LB/SY)
17.5" Aggregate Base (Type A, Grade 1-2)

ASPHALT PAVEMENT DETAIL

NOT-TO-SCALE

DETAIL FOR ALL LOCAL TYPE B

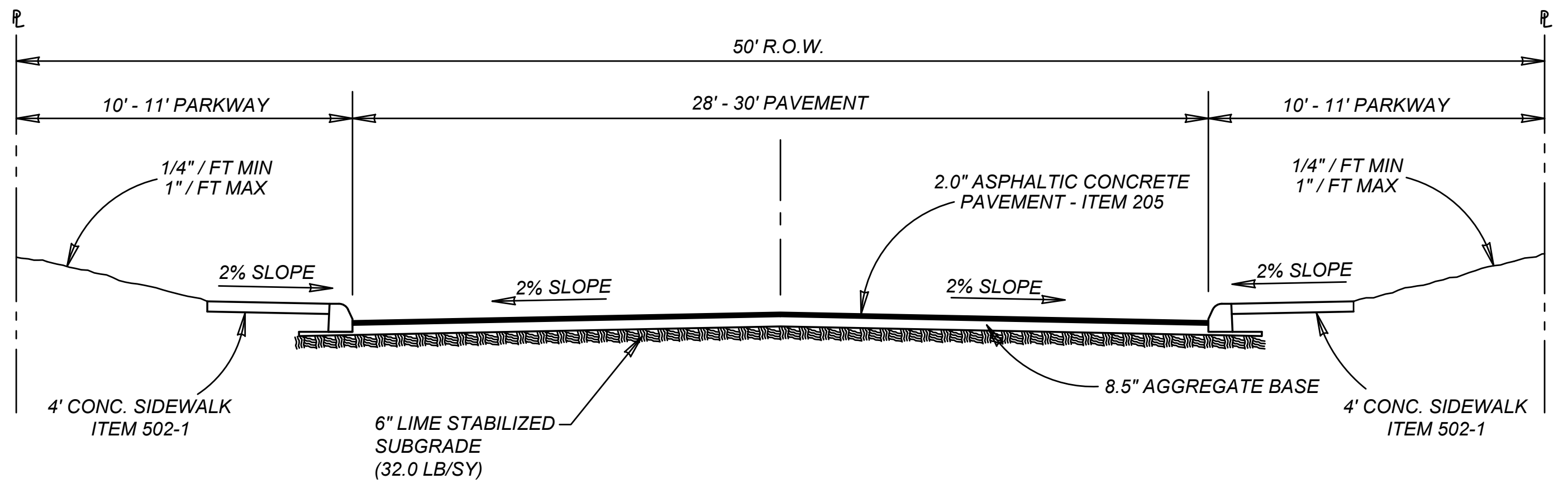
NOTES:

1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY INTEC, LLC. PROJECT NO. S251018 DATED FEBRUARY 17, 2025.

2. REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.

4. CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.


℄
℄
50' R.O.W.
10' - 11' PARKWAY
28' - 30' PAVEMENT
10' - 11' PARKWAY
1/4" / FT MIN
1" / FT MAX
2.0" ASPHALTIC CONCRETE
PAVEMENT - ITEM 205
1/4" / FT MIN
1" / FT MAX
2% SLOPE
2% SLOPE
2% SLOPE
2% SLOPE
4' CONC. SIDEWALK
ITEM 502-1
6" LIME STABILIZED
SUBGRADE
(32.0 LB/SY)
8.5" AGGREGATE BASE
4' CONC. SIDEWALK
ITEM 502-1

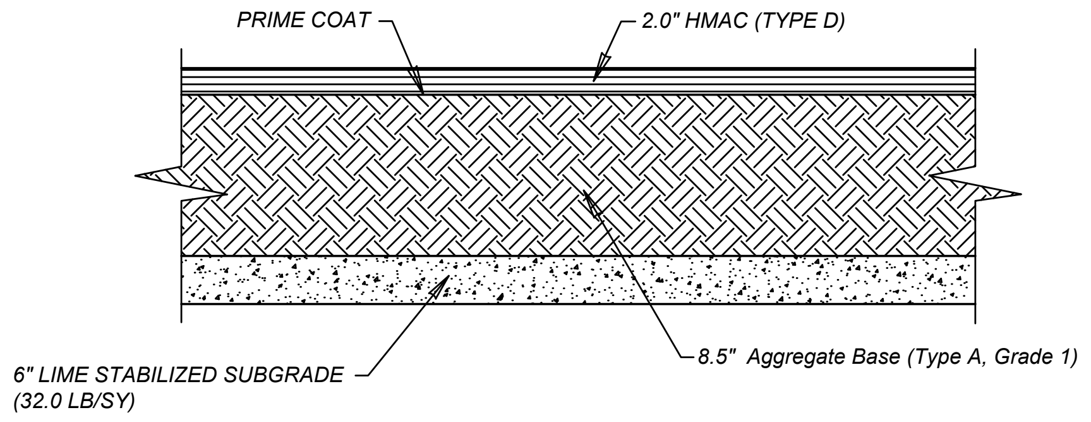
TYPICAL LOCAL "A" STREET SECTION

NOT TO SCALE

USE LOCAL "A" STREET SECTION FOR STREETS BELOW:

FREDDIE FIELD: STA: 1+00.00 - 2+28.23
REX RIDGE: STA: 2+28.23 - END
LONGCOURT DR.: STA: 4+40.50 - END
DAPHNE HILL: STA: 5+14.33 - END
LANTERN LP: STA: 22+11.23 - 1+00.00, 1+00.00 - 5+16.68
VELMA VALE: STA: 5+16.68 - 10+72.12
MIDNIGHT DEW: STA: 10+72.12 - 16+10.67
STREET "G": STA: 16+10.67 - 22+11.12
LANTERN LP: STA: 22+11.12 - END
STREET "H": STA: 1+00.00 - END
STREET "K": STA: 1+00.00 - END

Pavement Section
2.0" HMAC Type "D"
8.5" Aggregate Base (Type A, Grade 1)
6.0" Lime Stablized Subgrade (32.0 LB/SY)
Total: 16.5"
Structural No: 2.55
CBR: 3.0


PRIME COAT
2.0" HMAC (TYPE D)
6" LIME STABILIZED SUBGRADE
(32.0 LB/SY)
8.5" Aggregate Base (Type A, Grade 1)

ASPHALT PAVEMENT DETAIL

NOT-TO-SCALE

DETAIL FOR ALL LOCAL TYPE A

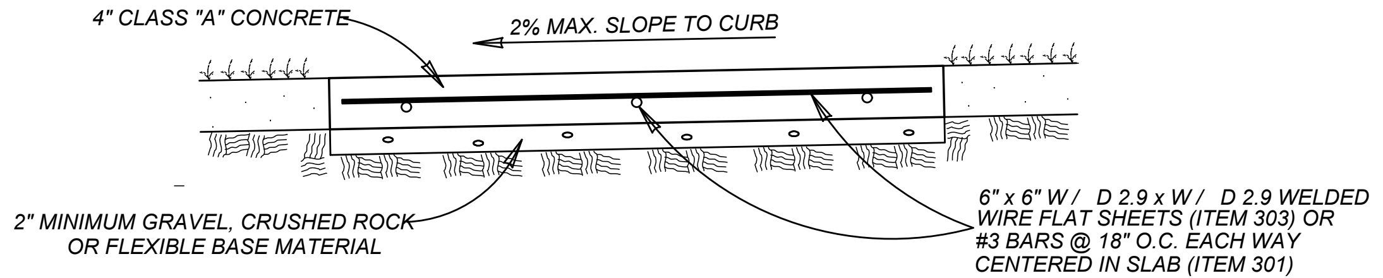
NOTES:

1. PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT BY INTEC, LLC. PROJECT NO. S251018 DATED FEBRUARY 17, 2025.

2. REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATION FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.

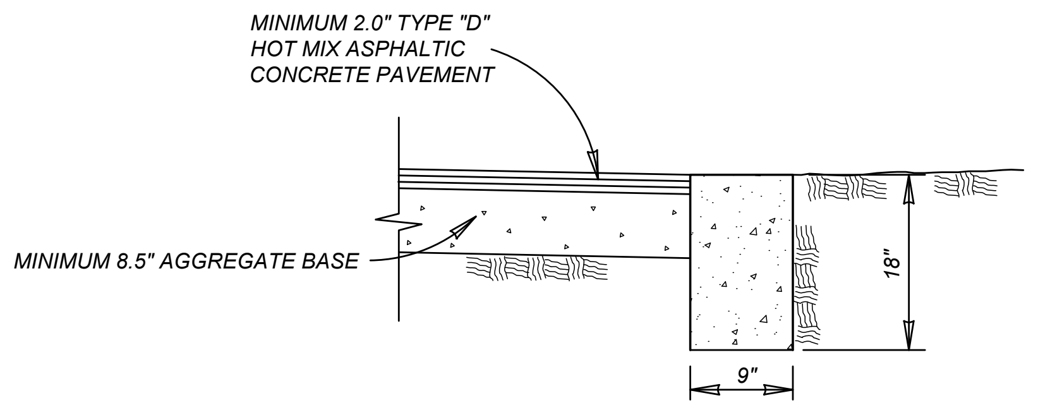
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.

4. CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.


4" CLASS "A" CONCRETE
2% MAX. SLOPE TO CURB
2" MINIMUM GRAVEL, CRUSHED ROCK
OR FLEXIBLE BASE MATERIAL
6" x 6" W / D 2.9 x W / D 2.9 WELDED
WIRE FLAT SHEETS (ITEM 303) OR
#3 BARS @ 18" O.C. EACH WAY
CENTERED IN SLAB (ITEM 301)

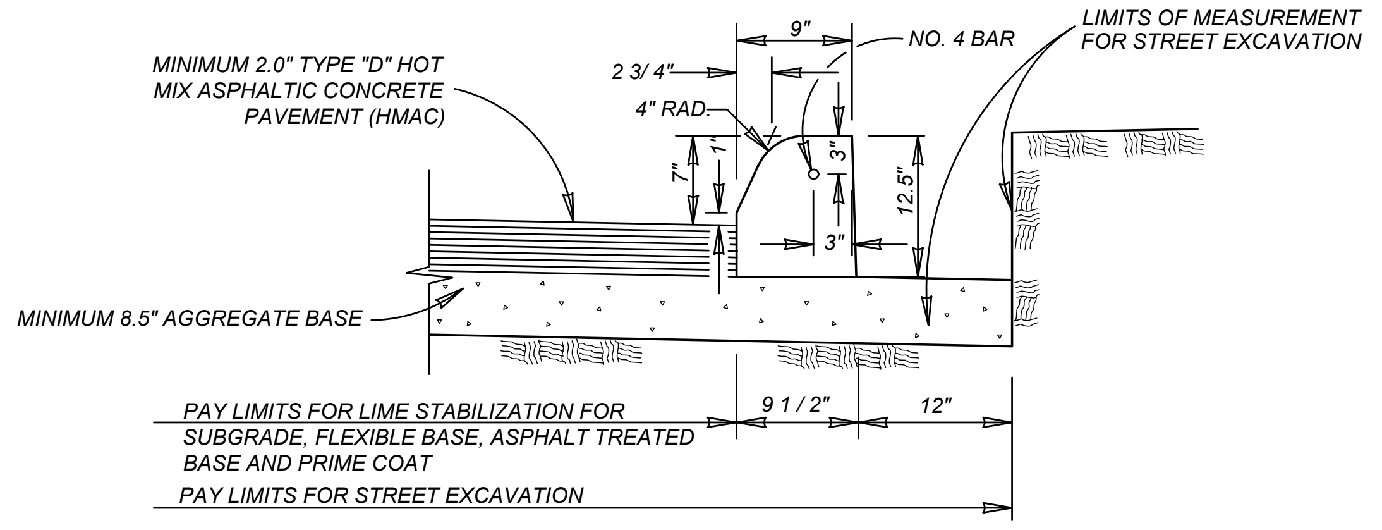
CONCRETE SIDEWALK SECTION

ITEM 502
NOT TO SCALE


MINIMUM 2.0" TYPE "D"
HOT MIX ASPHALTIC
CONCRETE PAVEMENT
MINIMUM 8.5" AGGREGATE BASE
18"
9"

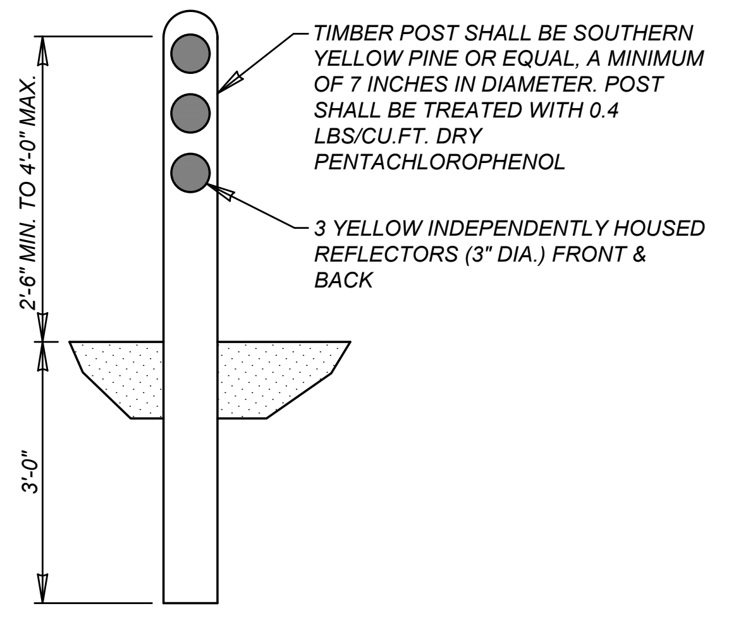
HEADER CURB

ITEM 500 ON SAND OR GRAVEL
NOT TO SCALE


MINIMUM 2.0" TYPE "D" HOT
MIX ASPHALTIC CONCRETE
PAVEMENT (HMAC)
9"
NO. 4 BAR
LIMITS OF MEASUREMENT
FOR STREET EXCAVATION
2 3/ 4"
4" RAD.
7"
1"
3"
12.5"
3"
MINIMUM 8.5" AGGREGATE BASE
PAY LIMITS FOR LIME STABILIZATION FOR
SUBGRADE, FLEXIBLE BASE, ASPHALT TREATED
BASE AND PRIME COAT
9 1 / 2"
12"
PAY LIMITS FOR STREET EXCAVATION

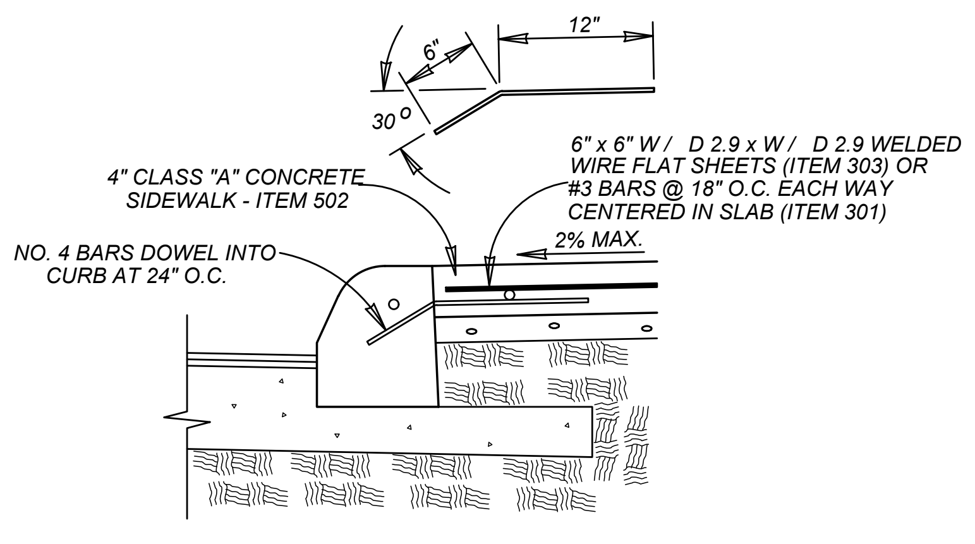
CONCRETE CURB

ITEM 500 ON ASPHALT TREATED BASE OR ASPHALTIC CONCRETE BASE
NOT TO SCALE


TIMBER POST SHALL BE SOUTHERN
YELLOW PINE OR EQUAL, A MINIMUM
OF 7 INCHES IN DIAMETER. POST
SHALL BE TREATED WITH 0.4
LBS/CU.FT. DRY
PENTACHLOROPHENOL
3 YELLOW INDEPENDENTLY HOUSED
REFLECTORS (3" DIA.) FRONT &
BACK
2'-6" MIN. TO 4'-0" MAX.
3'-0"

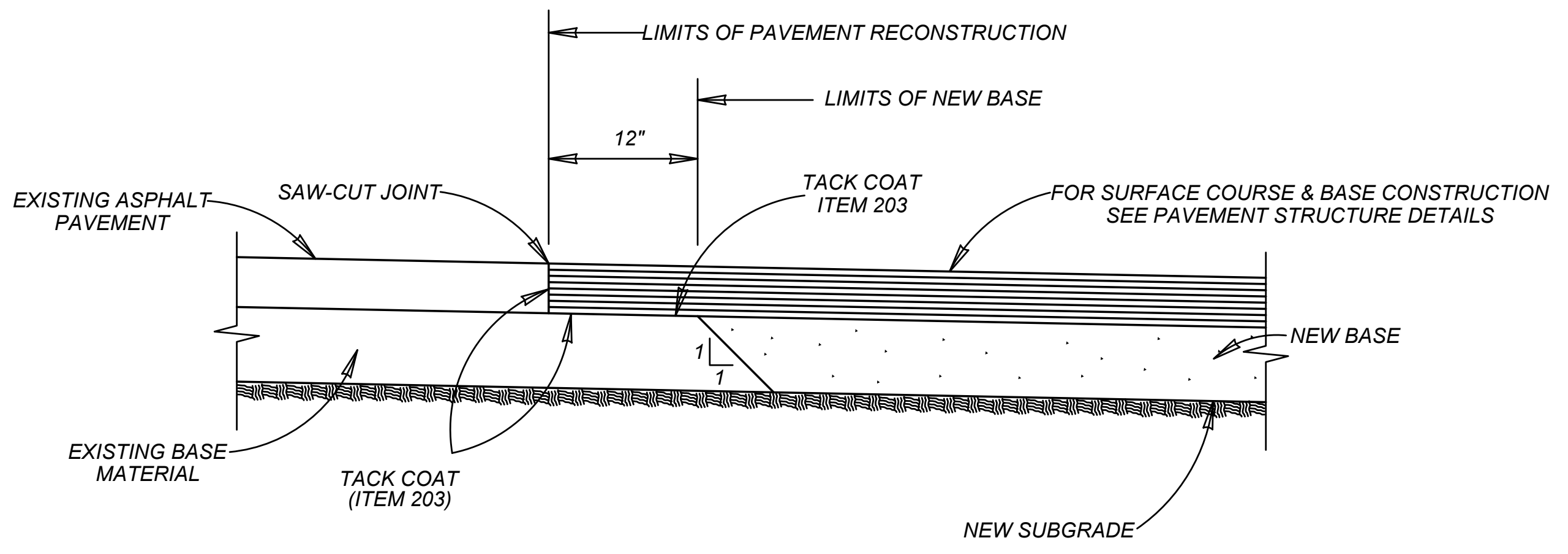
TIMBER GUARD POST DETAIL

NOT-TO-SCALE


12"
6"
30°
6" x 6" W / D 2.9 x W / D 2.9 WELDED
WIRE FLAT SHEETS (ITEM 303) OR
#3 BARS @ 18" O.C. EACH WAY
CENTERED IN SLAB (ITEM 301)
4" CLASS "A" CONCRETE
SIDEWALK - ITEM 502
NO. 4 BARS DOWEL INTO
CURB AT 24" O.C.
2% MAX.

CONCRETE SIDEWALK ABUTTING CURB SECTION

ITEM 502
NOT TO SCALE


LIMITS OF PAVEMENT RECONSTRUCTION
LIMITS OF NEW BASE
12"
EXISTING ASPHALT
PAVEMENT
SAW-CUT JOINT
TACK COAT
ITEM 203
FOR SURFACE COURSE & BASE CONSTRUCTION
SEE PAVEMENT STRUCTURE DETAILS
1
1
NEW BASE
EXISTING BASE
MATERIAL
TACK COAT
(ITEM 203)
NEW SUBGRADE

PAVEMENT JUNCTION DETAILS

NOT TO SCALE

GENERAL NOTES:

1. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOLUBLE SULPHATE CONTENT PRIOR TO INSTALLATION OF THE LIME OR CEMENT.

2. THE APPLICATION RATE OF LIME SHALL BE DETERMINED BASED ON LABORATORY TESTING AND SHALL BE THE LOWEST PERCENTAGE OF LIME THAT PROVIDES AN UNCONFINED COMPRESSIVE STRENGTH (UCS) AT 7-DAYS OF AT LEAST 160 PSI IN ACCORDANCE WITH ASTM D5102 STANDARD TEST METHODS FOR UNCONFINED COMPRESSIVE STRENGTH OF COMPACTED SOIL-LIME MIXTURES (PROCEDURE B) (IN ADDITION, CURING SHOULD OCCUR FOR 7 DAYS AT 40° AND SPECIMENS SHOULD BE SUBJECT TO 24-HR CAPILLARY SOAK PRIOR TO TESTING.

FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN 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 1 ¾" 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 ABOVE 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.

NOTES:

ANY FILL USED TO RAISE THE SUBGRADE:
- SHOUD NOT CONTAIN ANY DELETERIOUS MATERIAL.
- SHOULD HAVE A CBR VALUE OF 3 OR GREATER
- SHOULD HAVE THE "LIME PERCENTAGE/APPLICATION RATE" RE-EVALUATED AND TESTED PRIOR TO INSTALLATION
- PI SHOULD BE A MAXIMUM OF 60

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BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

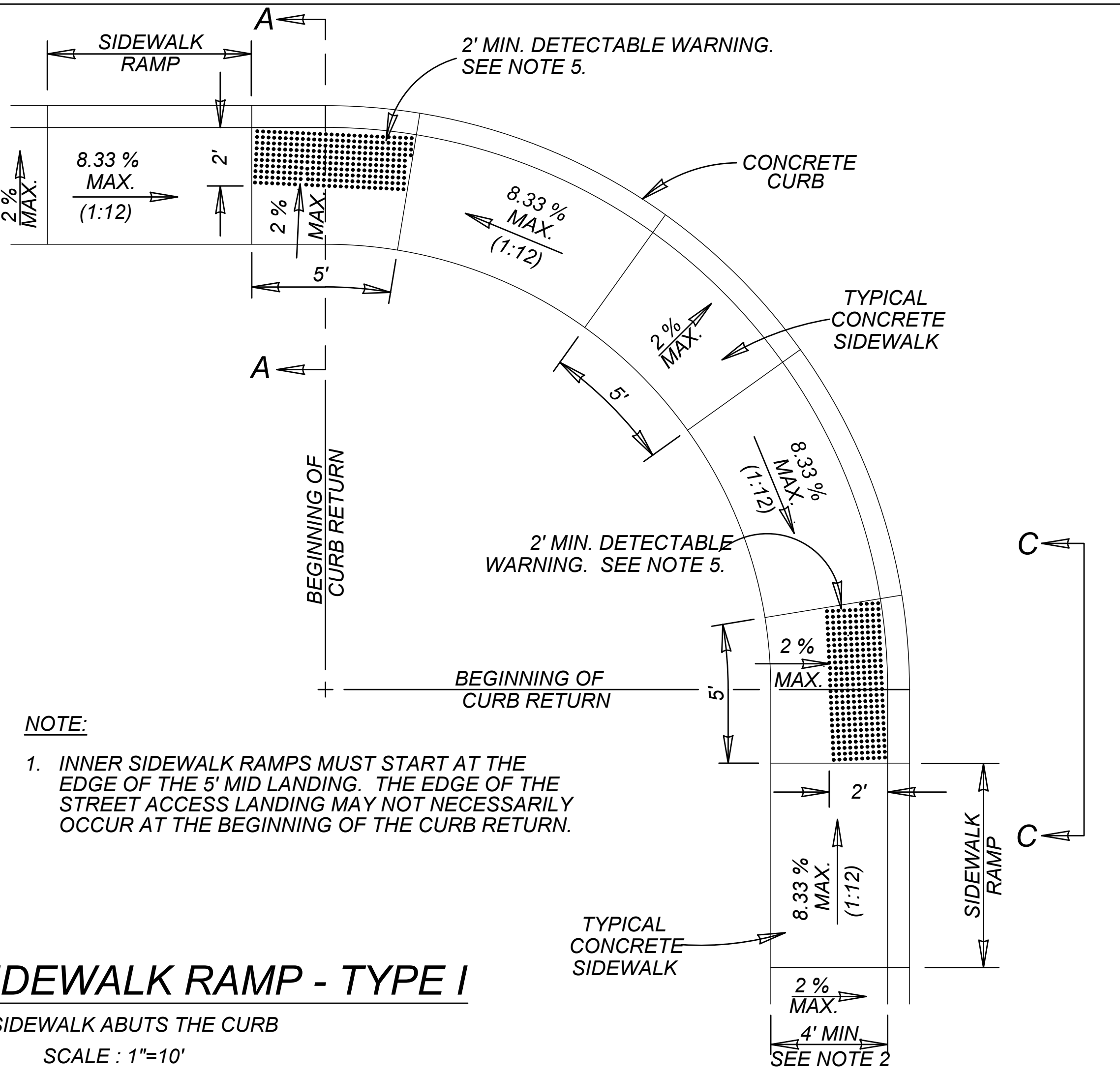
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: STDT2054113

SHEET TITLE: TYPICAL STREET DETAIL

SHEET NUMBER: 6.7

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


SIDEWALK RAMP
A
2' MIN. DETECTABLE WARNING. SEE NOTE 5.
2 % MAX.
8.33 % MAX. (1:12)
2'
2 % MAX
5'
CONCRETE CURB
8.33 % MAX. (1:12)
TYPICAL CONCRETE SIDEWALK
2 % MAX.
5'
BEGINNING OF CURB RETURN
8.33 % MAX. (1:12)
2' MIN. DETECTABLE WARNING. SEE NOTE 5.
C
BEGINNING OF CURB RETURN
2 % MAX.
5'
2'
C
SIDEWALK RAMP
8.33 % MAX. (1:12)
TYPICAL CONCRETE SIDEWALK
2 % MAX.
4' MIN. SEE NOTE 2

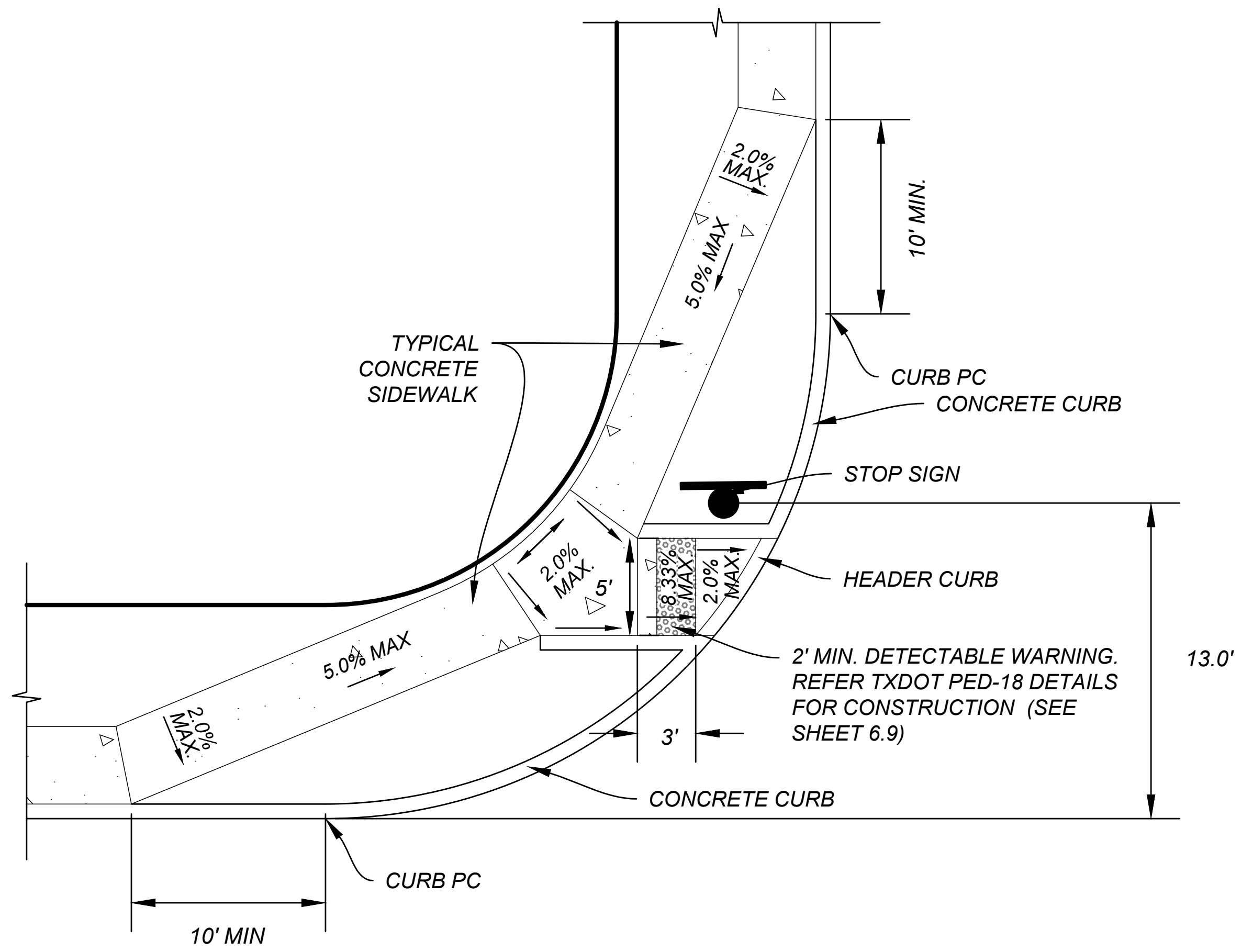
NOTE:

1. INNER SIDEWALK RAMPS MUST START AT THE EDGE OF THE 5' MID LANDING. THE EDGE OF THE STREET ACCESS LANDING MAY NOT NECESSARILY OCCUR AT THE BEGINNING OF THE CURB RETURN.

TYPICAL SIDEWALK RAMP - TYPE I

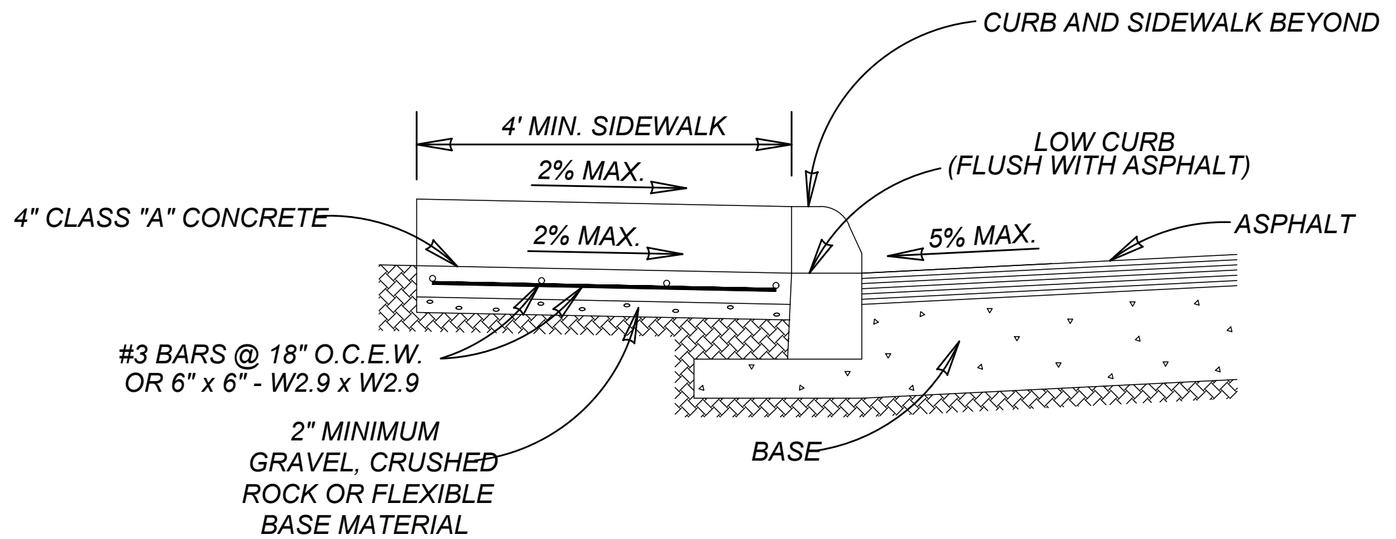
SIDEWALK ABUTS THE CURB

SCALE : 1"=10'


10' MIN.
2.0% MAX
5.0% MAX
TYPICAL CONCRETE SIDEWALK
CURB PC
CONCRETE CURB
STOP SIGN
2.0% MAX
5'
8.33% MAX
2.0% MAX
HEADER CURB
5.0% MAX
2' MIN. DETECTABLE WARNING. REFER TXDOT PED-18 DETAILS FOR CONSTRUCTION (SEE SHEET 6.9)
13.0'
2.0% MAX
3'
CONCRETE CURB
CURB PC
10' MIN

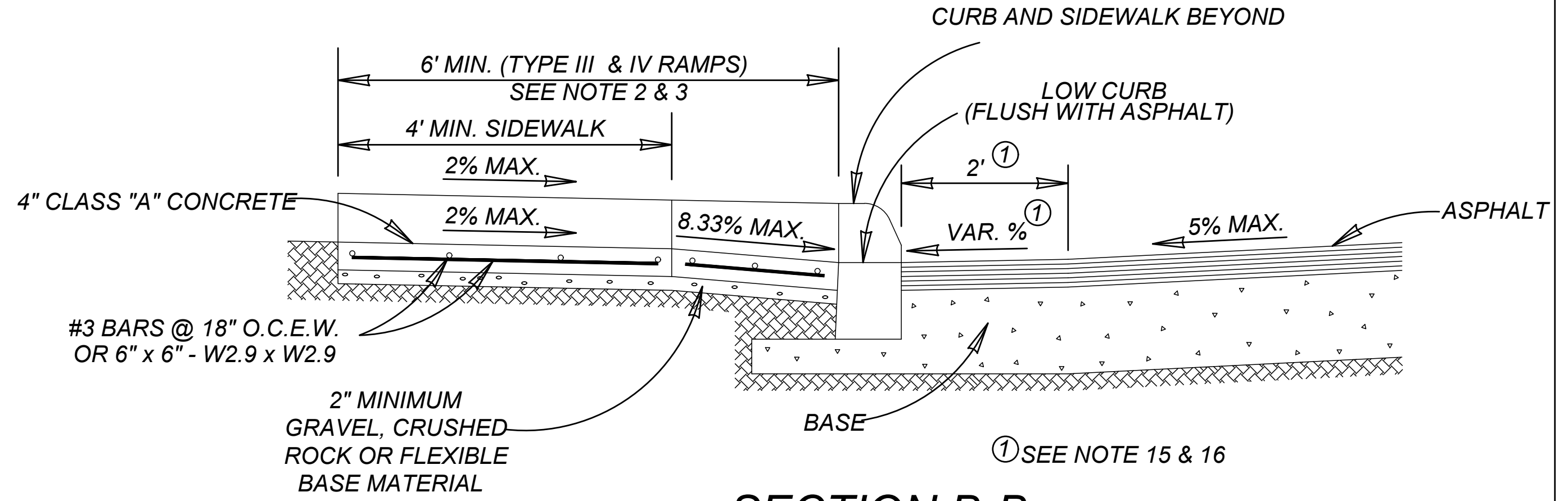
SINGLE DIRECTIONAL WHEEL CHAIR RAMP (SDWCR)

NOT TO SCALE


CURB AND SIDEWALK BEYOND
4' MIN. SIDEWALK
LOW CURB (FLUSH WITH ASPHALT)
2% MAX.
4" CLASS "A" CONCRETE
2% MAX.
5% MAX.
ASPHALT
#3 BARS @ 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9
2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
BASE

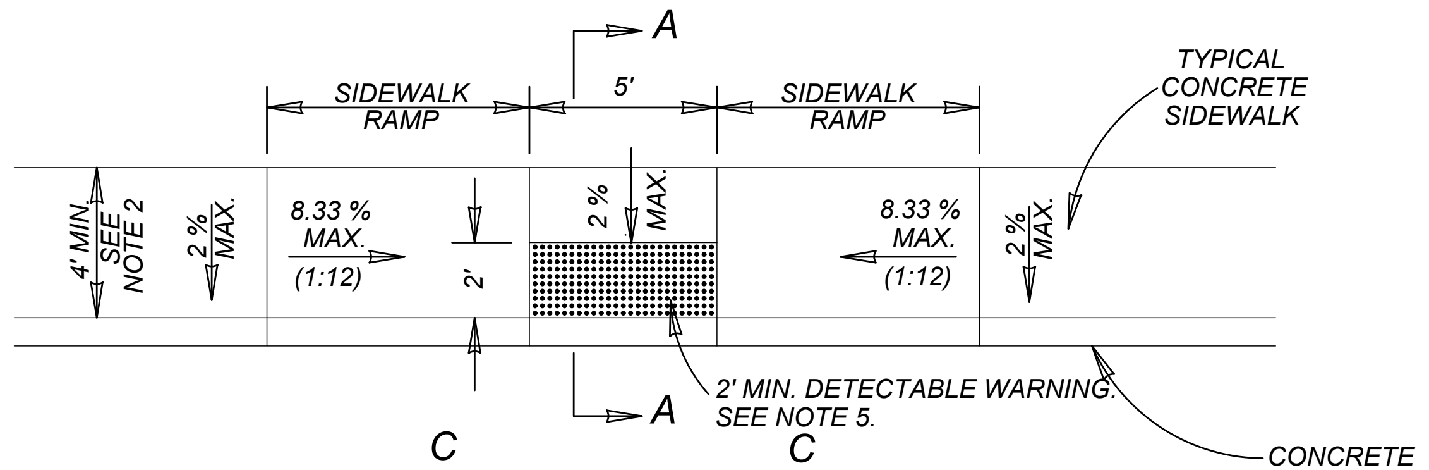
SECTION A-A

SCALE : 1"=4'


CURB AND SIDEWALK BEYOND
6' MIN. (TYPE III & IV RAMPS) SEE NOTE 2 & 3
LOW CURB (FLUSH WITH ASPHALT)
4' MIN. SIDEWALK
2' ①
2% MAX.
4" CLASS "A" CONCRETE
2% MAX.
8.33% MAX.
VAR. %
5% MAX.
ASPHALT
#3 BARS @ 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9
2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL
BASE
① SEE NOTE 15 & 16

SECTION B-B

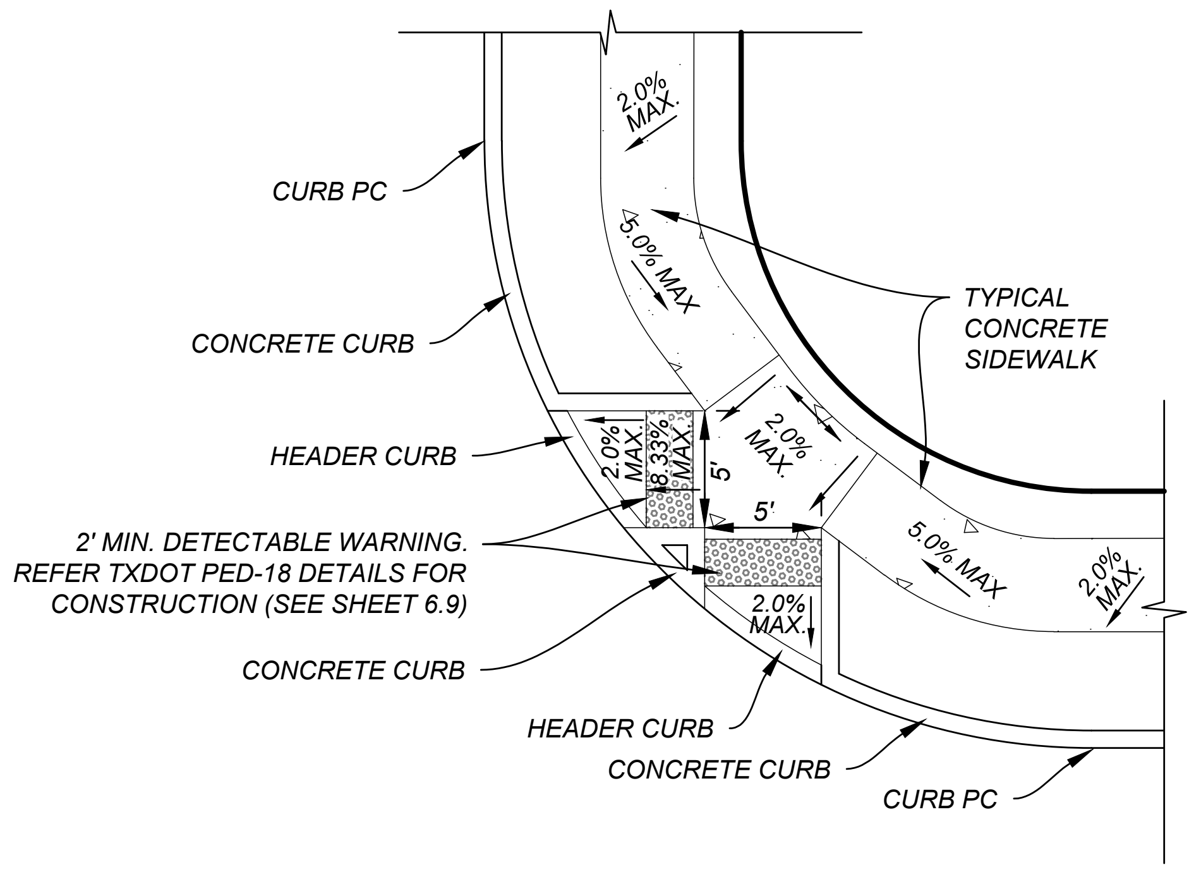
SCALE : 1"=4'


A
SIDEWALK RAMP
5'
SIDEWALK RAMP
TYPICAL CONCRETE SIDEWALK
4' MIN. SEE NOTE 2
2% MAX.
8.33 % MAX. (1:12)
2'
2% MAX.
8.33 % MAX. (1:12)
2% MAX.
A
2' MIN. DETECTABLE WARNING. SEE NOTE 5.
C
C
CONCRETE CURB

TYPICAL SIDEWALK RAMP - TYPE II

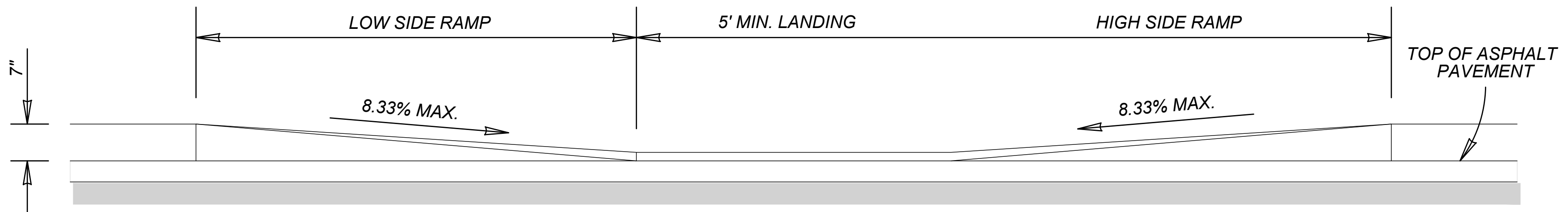
USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB

SCALE : 1"=10'


CURB PC
2.0% MAX
5.0% MAX
CONCRETE CURB
TYPICAL CONCRETE SIDEWALK
HEADER CURB
2.0% MAX
8.33% MAX
5'
2.0% MAX
5'
5.0% MAX
2.0% MAX
2' MIN. DETECTABLE WARNING. REFER TXDOT PED-18 DETAILS FOR CONSTRUCTION (SEE SHEET 6.9)
2.0% MAX.
CONCRETE CURB
HEADER CURB
CONCRETE CURB
CURB PC

DOUBLE DIRECTIONAL WHEEL CHAIR RAMP (DDWCR)

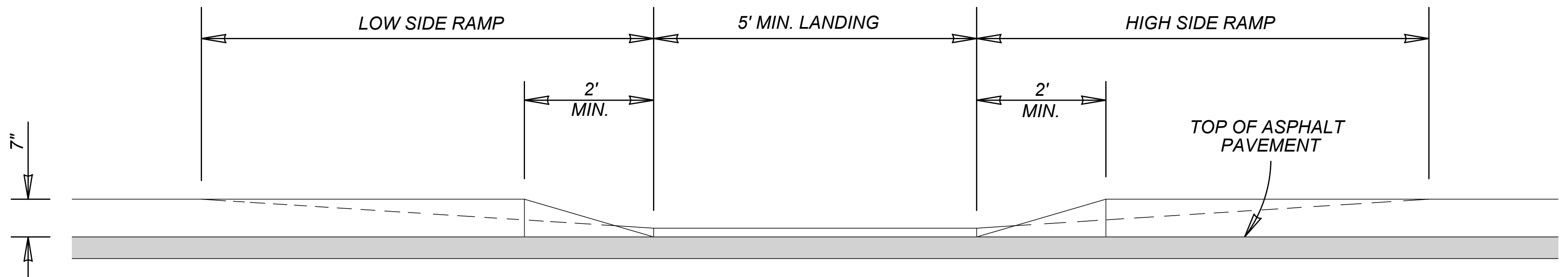
NOT TO SCALE


LOW SIDE RAMP
5' MIN. LANDING
HIGH SIDE RAMP
TOP OF ASPHALT PAVEMENT
7"
8.33% MAX.
8.33% MAX.

SECTION C-C

CURB PROFILE WHERE SIDEWALK ABUTS CURB

SCALE : 1"=4'


LOW SIDE RAMP
5' MIN. LANDING
HIGH SIDE RAMP
2' MIN.
2' MIN.
TOP OF ASPHALT PAVEMENT
7"

SECTION D-D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1"=4'

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 8.33% (1:12) MAXIMUM SLOPE.

5. ALL CURB-RAMPS OR LANDINGS ABUTTING THE CROSSWALK SHALL HAVE A DETECTABLE WARNING 24 INCHES DEEP (IN THE DIRECTION OF PEDESTRIAN TRAVEL) AND EXTENDING THE FULL WIDTH OF THE CURB RAMP OR LANDING. 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

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

10. SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM

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.

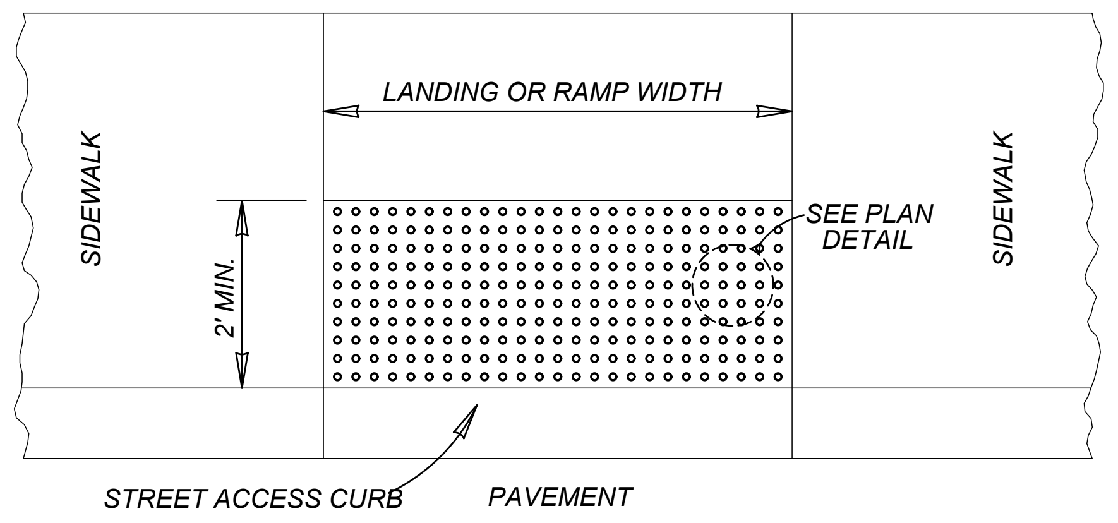
13. SIDEWALK GRADES SHALL NOT EXCEED THE GRADE ESTABLISHED FOR THE ADJACENT ROADWAY, ANY SIDEWALK CONSTRUCTION THAT DEVIATES FROM THE NATURAL GRADE OF THE ROADWAY TO CREATE A GRADE STEEPER THAN THE EXISTING ROADWAY WILL REQUIRE RAMPS, HANDRAILS AND RESTING PLATFORMS TO BE CONSTRUCTED IN ACCORDANCE WITH 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 SHALL BE DEFINED AS THE ALGEBRAIC DIFFERENCE OF THE ADJACENT SURFACE SLOPES. IN THE CASE OF A STREET ACCESS RAMP DESIGNED AT THE 8.33% MAXIMUM SLOPE, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN 2.67% (I.E. 8.33-(-2.67)=11). IN ADDITION, THE ADJACENT PAVEMENT CROSS SLOPE SHALL BE LESS THAN OR EQUAL TO 5%.

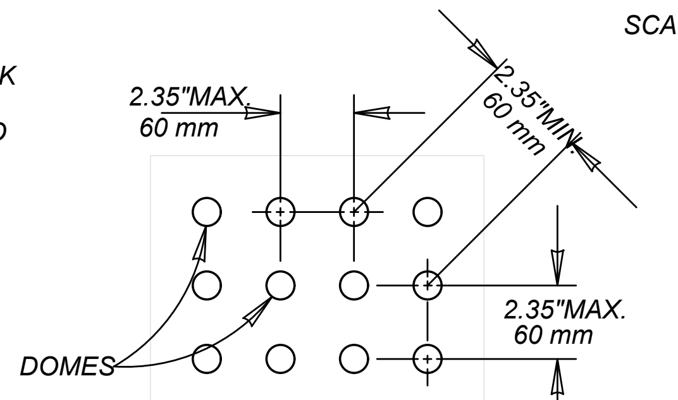
16. IF THE CHANGE OF GRADE BETWEEN ADJACENT SURFACES IS GREATER THAN OR EQUAL TO 11%, A LEVELING STRIP, 2 FEET IN LENGTH, SHALL BE PROVIDED TO TRANSITION THE ADJACENT SURFACES.

17. ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.


LANDING OR RAMP WIDTH
SIDEWALK
2' MIN.
SEE PLAN DETAIL
SIDEWALK
STREET ACCESS CURB
PAVEMENT

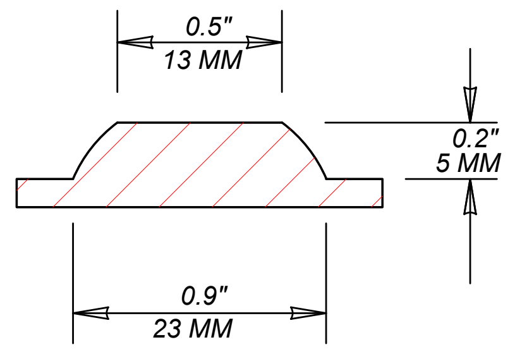
DETECTABLE WARNING SURFACE

SCALE : 1"=4'


2.35"MAX. 60 mm
2.35"MAX. 60 mm
2.35"MAX. 60 mm
DOMES

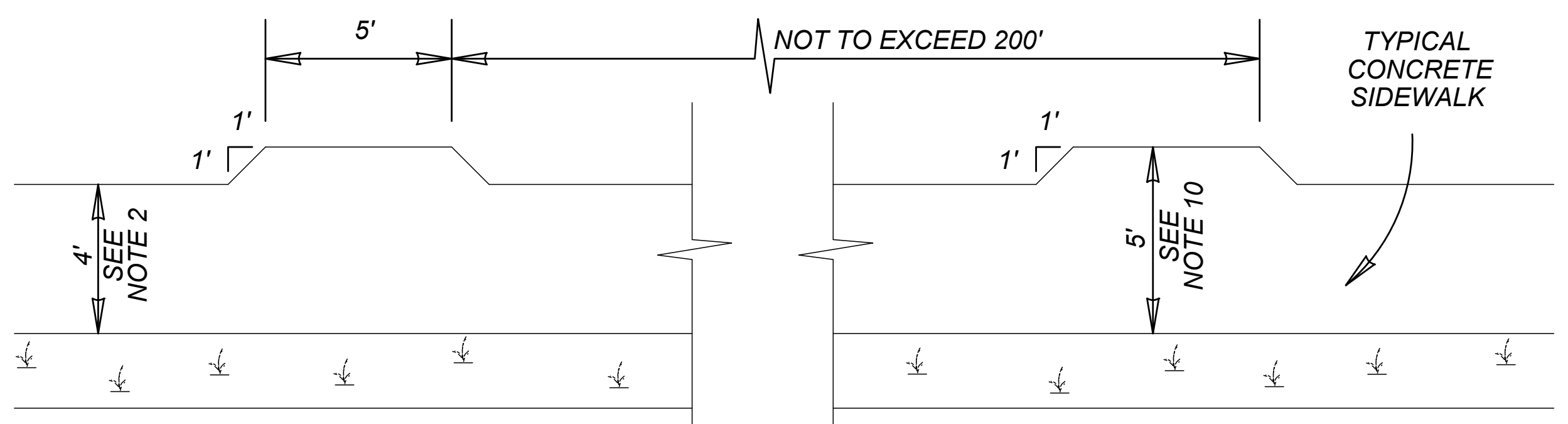
PLAN DETAIL

NO SCALE


0.5" 13 MM
0.2" 5 MM
0.9" 23 MM

DOME SECTION

NO SCALE


5'
NOT TO EXCEED 200'
TYPICAL CONCRETE SIDEWALK
1'
1'
1'
1'
4' SEE NOTE 2
5' SEE NOTE 10

SIDEWALK PASSING SPACE

SCALE : 1"=10'

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.

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

________% SUBMITTAL	PROJECT NO.:____________		DATE:__________
DRWN. BY: V. VASQUEZ	DSGN. BY:__________	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:_____OF_____

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

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UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	STDT2054113

SHEET TITLE:
WHEELCHAIR RAMP
DETAILS (SHT 1 OF 2)

SHEET NUMBER:
6.8

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

nit 10B\Civil\STREETS\STDT2054113.dwg\6.8 By: BELSETH

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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 applicalble 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 uncolored 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.

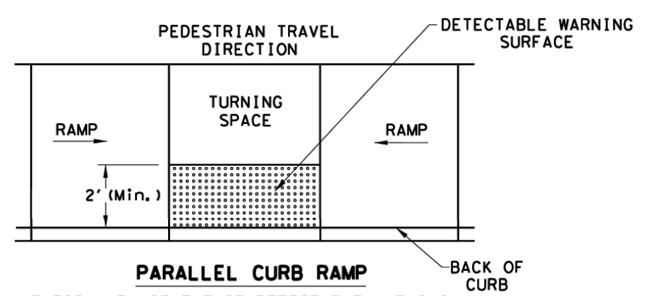
DETECTABLE WARNING PAVERS (IF USED)

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

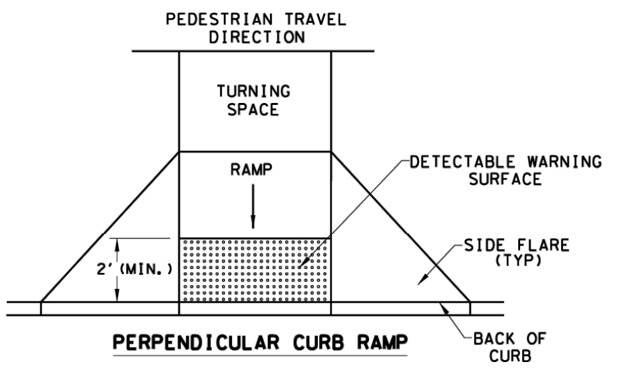
27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items 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


PEDESTRIAN TRAVEL DIRECTION
DETECTABLE WARNING SURFACE
RAMP
TURNING SPACE
RAMP
2' (Min.)
BACK OF CURB

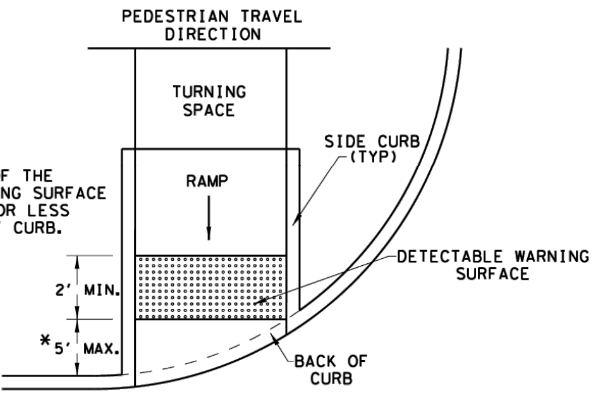
PARALLEL CURB RAMP

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


PEDESTRIAN TRAVEL DIRECTION
TURNING SPACE
RAMP
DETECTABLE WARNING SURFACE
SIDE FLARE (TYP)
2' (MIN.)
BACK OF CURB

PERPENDICULAR CURB RAMP

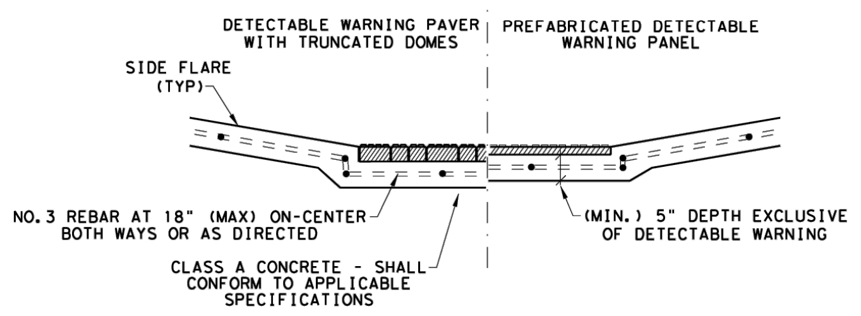
TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.


PEDESTRIAN TRAVEL DIRECTION
TURNING SPACE
SIDE CURB (TYP)
RAMP
DETECTABLE WARNING SURFACE
2' MIN.
*5' MAX.
BACK OF CURB

*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.


DETECTABLE WARNING PAVER WITH TRUNCATED DOMES
PREFABRICATED DETECTABLE WARNING PANEL
SIDE FLARE (TYP)
NO.3 REBAR AT 18" (MAX) ON-CENTER BOTH WAYS OR AS DIRECTED
(MIN.) 5" DEPTH EXCLUSIVE OF DETECTABLE WARNING
CLASS A CONCRETE - SHALL CONFORM TO APPLICABLE SPECIFICATIONS

SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

SHEET 2 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
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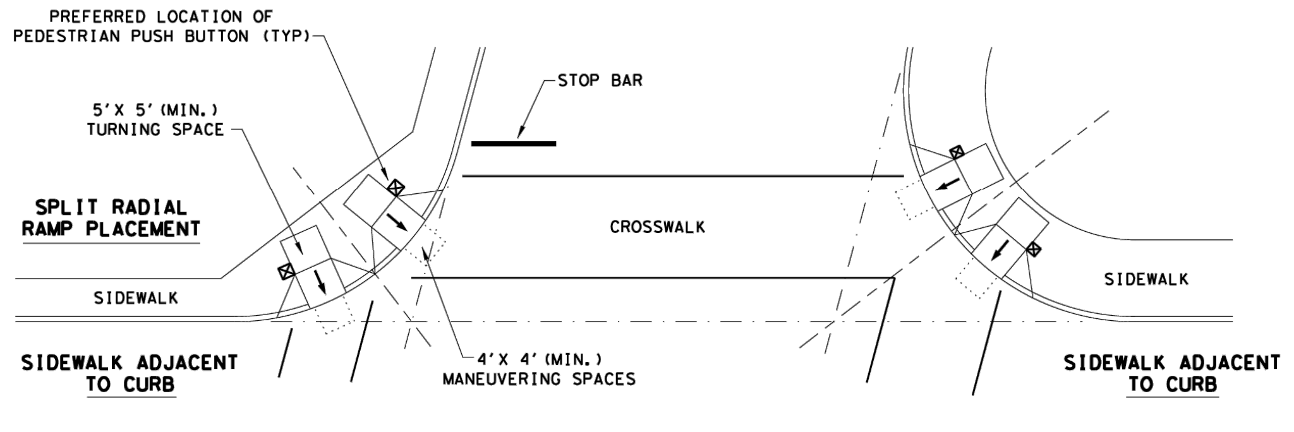
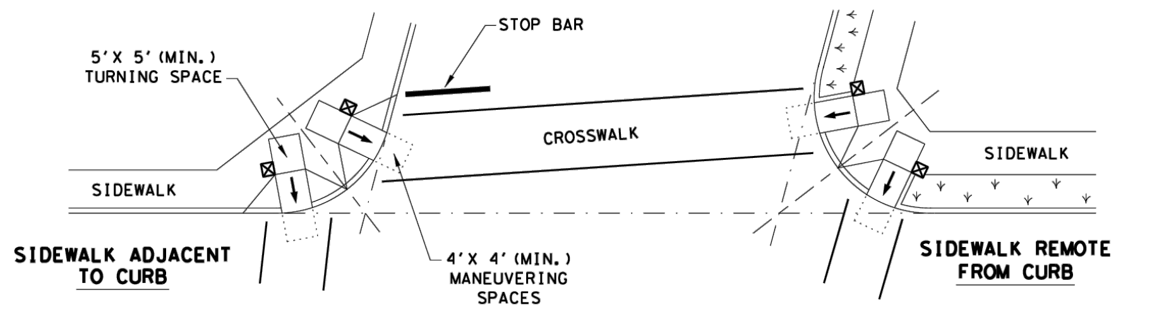
REVISIONS REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

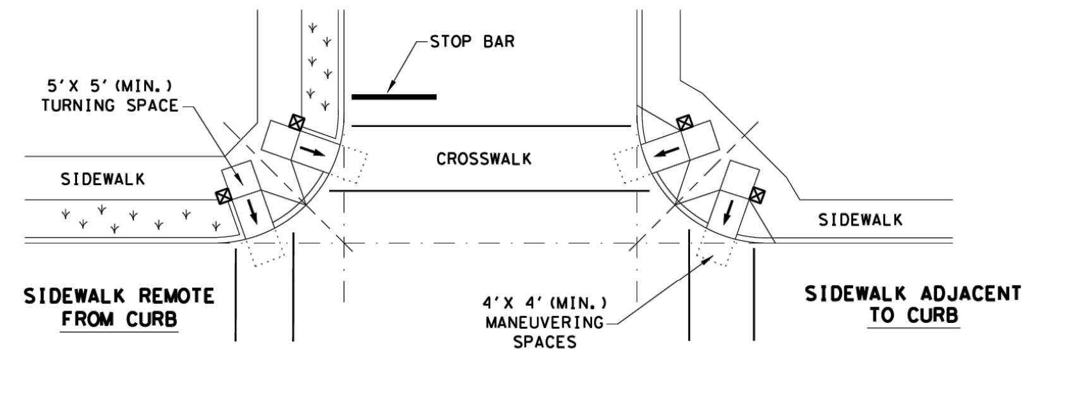
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS


PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (TYP)
5'X 5' (MIN.) TURNING SPACE
STOP BAR
SPLIT RADIAL RAMP PLACEMENT
CROSSWALK
SIDEWALK
SIDEWALK
SIDEWALK ADJACENT TO CURB
4'X 4' (MIN.) MANEUVERING SPACES
SIDEWALK ADJACENT TO CURB

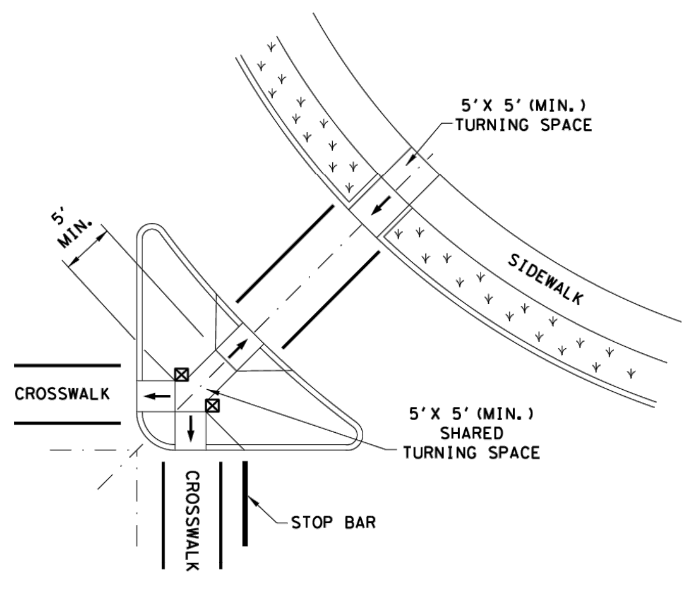
SKEWED INTERSECTION WITH "LARGE" RADIUS


5'X 5' (MIN.) TURNING SPACE
STOP BAR
CROSSWALK
SIDEWALK
SIDEWALK
SIDEWALK ADJACENT TO CURB
4'X 4' (MIN.) MANEUVERING SPACES
SIDEWALK REMOTE FROM CURB

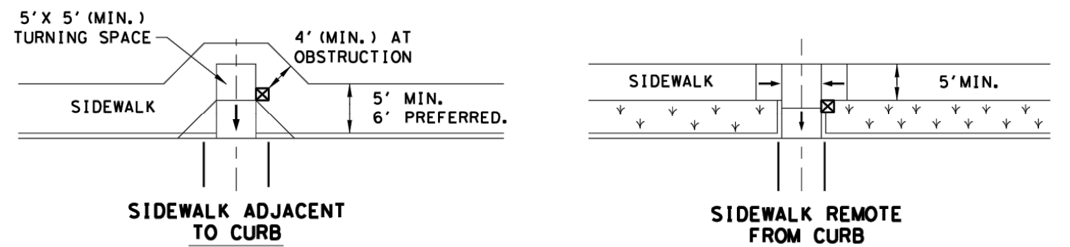
SKEWED INTERSECTION WITH "SMALL" RADIUS


5'X 5' (MIN.) TURNING SPACE
STOP BAR
CROSSWALK
SIDEWALK
SIDEWALK
SIDEWALK REMOTE FROM CURB
4'X 4' (MIN.) MANEUVERING SPACES
SIDEWALK ADJACENT TO CURB

NORMAL INTERSECTION WITH "SMALL" RADIUS


5'X 5' (MIN.) TURNING SPACE
5' MIN.
SIDEWALK
CROSSWALK
5'X 5' (MIN.) SHARED TURNING SPACE
CROSSWALK
STOP BAR

AT INTERSECTION
W/FREE RIGHT TURN & ISLAND


5'X 5' (MIN.) TURNING SPACE
4' (MIN.) AT OBSTRUCTION
SIDEWALK
5' MIN. 6' PREFERRED.
SIDEWALK ADJACENT TO CURB
SIDEWALK
5'MIN.
SIDEWALK REMOTE FROM CURB

MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

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.	v v v

SHEET 4 OF 4

Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
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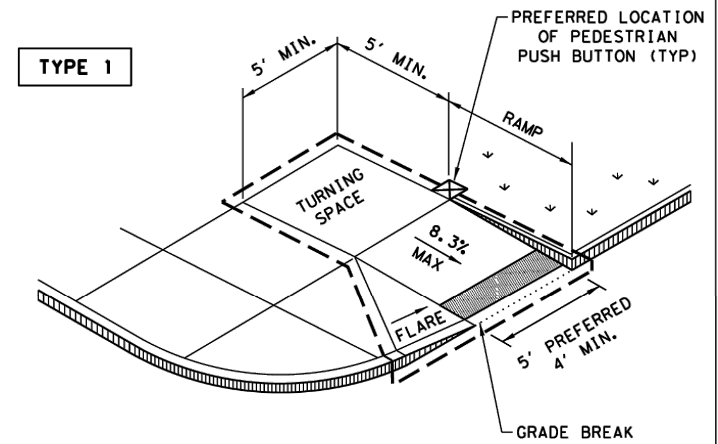
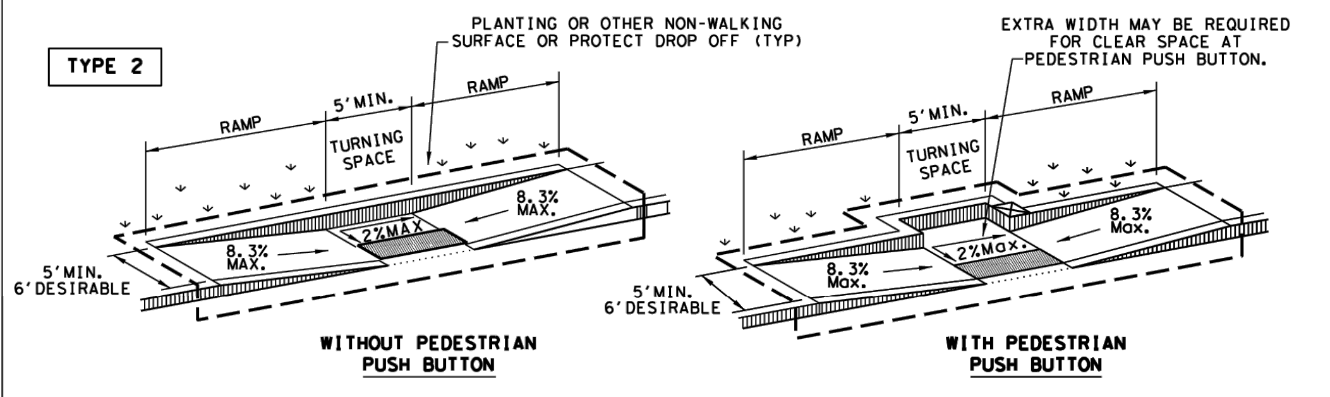
TYPE 1


5' MIN.
5' MIN.
PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (TYP)
RAMP
TURNING SPACE
8.3% MAX
FLARE
5' PREFERRED 4' MIN.
GRADE BREAK (TYP)

PERPENDICULAR CURB RAMP

TYPE 2

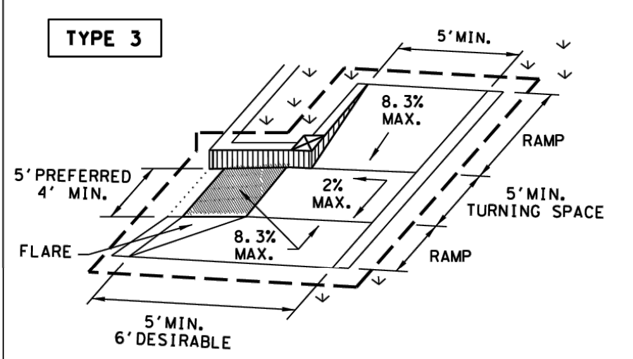

PLANTING OR OTHER NON-WALKING SURFACE OR PROTECT DROP OFF (TYP)
EXTRA WIDTH MAY BE REQUIRED FOR CLEAR SPACE AT PEDESTRIAN PUSH BUTTON.
RAMP
5'MIN.
TURNING SPACE
RAMP
8.3% MAX.
2%MAX
8.3% MAX.
5'MIN. 6'DESIRABLE
8.3% Max.
2%Max.
8.3% Max.
5'MIN. 6'DESIRABLE

WITHOUT PEDESTRIAN PUSH BUTTON

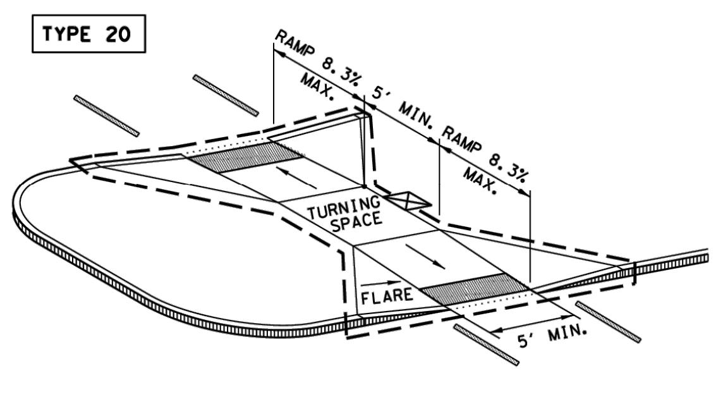
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3


5'MIN.
8.3% MAX.
RAMP
5'PREFERRED 4' MIN.
2% MAX.
5'MIN. TURNING SPACE
FLARE
8.3% MAX.
RAMP
5'MIN. 6'DESIRABLE

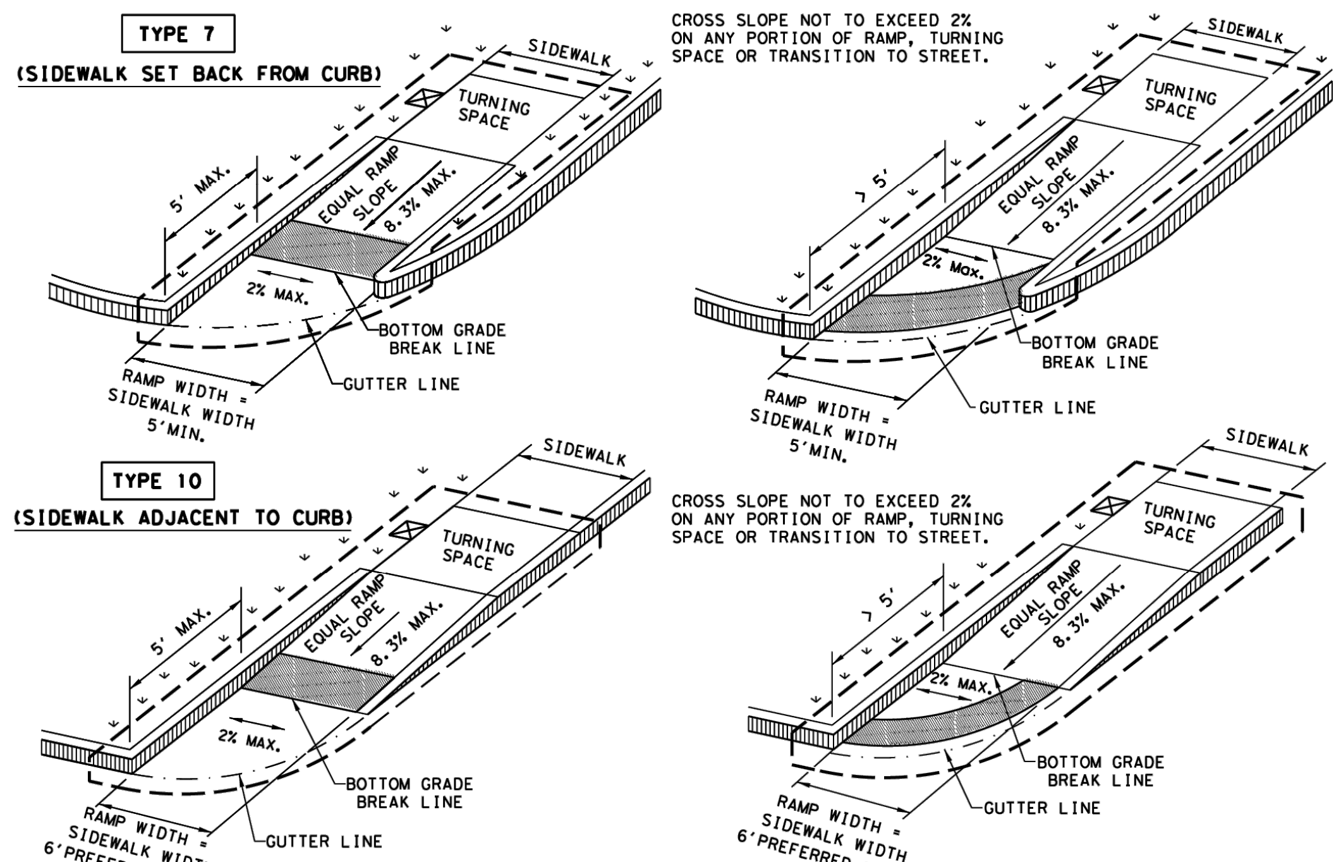
TYPE 20


RAMP 8.3% MAX.
5' MIN.
RAMP 8.3% MAX.
TURNING SPACE
FLARE
5' MIN.

CURB RAMPS AT MEDIAN ISLANDS

TYPE 7
(SIDEWALK SET BACK FROM CURB)

TYPE 10
(SIDEWALK ADJACENT TO CURB)

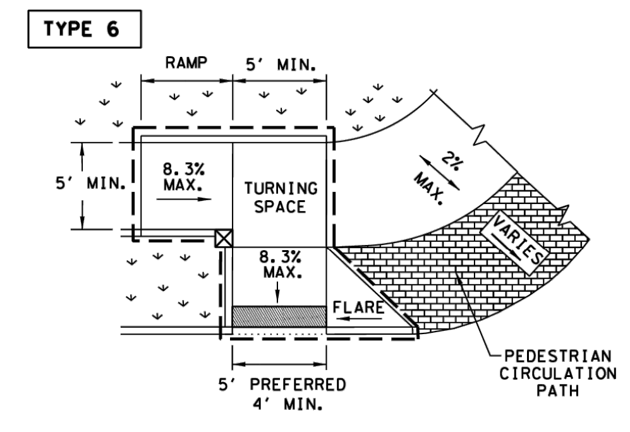

SIDEWALK
TURNING SPACE
5' MAX.
EQUAL RAMP SLOPE
8.3% MAX.
2% MAX.
BOTTOM GRADE BREAK LINE
GUTTER LINE
RAMP WIDTH = SIDEWALK WIDTH 5'MIN.
> 5'
2% Max.
RAMP WIDTH = SIDEWALK WIDTH 6'PREFERRED, 5'MIN.

CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.

CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.

DIRECTIONAL RAMPS WITHIN RADIUS

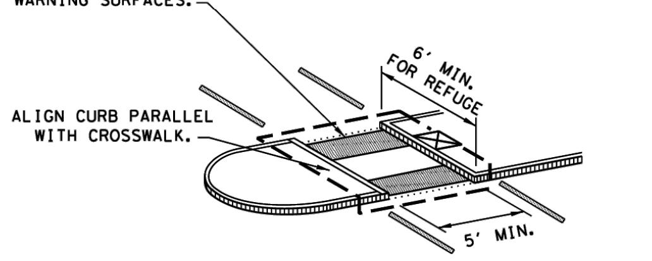
TYPE 6


RAMP
5' MIN.
5' MIN.
8.3% MAX.
TURNING SPACE
8.3% MAX.
2% MAX.
VARIES
FLARE
5' PREFERRED 4' MIN.
PEDESTRIAN CIRCULATION PATH

COMBINATION CURB RAMPS

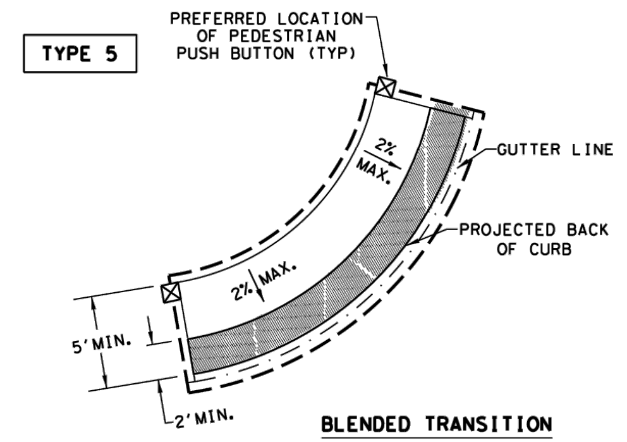
INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.

TYPE 21


6' MIN. FOR REFUGE
ALIGN CURB PARALLEL WITH CROSSWALK.
5' MIN.

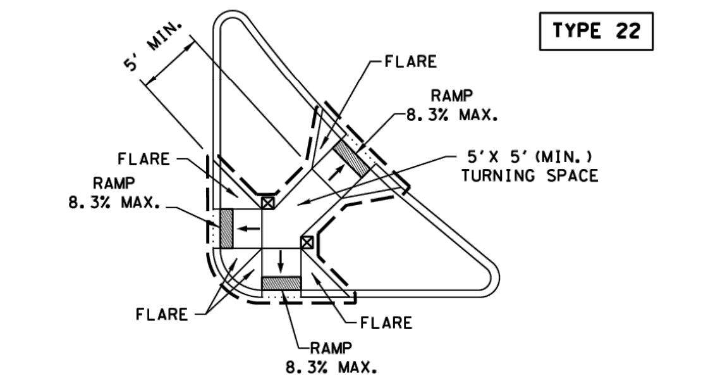
NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 5

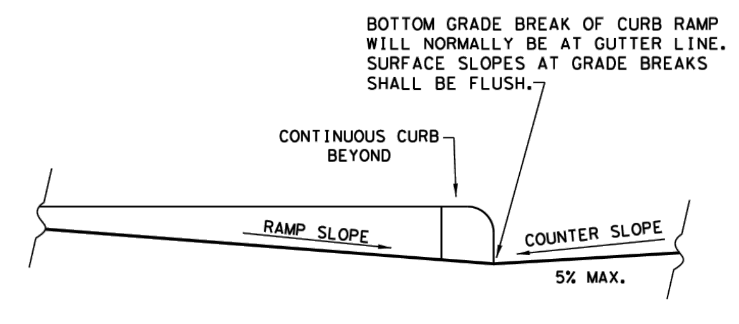

PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (TYP)
GUTTER LINE
2% MAX.
PROJECTED BACK OF CURB
2% MAX.
5'MIN.
2'MIN.

BLENDED TRANSITION
(FLUSH LANDING)

TYPE 22


5' MIN.
FLARE
RAMP 8.3% MAX.
5'X 5' (MIN.) TURNING SPACE
FLARE
RAMP 8.3% MAX.
FLARE
FLARE
RAMP 8.3% MAX.

COMBINATION ISLAND RAMPS


BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.
CONTINUOUS CURB BEYOND
RAMP SLOPE
COUNTER SLOPE
5% MAX.

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.	v v v	GUTTER LINE	— · —
DETECTABLE WARNING SURFACE	▨	GRADE BREAK	········
DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.	☒	RAMP LIMITS OF PAYMENT	— —

SHEET 1 OF 4

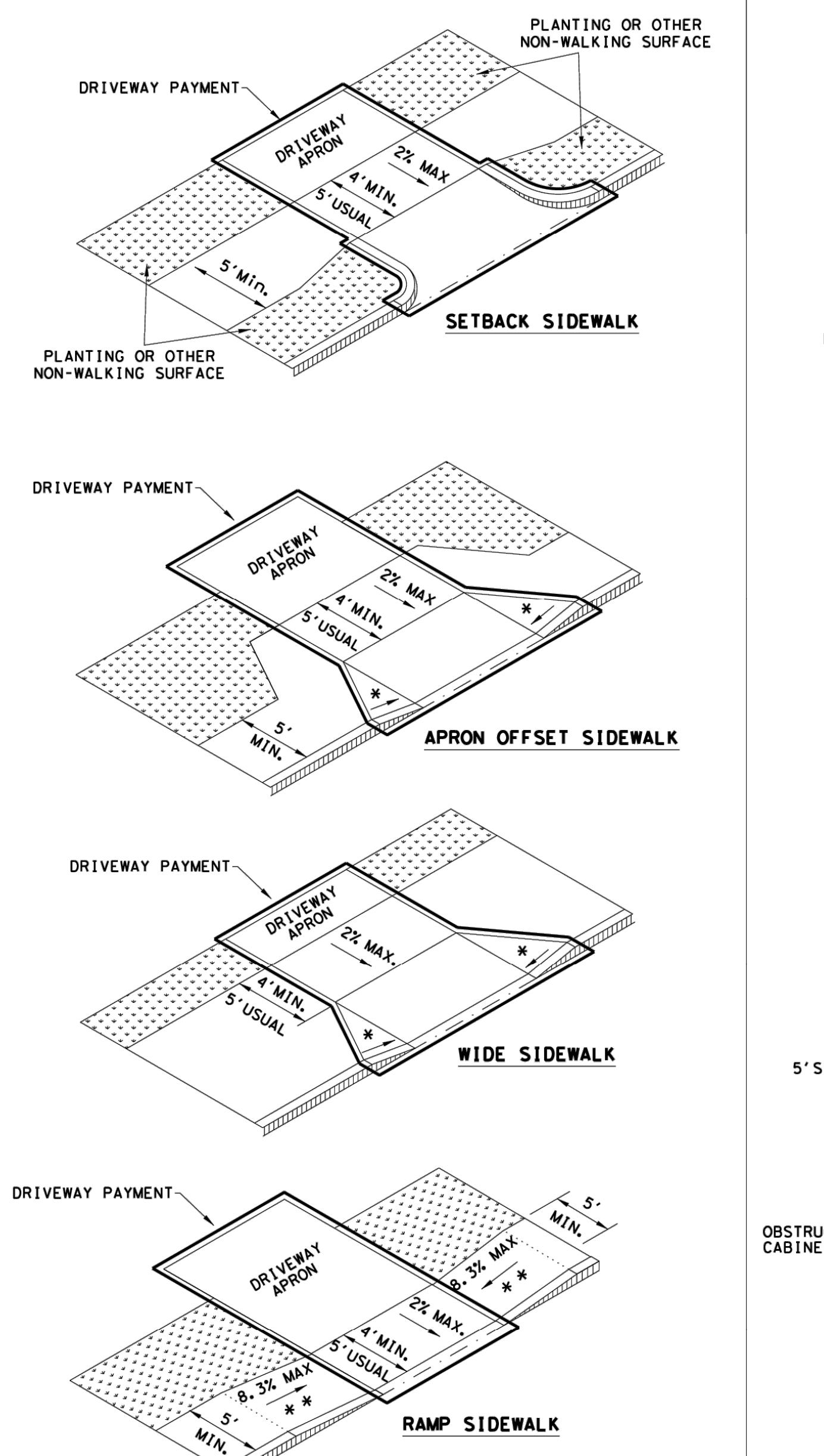
Texas Department of Transportation | Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS

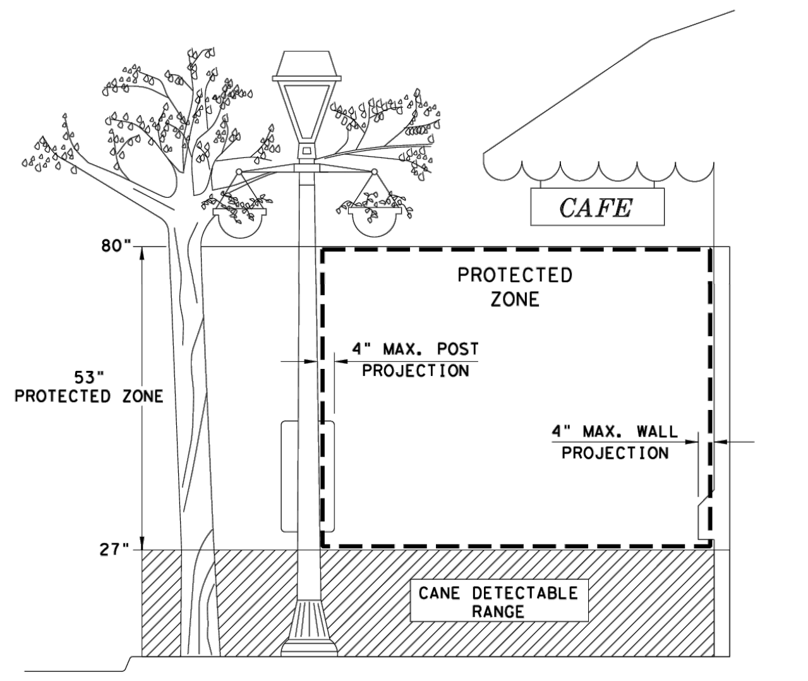
PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

SIDEWALK TREATMENT AT DRIVEWAYS

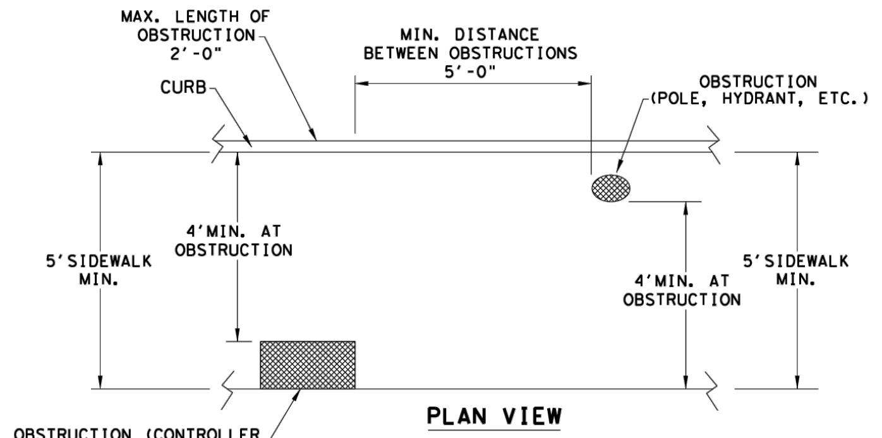

PLANTING OR OTHER NON-WALKING SURFACE
DRIVEWAY PAYMENT
DRIVEWAY APRON
2% MAX
4'MIN.
5'USUAL
5'Min.
PLANTING OR OTHER NON-WALKING SURFACE
SETBACK SIDEWALK
DRIVEWAY PAYMENT
*
5' MIN.
APRON OFFSET SIDEWALK
DRIVEWAY PAYMENT
2% MAX.
WIDE SIDEWALK
DRIVEWAY PAYMENT
8.3% MAX
**
5' MIN.
RAMP SIDEWALK

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.


CAFE
80"
PROTECTED ZONE
4" MAX. POST PROJECTION
53" PROTECTED ZONE
4" MAX. WALL PROJECTION
27"
CANE DETECTABLE RANGE

PROTECTED ZONE

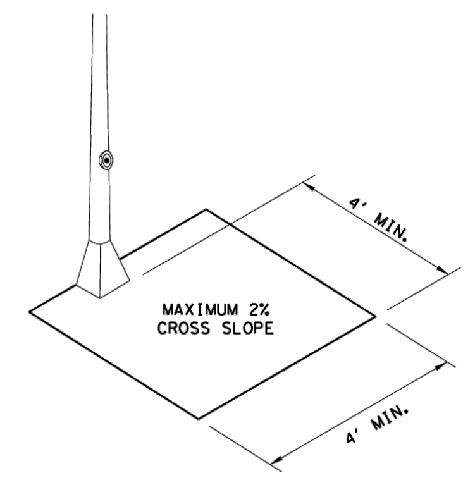
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.


MAX. LENGTH OF OBSTRUCTION 2'-0"
CURB
MIN. DISTANCE BETWEEN OBSTRUCTIONS 5'-0"
OBSTRUCTION (POLE, HYDRANT, ETC.)
5'SIDEWALK MIN.
4'MIN. AT OBSTRUCTION
4'MIN. AT OBSTRUCTION
5'SIDEWALK MIN.
OBSTRUCTION (CONTROLLER CABINET, MAILBOX, ETC.)

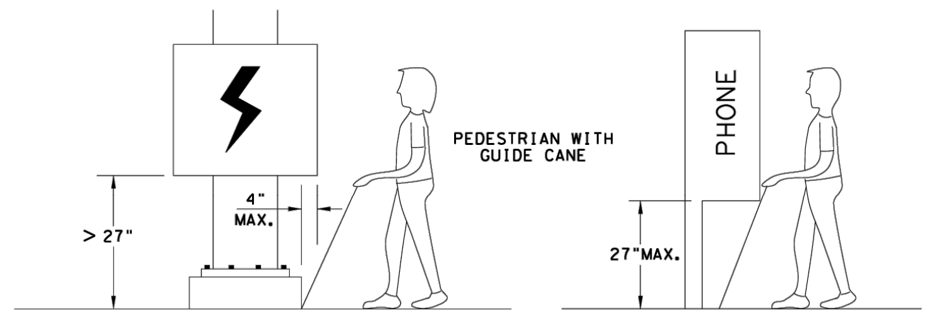
PLAN VIEW

PLACEMENT OF STREET FIXTURES

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


4' MIN.
MAXIMUM 2% CROSS SLOPE
4' MIN.

CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON


PEDESTRIAN WITH GUIDE CANE
4" MAX.
> 27"
PHONE
27"MAX.

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	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.

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Engineering
& Design

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Formerly Known as KFW ENGINEERS + SURVEYING

811 Know what's below. Call before you dig.

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

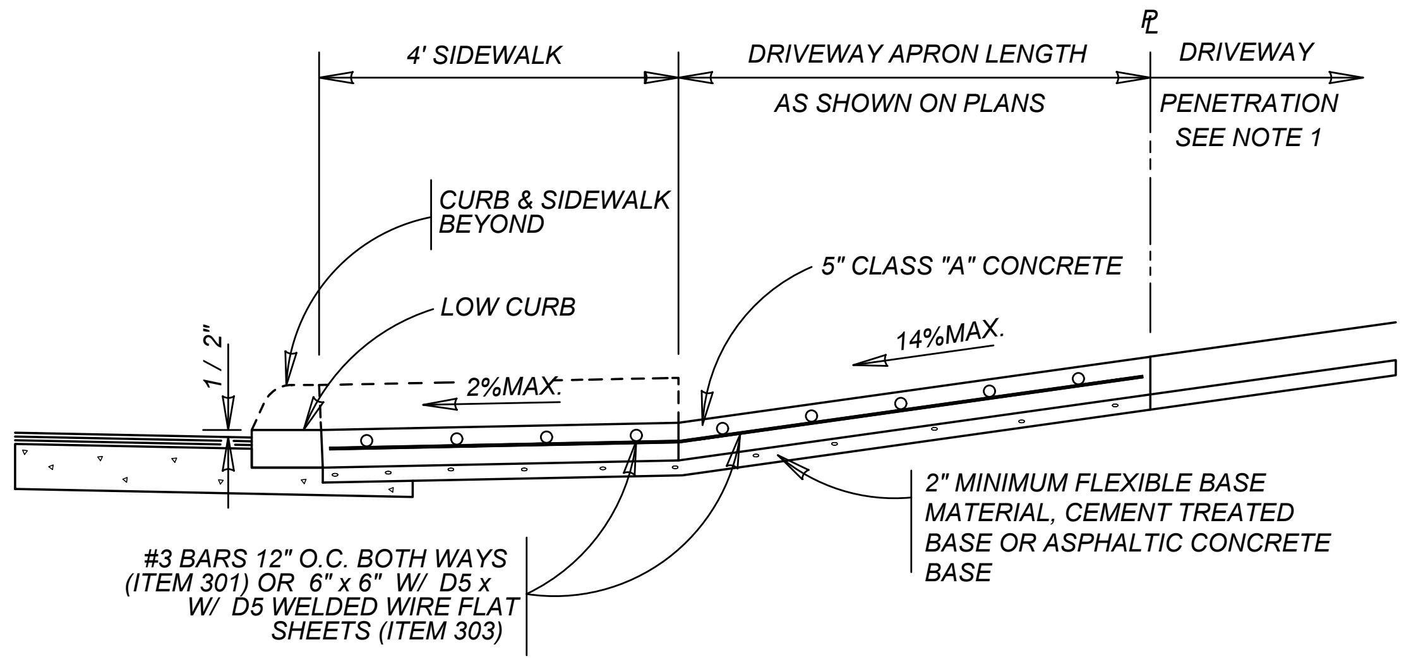
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	STDT2054113

SHEET TITLE:
WHEELCHAIR RAMP
DETAILS (SHT 2 OF 2)

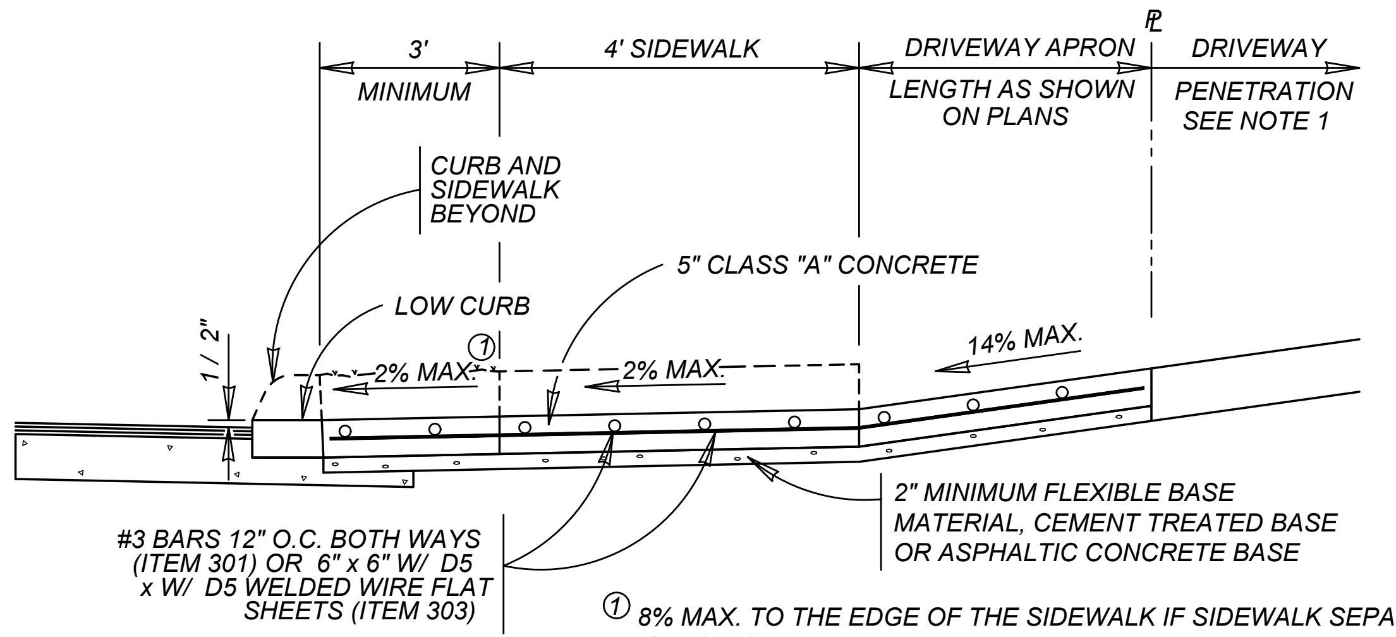
SHEET NUMBER:
6.9

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


4' SIDEWALK
DRIVEWAY APRON LENGTH
AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
CURB & SIDEWALK BEYOND
LOW CURB
5" CLASS "A" CONCRETE
14%MAX.
2%MAX.
1 / 2"
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
#3 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D5 x W/ D5 WELDED WIRE FLAT SHEETS (ITEM 303)

TYPICAL RESIDENTIAL DRIVEWAY SECTION

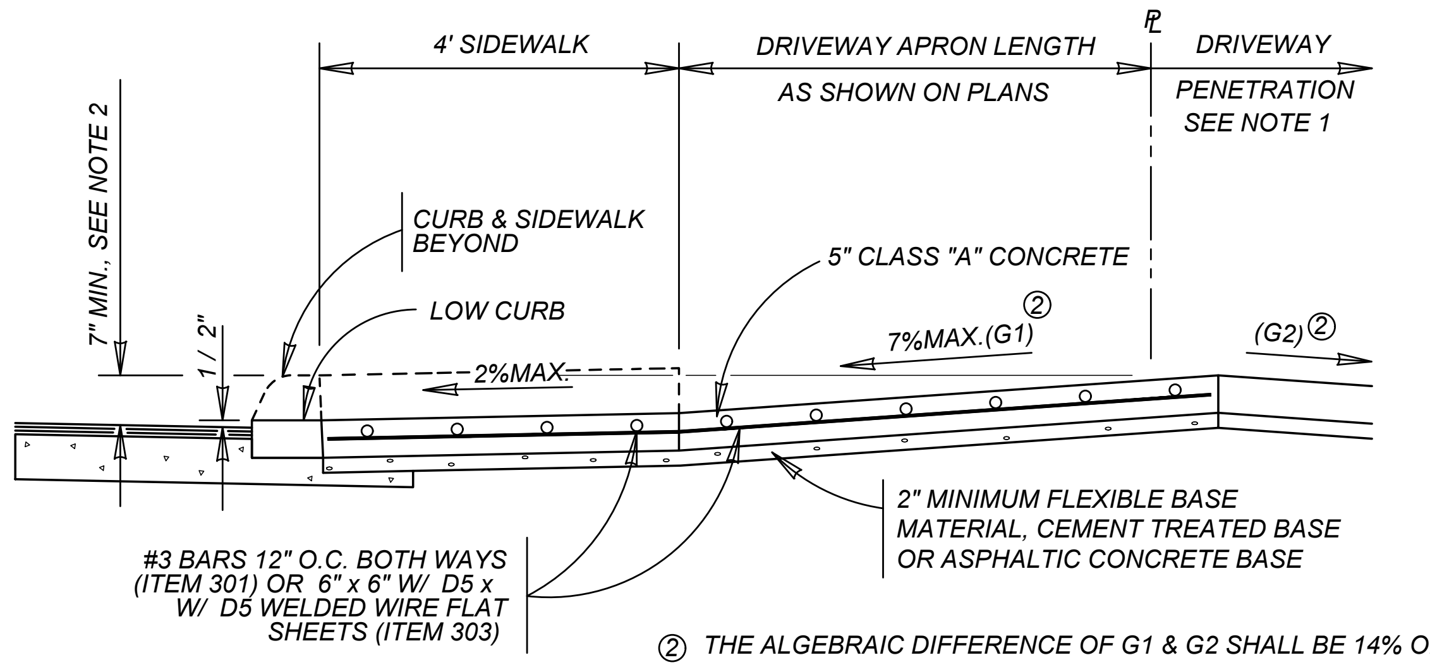
WITH SIDEWALK ABUTTING CURB
ITEM 503.1


3'
MINIMUM
4' SIDEWALK
DRIVEWAY APRON
LENGTH AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
CURB AND SIDEWALK BEYOND
LOW CURB
5" CLASS "A" CONCRETE
①
2% MAX.
2% MAX.
14% MAX.
1 / 2"
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
#3 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D5 x W/ D5 WELDED WIRE FLAT SHEETS (ITEM 303)

① 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.

TYPICAL RESIDENTIAL DRIVEWAY SECTION

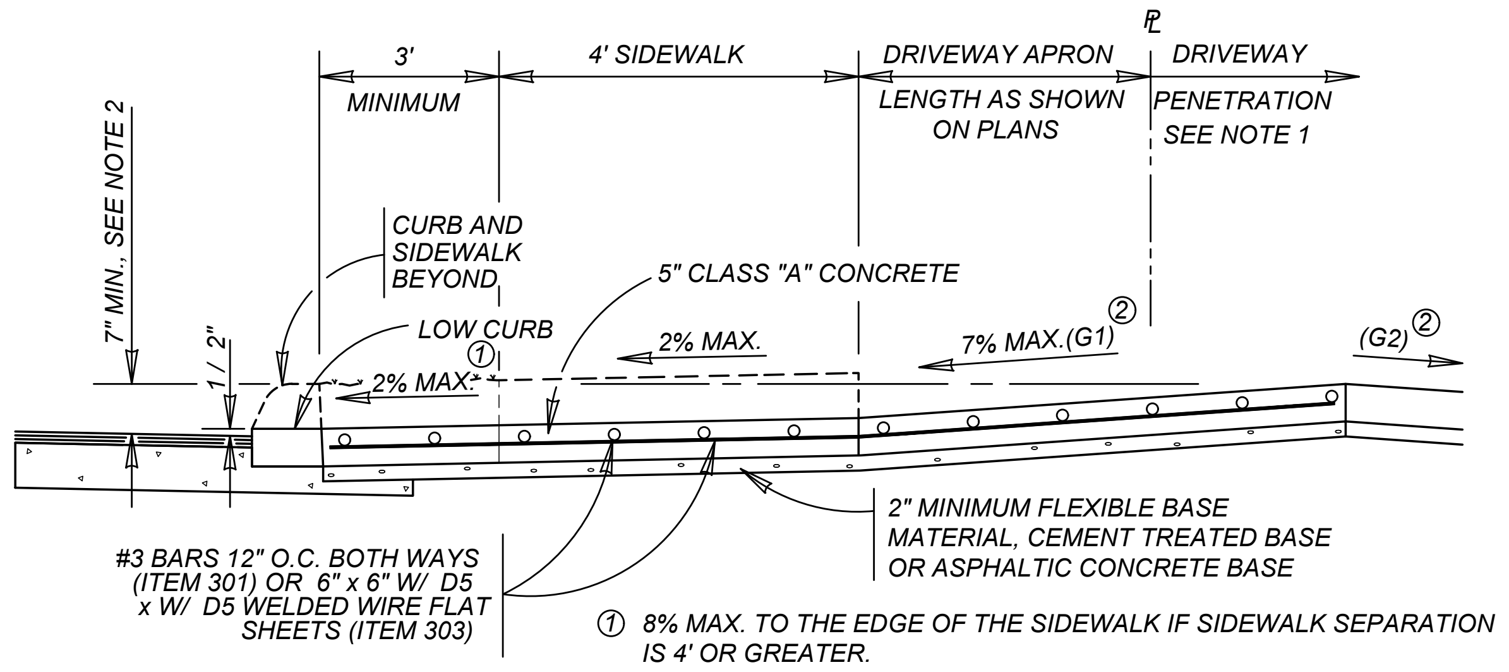
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1


4' SIDEWALK
DRIVEWAY APRON LENGTH
AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
7" MIN., SEE NOTE 2
1 / 2"
CURB & SIDEWALK BEYOND
LOW CURB
5" CLASS "A" CONCRETE
2%MAX.
7%MAX.(G1) ②
(G2) ②
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
#3 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D5 x W/ D5 WELDED WIRE FLAT SHEETS (ITEM 303)

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

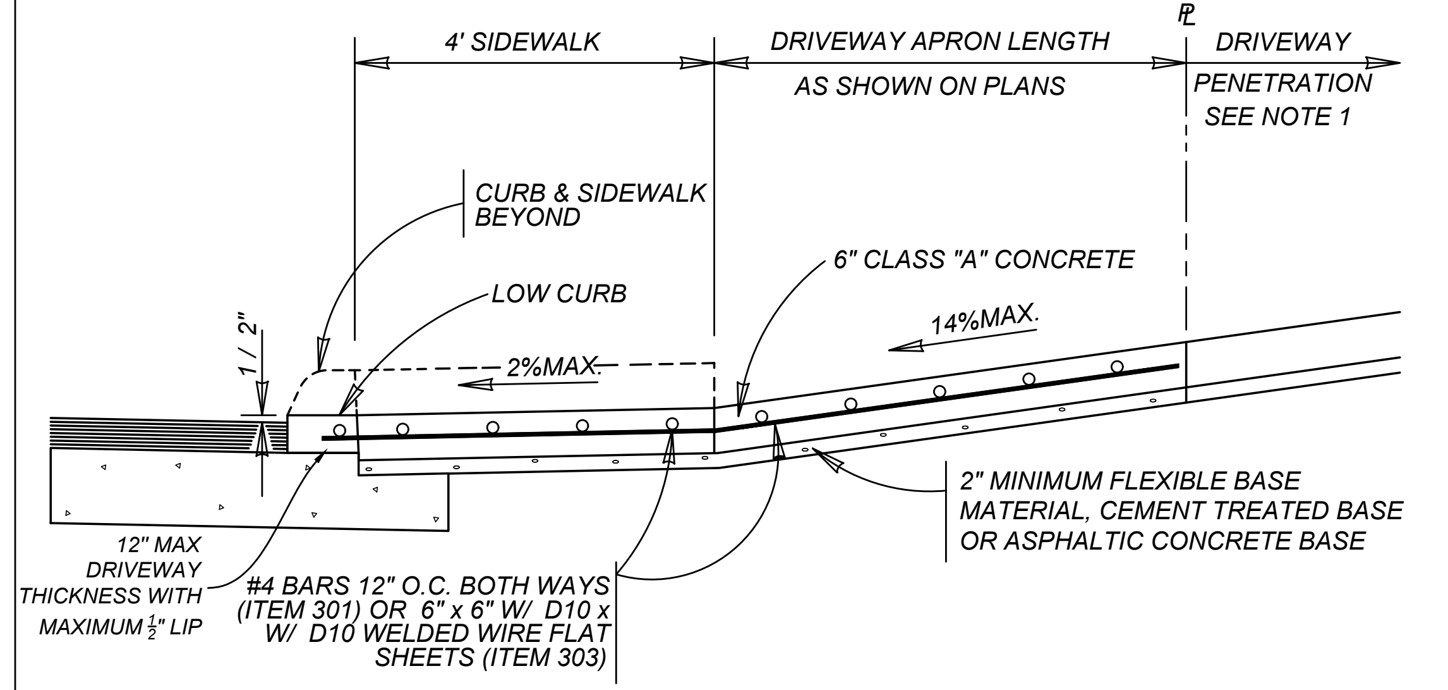

3'
MINIMUM
4' SIDEWALK
DRIVEWAY APRON
LENGTH AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
7" MIN., SEE NOTE 2
1 / 2"
CURB AND SIDEWALK BEYOND
LOW CURB
①
5" CLASS "A" CONCRETE
2% MAX.
2% MAX.
7% MAX.(G1) ②
(G2) ②
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
#3 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D5 x W/ D5 WELDED WIRE FLAT SHEETS (ITEM 303)

① 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.

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

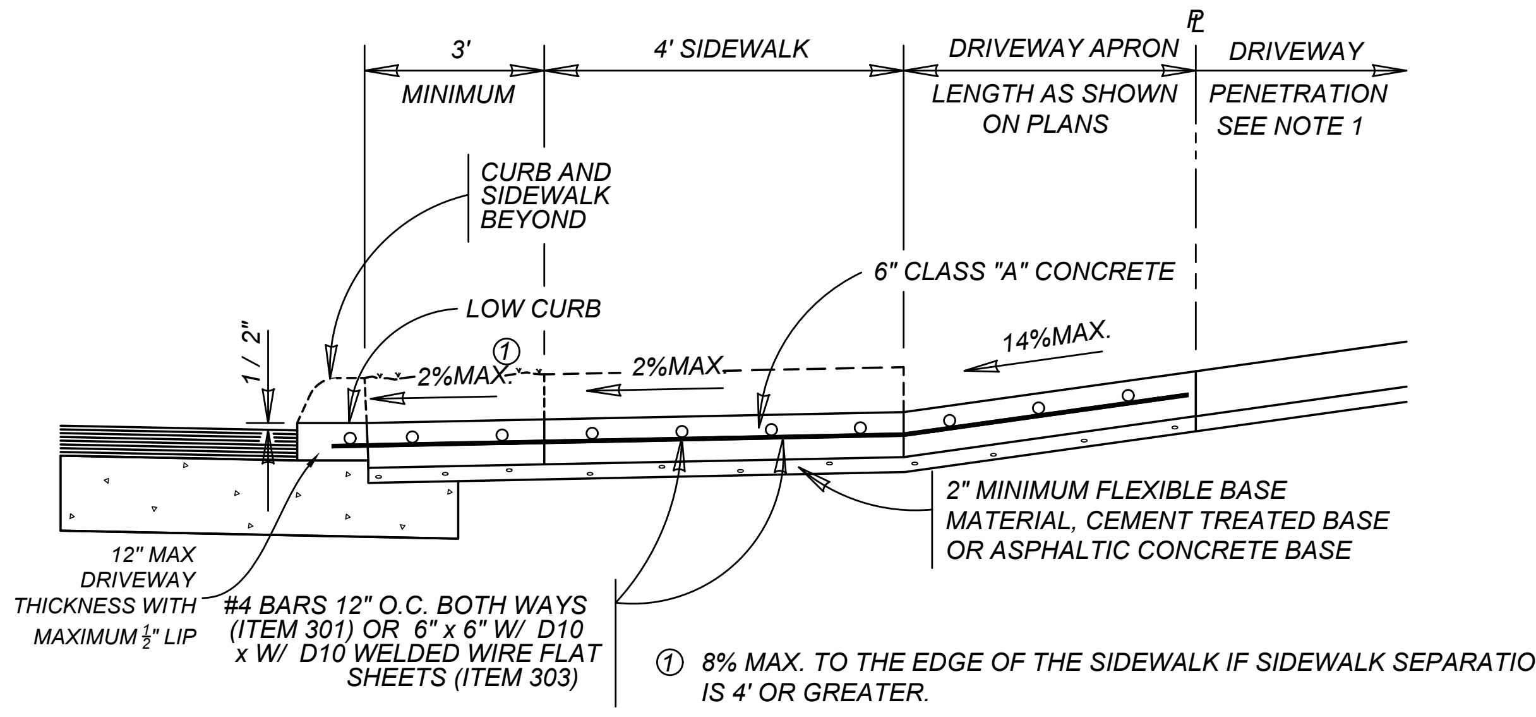
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WHERE PROPERTY IS LOWER THAN STREET & SIDEWALK IS SEPARATED FROM CURB
ITEM 503.1


4' SIDEWALK
DRIVEWAY APRON LENGTH
AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
CURB & SIDEWALK BEYOND
LOW CURB
6" CLASS "A" CONCRETE
14%MAX.
2%MAX.
1 / 2"
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
12" MAX DRIVEWAY THICKNESS WITH MAXIMUM ½" LIP
#4 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D10 x W/ D10 WELDED WIRE FLAT SHEETS (ITEM 303)

TYPICAL COMMERCIAL DRIVEWAY SECTION

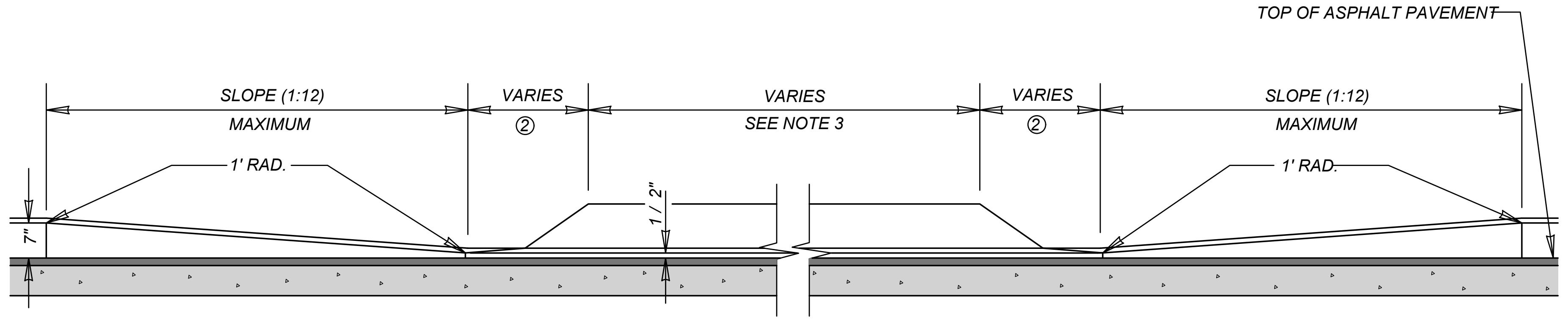
WITH SIDEWALK ABUTTING CURB
ITEM 503.2


3'
MINIMUM
4' SIDEWALK
DRIVEWAY APRON
LENGTH AS SHOWN ON PLANS
PL
DRIVEWAY
PENETRATION
SEE NOTE 1
CURB AND SIDEWALK BEYOND
LOW CURB
①
2%MAX.
2%MAX.
6" CLASS "A" CONCRETE
14%MAX.
1 / 2"
2" MINIMUM FLEXIBLE BASE MATERIAL, CEMENT TREATED BASE OR ASPHALTIC CONCRETE BASE
12" MAX DRIVEWAY THICKNESS WITH MAXIMUM ½" LIP
#4 BARS 12" O.C. BOTH WAYS (ITEM 301) OR 6" x 6" W/ D10 x W/ D10 WELDED WIRE FLAT SHEETS (ITEM 303)

① 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.

TYPICAL COMMERCIAL DRIVEWAY SECTION

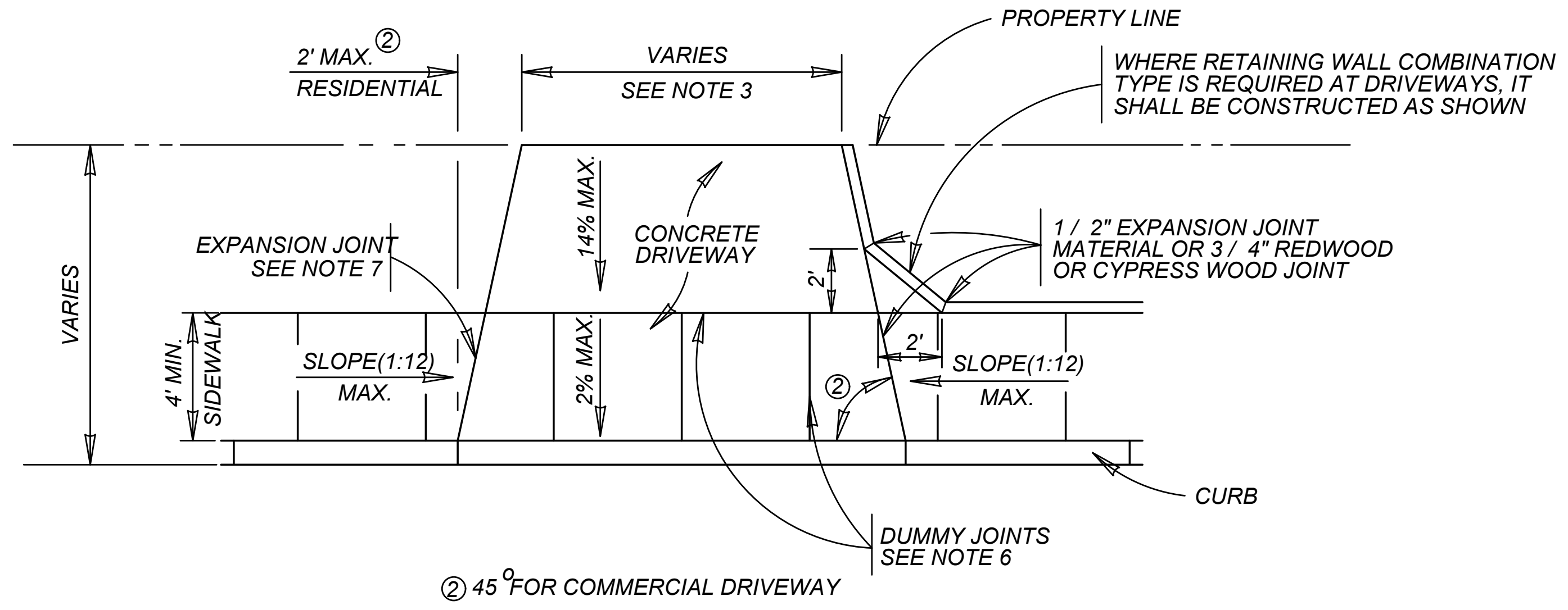
WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2


TOP OF ASPHALT PAVEMENT
SLOPE (1:12)
MAXIMUM
VARIES
②
VARIES
SEE NOTE 3
VARIES
②
SLOPE (1:12)
MAXIMUM
1' RAD.
1' RAD.
7"
1 / 2"

② RESIDENTIAL : 2' MAXIMUM;
COMMERCIAL: SEE PLAN VIEW

CURB PROFILE AT DRIVEWAY

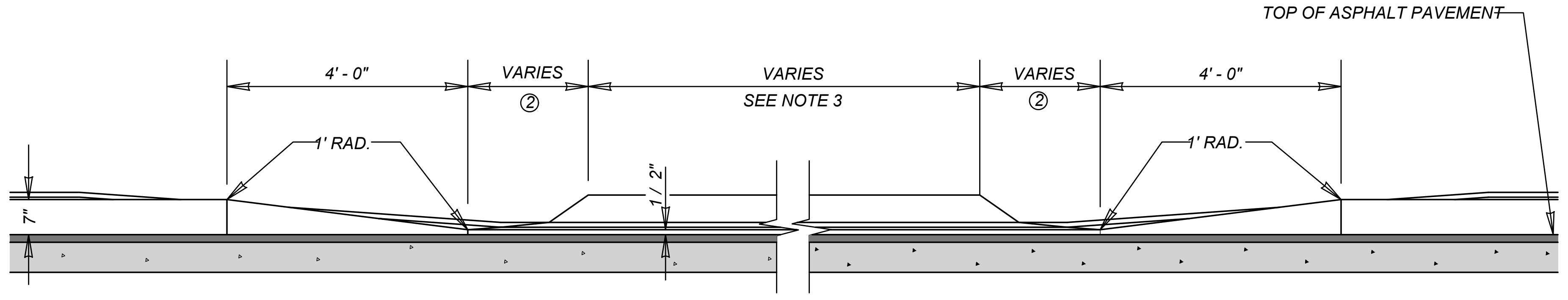
WITH SIDEWALK ABUTTING CURB


2' MAX. ②
RESIDENTIAL
VARIES
SEE NOTE 3
PROPERTY LINE
WHERE RETAINING WALL COMBINATION TYPE IS REQUIRED AT DRIVEWAYS, IT SHALL BE CONSTRUCTED AS SHOWN
1 / 2" EXPANSION JOINT MATERIAL OR 3 / 4" REDWOOD OR CYPRESS WOOD JOINT
EXPANSION JOINT SEE NOTE 7
14% MAX.
CONCRETE DRIVEWAY
2'
2'
VARIES
4' MIN. SIDEWALK
SLOPE(1:12) MAX.
2% MAX.
②
SLOPE(1:12) MAX.
CURB
DUMMY JOINTS SEE NOTE 6

② 45° FOR COMMERCIAL DRIVEWAY

TYPICAL DRIVEWAY PLAN VIEW

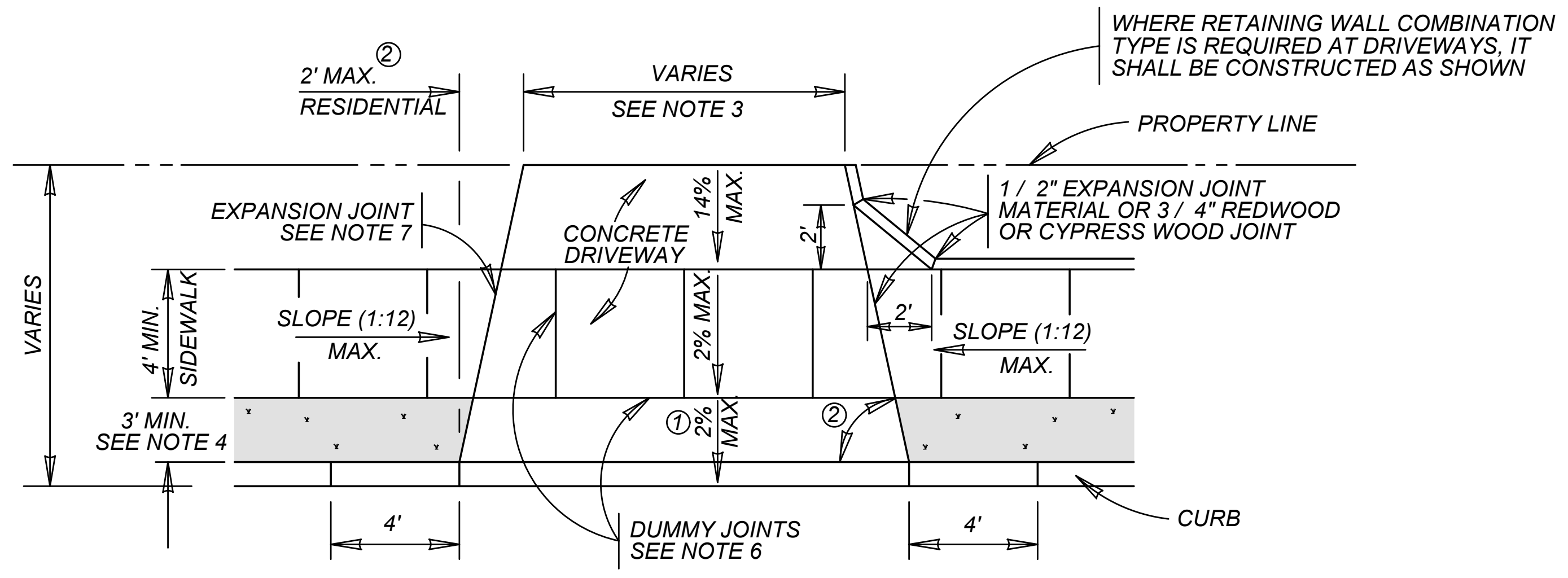
WITH SIDEWALK ABUTTING CURB


TOP OF ASPHALT PAVEMENT
4' - 0"
VARIES
②
VARIES
SEE NOTE 3
VARIES
②
4' - 0"
1' RAD.
1' RAD.
7"
1 / 2"

② RESIDENTIAL : 2' MAXIMUM;
COMMERCIAL: SEE PLAN VIEW

CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB


WHERE RETAINING WALL COMBINATION TYPE IS REQUIRED AT DRIVEWAYS, IT SHALL BE CONSTRUCTED AS SHOWN
2' MAX. ②
RESIDENTIAL
VARIES
SEE NOTE 3
PROPERTY LINE
1 / 2" EXPANSION JOINT MATERIAL OR 3 / 4" REDWOOD OR CYPRESS WOOD JOINT
EXPANSION JOINT SEE NOTE 7
14% MAX.
CONCRETE DRIVEWAY
2'
2'
VARIES
4' MIN. SIDEWALK
SLOPE (1:12) MAX.
2% MAX.
SLOPE (1:12) MAX.
3' MIN. SEE NOTE 4
① 2% MAX.
②
CURB
4'
4'
DUMMY JOINTS SEE NOTE 6

① 8% MAX. TO THE EDGE OF THE SIDEWALK IF SIDEWALK SEPARATION IS 4' OR GREATER.

② 45° FOR COMMERCIAL DRIVEWAY

TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB

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. 7" 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.

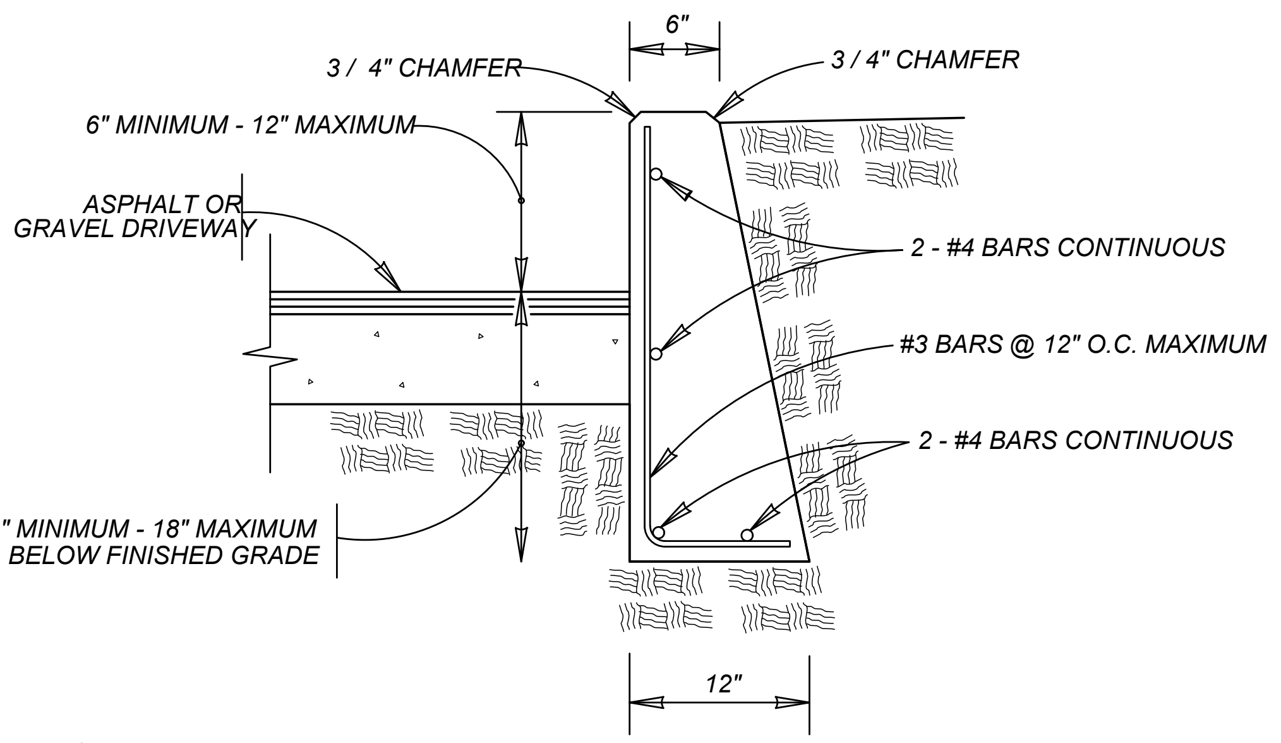
5. FOR OTHER THAN LOCAL TYPE "A" STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.

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.


6"
3 / 4" CHAMFER
3 / 4" CHAMFER
6" MINIMUM - 12" MAXIMUM
ASPHALT OR GRAVEL DRIVEWAY
2 - #4 BARS CONTINUOUS
#3 BARS @ 12" O.C. MAXIMUM
2 - #4 BARS CONTINUOUS
12" MINIMUM - 18" MAXIMUM BELOW FINISHED GRADE
12"

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:________
DRWN. BY: V. VASQUEZ	DSGN. BY:________	CHKD. BY: R.S. HOSSEINI, P.E.	SHEET NO.:____OF____

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
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3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: STDT2054113

SHEET TITLE:
CONCRETE DRIVEWAY
DETAILS

SHEET NUMBER:
6.10

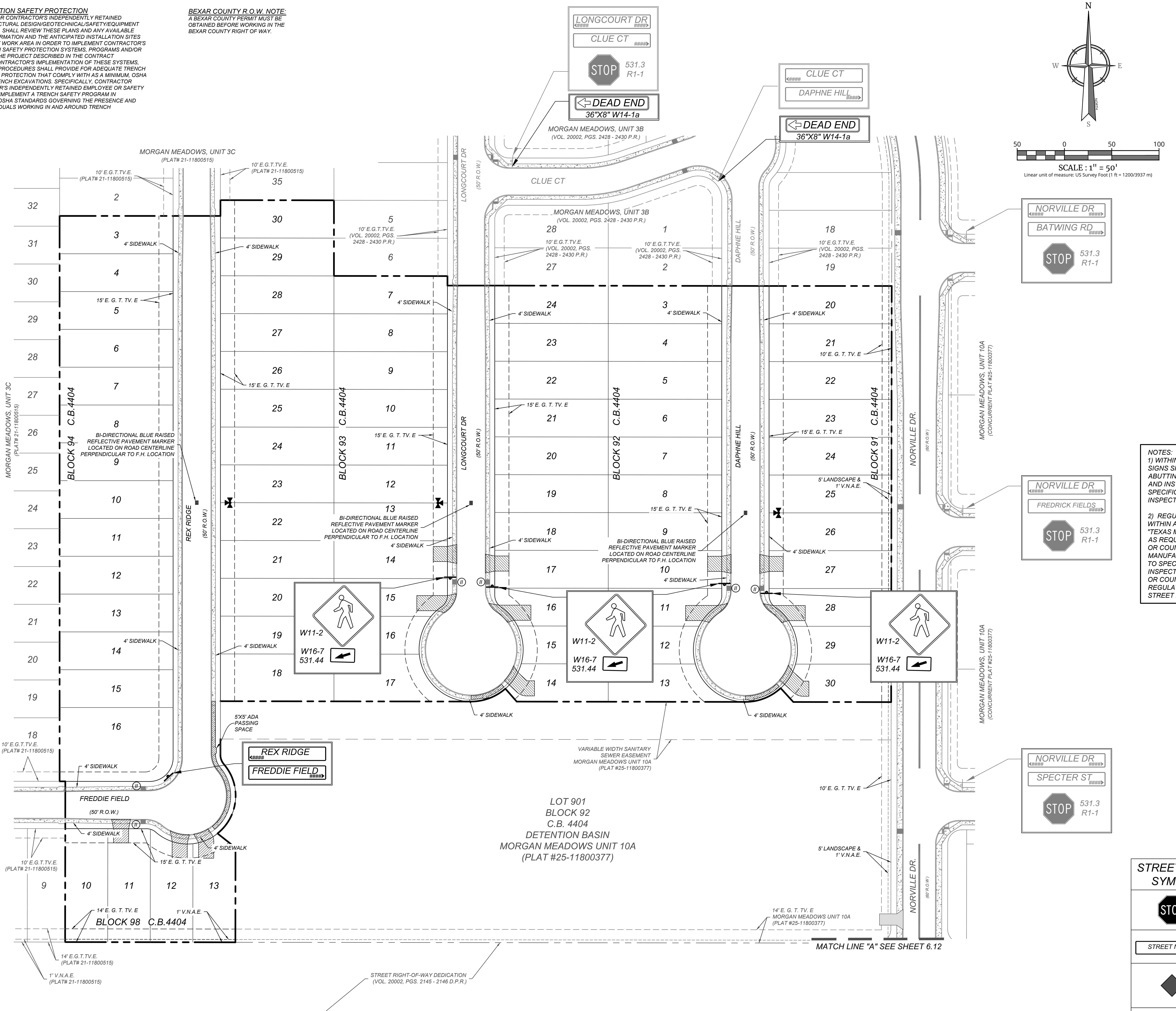
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

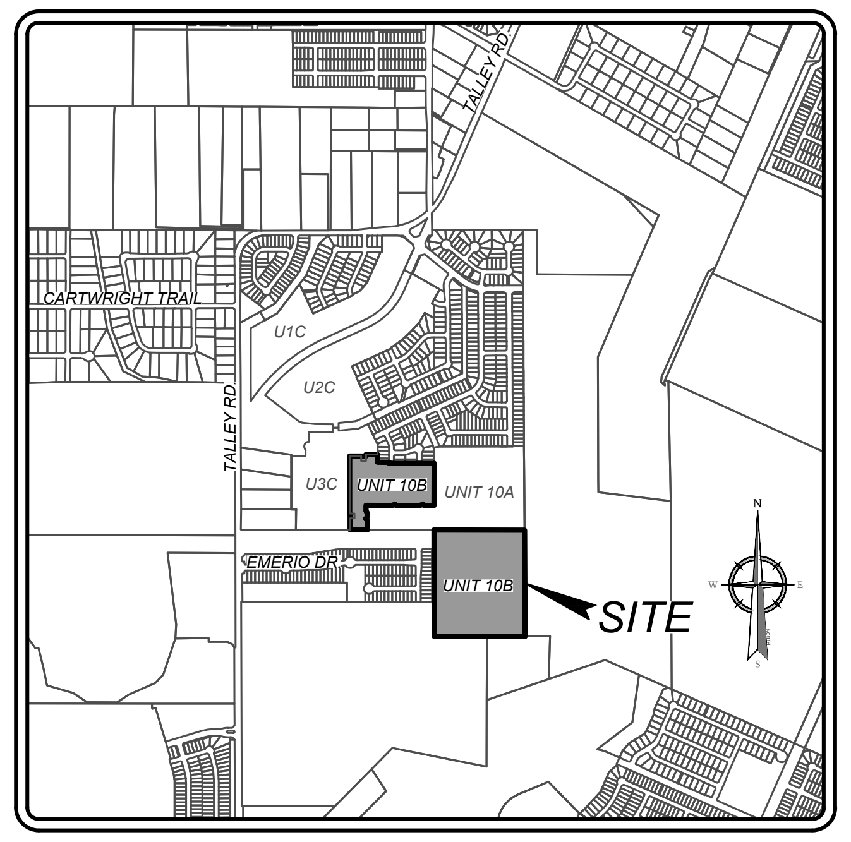
TRENCH EXCAVATION SAFETY PROTECTION

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.

BEXAR COUNTY R.O.W. NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEXAR COUNTY RIGHT OF WAY.


LONGCOURT DR
CLUE CT
STOP
531.3
R1-1
DEAD END
36"X8" W14-1a
CLUE CT
DAPHNE HILL
DEAD END
36"X8" W14-1a
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
10' E.G.T.TV.E.
(PLAT# 21-11800515)
CLUE CT
N
E
W
S
50 0 50 100
SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)
NORVILLE DR
BATWING RD
STOP
531.3
R1-1
NORVILLE DR
FREDRICK FIELDS
STOP
531.3
R1-1
NORVILLE DR
SPECTER ST
STOP
531.3
R1-1
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
REX RIDGE
(50' R.O.W.)
LONGCOURT DR
(50' R.O.W.)
DAPHNE HILL
(50' R.O.W.)
NORVILLE DR.
(60' R.O.W.)
MORGAN MEADOWS, UNIT 10A
(CONCURRENT PLAT #25-11800377)
4' SIDEWALK
15' E. G. T. TV. E
10' E. G. T. TV. E
BI-DIRECTIONAL BLUE RAISED REFLECTIVE PAVEMENT MARKER LOCATED ON ROAD CENTERLINE PERPENDICULAR TO F.H. LOCATION
5' LANDSCAPE & 1' V.N.A.E.
W11-2
W16-7
531.44
5'X5' ADA PASSING SPACE
REX RIDGE
FREDDIE FIELD
FREDDIE FIELD
(50' R.O.W.)
VARIABLE WIDTH SANITARY SEWER EASEMENT MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
LOT 901
BLOCK 92
C.B. 4404
DETENTION BASIN
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
BLOCK 98 C.B.4404
14' E. G. T. TV. E
1' V.N.A.E.
14' E. G. T. TV. E MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
MATCH LINE "A" SEE SHEET 6.12
STREET RIGHT-OF-WAY DEDICATION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
14' E.G.T.TV.E. (PLAT# 21-11800515)
1' V.N.A.E. (PLAT# 21-11800515)


U1C
U2C
U3C
UNIT 10A
SITE

LOCATION MAP NOT-TO-SCALE

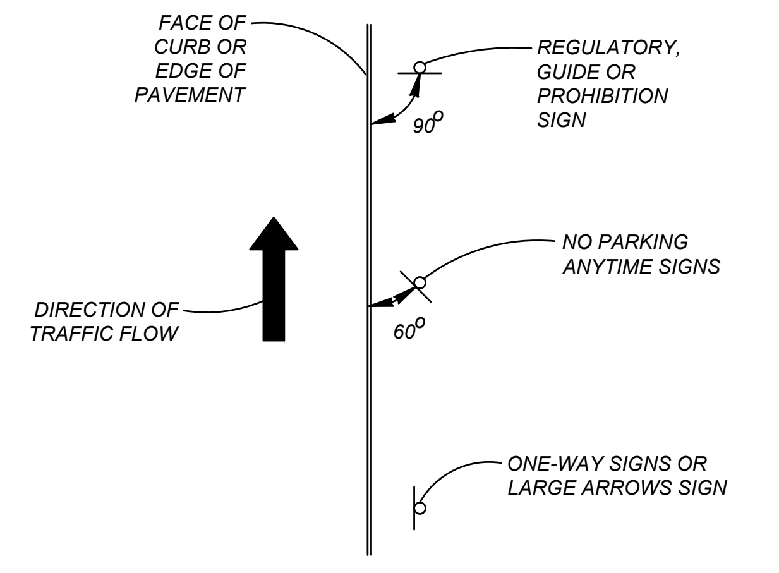
LEGEND

C.B	=	COUNTY BLOCK
E.G.T.C.E.	=	GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
V.N.A.E.	=	VEHICULAR NON-ACCESS EASEMENT
(II)	=	WHEELCHAIR RAMP TYPE IV SEE SHEET 6.8
SDW	=	SINGLE DIRECTIONAL WHEEL CHAIR RAMP SEE SHEET 6.8
DDW	=	DOUBLE DIRECTIONAL WHEEL CHAIR RAMP SEE SHEET 6.8
▨	=	SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
▭	=	SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
▨	=	PROPOSED DRIVEWAY LOCATION

NOTES:

1) WITHIN THE CITY'S EXTRATERRITORIAL JURISDICTION, STREET NAME SIGNS SHALL BE INSTALLED AT ALL INTERSECTIONS WITHIN AND ABUTTING THE SUBDIVISION. SUCH SIGNS SHALL BE MANUFACTURED AND INSTALLED BY THE SUBDIVIDER IN ACCORDANCE TO SPECIFICATIONS OF, AND SUBJECT TO PLAN REVIEWS AND INSPECTIONS BY THE COUNTY DEPARTMENT OF PUBLIC WORKS.

2) REGULATORY AND WARNING TRAFFIC SIGNS SHALL BE INSTALLED WITHIN AND ABUTTING THE SUBDIVISION IN ACCORDANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)," AS REQUIRED BY THE CITY'S DEVELOPMENT SERVICES DEPARTMENT OR COUNTY'S DEPARTMENT OF PUBLIC WORKS. SUCH SIGNS SHALL BE MANUFACTURED AND INSTALLED BY THE SUBDIVIDER IN ACCORDANCE TO SPECIFICATIONS OF, AND SUBJECT TO PLAN REVIEWS AND INSPECTIONS BY THE CITY'S DEVELOPMENT SERVICES DEPARTMENT OR COUNTY'S DEPARTMENT OF PUBLIC WORKS. WARNING AND REGULATORY SIGNS SHALL NOT BE ACCEPTED BY THE CITY UNTIL THE STREET HAS BEEN ACCEPTED FOR MAINTENANCE BY THE CITY.


FACE OF CURB OR EDGE OF PAVEMENT
REGULATORY, GUIDE OR PROHIBITION SIGN
90°
NO PARKING ANYTIME SIGNS
DIRECTION OF TRAFFIC FLOW
60°
ONE-WAY SIGNS OR LARGE ARROWS SIGN

TYPICAL GROUND MOUNTED SIGN PLACEMENT

STREET SIGN SYMBOL	DESCRIPTION	ITEM NUMBER
STOP	R1-1 30" X 30" (SINGLE LANE) 36" X 36" (MULTI LANE)	531.3
STREET NAME ####	STANDARD BEXAR COUNTY STREET NAME SIGN STD X 9"	531.57
◆	OM4-3 END-OF-ROADWAY MARKER 18" X 18"	531.56
▦	TYPE II BLUE PAVEMENT MARKER	537.8

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
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BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

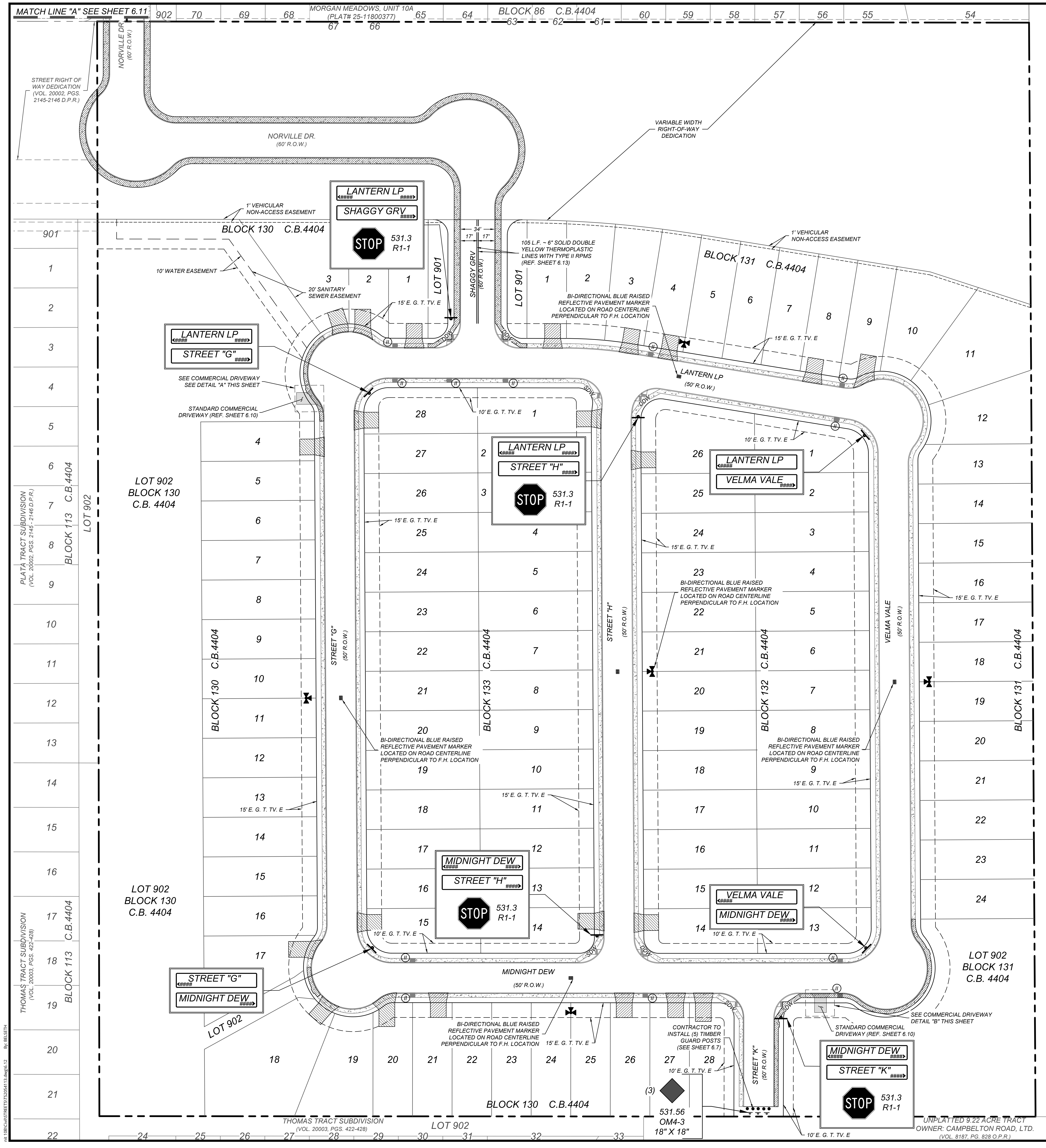
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

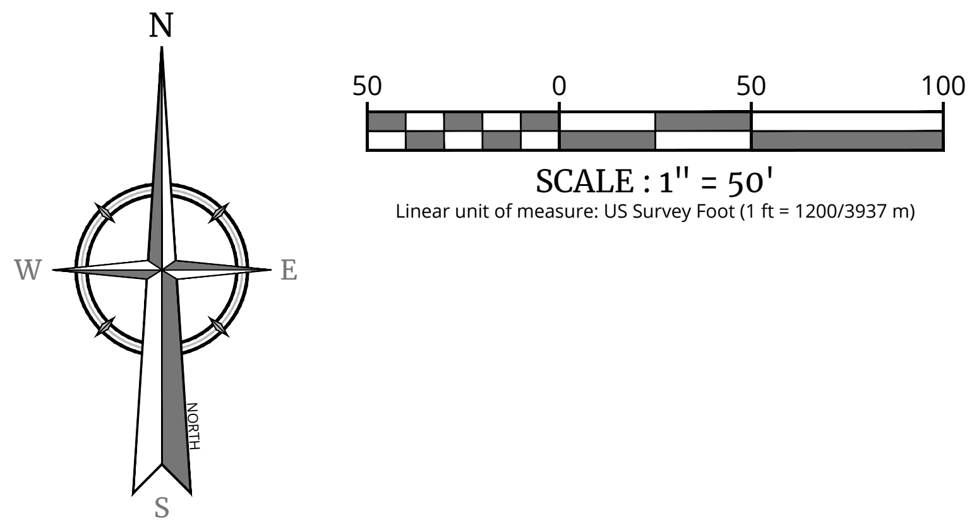
PROJECT NUMBER:	DRAWING NAME:
205-41-13	TS2054113

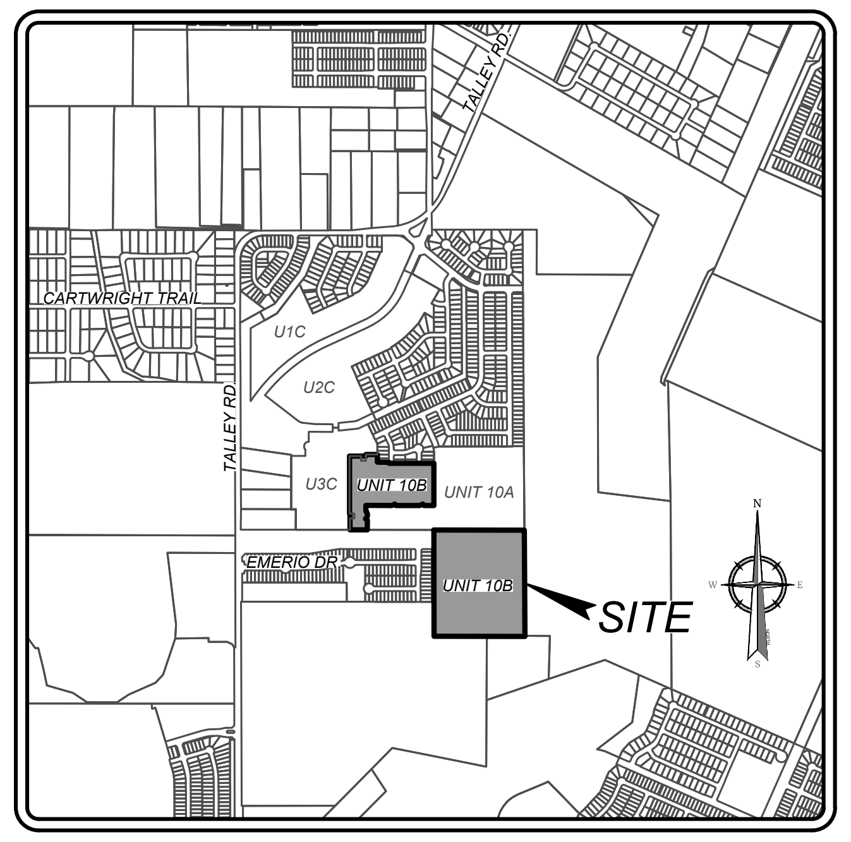
SHEET TITLE:
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN (SHT 1 OF 2)

SHEET NUMBER:
6.11

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


MATCH LINE "A" SEE SHEET 6.11
MORGAN MEADOWS, UNIT 10A
(PLAT# 25-11800377)
BLOCK 86 C.B.4404
NORVILLE DR.
(60' R.O.W.)
STREET RIGHT OF WAY DEDICATION
(VOL. 20002, PGS. 2145-2146 D.P.R.)
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
LANTERN LP
SHAGGY GRV
STOP
531.3
R1-1
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
BLOCK 131 C.B.4404
10' WATER EASEMENT
20' SANITARY SEWER EASEMENT
15' E. G. T. TV. E
SHAGGY GRV
(50' R.O.W.)
105 L.F. - 6" SOLID DOUBLE YELLOW THERMOPLASTIC LINES WITH TYPE II RPMS
(REF. SHEET 6.13)
BI-DIRECTIONAL BLUE RAISED REFLECTIVE PAVEMENT MARKER LOCATED ON ROAD CENTERLINE PERPENDICULAR TO F.H. LOCATION
LOT 901
LANTERN LP
(50' R.O.W.)
LANTERN LP
STREET "G"
SEE COMMERCIAL DRIVEWAY SEE DETAIL "A" THIS SHEET
STANDARD COMMERCIAL DRIVEWAY (REF. SHEET 6.10)
LOT 902
BLOCK 130
C.B. 4404
PLATA TRACT SUBDIVISION
(VOL. 20002, PGS. 2145 - 2146 D.P.R.)
BLOCK 113 C.B.4404
LOT 902
STREET "G"
(50' R.O.W.)
LANTERN LP
STREET "H"
STOP
531.3
R1-1
BLOCK 133 C.B.4404
STREET "H"
(50' R.O.W.)
LANTERN LP
VELMA VALE
BLOCK 132 C.B.4404
VELMA VALE
(50' R.O.W.)
UNPLATTED 157.48 ACRE TRACT
OWNER: VISE OAKS I, LTD.
(VOL. 9437, PGS. 963 O.P.R.)
BLOCK 131 C.B.4404
10' E. G. T. TV. E
MIDNIGHT DEW
STREET "H"
STOP
531.3
R1-1
VELMA VALE
MIDNIGHT DEW
LOT 902
BLOCK 131
C.B. 4404
THOMAS TRACT SUBDIVISION
(VOL. 20003, PGS. 422-428)
STREET "G"
MIDNIGHT DEW
LOT 902
MIDNIGHT DEW
(50' R.O.W.)
SEE COMMERCIAL DRIVEWAY DETAIL "B" THIS SHEET
STANDARD COMMERCIAL DRIVEWAY (REF. SHEET 6.10)
CONTRACTOR TO INSTALL (5) TIMBER GUARD POSTS (SEE SHEET 6.7)
STREET "K"
(50' R.O.W.)
MIDNIGHT DEW
STREET "K"
STOP
531.3
R1-1
(3)
531.56
OM4-3
18" X 18"
BLOCK 130 C.B.4404
THOMAS TRACT SUBDIVISION
(VOL. 20003, PGS. 422-428)
LOT 902
UNPLATTED 9.22 ACRE TRACT
OWNER: CAMPBELTON ROAD, LTD.
(VOL. 8187, PG. 828 O.P.R.)
SDW
DDW


N
S
E
W
NORTH
50
0
50
100
SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
U1C
U2C
U3C
UNIT 10A
EMERIO DR
SITE

LOCATION MAP NOT-TO-SCALE

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.

BEXAR COUNTY R.O.W. NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEXAR COUNTY RIGHT OF WAY.

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LEGEND

C.B	=	COUNTY BLOCK
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SDW	=	SINGLE DIRECTIONAL WHEEL CHAIR RAMP SEE SHEET 6.8
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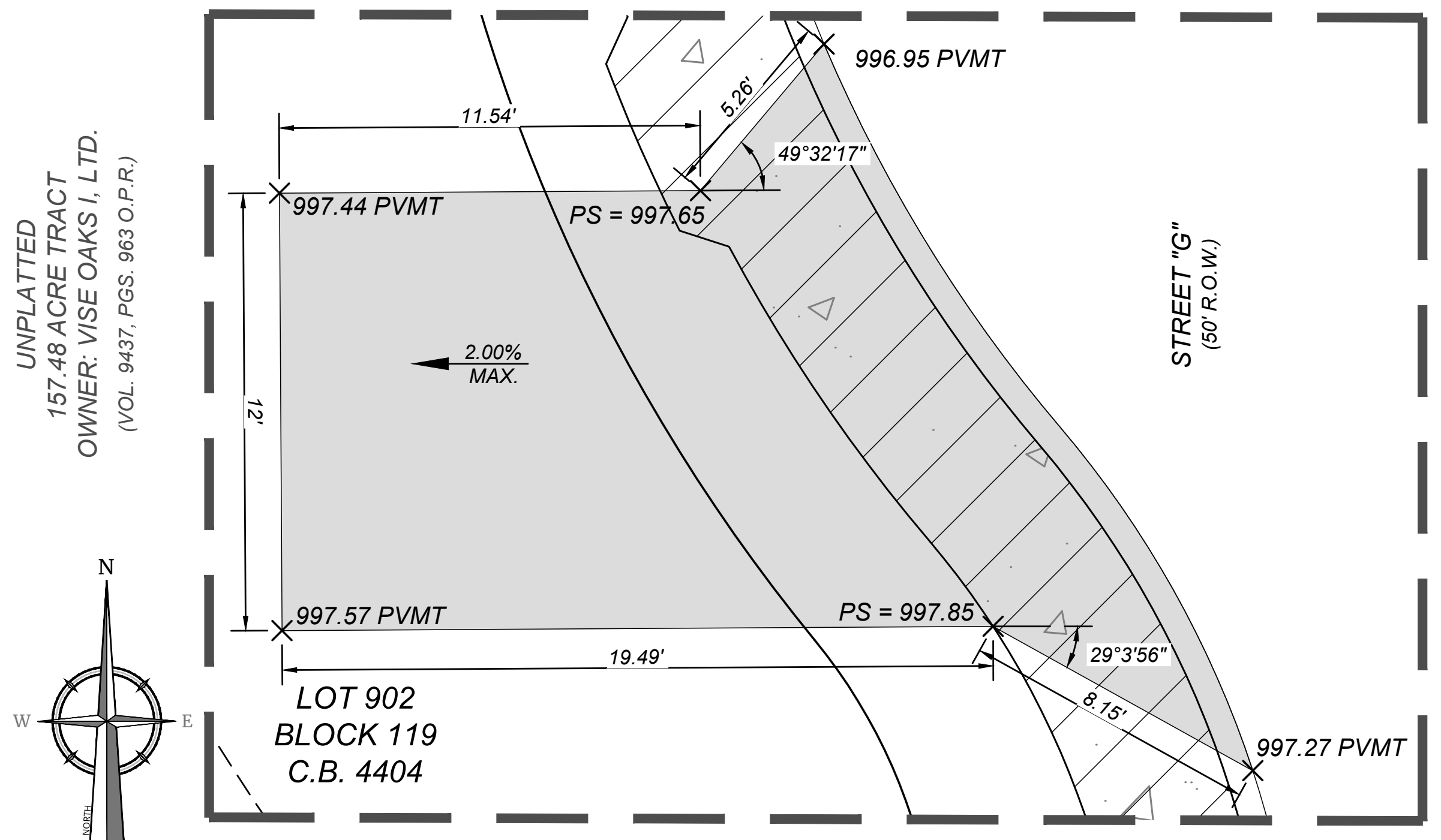
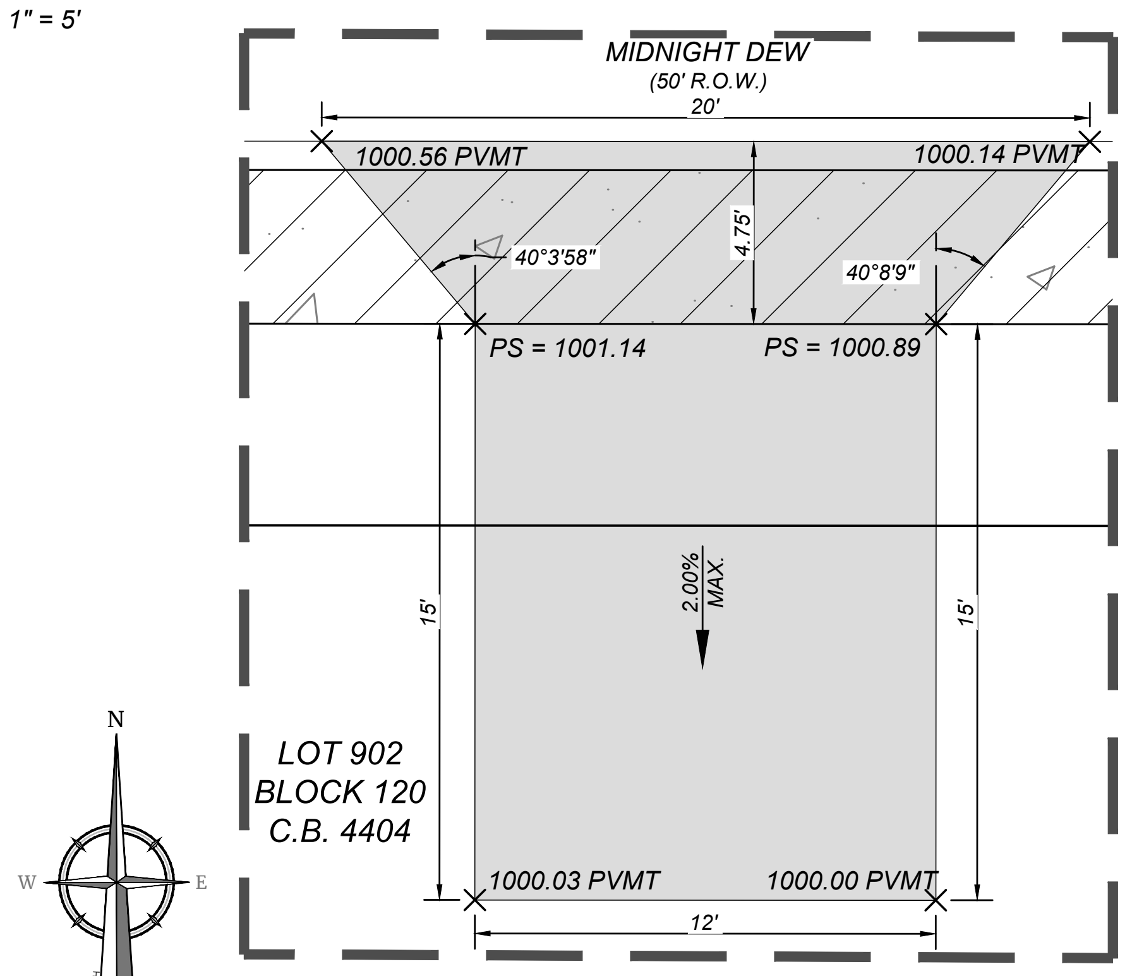
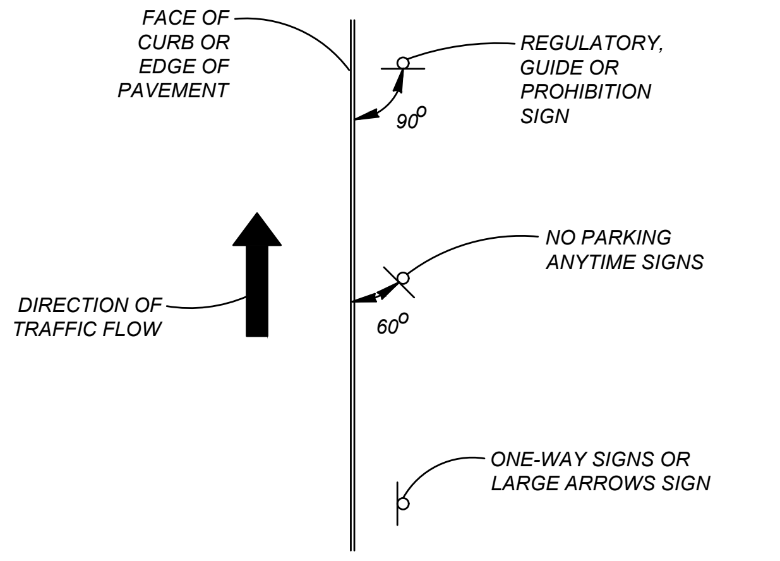
▨	=	PROPOSED DRIVEWAY LOCATION


996.95 PVMT
11.54'
5.26'
49°32'17"
997.44 PVMT
PS = 997.65
2.00% MAX.
12'
STREET "G"
(50' R.O.W.)
997.57 PVMT
PS = 997.85
19.49'
29°3'56"
8.15'
997.27 PVMT
LOT 902
BLOCK 119
C.B. 4404
N
S
E
W

COMMERCIAL DRIVEWAY DETAIL "A"
SCALE: 1" = 5'


MIDNIGHT DEW
(50' R.O.W.)
20'
1000.56 PVMT
1000.14 PVMT
4.75'
40°3'58"
40°8'9"
PS = 1001.14
PS = 1000.89
2.00% MAX.
15'
15'
LOT 902
BLOCK 120
C.B. 4404
1000.03 PVMT
1000.00 PVMT
12'
N
S
E
W

COMMERCIAL DRIVEWAY DETAIL "B"
SCALE: 1" = 5'


FACE OF CURB OR EDGE OF PAVEMENT
REGULATORY, GUIDE OR PROHIBITION SIGN
90°
NO PARKING ANYTIME SIGNS
DIRECTION OF TRAFFIC FLOW
60°
ONE-WAY SIGNS OR LARGE ARROWS SIGN

TYPICAL GROUND MOUNTED SIGN PLACEMENT

STREET SIGN SYMBOL	DESCRIPTION	ITEM NUMBER
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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

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UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: TS2054113

SHEET TITLE:
TRAFFIC SIGNAGE & PEDESTRIAN ACCESSIBILITY PLAN (SHT 2 OF 2)

SHEET NUMBER:
6.12

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

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))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

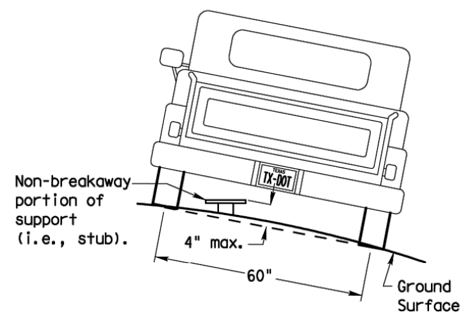
Anchor Type

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

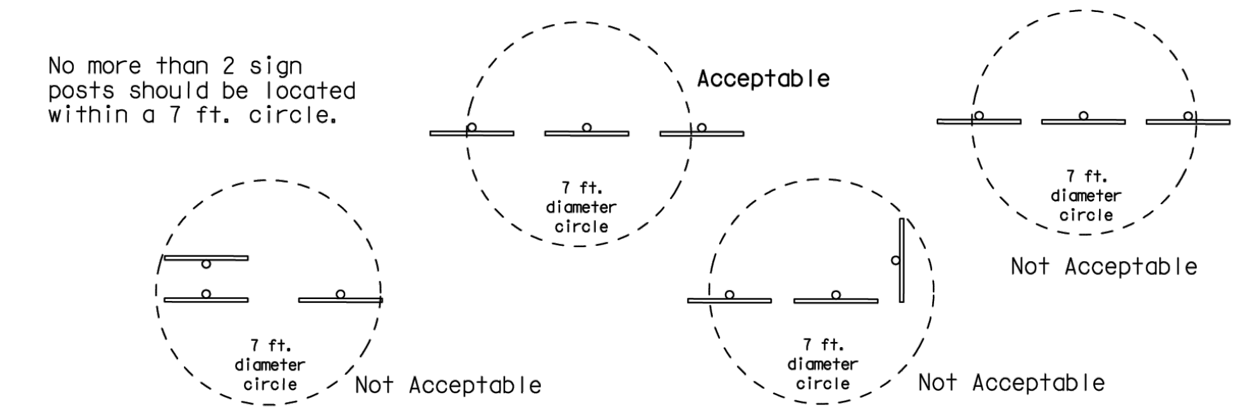
P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
WC = 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


Non-breakaway portion of support (i.e., stub).
4" max.
60"
Ground Surface
TX-DOT

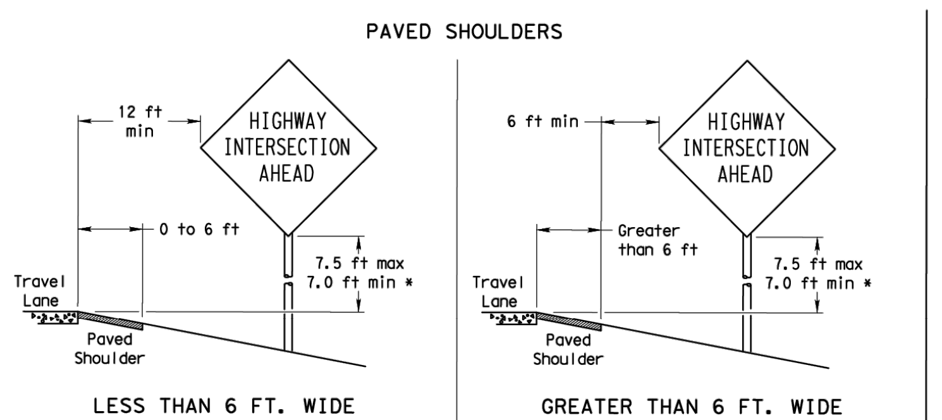
To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

No more than 2 sign posts should be located within a 7 ft. circle.


Acceptable
7 ft. diameter circle
Not Acceptable
7 ft. diameter circle
Not Acceptable
7 ft. diameter circle
Not Acceptable
7 ft. diameter circle

SIGN LOCATION

PAVED SHOULDERS


12 ft min
0 to 6 ft
HIGHWAY INTERSECTION AHEAD
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder
6 ft min
Greater than 6 ft
HIGHWAY INTERSECTION AHEAD
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder

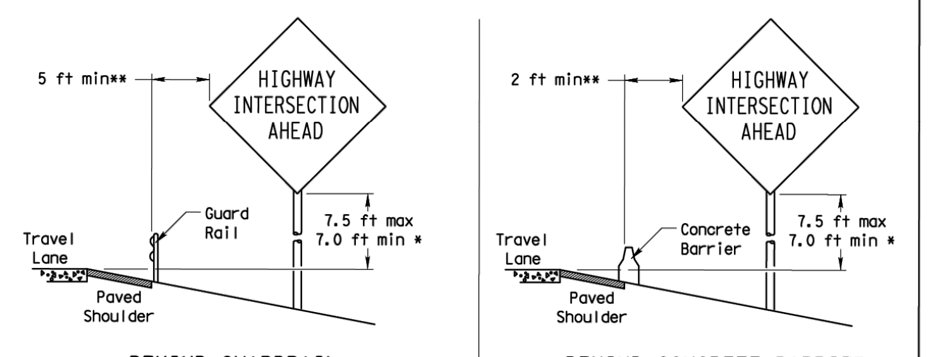
LESS THAN 6 FT. WIDE

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

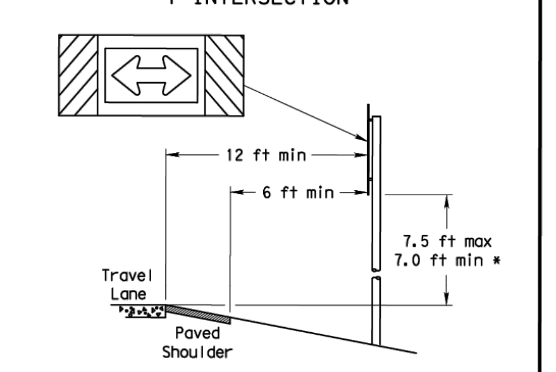

5 ft min**
HIGHWAY INTERSECTION AHEAD
Guard Rail
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder
2 ft min**
HIGHWAY INTERSECTION AHEAD
Concrete Barrier
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder

BEHIND GUARDRAIL

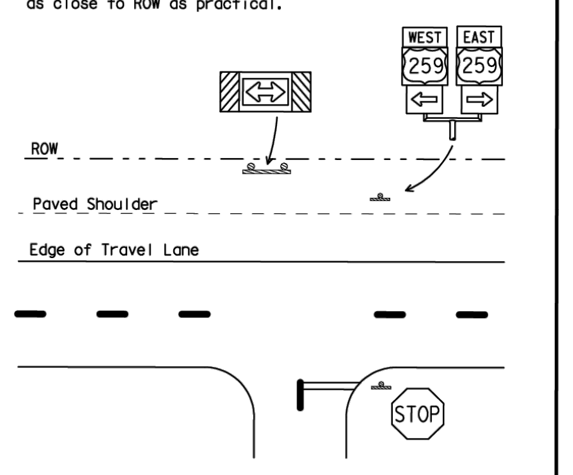
BEHIND CONCRETE BARRIER

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

T-INTERSECTION


12 ft min
6 ft min
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder

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.


WEST
259
EAST
259
ROW
Paved Shoulder
Edge of Travel Lane
STOP

* 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

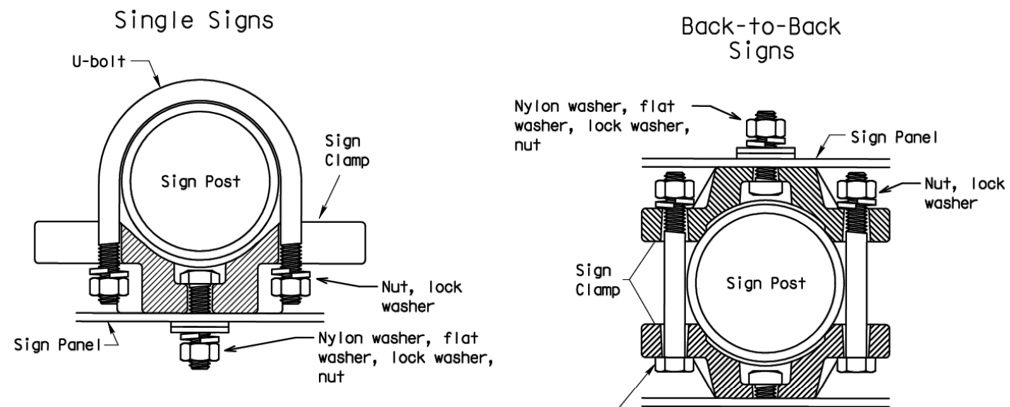
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

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:
http://www.txdot.gov/publications/traffic.htm

TYPICAL SIGN ATTACHMENT DETAIL


Single Signs
U-bolt
Sign Clamp
Sign Post
Nut, lock washer
Sign Panel
Nylon washer, flat washer, lock washer, nut
Back-to-Back Signs
Nylon washer, flat washer, lock washer, nut
Sign Panel
Nut, lock washer
Sign Clamp
Sign Post
Clamp Bolt
Sign Panel
Nylon washer, flat washer, lock washer, nut
Sign Bolt

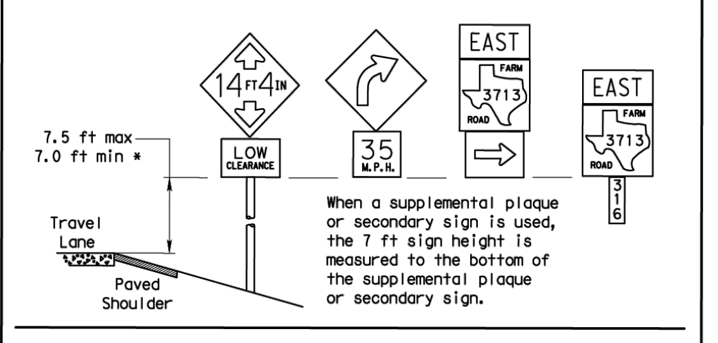
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

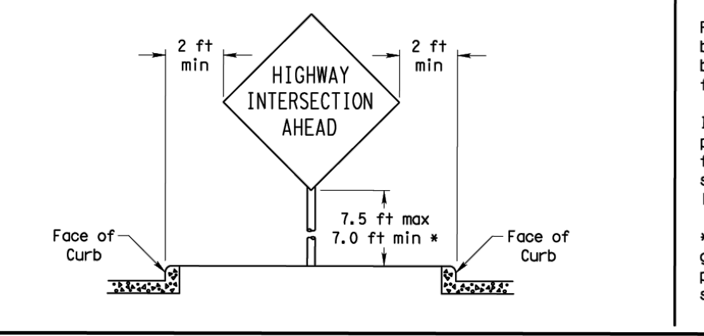
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES


14 FT 4 IN
LOW CLEARANCE
35 M.P.H.
EAST
FARM 3713 ROAD
EAST
FARM 3713 ROAD
316
7.5 ft max
7.0 ft min *
Travel Lane
Paved Shoulder

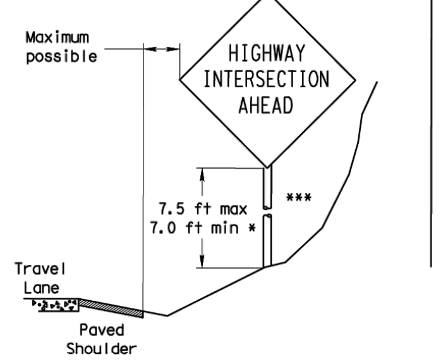
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND


2 ft min
2 ft min
HIGHWAY INTERSECTION AHEAD
7.5 ft max
7.0 ft min *
Face of Curb
Face of Curb

RESTRICTED RIGHT-OF-WAY

(When 6 ft min. is not possible.)


Maximum possible
HIGHWAY INTERSECTION AHEAD
7.5 ft max
7.0 ft min *
***
Travel Lane
Paved Shoulder

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

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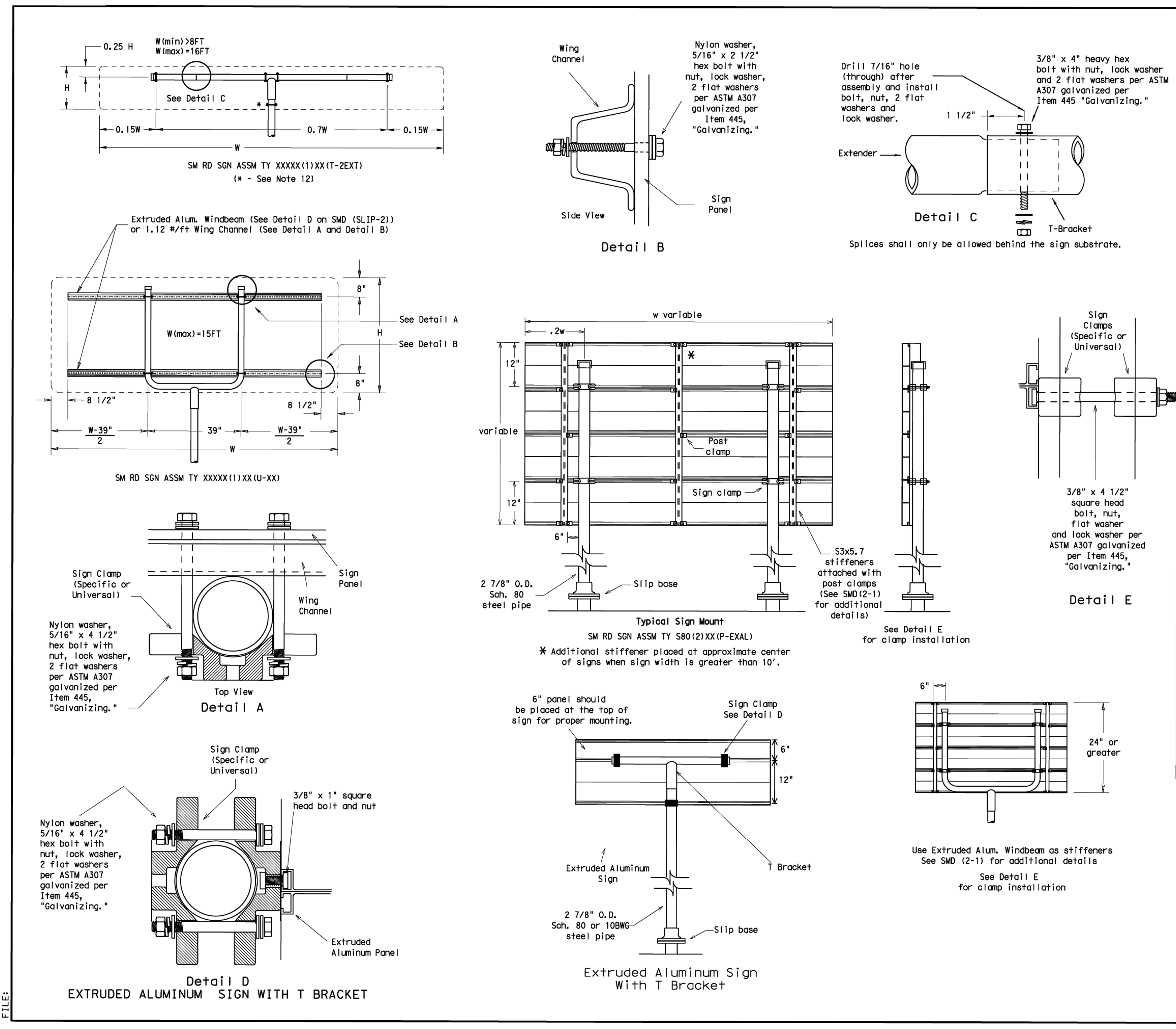
0.25 H
W(min)>8FT
W(max)=16FT
H
See Detail C
*
0.15W
0.7W
0.15W
W
SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)
Extruded Alum. Windbeam (See Detail D on SMD (SLIP-2)) or 1.12 #/ft Wing Channel (See Detail A and Detail B)
8"
W(max)=15FT
See Detail A
See Detail B
H
8"
8 1/2"
8 1/2"
W-39"/2
39"
W-39"/2
W
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)
Wing Channel
Nylon washer, 5/16" x 2 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Side View
Sign Panel
Detail B
Drill 7/16" hole (through) after assembly and install bolt, nut, 2 flat washers and lock washer.
3/8" x 4" heavy hex bolt with nut, lock washer and 2 flat washers per ASTM A307 galvanized per Item 445 "Galvanizing."
1 1/2"
Extender
Detail C
T-Bracket
Splices shall only be allowed behind the sign substrate.
w variable
.2w
12"
*
variable
Post clamp
Sign clamp
12"
6"
2 7/8" O.D. Sch. 80 steel pipe
Slip base
S3x5.7 stiffeners attached with post clamps (See SMD(2-1) for additional details)
Typical Sign Mount
SM RD SGN ASSM TY S80(2)XX(P-EXAL)
* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.
See Detail E for clamp installation
Sign Clamps (Specific or Universal)
3/8" x 4 1/2" square head bolt, nut, flat washer and lock washer per ASTM A307 galvanized per Item 445, "Galvanizing."
Detail E
Sign Clamp (Specific or Universal)
Sign Panel
Wing Channel
Nylon washer, 5/16" x 4 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Top View
Detail A
6" panel should be placed at the top of sign for proper mounting.
Sign Clamp See Detail D
6"
12"
Extruded Aluminum Sign
T Bracket
2 7/8" O.D. Sch. 80 or 10BWG steel pipe
Slip base
Extruded Aluminum Sign With T Bracket
6"
24" or greater
Use Extruded Alum. Windbeam as stiffeners See SMD (2-1) for additional details
See Detail E for clamp installation
Sign Clamp (Specific or Universal)
3/8" x 1" square head bolt and nut
Nylon washer, 5/16" x 4 1/2" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Extruded Aluminum Panel
Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

GENERAL NOTES:

1.

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

2. 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.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. 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.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. 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.
7. 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.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. 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.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Sign blanks shall be the sizes and shapes shown on the plans.
11. Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.

REQUIRED SUPPORT

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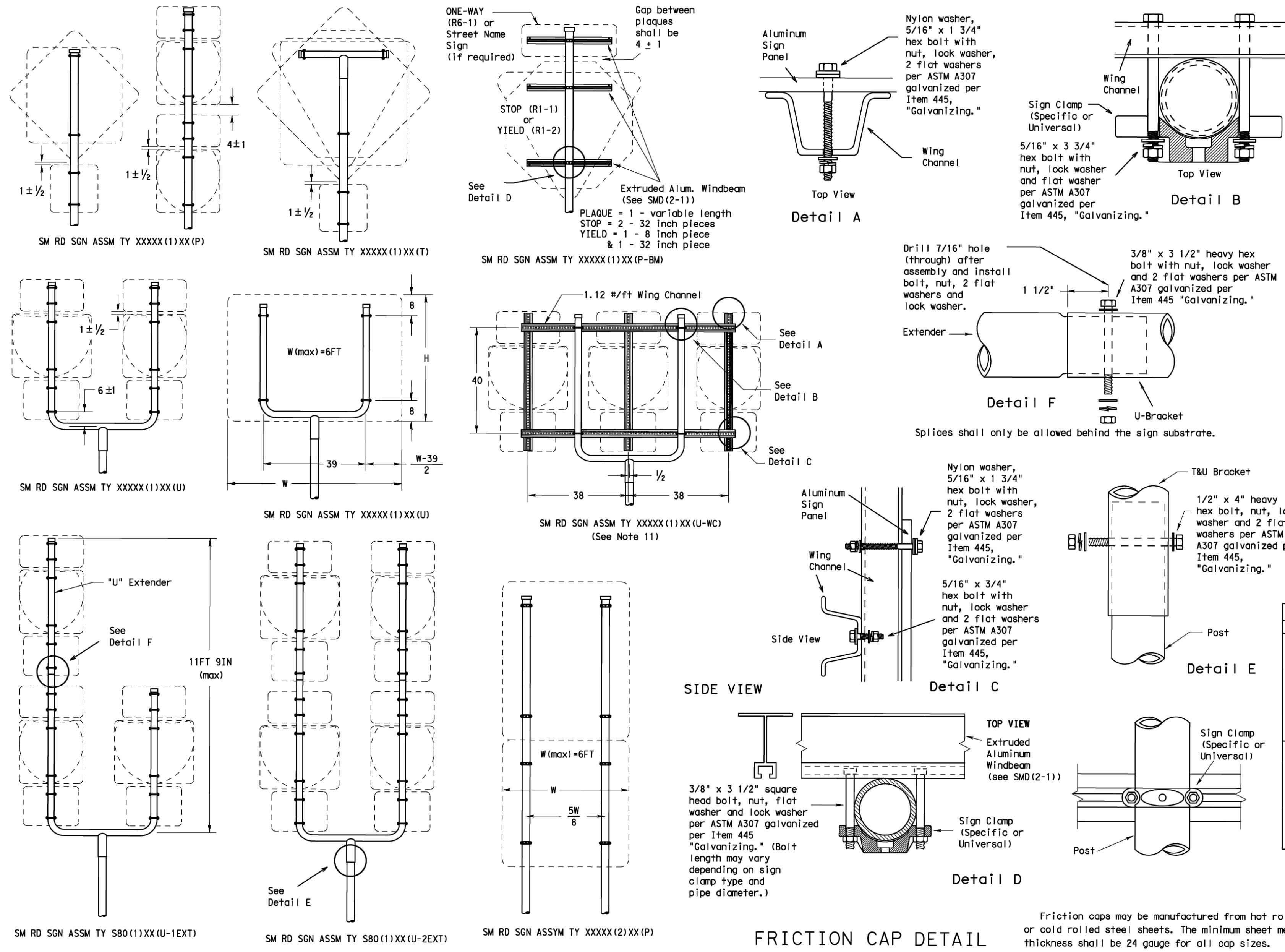
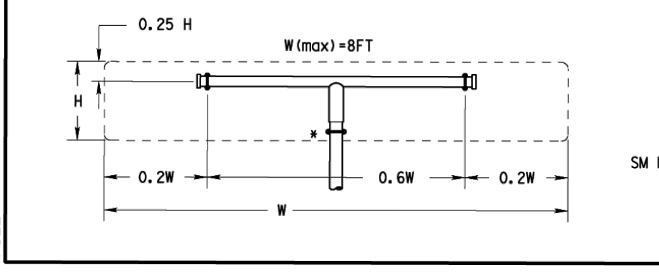
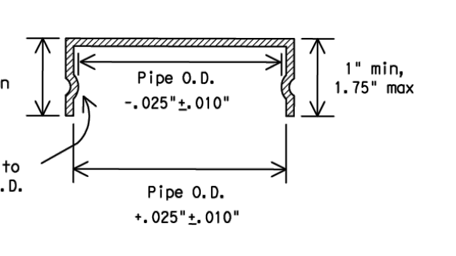

1±½
1±½
4±1
1±½
SM RD SGN ASSM TY XXXXX(1)XX(P)
SM RD SGN ASSM TY XXXXX(1)XX(T)
ONE-WAY (R6-1) or Street Name Sign (if required)
Gap between plaques shall be 4 ± 1
STOP (R1-1) or YIELD (R1-2)
See Detail D
Extruded Alum. Windbeam (See SMD(2-1))
PLAQUE = 1 - variable length
STOP = 2 - 32 inch pieces
YIELD = 1 - 8 inch piece & 1 - 32 inch piece
SM RD SGN ASSM TY XXXXX(1)XX(P-BM)
Aluminum Sign Panel
Nylon washer, 5/16" x 1 3/4" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Wing Channel
Top View
Detail A
Sign Clamp (Specific or Universal)
5/16" x 3 3/4" hex bolt with nut, lock washer and flat washer per ASTM A307 galvanized per Item 445, "Galvanizing."
Wing Channel
Top View
Detail B
1±½
6±1
SM RD SGN ASSM TY XXXXX(1)XX(U)
W(max)=6FT
8
H
8
39
W-39/2
W
SM RD SGN ASSM TY XXXXX(1)XX(U)
1.12 #/ft Wing Channel
40
See Detail A
See Detail B
See Detail C
38
½
38
SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)
Drill 7/16" hole (through) after assembly and install bolt, nut, 2 flat washers and lock washer.
3/8" x 3 1/2" heavy hex bolt with nut, lock washer and 2 flat washers per ASTM A307 galvanized per Item 445 "Galvanizing."
1 1/2"
Extender
Detail F
U-Bracket
Splices shall only be allowed behind the sign substrate.
Aluminum Sign Panel
Nylon washer, 5/16" x 1 3/4" hex bolt with nut, lock washer, 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Wing Channel
5/16" x 3/4" hex bolt with nut, lock washer and 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Side View
Detail C
T&U Bracket
1/2" x 4" heavy hex bolt, nut, lock washer and 2 flat washers per ASTM A307 galvanized per Item 445, "Galvanizing."
Post
Detail E
"U" Extender
See Detail F
11FT 9IN (max)
SM RD SGN ASSM TY S80(1)XX(U-1EXT)
See Detail E
SM RD SGN ASSM TY S80(1)XX(U-2EXT)
W(max)=6FT
W
5W/8
SM RD SGN ASSYM TY XXXXX(2)XX(P)
SIDE VIEW
TOP VIEW
Extruded Aluminum Windbeam (see SMD(2-1))
3/8" x 3 1/2" square head bolt, nut, flat washer and lock washer per ASTM A307 galvanized per Item 445 "Galvanizing." (Bolt length may vary depending on sign clamp type and pipe diameter.)
Sign Clamp (Specific or Universal)
Detail D
Sign Clamp (Specific or Universal)
Post


0.25 H
W(max)=8FT
H
*
0.2W
0.6W
0.2W
W

All dimensions are in english unless detailed otherwise.

SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

FRICTION CAP DETAIL


±.05" Skirt Variation Depth
Pipe O.D. -.025"±.010"
1" min, 1.75" max
Rolled Crimp to engage pipe O.D.
Pipe O.D. +.025"±.010"

Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

GENERAL NOTES:

1.

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

2. 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.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. 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.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. 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.
7. 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.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. 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.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.

REQUIRED SUPPORT

	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	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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PLAT# 25-11800378

FOR

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INITIATIVE, LLC

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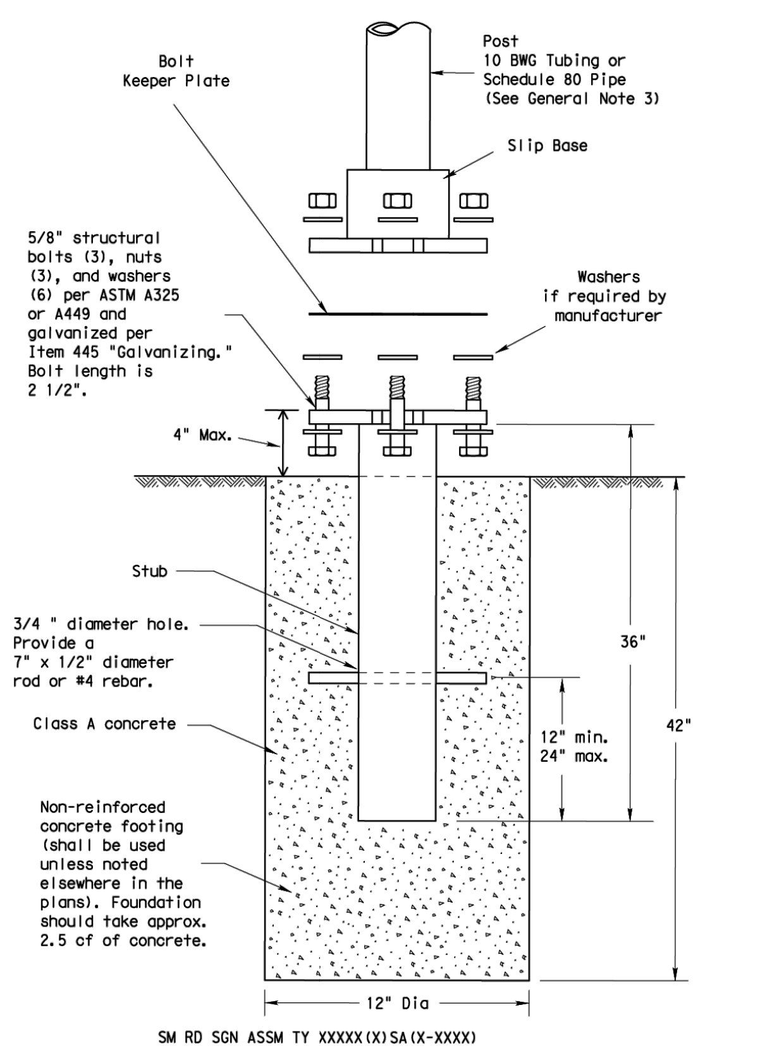
PROJECT NUMBER: 205-41-13
DRAWING NAME: TSDT2054113

SHEET TITLE:
TRAFFIC SIGNAGE DETAILS
(SHT 1 OF 3)

SHEET NUMBER:
6.13

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS


Post
10 BWG Tubing or Schedule 80 Pipe (See General Note 3)
Bolt Keeper Plate
Slip Base
5/8" structural bolts (3), nuts (3), and washers (6) per ASTM A325 or A449 and galvanized per Item 445 "Galvanizing." Bolt length is 2 1/2".
Washers if required by manufacturer
4" Max.
Stub
3/4" diameter hole. Provide a 7" x 1/2" diameter rod or #4 rebar.
Class A concrete
Non-reinforced concrete footing (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.5 cf of concrete.
36"
42"
12" min. 24" max.
12" Dia

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 precoated 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 2.855" 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:
   http://www.txdot.gov/publications/traffic.htm
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

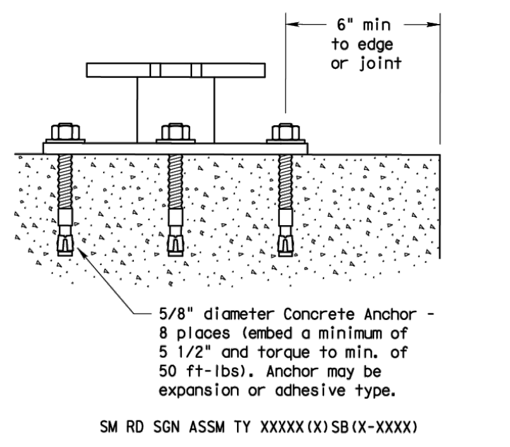
Foundation

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 batches 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 assure 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 travelway (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 travelway. 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


6" min to edge or joint
5/8" diameter Concrete Anchor - 8 places (embed a minimum of 5 1/2" and torque to min. of 50 ft-lbs). Anchor may be expansion or adhesive type.

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

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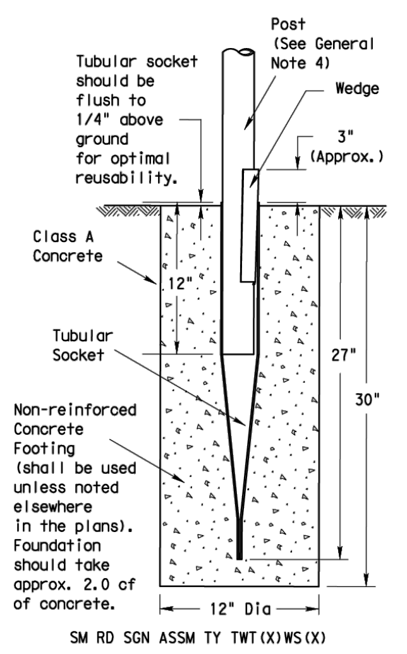
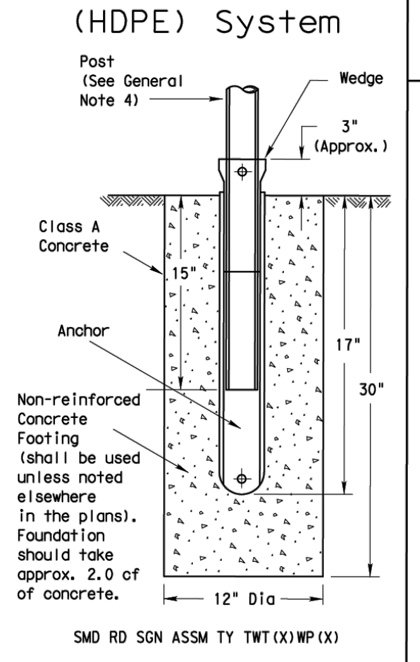
Wedge Anchor Steel System


Post (See General Note 4)
Wedge
3" (Approx.)
Tubular socket should be flush to 1/4" above ground for optimal reusability.
Class A Concrete
Tubular Socket
Non-reinforced Concrete Footing (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.0 cf of concrete.
12"
27"
30"
12" Dia

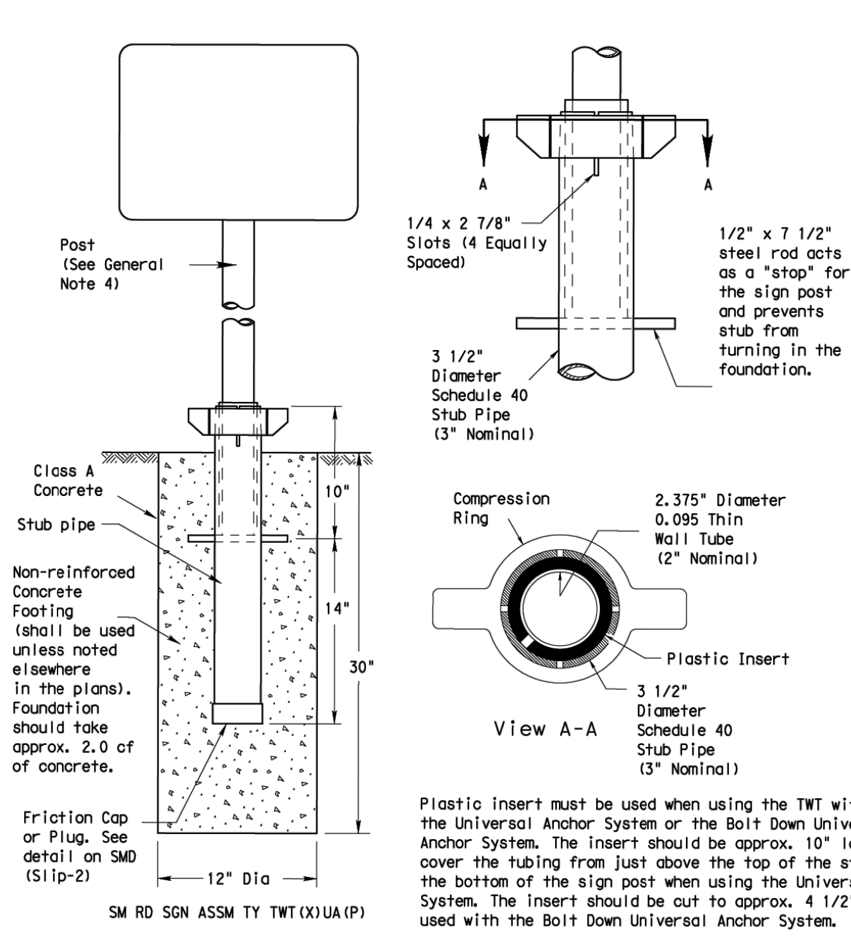
SM RD SGN ASSM TY TWT(X)WS(X)

Wedge Anchor High Density Polyethylene (HDPE) System


Post (See General Note 4)
3" (Approx.)
Class A Concrete
Anchor
Non-reinforced Concrete Footing (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.0 cf of concrete.
15"
17"
30"
12" Dia

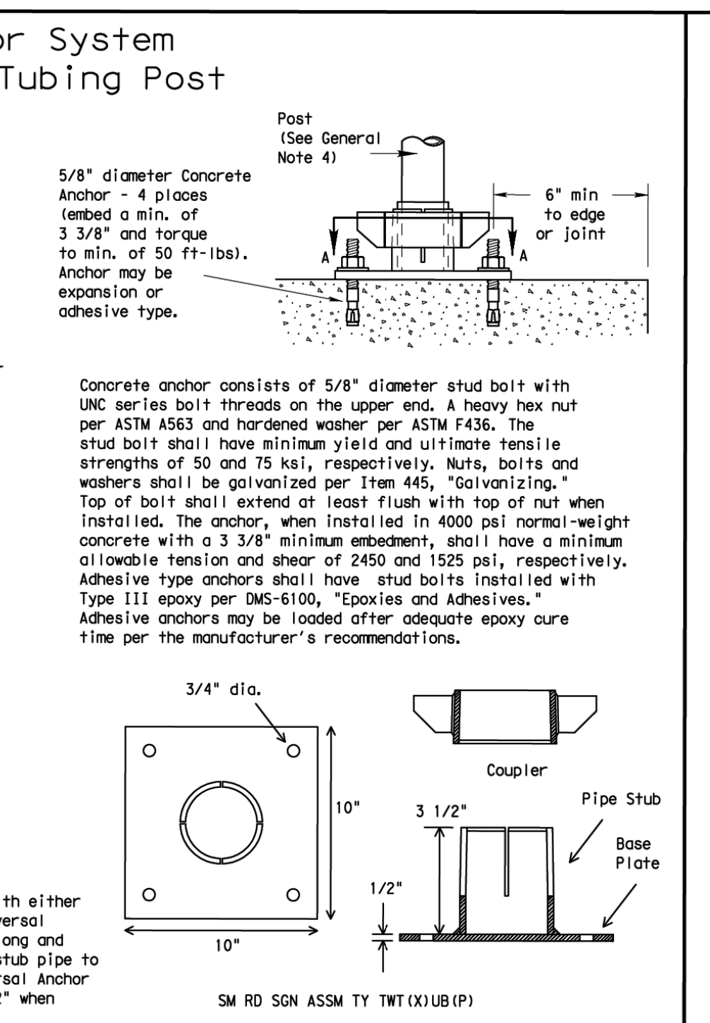
SM RD SGN ASSM TY TWT(X)WP(X)

Universal Anchor System with Thin-Walled Tubing Post


Post (See General Note 4)
1/4 x 2 7/8" Slots (4 Equally Spaced)
1/2" x 7 1/2" steel rod acts as a "stop" for the sign post and prevents stub from turning in the foundation.
3 1/2" Diameter Schedule 40 Stub Pipe (3" Nominal)
Class A Concrete
Stub pipe
Non-reinforced Concrete Footing (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.0 cf of concrete.
Friction Cap or Plug. See detail on SMD (Slip-2)
10"
14"
30"
12" Dia
A
Compression Ring
2.375" Diameter 0.095 Thin Wall Tube (2" Nominal)
Plastic Insert
3 1/2" Diameter Schedule 40 Stub Pipe (3" Nominal)
View A-A

SM RD SGN ASSM TY TWT(X)UA(P)

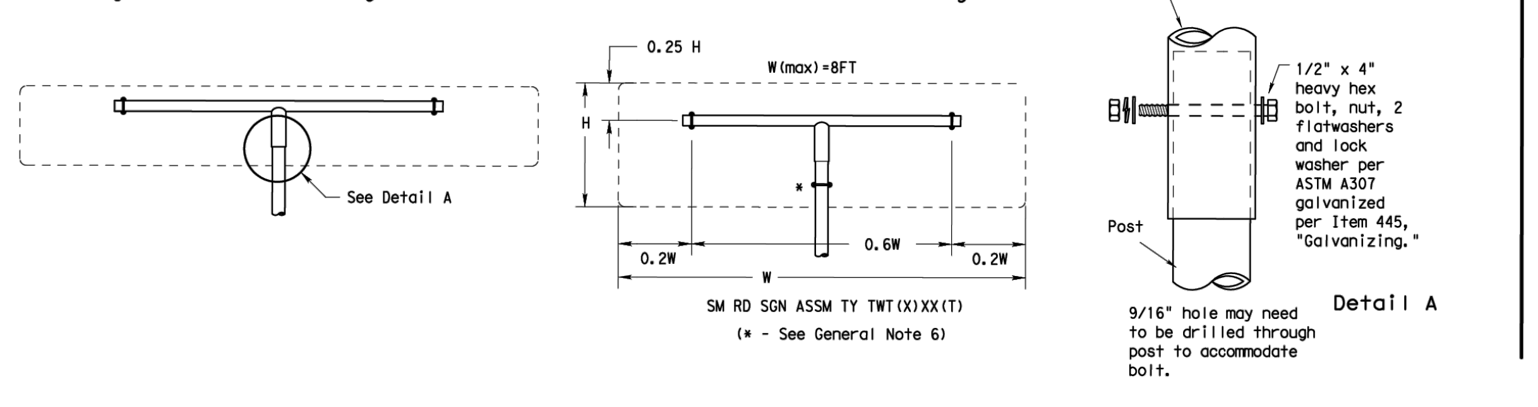
Plastic insert must be used when using the TWT with either the Universal Anchor System or the Bolt Down Universal Anchor System. The insert should be approx. 10" long and cover the tubing from just above the top of the stub pipe to the bottom of the sign post when using the Universal Anchor System. The insert should be cut to approx. 4 1/2" when used with the Bolt Down Universal Anchor System.


Post (See General Note 4)
5/8" diameter Concrete Anchor - 4 places (embed a min. of 3 3/8" and torque to min. of 50 ft-lbs). Anchor may be expansion or adhesive type.
6" min to edge or joint
A
3/4" dia.
10"
Coupler
3 1/2"
1/2"
Pipe Stub
Base Plate

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. 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.

SM RD SGN ASSM TY TWT(X)UB(P)

Sign Installation Using a Prefabricated T-Bracket for Thin-Wall Tubing Post


See Detail A
0.25 H
W(max)=8FT
H
0.2W
0.6W
0.2W
T-Bracket
1/2" x 4" heavy hex bolt, nut, 2 flatwashers and lock washer per ASTM A307 galvanized per Item 445, "Galvanizing."
Post
9/16" hole may need to be drilled through post to accommodate bolt.
Detail A

SM RD SGN ASSM TY TWT(X)XX(T)
(* - See General Note 6)

NOTE

The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

GENERAL NOTES:

1. The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
2. The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to the approval of the TxDOT Traffic Standards Engineer.
3. Except for posts (13 BWG Tubing), clamps, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Producer List web page. The website address is:
   http://www.txdot.gov/business/producer list.htm
4. Material used as post with this system shall conform to the following specifications:
   13 BWG Tubing (2.375" outside diameter) (TWT)
   0.095" nominal wall thickness
   Seamless or electric-resistance welded steel tubing
   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
   18% minimum elongation in 2"
   Wall thickness (uncoated) shall be within the range of .083" to .099"
   Outside diameter (uncoated) shall be within the range of 2.369" to 2.381"
   Galvanization per ASTM 123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
5. Sign blanks shall be the sizes and shapes shown on the plans.
6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
7. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is:
   http://www.txdot.gov/publications/traffic.htm

WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches 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. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
3. Insert tubular socket into concrete until top of socket is approximaely 1/4 " above the concrete footing.
4. Plumb the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer..
5. Attach the sign to the sign post.
6. Insert the sign post into socket and align sign face with roadway.
7. Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. Insert base post in hole to depths shown and backfill hole with concrete.
3. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the slots provided in the stub pipe shall remain above the top of the concrete foundation.
4. Attach the sign to the sign post.
5. Install plastic insert around bottom of post.
6. Insert sign post into base post. Lower until the post comes to rest on steel rod.
7. Seat compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
8. Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST

SMD(TWT)-08

©TxDOT July 2002	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
9-08 REVISIONS	CONT	SECT	JOB	HIGHWAY
	DIST	COUNTY		SHEET NO.

26E

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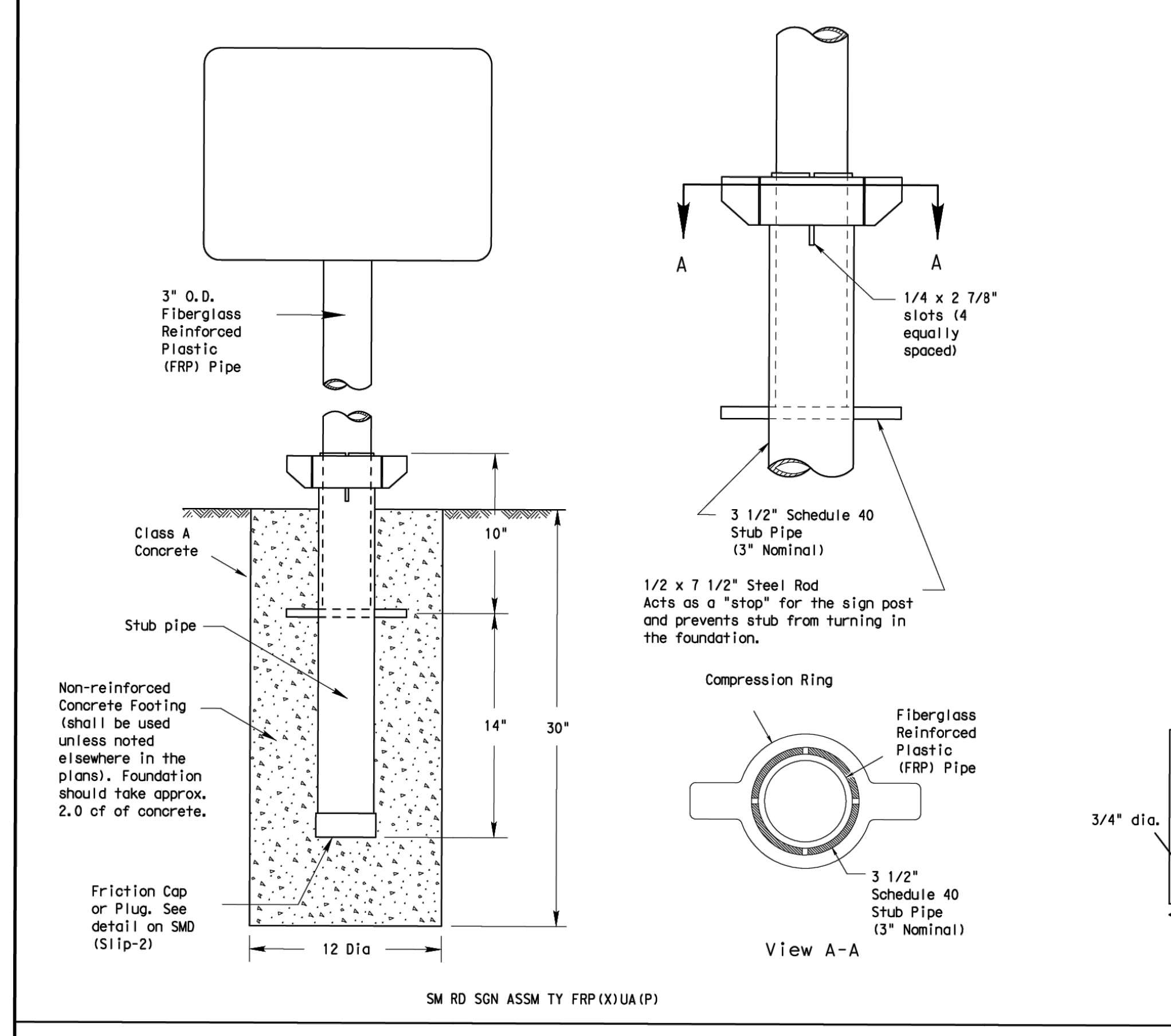
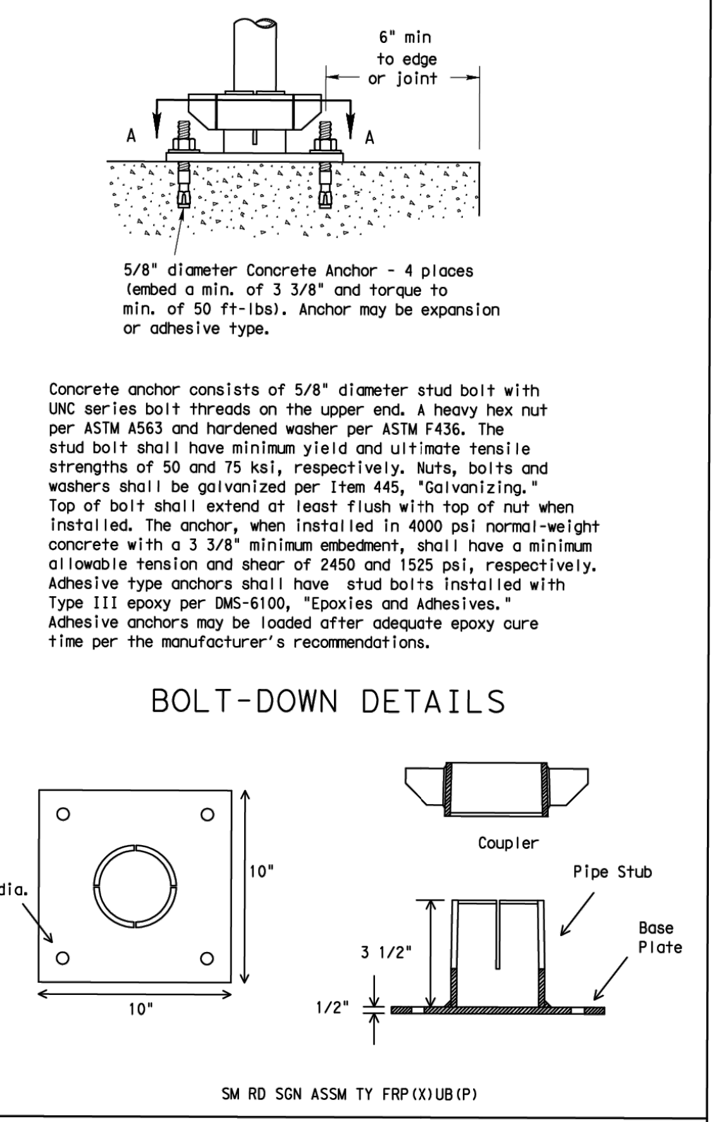
DATE:
FILE:

Universal Anchor System with Fiberglass Reinforced Plastic (FRP) Post


3" O.D. Fiberglass Reinforced Plastic (FRP) Pipe
1/4 x 2 7/8" slots (4 equally spaced)
A
Class A Concrete
Stub pipe
Non-reinforced Concrete Footing (shall be used unless noted elsewhere in the plans). Foundation should take approx. 2.0 cf of concrete.
Friction Cap or Plug. See detail on SMD (Slip-2)
10"
14"
30"
12" Dia
3 1/2" Schedule 40 Stub Pipe (3" Nominal)
1/2 x 7 1/2" Steel Rod Acts as a "stop" for the sign post and prevents stub from turning in the foundation.
Compression Ring
Fiberglass Reinforced Plastic (FRP) Pipe
3 1/2" Diameter Schedule 40 Stub Pipe (3" Nominal)
View A-A

SM RD SGN ASSM TY FRP(X)UA(P)


6" min to edge or joint
A
3/4" dia.
10"
Coupler
Pipe Stub
Base Plate
3 1/2"
1/2"

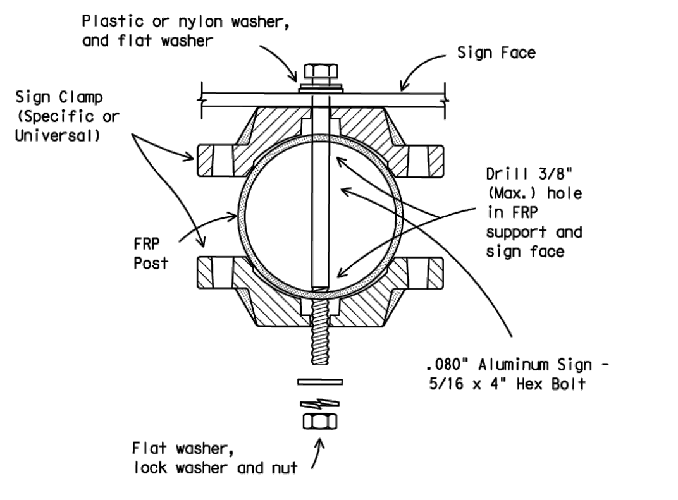
5/8" diameter Concrete Anchor - 4 places (embed a min. of 3 3/8" and torque to min. of 50 ft-lbs). Anchor may be expansion or adhesive type.

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. A heavy hex nut per ASTM A563 and hardened washer per ASTM F436. The stud bolt shall have minimum yield and ultimate tensile strengths of 50 and 75 ksi, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Top of bolt shall extend at least flush with top of nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 3 3/8" minimum embedment, shall have a minimum allowable tension and shear of 2450 and 1525 psi, respectively. 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.

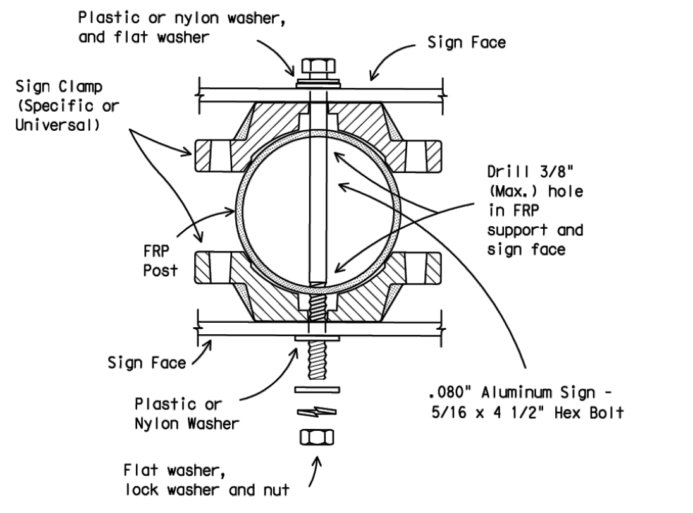
BOLT-DOWN DETAILS

SM RD SGN ASSM TY FRP(X)UB(P)

Typical Sign Mounting Detail for FRP Support with Single Sign


Plastic or nylon washer, and flat washer
Sign Face
Sign Clamp (Specific or Universal)
FRP Post
Drill 3/8" (Max.) hole in FRP support and sign face
.080" Aluminum Strip - 5/16 x 4" Hex Bolt
Flat washer, lock washer and nut

Typical Sign Mounting Detail for FRP Support with Back-to-Back Signs


Plastic or nylon washer, and flat washer
Sign Face
Sign Clamp (Specific or Universal)
FRP Post
Drill 3/8" (Max.) hole in FRP support and sign face
Sign Face
Plastic or Nylon Washer
.080" Aluminum Strip - 5/16 x 4 1/2" Hex Bolt
Flat washer, lock washer and nut

GENERAL NOTES:

1. FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
2. All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing."
3. See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is:
   http://www.txdot.gov/publications/traffic.htm

FRP POST REQUIREMENTS

1. Materials shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
2. Thickness of FRP sign support is 0.125" + 0.031", - 0.0".
3. FRP sign supports are prequalified by the Traffic Operations Division.
   Prequalification procedures are obtained by writing:
   Texas Department of Transportation
   Traffic Operations Division
   125 East 11th Street
   Austin, Texas 78701-2483

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURES

1. Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD(GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
2. The Engineer may permit batches 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. Insert base post in foundation hole to depths shown and fill hole with concrete. Cut base post from bottom and ensure a minimum of 18" embedment if installed in solid rock.
4. Level and plumb the base post with coupler using a torpedo level and let concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post slots shall be above the concrete footing.
5. Attach sign to FRP post.
6. Insert sign post into base post. Lower until the post comes to rest on the steel rod.
7. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
8. Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

BOLT DOWN SIGN SUPPORT

1. Position base plate with coupler on existing concrete.
2. Drill holes into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
3. Attach sign to FRP post.
4. Insert bottom of sign post into pipe stub.
5. Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
6. Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
UNIVERSAL ANCHOR SYSTEM
WITH FRP POST

SMD(FRP)-08

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

26F

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MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378

FOR

TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
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SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

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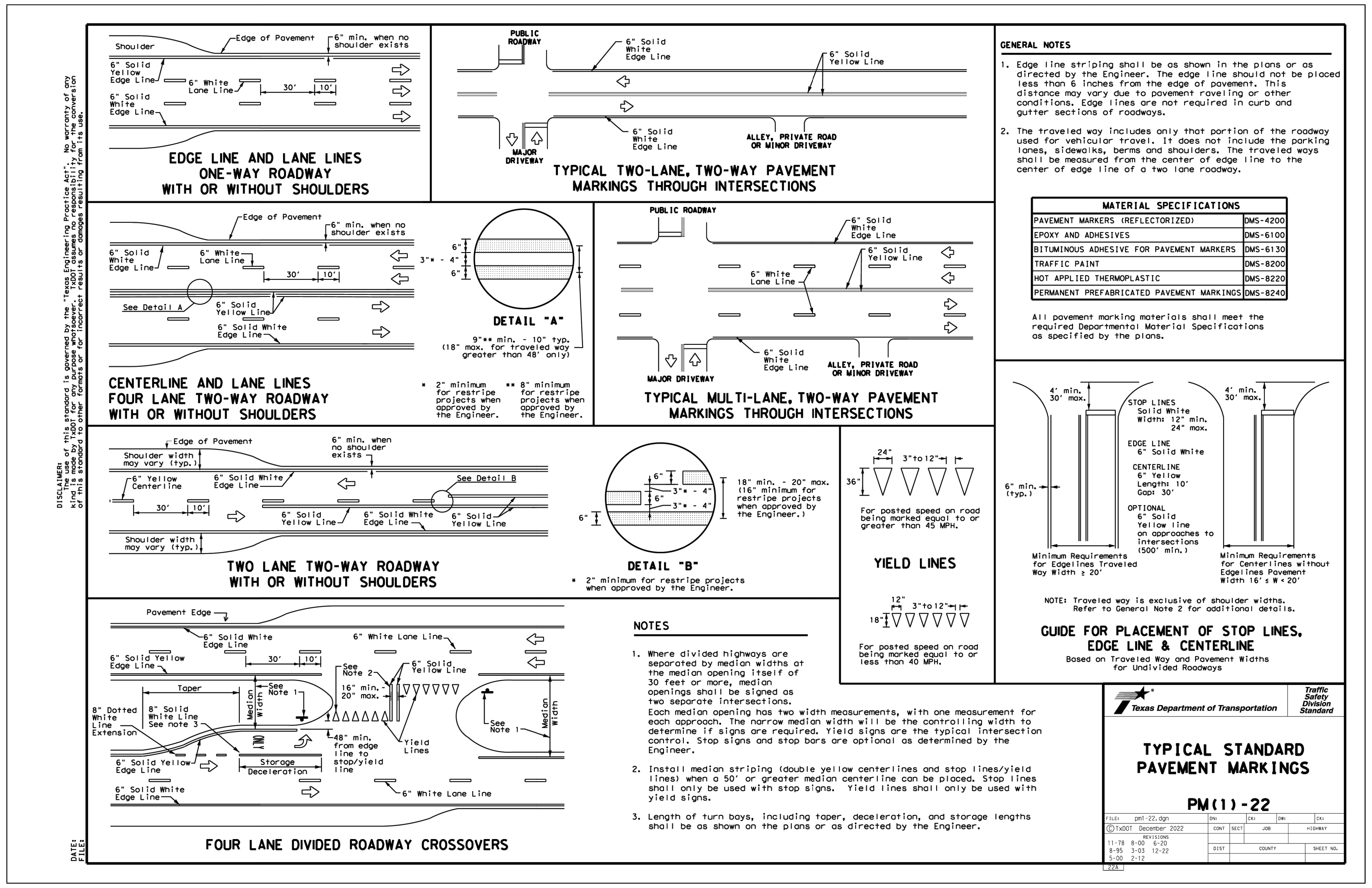
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	TSDT2054113

SHEET TITLE:
TRAFFIC SIGNAGE DETAILS
(SHT 2 OF 3)

SHEET NUMBER:
6.14

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS
TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS
DETAIL "A"
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS
DETAIL "B"
YIELD LINES
GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE
FOUR LANE DIVIDED ROADWAY CROSSOVERS
Texas Department of Transportation
Traffic Safety Division Standard
TYPICAL STANDARD PAVEMENT MARKINGS
PM(1)-22

GENERAL NOTES

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines are not required in curb and gutter sections of roadways.
2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

* 2" minimum for restripe projects when approved by the Engineer.

For posted speed on road being marked equal to or greater than 45 MPH.

For posted speed on road being marked equal to or less than 40 MPH.

NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

NOTES

1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

FILE: pm1-22.dgn
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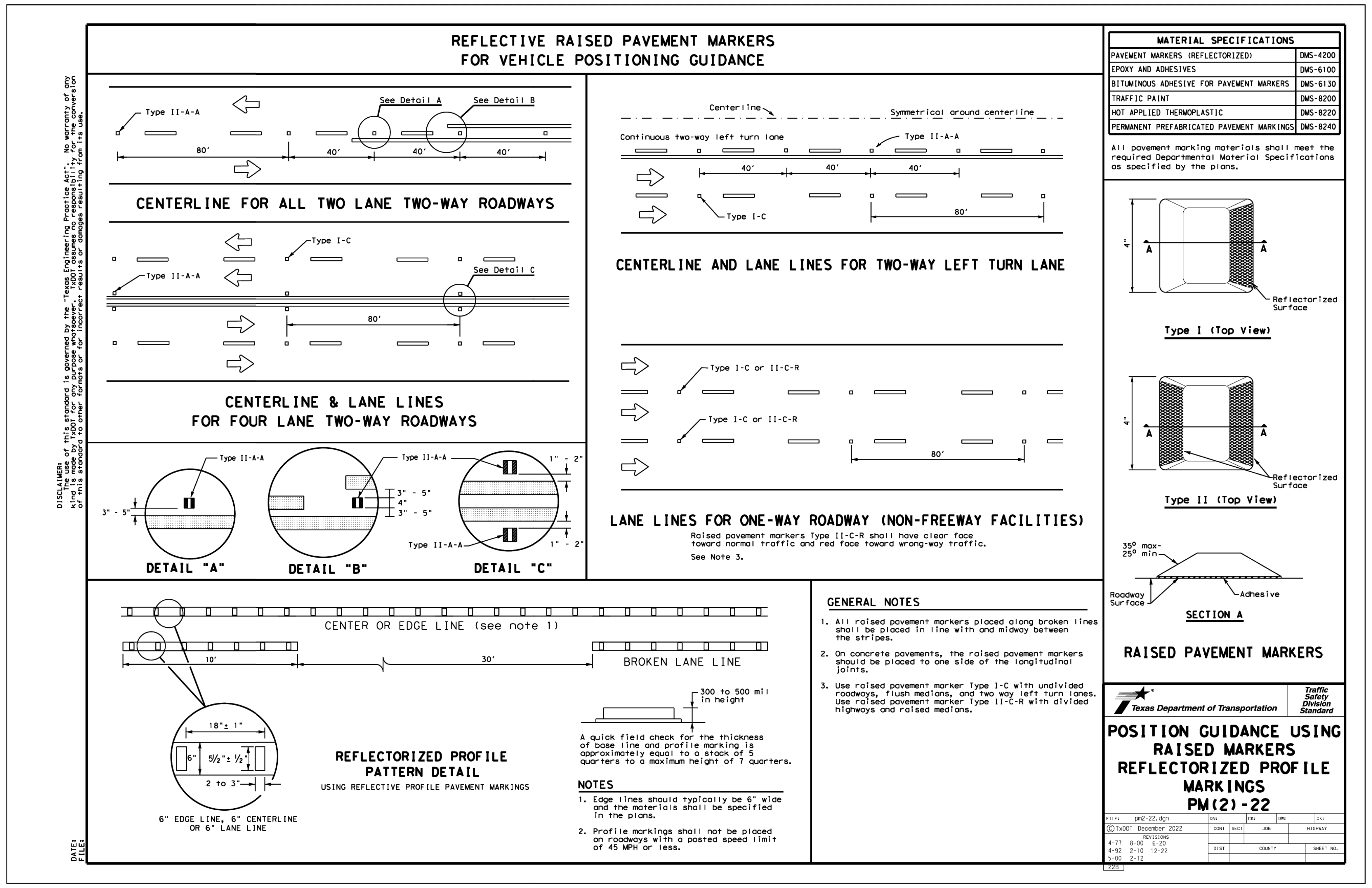
REVISIONS 11-78 8-00 6-20 8-95 3-03 12-22 5-00 2-12


REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE
CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS
CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)
DETAIL "A"
DETAIL "B"
DETAIL "C"
Type I (Top View)
Type II (Top View)
SECTION A
RAISED PAVEMENT MARKERS
REFLECTORIZED PROFILE PATTERN DETAIL
USING REFLECTIVE PROFILE PAVEMENT MARKINGS
Texas Department of Transportation
Traffic Safety Division Standard
POSITION GUIDANCE USING RAISED MARKERS REFLECTORIZED PROFILE MARKINGS
PM(2)-22

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

See Note 3.

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTES

1. Edge lines should typically be 6" wide and the materials shall be specified in the plans.
2. Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

1. All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements, the raised pavement markers should be placed to one side of the longitudinal joints.
3. Use raised pavement marker Type I-C with undivided roadways, flush medians, and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

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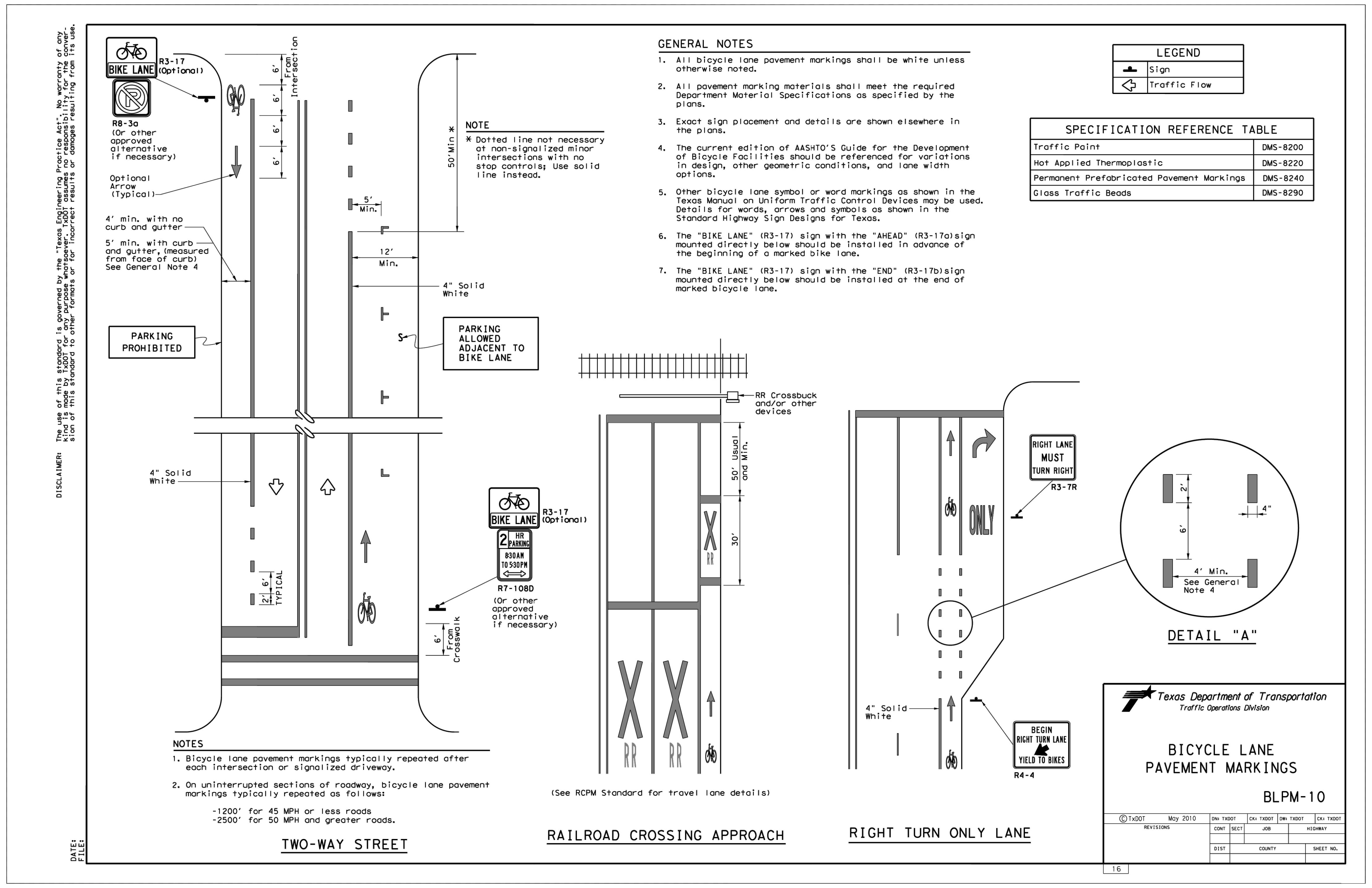
TWO-WAY STREET
RAILROAD CROSSING APPROACH
RIGHT TURN ONLY LANE
DETAIL "A"
BIKE LANE
R3-17 (Optional)
R8-3a
R7-108D
R3-7R
R4-4
PARKING PROHIBITED
PARKING ALLOWED ADJACENT TO BIKE LANE
Texas Department of Transportation
Traffic Operations Division
BICYCLE LANE PAVEMENT MARKINGS
BLPM-10

NOTE

* Dotted line not necessary at non-signalized minor intersections with no stop controls; Use solid line instead.

GENERAL NOTES

1. All bicycle lane pavement markings shall be white unless otherwise noted.
2. All pavement marking materials shall meet the required Department Material Specifications as specified by the plans.
3. Exact sign placement and details are shown elsewhere in the plans.
4. The current edition of AASHTO'S Guide for the Development of Bicycle Facilities should be referenced for variations in design, other geometric conditions, and lane width options.
5. Other bicycle lane symbol or word markings as shown in the Texas Manual on Uniform Traffic Control Devices may be used. Details for words, arrows and symbols as shown in the Standard Highway Sign Designs for Texas.
6. The "BIKE LANE" (R3-17) sign with the "AHEAD" (R3-17a)sign mounted directly below should be installed in advance of the beginning of a marked bike lane.
7. The "BIKE LANE" (R3-17) sign with the "END" (R3-17b)sign mounted directly below should be installed at the end of marked bicycle lane.

LEGEND	
⊥	Sign
⇦	Traffic Flow

SPECIFICATION REFERENCE TABLE	
Traffic Paint	DMS-8200
Hot Applied Thermoplastic	DMS-8220
Permanent Prefabricated Pavement Markings	DMS-8240
Glass Traffic Beads	DMS-8290

NOTES

1. Bicycle lane pavement markings typically repeated after each intersection or signalized driveway.
2. On uninterrupted sections of roadway, bicycle lane pavement markings typically repeated as follows:

 -1200' for 45 MPH or less roads
 -2500' for 50 MPH and greater roads.

(See RCPM Standard for travel lane details)

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FOR
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AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	TSDT2054113

SHEET TITLE:
TRAFFIC SIGNAGE DETAILS
(SHT 1 OF 3)

SHEET NUMBER:
6.13

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MORGAN MEADOWS, UNIT 10B

BEXAR COUNTY, TEXAS

SANITARY SEWER IMPROVEMENTS

SAWS STANDARD GENERAL CONSTRUCTION NOTES ASSOCIATED WITH 2021 SAWS STANDARD SPECS

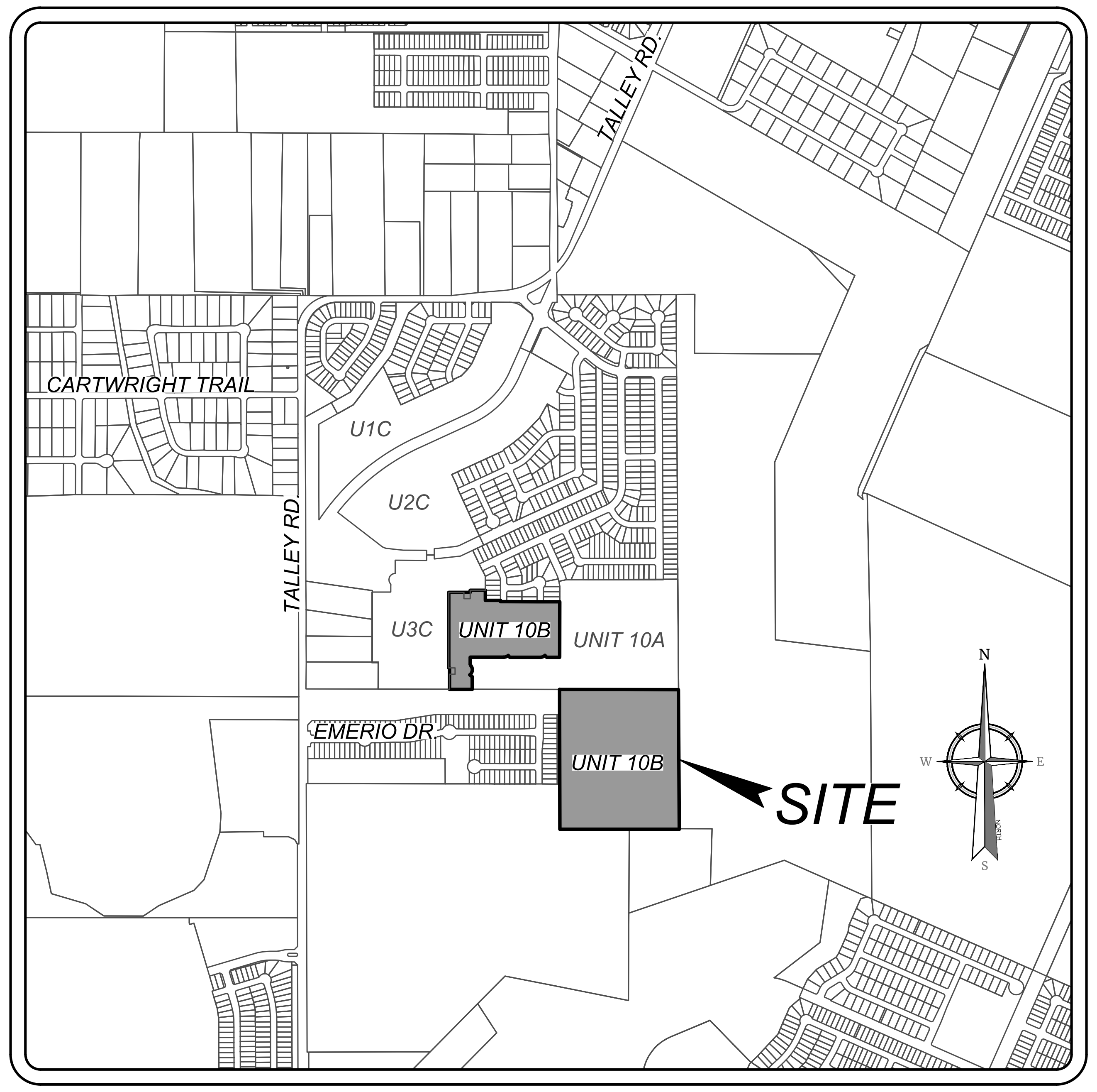
Updated December 14, 2021

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.

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.



LOCATION MAP
NOT-TO-SCALE

OWNER INFORMATION
TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC.
5210 THOUSAND OAKS, SUITE 1318
SAN ANTONIO, TX 78233

INDEX

SHEET TITLE	SHEET NUMBER
SANITARY SEWER COVER SHEET	7.1
OVERALL SANITARY SEWER (SHT 1 OF 2)	7.2
OVERALL SANITARY SEWER (SHT 2 OF 2)	7.3
LINE "A" PLAN & PROFILE (SHT 1 OF 2)	7.4
LINE "A" (SHT 2 OF 2) & LINE "B" PLAN & PROFILE	7.5
LINE "D" PLAN & PROFILE	7.6
LINE "F" PLAN & PROFILE	7.7
LINE "G" & LINE "H" PLAN & PROFILE	7.8
LINE "I", LINE "J", & LINE "K" PLAN & PROFILE	7.9

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176
TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:

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& Design

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: CVOS2054113

SHEET TITLE:
SANITARY SEWER
COVER SHEET

SHEET NUMBER:
7.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

nit 10B\Civil\SEWER\CVOS2054113.dwg\7.1 By: BELSETH

TRENCH EXCAVATION SAFETY PROTECTION

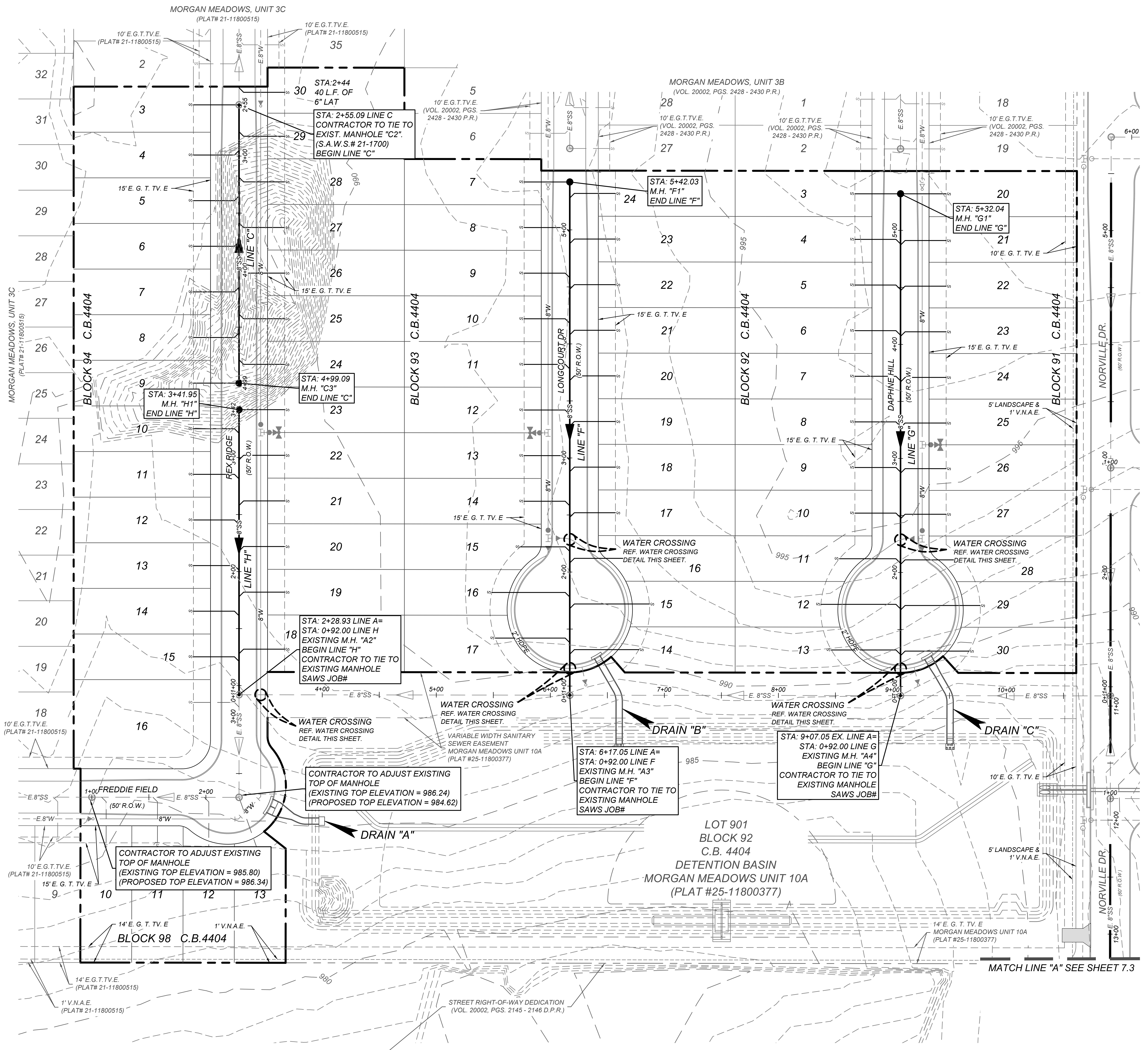
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.

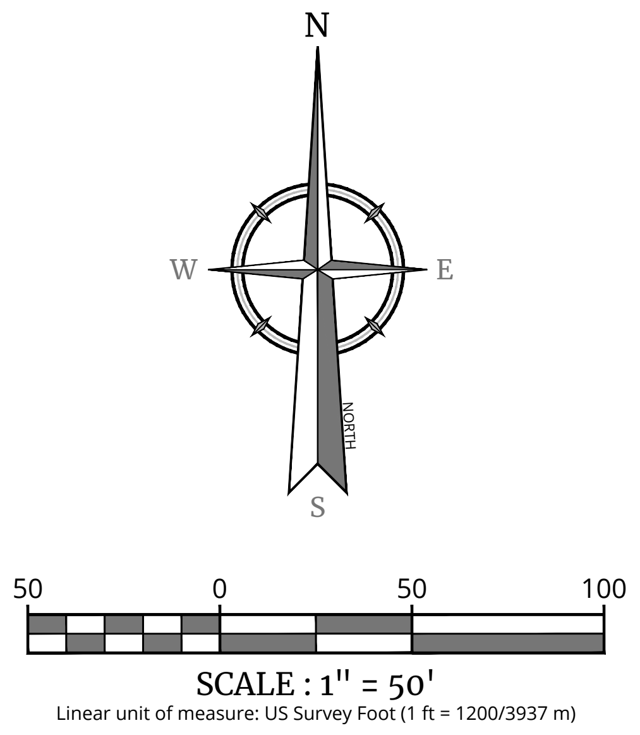
COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

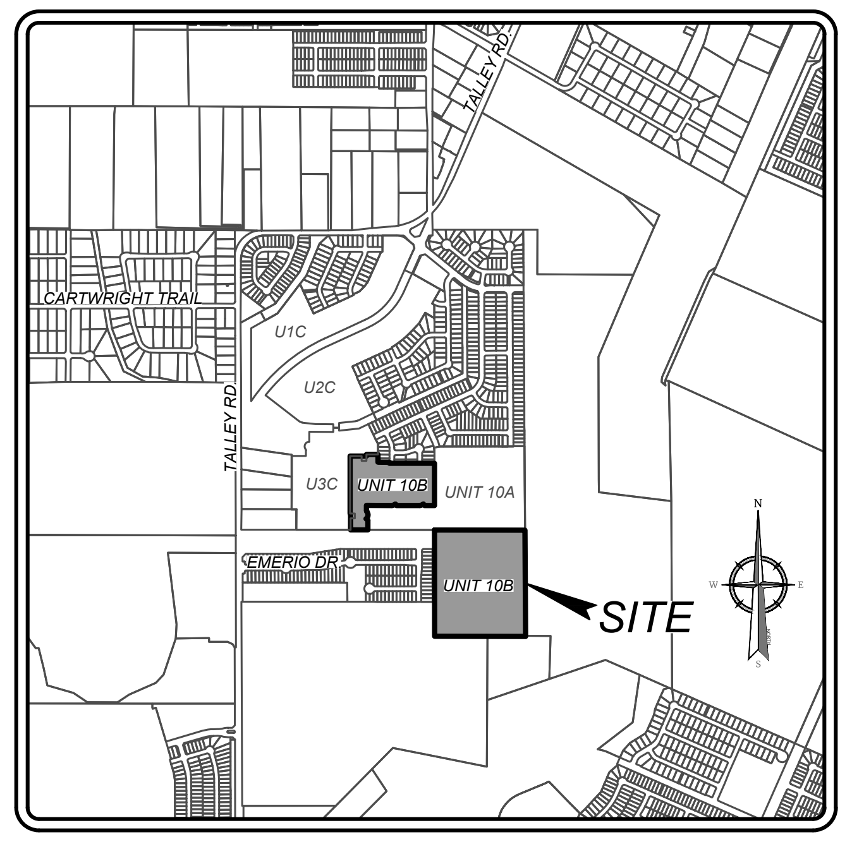
CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST 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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.


MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
BLOCK 98 C.B.4404
REX RIDGE (50' R.O.W.)
LONGCOURT DR (50' R.O.W.)
DAPHNE HILL (50' R.O.W.)
NORVILLE DR. (60' R.O.W.)
FREDDIE FIELD (50' R.O.W.)
LINE "C"
LINE "H"
LINE "F"
LINE "G"
STA:2+44 40 L.F. OF 6" LAT
STA: 2+55.09 LINE C CONTRACTOR TO TIE TO EXIST. MANHOLE "C2". (S.A.W.S.# 21-1700) BEGIN LINE "C"
STA: 4+99.09 M.H. "C3" END LINE "C"
STA: 3+41.95 M.H. "H1" END LINE "H"
STA: 5+42.03 M.H. "F1" END LINE "F"
STA: 5+32.04 M.H. "G1" END LINE "G"
STA: 2+28.93 LINE A= STA: 0+92.00 LINE H EXISTING M.H. "A2" BEGIN LINE "H" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB#
STA: 6+17.05 LINE A= STA: 0+92.00 LINE F EXISTING M.H. "A3" BEGIN LINE "F" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB#
STA: 9+07.05 EX. LINE A= STA: 0+92.00 LINE G EXISTING M.H. "A4" BEGIN LINE "G" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB#
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
VARIABLE WIDTH SANITARY SEWER EASEMENT MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
CONTRACTOR TO ADJUST EXISTING TOP OF MANHOLE (EXISTING TOP ELEVATION = 986.24) (PROPOSED TOP ELEVATION = 984.62)
CONTRACTOR TO ADJUST EXISTING TOP OF MANHOLE (EXISTING TOP ELEVATION = 985.80) (PROPOSED TOP ELEVATION = 986.34)
DRAIN "A"
DRAIN "B"
DRAIN "C"
LOT 901 BLOCK 92 C.B. 4404 DETENTION BASIN MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
10' E.G.T.TV.E. (PLAT# 21-11800515)
10' E.G.T.TV.E. (VOL. 20002, PGS. 2428 - 2430 P.R.)
15' E. G. T. TV. E
10' E. G. T. TV. E
14' E. G. T. TV. E
14' E. G. T. TV. E MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
14' E.G.T.TV.E. (PLAT# 21-11800515)
1' V.N.A.E. (PLAT# 21-11800515)
5' LANDSCAPE & 1' V.N.A.E.
1' V.N.A.E.
STREET RIGHT-OF-WAY DEDICATION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
MATCH LINE "A" SEE SHEET 7.3
E. 8"SS
E. 8"W
8"W
2" HDPE
985
990
995
980


N
W
E
S
50
0
50
100

SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
U1C
U2C
U3C
UNIT 10B
UNIT 10A
SITE

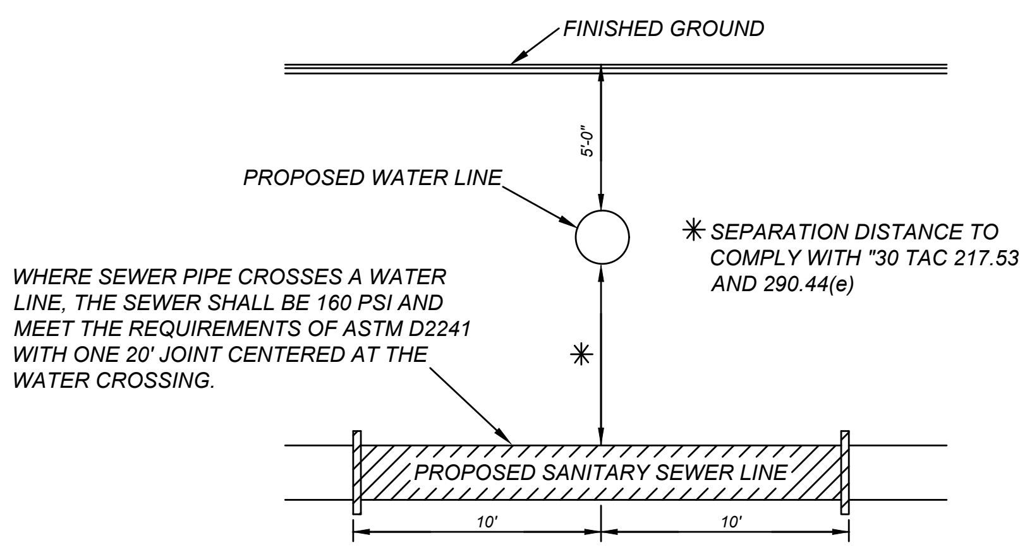
LOCATION MAP
NOT-TO-SCALE

NOTE:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
5. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

LEGEND

PROPOSED WATER MAIN	=	——W——
PROPOSED FIRE HYDRANT	=	⧓
PROPOSED WATER VALVE	=	● ●
PROPOSED SANITARY SEWER MAIN	=	——◀——SS——
PROPOSED SANITARY SEWER MANHOLE	=	——●——SS——
PROPOSED SANITARY SEWER LATERAL	=	╲——s
ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT (PLAT NUMBER 25-xxxxxxxx)	=	E.G.T.TV.E
EXISTING WATER MAIN	=	— — — —EW—
EXISTING FIRE HYDRANT	=	⧓
EXISTING WATER VALVE	=	⋈
EXISTING SANITARY SEWER MAIN	=	— ◁ —ESS—
EXISTING SANITARY SEWER MANHOLE	=	— ◎ —ESS—


FINISHED GROUND
5'-0"
PROPOSED WATER LINE
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
✳
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176
TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
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& Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

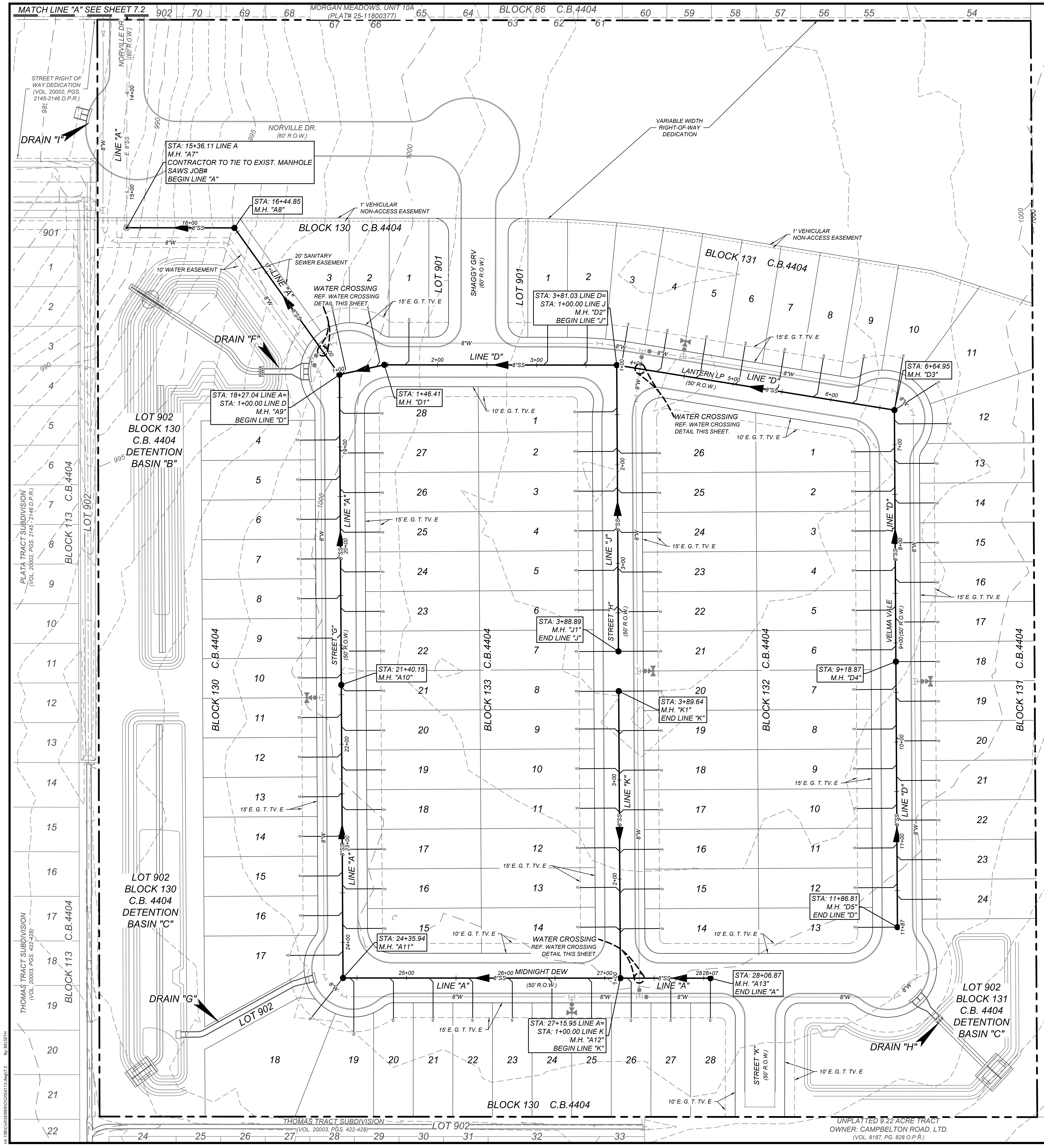
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

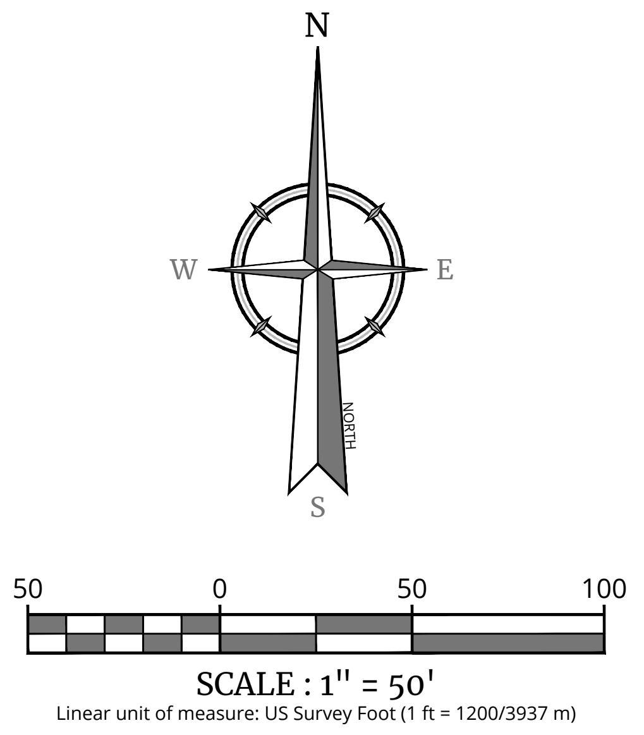
PROJECT NUMBER: 205-41-13
DRAWING NAME: OS2054113

SHEET TITLE:
OVERALL SANITARY SEWER (SHT 1 OF 2)

SHEET NUMBER:
7.2

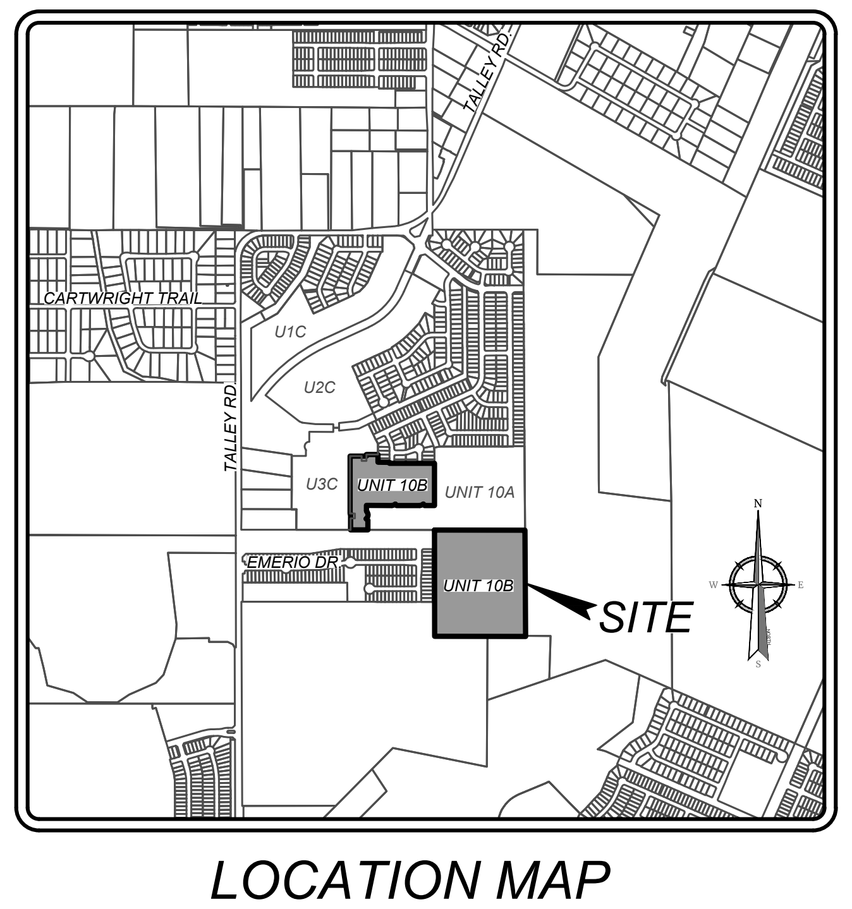
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


MATCH LINE "A" SEE SHEET 7.2
MORGAN MEADOWS, UNIT 10A (PLAT# 25-11800377)
BLOCK 86 C.B.4404
902 70 69 68 65 64 60 59 58 57 56 55 54
67 66 63 62 61
NORVILLE DR. (60' R.O.W.)
STREET RIGHT OF WAY DEDICATION (VOL. 20002, PGS. 2145-2146 D.P.R.)
DRAIN "I"
LINE "A"
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
STA: 15+36.11 LINE A
M.H. "A7"
CONTRACTOR TO TIE TO EXIST. MANHOLE
SAWS JOB#
BEGIN LINE "A"
STA: 16+44.85
M.H. "A8"
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
BLOCK 131 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.
SHAGGY GRV (60' R.O.W.)
LOT 901
STA: 3+81.03 LINE D=
STA: 1+00.00 LINE J
M.H. "D2"
BEGIN LINE "J"
DRAIN "F"
LINE "D"
LANTERN LP (50' R.O.W.)
STA: 6+64.95
M.H. "D3"
STA: 18+27.04 LINE A=
STA: 1+00.00 LINE D
M.H. "A9"
BEGIN LINE "D"
STA: 1+46.41
M.H. "D1"
15' E. G. T. TV. E
10' E. G. T. TV. E
LOT 902
BLOCK 130
C.B. 4404
DETENTION BASIN "B"
PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145-2146 D.P.R.)
BLOCK 113 C.B.4404
LOT 902
UNPLATTED 157.48 ACRE TRACT
OWNER: VISE OAKS I, LTD.
(VOL. 9437, PGS. 963 O.P.R.)
STREET "G" (50' R.O.W.)
STREET "H" (50' R.O.W.)
LINE "J"
STA: 3+88.89
M.H. "J1"
END LINE "J"
BLOCK 133 C.B.4404
BLOCK 132 C.B.4404
BLOCK 131 C.B.4404
VELMA VALE (50' R.O.W.)
STA: 21+40.15
M.H. "A10"
STA: 3+89.64
M.H. "K1"
END LINE "K"
STA: 9+18.87
M.H. "D4"
LINE "K"
STA: 11+86.81
M.H. "D5"
END LINE "D"
LOT 902
BLOCK 130
C.B. 4404
DETENTION BASIN "C"
STA: 24+35.94
M.H. "A11"
WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.
MIDNIGHT DEW (50' R.O.W.)
STA: 28+06.87
M.H. "A13"
END LINE "A"
DRAIN "G"
STA: 27+15.95 LINE A=
STA: 1+00.00 LINE K
M.H. "A12"
BEGIN LINE "K"
LOT 902
BLOCK 131
C.B. 4404
DETENTION BASIN "C"
DRAIN "H"
STREET "K" (60' R.O.W.)
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
BLOCK 130 C.B.4404
UNPLATTED 9.22 ACRE TRACT
OWNER: CAMPBELTON ROAD, LTD.
(VOL. 8187, PG. 828 O.P.R.)
24 25 26 27 28 29 30 31 32 33
8"W
8"SS


N
S
E
W
50 0 50 100

SCALE : 1" = 50'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


TALLEY RD
CARTWRIGHT TRAIL
U1C
U2C
U3C
UNIT 10A
UNIT 10B
SITE

LOCATION MAP NOT-TO-SCALE

LEGEND

PROPOSED WATER MAIN	=	——W——
PROPOSED FIRE HYDRANT	=	
PROPOSED WATER VALVE	=	●
PROPOSED SANITARY SEWER MAIN	=	——◄——SS——
PROPOSED SANITARY SEWER MANHOLE	=	——●——SS——
PROPOSED SANITARY SEWER LATERAL	=	_____s
ELECTRIC, GAS, TELEPHONE, & CABLE TV EASEMENT (PLAT NUMBER 25-xxxxxxxx)	=	E.G.T.TV.E
EXISTING WATER MAIN	=	— — — —EW—
EXISTING FIRE HYDRANT	=	
EXISTING WATER VALVE	=	
EXISTING SANITARY SEWER MAIN	=	— —◁—ESS—
EXISTING SANITARY SEWER MANHOLE	=	— —Ⓢ—ESS—

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.

COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

NOTE:

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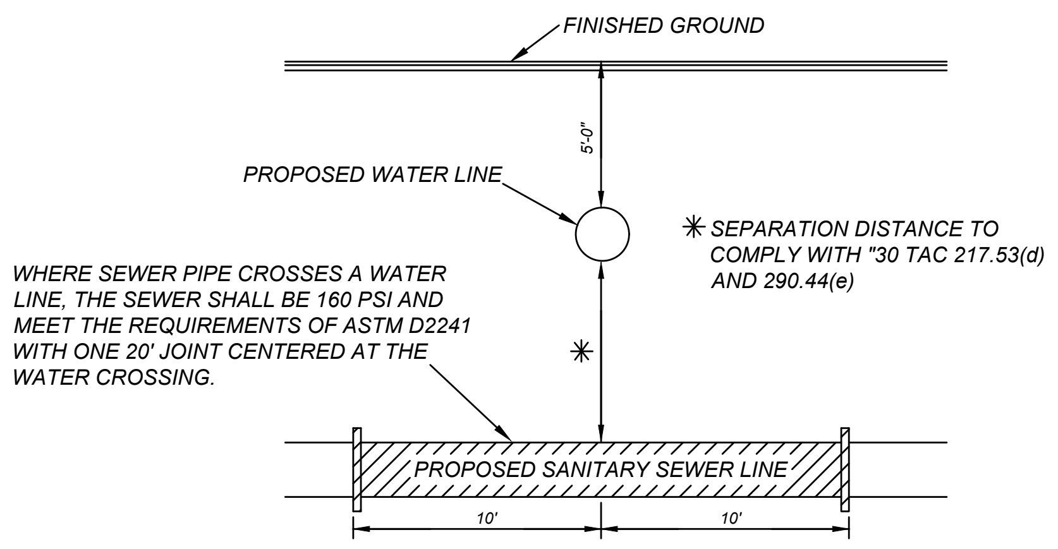
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
5. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.


FINISHED GROUND
5'-0"
PROPOSED WATER LINE
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
✳
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC

DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233

PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.

SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176

TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378

NUMBER OF LOTS: 181 SAWS JOB#:

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
.	.	.	.

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13

DRAWING NAME: OS2054113

SHEET TITLE:
OVERALL SANITARY SEWER (SHT 2 OF 2)

SHEET NUMBER:
7.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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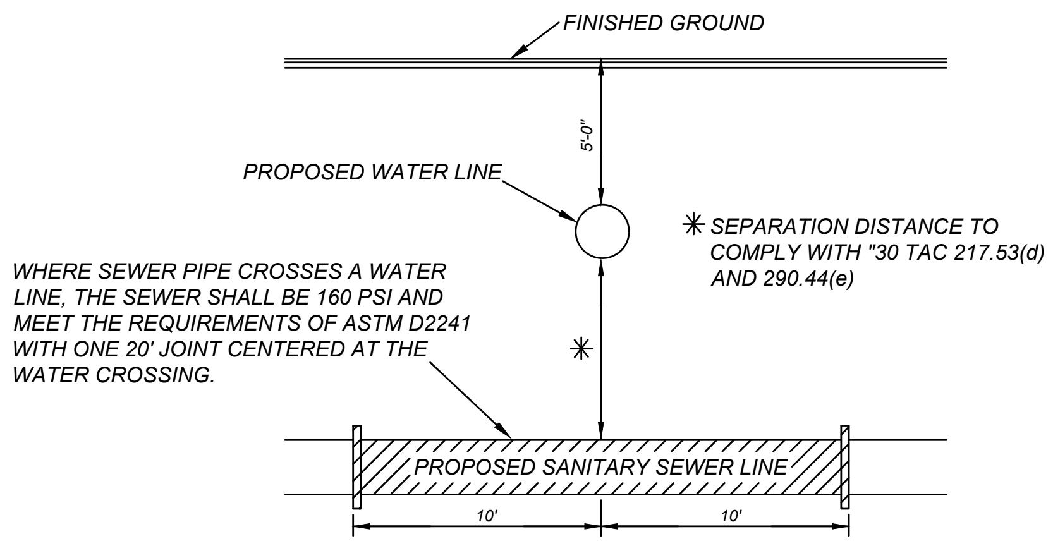
FINISHED GROUND
PROPOSED WATER LINE
5'-0"
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
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PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

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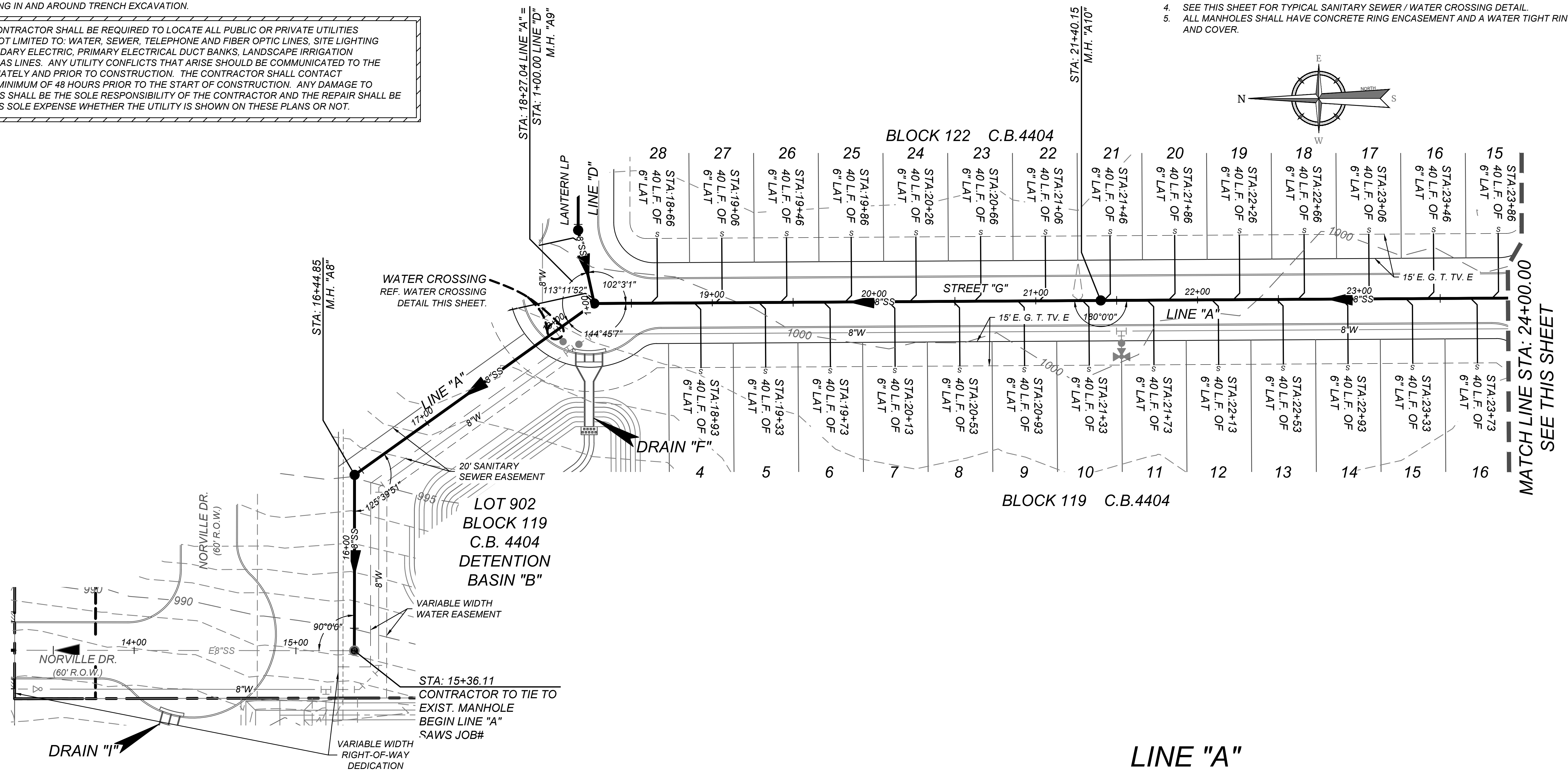
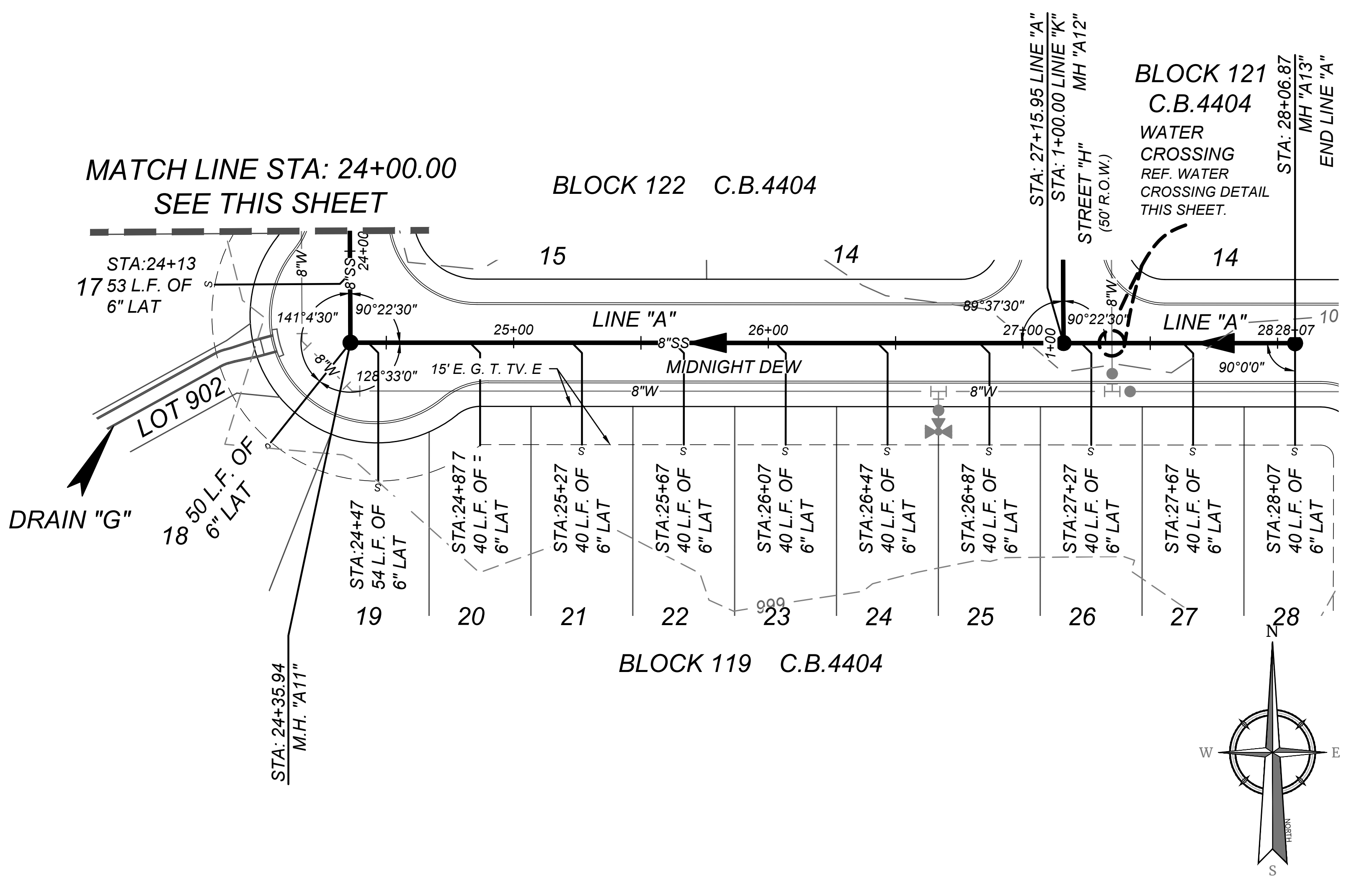
NUMBER OF LOTS: 181 SAWS JOB#:


BLOCK 122 C.B.4404
BLOCK 119 C.B.4404
STREET "G"
LINE "A"
LINE "D"
LANTERN LP
STA: 18+27.04 LINE "A" = STA: 1+00.00 LINE "D" M.H. "A9"
STA: 21+40.15 M.H. "A10"
STA: 16+44.85 M.H. "A8"
STA: 15+36.11 CONTRACTOR TO TIE TO EXIST. MANHOLE BEGIN LINE "A" SAWS JOB#
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
DRAIN "F"
DRAIN "I"
LOT 902 BLOCK 119 C.B. 4404 DETENTION BASIN "B"
20' SANITARY SEWER EASEMENT
VARIABLE WIDTH WATER EASEMENT
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
NORVILLE DR. (60' R.O.W.)
15' E. G. T. TV. E
MATCH LINE STA: 24+00.00 SEE THIS SHEET
STA:18+66 40 L.F. OF 6" LAT
STA:19+06 40 L.F. OF 6" LAT
STA:19+46 40 L.F. OF 6" LAT
STA:19+86 40 L.F. OF 6" LAT
STA:20+26 40 L.F. OF 6" LAT
STA:20+66 40 L.F. OF 6" LAT
STA:21+06 40 L.F. OF 6" LAT
STA:21+46 40 L.F. OF 6" LAT
STA:21+86 40 L.F. OF 6" LAT
STA:22+26 40 L.F. OF 6" LAT
STA:22+66 40 L.F. OF 6" LAT
STA:23+06 40 L.F. OF 6" LAT
STA:23+46 40 L.F. OF 6" LAT
STA:23+86 40 L.F. OF 6" LAT
STA:18+93 40 L.F. OF 6" LAT
STA:19+33 40 L.F. OF 6" LAT
STA:19+73 40 L.F. OF 6" LAT
STA:20+13 40 L.F. OF 6" LAT
STA:20+53 40 L.F. OF 6" LAT
STA:20+93 40 L.F. OF 6" LAT
STA:21+33 40 L.F. OF 6" LAT
STA:21+73 40 L.F. OF 6" LAT
STA:22+13 40 L.F. OF 6" LAT
STA:22+53 40 L.F. OF 6" LAT
STA:22+93 40 L.F. OF 6" LAT
STA:23+33 40 L.F. OF 6" LAT
STA:23+73 40 L.F. OF 6" LAT
28 27 26 25 24 23 22 21 20 19 18 17 16 15
4 5 6 7 8 9 10 11 12 13 14 15 16

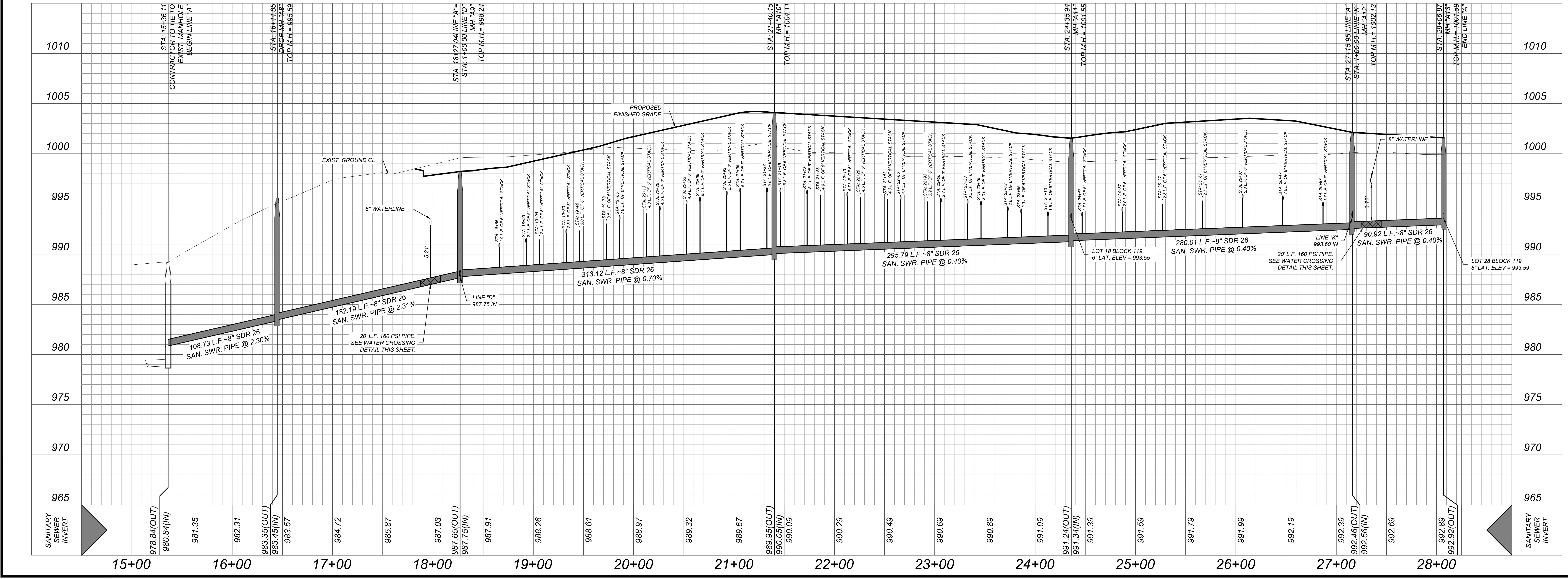

MATCH LINE STA: 24+00.00 SEE THIS SHEET
BLOCK 122 C.B.4404
BLOCK 121 C.B.4404
BLOCK 119 C.B.4404
LINE "A"
MIDNIGHT DEW
STREET "H" (50' R.O.W.)
STA: 27+15.95 LINE "A" STA: 1+00.00 LINE "K" MH "A12"
STA: 28+06.87 MH "A13" END LINE "A"
STA: 24+35.94 M.H. "A11"
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
LOT 902
DRAIN "G"
STA:24+13 17 53 L.F. OF 6" LAT
18 50 L.F. OF 6" LAT
STA:24+47 19 54 L.F. OF 6" LAT
STA:24+87 40 L.F. OF 6" LAT
STA:25+27 40 L.F. OF 6" LAT
STA:25+67 40 L.F. OF 6" LAT
STA:26+07 40 L.F. OF 6" LAT
STA:26+47 40 L.F. OF 6" LAT
STA:26+87 40 L.F. OF 6" LAT
STA:27+27 40 L.F. OF 6" LAT
STA:27+67 40 L.F. OF 6" LAT
STA:28+07 40 L.F. OF 6" LAT
15 14 14
19 20 21 22 23 24 25 26 27 28
15' E. G. T. TV. E

SCALE : 1" = 50'
HORIZONTAL

SCALE : 1" = 5'
VERTICAL

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LINE "A"
STA: 15+36.11 - END


STA: 15+36.11 CONTRACTOR TO TIE TO EXIST. MANHOLE BEGIN LINE "A"
STA: 16+44.85 DROP MH "A8" TOP M.H. = 995.59
STA: 18+27.04 LINE "A" = STA: 1+00.00 LINE "D" MH "A9" TOP M.H. = 998.24
STA: 21+40.15 MH "A10" TOP M.H. = 1004.11
STA: 24+35.94 MH "A11" TOP M.H. = 1001.55
STA: 27+15.95 LINE "A" STA: 1+00.00 LINE "K" MH "A12" TOP M.H. = 1002.13
STA: 28+06.87 MH "A13" TOP M.H. = 1001.99 END LINE "A"
PROPOSED FINISHED GRADE
EXIST. GROUND CL
8" WATERLINE
108.73 L.F.~8" SDR 26 SAN. SWR. PIPE @ 2.30%
182.19 L.F.~8" SDR 26 SAN. SWR. PIPE @ 2.31%
313.12 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.70%
295.79 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
280.01 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
90.92 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
20' L.F. 160 PSI PIPE. SEE WATER CROSSING DETAIL THIS SHEET.
LINE "D" 987.75 IN
LINE "K" 993.60 IN
LOT 18 BLOCK 119 6" LAT. ELEV = 993.55
LOT 28 BLOCK 119 6" LAT. ELEV = 993.59
5.21'
3.72'
1010 1005 1000 995 990 985 980 975 970 965
SANITARY SEWER INVERT
978.84(OUT) 980.84(IN) 981.35 982.31 983.35(OUT) 983.45(IN) 983.57 984.72 985.87 987.03 987.65(OUT) 987.75(IN) 987.91 988.26 988.61 988.97 989.32 989.67 989.95(OUT) 990.05(IN) 990.09 990.29 990.49 990.69 990.89 991.09 991.24(OUT) 991.34(IN) 991.39 991.59 991.79 991.99 992.19 992.39 992.46(OUT) 992.56(IN) 992.69 992.89 992.92(OUT)
15+00 16+00 17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

SAN ANTONIO (KFW)
3421 Paesanos
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SS2054113

SHEET TITLE:
LINE "A" PLAN & PROFILE

SHEET NUMBER:
7.4

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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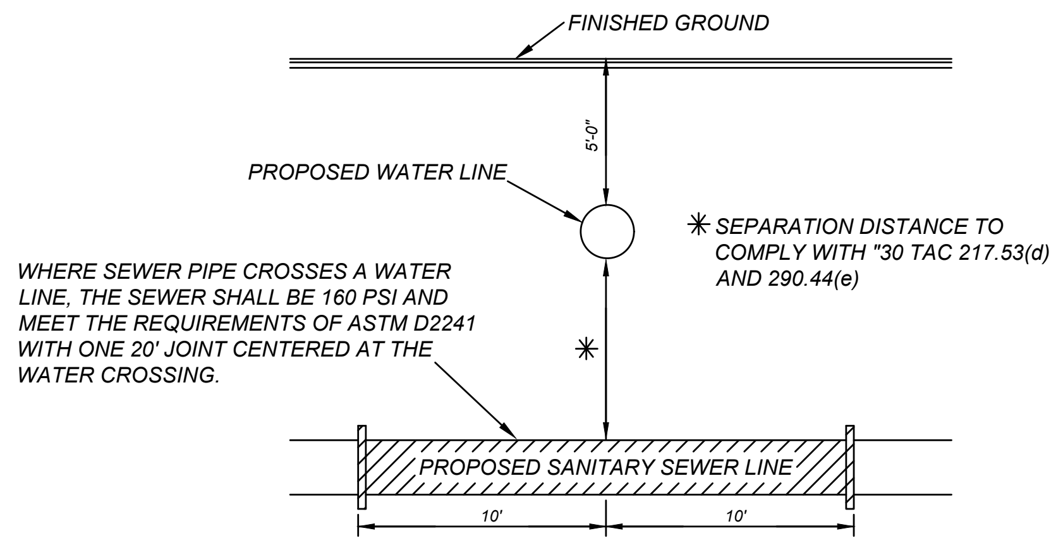
FINISHED GROUND
5'-0"
PROPOSED WATER LINE
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
✳
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

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DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
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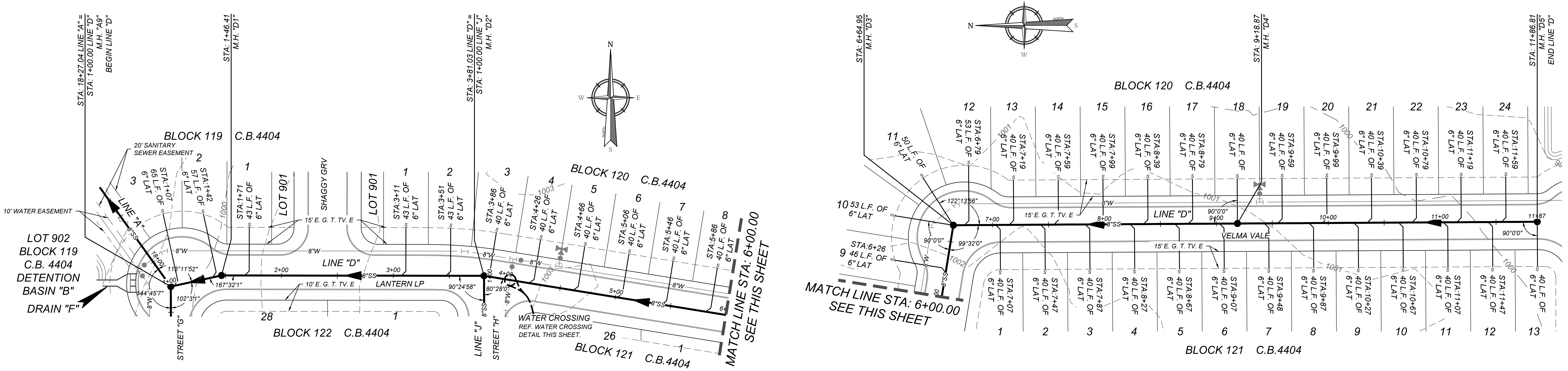
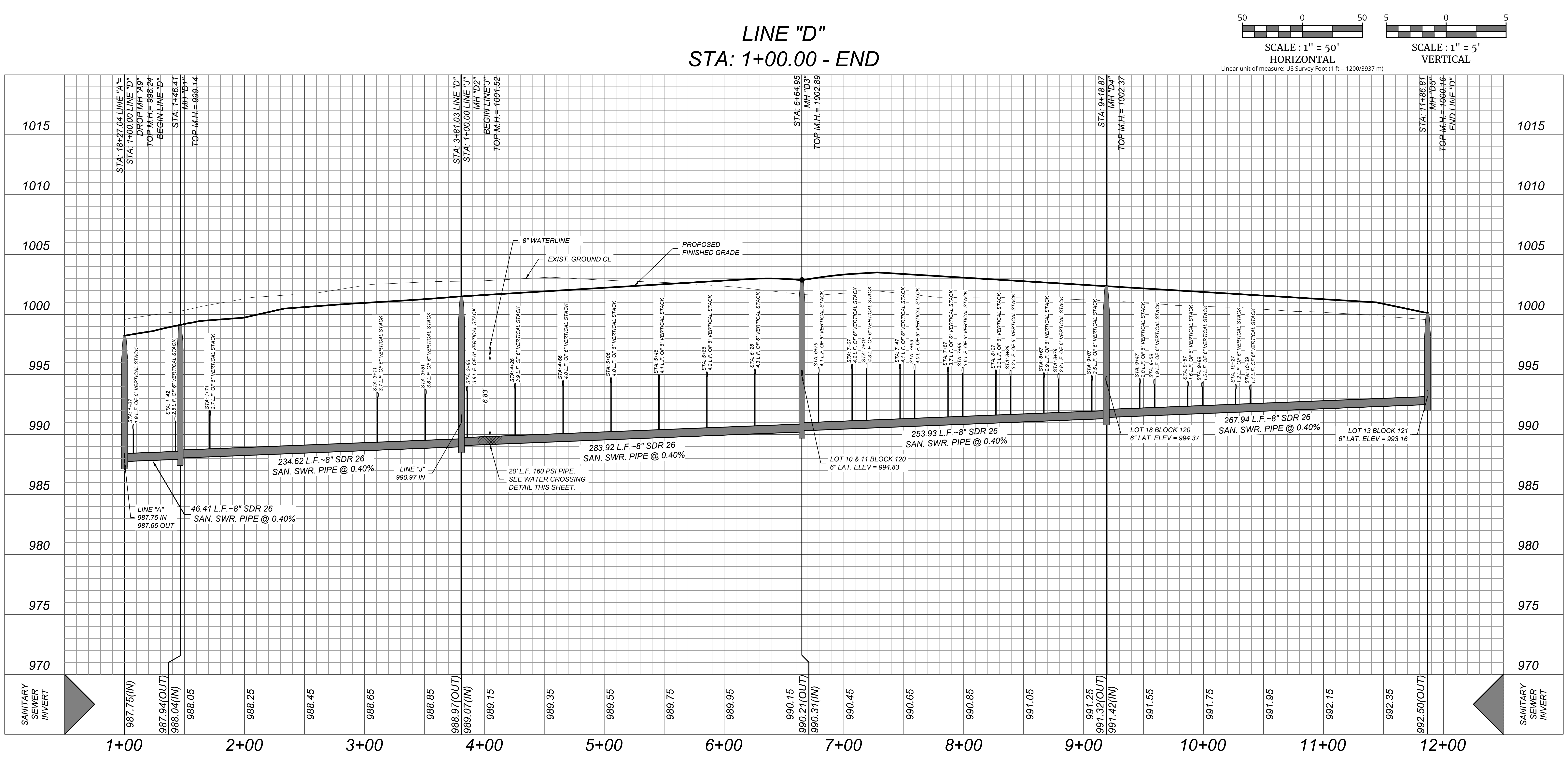

STA: 18+27.04 LINE "A" = STA: 1+00.00 LINE "D" M.H. "A9" BEGIN LINE "D"
STA: 1+46.41 M.H. "D1"
STA: 3+81.03 LINE "D" = STA: 1+00.00 LINE "J" M.H. "D2"
BLOCK 119 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
LOT 902 BLOCK 119 C.B. 4404 DETENTION BASIN "B"
DRAIN "F"
LINE "A"
LOT 901
SHAGGY GRV
15' E. G. T. TV. E
LINE "D"
LANTERN LP
10' E. G. T. TV. E
BLOCK 122 C.B.4404
BLOCK 120 C.B.4404
BLOCK 121 C.B.4404
STREET "G"
LINE "J"
STREET "H"
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
MATCH LINE STA: 6+00.00 SEE THIS SHEET
STA: 6+64.95 M.H. "D3"
STA: 9+18.87 M.H. "D4"
STA: 11+86.81 M.H. "D5" END LINE "D"
VELMA VALE
MATCH LINE STA: 6+00.00 SEE THIS SHEET
N
S
E
W

LINE "D"
STA: 1+00.00 - END

SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

SCALE : 1" = 5'
VERTICAL


50 0 50
5 0 5
STA: 18+27.04 LINE "A"= STA: 1+00.00 LINE "D" DROP MH "A9" TOP M.H.= 998.24 BEGIN LINE "D"
STA: 1+46.41 MH "D1" TOP M.H.= 999.14
STA: 3+81.03 LINE "D" = STA: 1+00.00 LINE "J" MH "D2" BEGIN LINE "J" TOP M.H.= 1001.52
STA: 6+64.95 MH "D3" TOP M.H.= 1002.69
STA: 9+18.87 MH "D4" TOP M.H.= 1002.37
STA: 11+86.81 MH "D5" TOP M.H.= 1000.16 END LINE "D"
8" WATERLINE
EXIST. GROUND CL
PROPOSED FINISHED GRADE
234.62 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
46.41 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
283.92 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
253.93 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
267.94 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
LINE "A" 987.75 IN 987.65 OUT
LINE "J" 990.97 IN
20' L.F. 160 PSI PIPE. SEE WATER CROSSING DETAIL THIS SHEET.
LOT 10 & 11 BLOCK 120 6" LAT. ELEV = 994.83
LOT 18 BLOCK 120 6" LAT. ELEV = 994.37
LOT 13 BLOCK 121 6" LAT. ELEV = 993.16
1015 1010 1005 1000 995 990 985 980 975 970
SANITARY SEWER INVERT
987.75(IN) 987.94(OUT) 988.04(IN) 988.05 988.25 988.45 988.65 988.85 988.97(OUT) 989.07(IN) 989.15 989.35 989.55 989.75 989.95 990.15 990.21(OUT) 990.31(IN) 990.45 990.65 990.85 991.05 991.25 991.32(OUT) 991.42(IN) 991.55 991.75 991.95 992.15 992.35 992.50(OUT)
1+00 2+00 3+00 4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SS2054113

SHEET TITLE:
LINE "D" PLAN & PROFILE

SHEET NUMBER:
7.5

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

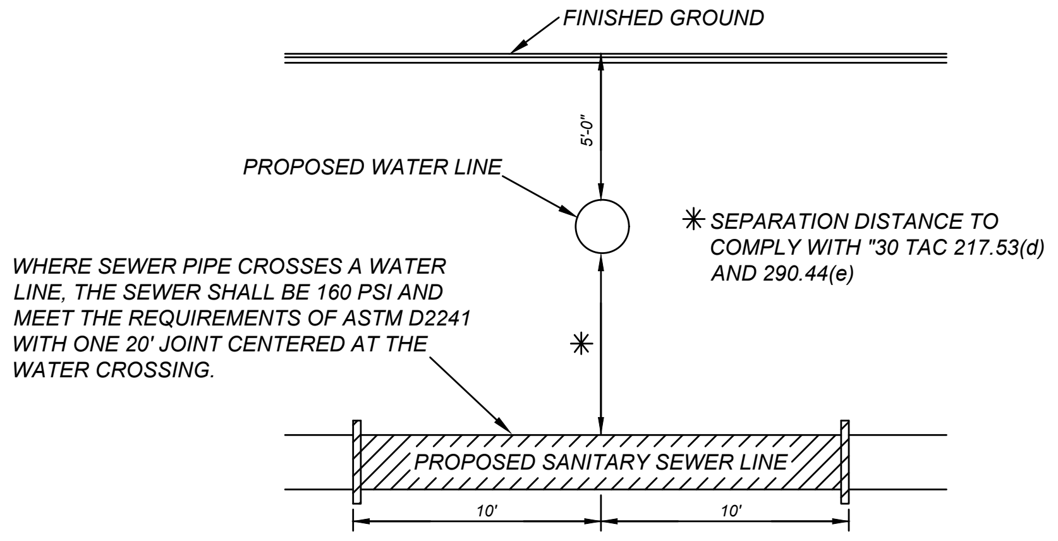
COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

NOTE:

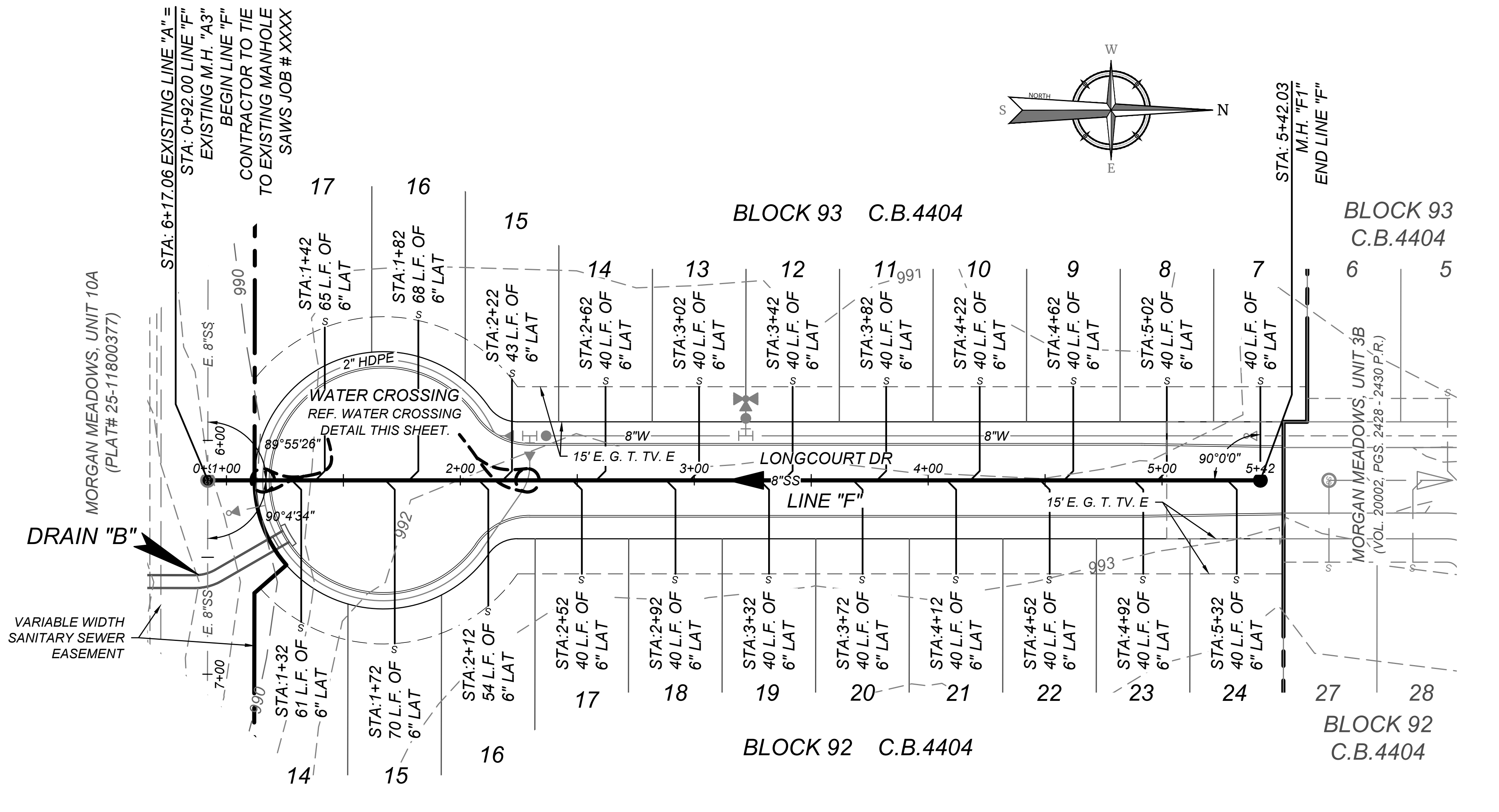
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
5. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.


FINISHED GROUND
PROPOSED WATER LINE
5'-0"
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176
TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:


STA: 6+17.06 EXISTING LINE "A" = STA: 0+92.00 LINE "F" EXISTING M.H. "A3" BEGIN LINE "F" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB # XXXX
STA: 5+42.03 M.H. "F1" END LINE "F"
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
MORGAN MEADOWS, UNIT 10A (PLAT# 25-11800377)
MORGAN MEADOWS, UNIT 3B (VOL. 20002, PGS. 2428 - 2430 P.R.)
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
2" HDPE
LONGCOURT DR
LINE "F"
8"W
8"SS
15' E. G. T. TV. E
DRAIN "B"
VARIABLE WIDTH SANITARY SEWER EASEMENT
89°55'26"
90°4'34"
90°0'0"
STA:1+42 65 L.F. OF 6" LAT
STA:1+82 68 L.F. OF 6" LAT
STA:2+22 43 L.F. OF 6" LAT
STA:2+62 40 L.F. OF 6" LAT
STA:3+02 40 L.F. OF 6" LAT
STA:3+42 40 L.F. OF 6" LAT
STA:3+82 40 L.F. OF 6" LAT
STA:4+22 40 L.F. OF 6" LAT
STA:4+62 40 L.F. OF 6" LAT
STA:5+02 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
STA:1+32 61 L.F. OF 6" LAT
STA:1+72 70 L.F. OF 6" LAT
STA:2+12 54 L.F. OF 6" LAT
STA:2+52 40 L.F. OF 6" LAT
STA:2+92 40 L.F. OF 6" LAT
STA:3+32 40 L.F. OF 6" LAT
STA:3+72 40 L.F. OF 6" LAT
STA:4+12 40 L.F. OF 6" LAT
STA:4+52 40 L.F. OF 6" LAT
STA:4+92 40 L.F. OF 6" LAT
STA:5+32 40 L.F. OF 6" LAT
1+00
2+00
3+00
4+00
5+00
5+42
17
16
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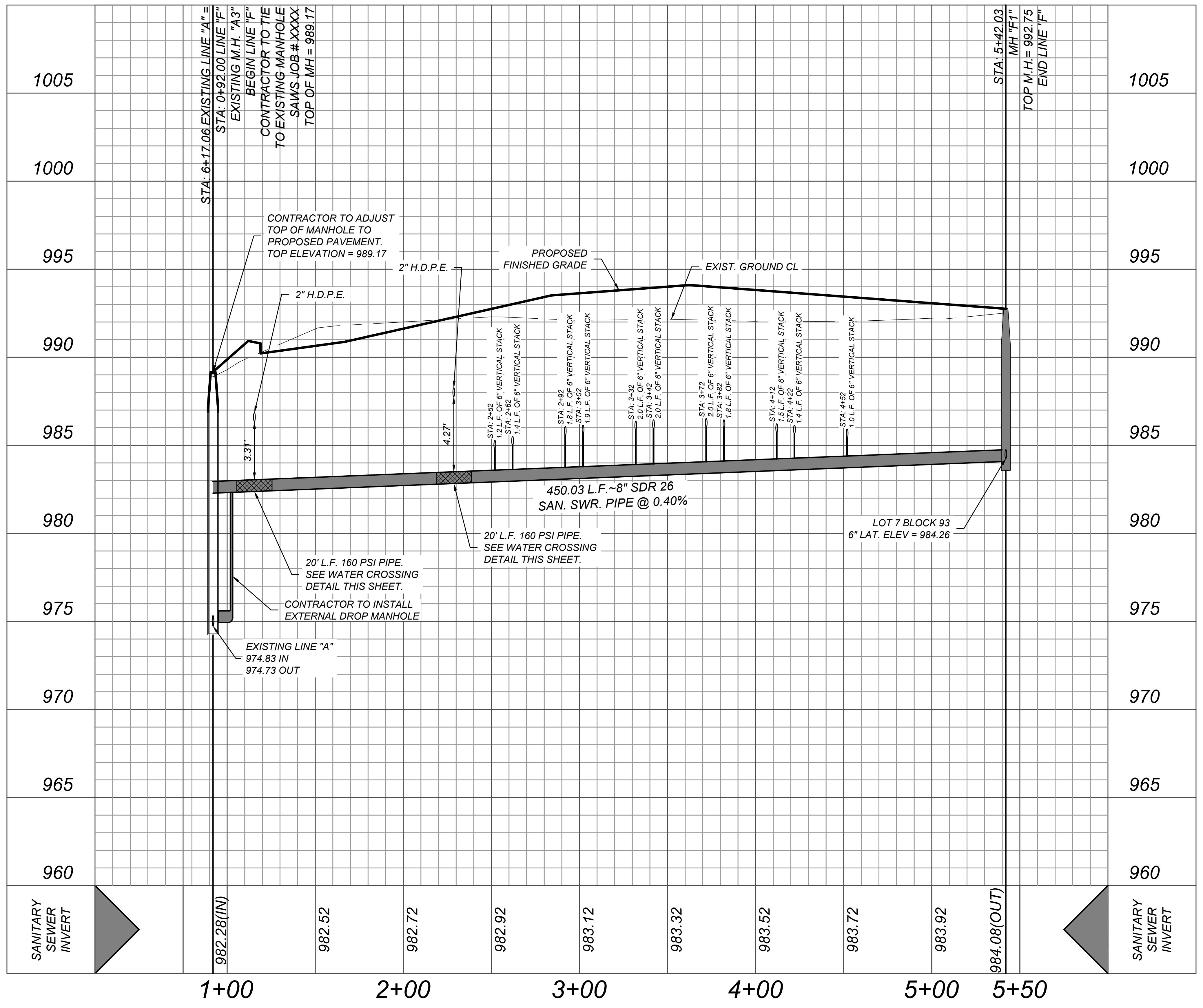
W
E

SCALE : 1" = 50' HORIZONTAL

SCALE : 1" = 5' VERTICAL

LINE "F"
STA: 0+92.00 - END

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


STA: 6+17.06 EXISTING LINE "A" = STA: 0+92.00 LINE "F" EXISTING M.H. "A3" BEGIN LINE "F" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB # XXXX TOP OF MH = 989.17
STA: 5+42.03 MH "F1" TOP M.H.= 992.75 END LINE "F"
CONTRACTOR TO ADJUST TOP OF MANHOLE TO PROPOSED PAVEMENT. TOP ELEVATION = 989.17
PROPOSED FINISHED GRADE
EXIST. GROUND CL
2" H.D.P.E.
3.3'
4.27'
450.03 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
20' L.F. 160 PSI PIPE. SEE WATER CROSSING DETAIL THIS SHEET.
CONTRACTOR TO INSTALL EXTERNAL DROP MANHOLE
EXISTING LINE "A" 974.83 IN 974.73 OUT
LOT 7 BLOCK 93 6" LAT. ELEV = 984.26
1005
1000
995
990
985
980
975
970
965
960
SANITARY SEWER INVERT
982.28(IN)
982.52
982.72
982.92
983.12
983.32
983.52
983.72
983.92
984.08(OUT)
1+00
2+00
3+00
4+00
5+00
5+50

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
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CONSTRUCTION

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PLAT# 25-11800378
FOR
TALLEY EXTENSION
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BEXAR COUNTY
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3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SS2054113

SHEET TITLE:
LINE "F" PLAN & PROFILE

SHEET NUMBER:
7.6

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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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COMPACTION NOTE:

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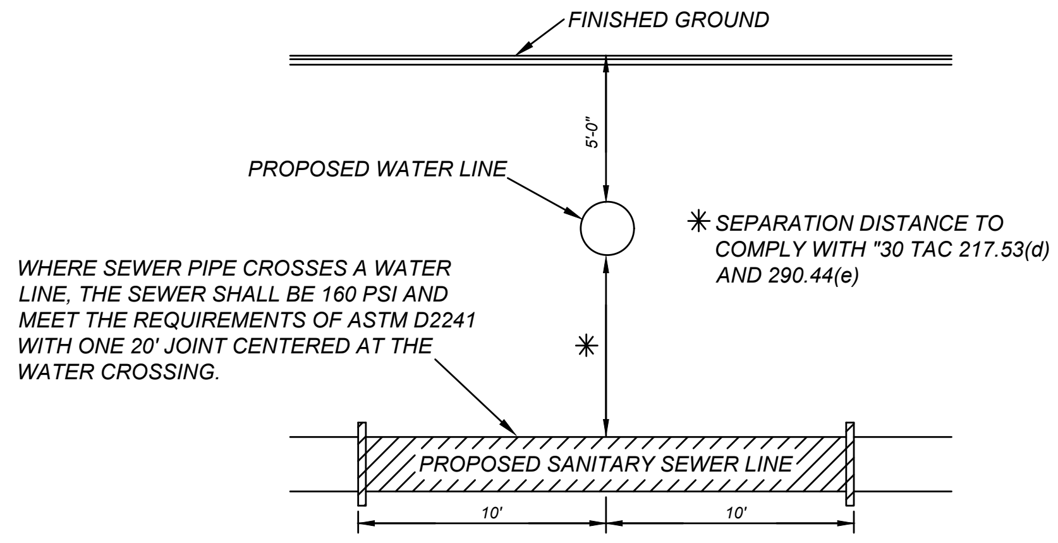
MANHOLE NOTE:

ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

NOTE:

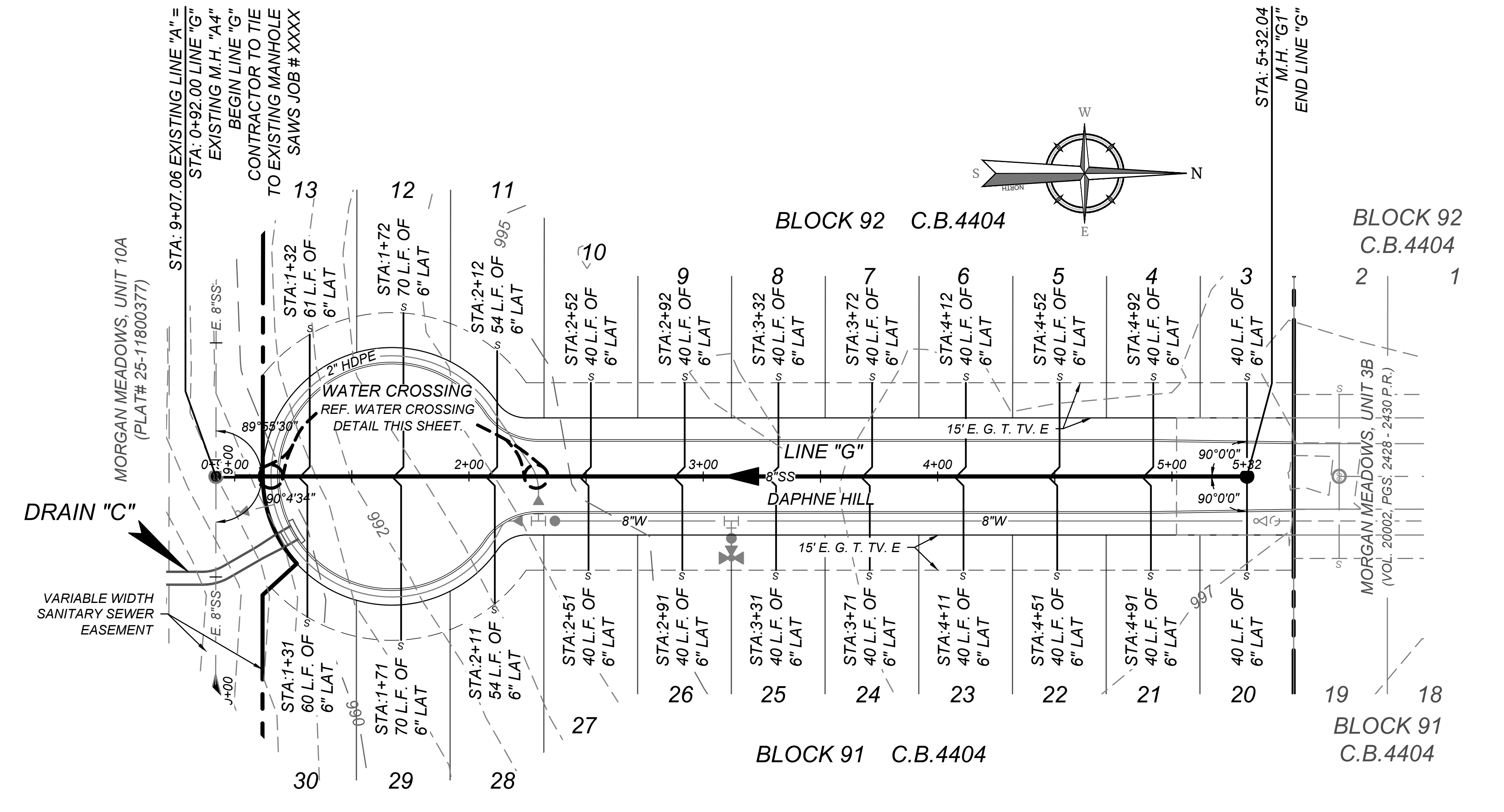
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
5. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

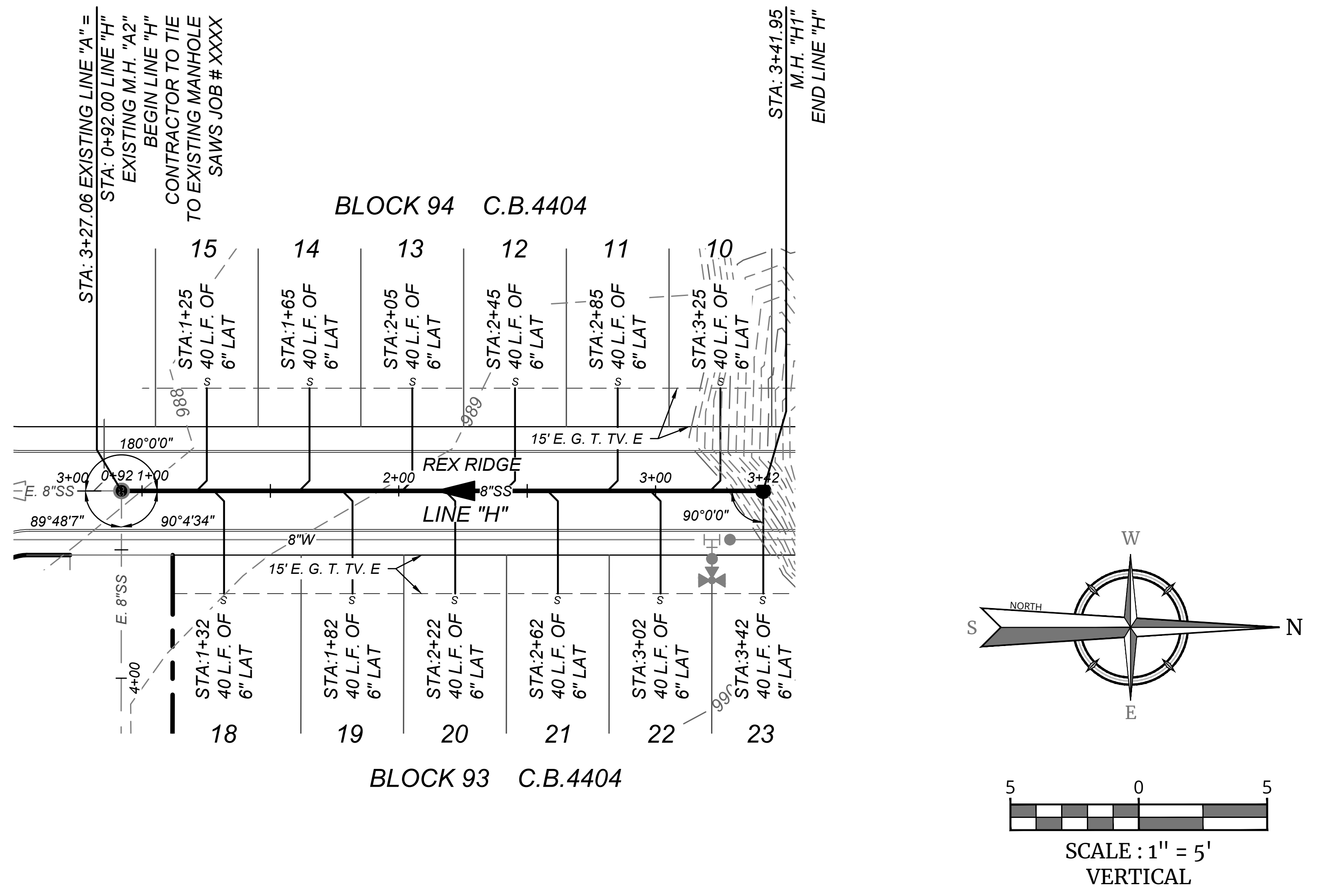

FINISHED GROUND
5'-0"
PROPOSED WATER LINE
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
PROPOSED SANITARY SEWER LINE
10'
10'

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

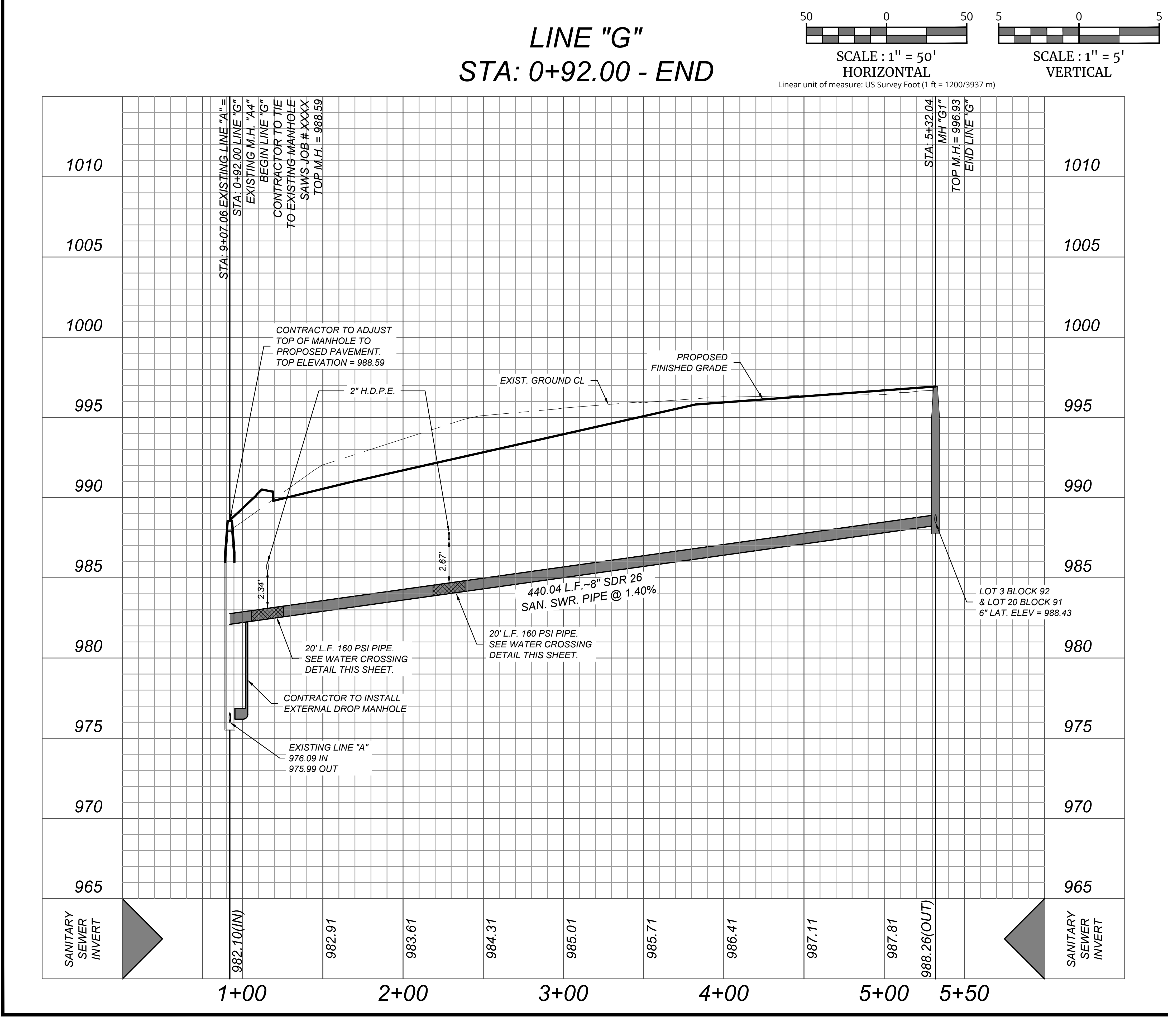
SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176
TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:

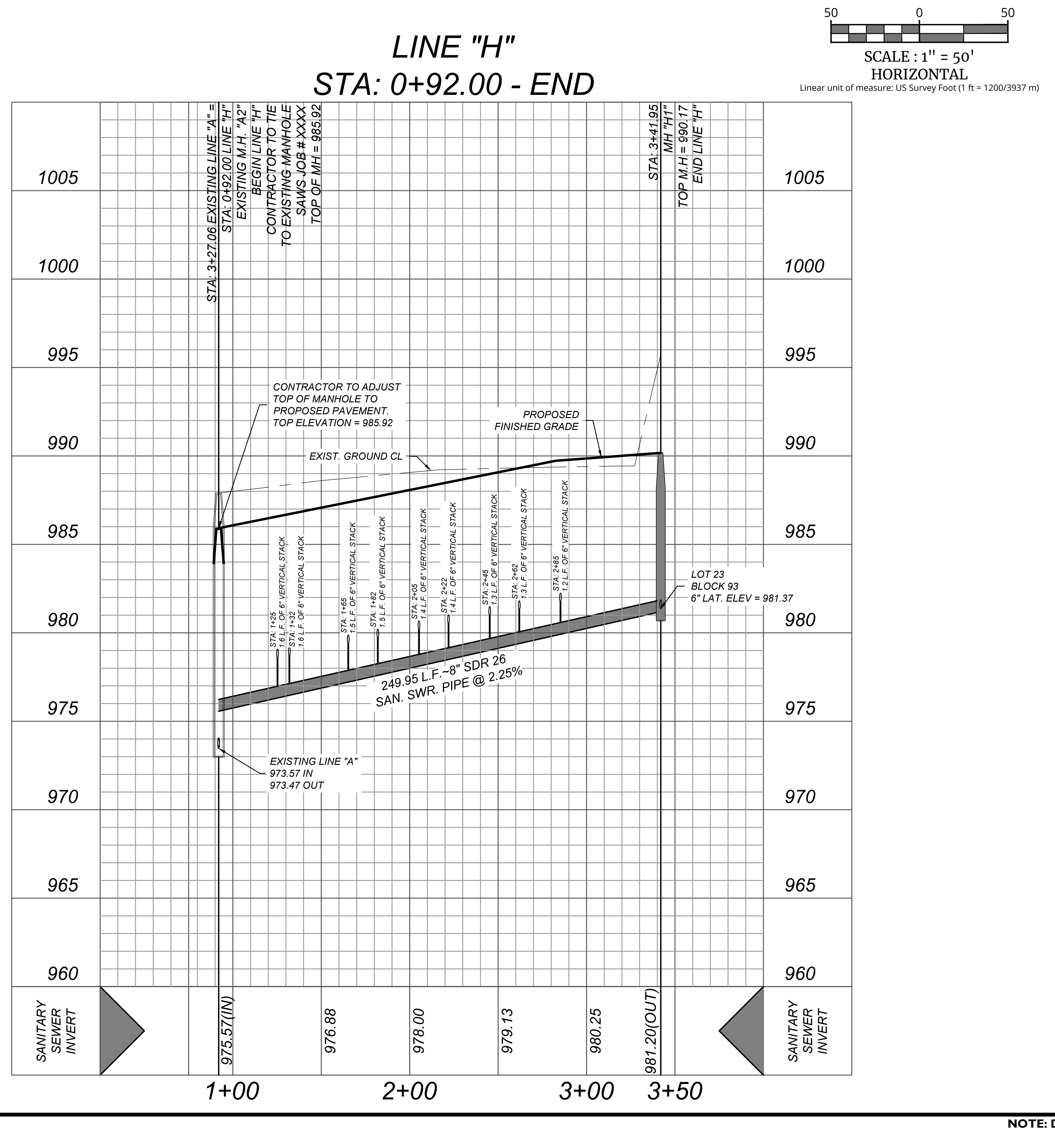

STA: 9+07.06 EXISTING LINE "A" = STA: 0+92.00 LINE "G" EXISTING M.H. "A4" BEGIN LINE "G" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB # XXXX
STA: 5+32.04 M.H. "G1" END LINE "G"
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
MORGAN MEADOWS, UNIT 10A (PLAT# 25-11800377)
MORGAN MEADOWS, UNIT 3B (VOL. 20002, PGS. 2428 - 2430 P.R.)
DRAIN "C"
VARIABLE WIDTH SANITARY SEWER EASEMENT
WATER CROSSING REF. WATER CROSSING DETAIL THIS SHEET.
2" HDPE
LINE "G"
DAPHNE HILL
8"SS
8"W
15' E. G. T. TV. E
E. 8"SS
89°55'30"
90°4'34"
90°0'0"
STA:1+32 61 L.F. OF 6" LAT
STA:1+72 70 L.F. OF 6" LAT
STA:2+12 54 L.F. OF 6" LAT
STA:2+52 40 L.F. OF 6" LAT
STA:2+92 40 L.F. OF 6" LAT
STA:3+32 40 L.F. OF 6" LAT
STA:3+72 40 L.F. OF 6" LAT
STA:4+12 40 L.F. OF 6" LAT
STA:4+52 40 L.F. OF 6" LAT
STA:4+92 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
STA:1+31 60 L.F. OF 6" LAT
STA:1+71 70 L.F. OF 6" LAT
STA:2+11 54 L.F. OF 6" LAT
STA:2+51 40 L.F. OF 6" LAT
STA:2+91 40 L.F. OF 6" LAT
STA:3+31 40 L.F. OF 6" LAT
STA:3+71 40 L.F. OF 6" LAT
STA:4+11 40 L.F. OF 6" LAT
STA:4+51 40 L.F. OF 6" LAT
STA:4+91 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
13 12 11 10 9 8 7 6 5 4 3 2 1
30 29 28 27 26 25 24 23 22 21 20 19 18
2+00 3+00 4+00 5+00 5+32
995 997 990


STA: 3+27.06 EXISTING LINE "A" = STA: 0+92.00 LINE "H" EXISTING M.H. "A2" BEGIN LINE "H" CONTRACTOR TO TIE TO EXISTING MANHOLE SAWS JOB # XXXX
STA: 3+41.95 M.H. "H1" END LINE "H"
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
REX RIDGE
LINE "H"
8"SS
8"W
E. 8"SS
15' E. G. T. TV. E
180°0'0"
89°48'7"
90°4'34"
90°0'0"
STA:1+25 40 L.F. OF 6" LAT
STA:1+65 40 L.F. OF 6" LAT
STA:2+05 40 L.F. OF 6" LAT
STA:2+45 40 L.F. OF 6" LAT
STA:2+85 40 L.F. OF 6" LAT
STA:3+25 40 L.F. OF 6" LAT
STA:1+32 40 L.F. OF 6" LAT
STA:1+82 40 L.F. OF 6" LAT
STA:2+22 40 L.F. OF 6" LAT
STA:2+62 40 L.F. OF 6" LAT
STA:3+02 40 L.F. OF 6" LAT
STA:3+42 40 L.F. OF 6" LAT
15 14 13 12 11 10
18 19 20 21 22 23
3+00 0+92 1+00 2+00 3+00 3+42 4+00
988 989 990
W S N E
5 0 5
SCALE : 1" = 5'
VERTICAL

LINE "G"
STA: 0+92.00 - END



LINE "H"
STA: 0+92.00 - END



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

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NOT FOR
CONSTRUCTION

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UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
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COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SS2054113

SHEET TITLE:
LINE "G" & LINE "H"
PLAN & PROFILE

SHEET NUMBER:
7.7

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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.

COMPACTION NOTE:

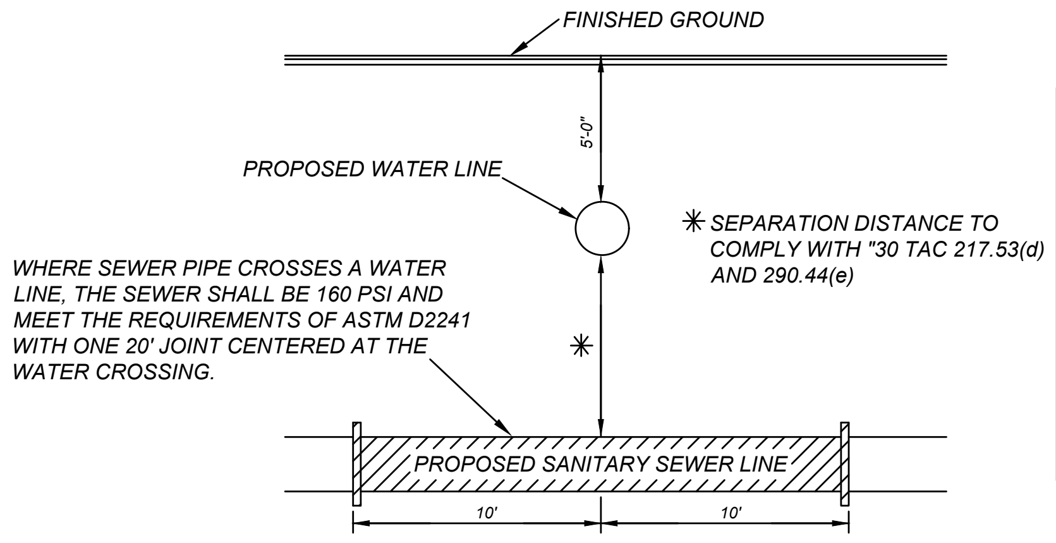
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. PERMITS AND/OR WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.

MANHOLE NOTE:

ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

NOTE:

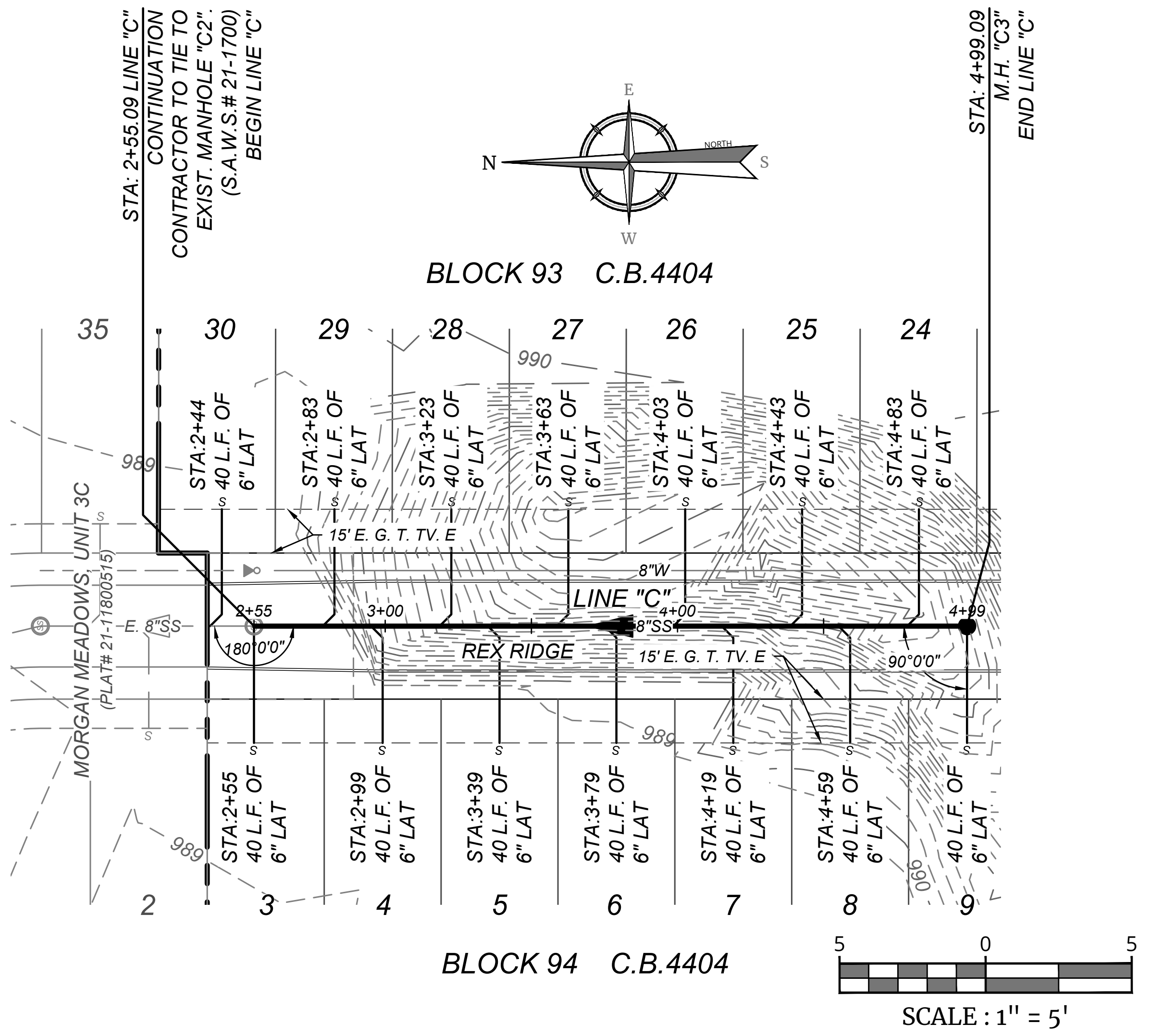
1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATION.
2. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE MEET THE REQUIREMENTS OF ASTM D2241. CONTRACTOR SHALL CENTER A 20 FOOT JOINT OF 160 P.S.I. PRESSURE RATED P.V.C. AT THE PROPOSED WATER CROSSING (NO SEPARATE PAY ITEM). REFERENCE SHEET 7.1, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. PIPE TYPE DESIGNATIONS ARE SDR 26.
4. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
5. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

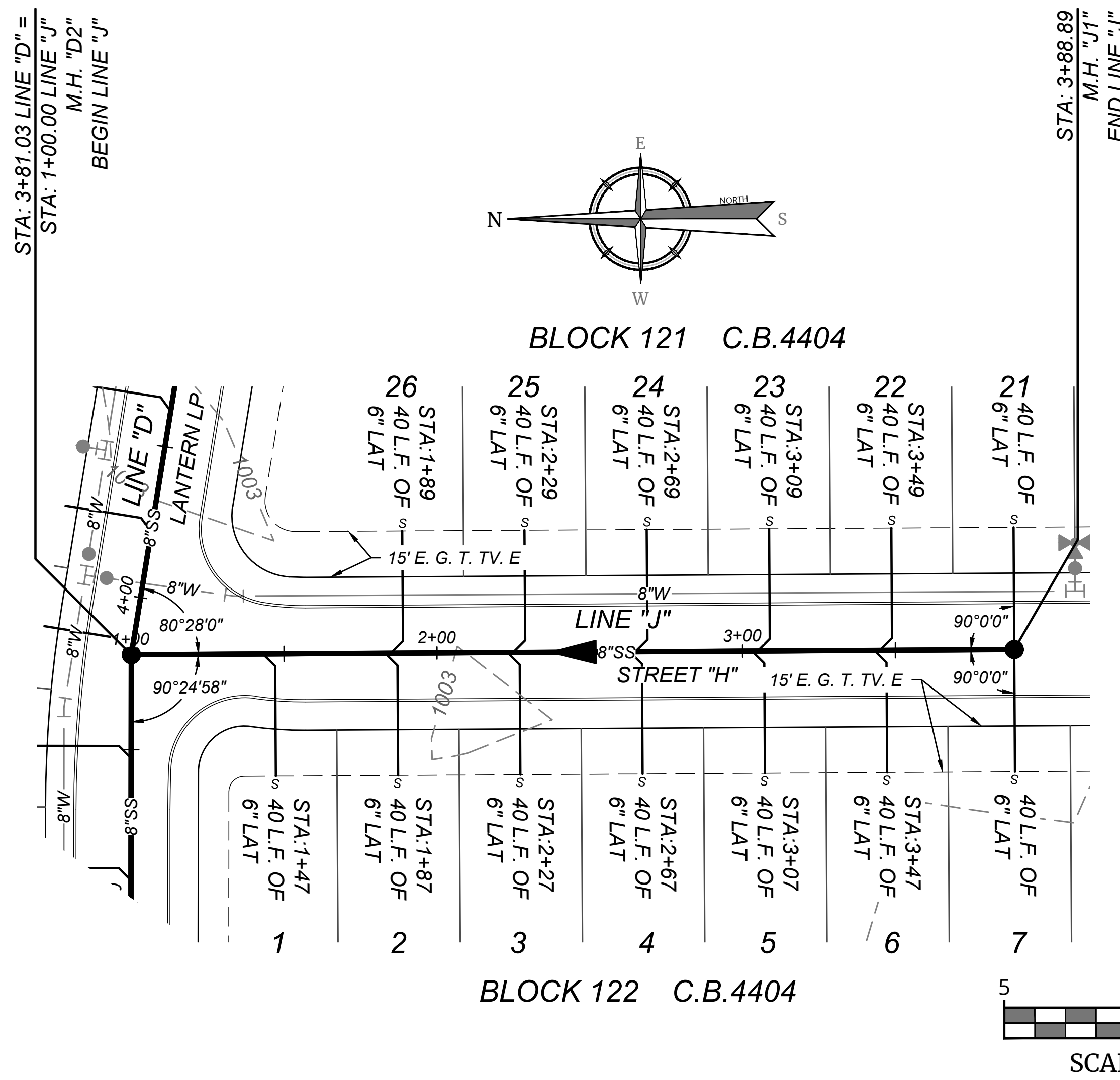

FINISHED GROUND
5'-0"
PROPOSED WATER LINE
✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.
✳
PROPOSED SANITARY SEWER LINE
10'
10'

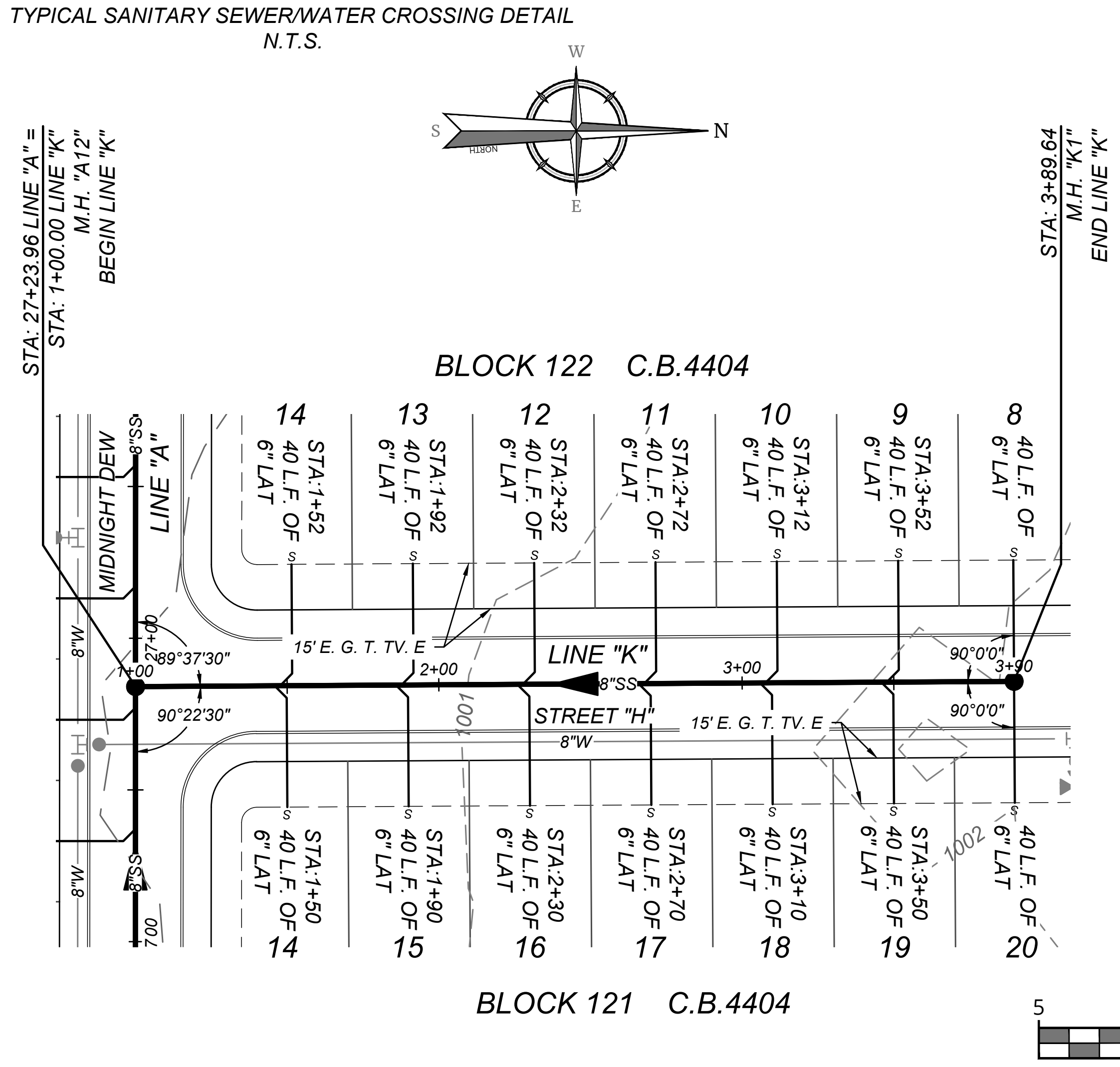
TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SEWER: MEDIO CREEK WATERSHED - FAR WEST SEWERSHED - MEDIO CREEK W.R.C.

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 176
TOTAL LINEAR FOOTAGE OF PIPE: 4,522.68 L.F. ~ 8" SDR 26 PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:


STA: 2+55.09 LINE "C"
CONTINUATION
CONTRACTOR TO TIE TO
EXIST. MANHOLE "C2"
(S.A.W.S.# 21-1700)
BEGIN LINE "C"
STA: 4+99.09
M.H. "C3"
END LINE "C"
N
E
S
W
NORTH
BLOCK 93 C.B.4404
35
30
29
28
27
26
25
24
990
989
STA:2+44 40 L.F. OF 6" LAT
STA:2+83 40 L.F. OF 6" LAT
STA:3+23 40 L.F. OF 6" LAT
STA:3+63 40 L.F. OF 6" LAT
STA:4+03 40 L.F. OF 6" LAT
STA:4+43 40 L.F. OF 6" LAT
STA:4+83 40 L.F. OF 6" LAT
15' E. G. T. TV. E
8"W
LINE "C"
8"SS
3+00
4+00
4+99
2+55
180°0'0"
90°0'0"
REX RIDGE
MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
8"SS
986
988
STA:2+55 40 L.F. OF 6" LAT
STA:2+99 40 L.F. OF 6" LAT
STA:3+39 40 L.F. OF 6" LAT
STA:3+79 40 L.F. OF 6" LAT
STA:4+19 40 L.F. OF 6" LAT
STA:4+59 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
2
3
4
5
6
7
8
9
BLOCK 94 C.B.4404

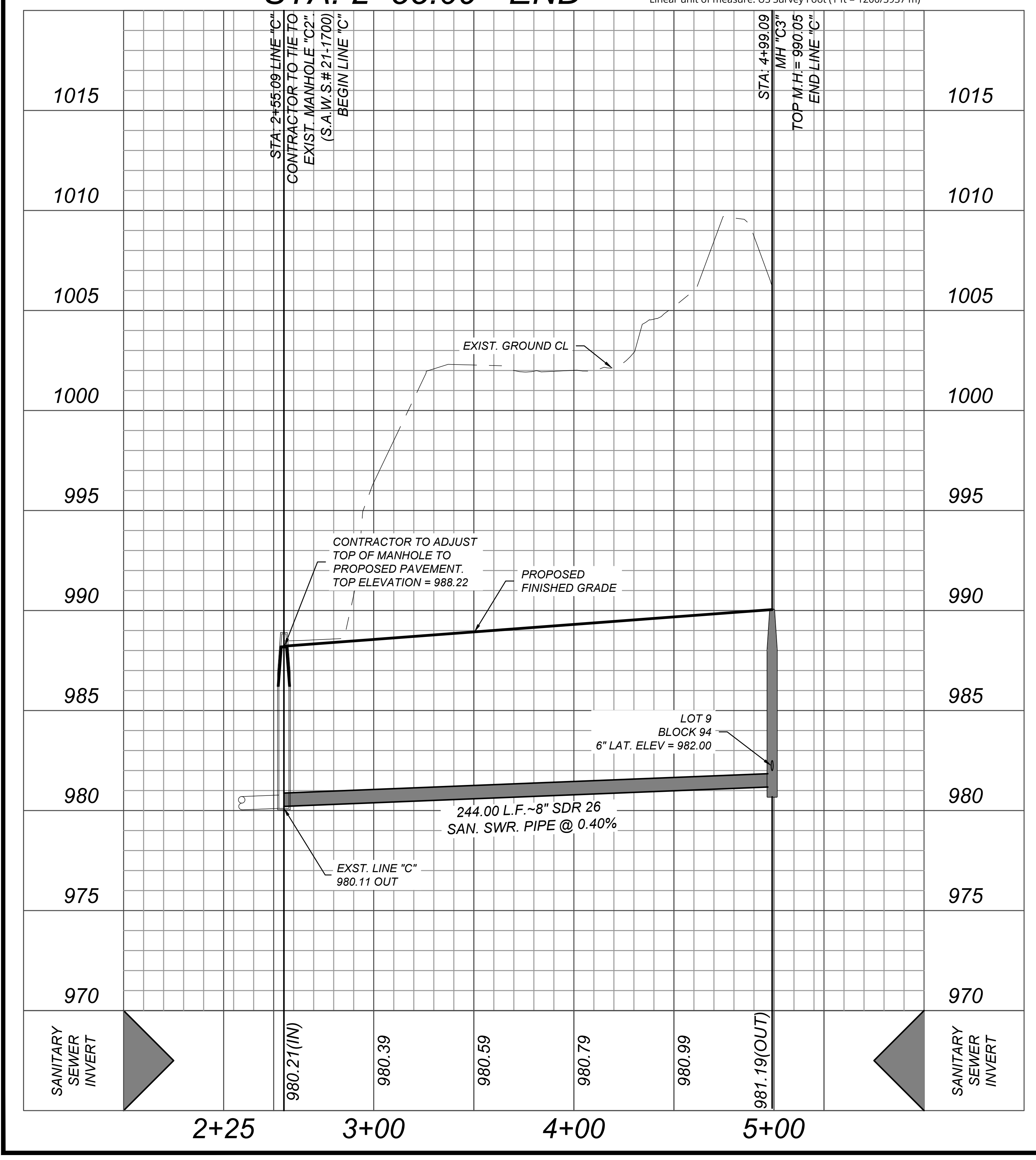

STA: 3+81.03 LINE "D" =
STA: 1+00.00 LINE "J"
M.H. "D2"
BEGIN LINE "J"
STA: 3+88.89
M.H. "J1"
END LINE "J"
N
E
S
W
NORTH
BLOCK 121 C.B.4404
26
25
24
23
22
21
STA:1+89 40 L.F. OF 6" LAT
STA:2+29 40 L.F. OF 6" LAT
STA:2+69 40 L.F. OF 6" LAT
STA:3+09 40 L.F. OF 6" LAT
STA:3+49 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
LINE "D"
LANTERN LP
8"W
15' E. G. T. TV. E
LINE "J"
2+00
3+00
4+00
80°28'0"
90°24'58"
8"SS
STREET "H"
90°0'0"
1003
1003
STA:1+47 40 L.F. OF 6" LAT
STA:1+87 40 L.F. OF 6" LAT
STA:2+27 40 L.F. OF 6" LAT
STA:2+67 40 L.F. OF 6" LAT
STA:3+07 40 L.F. OF 6" LAT
STA:3+47 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
1
2
3
4
5
6
7
BLOCK 122 C.B.4404


STA: 27+23.96 LINE "A" =
STA: 1+00.00 LINE "K"
M.H. "A12"
BEGIN LINE "K"
STA: 3+89.64
M.H. "K1"
END LINE "K"
W
N
S
E
NORTH
BLOCK 122 C.B.4404
14
13
12
11
10
9
8
STA:1+52 40 L.F. OF 6" LAT
STA:1+92 40 L.F. OF 6" LAT
STA:2+32 40 L.F. OF 6" LAT
STA:2+72 40 L.F. OF 6" LAT
STA:3+12 40 L.F. OF 6" LAT
STA:3+52 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
MIDNIGHT DEW
LINE "A"
8"W
89°37'30"
90°22'30"
15' E. G. T. TV. E
LINE "K"
2+00
3+00
3+90
1001
8"SS
STREET "H"
90°0'0"
1002
STA:1+50 40 L.F. OF 6" LAT
STA:1+90 40 L.F. OF 6" LAT
STA:2+30 40 L.F. OF 6" LAT
STA:2+70 40 L.F. OF 6" LAT
STA:3+10 40 L.F. OF 6" LAT
STA:3+50 40 L.F. OF 6" LAT
40 L.F. OF 6" LAT
14
15
16
17
18
19
20
BLOCK 121 C.B.4404

5 0 5
SCALE : 1" = 5'
VERTICAL

50 0 50
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

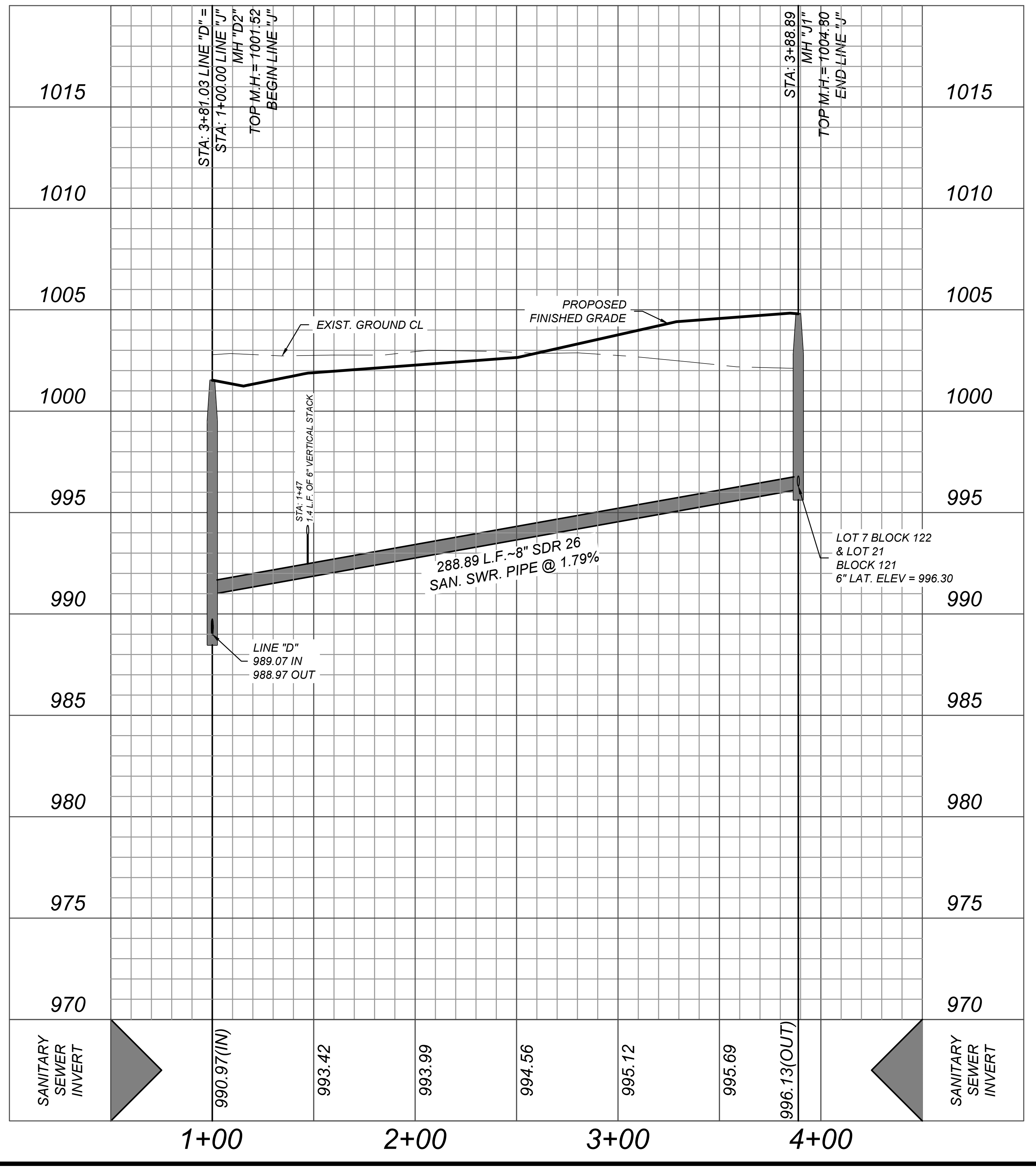
LINE "C"
STA: 2+55.09 - END


STA: 2+55.09 LINE "C"
CONTRACTOR TO TIE TO
EXIST. MANHOLE "C2"
(S.A.W.S.# 21-1700)
BEGIN LINE "C"
STA: 4+99.09
MH "C3"
TOP M.H = 990.05
END LINE "C"
1015
1010
1005
1000
995
990
985
980
975
970
EXIST. GROUND CL
CONTRACTOR TO ADJUST TOP OF MANHOLE TO PROPOSED PAVEMENT. TOP ELEVATION = 988.22
PROPOSED FINISHED GRADE
LOT 9 BLOCK 94 6" LAT. ELEV = 982.00
244.00 L.F.~8" SDR 26 SAN. SWR. PIPE @ 0.40%
EXST. LINE "C" 980.11 OUT
SANITARY SEWER INVERT
980.21(IN)
980.39
980.59
980.79
980.99
981.19(OUT)
2+25
3+00
4+00
5+00

5 0 5
SCALE : 1" = 5'
VERTICAL

50 0 50
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

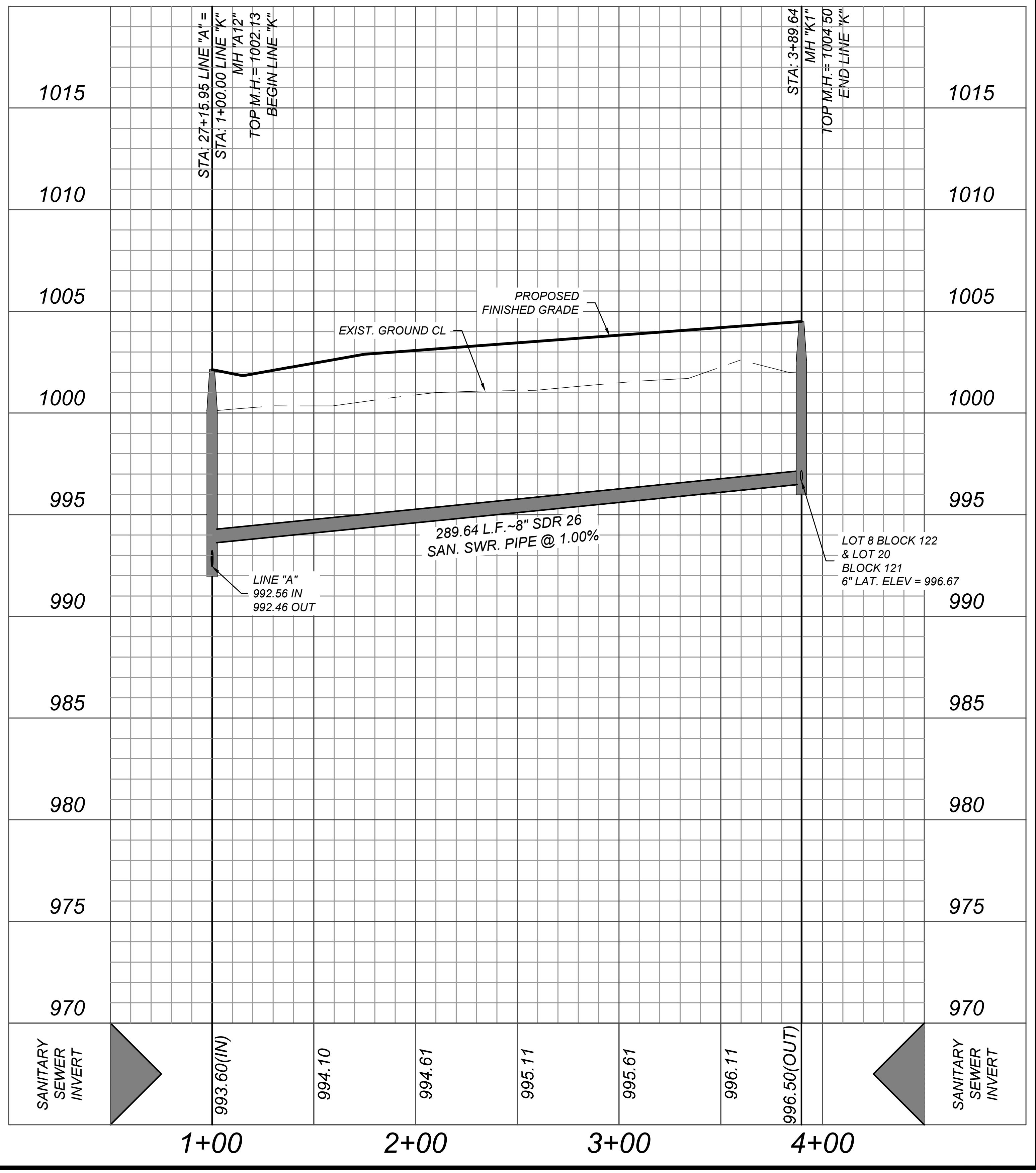
LINE "J"
STA: 1+00.00 - END


STA: 3+81.03 LINE "D" =
STA: 1+00.00 LINE "J"
MH "D2"
TOP M.H.= 1001.52
BEGIN LINE "J"
STA: 3+88.89
MH "J1"
TOP M.H = 1004.30
END LINE "J"
1015
1010
1005
1000
995
990
985
980
975
970
EXIST. GROUND CL
PROPOSED FINISHED GRADE
STA: 1+47 1.4 L.F. OF 6" VERTICAL STACK
288.89 L.F.~8" SDR 26 SAN. SWR. PIPE @ 1.79%
LOT 7 BLOCK 122 & LOT 21 BLOCK 121 6" LAT. ELEV = 996.30
LINE "D" 989.07 IN 988.97 OUT
SANITARY SEWER INVERT
990.97(IN)
993.42
993.99
994.56
995.12
995.69
996.13(OUT)
1+00
2+00
3+00
4+00

5 0 5
SCALE : 1" = 5'
VERTICAL

50 0 50
SCALE : 1" = 50'
HORIZONTAL
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)

LINE "K"
STA: 1+00.00 - END


STA: 27+15.95 LINE "A" =
STA: 1+00.00 LINE "K"
MH "A12"
TOP M.H.= 1002.13
BEGIN LINE "K"
STA: 3+89.64
MH "K1"
TOP M.H.= 1004.50
END LINE "K"
1015
1010
1005
1000
995
990
985
980
975
970
PROPOSED FINISHED GRADE
EXIST. GROUND CL
289.64 L.F.~8" SDR 26 SAN. SWR. PIPE @ 1.00%
LINE "A" 992.56 IN 992.46 OUT
LOT 8 BLOCK 122 & LOT 20 BLOCK 121 6" LAT. ELEV = 996.67
SANITARY SEWER INVERT
993.60(IN)
994.10
994.61
995.11
995.61
996.11
996.50(OUT)
1+00
2+00
3+00
4+00

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SS2054113

SHEET TITLE:
LINE "C", LINE "J", & LINE "K" PLAN & PROFILE

SHEET NUMBER:
7.8

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

By: BELSETH

MORGAN MEADOWS UNIT 10B

BEXAR COUNTY, TEXAS

WATER DISTRIBUTION IMPROVEMENTS

GENERAL WATER NOTES

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 Waste water 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.

Water Section

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 __985__ feet where the static pressure will normally exceed 80 PSI. At all such locations where the ground level is below __985__ 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).

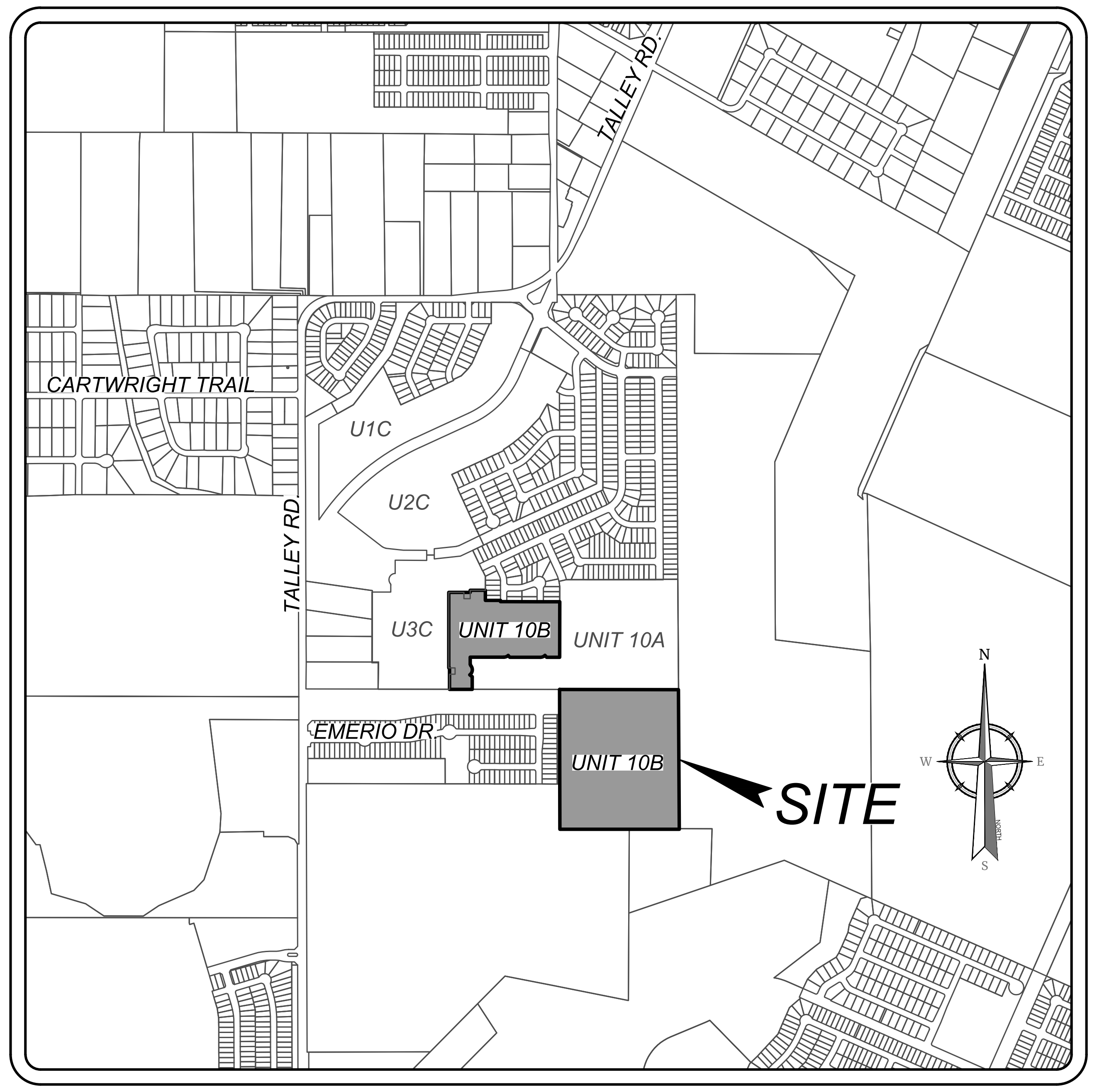
7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet. (Item No. 847.3): Mains shall be disinfected with dry HTH where shown in the contract documents or as directed by the Inspector, and shall not exceed a total length of 800 feet. This method of disinfection will also be followed 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.



LOCATION MAP
NOT-TO-SCALE

INDEX

SHEET TITLE	SHEET NUMBER
WATER DISTRIBUTION COVER SHEET	8.1
WATER DISTRIBUTION PLAN (SHT 1 OF 2)	8.2
WATER DISTRIBUTION PLAN (SHT 2 OF 2)	8.3

OWNER INFORMATION
TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
5210 THOUSAND OAKS, SUITE 1318
SAN ANTONIO, TX 78233

PRESSURE ZONE 8 (HGL1770)

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO   STATE: TEXAS   ZIP: 78233
PHONE#:   FAX#:   TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604   TOTAL EDU'S: 182.5
TOTAL LINEAR FOOTAGE OF PIPE: 4,942 L.F. ~ 8" C900 PVC
682 L.F. ~ 2" H.D.P.E.   PLAT NO.: 25-11800378
NUMBER OF LOTS: 181   SAWS JOB#:

nit 10B\Civil\WATER\CVOW2054113.dwg\8.1   By: BELSETH

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REV	DATE	DRAWN BY	DESCRIPTION

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UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
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BEXAR COUNTY
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San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: CVOW2054113

SHEET TITLE:
WATER DISTRIBUTION
COVER SHEET

SHEET NUMBER:
8.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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.

FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESS 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 HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

PRESSURE REDUCING VALVE (PRV) NOTE:

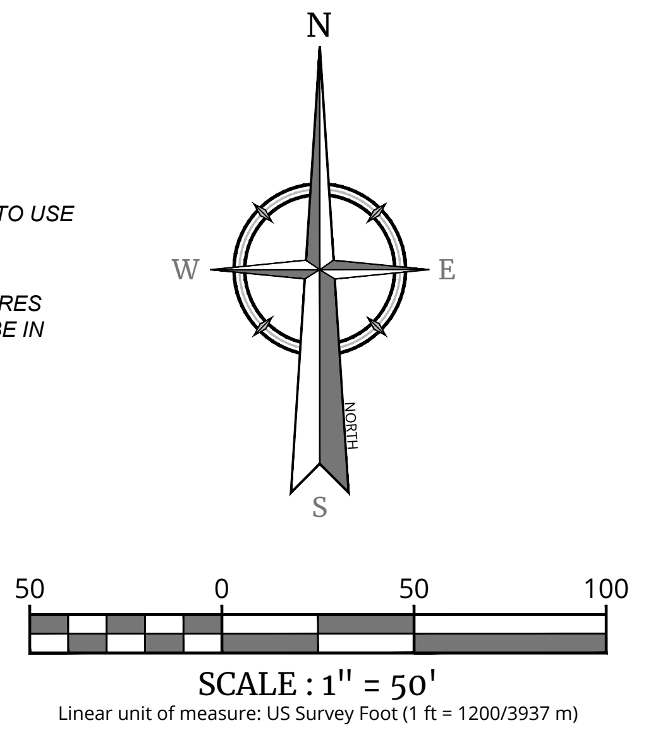
CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED 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. WATER SERVICES WHERE PRV'S REQUIRED ARE DESIGNATED BY AN ASTERISK (*).

*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE(PRV)

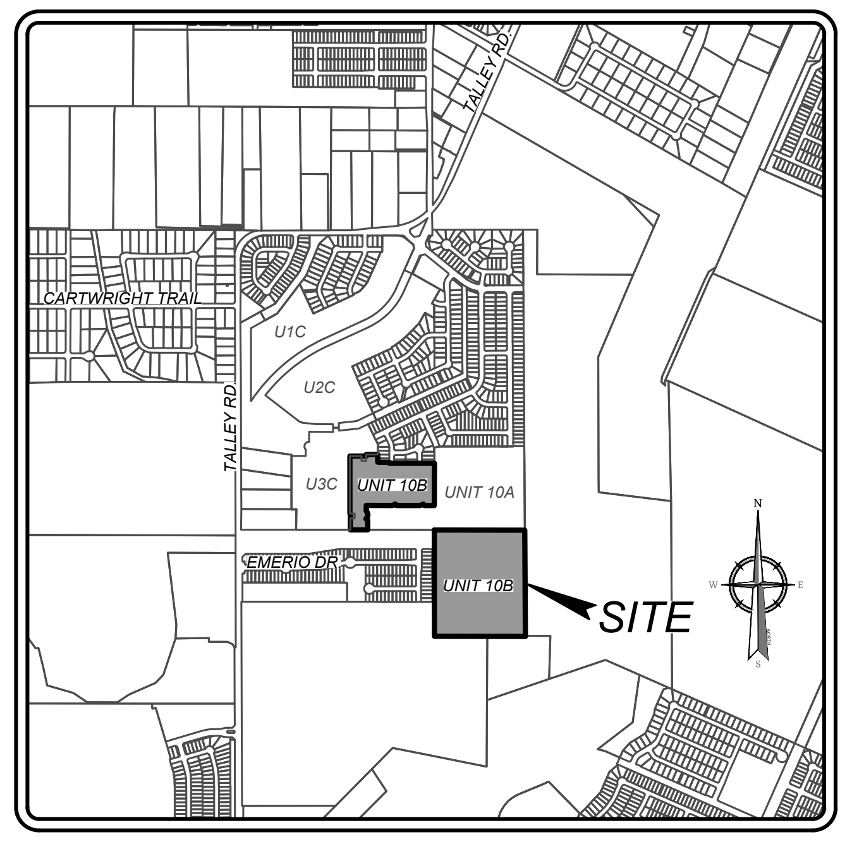
CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TEST 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.

SAWS NOTE:

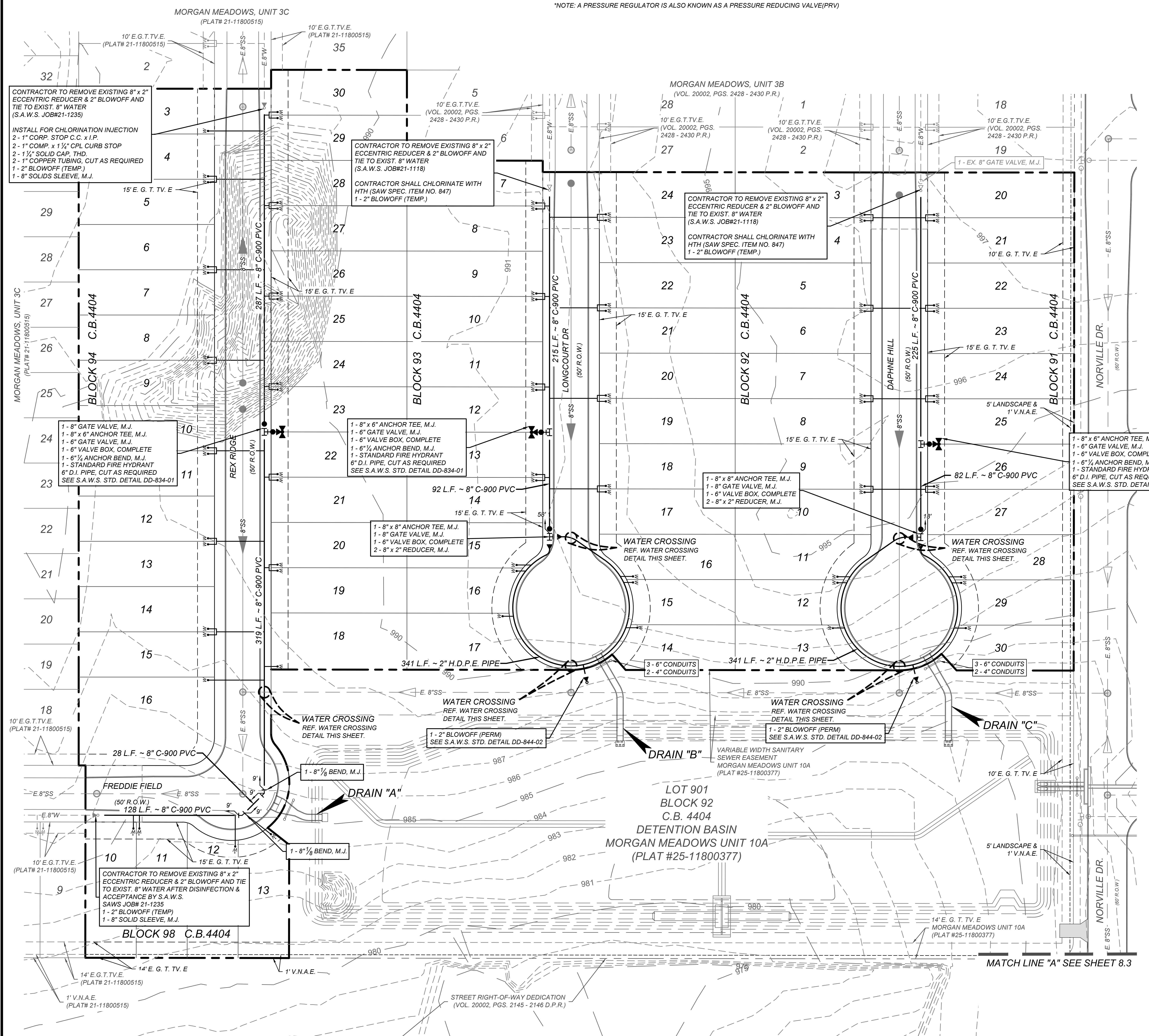
1. "SAWS REQUIRES GCPs AND COUNTER PERMIT TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS."
2. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATIONS.


N
W
E
S
NORTH
50
0
50
100

SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


U1C
U2C
U3C
UNIT 10B
UNIT 10A
TALLEY RD.
CARTWRIGHT TRAIL
SITE

LOCATION MAP
NOT-TO-SCALE


MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
10' E.G.T.TV.E.
(PLAT# 21-11800515)
10' E.G.T.TV.E.
(VOL. 20002, PGS. 2428 - 2430 P.R.)
15' E. G. T. TV. E
10' E. G. T. TV. E
14' E. G. T. TV. E
5' LANDSCAPE & 1' V.N.A.E.
1' V.N.A.E.
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
BLOCK 98 C.B.4404
REX RIDGE
(50' R.O.W.)
LONGCOURT DR
DAPHNE HILL
NORVILLE DR.
(60' R.O.W.)
FREDDIE FIELD
E.8"SS
E.8"W
8"SS
287 L.F. ~ 8" C-900 PVC
319 L.F. ~ 8" C-900 PVC
215 L.F. ~ 8" C-900 PVC
225 L.F. ~ 8" C-900 PVC
92 L.F. ~ 8" C-900 PVC
82 L.F. ~ 8" C-900 PVC
28 L.F. ~ 8" C-900 PVC
128 L.F. ~ 8" C-900 PVC
341 L.F. ~ 2" H.D.P.E. PIPE
341 L.F. ~ 2" H.D.P.E. PIPE
3 - 6" CONDUITS
2 - 4" CONDUITS
58'
18'
9'
1 - EX. 8" GATE VALVE, M.J.
1 - 8" 1/8 BEND, M.J.
1 - 8" 1/8 BEND, M.J.
DRAIN "A"
DRAIN "B"
DRAIN "C"
VARIABLE WIDTH SANITARY SEWER EASEMENT
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
LOT 901
BLOCK 92
C.B. 4404
DETENTION BASIN
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
14' E. G. T. TV. E
MORGAN MEADOWS UNIT 10A
(PLAT #25-11800377)
STREET RIGHT-OF-WAY DEDICATION
(VOL. 20002, PGS. 2145 - 2146 D.P.R.)
990
991
995
996
997
987
986
985
984
983
982
981
980
975

CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 8" WATER
(S.A.W.S. JOB#21-1235)

INSTALL FOR CHLORINATION INJECTION
2 - 1" CORP. STOP C.C. x I.P.
2 - 1" COMP. x 1¼" CPL CURB STOP
2 - 1¼" SOLID CAP, THD.
2 - 1" COPPER TUBING, CUT AS REQUIRED
1 - 2" BLOWOFF (TEMP.)
1 - 8" SOLIDS SLEEVE, M.J.

CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 8" WATER
(S.A.W.S. JOB#21-1118)

CONTRACTOR SHALL CHLORINATE WITH HTH (SAW SPEC. ITEM NO. 847)
1 - 2" BLOWOFF (TEMP.)

CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 8" WATER
(S.A.W.S. JOB#21-1118)

CONTRACTOR SHALL CHLORINATE WITH HTH (SAW SPEC. ITEM NO. 847)
1 - 2" BLOWOFF (TEMP.)

1 - 8" GATE VALVE, M.J.
1 - 8" x 6" ANCHOR TEE, M.J.
1 - 6" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
1 - 6" ¼ ANCHOR BEND, M.J.
1 - STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQUIRED
SEE S.A.W.S. STD. DETAIL DD-834-01

1 - 8" x 6" ANCHOR TEE, M.J.
1 - 6" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
1 - 6" ¼ ANCHOR BEND, M.J.
1 - STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQUIRED
SEE S.A.W.S. STD. DETAIL DD-834-01

1 - 8" x 8" ANCHOR TEE, M.J.
1 - 8" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
2 - 8" x 2" REDUCER, M.J.

1 - 8" x 8" ANCHOR TEE, M.J.
1 - 8" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
2 - 8" x 2" REDUCER, M.J.

1 - 8" x 6" ANCHOR TEE, M.J.
1 - 6" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
1 - 6" ¼ ANCHOR BEND, M.J.
1 - STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQUIRED
SEE S.A.W.S. STD. DETAIL DD-834-01

WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.

1 - 2" BLOWOFF (PERM)
SEE S.A.W.S. STD. DETAIL DD-844-02

1 - 2" BLOWOFF (PERM)
SEE S.A.W.S. STD. DETAIL DD-844-02

CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 8" WATER AFTER DISINFECTION & ACCEPTANCE BY S.A.W.S.
SAWS JOB# 21-1235
1 - 2" BLOWOFF (TEMP)
1 - 8" SOLID SLEEVE, M.J.

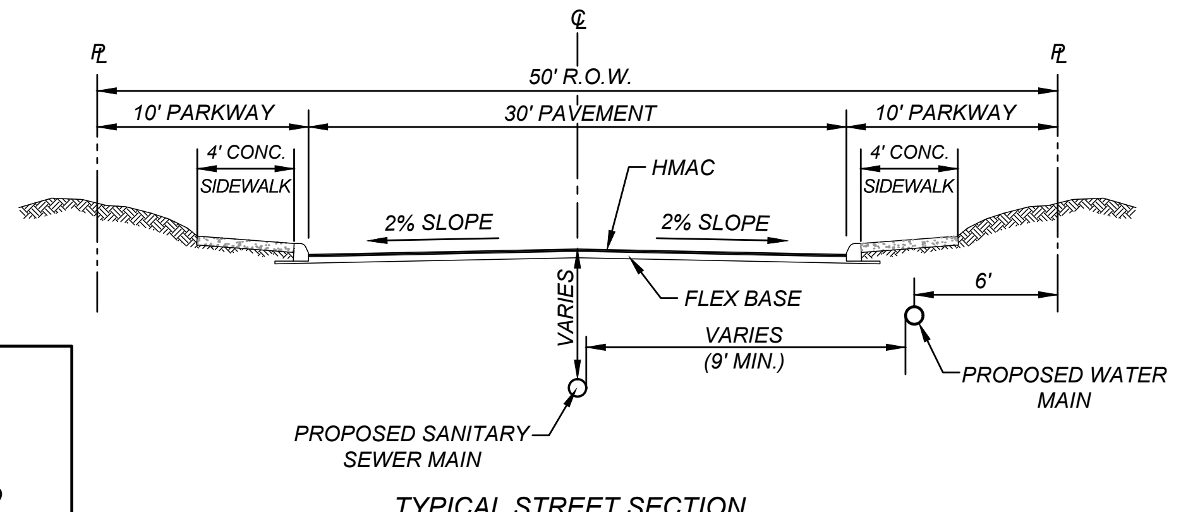
MATCH LINE "A" SEE SHEET 8.3

LEGEND

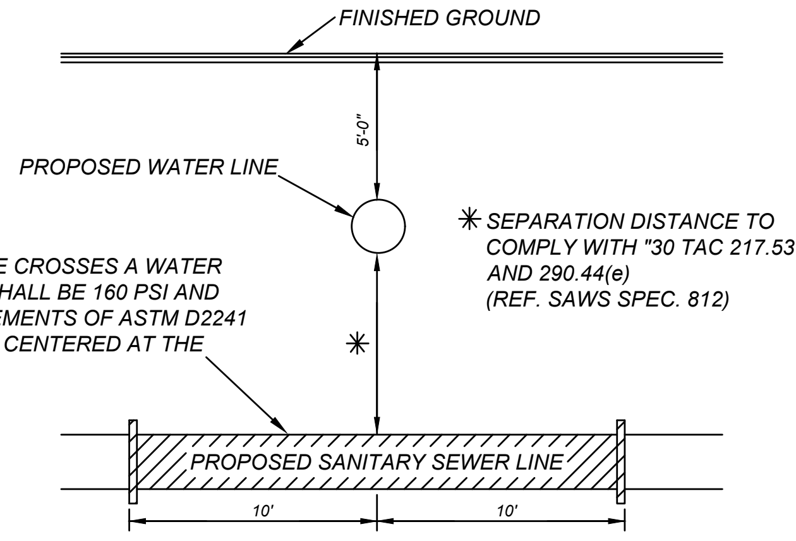
PROPOSED WATER MAIN	=	—— W ——
PROPOSED WATER SERVICE & METER BOX	=	W W
PROPOSED WATER SERVICE & METER BOX WITH PRESSURE REDUCING VALVE	=	W *
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	=	¾IRR
PROPOSED FIRE HYDRANT	=	⧓
PROPOSED WATER VALVE	=	●
PROPOSED SANITARY SEWER MAIN	=	— SS —◀—
PROPOSED SANITARY SEWER MANHOLE	=	——●——
PROPOSED ELECTRIC, GAS, TELE., & CABLE TV EASEMENT	=	E, G, T, & TV ESM'T
EXISTING WATER MAIN	=	— — —E.?"W— — —
EXISTING FIRE HYDRANT	=	⋈
EXISTING WATER VALVE	=	⋈
EXISTING SANITARY SEWER MAIN	=	—E.?"SS— ◁ —
EXISTING SANITARY SEWER MANHOLE	=	— —◎— —
EXISTING OVERHEAD ELECTRIC W/POWER POLE	=	—OHE- - -◍- - -OHE—
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	- -▷- - - - -OHE- -

WATER PLAN NOTES:

1. FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.
2. WATER METER BY LOCATIONS BY LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD S.A.W.S. WATER DETAILS & SPECIFICATIONS.
3. WHERE WATER SERVICES AND LIGHT POLE FOUNDATIONS ARE PROPOSED TO BE AT THE SAME LOT CORNERS, SERVICE TAPS AND LEADS SHOULD BE AT LEAST 3 FEET FROM THE LIGHT POLE FOUNDATION.
4. ALL VALVES SHALL READ "OPEN RIGHT"
5. ALL PVC PIPE TO BE C-900 CLASS 235 (DR 18.)


℄
℞
℞
50' R.O.W.
10' PARKWAY
30' PAVEMENT
10' PARKWAY
4' CONC. SIDEWALK
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
6'
VARIES (9' MIN.)
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

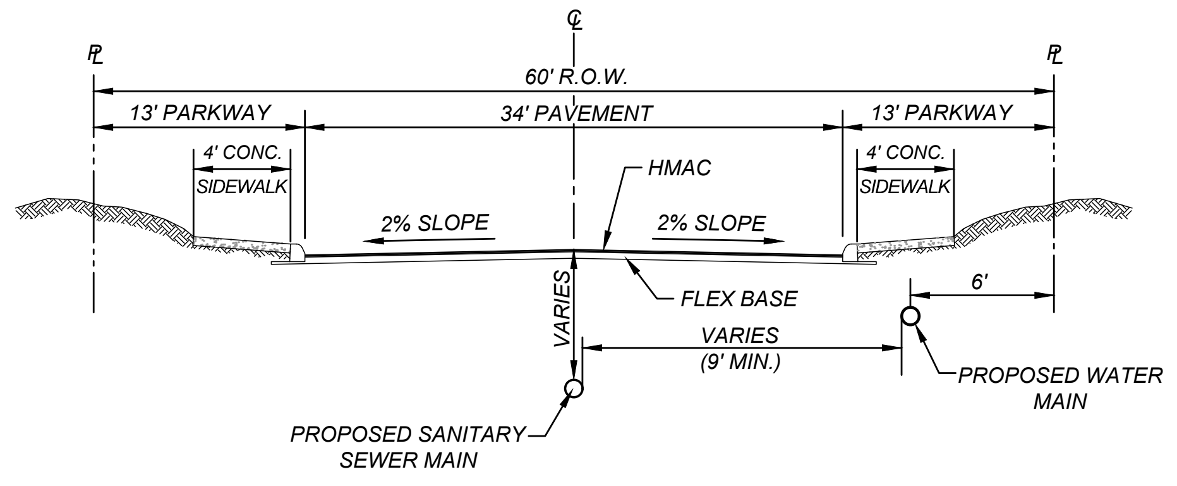
TYPICAL STREET SECTION
N.T.S.


FINISHED GROUND
5'-0"
PROPOSED WATER LINE
*
PROPOSED SANITARY SEWER LINE
10'
10'

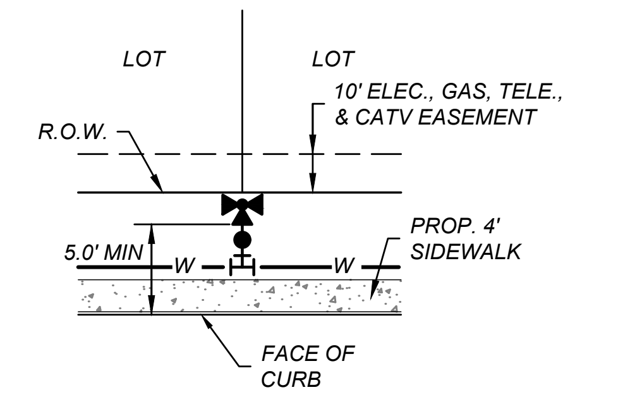
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.

* SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e)
(REF. SAWS SPEC. 812)

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.


℄
℞
℞
60' R.O.W.
13' PARKWAY
34' PAVEMENT
13' PARKWAY
4' CONC. SIDEWALK
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
6'
VARIES (9' MIN.)
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

TYPICAL STREET SECTION
N.T.S.


LOT
LOT
10' ELEC., GAS, TELE., & CATV EASEMENT
R.O.W.
5.0' MIN
W
W
PROP. 4' SIDEWALK
FACE OF CURB

TYPICAL FIRE HYDRANT DETAIL
NOT-TO-SCALE

PRESSURE ZONE 8 (HGL1770)

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 182.5
TOTAL LINEAR FOOTAGE OF PIPE: 4,942 L.F. ~ 8" C900 PVC PLAT NO.: 25-11800378
682 L.F. ~ 2" H.D.P.E.
NUMBER OF LOTS: 181 SAWS JOB#:

Colliers
Engineering & Design

www.colliersengineering.com

Formerly Known as KFW ENGINEERS + SURVEYING

811
Know what's below. Call before you dig.

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS
VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers
Engineering & Design

SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

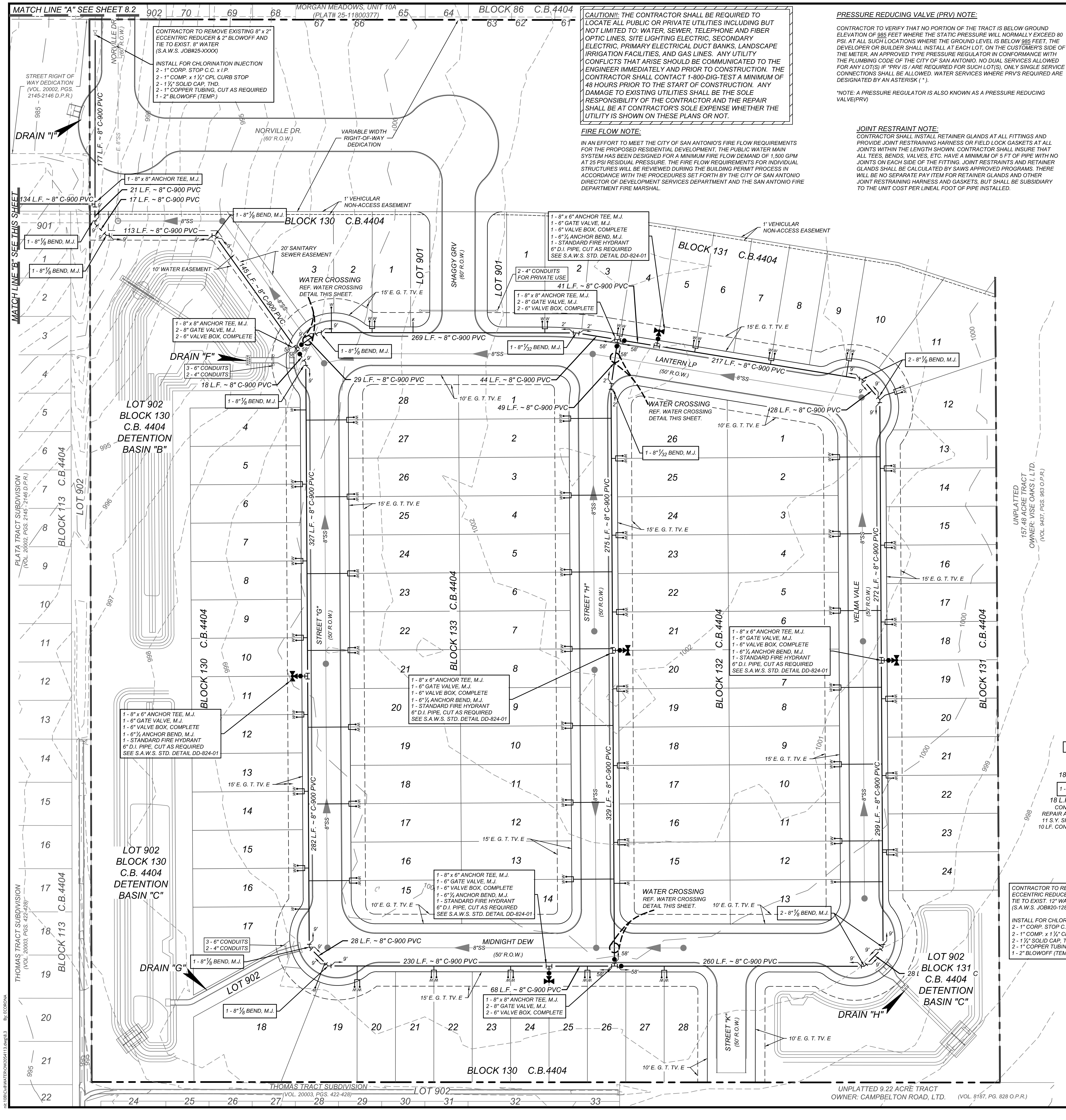
SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	OW2054113

SHEET TITLE:
WATER DISTRIBUTION
PLAN (SHT 1 OF 2)

SHEET NUMBER:
8.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.


MATCH LINE "A" SEE SHEET 8.2
MORGAN MEADOWS, UNIT 10A
(PLAT# 25-11800377)
BLOCK 86 C.B.4404
MATCH LINE "B" SEE THIS SHEET
CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 8" WATER (S.A.W.S. JOB#25-XXXX)
INSTALL FOR CHLORINATION INJECTION
2 - 1" CORP. STOP C.C. x I.P.
2 - 1" COMP. x 1¼" CPL CURB STOP
2 - 1¼" SOLID CAP, THD.
2 - 1" COPPER TUBING, CUT AS REQUIRED
1 - 2" BLOWOFF (TEMP.)
STREET RIGHT OF WAY DEDICATION (VOL. 20002, PGS. 2145-2146 D.P.R.)
DRAIN "I"
NORVILLE DR. (60' R.O.W.)
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
177 L.F. ~ 8" C-900 PVC
1 - 8" x 8" ANCHOR TEE, M.J.
134 L.F. ~ 8" C-900 PVC
21 L.F. ~ 8" C-900 PVC
17 L.F. ~ 8" C-900 PVC
1 - 8" ⅛ BEND, M.J.
113 L.F. ~ 8" C-900 PVC
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
145 L.F. ~ 8" C-900 PVC
WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.
1 - 8" x 8" ANCHOR TEE, M.J.
2 - 8" GATE VALVE, M.J.
2 - 6" VALVE BOX, COMPLETE
DRAIN "F"
3 - 6" CONDUITS
2 - 4" CONDUITS
18 L.F. ~ 8" C-900 PVC
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "B"
LOT 901
SHAGGY GRV (60' R.O.W.)
15' E. G. T. TV. E
269 L.F. ~ 8" C-900 PVC
1 - 8" x 6" ANCHOR TEE, M.J.
1 - 6" GATE VALVE, M.J.
1 - 6" VALVE BOX, COMPLETE
1 - 6" ¼ ANCHOR BEND, M.J.
1 - STANDARD FIRE HYDRANT
6" D.I. PIPE, CUT AS REQUIRED
SEE S.A.W.S. STD. DETAIL DD-824-01
2 - 4" CONDUITS FOR PRIVATE USE
41 L.F. ~ 8" C-900 PVC
1 - 8" x 8" ANCHOR TEE, M.J.
2 - 8" GATE VALVE, M.J.
2 - 6" VALVE BOX, COMPLETE
1 - 8" ⅛ BEND, M.J.
1 - 8" 1/32 BEND, M.J.
BLOCK 131 C.B.4404
1' VEHICULAR NON-ACCESS EASEMENT
LANTERN LP (50' R.O.W.)
217 L.F. ~ 8" C-900 PVC
2 - 8" ⅛ BEND, M.J.
29 L.F. ~ 8" C-900 PVC
44 L.F. ~ 8" C-900 PVC
49 L.F. ~ 8" C-900 PVC
128 L.F. ~ 8" C-900 PVC
10' E. G. T. TV. E
WATER CROSSING
REF. WATER CROSSING DETAIL THIS SHEET.
STREET "G" (50' R.O.W.)
327 L.F. ~ 8" C-900 PVC
282 L.F. ~ 8" C-900 PVC
STREET "H" (50' R.O.W.)
275 L.F. ~ 8" C-900 PVC
329 L.F. ~ 8" C-900 PVC
VELMA VALE (50' R.O.W.)
272 L.F. ~ 8" C-900 PVC
299 L.F. ~ 8" C-900 PVC
BLOCK 133 C.B.4404
BLOCK 132 C.B.4404
BLOCK 131 C.B.4404
BLOCK 130 C.B.4404
BLOCK 113 C.B.4404
LOT 902
PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
UNPLATTED 157.48 ACRE TRACT OWNER: VISE OAKS I, LTD. (VOL. 9437, PGS. 963 O.P.R.)
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "C"
LOT 902 BLOCK 131 C.B. 4404 DETENTION BASIN "C"
DRAIN "G"
DRAIN "H"
28 L.F. ~ 8" C-900 PVC
230 L.F. ~ 8" C-900 PVC
260 L.F. ~ 8" C-900 PVC
68 L.F. ~ 8" C-900 PVC
1 - 8" x 8" ANCHOR TEE, M.J.
2 - 8" GATE VALVE, M.J.
2 - 6" VALVE BOX, COMPLETE
MIDNIGHT DEW (50' R.O.W.)
STREET "K" (50' R.O.W.)
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
UNPLATTED 9.22 ACRE TRACT OWNER: CAMPBELTON ROAD, LTD.
(VOL. 8187, PG. 828 O.P.R.)
134 L.F. ~ 8" C-900 PVC
1 - 12" x 8" REDUCER, M.J.
18 L.F. ~ 12" C-900 PVC
CONTRACTOR TO REPAIR AND REPLACE 11 S.Y. SIDEWALK AND 10 LF. CONCRETE CURB
SENDERO RANCH (VAR. WIDTH R.O.W.)
16' E. G. T. TV. E
1' V.N.A.E.
12'E.G.T.TV.E.
CONTRACTOR TO REMOVE EXISTING 8" x 2" ECCENTRIC REDUCER & 2" BLOWOFF AND TIE TO EXIST. 12" WATER (S.A.W.S. JOB#20-1287)

CAUTION!!: THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, 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-TEST 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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IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1,500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

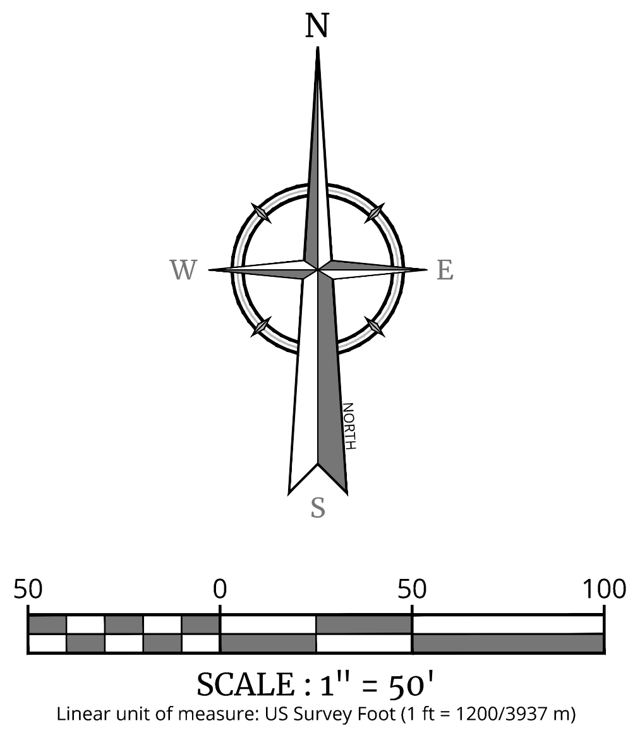
PRESSURE REDUCING VALVE (PRV) NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 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. WATER SERVICES WHERE PRV'S REQUIRED ARE DESIGNATED BY AN ASTERISK (*).

*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 HARNESS 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 HARNESS AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.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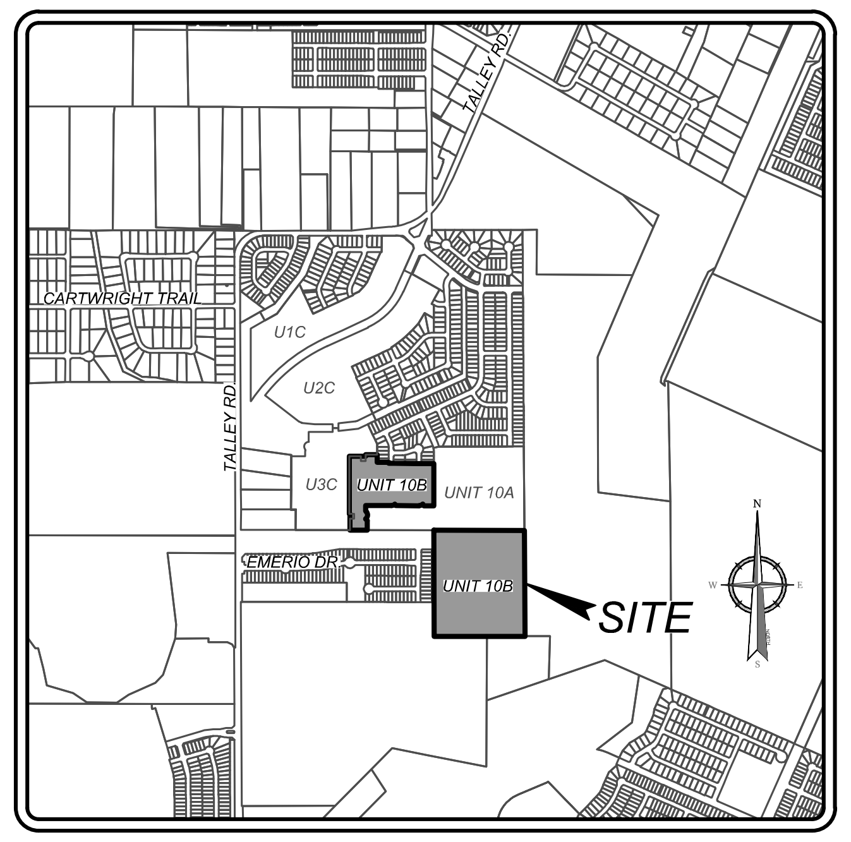
50
100

SCALE : 1" = 50'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


SITE
UNIT 10A

LOCATION MAP
NOT-TO-SCALE

TRENCH EXCAVATION SAFETY PROTECTION

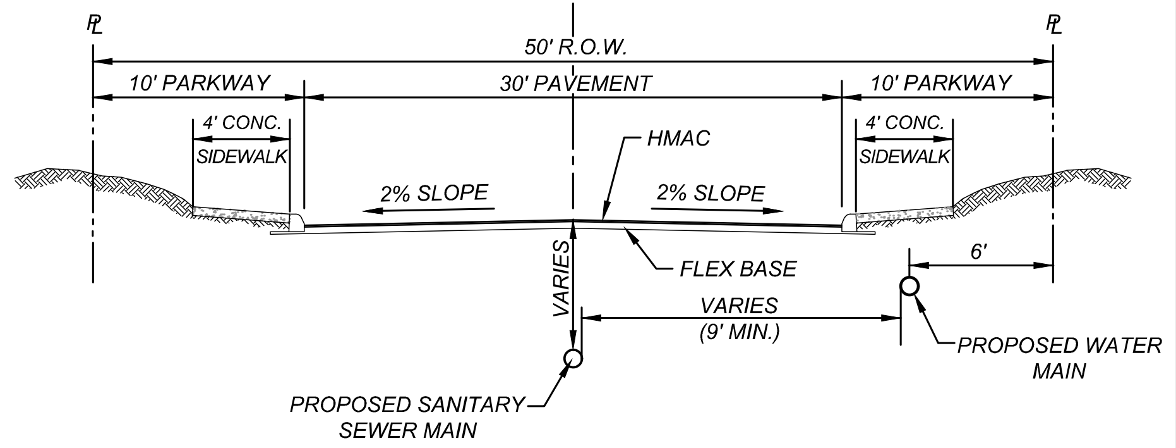
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.

WATER PLAN NOTES:

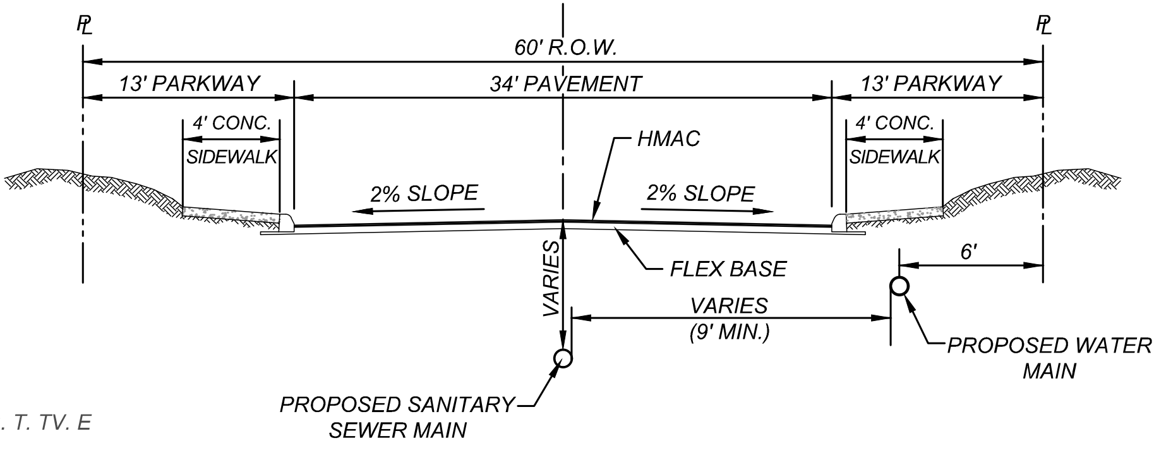
1. FOR TYPICAL STREET SECTIONS SEE DETAIL THIS SHEET.
2. WATER METER BY LOCATIONS BY LOCATIONS ARE SHOWN SYMBOLICALLY TO SERVICE THE LOTS BUT SHALL BE LOCATED IN ACCORDANCE WITH THE STANDARD S.A.W.S. WATER DETAILS & SPECIFICATIONS.
3. WHERE WATER SERVICES AND LIGHT POLE FOUNDATIONS ARE PROPOSED TO BE AT THE SAME LOT CORNERS, SERVICE TAPS AND LEADS SHOULD BE AT LEAST 3 FEET FROM THE LIGHT POLE FOUNDATION.
4. ALL VALVES SHALL READ "OPEN RIGHT"
5. ALL PVC PIPE TO BE C-900 CLASS 235 (DR 18.)

LEGEND

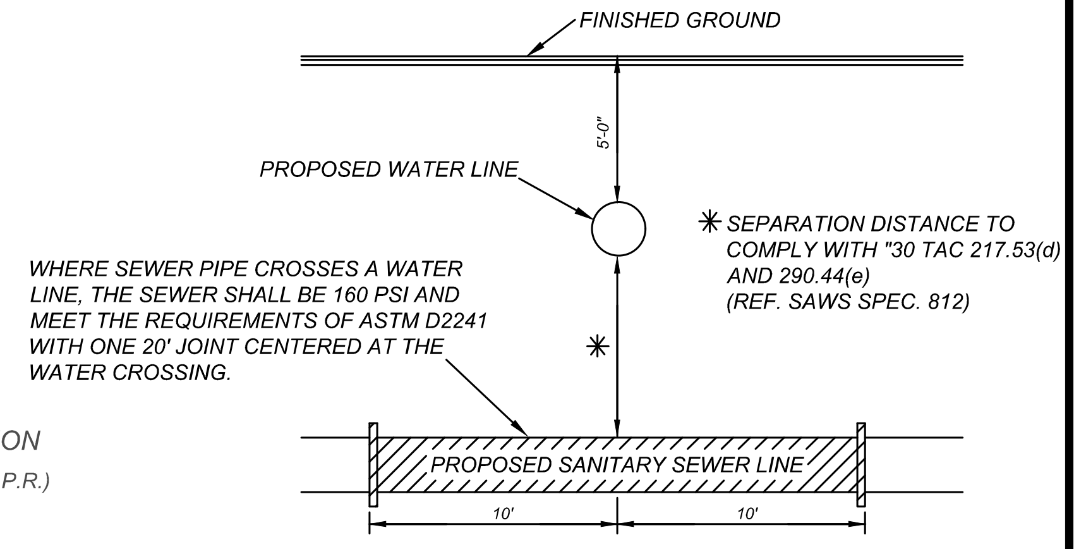
PROPOSED WATER MAIN	=	—— W ——
PROPOSED WATER SERVICE & METER BOX	=	W W
PROPOSED WATER SERVICE & METER BOX WITH PRESSURE REDUCING VALVE	=	W *
PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX	=	¾IRR
PROPOSED FIRE HYDRANT	=	⧓
PROPOSED WATER VALVE	=	●
PROPOSED SANITARY SEWER MAIN	=	— SS ◀—
PROPOSED SANITARY SEWER MANHOLE	=	—●—
PROPOSED ELECTRIC, GAS, TELE., & CABLE TV EASEMENT	=	E, G, T, & TV ESM'T
EXISTING WATER MAIN	=	— — —E.?"W— — —
EXISTING FIRE HYDRANT	=	⋈
EXISTING WATER VALVE	=	⋈
EXISTING SANITARY SEWER MAIN	=	—E.?"SS— ◁ —
EXISTING SANITARY SEWER MANHOLE	=	— —○— —
EXISTING OVERHEAD ELECTRIC W/POWER POLE	=	—OHE- - -◍- - -OHE—
EXISTING GUY WIRE/OVERHEAD ELECTRIC	=	- -▷- - - - -OHE- -


℄
℗L
50' R.O.W.
10' PARKWAY
30' PAVEMENT
10' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
VARIES (9' MIN.)
6'
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

TYPICAL STREET SECTION
N.T.S.


℄
℗L
60' R.O.W.
13' PARKWAY
34' PAVEMENT
13' PARKWAY
4' CONC. SIDEWALK
HMAC
2% SLOPE
2% SLOPE
FLEX BASE
VARIES
VARIES (9' MIN.)
6'
PROPOSED SANITARY SEWER MAIN
PROPOSED WATER MAIN

TYPICAL STREET SECTION
N.T.S.


FINISHED GROUND
5'-0"
PROPOSED WATER LINE
PROPOSED SANITARY SEWER LINE
10'
10'

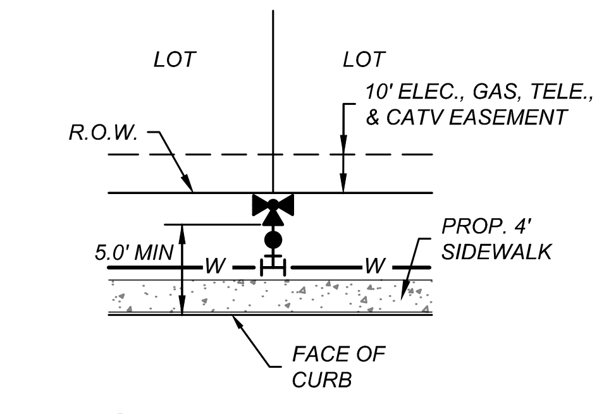
WHERE SEWER PIPE CROSSES A WATER LINE, THE SEWER SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT THE WATER CROSSING.

✳ SEPARATION DISTANCE TO COMPLY WITH "30 TAC 217.53(d) AND 290.44(e) (REF. SAWS SPEC. 812)

TYPICAL SANITARY SEWER/WATER CROSSING DETAIL
N.T.S.

SAWS NOTE:

1. "SAWS REQUIRES GCPs AND COUNTER PERMIT TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS."
2. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE IN ACCORDANCE WITH THE SAN ANTONIO WATER SYSTEM (S.A.W.S.) STANDARD SPECIFICATIONS.


LOT
LOT
10' ELEC., GAS, TELE., & CATV EASEMENT
R.O.W.
5.0' MIN
W
W
PROP. 4' SIDEWALK
FACE OF CURB

TYPICAL FIRE HYDRANT DETAIL
NOT-TO-SCALE

PRESSURE ZONE 8 (HGL1770)

DEVELOPER'S NAME: TALLEY EXTENSION REVITALIZATION INITIATIVE, LLC
DEVELOPER'S ADDRESS: 5210 THOUSAND OAKS, SUITE 1318
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78233
PHONE#: FAX#: TOTAL ACREAGE: 34.46 AC.
SAWS BLOCK MAP#: 068602, 068604,070604 TOTAL EDU'S: 182.5
TOTAL LINEAR FOOTAGE OF PIPE: 4,942 L.F. ~ 8" C900 PVC
682 L.F. ~ 2" H.D.P.E. PLAT NO.: 25-11800378
NUMBER OF LOTS: 181 SAWS JOB#:

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION
.	.	.	.

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG
PROJECT NUMBER: 205-41-13	DRAWING NAME: OW2054113		

SHEET TITLE:
WATER DISTRIBUTION
PLAN (SHT 2 OF 2)

SHEET NUMBER:
8.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

INSTALLATION:

1. ALL OPERATORS SHALL SUBMIT A NOTICE OF INTENT (NOI) AT LEAST 48 HOURS IN ADVANCE AND ALL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE IN PLACE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.
2. CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

MAINTENANCE AND INSPECTION:

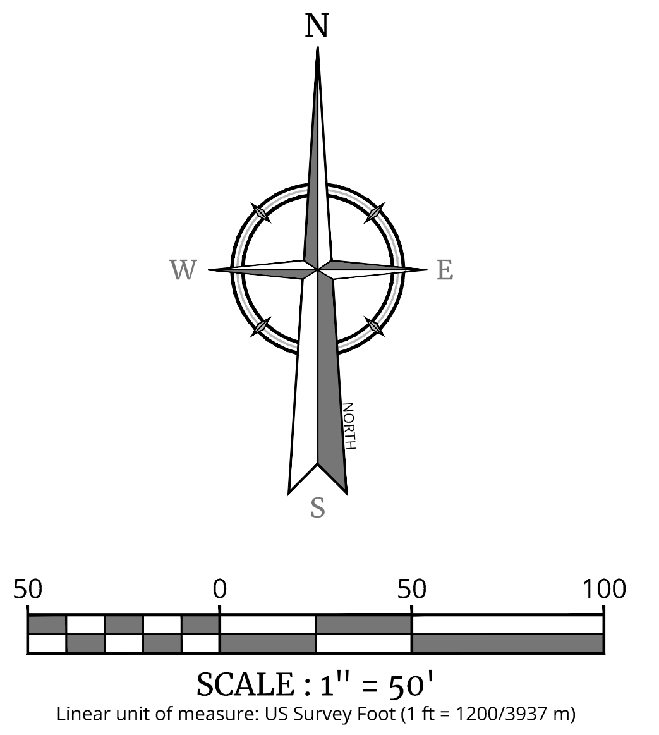
1. CONTRACTOR SHOULD LIMIT CONSTRUCTION ACTIVITIES TO ONLY THOSE AREAS SHOWN TO BE DISTURBED ON THIS PLAN. IF ADDITIONAL VEGETATED AREAS ARE DISTURBED, THEY SHOULD BE PROTECTED WITH APPROPRIATE BEST MANAGEMENT PRACTICES UNTIL THE AREAS HAVE BEEN STABILIZED AS PER THE SPECIFICATIONS OF THE SWPPP. THE AREAS OF THIS ADDITIONAL SOIL DISTURBANCE AND THE MEASURES USED SHOULD BE SHOWN ON THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

GENERAL:

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.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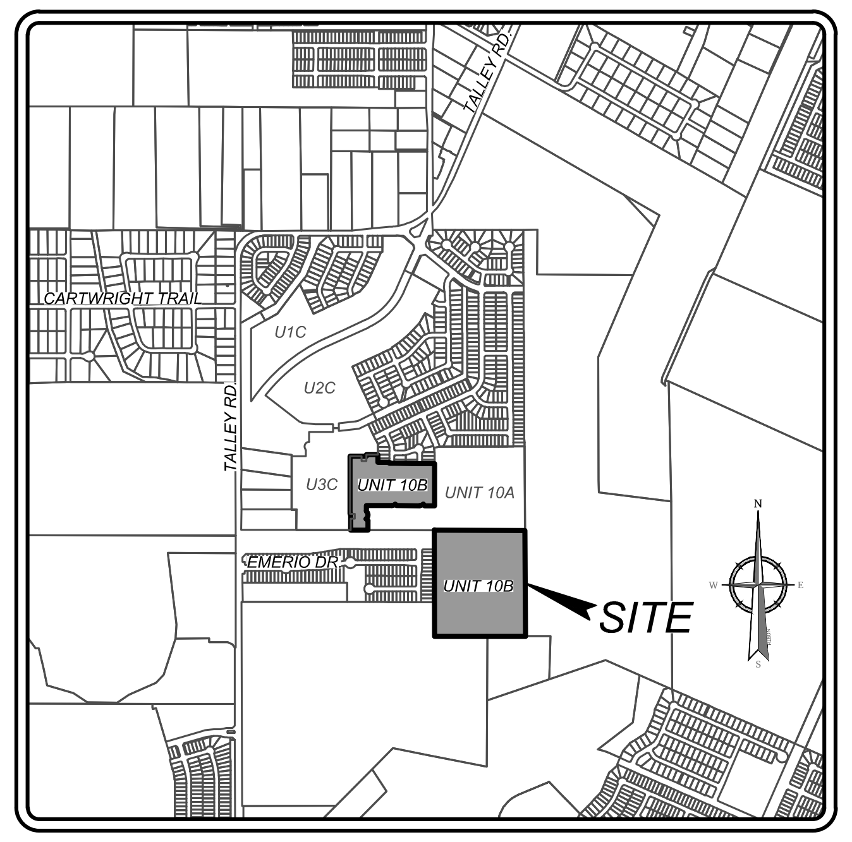
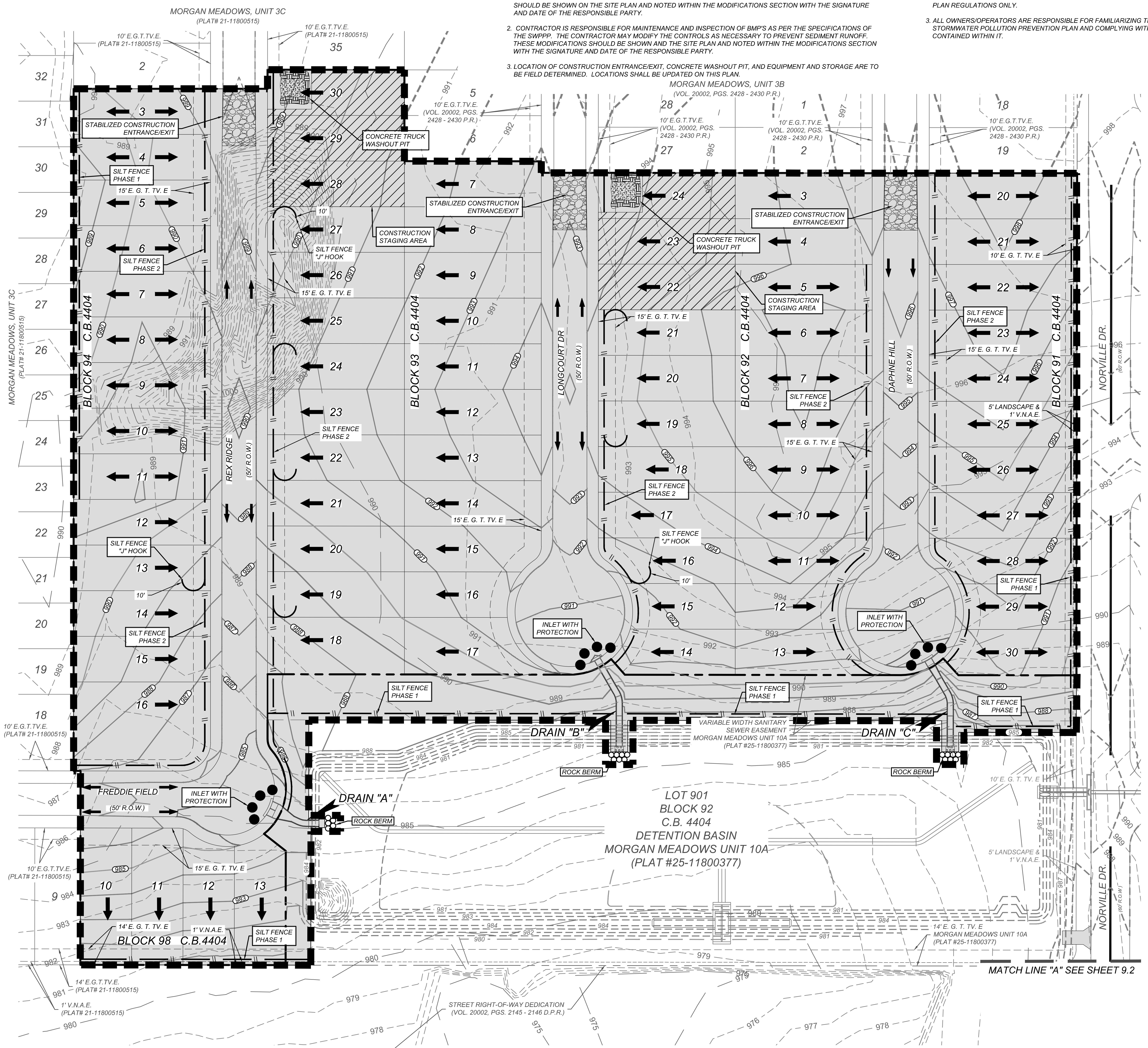
SCALE : 1" = 50'
Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
UNIT 10A
SITE

LOCATION MAP
NOT-TO-SCALE


MORGAN MEADOWS, UNIT 3C
(PLAT# 21-11800515)
MORGAN MEADOWS, UNIT 3B
(VOL. 20002, PGS. 2428 - 2430 P.R.)
10' E.G.T.TV.E.
STABILIZED CONSTRUCTION ENTRANCE/EXIT
CONCRETE TRUCK WASHOUT PIT
CONSTRUCTION STAGING AREA
SILT FENCE PHASE 1
SILT FENCE PHASE 2
SILT FENCE "J" HOOK
15' E. G. T. TV. E
BLOCK 94 C.B.4404
BLOCK 93 C.B.4404
BLOCK 92 C.B.4404
BLOCK 91 C.B.4404
BLOCK 98 C.B.4404
REX RIDGE (50' R.O.W.)
LONGCOURT DR (50' R.O.W.)
DAPHNE HILL (50' R.O.W.)
NORVILLE DR.
FREDDIE FIELD (50' R.O.W.)
INLET WITH PROTECTION
DRAIN "A"
DRAIN "B"
DRAIN "C"
ROCK BERM
5' LANDSCAPE & 1' V.N.A.E.
VARIABLE WIDTH SANITARY SEWER EASEMENT MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
LOT 901 BLOCK 92 C.B. 4404 DETENTION BASIN MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
14' E. G. T. TV. E MORGAN MEADOWS UNIT 10A (PLAT #25-11800377)
14' E.G.T.TV.E. (PLAT# 21-11800515)
1' V.N.A.E. (PLAT# 21-11800515)
STREET RIGHT-OF-WAY DEDICATION (VOL. 20002, PGS. 2145 - 2146 D.P.R.)
MATCH LINE "A" SEE SHEET 9.2

LEGEND

▬ ▬ ▬	LIMITS OF CONSTRUCTION
— — 570 — —	EXISTING CONTOURS
—(1008)—	PROPOSED CONTOURS
➡	FLOW ARROW
▦	STABILIZED CONSTRUCTION ENTRANCE/EXIT
▨	CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.
▩	CONCRETE TRUCK WASHOUT PIT
▒	DISTURBED AREA
○○○	ROCK BERM
— \\ — \\ —	SILT FENCE PHASE 1 (SILT FENCE PHASE 2 ALONG THE FRONT OF LOTS TO BE INSTALLED AFTER PAVING)
⁂	NATURAL VEGETATIVE BUFFER
●●●●	INLET WITH PROTECTION (GRAVEL FILTERS BAGS)

COORDINATION NOTE:

1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TEST A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

Colliers Engineering & Design
SAN ANTONIO (KFW)
3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

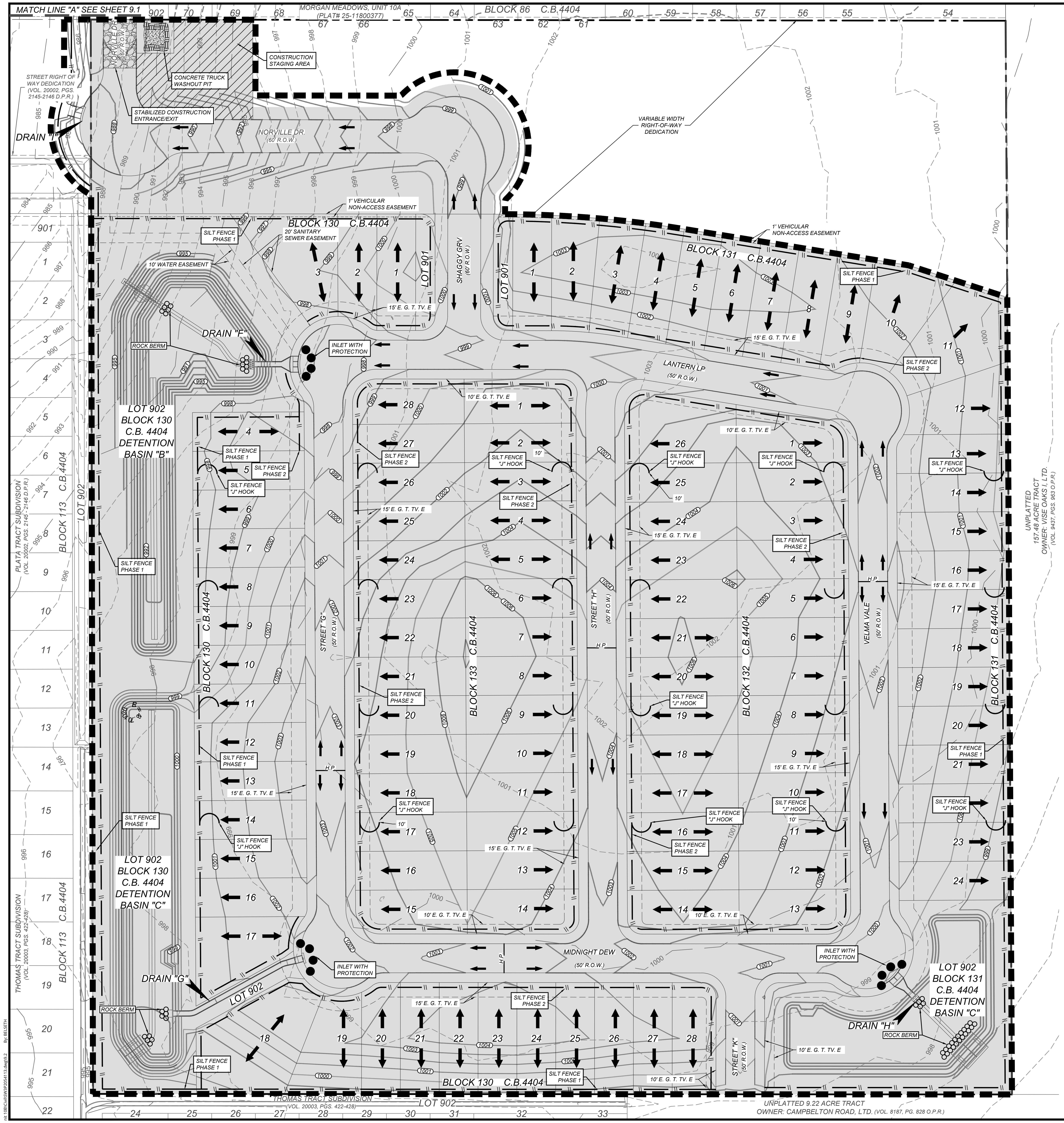
PROJECT NUMBER:	DRAWING NAME:
205-41-13	SW3P2054113

SHEET TITLE:
STORM WATER
POLLUTION PREVENTION
PLAN (SHT 1 OF 2)

SHEET NUMBER:
9.1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

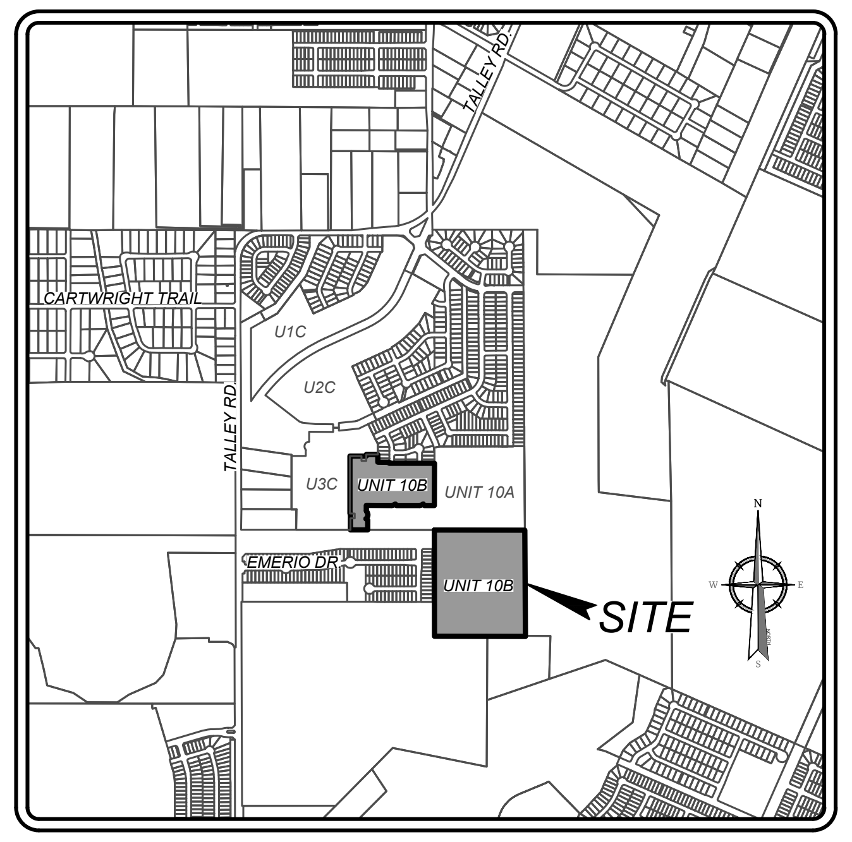
By: DYLAN FORSTER


MATCH LINE "A" SEE SHEET 9.1
MORGAN MEADOWS, UNIT 10A (PLAT# 25-11800377)
BLOCK 86 C.B.4404
CONSTRUCTION STAGING AREA
CONCRETE TRUCK WASHOUT PIT
STABILIZED CONSTRUCTION ENTRANCE/EXIT
STREET RIGHT OF WAY DEDICATION (VOL. 20002, PGS. 2145-2146 D.P.R.)
DRAIN "I"
NORVILLE DR. (60' R.O.W.)
VARIABLE WIDTH RIGHT-OF-WAY DEDICATION
1' VEHICULAR NON-ACCESS EASEMENT
BLOCK 130 C.B.4404
BLOCK 131 C.B.4404
BLOCK 132 C.B.4404
BLOCK 133 C.B.4404
20' SANITARY SEWER EASEMENT
10' WATER EASEMENT
SILT FENCE PHASE 1
SILT FENCE PHASE 2
SILT FENCE "J" HOOK
DRAIN "F"
DRAIN "G"
DRAIN "H"
ROCK BERM
INLET WITH PROTECTION
SHAGGY GRV (60' R.O.W.)
LANTERN LP (50' R.O.W.)
STREET "G" (50' R.O.W.)
STREET "H" (50' R.O.W.)
STREET "K" (50' R.O.W.)
VELMA VALE (50' R.O.W.)
MIDNIGHT DEW (50' R.O.W.)
15' E. G. T. TV. E
10' E. G. T. TV. E
LOT 901
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "B"
LOT 902 BLOCK 130 C.B. 4404 DETENTION BASIN "C"
LOT 902 BLOCK 131 C.B. 4404 DETENTION BASIN "C"
LOT 902
PLATA TRACT SUBDIVISION (VOL. 20002, PGS. 2145-2146 D.P.R.)
THOMAS TRACT SUBDIVISION (VOL. 20003, PGS. 422-428)
BLOCK 113 C.B.4404
UNPLATTED 157.48 ACRE TRACT OWNER: VISE OAKS I, LTD. (VOL. 9437, PGS. 963 O.P.R.)
UNPLATTED 9.22 ACRE TRACT OWNER: CAMPBELTON ROAD, LTD. (VOL. 8187, PG. 828 O.P.R.)

50 0 50 100

SCALE : 1" = 50'

Linear unit of measure: US Survey Foot (1 ft = 1200/3937 m)


CARTWRIGHT TRAIL
TALLEY RD
UNIT 10A
UNIT 10B
SITE

LOCATION MAP NOT-TO-SCALE

INSTALLATION:

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3. CONTRACTOR MAY INSTALL THE BEST MANAGEMENT PRACTICES IN PHASES THAT COINCIDE WITH THE DISTURBANCE OF UP GRADIENT AREAS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
4. CONTRACTOR TO VERIFY SUFFICIENT VEGETATION IN AREAS DENOTED AS VEGETATED FILTER STRIP. IF INSUFFICIENT VEGETATION EXISTS, CONTRACTOR SHALL IMPLEMENT A DIFFERENT BEST MANAGEMENT PRACTICE AND WILL SHOW IT ON THIS PLAN WITH NOTATION IN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.

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2. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE AND INSPECTION OF BMP'S AS PER THE SPECIFICATIONS OF THE SWPPP. THE CONTRACTOR MAY MODIFY THE CONTROLS AS NECESSARY TO PREVENT SEDIMENT RUNOFF. THESE MODIFICATIONS SHOULD BE SHOWN AND THE SITE PLAN AND NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. LOCATION OF CONSTRUCTION ENTRANCE/EXIT, CONCRETE WASHOUT PIT, AND EQUIPMENT AND STORAGE ARE TO BE FIELD DETERMINED. LOCATIONS SHALL BE UPDATED ON THIS PLAN.

PROJECT COMPLETION:

1. ALL DISTURBED AREAS ARES NOT COVERED BY IMPERVIOUS COVER ARE TO BE STABILIZED PER THE SWPPP AND PROJECT SPECIFICATIONS PRIOR TO REMOVAL OF ANY BMP'S AND/OR PRIOR TO FILING A NOTICE OF TERMINATION (NOT).
2. BEST MANAGEMENT PRACTICES MAY BE REMOVED IN PHASES IF ALL UPGRADIENT AREAS HAVE BEEN STABILIZED PER SWPPP AND PROJECT SPECIFICATIONS. THIS PHASING SHOULD BE NOTED WITHIN THE MODIFICATIONS SECTION WITH THE SIGNATURE AND DATE OF THE RESPONSIBLE PARTY.
3. CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

GENERAL:

1. THIS EXHIBIT IS TO BE USED FOR THE PURPOSES OF STORMWATER POLLUTION PREVENTION ONLY. ALL OTHER CIVIL ENGINEERING INFORMATION SHOULD BE OBTAINED FROM THE APPROPRIATE CONSTRUCTION DOCUMENTS.
2. THE PURPOSE OF THE SIGNATURE AND SEAL OF THE ENGINEER ON THIS DOCUMENT IS TO DEMONSTRATE COMPLIANCE WITH THE TPDES STORMWATER POLLUTION PREVENTION PLAN REGULATIONS ONLY.
3. ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

LEGEND

▬ ▬ ▬ ▬ ▬	LIMITS OF CONSTRUCTION
— — — 570 — —	EXISTING CONTOURS
——(1008)——	PROPOSED CONTOURS
→	FLOW ARROW
▨	STABILIZED CONSTRUCTION ENTRANCE/EXIT
▨	CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA.
▨	CONCRETE TRUCK WASHOUT PIT
▨	DISTURBED AREA
○○○	ROCK BERM
—— \\ —— \\ ——	SILT FENCE PHASE 1 (SILT FENCE PHASE 2 ALONG THE FRONT OF LOTS TO BE INSTALLED AFTER PAVING)
▨	NATURAL VEGETATIVE BUFFER
● ● ● ●	INLET WITH PROTECTION (GRAVEL FILTERS BAGS)

COORDINATION NOTE:

1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE. CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
5. CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
6. CONTRACTOR SHALL CONTACT 1-800-DIG-TEST A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION

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REV	DATE	DRAWN BY	DESCRIPTION

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CONSTRUCTION

MORGAN MEADOWS,
UNIT 10B
PLAT# 25-11800378
FOR
TALLEY EXTENSION
REVITALIZATION
INITIATIVE, LLC

BEXAR COUNTY
TEXAS

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3421 Paesanos
Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909
TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
205-41-13	SW3P2054113

SHEET TITLE:
STORM WATER
POLLUTION PREVENTION
PLAN (SHT 2 OF 2)

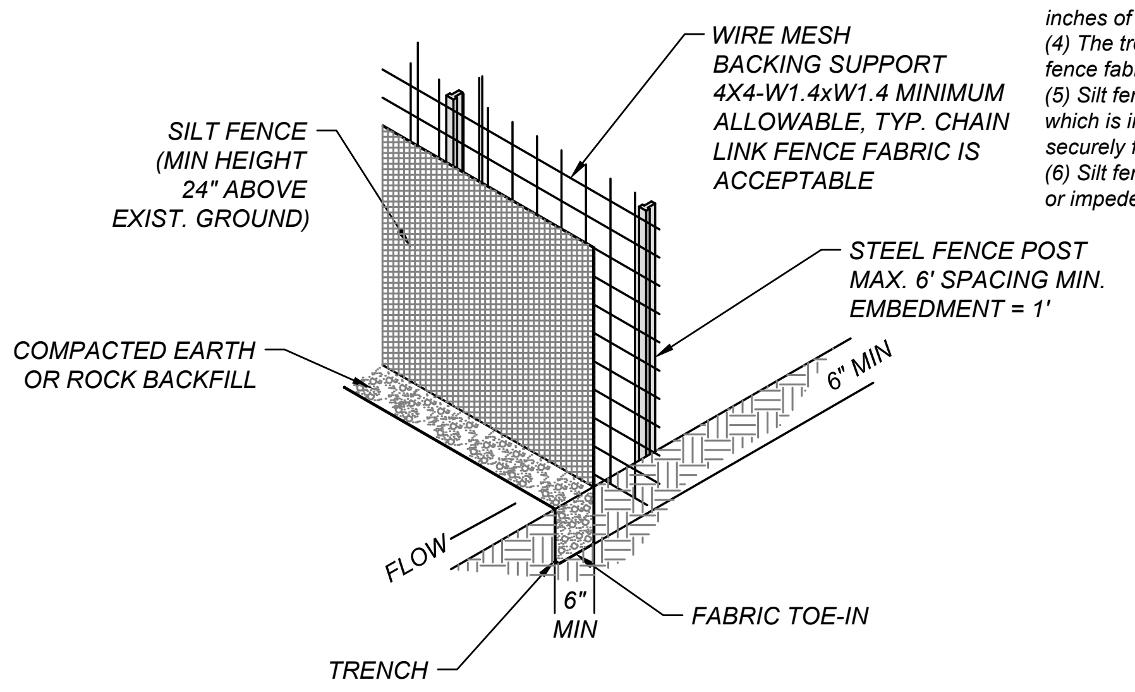
SHEET NUMBER:
9.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Inspection and Maintenance Guidelines:
(1) Inspect all fencing weekly, and after any rainfall.
(2) Remove sediment when buildup reaches 6 inches.
(3) Replace any torn fabric or install a second line of fencing parallel to the torn section.
(4) Replace or repair any 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.

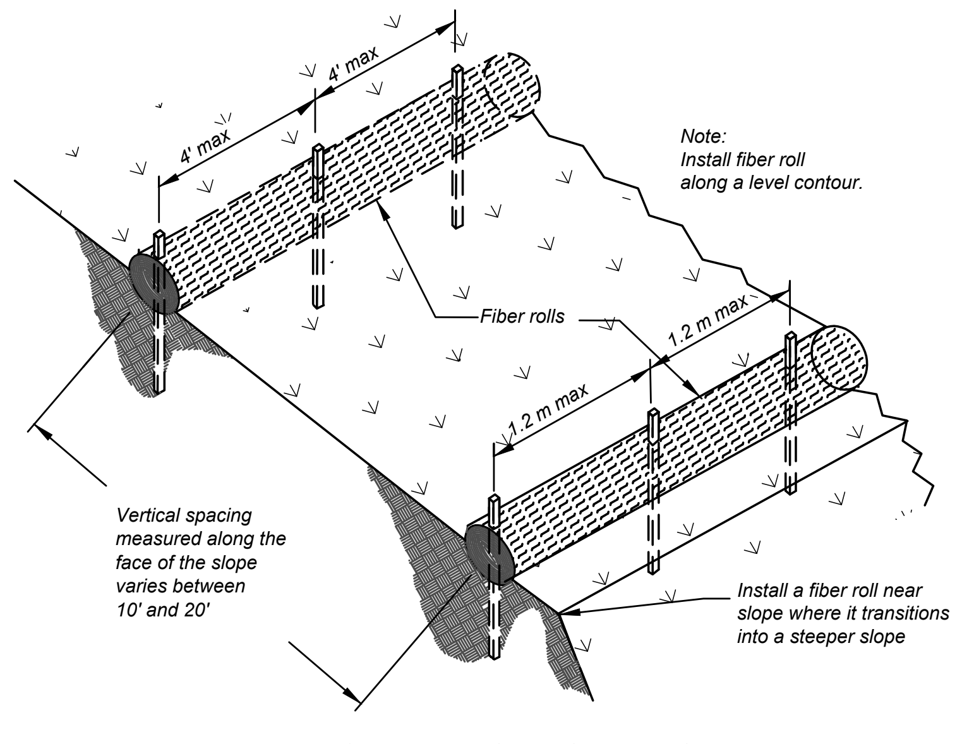
Materials:
(1) Silt fence material should be polypropylene, polyethylene or polyamide woven or nonwoven fabric. The fabric width should be 36 inches, with a minimum unit weight of 4.5 oz/yd, mullen burst strength exceeding 190 lb/in2, ultraviolet stability exceeding 70%, and minimum apparent opening size of U.S. Sieve No.
30.
(2) Fence posts should be made of hot rolled steel, at least 4 feet long with Tee or Ybar cross section, surface painted or galvanized, minimum nominal weight 1.25 lb/fl2, 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. Post 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/i 00 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 stone flow or drainage.


WIRE MESH BACKING SUPPORT 4X4-W1.4xW1.4 MINIMUM ALLOWABLE, TYP. CHAIN LINK FENCE FABRIC IS ACCEPTABLE
SILT FENCE (MIN HEIGHT 24" ABOVE EXIST. GROUND)
STEEL FENCE POST MAX. 6' SPACING MIN. EMBEDMENT = 1'
COMPACTED EARTH OR ROCK BACKFILL
6" MIN
FLOW
6" MIN
FABRIC TOE-IN
TRENCH

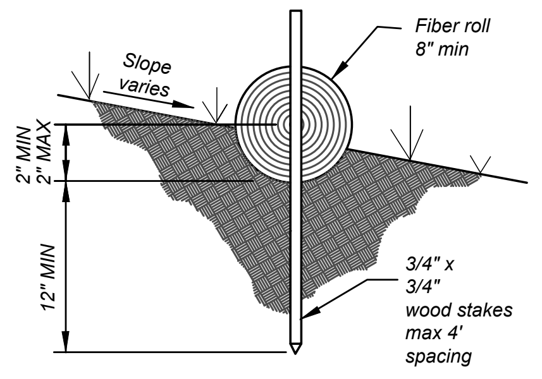
ISOMETRIC PLAN VIEW

SILT FENCE


4' max
4' max
Note: Install fiber roll along a level contour.
Fiber rolls
1.2 m max
1.2 m max
Vertical spacing measured along the face of the slope varies between 10' and 20'
Install a fiber roll near slope where it transitions into a steeper slope

TYPICAL FIBER ROLL INSTALLATION

N.T.S.


Slope varies
Fiber roll 8" min
2" MIN 4" MAX
12" MIN
3/4" x 3/4" wood stakes max 4' spacing

ENTRENCHMENT DETAIL

N.T.S.

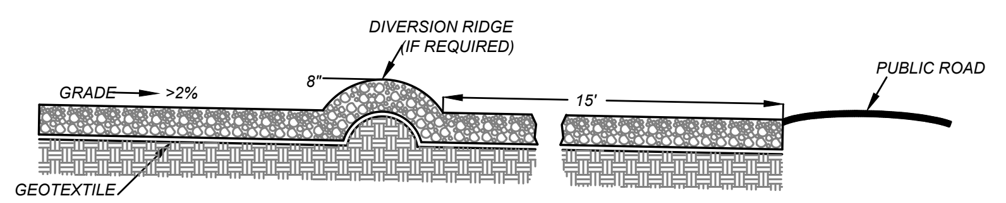
THE MATERIAL, INSTALLATION, INSPECTION, AND MAINTENANCE OF FIBER ROLLS WILL BE PER THE MANUFACTURE'S SPECIFICATIONS AND SHALL ALSO COMPLY WITH THE TEXAS COMMISSION OF ENVIRONMENTAL QUALITY CURRENT "TECHNICAL GUIDANCE ON BEST MANAGEMENT PRACTICES" AS NOTED BELOW.

Material:
(1) Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.
(2) Containment Mesh: Containment mesh should be 100% biodegradable, photodegradable or recyclable such as burlap, twine, UV photodegradable plastic, polyester, or similar material. When the fiber role will remain in place as part of a vegetative system use biodegradable or photodegradable mesh. For temporary installation recyclable mesh is recommended.

Implementation:
(1) Locate fiber rolls on level contours spaced as follows:
Slope inclination of 4:1 (H:V) or flatter: Fiber rolls should be placed at a maximum interval of 20 ft.
Slope inclination between 4:1 and 2:1 (H:V): Fiber Rolls should be placed at a maximum interval of 15 ft. (a closer spacing is more effective).
Slope inclination 2:1 (H:V) or greater: Fiber Rolls should be placed at a maximum interval of 10 ft. (a closer spacing is more effective).
(2) Turn the ends of the fiber roll up slope to prevent runoff from going around the roll.
(3) Stake fiber rolls into a 2 to 4 in. deep trench with a width equal to the diameter of the fiber roll.
(4) Drive stakes at the end of each fiber roll and spaced 4 ft maximum on center.
(5) Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
(6) If more than one fiber roll is placed in a row, the rolls should be overlapped, not abutted.

Inspection and Maintenance Guidelines:
(1) Inspect prior to forecast rain, daily during extended rain events, after rain events, and weekly.
(2) Repair or replace split, torn, unraveling, or slumping fiber rolls.
(3) If the fiber roll is used as a sediment capture device, or as an erosion control device to maintain sheet flows, sediment that accumulates behind the role must be periodically removed in order to maintain its effectiveness. Sediment should be removed when the accumulation reaches one-half the designated sediment storage depth, usually one-half the distance between the top of the fiber roll and the adjacent ground surface. Sediment removed during maintenance may be incorporated into earthwork on the site or disposed of at an appropriate location.

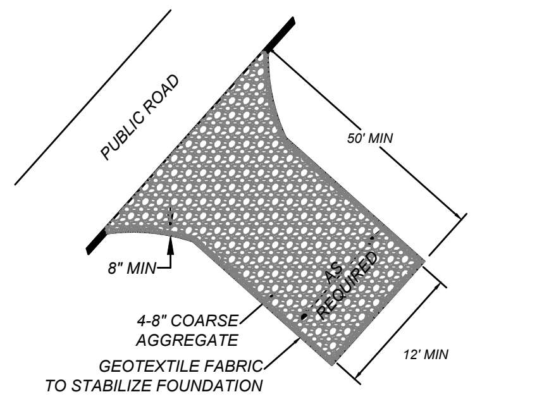
FIBER ROLL


DIVERSION RIDGE (IF REQUIRED)
GRADE >2%
8"
15'
PUBLIC ROAD
GEOTEXTILE FABRIC

CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT

Materials:

(1) The aggregate should consist of 4 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 rack should be included in the plans. Divert wastewater to a sediment trap or basin.

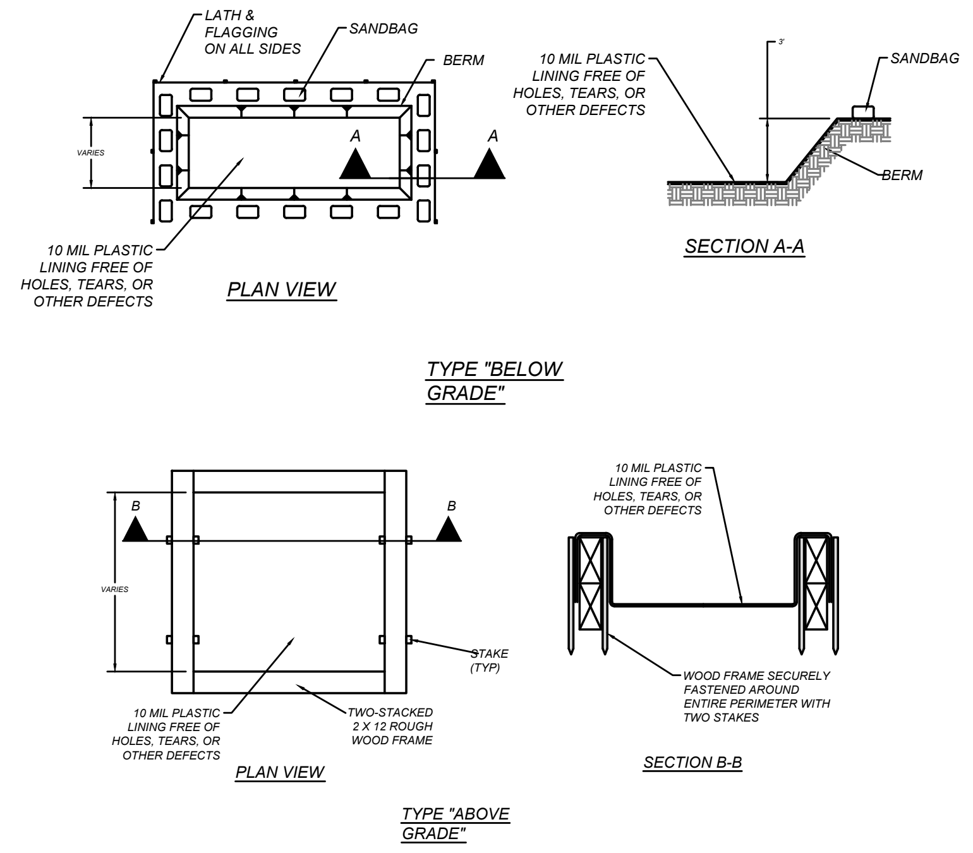

PUBLIC ROAD
50' MIN
8" MIN
4-8" COARSE AGGREGATE
GEOTEXTILE FABRIC TO STABILIZE FOUNDATION
12' MIN

TEMPORARY CONSTRUCTION ENTRANCE/EXIT

Installation: (North Carolina, 1993)
(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 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.

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 andlor 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.

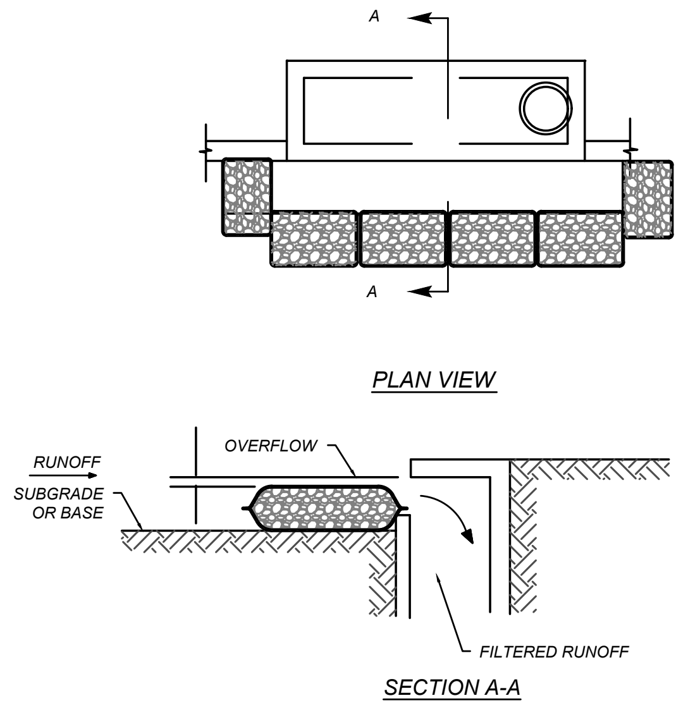
STABILIZED CONSTRUCTION ENTRANCE / EXIT


LATH & FLAGGING ON ALL SIDES
SANDBAG
BERM
10 MIL PLASTIC LINING FREE OF HOLES, TEARS, OR OTHER DEFECTS
A
A
PLAN VIEW
SANDBAG
BERM
SECTION A-A
TYPE "BELOW GRADE"
B
B
10 MIL PLASTIC LINING FREE OF HOLES, TEARS, OR OTHER DEFECTS
STAKE (TYP)
TWO-STACKED 2 X 12 ROUGH WOOD FRAME
PLAN VIEW
WOOD FRAME SECURELY FASTENED AROUND ENTIRE PERIMETER WITH TWO STAKES
SECTION B-B
TYPE "ABOVE GRADE"

GENERAL NOTES:

- DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
- WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
- WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF AND AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES, STREETS, OR STREAMS.

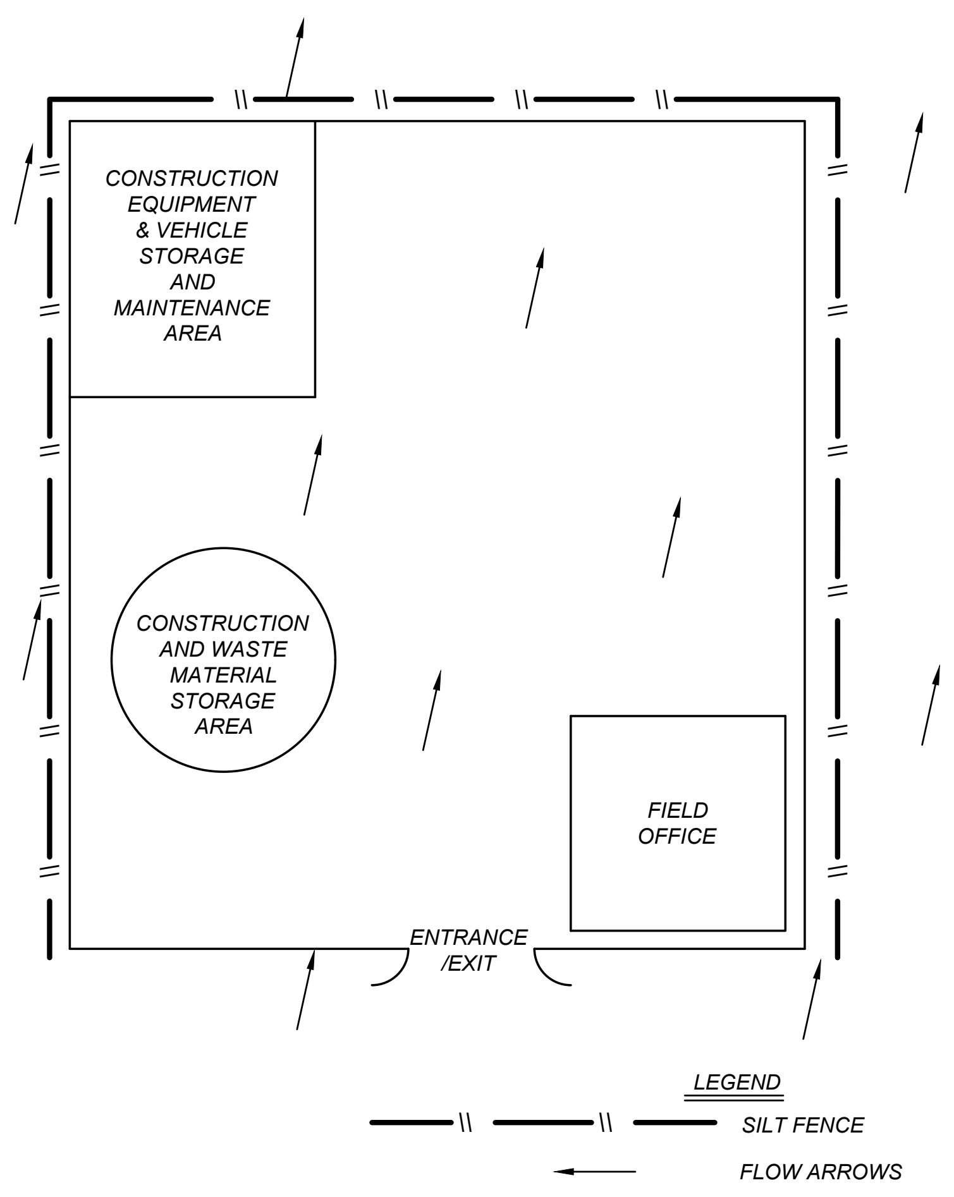
CONCRETE TRUCK WASHOUT PIT


A
A
PLAN VIEW
RUNOFF
OVERFLOW
SUBGRADE OR BASE
FILTERED RUNOFF
SECTION A-A

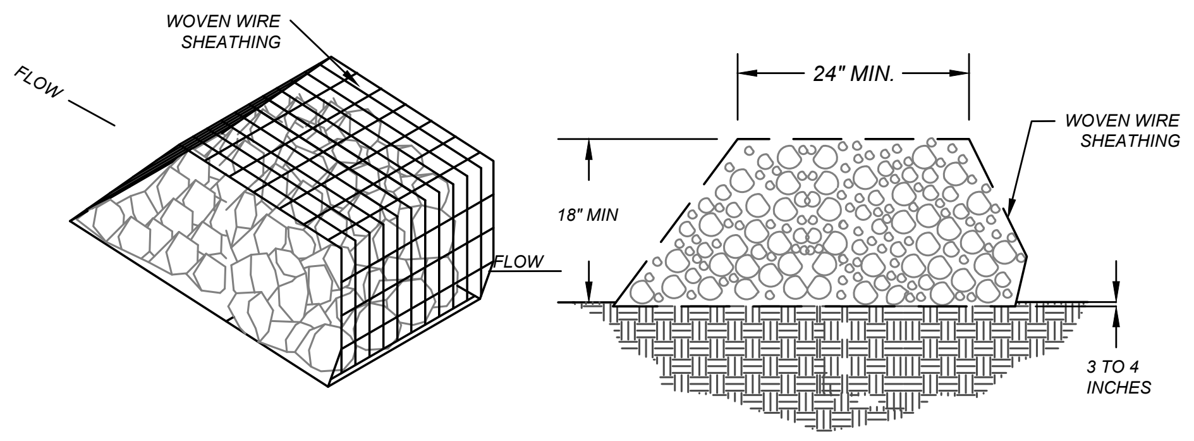
GENERAL NOTES:

- ALL STORM DRAINAGE SYSTEMS INLETS SHOULD FILTER RUNOFF BEFORE THE WATER IS DISCHARGED INTO STREAMS OR ONTO ADJACENT PROPERTIES, UNLESS TREATMENT IS PROVIDED ELSEWHERE.
- IF NO ADDITIONAL DOWNSTREAM TREATMENT EXISTS, THE MAXIMUM DRAINAGE AREA TRIBUTARY TO AN AREA DRAIN INSTALLED WITH A GRAVEL FILTER SHOULD BE ONE ACRE.
- ALL CURB INLET GRAVEL FILTERS SHOULD BE INSPECTED AND REPAIRED AFTER EACH RUNOFF EVENT. SEDIMENT SHOULD BE REMOVED WHEN MATERIAL IS WITHIN THREE INCHES OF THE TOP OF THE CONCRETE BLOCKS. PERIODICALLY, THE GRAVEL SHOULD BE RAKED TO INCREASE INFILTRATION AND FILTERING OF RUNOFF WATERS.

CURB INLET PROTECTION GRAVEL FILTER BAGS


CONSTRUCTION EQUIPMENT & VEHICLE STORAGE AND MAINTENANCE AREA
CONSTRUCTION AND WASTE MATERIAL STORAGE AREA
FIELD OFFICE
ENTRANCE /EXIT
LEGEND
SILT FENCE
FLOW ARROWS

TYPICAL CONSTRUCTION STAGING AREA


WOVEN WIRE SHEATHING
FLOW
FLOW
24" MIN.
WOVEN WIRE SHEATHING
18" MIN
3 TO 4 INCHES

ISOMETRIC PLAN VIEW

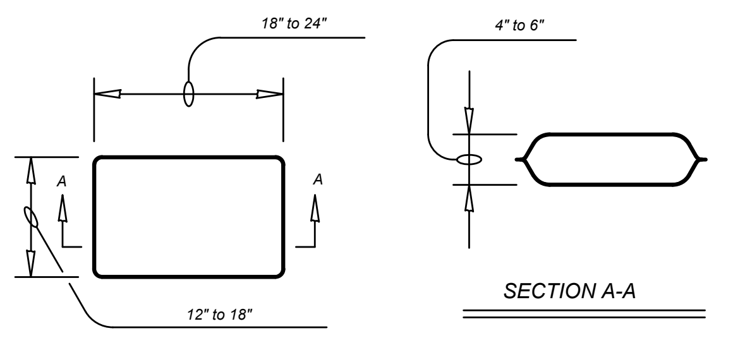
CROSS SECTION

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- to 5-inch diameter rock should be used, except in areas where high velocities or large volumes of flow are expected, where 5- 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 Figure 1-28), 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, airl 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.

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.

ROCK BERM

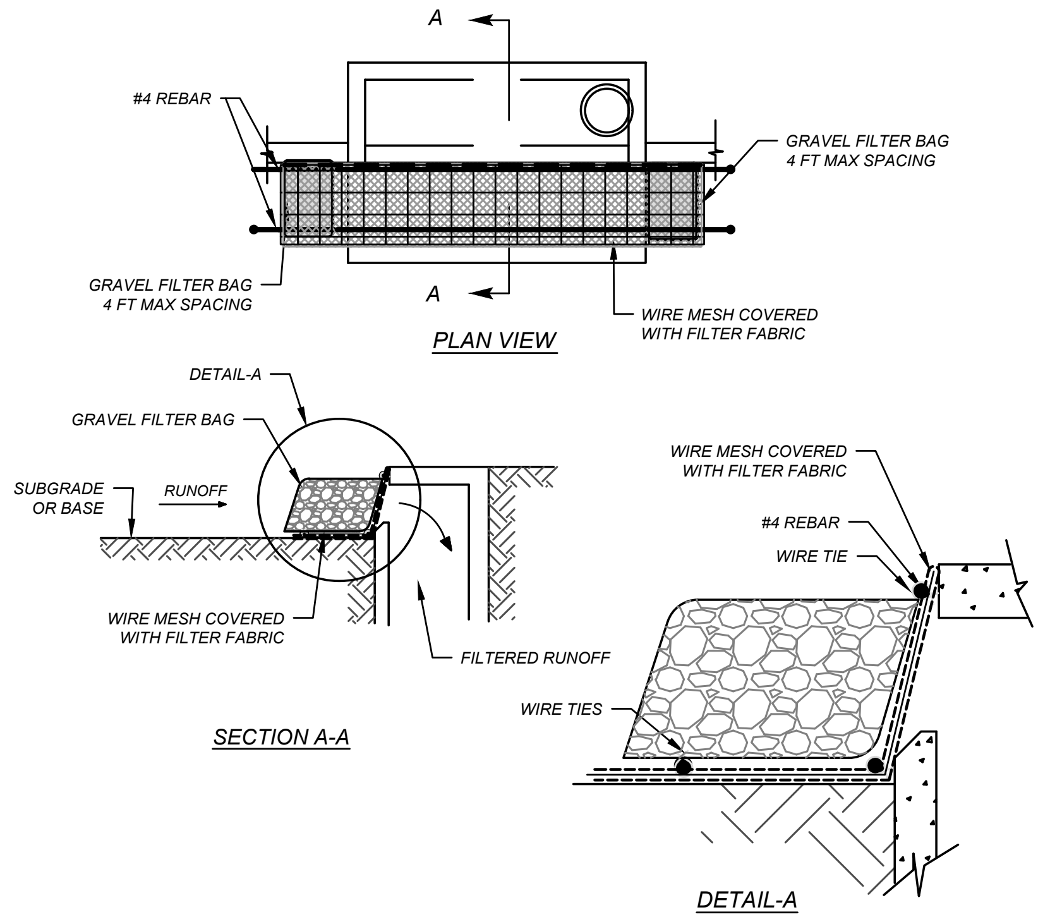

16" to 24"
4" to 6"
A
A
12" to 18"

SECTION A-A

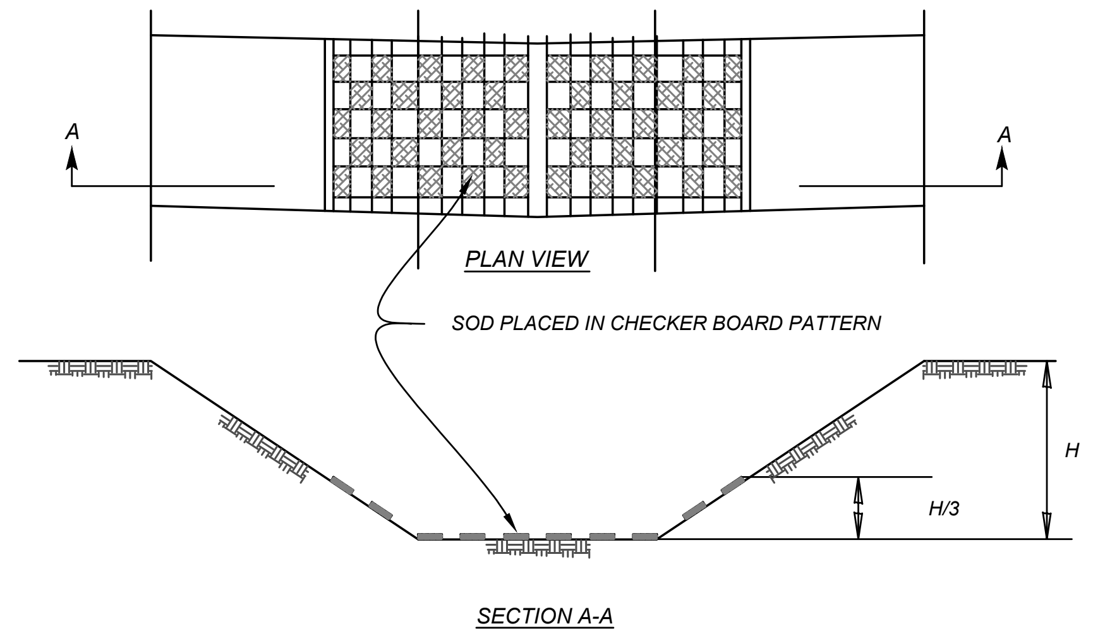
GENERAL NOTES:

- THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN UNIT WEIGHT OF 4 OUNCES/SY, MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.
- THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).

GRAVEL FILTER BAG DETAIL

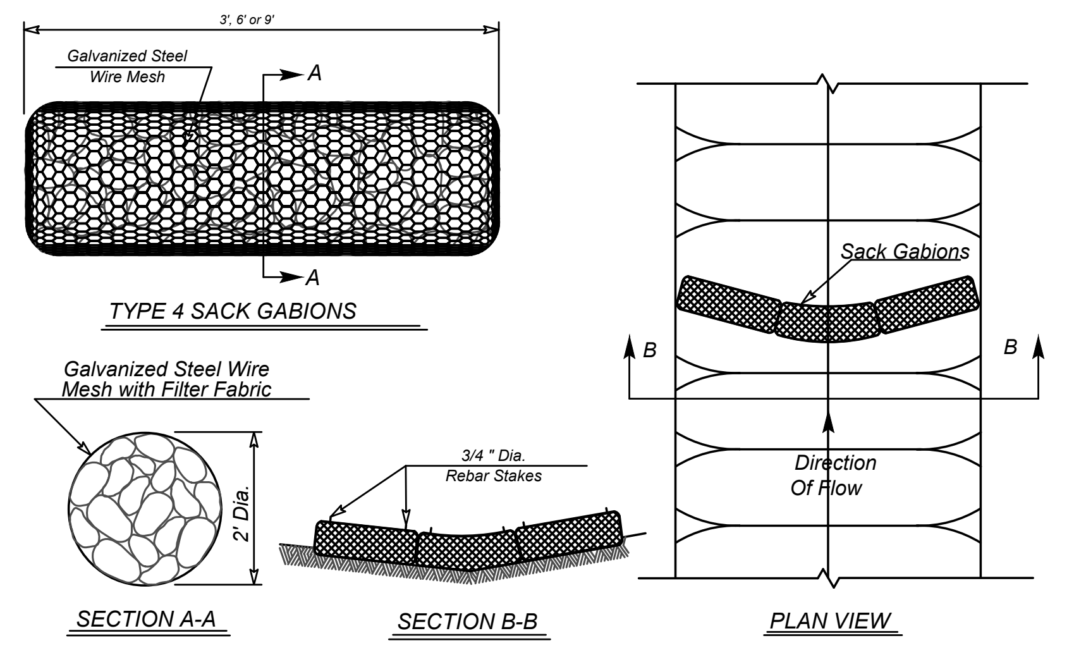

A
#4 REBAR
GRAVEL FILTER BAG 4 FT MAX SPACING
GRAVEL FILTER BAG 4 FT MAX SPACING
A
WIRE MESH COVERED WITH FILTER FABRIC
PLAN VIEW
DETAIL-A
GRAVEL FILTER BAG
SUBGRADE OR BASE
RUNOFF
WIRE MESH COVERED WITH FILTER FABRIC
FILTERED RUNOFF
SECTION A-A
WIRE MESH COVERED WITH FILTER FABRIC
#4 REBAR
WIRE TIE
WIRE TIES
DETAIL-A

CURB INLET PROTECTION (ALTERNATE)


A
A
PLAN VIEW
SOD PLACED IN CHECKER BOARD PATTERN
H
H/3
SECTION A-A

- CHANNEL TO BE STABILIZED WITH SOD PLACED IN A CHECKER BOARD PATTERN TON THE CHANNEL BOTTOM AND ON THE SIDES UP TO 1/3 THE DEPTH OF CHANNEL.

CHANNEL LINING


5', 6' or 9'
Galvanized Steel Wire Mesh
A
A
TYPE 4 SACK GABIONS
Galvanized Steel Wire Mesh with Filter Fabric
2' Dia
SECTION A-A
3/4" Dia Rebar Stakes
SECTION B-B
Sack Gabions
B
B
Direction Of Flow
PLAN VIEW

GENERAL NOTES:

- THE TOP OF THE SACK GABIONS SHOULD BE LEVEL AND ORIENTED PERPENDICULAR TO THE DIRECTION OF FLOW.
- FILTER FABRIC MATERIAL SHALL BE FASTENED TO WOVEN WIRE SUPPORT.
- FILTER FABRIC MATERIAL SHOULD MEET THE FOLLOWING SPECIFICATIONS: RESISTANT TO ULTRAVIOLET LIGHT, FABRIC SHOULD BE NON-WOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 200 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 120 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.
- STONE SIZE: ±4"-8" OPEN GRADED CRUSHED LIMESTONE.
- INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.
- WHEN SILT REACHES A DEPTH OF 6 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESILTATION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.

TYPE 4 SACK GABIONS

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REV	DATE	DRAWN BY	DESCRIPTION

BID SET
NOT FOR
CONSTRUCTION

MORGAN MEADOWS,
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PLAT# 25-11800378
FOR
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SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	02/26/25	JA	CG

PROJECT NUMBER: 205-41-13
DRAWING NAME: SW3PDT2054113

SHEET TITLE:
STORM WATER POLLUTION
PREVENTION DETAILS

SHEET NUMBER:
9.3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.