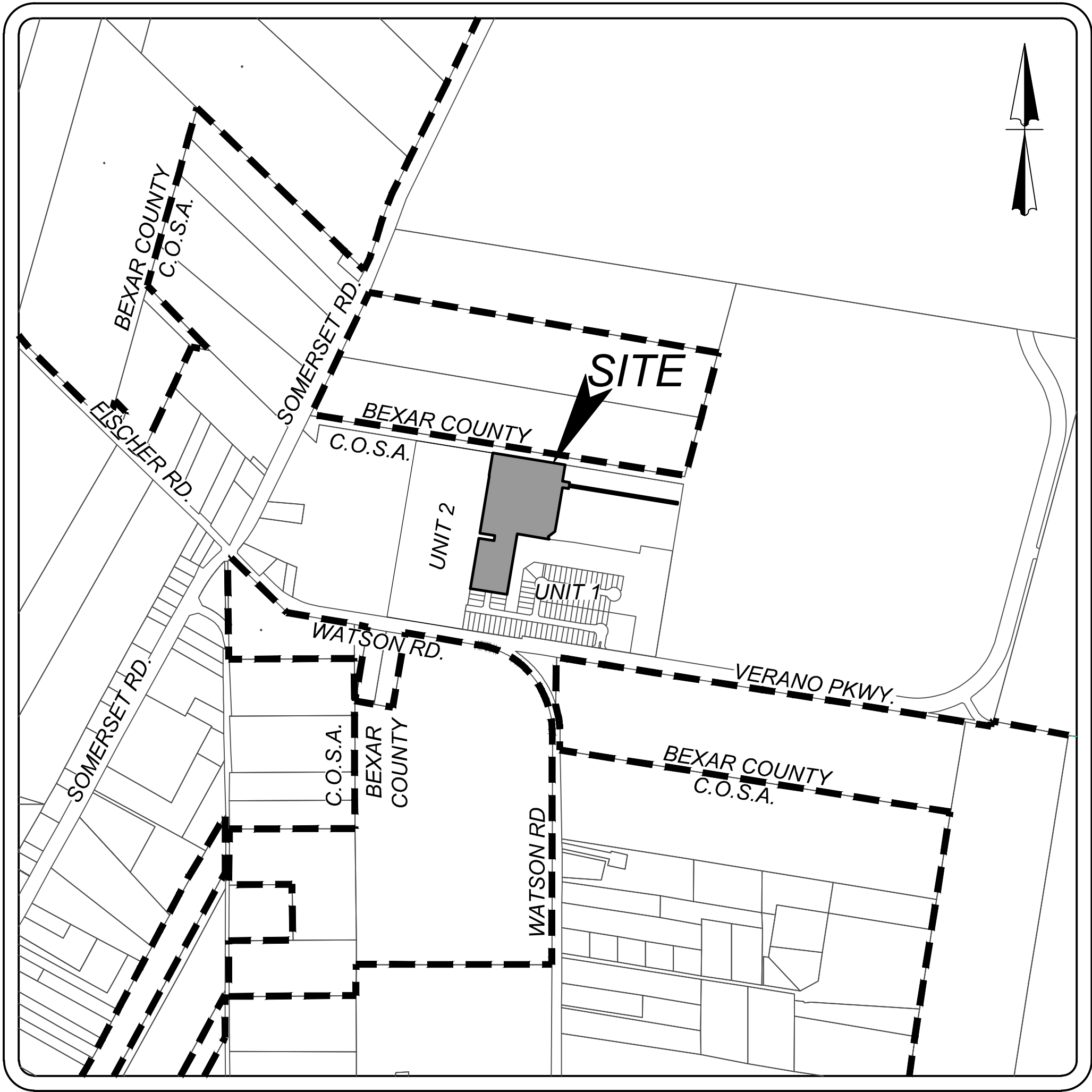


TMM SOMERSET, UNIT 3A
SAN ANTONIO, TX
STREET, DRAINAGE, WATER, SANITARY SEWER, AND UTILITY IMPROVEMENTS



LOCATION MAP
NOT-TO-SCALE

OWNER INFORMATION:
KB HOMES
4800 FREDERICKSBURG RD.
SAN ANTONIO, TX 78229
PHONE: (210) 301 - 5485

Sheet List Table	
SHEET TITLE	SHEET NUMBER
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OVERALL UTILITY PLAN (SHT 1 OF 2)	1.0
OVERALL UTILITY PLAN (SHT 2 OF 2)	1.1
MASTER DRAINAGE PLAN	2.0
OVERALL GRADING PLAN	3.0
DRAIN "A" PLAN & PROFILE	4.0
MUTTON CROSSING PLAN & PROFILE	5.0
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WATER DISTRIBUTION PLAN	7.1
STORM WATER POLLUTION PREVENTION PLAN (SHT 1 OF 2)	8.0
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STORM WATER POLLUTION PREVENTION PLAN DETAILS	8.2

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REV	DATE	DRAWN BY	DESCRIPTION										
1	1/22/25	JA	REVISED LOT LAYOUT FOR BLK 11 LOTS 434 & 49-50 & BLK 12 LOTS 537 & REMOVED LOTS.										

Clayton J. Linney
3/18/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909 TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

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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: AS SHOWN	DATE: 01/22/25	DRAWN BY: JA	CHECKED BY: CG
PROJECT NUMBER: 418-14-07	DRAWING NAME: CV4181407		

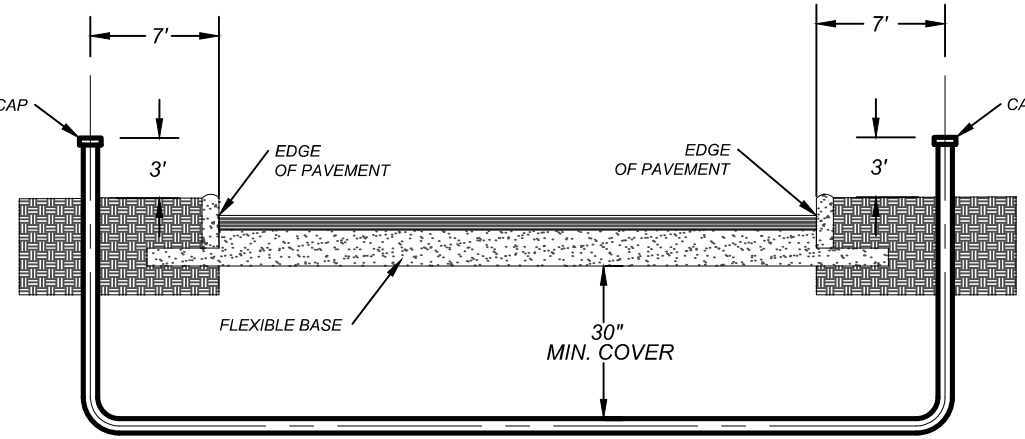
COVER SHEET

SHEET NUMBER: 0.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

CONTRACTOR AND/OR CONTRACTORS 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 CONTRACTORS 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.

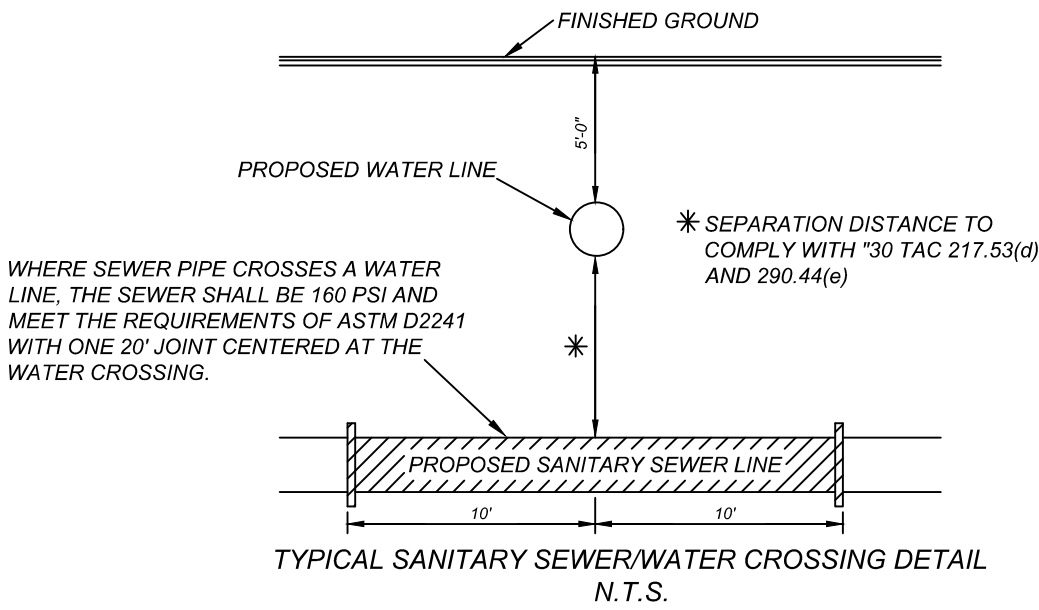


TYPICAL CONDUIT DETAIL
NOT-TO-SCALE

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.

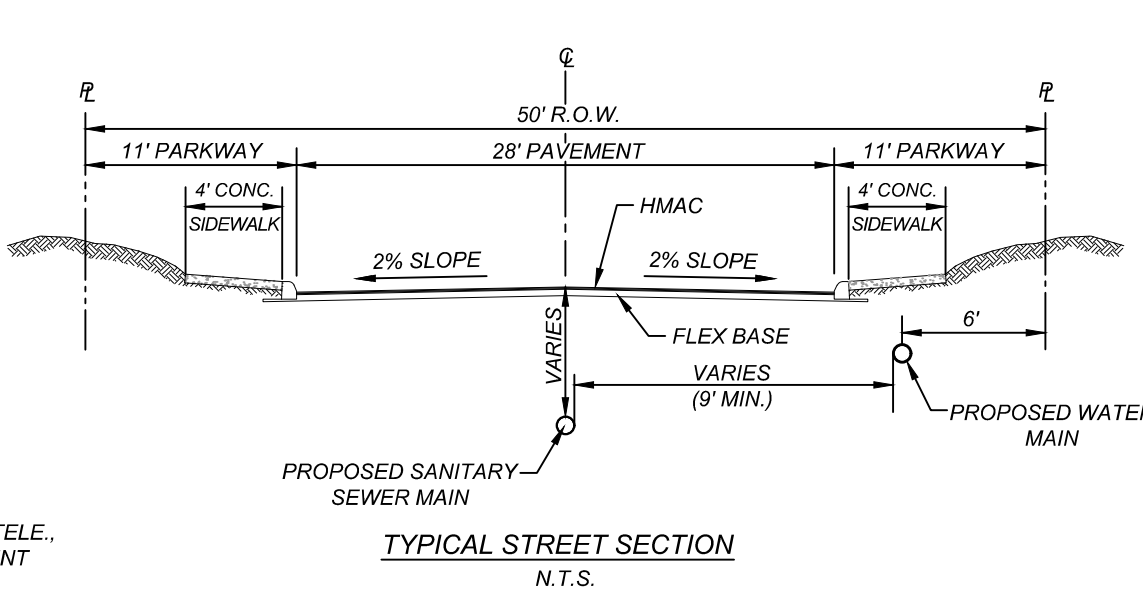
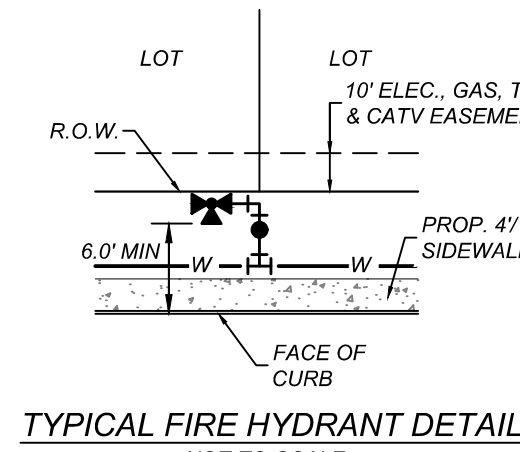
COMPACTION NOTE:

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.

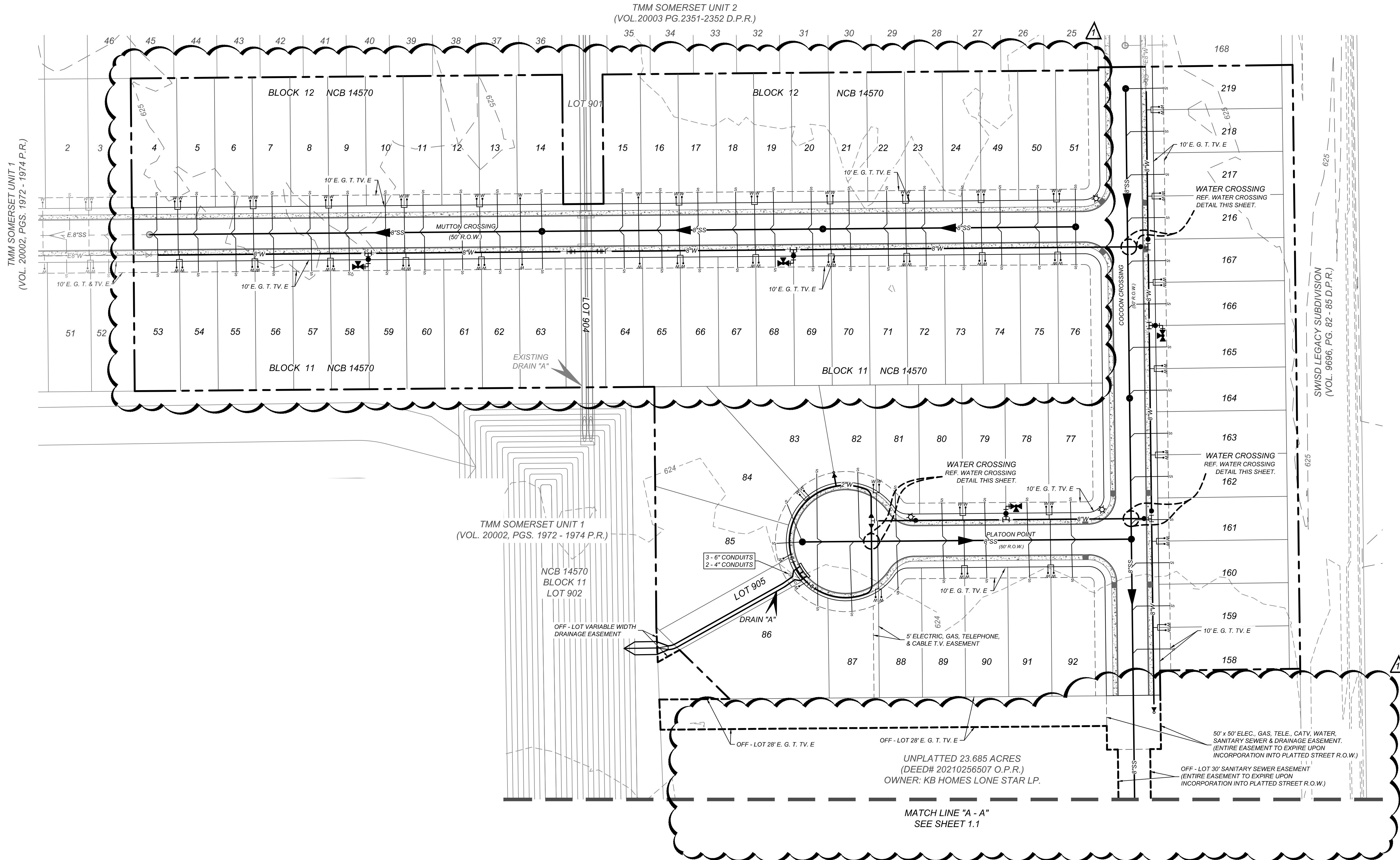
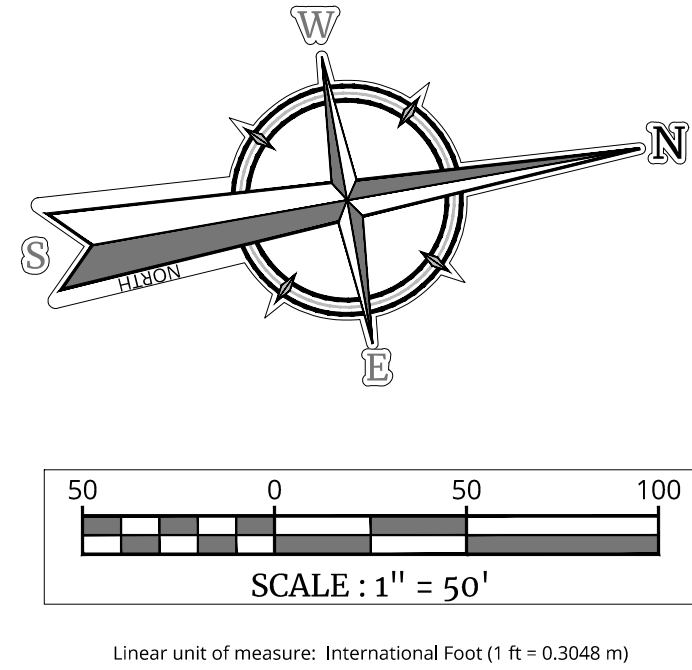


LEGEND

- PROPOSED WATER MAIN = W
- PROPOSED WATER SERVICE & METER BOX = M
- PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX = 3/4"
- PROPOSED FIRE HYDRANT = H
- PROPOSED WATER VALVE = V
- PROPOSED 100W STREETLIGHT = SS
- PROPOSED SANITARY SEWER MAIN = SS
- PROPOSED SANITARY SEWER MANHOLE = S
- 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 = H
- EXISTING WATER VALVE = V
- EXISTING SANITARY SEWER MAIN = S
- EXISTING SANITARY SEWER MANHOLE = S
- EXISTING OVERHEAD ELECTRIC WIPOWER POLE = -OHE-
- EXISTING GUY WIRE/OVERHEAD ELECTRIC = -OHE-



LOCATION MAP
NOT-TO-SCALE



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CLAYTON J. LINNEY

111543

CLAYTON J. LINNEY

7/30/2025

CLAYTON J. LINNEY

TEXAS LICENSED PROFESSIONAL ENGINEER

LICENSE NUMBER: 111543

COLLIERS ENGINEERING & DESIGN, INC.

TBPE Firm#: F-14909 - TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A

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FOR

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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: AS SHOWN

DATE: 01/22/25

DRAWN BY: JA

CHECKED BY: CG

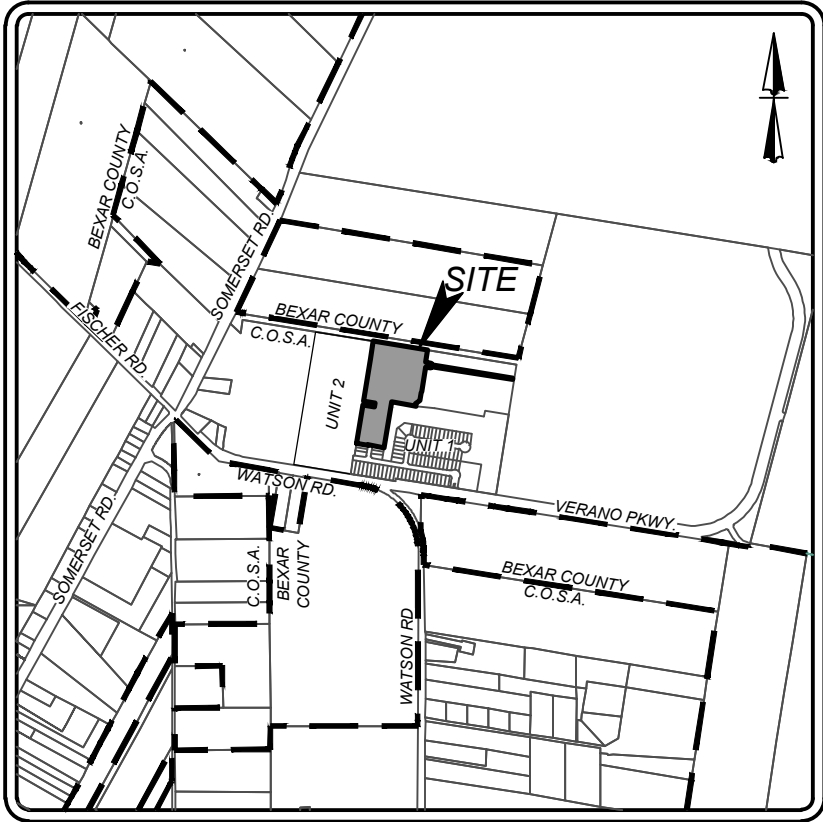
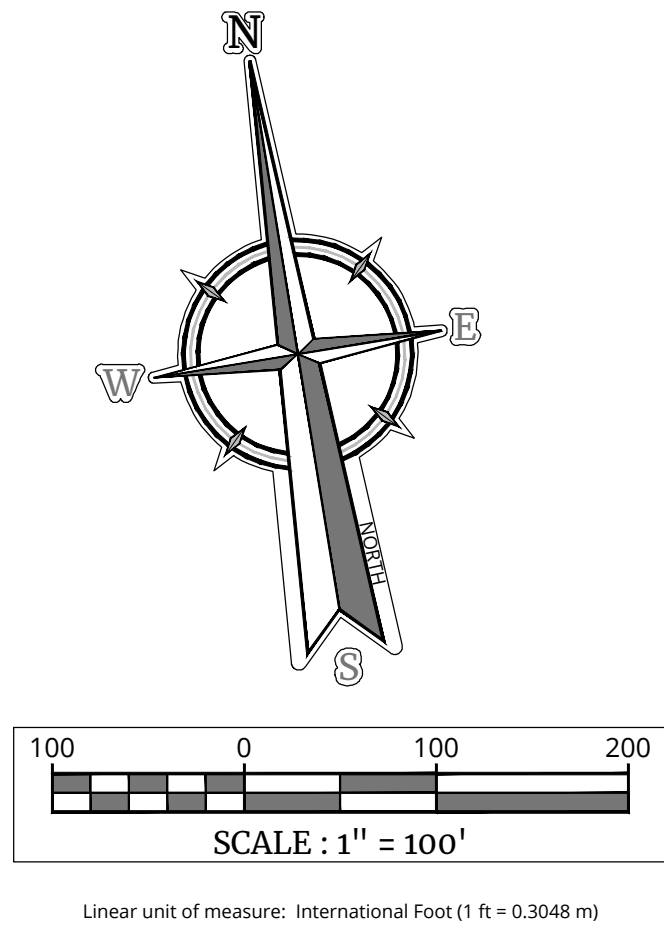
PROJECT NUMBER: 418-14-07

DRAWING NAME: 014181407

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

SHEET NUMBER: 1.0

Ultimate Conditions:															
Study Point	AREA	(Acres)	C	T _{int} (min)		T _{sc} (min)	T _{sk} (min)	T _{tot} (min)	I ₅ (in/hr)	I ₂₅ (in/hr)	I ₁₀₀ (in/hr)	Q ₅ (ft ³ /s)	Q ₂₅ (ft ³ /s)	Q ₁₀₀ (ft ³ /s)	
1	DA-1	6.01	0.77	9.00		5	2	16	5.03	6.95	8.71	23.26	32.16	40.29	
2	DA-2	1.34	0.77	9.00		3	0	12	5.81	8.12	10.14	5.99	8.38	10.46	
3	DA-3	1.43	0.77	9.00		4	0	13	5.61	7.82	9.76	6.18	8.61	10.75	
4	DA-4	3.88	0.77	9.00		5	1	15	5.20	7.20	9.03	15.54	21.51	26.97	
5	PT. 4 + DA-5	7.04	0.77	15.00	CARRYOVER FROM PT. 4	0	1	16	5.03	6.95	8.71	27.25	37.68	47.19	
	DA-5	3.16													
6	DA-6	7.70	0.77	9.00		4	1	14	5.39	7.48	9.39	31.97	44.35	55.66	
7	DA-7	6.94	0.77	9.00		5	0	14	5.39	7.48	9.39	28.80	39.95	50.15	
8	PT. 6 + PT. 7	14.64	0.77	14.00	CARRYOVER FROM PT. 6b	0	0	14	5.39	7.48	9.39	60.77	84.30	105.82	
10	DA-10	3.83	0.77	9.00		3	0	12	5.81	8.12	10.14	17.13	23.95	29.91	
11	PT. 8 + PT. 10	18.47	0.77	14.00	CARRYOVER FROM PT. 8	0	0	14	5.42	7.53	9.39	77.11	107.01	133.51	
12	DA-12	3.08	0.77	12.00		4	1	17	4.91	6.76	8.42	11.64	16.04	19.97	
13	DA-13	3.09	0.77	9.00		4	0	13	5.61	7.82	9.76	13.35	18.60	23.21	
14	DA-14	2.77	0.77	14.00		1	1	16	5.06	6.99	8.71	10.81	14.92	18.59	
15	DA-15	0.92	0.77	9.00		3	0	12	5.81	8.12	10.14	4.13	5.77	7.21	
16	DA-16	2.25	0.77	9.00		2	0	11	4.51	8.43	10.54	7.81	14.59	18.23	
17	PT. 2 + PT. 3 + PT. 5 + PT. 11 + PT. 12 + PT. 13 + PT. 14 + PT. 15 + DA-17	50.61	0.77	16.00	CARRYOVER FROM PT. 12	1	3	20	4.51	6.21	7.71	175.94	241.84	300.60	



LOCATION MAP
NOT-TO-SCALE

LEGEND

- ① STUDY POINT
- DRAINAGE AREA BOUNDARY
- - - - - EXISTING CONTOURS
- PROPOSED UNIT
- FLOW ARROW



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TBPE Firm#: F-14909 TBPLS Firm#: 10194550

SCALE: AS SHOWN

DATE: 01/22/25

DRAWN BY: JA

CHECKED BY: CG

PROJECT NUMBER: 418-14-07

DRAWING NAME: MD-4181407

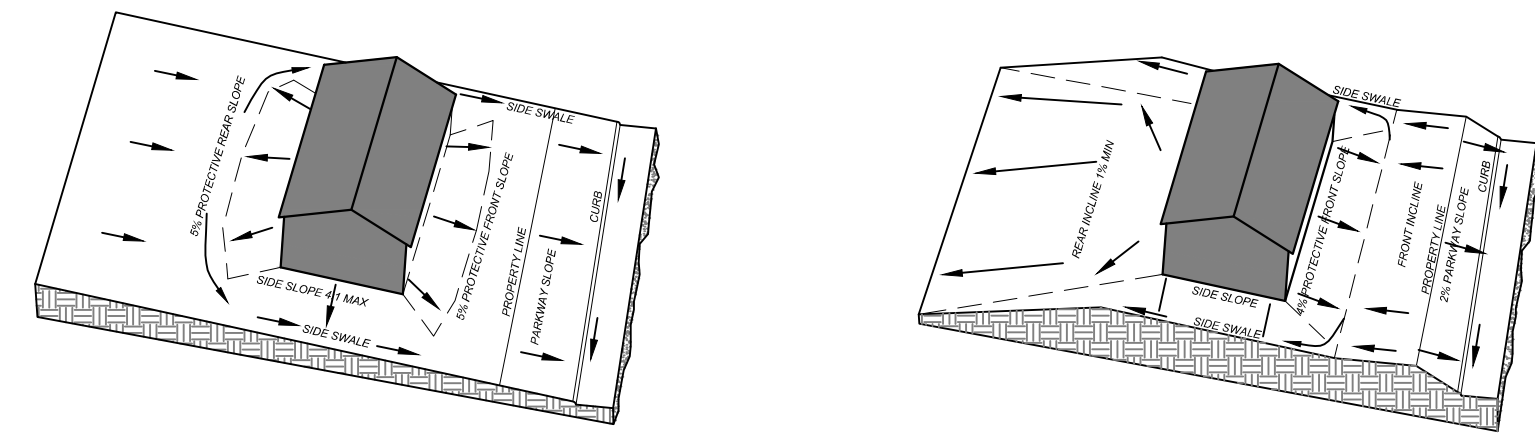
SHEET TITLE: MASTER DRAINAGE PLAN

SHEET NUMBER: 2.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

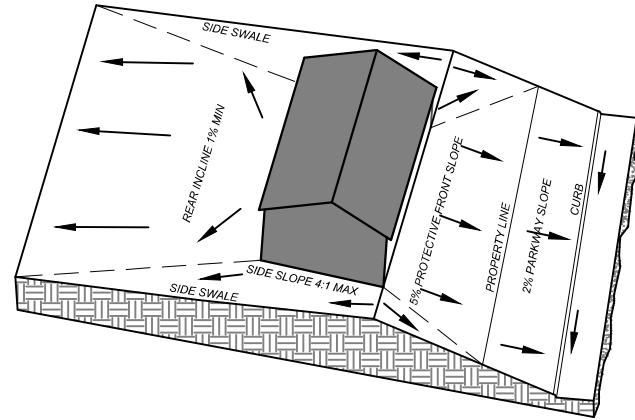
TMM SOMERSET UNIT 1
(VOL. 20002, PGS. 1972 - 1974 P.R.)

\\VAGLE\B1\B07\JWG\3.0 - BY: CCGPFF

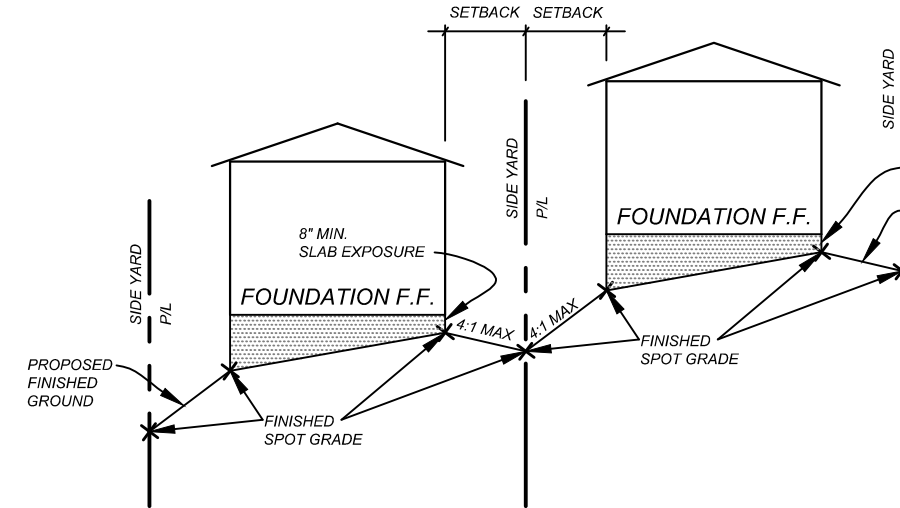


TYPE 'A' LOT GRADING

TYPE 'C' LOT GRADING

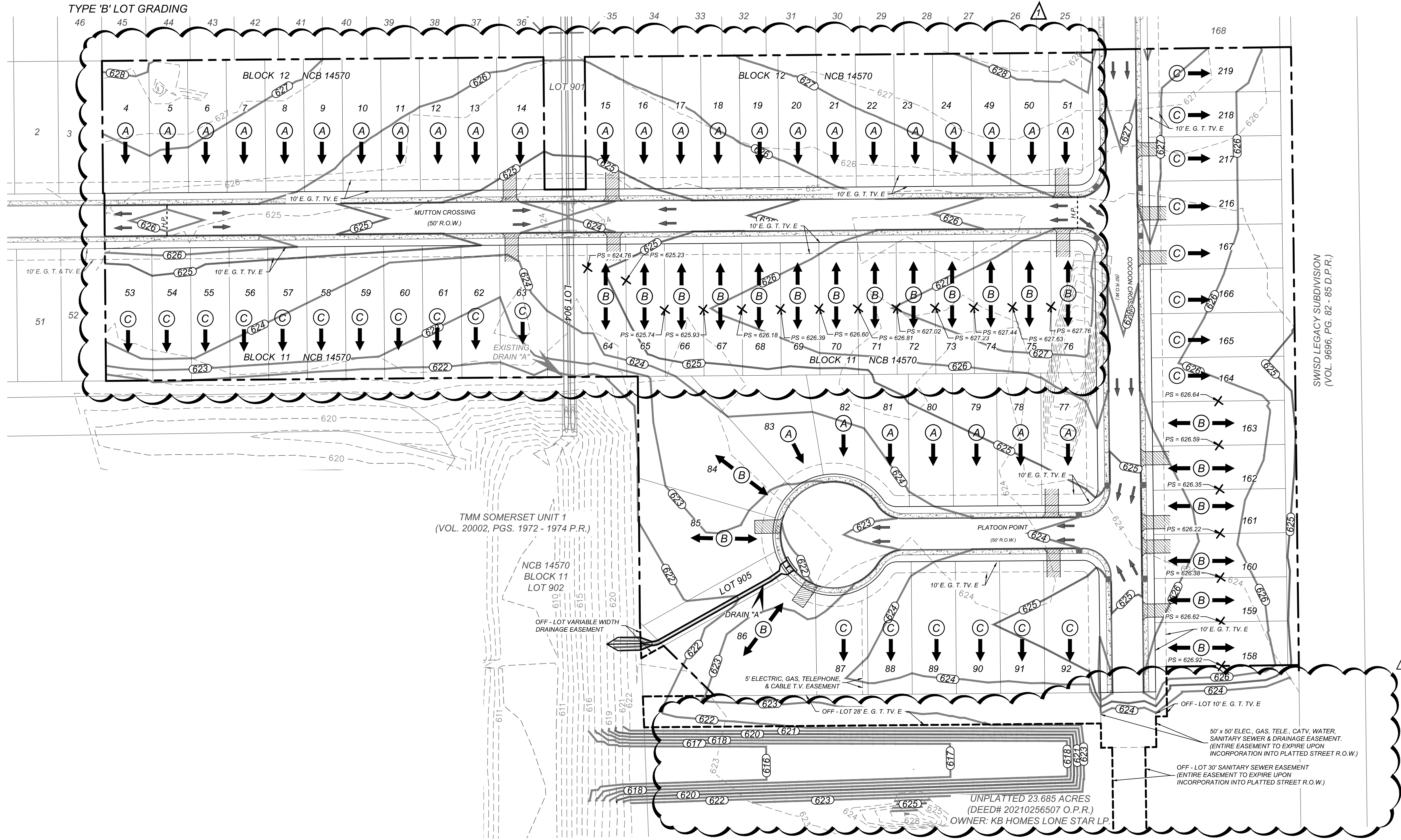


TYPE 'B' LOT GRADING



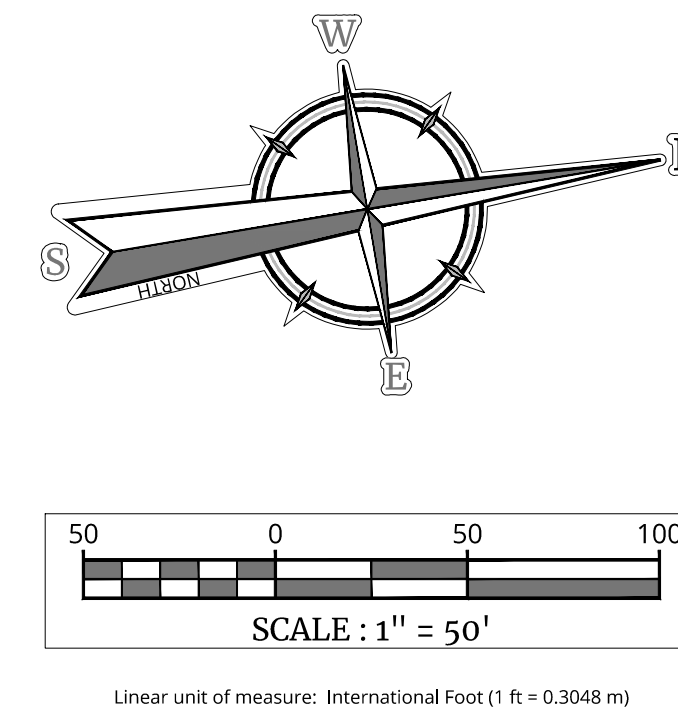
TYPICAL SIDE YARD GRADING
N.T.S.

TMM SOMERSET UNIT 2
(VOL. 20003 PG. 2351-2352 D.P.R.)



GENERAL NOTES:

- ELEVATION SHOWN ON FOUNDATION IS FOR FINISHED FLOOR.
- CONTRACTOR SHALL PROVIDE OWNER ALL NECESSARY DENSITY TESTS FOR FILL LOTS AS REQUIRED BY HUD SPECIFICATIONS.
- HOME BUILDER SHALL REFER TO THE APPROVED SUBDIVISION PLAT TO CONFIRM ALL BUILDING SETBACKS PRIOR TO ANY FOUNDATION WORK.
- AS SOON AS PRACTICAL HOME BUILDER SHALL ESTABLISH VEGETATION (HYDROMULCH, SEEDING, SODDING, ETC.) TO PREVENT EROSION FROM OCCURRING.
- CONTRACTOR SHALL CONTACT ENGINEER REGARDING ANY QUESTIONS ON THE INTENT OF THIS PLAN.
- 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.
- 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.
- 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.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE ALL SWALES.



LOCATION MAP
NOT-TO-SCALE

LEGEND

- E, G, T, & TV. E. = GAS, ELECTRIC, TELEPHONE, CABLE T.V. EASEMENT
- = FLOW ARROW
- (A) = LOT GRADE TYPE
- ▨ = PROPOSED DRIVEWAY LOCATION
- H.P. = HIGH POINT
- X PS = 600.00 = PROPOSED FINISHED GRADE

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8/18/2025

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TBPLS Firm#: F-14909

TBPLS Firm#: 10194550

SCALE: AS SHOWN

DATE: 01/22/25

DRAWN BY: JA

CHECKED BY: CG

PROJECT NUMBER: 418-14-07

DRAWING NAME: GR4181407

SHEET TITLE: OVERALL GRADING PLAN

SHEET NUMBER: 3.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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COMPACTION NOTE:

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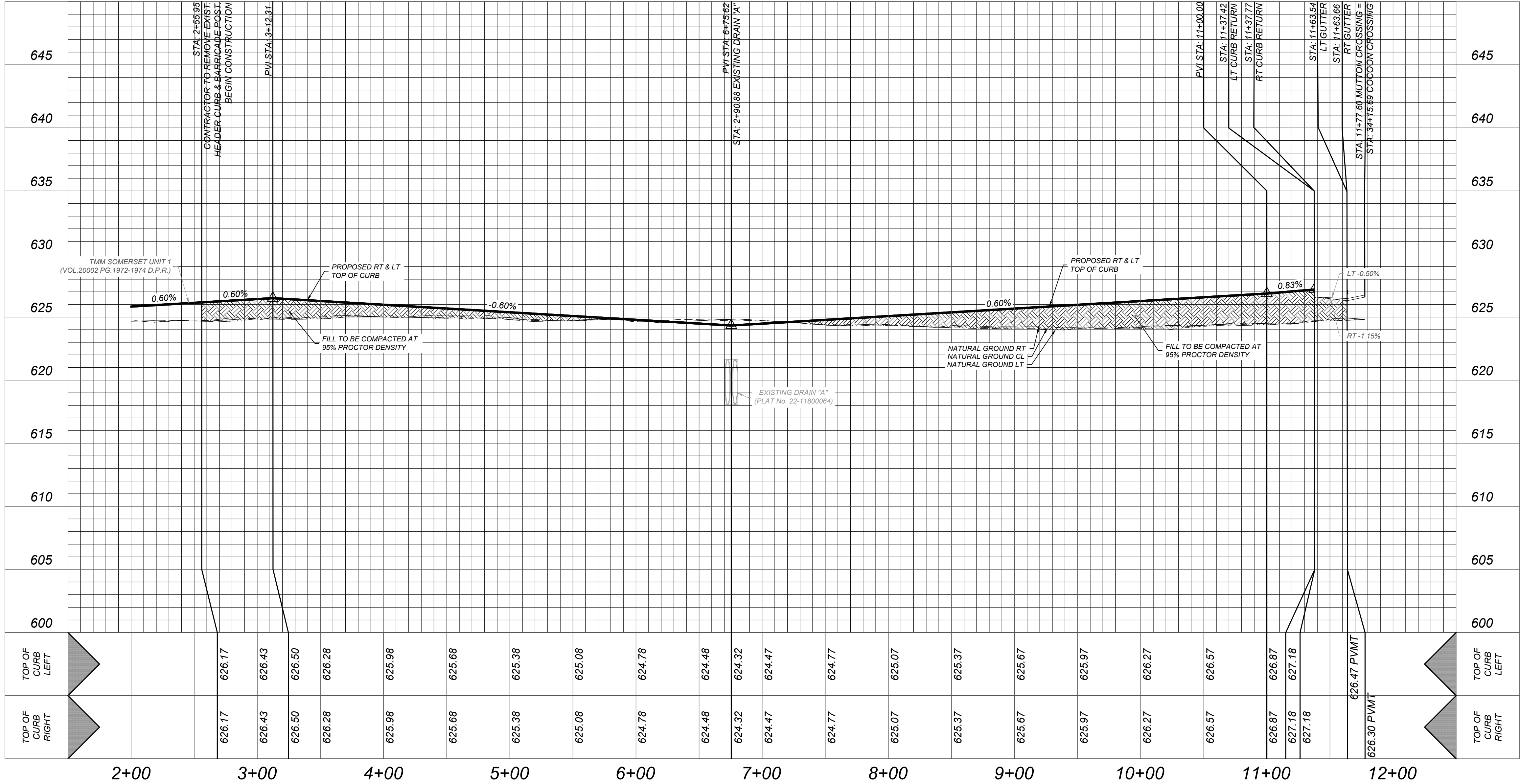
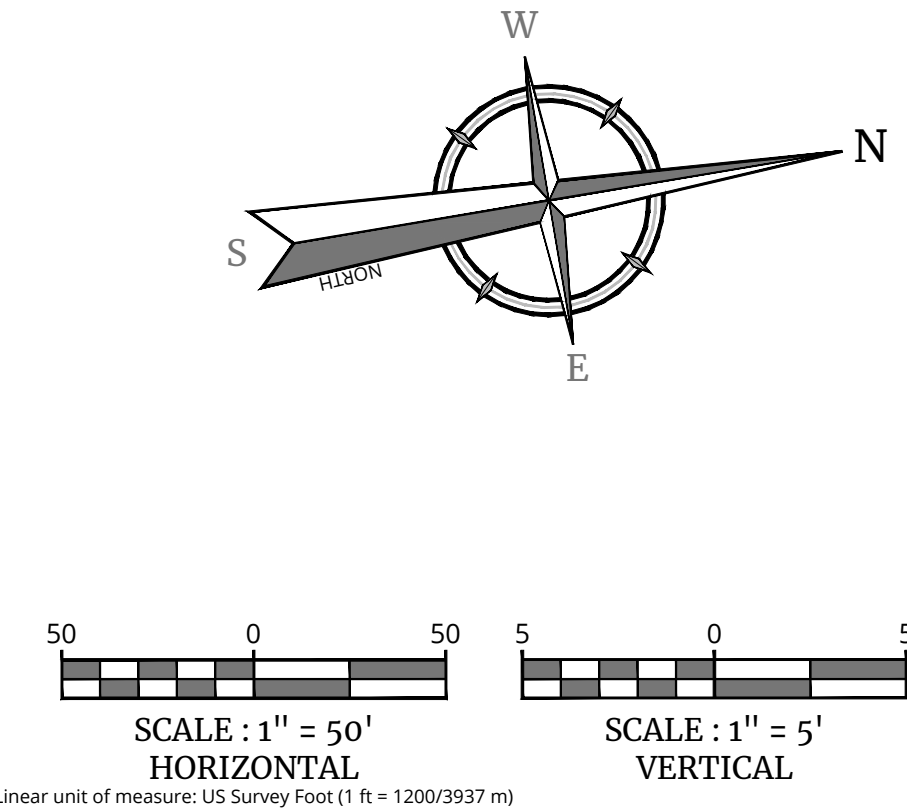
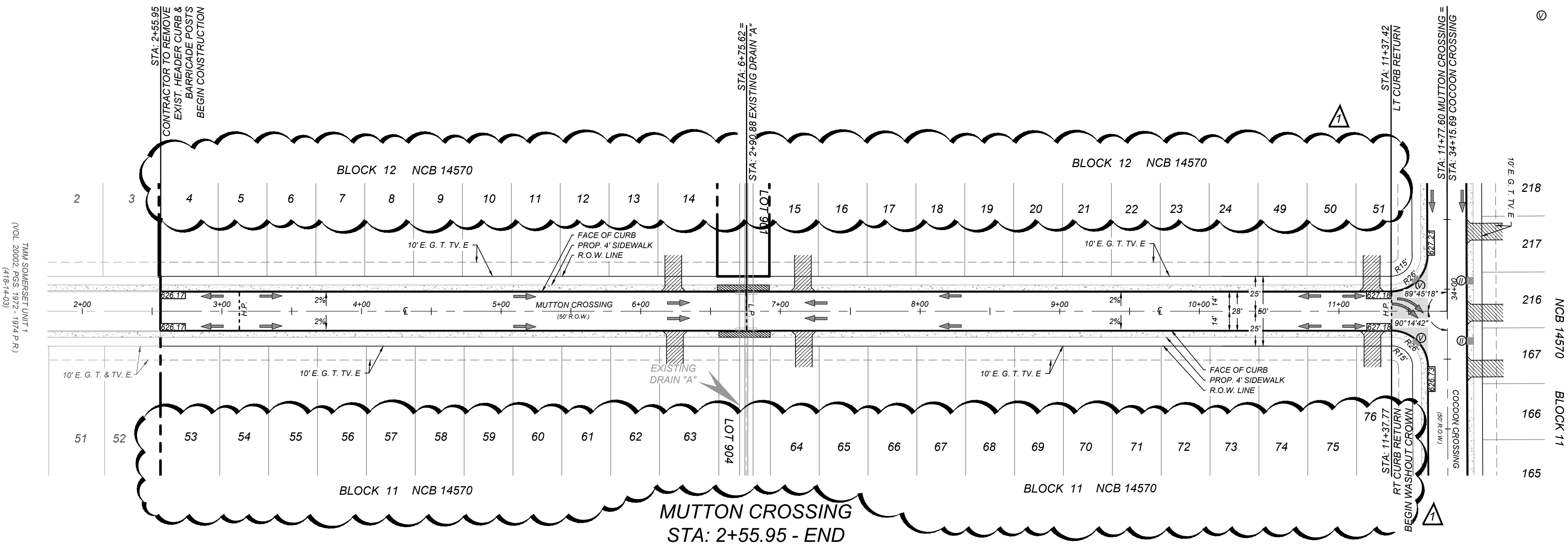
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CONDUIT LOCATIONS SHOWN ON PLAN ARE FOR GEOGRAPHICAL PURPOSES ONLY AND ARE APPROXIMATE. CONTRACTOR TO INSTALL PROPOSED CONDUITS IN ACCORDANCE WITH DRY UTILITY PURVEYOR'S SPECIFICATIONS. CONTRACTOR TO VERIFY THE CONDUIT LOCATIONS AND SIZES BASED ON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

LEGEND

- R.O.W. = RIGHT OF WAY
G.E.T.V.E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
= FLOW ARROW
= WASHOUT CROWN
① = WHEELCHAIR RAMP TYPE I CHAIR RAMP SEE SHEET 5.3
② = WHEELCHAIR RAMP TYPE II SEE SHEET 5.3
③ = WHEELCHAIR RAMP TYPE V SEE SHEET 5.3

- ===== = 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
===== = PROPOSED TOP OF CURB ELEVATION



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REVISED LOT LAYOUT FOR BLK 11, LOTS 4-34 & 48-50 & BLK 12, LOTS 5-27 & REMOVED LOTS.

REV.	DATE	DRAWN BY	DESCRIPTION
1	1/27/25	JA	

STATE OF TEXAS

CLAYTON J. LINNEY

111543

CLAYTON LINNEY

5/19/2025

CLAYTON J. LINNEY

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LICENSE NUMBER: 111543

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SCALE: AS SHOWN

DATE: 01/22/25

DRAWN BY: JA

CHECKED BY: CG

PROJECT NUMBER: 418-14-07

DRAWING NAME: ST4181407

SHEET TITLE: MUTTON CROSSING PLAN & PROFILE

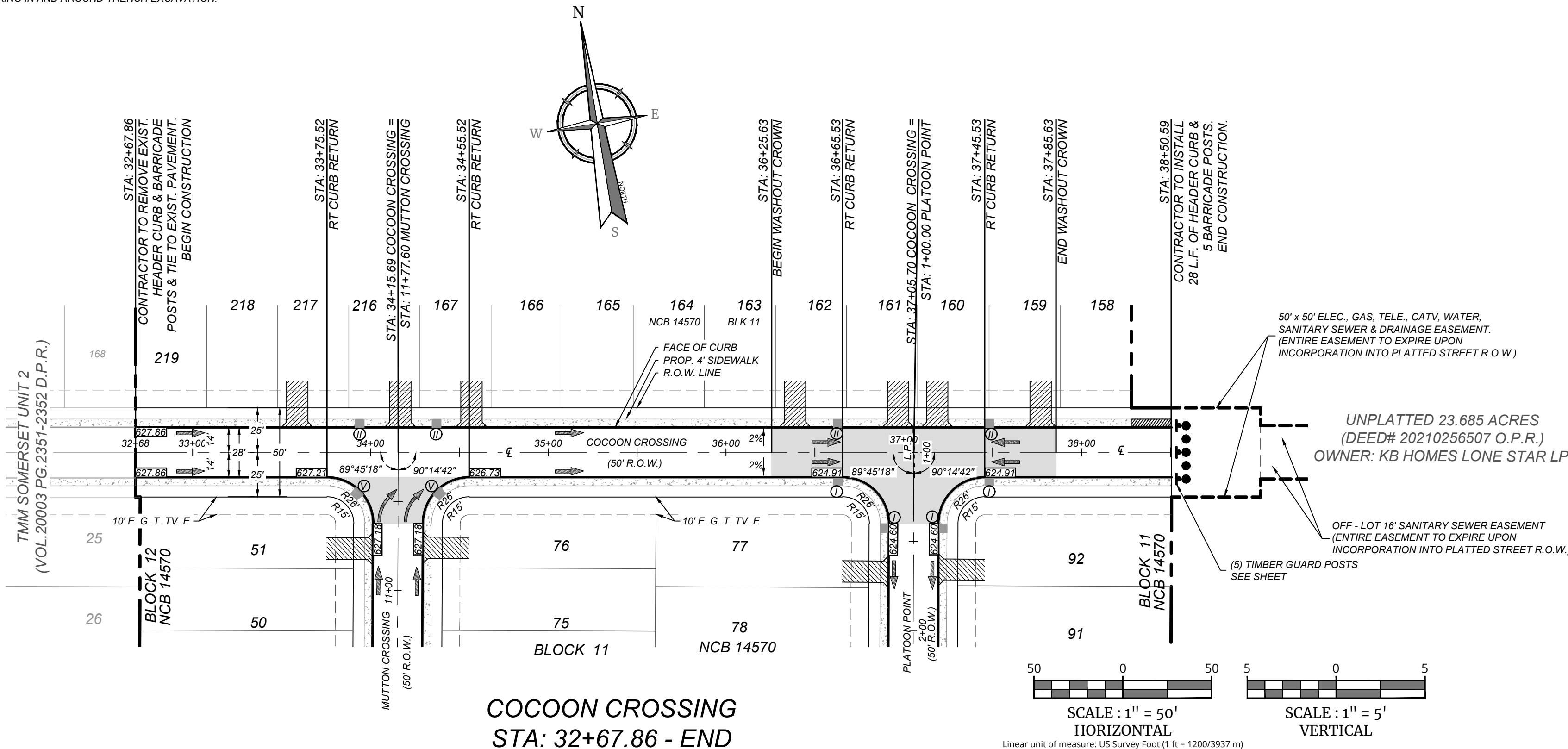
SHEET NUMBER: 5.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

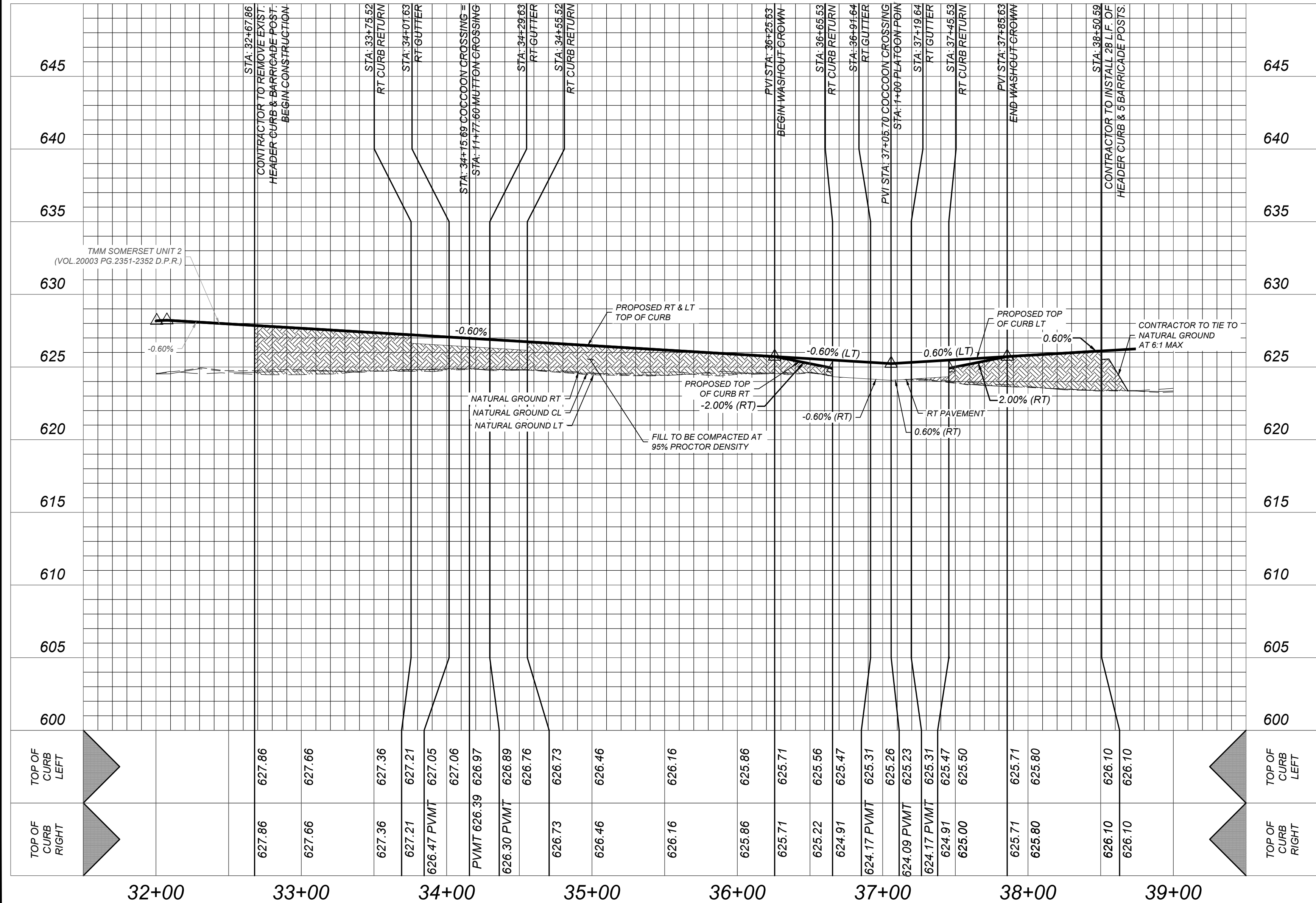
TRENCH EXCAVATION SAFETY PROTECTION
CONTRACTOR AND/OR CONTRACTORS INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA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

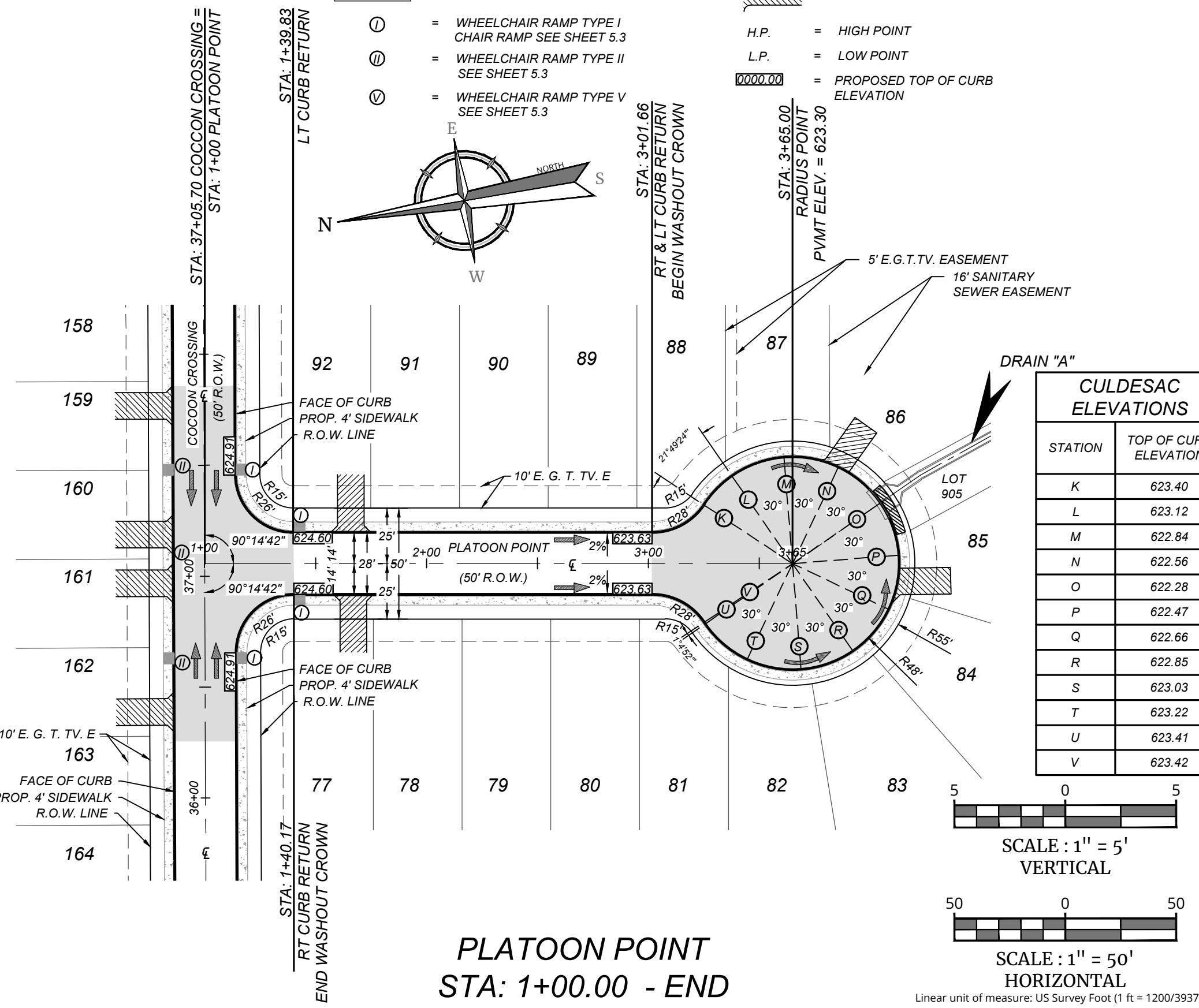


COCOON CROSSING
STA: 32+67.86 - END

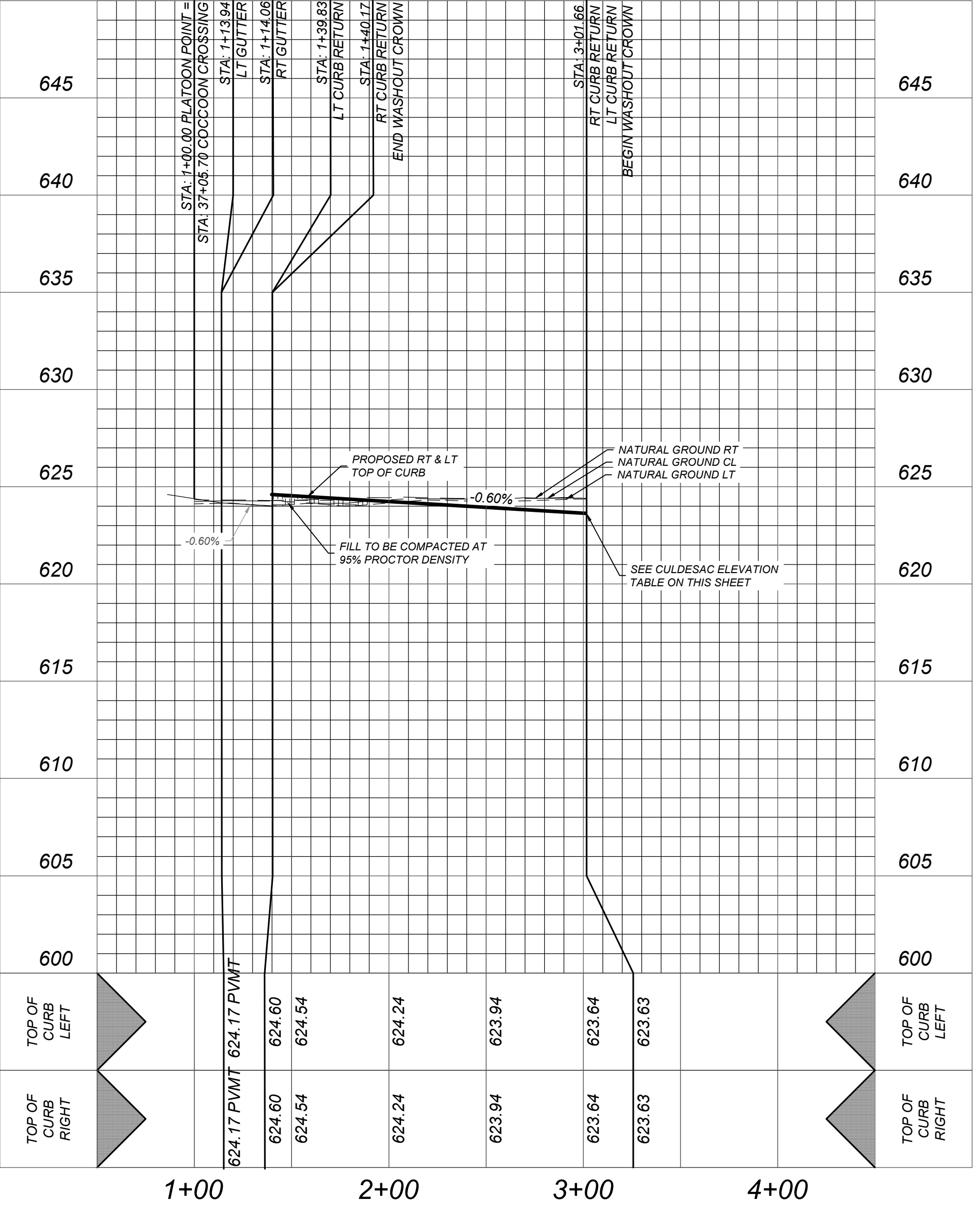


LEGEND

- R.O.W. = RIGHT OF WAY
- G.E.T.V.E. = GAS, ELECTRIC, TELEPHONE & CABLE EASEMENT
- = FLOW ARROW
- WASHOUT CROWN
- WHEELCHAIR RAMP TYPE I CHAIR RAMP SEE SHEET 5.3
- WHEELCHAIR RAMP TYPE II SEE SHEET 5.3
- WHEELCHAIR RAMP TYPE V SEE SHEET 5.3
- SIDEWALK TO BE CONSTRUCTED BY DEVELOPER
- SIDEWALK TO BE BUILT AT THE TIME OF HOME CONSTRUCTION
- H.P. = HIGH POINT
- L.P. = LOW POINT
- PROPOSED TOP OF CURB ELEVATION



PLATOON POINT
STA: 1+00.00 - END



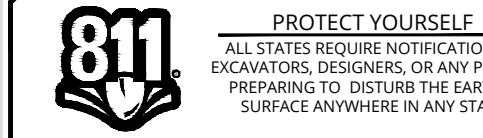
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Formerly Known as

KFW



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

REVISIONS

DATE

DESCRIPTION

DRAWN BY

REV

1

1/27/25

JA

REVISED LOT LAYOUT FOR BLK 11, LOTS 434 & 45-50 & BLK 12, LOTS 537 & 537-1 & 537-2

REVISED LOT LAYOUT FOR BLK 11, LOTS 434 & 45-50 & BLK 12, LOTS 537 & 537-1 & 537-2

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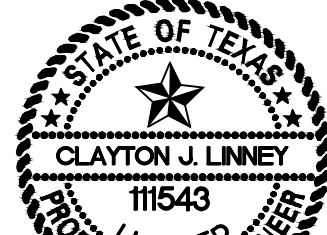
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Clayton J. Linney
3/18/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPES Firm#: E-14909 TBPES Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS



Engineering
& Design

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

SCALE: AS SHOWN DATE: 01/22/25 DRAWN BY: JA CHECKED BY: CG
PROJECT NUMBER: 418-14-07 DRAWING NAME: STD14181-007

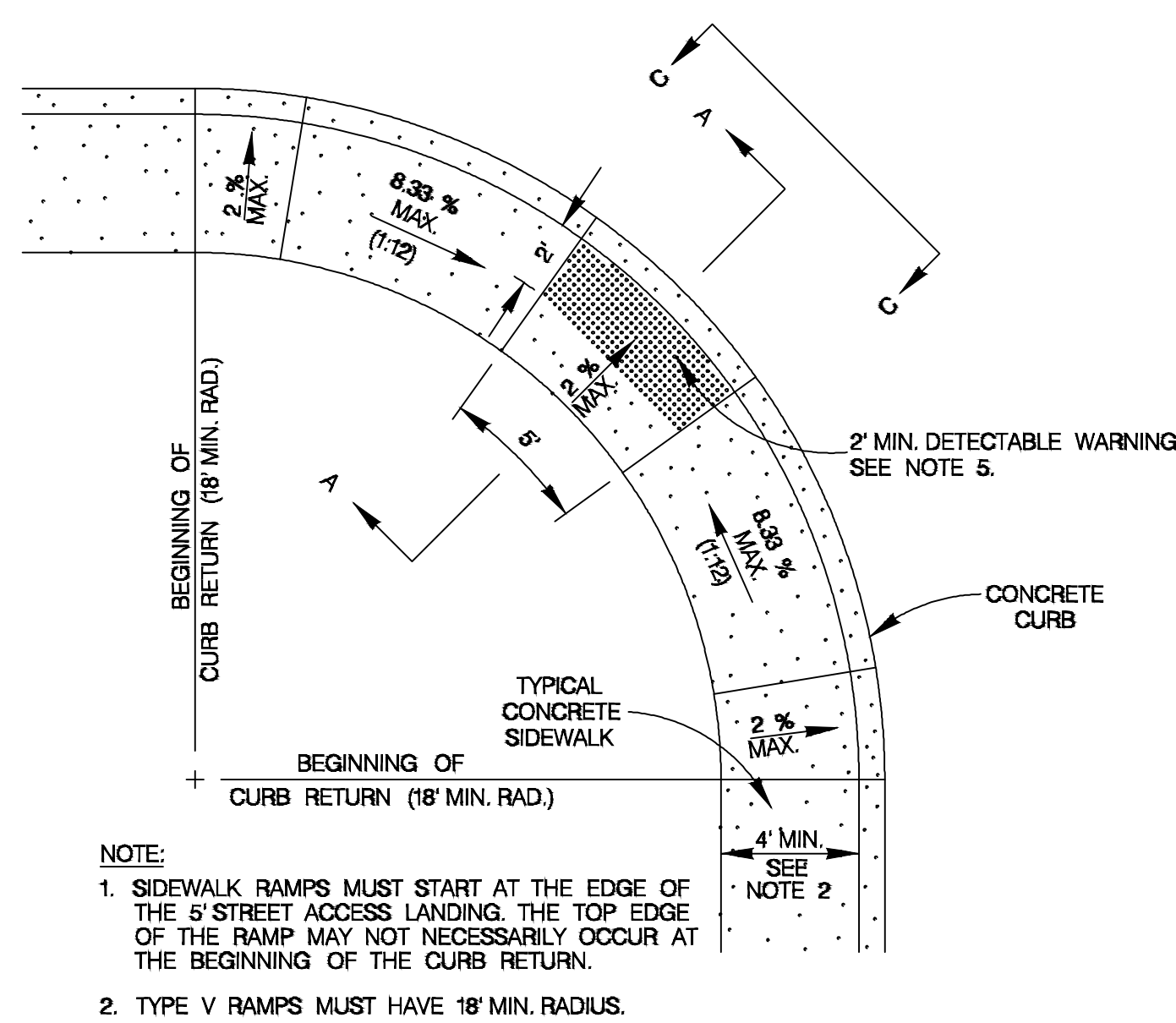
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WHEELCHAIR RAMP DETAILS

SHEET NUMBER:

5.3

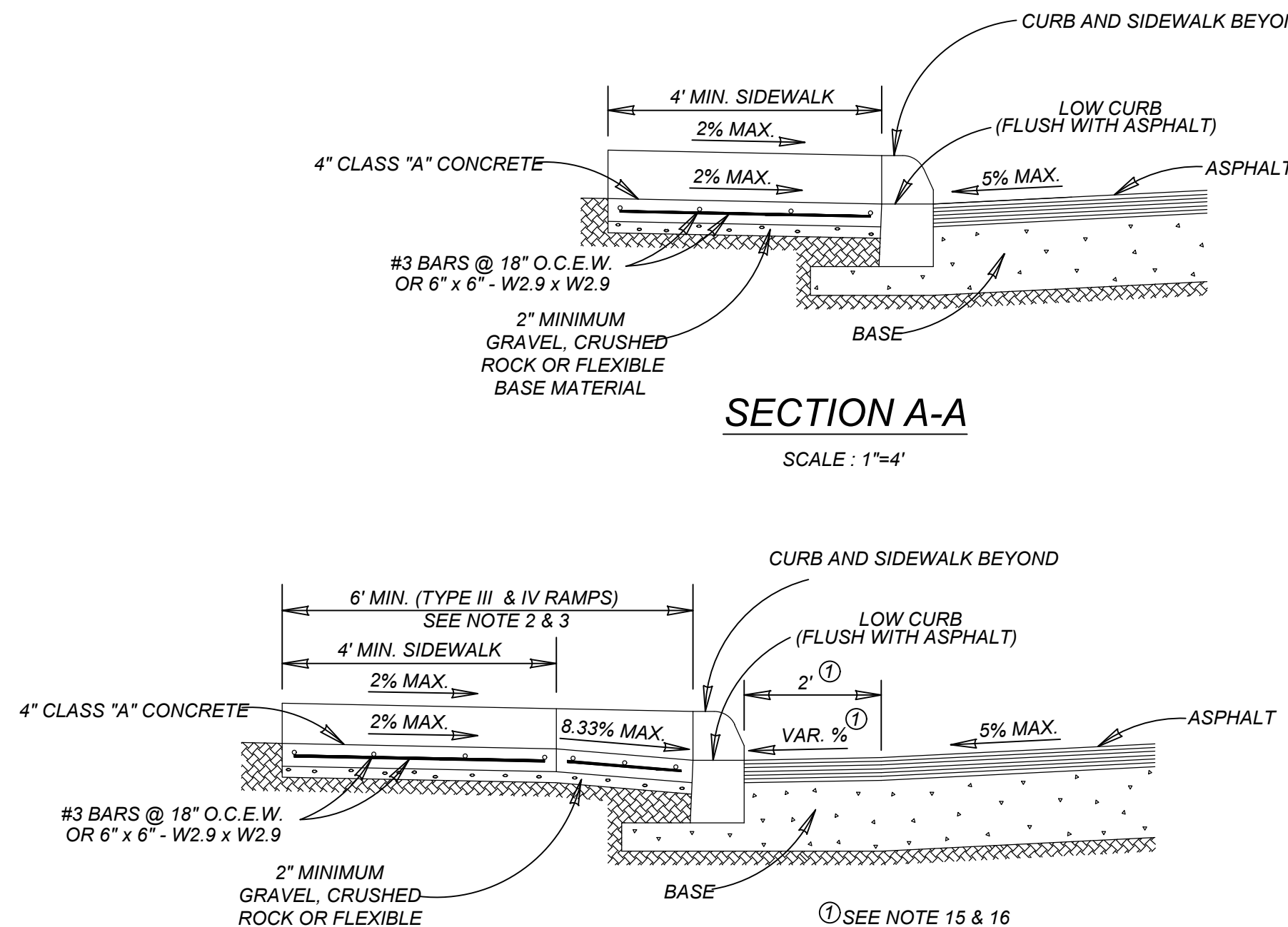
NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



TYPICAL SIDEWALK RAMP - TYPE V

SIDEWALK ABUTS CURB

SCALE : 1"=10'

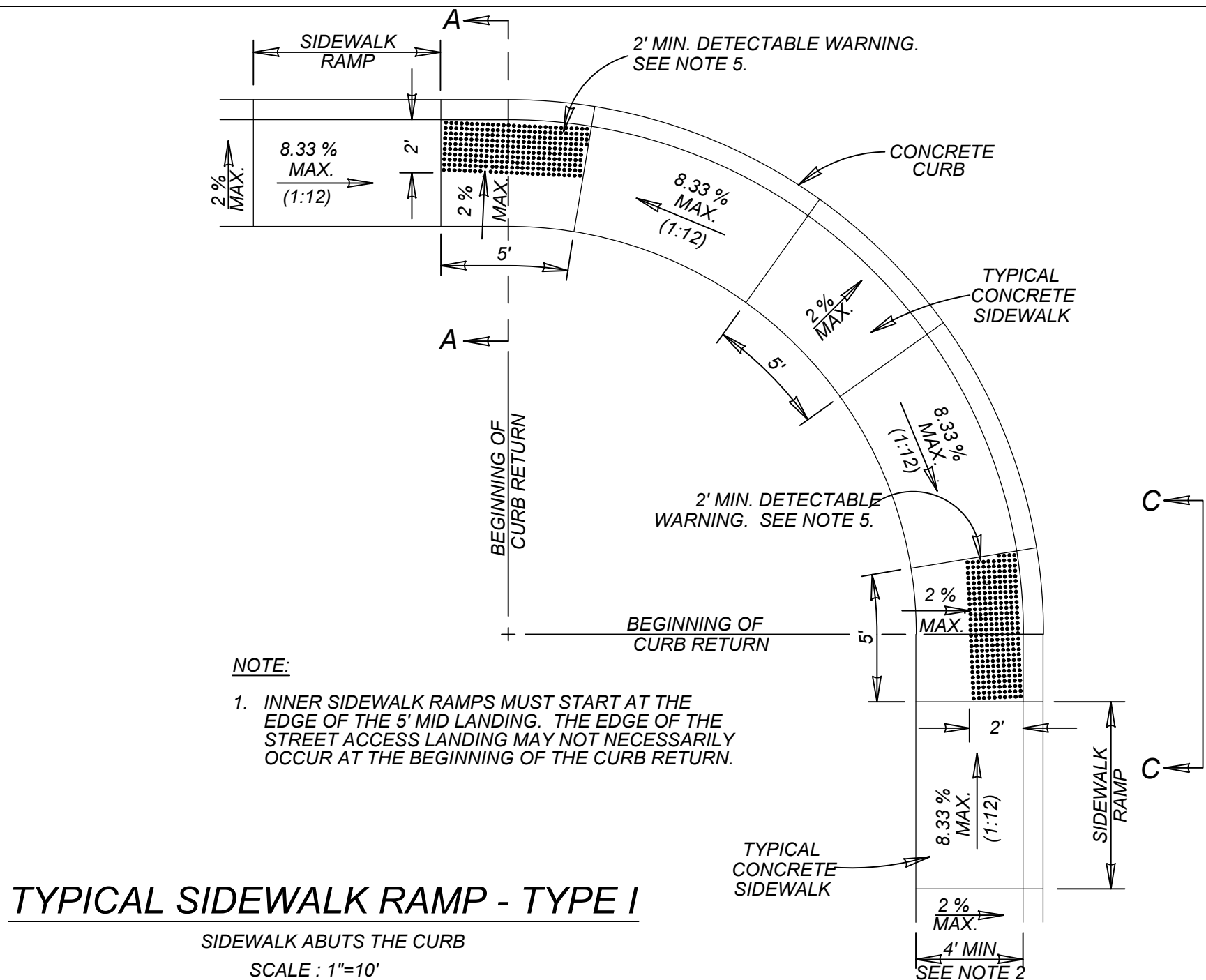


SECTION A-A

SCALE : 1"=4'

SECTION B-B

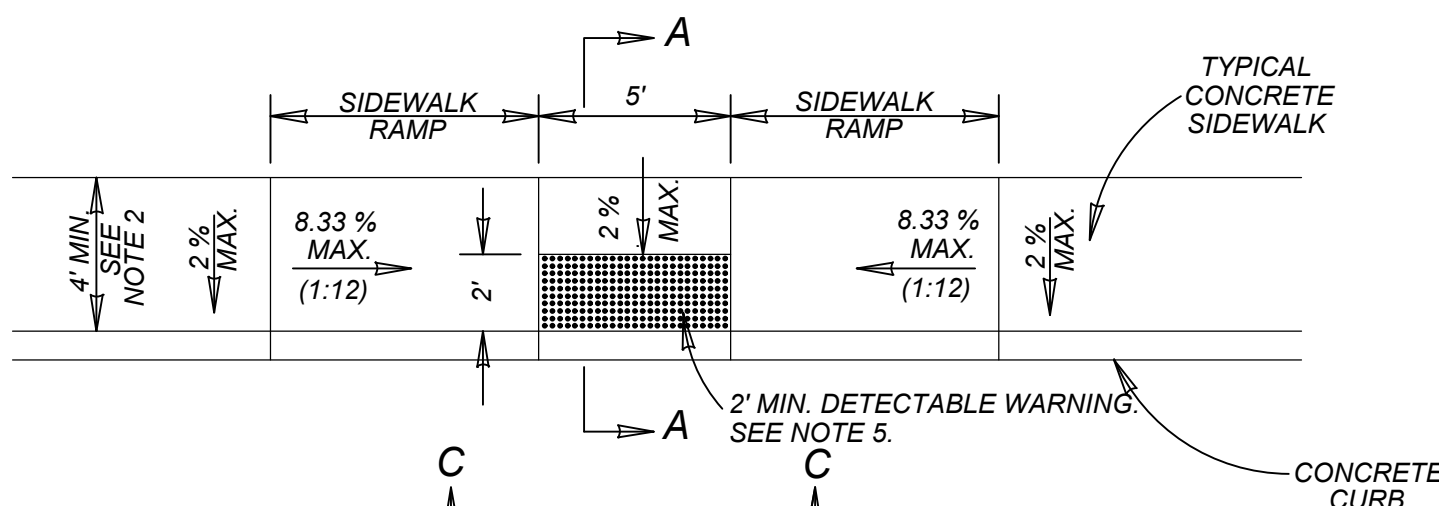
SCALE : 1"=4'



TYPICAL SIDEWALK RAMP - TYPE I

SIDEWALK ABUTS THE CURB

SCALE : 1"=10'



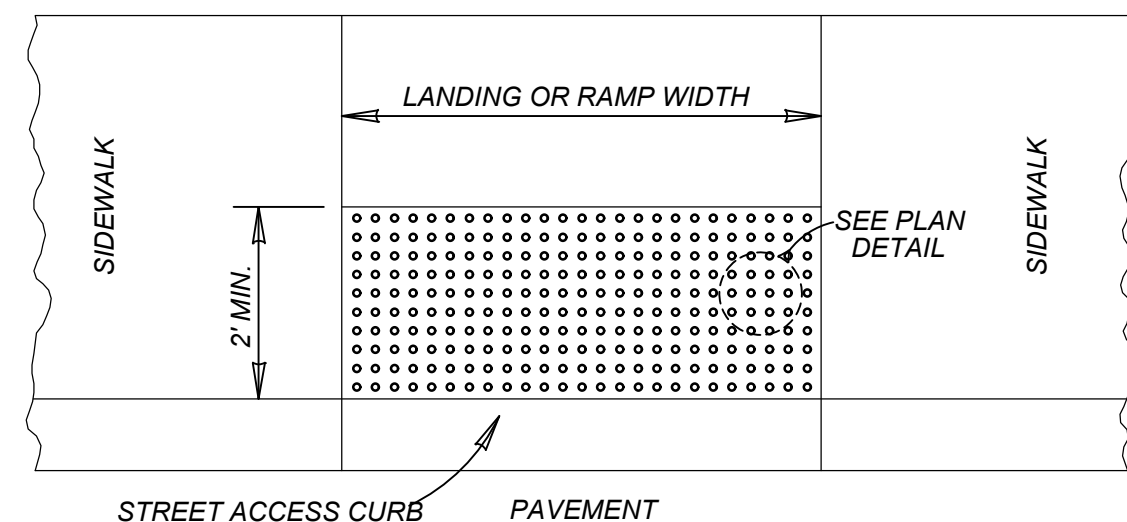
TYPICAL SIDEWALK RAMP - TYPE II

USED AT TEE INTERSECTIONS WHERE SIDEWALK ABUTS CURB

SCALE : 1"=10'

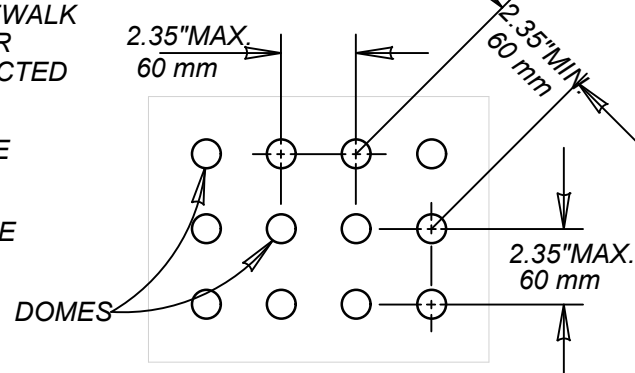
GENERAL NOTES

- 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.
- 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.
- 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.
- 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.
- 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 4" 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.
- 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.
- SIDEWALK RAMP TYPE V SHALL BE USED ONLY WHERE THERE IS SIGNIFICANT RESTRICTION WITHIN THE PARKWAY TO CONSTRUCT TYPE I OR TYPE III RAMPS.
- 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.
- 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
- SIDEWALKS LESS THAN 5 FEET IN WIDTH SHALL BE PROVIDED WITH A PASSING SPACE AT A MAXIMUM
- WHEELCHAIR RAMP SHALL BE CONSTRUCTED WITH 4" CLASS "A" CONCRETE AND 2" MINIMUM GRAVEL, CRUSHED ROCK OR FLEXIBLE BASE MATERIAL.
- REINFORCING STEEL SHALL BE #3 BARS AT 18" O.C.E.W. OR 6" x 6" - W2.9 x W2.9 WIRE MESH.
- 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.
- SIDEWALK CROSS GRADE SHALL HAVE A MAXIMUM SLOPE OF 2%. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ANY DIRECTION.
- 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%.
- 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.
- ADA COMPLIANCE IN ALTERATIONS INCLUDE ONLY THAT WORK WITHIN THE LIMITS, BOUNDARIES OR SCOPE OF A PLANNED PROJECT.



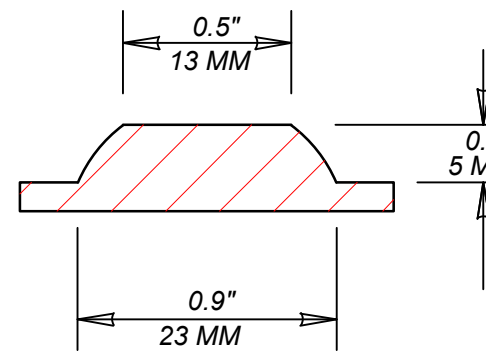
DETECTABLE WARNING SURFACE

SCALE : 1"=4'



PLAN DETAIL

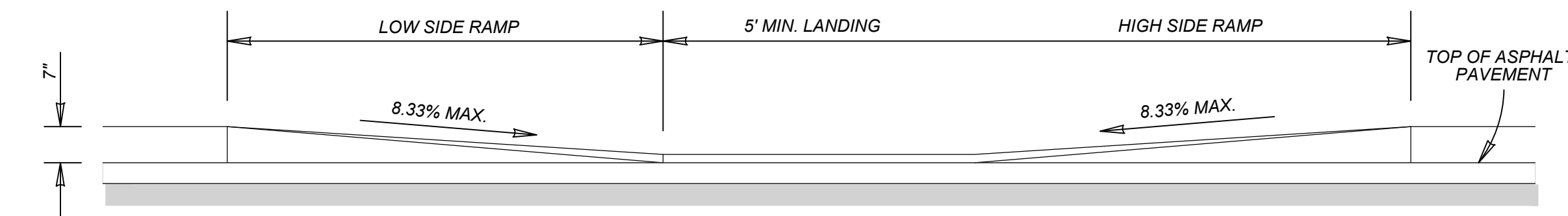
NO SCALE



DOMES SECTION

NO SCALE

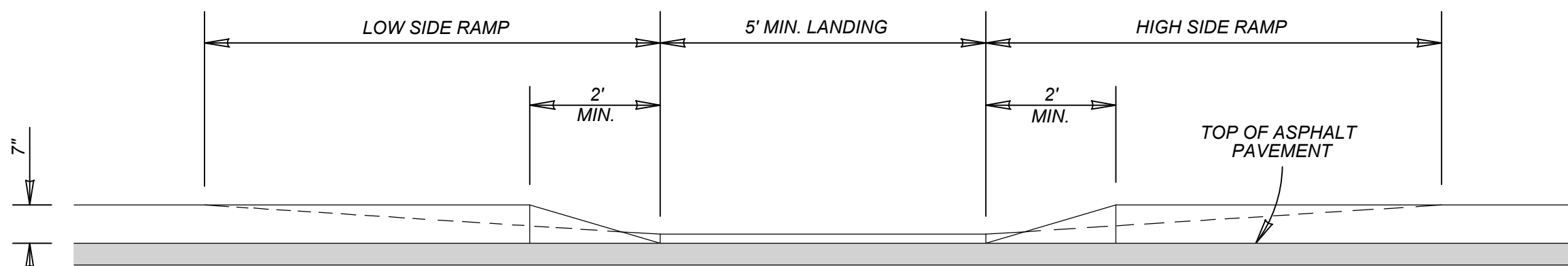
NOTE:
STAMPED CONCRETE TRUNCATED DOMES WILL NOT BE ALLOWED TO BE USED
FOR DETECTABLE WARNING ON WHEELCHAIR RAMPS. CONTRACTOR MUST SUBMIT
TRUNCATED DOME INFORMATION THAT IS TO BE USED ON WHEELCHAIR RAMPS
TO THE PROJECT MANAGER FOR APPROVAL AT LEAST 30 DAYS PRIOR TO INSTALLATION.



SECTION C-C

CURB PROFILE WHERE SIDEWALK ABUTS CURB

SCALE : 1"=4'



SECTION D-D

CURB PROFILE WHERE SIDEWALK IS SEPARATED FROM CURB

SCALE : 1"=4'

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

REV.	DATE	DRAWN BY	DESCRIPTION
1	1/27/25	JA	REVISED LOT LAYOUT FOR BLK 11, LOTS 4-34 & 45-50 & BLK 12 LOTS 5-7 & 8 REMOVED LOTS.



Clayton Linney
3/18/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909 - TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS

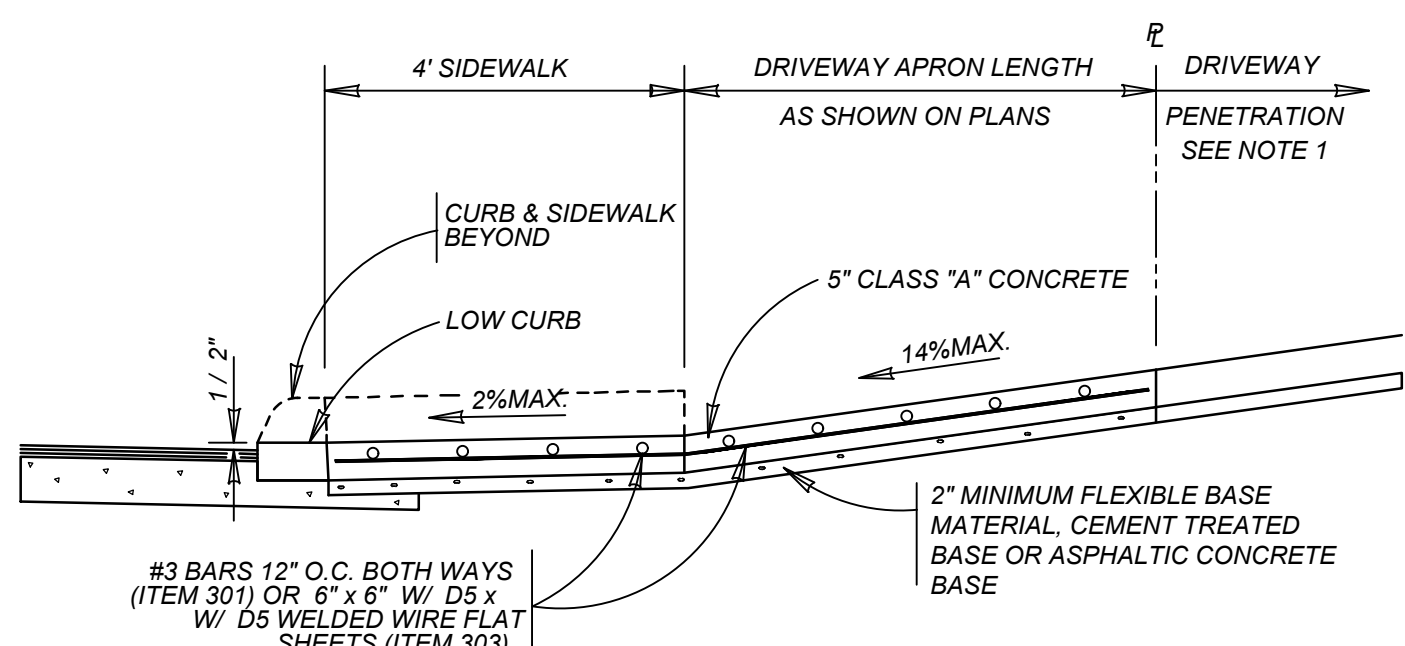


SAN ANTONIO (KFW)
3421 Paesanos Parkway
San Antonio, TX 78231
Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909 - TBPLS Firm#: 10194550

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/22/25	JA	CG
PROJECT NUMBER:	418-14-07	DRAWING NAME:	STD14181-407

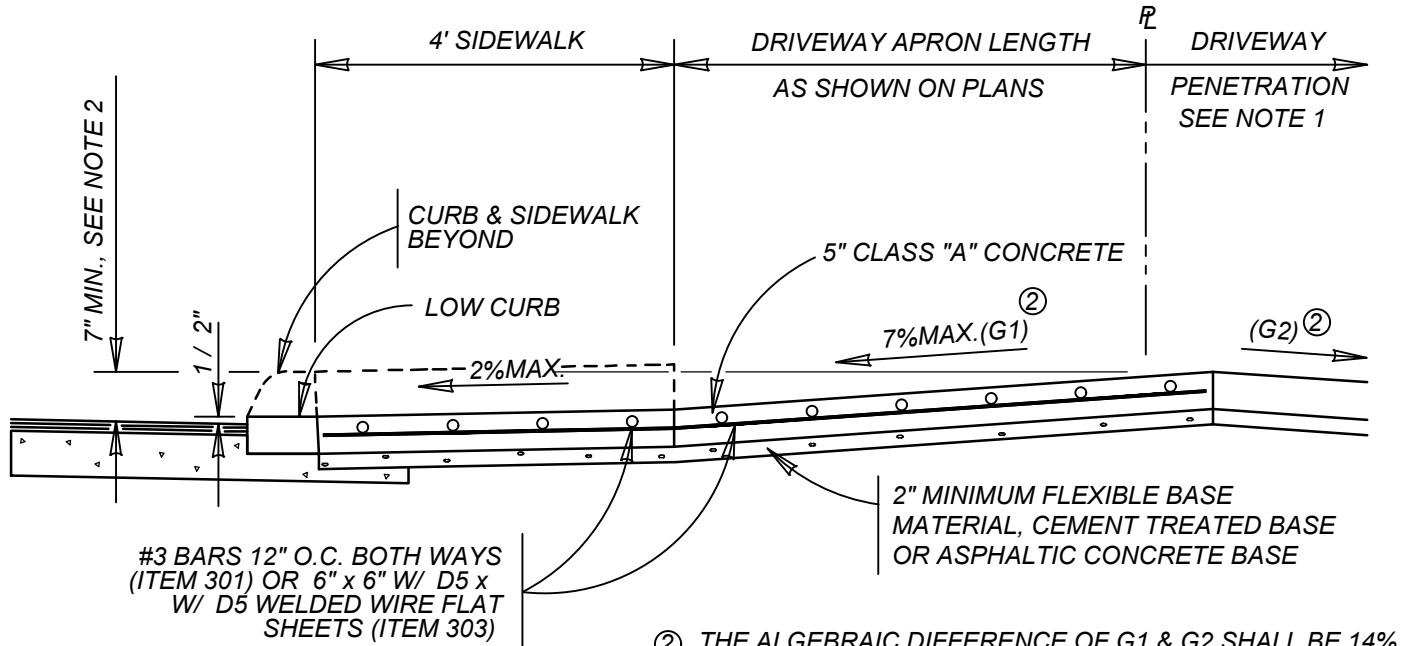
CONCRETE DRIVEWAY DETAILS

SHEET NUMBER:
5.4



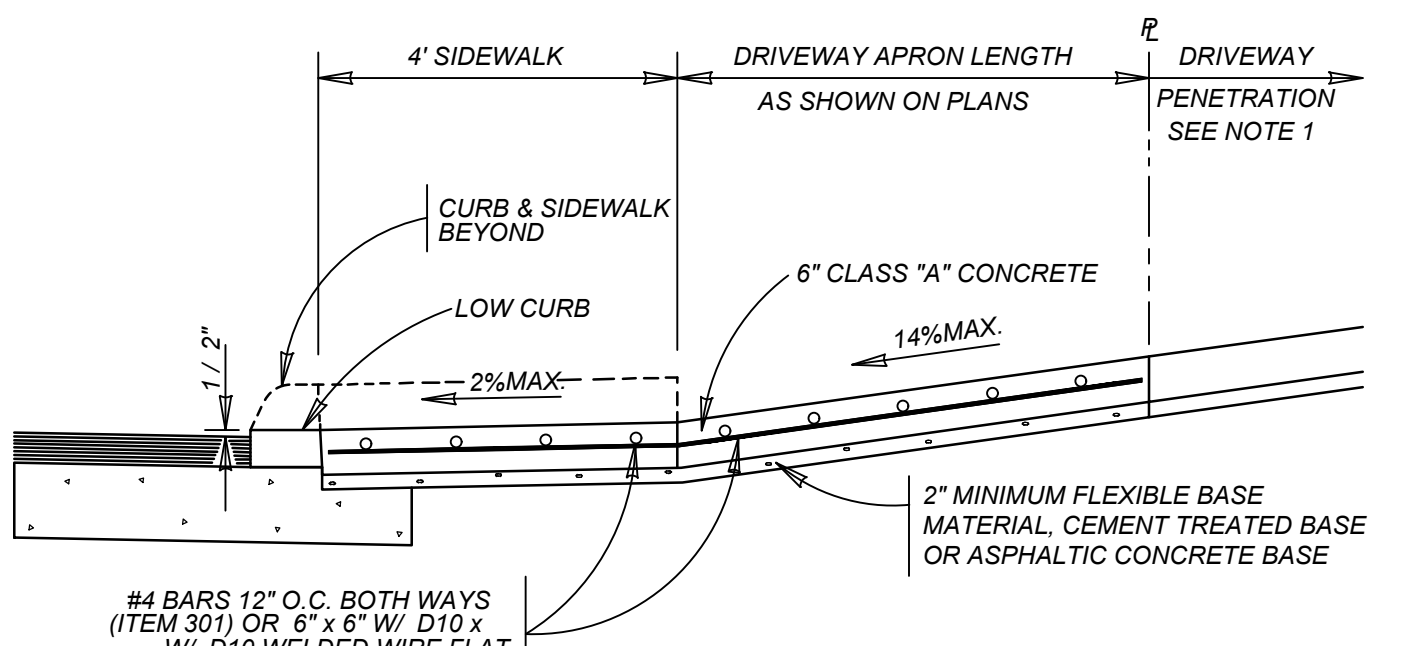
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.1



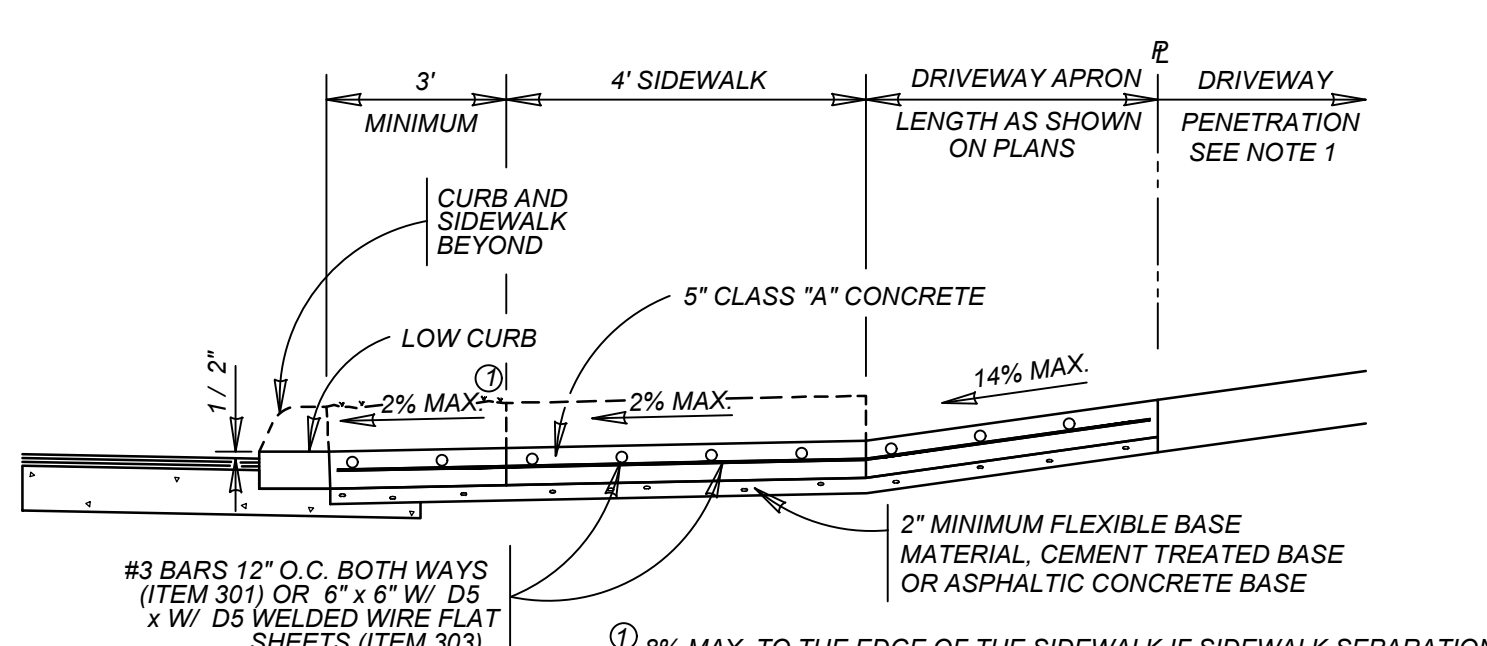
TYPICAL RESIDENTIAL DRIVEWAY SECTION

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



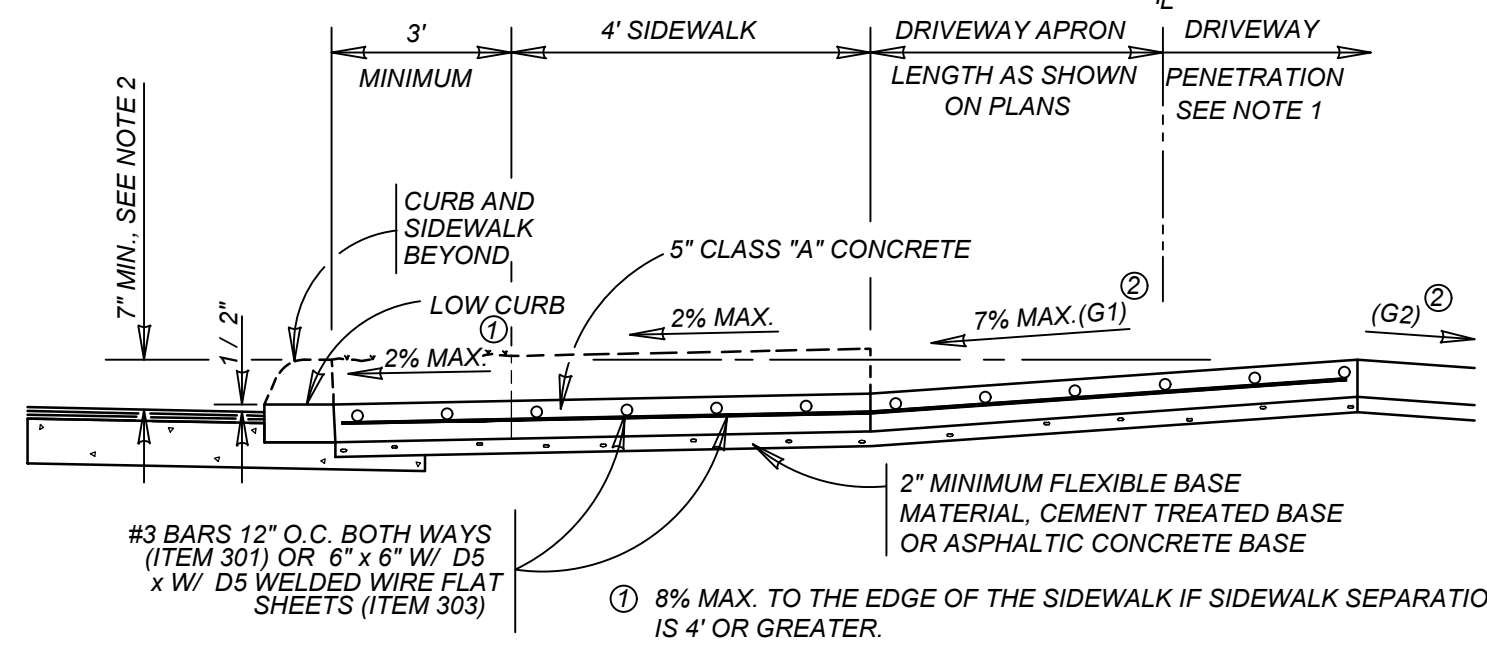
TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK ABUTTING CURB
ITEM 503.2



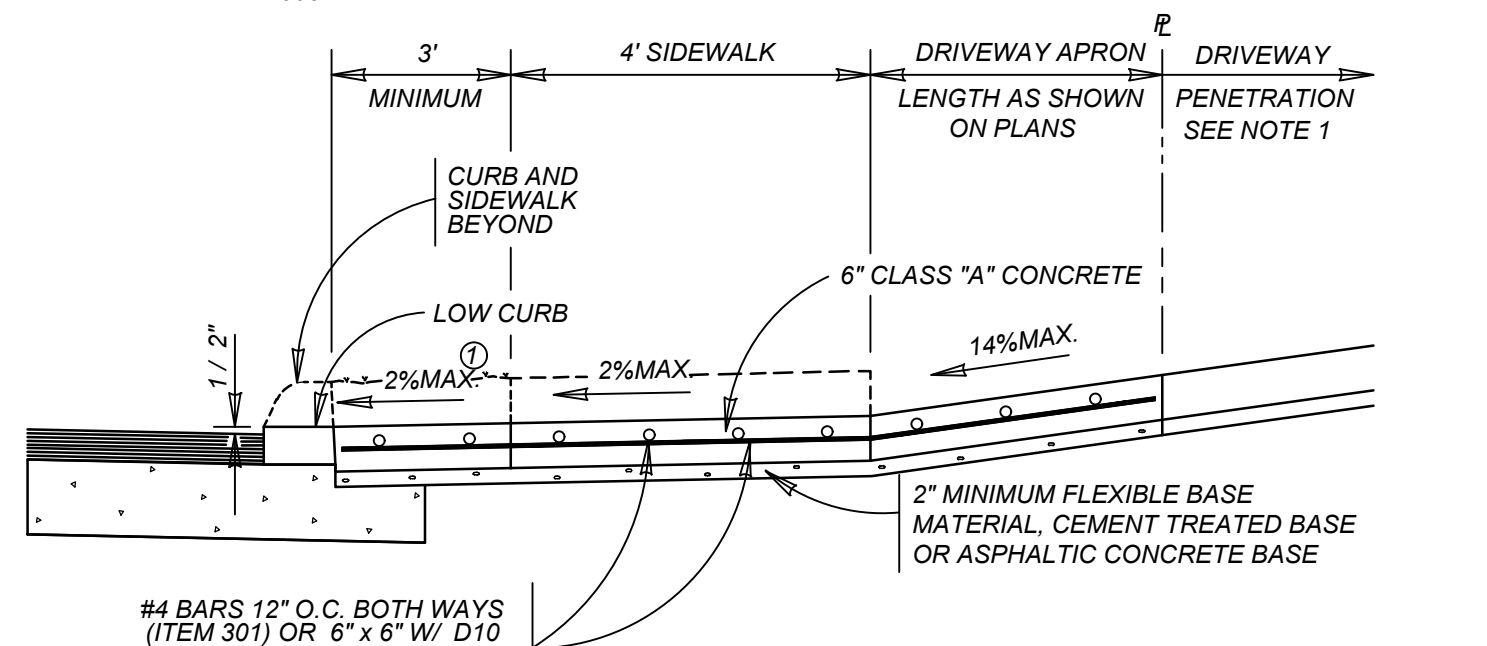
TYPICAL RESIDENTIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.1



TYPICAL RESIDENTIAL DRIVEWAY SECTION

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



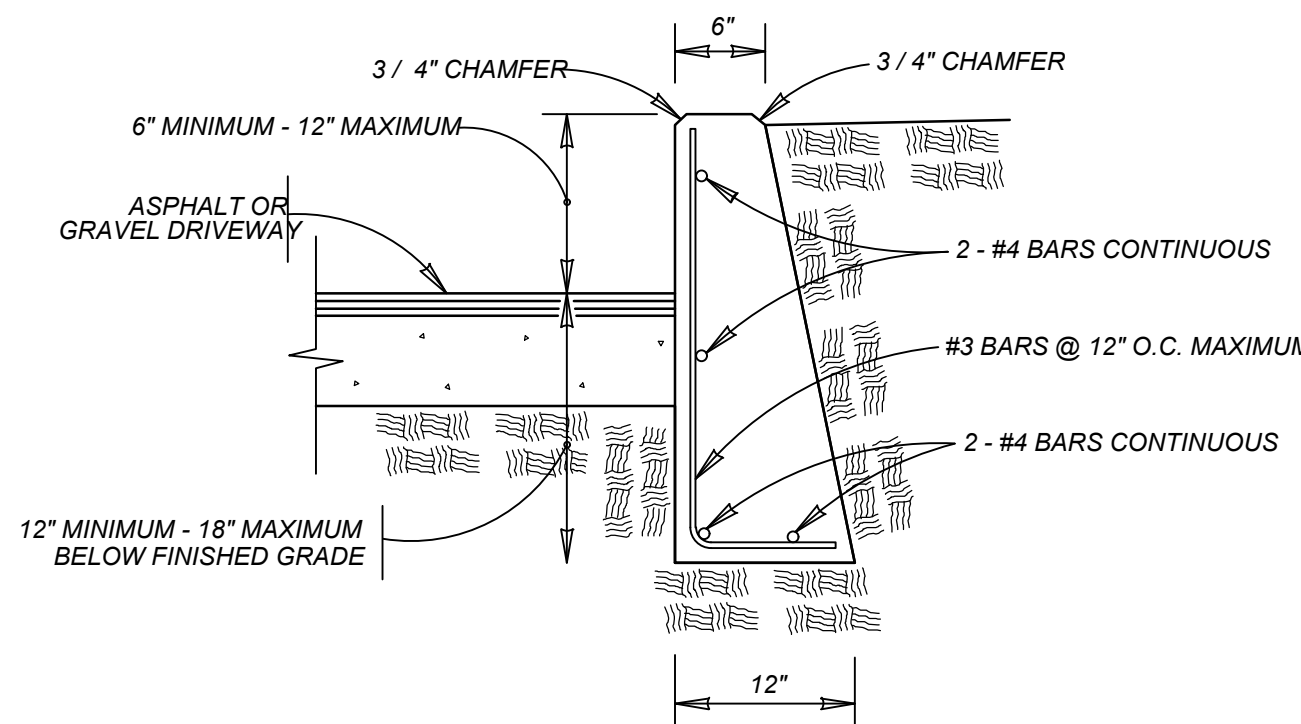
TYPICAL COMMERCIAL DRIVEWAY SECTION

WITH SIDEWALK SEPARATED FROM CURB
ITEM 503.2

- 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
- 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.
- 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'

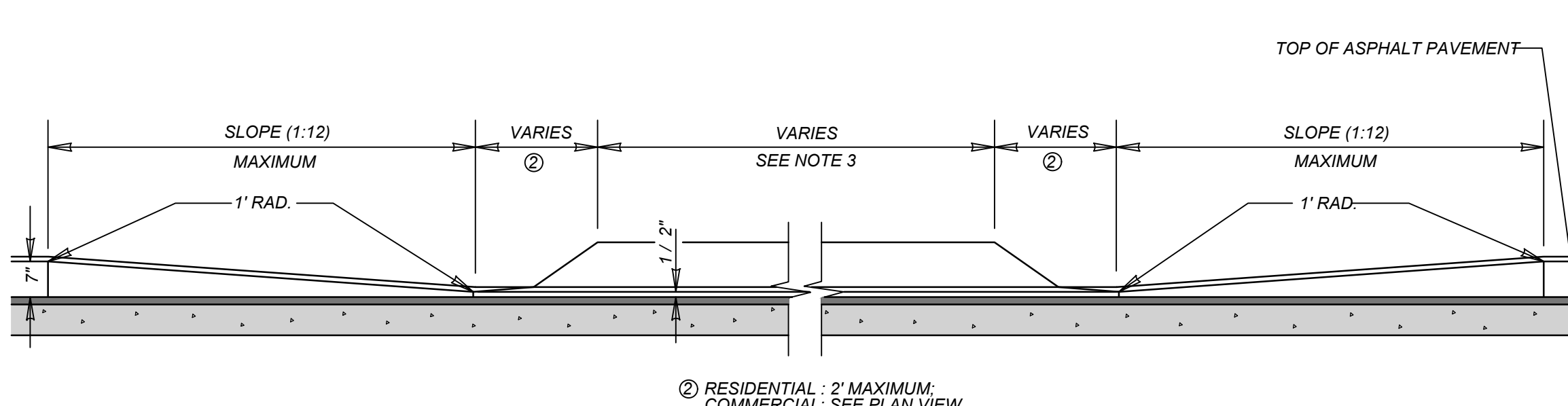
- FOR LOCAL TYPE 'A' STREETS, SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND IF SEPARATED FROM THE CURB, THE SIDEWALK SHALL BE LOCATED A MINIMUM OF 3' FROM THE BACK OF CURB.
- FOR OTHER THAN LOCAL TYPE 'A' STREETS, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 4' AND SEPARATED A MINIMUM OF 3' FROM THE BACK OF CURB OR, AS AN OPTION, THE SIDEWALK SHALL HAVE A MINIMUM WIDTH OF 6' WHEN LOCATED AT THE BACK OF CURB.
- 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.
- 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.
- 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%.
- SIDEWALK RAMP SURFACE SHALL BE BRUSH FINISHED.



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

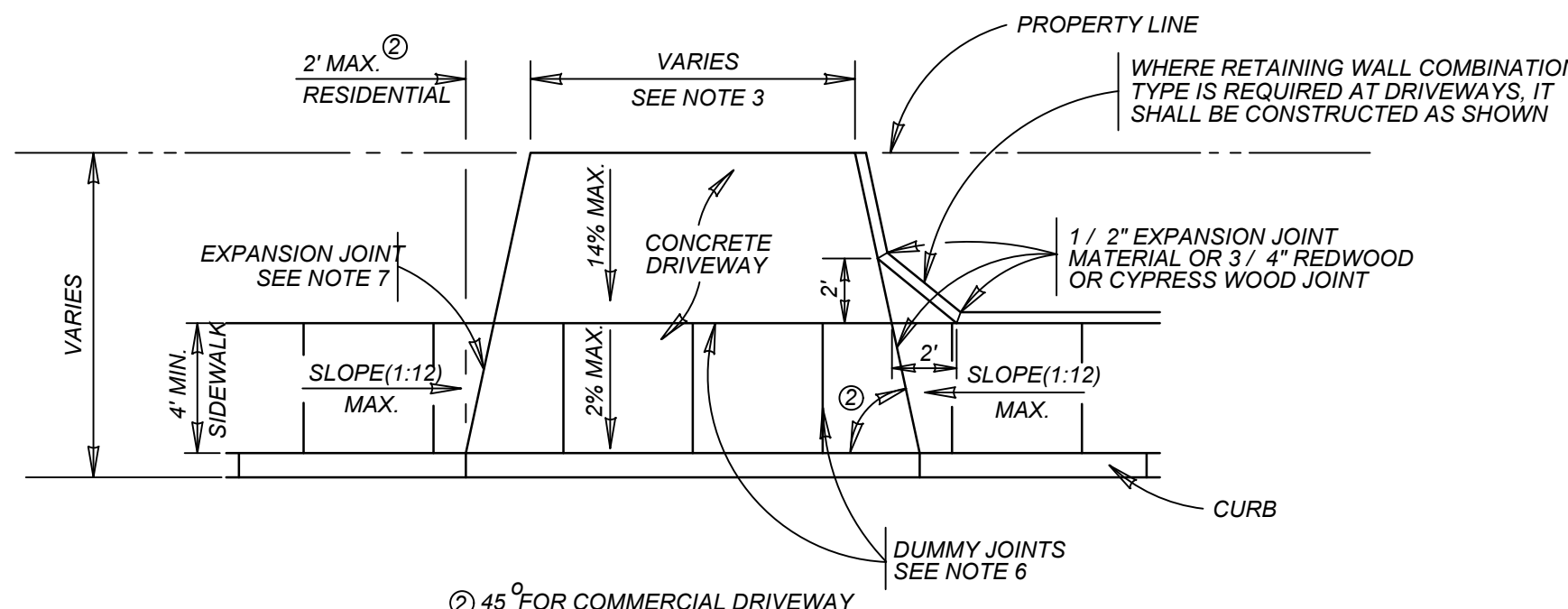
DRIVEWAY - CONCRETE RETAINING WALL

ON COMPACTED SUBGRADE
ITEM 307.1



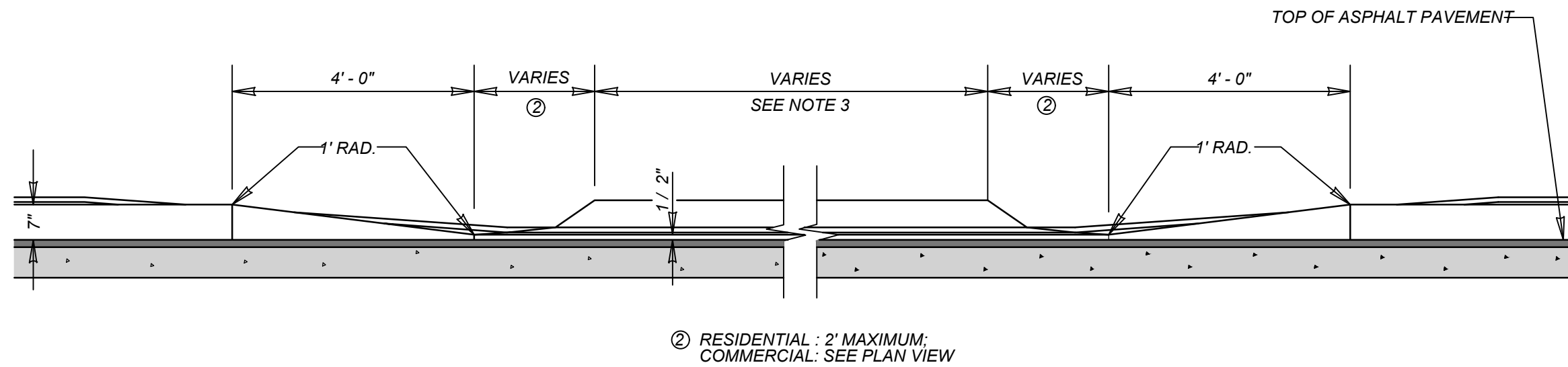
CURB PROFILE AT DRIVEWAY

WITH SIDEWALK ABUTTING CURB



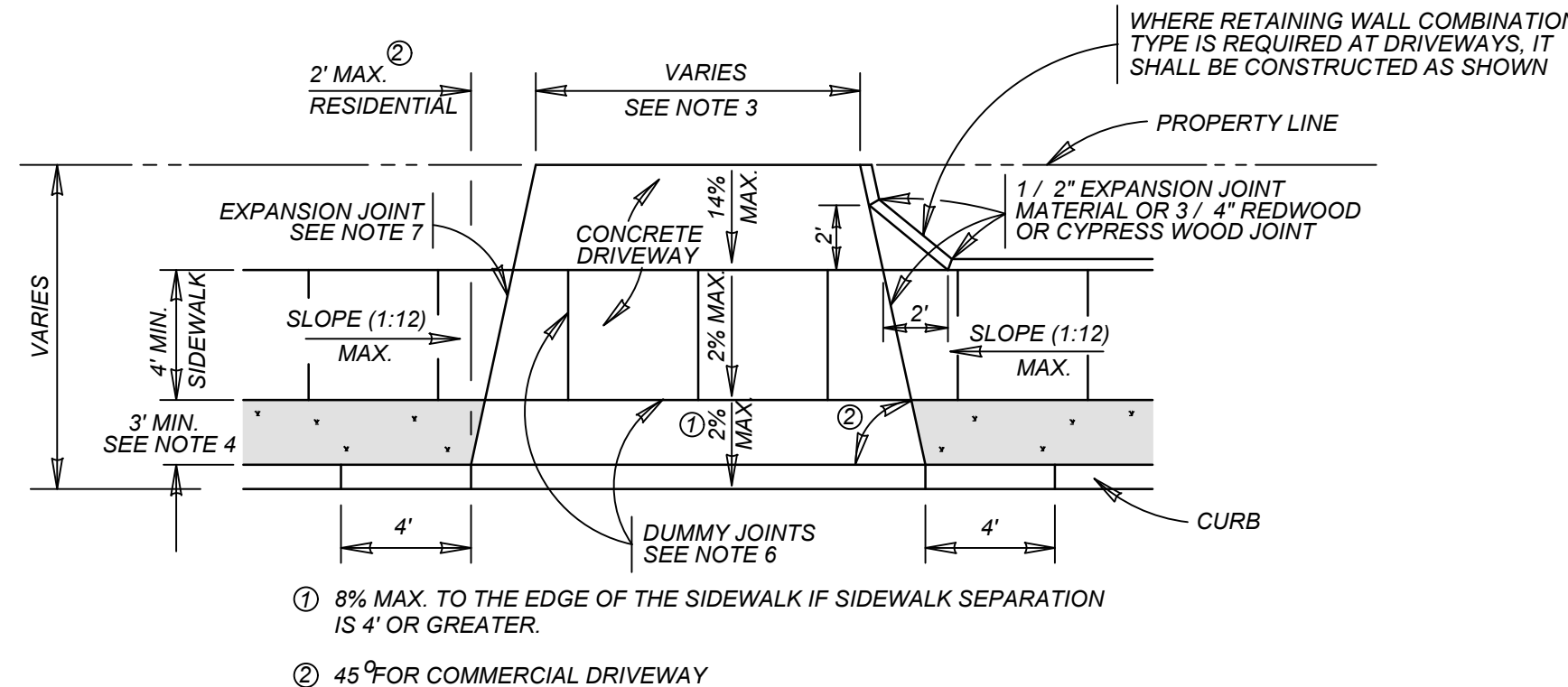
TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK ABUTTING CURB



CURB PROFILE AT DRIVEWAY

WITH SIDEWALK SEPARATED FROM CURB



TYPICAL DRIVEWAY PLAN VIEW

WITH SIDEWALK SEPARATED FROM CURB

MAY 2009

CITY OF SAN ANTONIO

CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT

CONCRETE DRIVEWAY STANDARDS

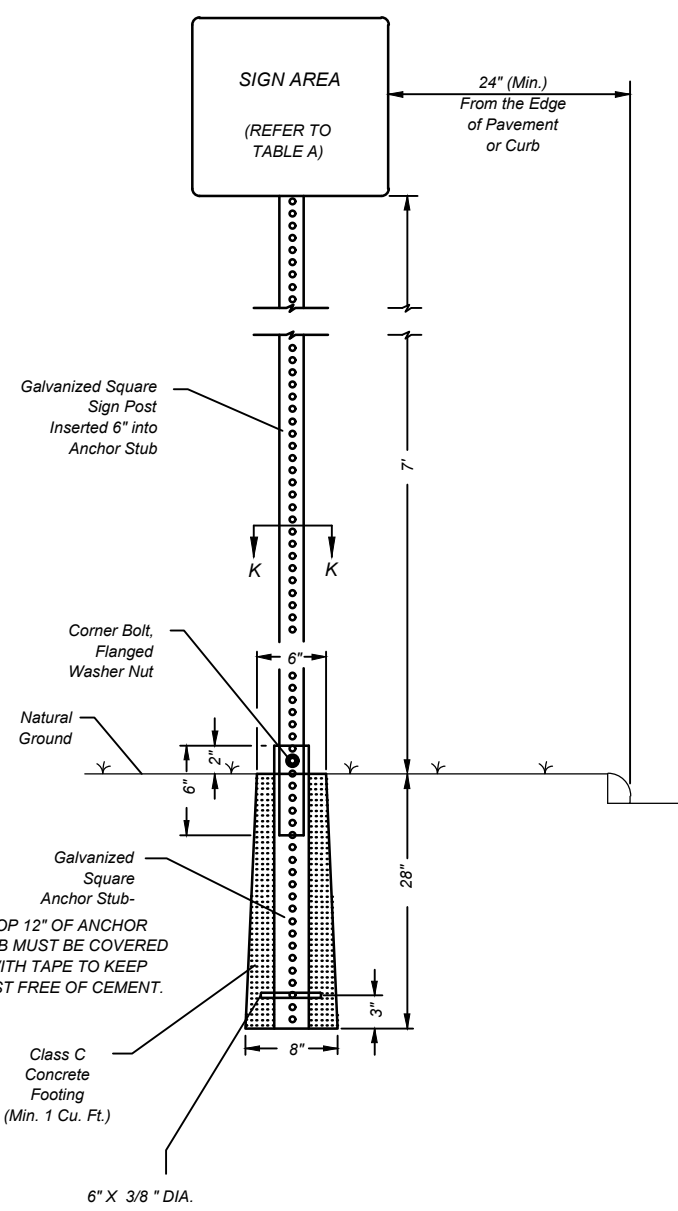
% SUBMITTAL	PROJECT NO.:	DATE:
DRWN. BY: V. VASQUEZ	DSGN. BY:	CHKD. BY: R.S. HOSSEINI, P.E.

SHEET NO.:	OF
1	1

GENERAL NOTES

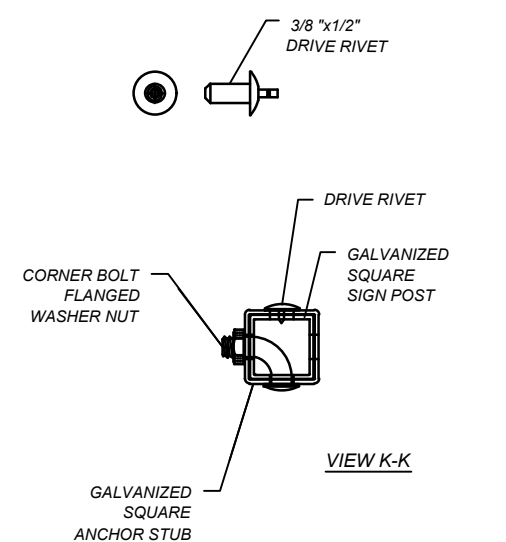
- 1.) THE EXISTING SIGNS LOCATED ON THE JOBSITE ARE THE PROPERTY OF THE CITY OF SAN ANTONIO. THROUGHOUT THE PERIOD OF THE CONTRACT, THE CONTRACTOR SHALL PROTECT THESE SIGNS SUCH THAT THEY ARE NOT DAMAGED IN THE COURSE OF CONSTRUCTION ACTIVITY. SUCH PROTECTION SHALL INCLUDE THE PERIOD AFTER SIGNS ARE REMOVED FROM INSTALLATION AND STORED BY THE CONTRACTOR OR DELIVERED TO TRAFFIC OPERATIONS. THE ASSISTANT TRAFFIC SUPERINTENDENT (207-7765) MUST BE NOTIFIED 48 HOURS IN ADVANCE PRIOR TO DELIVERY.
- 2.) AFTER SIGNS ARE REMOVED FROM INSTALLATION AND ARE BEING STORED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE TRAFFIC OPERATIONS SECTION OF THE PUBLIC WORKS DEPARTMENT (207-7765) AND ARRANGE FOR A CONVENIENT TIME TO DELIVER CITY SIGNS AND POLES.
- 3.) PRIOR TO THE START OF CONSTRUCTION, ALL EXISTING SIGNS WITHIN THE AREA OF CONSTRUCTION WILL BE INVENTORIED AND DOCUMENTED JOINTLY BY THE TRAFFIC ENGINEERING (207-7720) CONSTRUCTION INSPECTION AND THE CONTRACTOR. THIS DOCUMENT WILL BE JOINTLY SIGNED BY BOTH PARTIES REFLECTING THE SIGN TYPE, SIGN SIZE, SIGN CONDITION, SIGN LOCATION, REFLECTIVITY ADEQUACY, ETC. THE CONTRACTOR IS HELD ACCOUNTABLE FOR THESE SIGNS THROUGHOUT THE PROJECT AND AT THE PROJECTS COMPLETION.
- 4.) ALL GROUND MOUNTED SHALL USE HIGH INTENSITY REFLECTIVE SHEETING.
- 5.) ALL OVERHEAD SIGNS SHALL USE DIAMOND GRADE REFLECTIVE SHEETING.
- 6.) ALL BLANKS TO BE ALUMINUM ALLOY NO. 5052-H38.
- 7.) "T" DENOTES THICKNESS OF SIGN BLANKS.
- 8.) ALL HOLES SHALL BE 3/8" DIAMETER DRILLED OR PUNCHED AS SHOWN ON EACH BLANK DETAIL AND SHALL BE FREE OF BURRS AND/OR ROUGH EDGES.
- 9.) SIGN BLANK CORNERS TO BE ROUNDED AS SHOWN ON EACH DETAIL.
- 10.) ALL SIGN BLANK TO BE ETCHED, DEGREASED, AND HAVE AN ALODINE FINISH PRIOR TO APPLICATION OF LEGENDS.
- 11.) ALL DETAILS ARE NOT TO SCALE.
- 12.) ALL DIMENSIONS ARE IN INCHES.
- 13.) ALL SIGNS SHALL BE MANUFACTURED AND INSTALLED IN CONFORMANCE TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND STANDARD HIGHWAY SIGNS (FHWA) LATEST EDITION.
- 14.) REINSTALLATION OF PREVIOUSLY EXISTING SIGNS, WHERE REQUIRED BY THE CITY TRAFFIC ENGINEER, SHALL BE AT THE CONTRACTOR'S EXPENSE.

TYPICAL GROUND SIGN INSTALLATION

TYPE "U" MOUNT
PERFORATED SQUARE METAL TUBING (DRIVEABLE)

METAL TUBING	SIGN AREA	
	< 10 SQ. FT.	> 10 SQ. FT.
GALVANIZED SQUARE SIGN POST (Perforated)	1-3/4\" x 1-3/4\" (14 Gauge)	2\" x 2\" (12 Gauge)
GALVANIZED SQUARE ANCHOR STUB (Perforated)	2\" x 2\" (14 Gauge)	2-1/4\" x 2-1/4\" (14 Gauge)

TABLE A



CITY OF SAN ANTONIO
TRAFFIC ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
GENERAL NOTES AND
GROUND SIGN MOUNTING

NO.	REVISION	BY	DATE
1	XXX	XXX	XXX

TE-SGN(1)-06

COND/ENR	APPROJ	DATE	1:30:06	SHT NO.
DRW/APP	ENR	DATE	2:6:06	1 OF 4
PRVD	APPROJ	DATE		SCALE: NOT TO SCALE

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD H. MERRY, P.E., # 58988 ON 02-06-08 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

HWY B, C, OR D FONT STYLE

BLUE BACKGROUND

WHITE LETTERS, NUMBERS, & ARROWS

5/32\" WHITE BORDER

HWY D - FONT STYLE FOR BLOCK NUMBERS

9\" D3 - STREET NAME SIGN

HWY D FONT BLACK LETTERS

0.2\" BLACK BORDER

YELLOW BACKGROUND

BLACK ARROW

3/8\" x 1/2\" DRIVE RIVET

NEW 9\" D3 w/ DEAD END OR NO OUTLET SIGNAGE

NOTE: (2) ONE-SIDED D3 SIGNS ARE REQUIRED FOR EACH DIRECTION OF TRAFFIC ON EACH POLE.

D3 SIGN TO POLE INSTALLATION

NOTE: THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD H. MERRY, P.E., # 58988 ON 02-06-08 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

FACE OF CURB OR EDGE OF PAVEMENT

REGULATORY, GUIDE OR PROHIBITION SIGN

NO PARKING ANYTIME SIGNS

ONE-WAY SIGNS OR LARGE ARROWS SIGN

DIRECTION OF TRAFFIC FLOW

90°

60°

TABLE - D3 SIGNS

A	B	C	D	E	F	T
24\"	9\"	1/2\"	3/4\"	8\"	12\"	0.125\"
30\"	9\"	1/2\"	3/4\"	8\"	15\"	0.125\"
36\"	9\"	1/2\"	3/4\"	8\"	18\"	0.125\"
42\"	9\"	1/2\"	3/4\"	8\"	21\"	0.125\"
48\"	9\"	1/2\"	3/4\"	8\"	24\"	0.125\"
54\"	9\"	1/2\"	3/4\"	8\"	27\"	0.125\"

NOTE: A 30\" LONG OR GREATER PLATE SHALL BE USED WHEN A \"DEAD END\" OR \"NO OUTLET\" SUPPLEMENT IS REQUIRED.

HEIGHT 9\" (228 mm)

LENGTH 24\" (600mm) MIN. 54\" (1360mm) MAX. 6\" (150mm) INCREMENTS OF LENGTH

THICKNESS 0.125\" (3mm)

SUBSTRATE ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH

SIGN FACE MATERIALS BLUE FILM OVER HIGH INTENSITY FP-85, SECTION 718 AND L-S-300C

LEGENDS AND SYMBOLS SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY

COLOR WHITE LEGEND ON BLUE BACKGROUND

LETTER TRACKING 10%

TYPICAL GROUND MOUNTED SIGN PLACEMENT

CITY OF SAN ANTONIO
TRAFFIC ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
D3 STREET NAME SIGN
AND SIGN MOUNTING

TE-SGN(2)-06

COND/ENR	APPROJ	DATE	1:30:06	SHT NO.
DRW/APP	ENR	DATE	2:6:06	2 OF 4
PRVD	APPROJ	DATE		SCALE: NOT TO SCALE

OCTAGONAL

A	B	C	T
24	3	12	0.080
30	3	24	0.080
36	3	30	0.100

DIAMOND (A)

A	B	C	D	T
24	3	12	12	0.080
24	12	12	12	0.080
24	12	12	30	0.100

DIAMOND (B)

A	B	C	D	T
48	18	18	3	0.100

CIRCLE

A	B	T
18	18	0.100

PENTAGON (SCHOOL)

A	B	C	D	T
48	18	18	3	0.100

EQUILATERAL TRIANGLE

A	B	C	D	T
48	3	24	2	0.100

ISOSCELES TRIANGLE

A	B	C	D	E	T
48	3	24	12	12	0.100

SQUARE (A)

A	B	C	D	T
18	12	12	12	0.080
24	3	18	12	0.080
30	3	24	12	0.100

SQUARE (B)

A	B	C	D	E	F	T
48	3	36	3	30	3	0.100

VERTICAL / HORIZONTAL RECTANGLE

A	B	C	D	E	F	G	T
12	18	18	30	12	18	18	0.080
18	12	12	30	12	18	18	0.080
18	24	12	27	12	12	12	0.080
24	30	3	24	12	3	18	0.080
24	36	3	30	12	3	18	0.080
24	48	4	36	12	24	18	0.080
30	36	3	30	12	3	24	0.080

HORIZONTAL RECTANGLE

A	B	C	D	E	T
6	12	1	4	14	0.080
6	18	1	4	14	0.080
20	36	0.125	17	12	0.080

VERTICAL RECTANGLE

A	B	C	D	E	F	G	T
48	60	6	48	6	30	3	0.100

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CITY OF SAN ANTONIO
TRAFFIC ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
GROUND MOUNTED
SIGN SIZES

TE-SGN(3)-06

COND/ENR	APPROJ	DATE	1:30:06	SHT NO.
DRW/APP	ENR	DATE	2:6:06	3 OF 4
PRVD	APPROJ	DATE		SCALE: NOT TO SCALE

LENGTH VARIES (SEE TABLE BELOW)

1/4\" WHITE BORDER

WHITE LETTERS, NUMBERS & ARROWS

BLUE BACKGROUND

1 7/8\" R

15\" METRO - STREET NAME SIGNS

15\" METRO w/ CITY SKY LINE

BLACK LOGO & LETTERING

WHITE BACKGROUND

BLACK LOGO & LETTERING

SPAN WIRE INSTALLATION

MAST ARM INSTALLATION

PEDESTRIAN PUSHBUTTON SIGNS

7.5\"

5\"

1/4\" R

R10-4b(R)

R10-4b(L)

R10-10 (30\" X 36\")

R3-SL (30\" X 36\")

R10-9 (30\" X 24\")

R10-12 (30\" X 36\")

LEFT TURN SIGNAL

ONLY

PROTECTED LEFT ON GREEN ARROW

LEFT TURN YIELD ON GREEN

LEFT TURN SIGNS

NOTE: ** SIGN PLATE LONGER THAN 72\" MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER

* DIAMOND GRADE SHEETING 5052-H38 ALUMINUM SUBSTRATE

HEIGHT 15\" (381 mm)

LENGTH 48\" (1200 mm) MIN. 72\" (1800 mm) MAX.** 1\" (25mm) INCREMENTS OF LENGTH

THICKNESS 0.125\" (3mm)

SUBSTRATE ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH

SIGN FACE MATERIALS BLUE FILM OVER DIAMOND GRADE FP-85, SECTION 718 AND L-S-300C

LEGENDS AND SYMBOLS SERIES D (USUAL) SERIES C OR B FOR MAXIMUM LENGTH SIGN BLANK, IF NECESSARY

COLOR WHITE LEGEND ON BLUE BACKGROUND

LETTER TRACKING 17% (USUAL) 10% (MIN.)

CITY OF SAN ANTONIO
TRAFFIC ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

TRAFFIC SIGN STANDARDS
METRO
STREET NAME SIGN
AND SIGN PLACEMENT

TE-SGN(4)-06

COND/ENR	APPROJ	DATE	1:30:06	SHT NO.
DRW/APP	ENR	DATE	2:6:06	4 OF 4
PRVD	APPROJ	DATE		SCALE: NOT TO SCALE

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY EDWARD H. MERRY, P.E., # 58988 ON 02-06-08 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

TMM SOMERSET, UNIT 3A
SAN ANTONIO, TX
SANITARY SEWER IMPROVEMENTS

**SAWS STANDARD GENERAL CONSTRUCTION NOTES
ASSOCIATED WITH 2022 SAWS STANDARD SPECS
UPDATED JANUARY, 2022**

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 SHALL BE IN ACCORD WITH THE CITY 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 200 AND 'PUBLIC UTILITY DESIGN CRITERIA' TAC TITLE 30 PART 1 CHAPTER 200
 - B. CURRENT 'XDOT' 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 ATTENDED 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_centers/specs UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
4. THE CONTRACTOR SHALL BE IN AGREEMENT 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 IS 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 AT LEAST 7 BUSINESS DAYS FOR LOCATES PRIOR TO STARTING PIPE INSTALLATION WORKS ON THE PLANS. 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) 206-9696
 - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
 - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-455-6008 OR 811

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL CONDITION PRIOR TO CONSTRUCTION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
8. ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEAR BRIDGE RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND 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 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 ANY OF THE FOLLOWING HOLIDAYS: NEW YEAR'S DAY, MARTIN LUTHER KING, JR. DAY, EASTER, MEMORIAL DAY, INDEPENDENCE DAY, LABOR DAY, THANKSGIVING, CHRISTMAS, AND NEW YEAR'S EVE. CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST A WEEKEND WORK PERMIT. CONTRACTORS MUST OBTAIN A WEEKEND WORK PERMIT FROM CONSWORKPERM@SAWS.ORG. WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST A WEEKEND WORK PERMIT. CONTRACTORS MUST OBTAIN A WEEKEND WORK PERMIT FROM CONSWORKPERM@SAWS.ORG. ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER REPAIR.
12. COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE BACKFILL TO BE PERFORMED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 40 LINEAR FEET MINIMUM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE BACKFILL WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
13. A COPY OF ALL TEST RESULTS 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 TELEVIEWING 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 SWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
3. TO THE IN-AGE, ALL 24" TO 36" DIAMETER MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SWS CONSTRUCTION INSPECTION DIVISION AT (210) 333-2873 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO OBTAIN A SEQUENCE OF WORK ORDER FROM THE SWS CONSTRUCTION INSPECTION DIVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST TO SWS 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 2426, 2427, 2428, 2429, 2433 AND TCEQ 290.44(E)/(F). CONTRACTOR SHALL CENTER A 20' JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.
5. ALL JOINTS POSITIONED 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 PROJECTS
6. SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS OR OTHER LIQUIDS MUST BE REPORTED TO THE SWS CONSTRUCTION INSPECTION DIVISION 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 BY THE SWS CONSTRUCTION INSPECTION DIVISION. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN A WORK ORDER FROM THE INSPECTION DIVISION, AS PER THE SWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
8. ALL 16" TO 18" DIAMETER 14 PSI OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 15 PSI.



LOCATION MAP
NOT-TO-SCALE

OWNER INFORMATION:
KB HOMES
4800 FREDERICKSBURG RD.
SAN ANTONIO, TX 78229
PHONE: (210) 301 - 5485

SHEET TITLE	SHEET NUMBER
SANITARY SEWER COVER SHEET	6.0
OVERALL SANITARY SEWER PLAN (SHT 1 OF 2)	6.1
OVERALL SANITARY SEWER PLAN (SHT 2 OF 2)	6.2
LINE "A" PLAN & PROFILE (SHT 1 OF 2)	6.3
LINE "A" PLAN & PROFILE (SHT 2 OF 2)	6.4
LINE "B" PLAN & PROFILE	6.5
LINE "C" PLAN & PROFILE	6.6

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[illegible]

CLAYTON J. LINNEY
111543
LICENSED
PROFESSIONAL ENGINEER

Clayton Linney
4/25/2015

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909 - TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers
Engineering
& Design

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

SCALE: AS SHOWN	DATE: 01/22/25	DRAWN BY: JA	CHECKED BY: CG
PROJECT NUMBER: 418-14-07		DRAWING NAME: CVSS4181407	

SHEET TITLE:

SANITARY SEWER COVER SHEET

SHEET NUMBER:

6.0

DEVELOPER'S NAME: KB HOME LONESTAR INC.		
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD		
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78229
PHONEN: (210) 301-5485	FAX#:	TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 128530, 128532		TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2.651 L/F ~ 8" SDR 26		PLAT NO.: 23-11800289
NUMBER OF LOTS: 78		SAWS JOB#: 23-1605

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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.

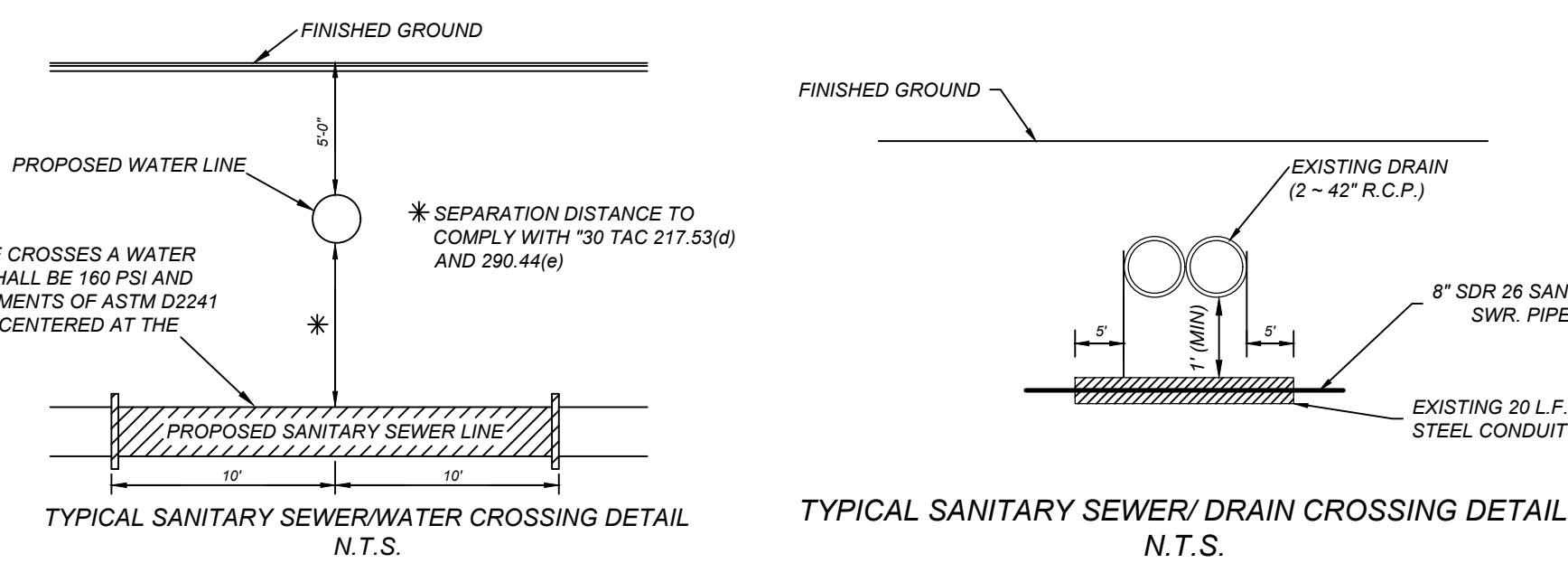
MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENT PER SAWS DETAIL DD852-02.

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 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 6.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. SEE THIS SHEET FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 26.
5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

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:
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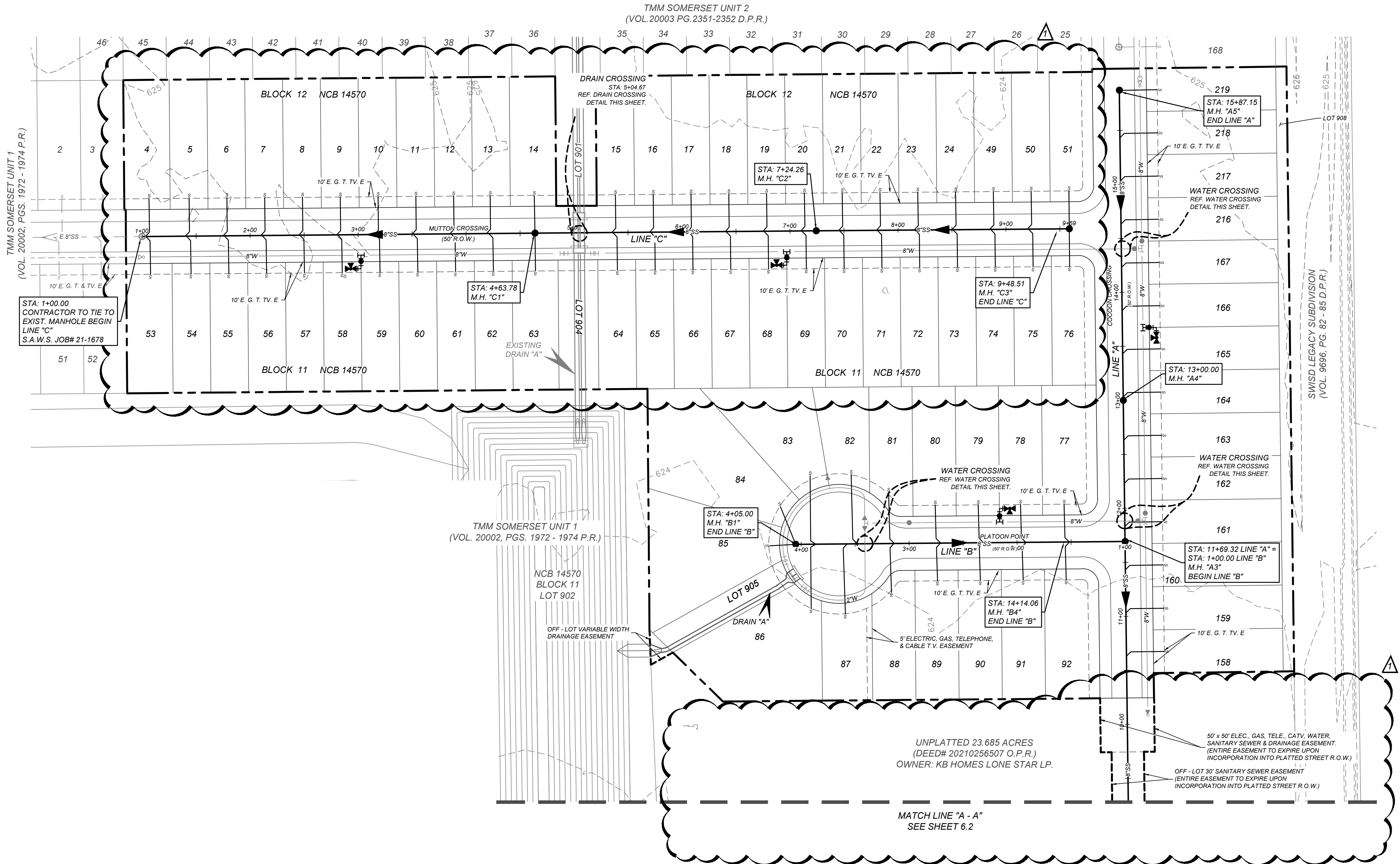
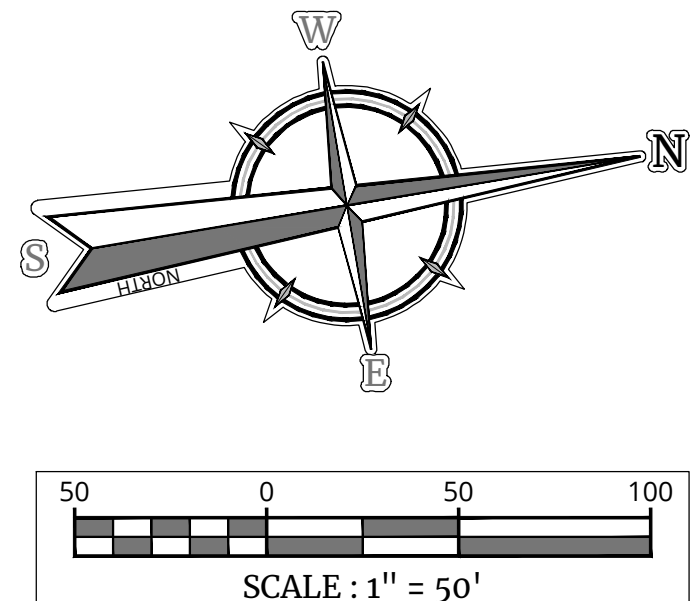


LEGEND

- PROPOSED WATER MAIN = W
- PROPOSED WATER SERVICE & METER BOX = W
- PROPOSED WATER 3/4\"/>
- PROPOSED FIRE HYDRANT = F
- PROPOSED WATER VALVE = W
- PROPOSED SANITARY SEWER MAIN = SS
- PROPOSED SANITARY SEWER MANHOLE = S
- 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 = F
- EXISTING WATER VALVE = W
- EXISTING SANITARY SEWER MAIN = S.S.
- EXISTING SANITARY SEWER MANHOLE = S
- EXISTING OVERHEAD ELECTRIC W/POWER POLE = OHE
- EXISTING GUY WIRE/OVERHEAD ELECTRIC = OHE



LOCATION MAP
NOT-TO-SCALE



DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 126530, 126532 TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2,651 L.F. ~ 8\"/>

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STATE OF TEXAS

CLAYTON J. LINNEY

111543

CLAYTON J. LINNEY

5/19/2025

CLAYTON J. LINNEY

TEXAS LICENSED PROFESSIONAL ENGINEER

LICENSE NUMBER: 111543

COLLIERS ENGINEERING & DESIGN, INC.

TBPE Firm#: E-14909 TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A

PLAT# 23-11800289

FOR

KB HOME

CITY OF SAN ANTONIO

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#: E-14909 TBPLS Firm#: 10194550

SCALE: AS SHOWN

DATE: 01/22/25

DRAWN BY: JA

CHECKED BY: CG

PROJECT NUMBER: 418-14-07

DRAWING NAME: 054181407

SHEET TITLE: OVERALL SANITARY SEWER PLAN (SHT 1 OF 2)

SHEET NUMBER: 6.1

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.

MANHOLE NOTE:
ALL MANHOLES MUST BE WATERTIGHT, WITH WATERTIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL 00855-02.

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 6.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
3. SEE THIS SHEET FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 35.
5. SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
6. ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.

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:

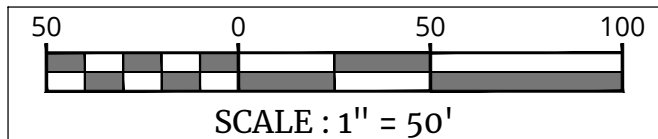
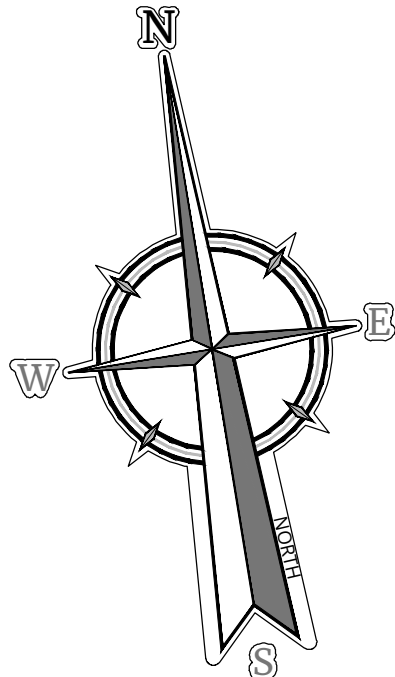
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LEGEND

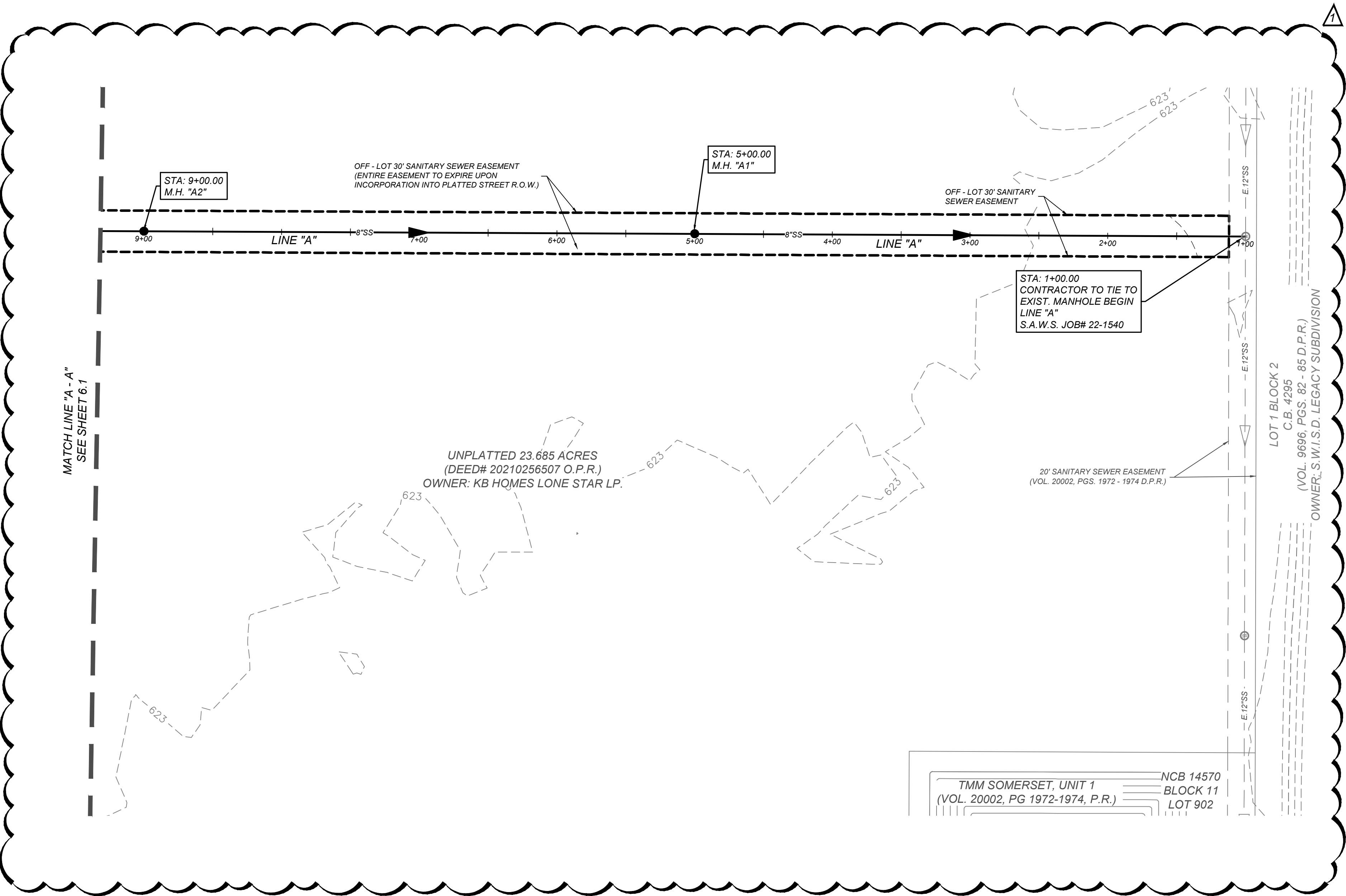
- PROPOSED WATER MAIN = W
- PROPOSED WATER SERVICE & METER BOX =
- PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX =
- PROPOSED FIRE HYDRANT =
- PROPOSED WATER VALVE =
- PROPOSED SANITARY SEWER MAIN = SS
- PROPOSED SANITARY SEWER MANHOLE =
- PROPOSED SANITARY SEWER LATERAL & CABLE TV EASEMENT = E. 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
- EXISTING GUY WIRE/OVERHEAD ELECTRIC =



**LOCATION MAP
NOT-TO-SCALE**



Linear unit of measure: International Foot (1 ft = 0.3048 m)



DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 126530, 126532 TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2,651 L.F. ~ 8" SDR 26 PLAT NO.: 23-11800289
NUMBER OF LOTS: 78 SAWS JOB#: 23-1605

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REV	DATE	DESCRIPTION	DRAWN BY	DATE	DESCRIPTION
1	1/27/25	REVISED LOT LAYOUT FOR BLK 11 LOTS 434 & 450 & BLK 12 LOTS 537 & 539 & REMOVED LOTS.	JA		

STATE OF TEXAS
CLAYTON J. LINNEY
111543
CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: E-14909 TBPLS Firm#: 10194550

**TMM SOMERSET, UNIT 3A
PLAT# 23-11800289**

**FOR
KB HOME**

**CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS**

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

SCALE: AS SHOWN	DATE: 01/22/25	DRAWN BY: JA	CHECKED BY: CG
PROJECT NUMBER: 418-14-07	DRAWING NAME: 054181407	SHEET TITLE: OVERALL SANITARY SEWER PLAN (SHT 2 OF 2)	SHEET NUMBER: 6.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

TRENCH EXCAVATION SAFETY PROTECTION

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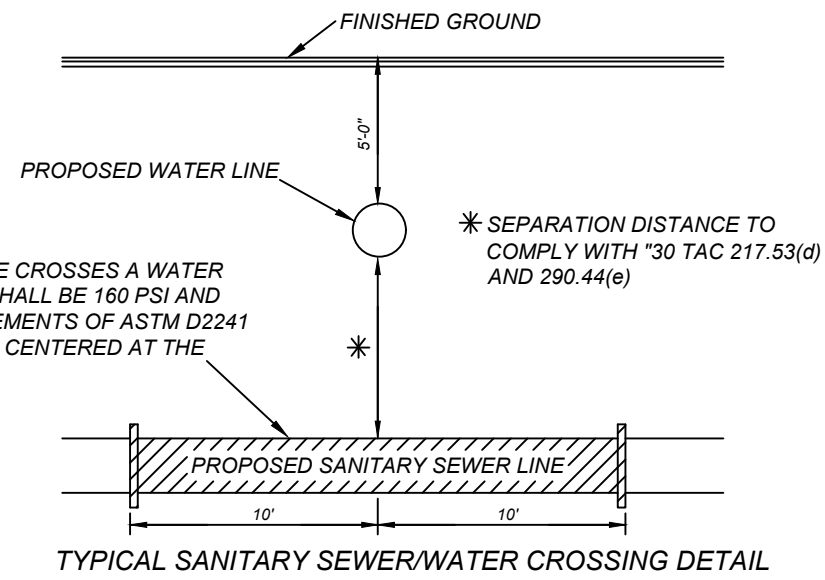
MANHOLE NOTE:

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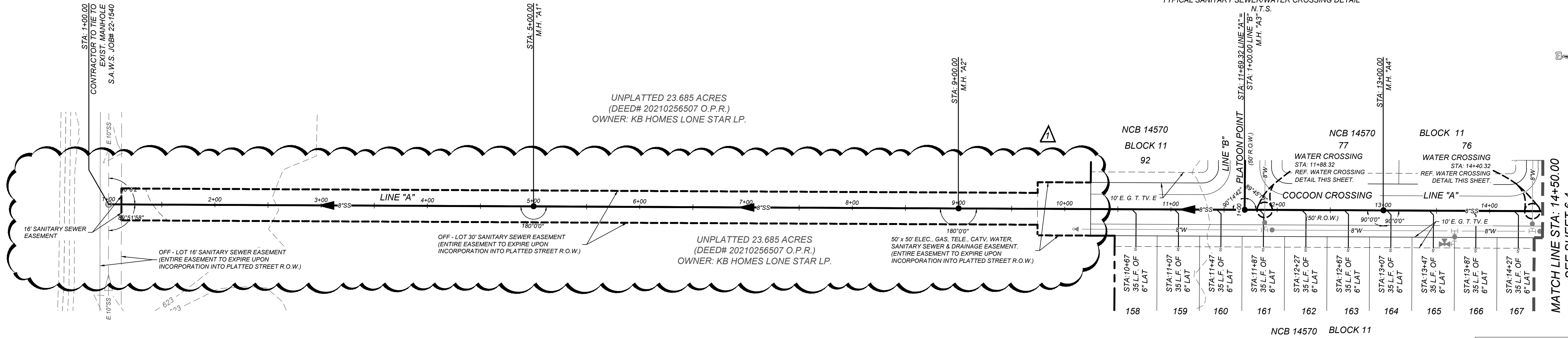
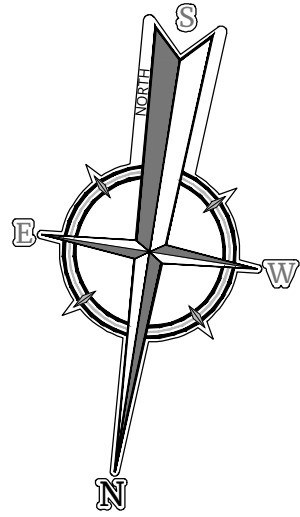
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3. SEE THIS SHEET FOR BENCHMARK INFORMATION.
4. PIPE TYPE DESIGNATIONS ARE SDR 26.
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DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 126533, 126532 TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2,651 L.F. ~ 8" SDR 26 PLAT NO.: 23-11800289
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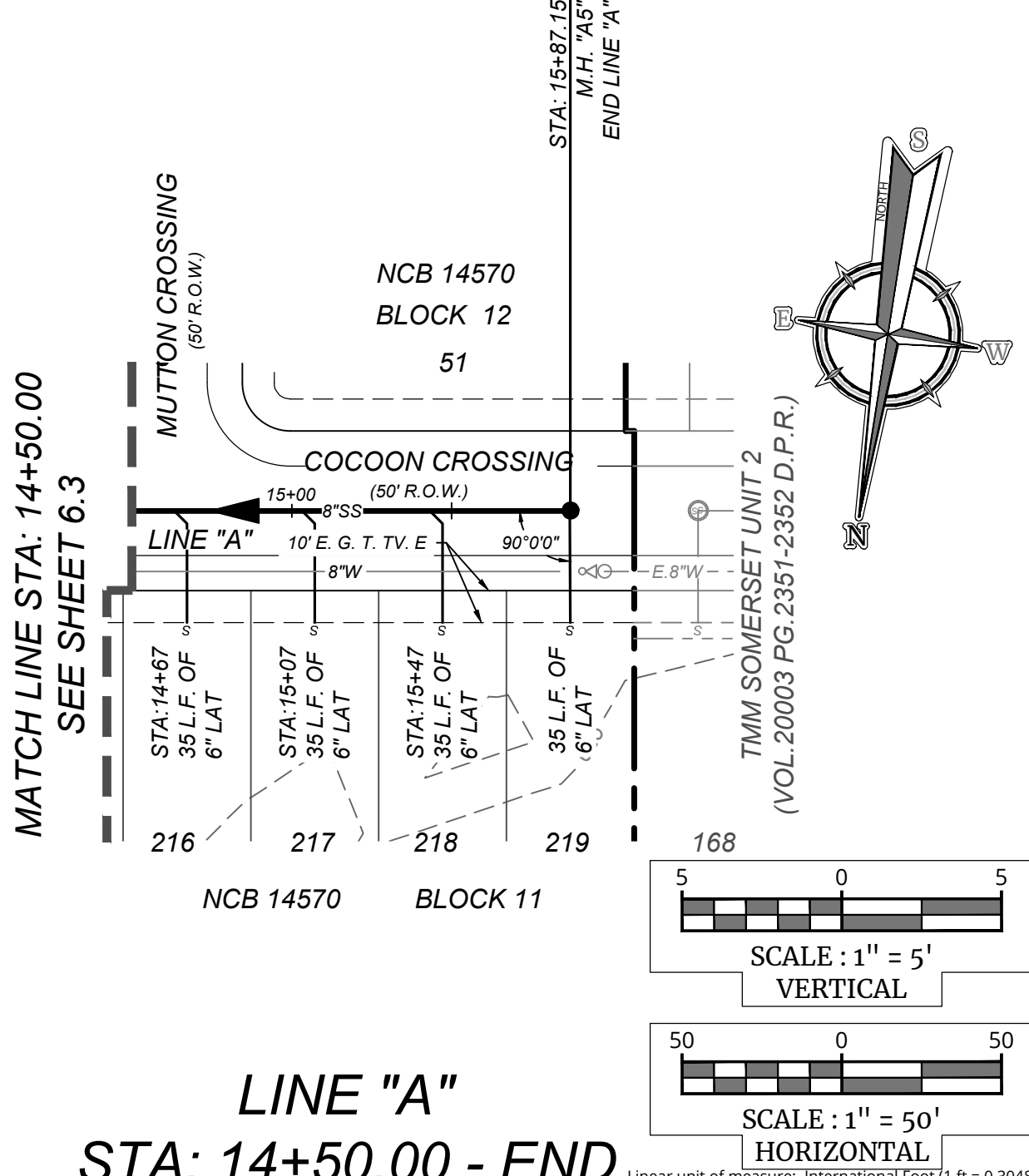
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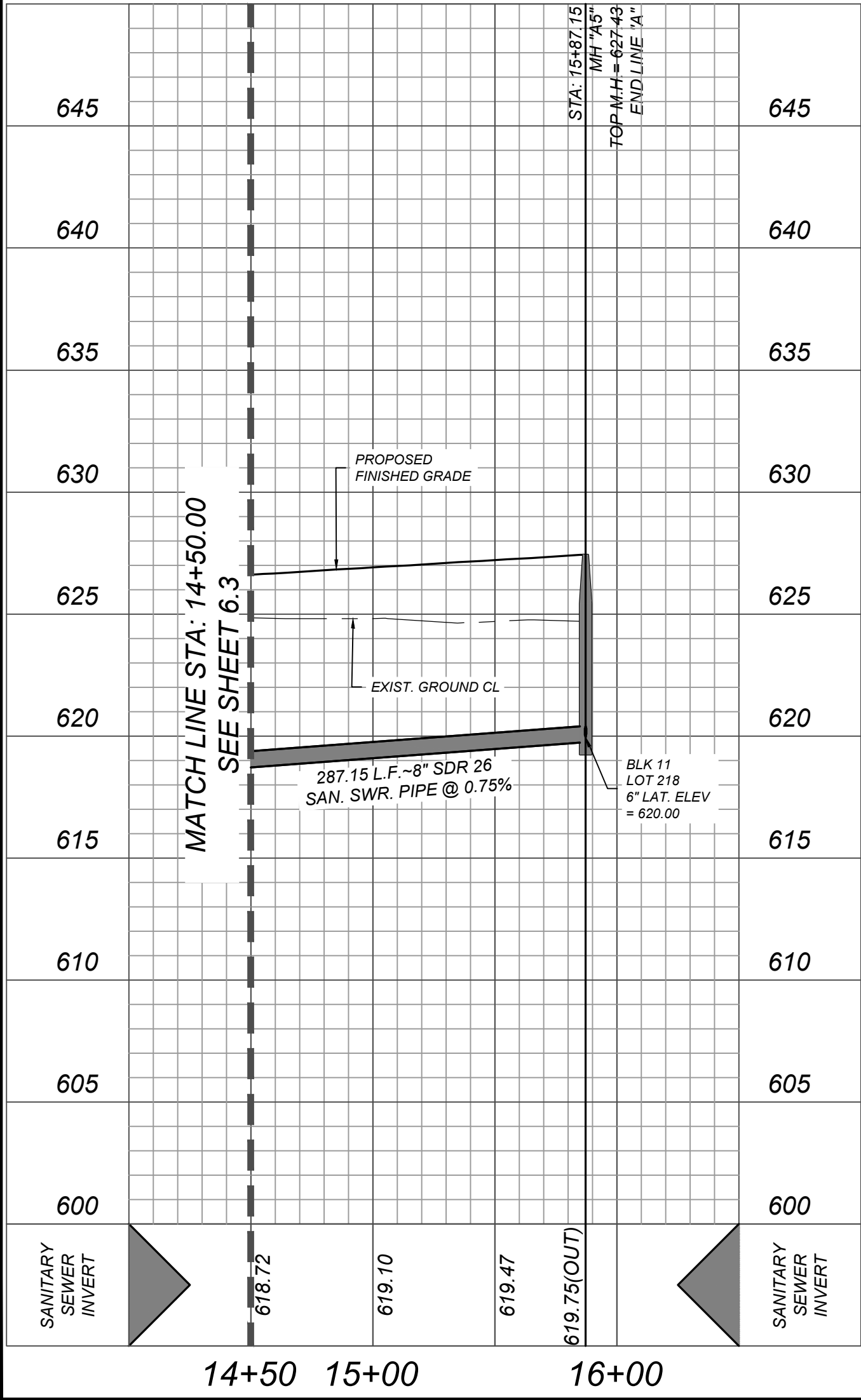
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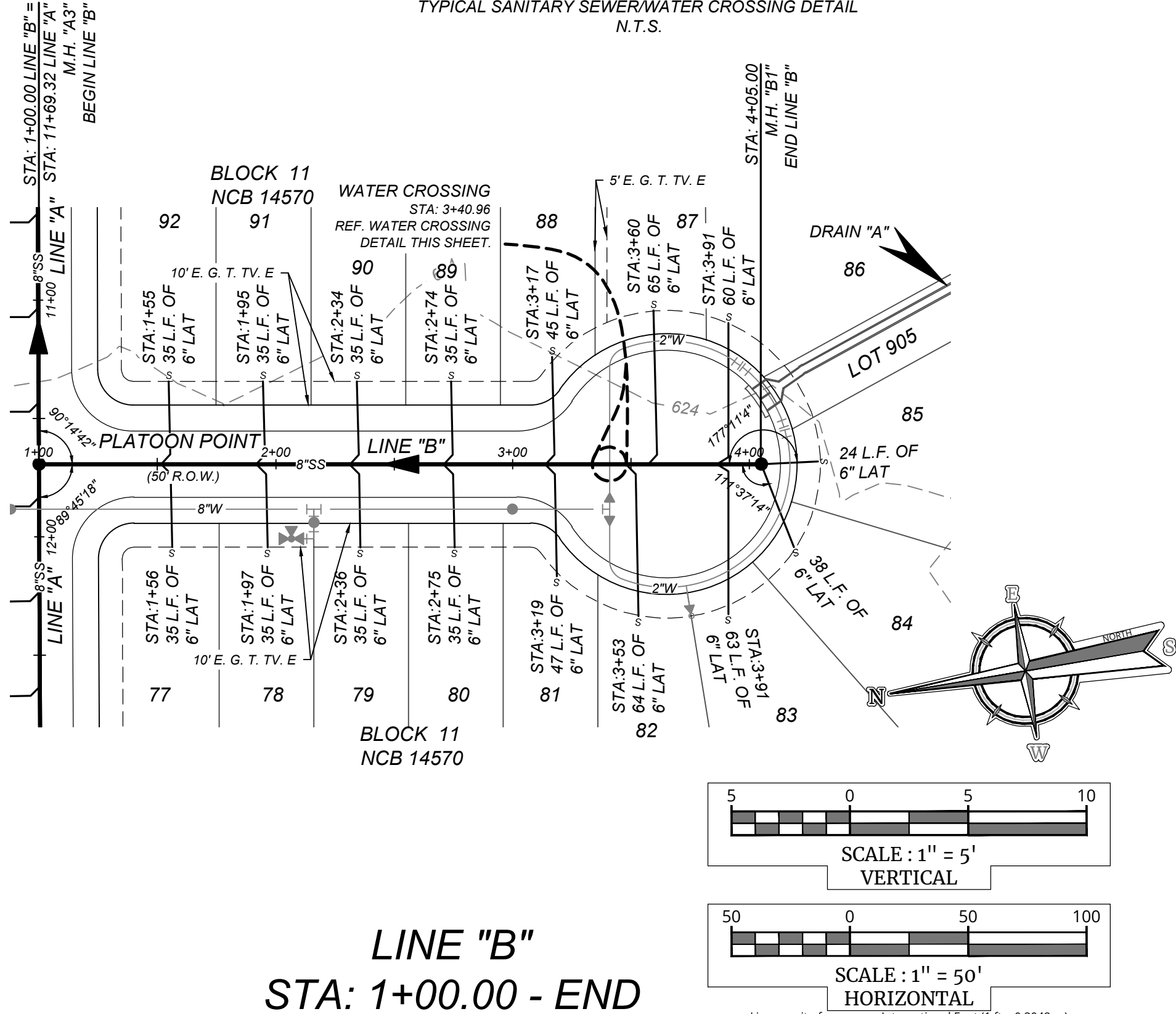
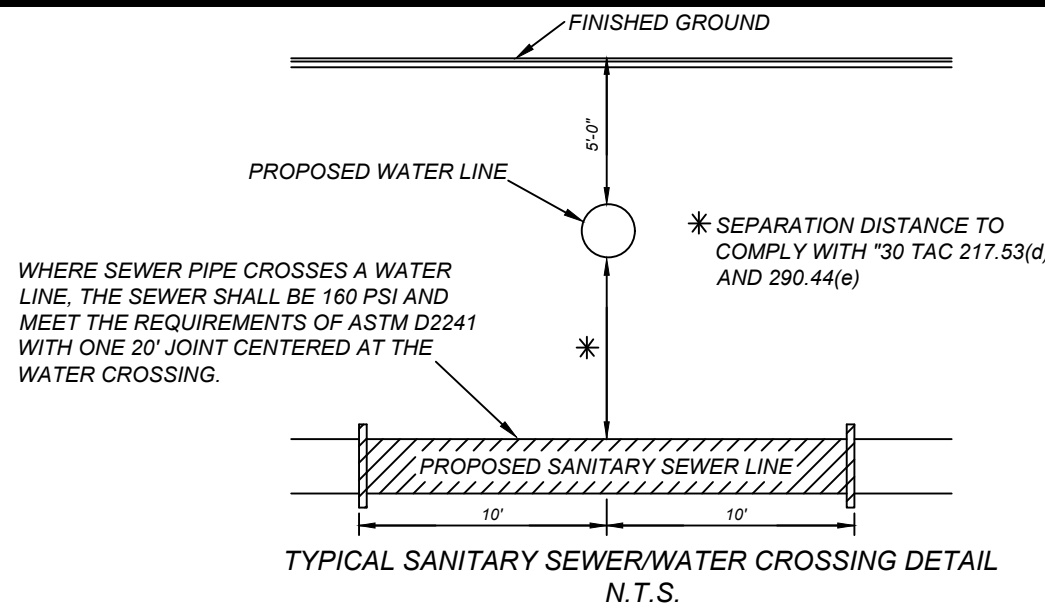


LINE "A"
STA: 14+50.00 - END

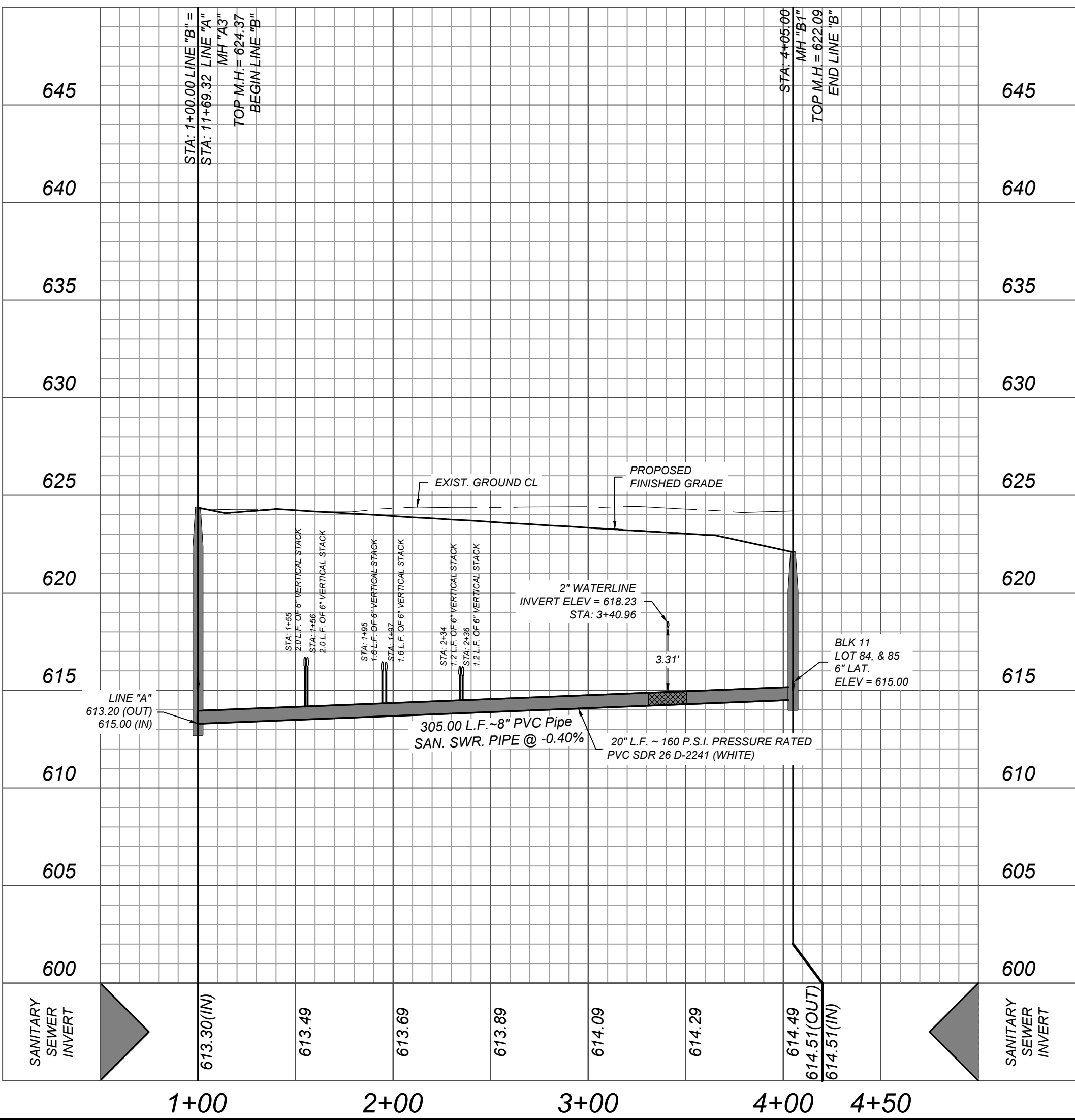


NOTE:

- 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.
- 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 6.0, SANITARY SEWER GENERAL NOTES, S.A.W.S. CRITERIA FOR SEWER MAIN CONSTRUCTION IN THE VICINITY OF WATER MAINS.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- PIPE TYPE DESIGNATIONS ARE SDR 26
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.



LINE "B"
STA: 1+00.00 - END



DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 126530, 126532 TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2,651 L.F. ~ 8" SDR 26 PLAT NO.: 23-11800289
NUMBER OF LOTS: 78 SAWS JOB#: 23-1605

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& Design

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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
1	1/27/25	JA	REVISED LOT LAYOUT FOR BLK 11, LOTS 43-44 & BLK 12, LOTS 53-75 & REMOVED LOTS.



CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: E-14909 TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
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#: E-14909 TBPLS Firm#: 10194550

SCALE: AS SHOWN DATE: 01/22/25 DRAWN BY: JA CHECKED BY: CG
PROJECT NUMBER: 418-14-07 DRAWING NAME: 554181407

SHEET TITLE:
LINE "A" AND "B" 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 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.

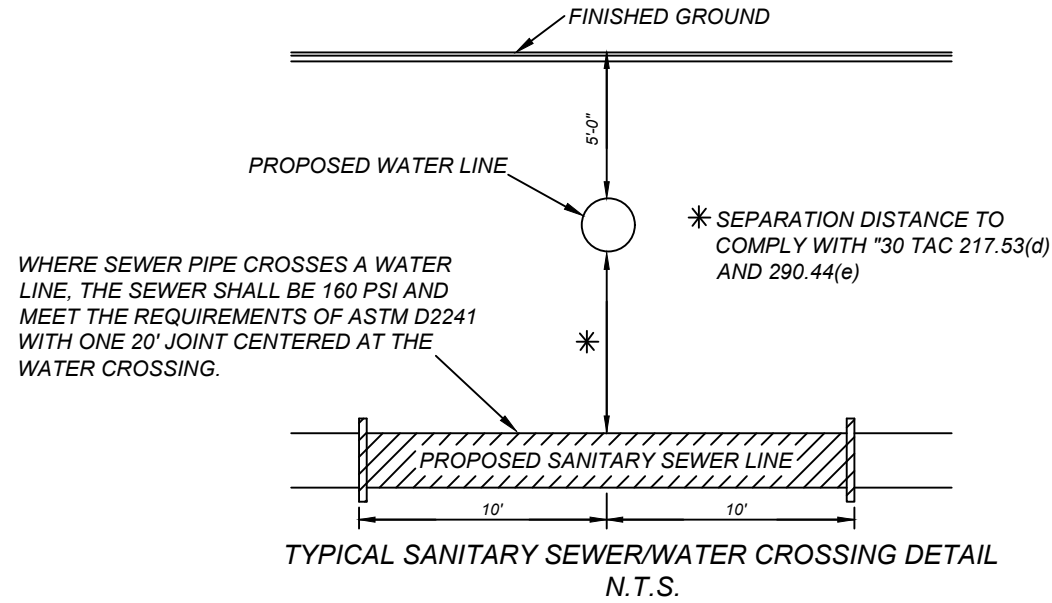
COMPACTION NOTE:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAYING FOR THE TESTS TO BE PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED OR AS INDICATED BY THE SAWS INSPECTOR/TEST ADMINISTRATOR, PER EACH 12 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 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-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.

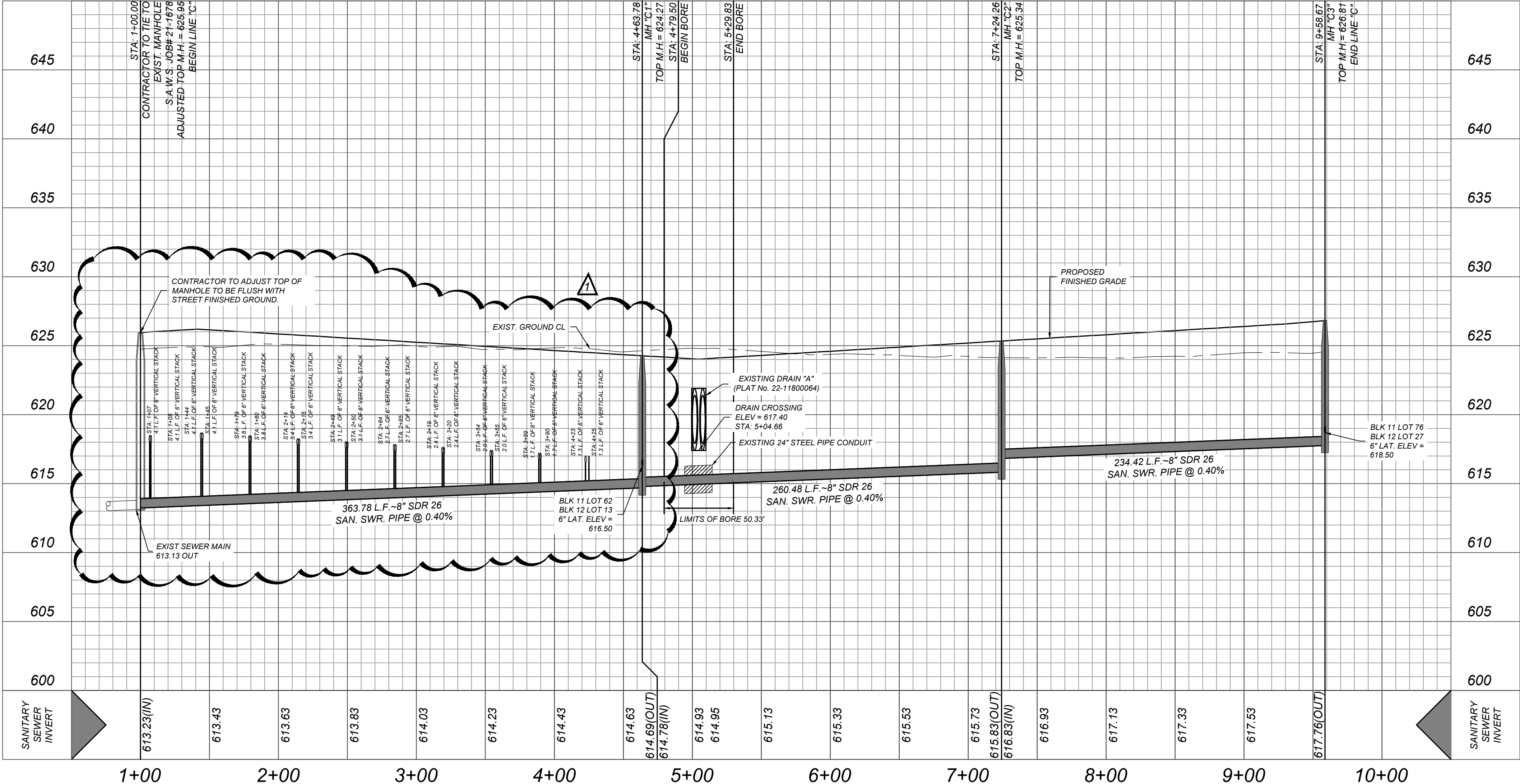
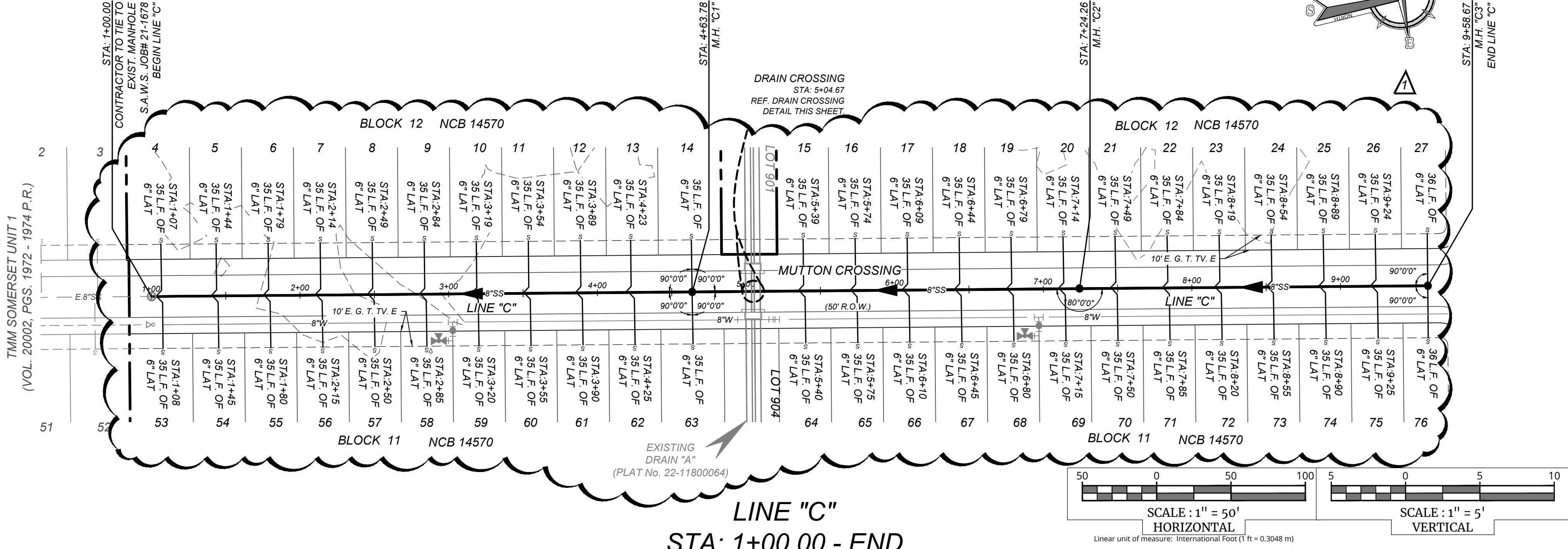
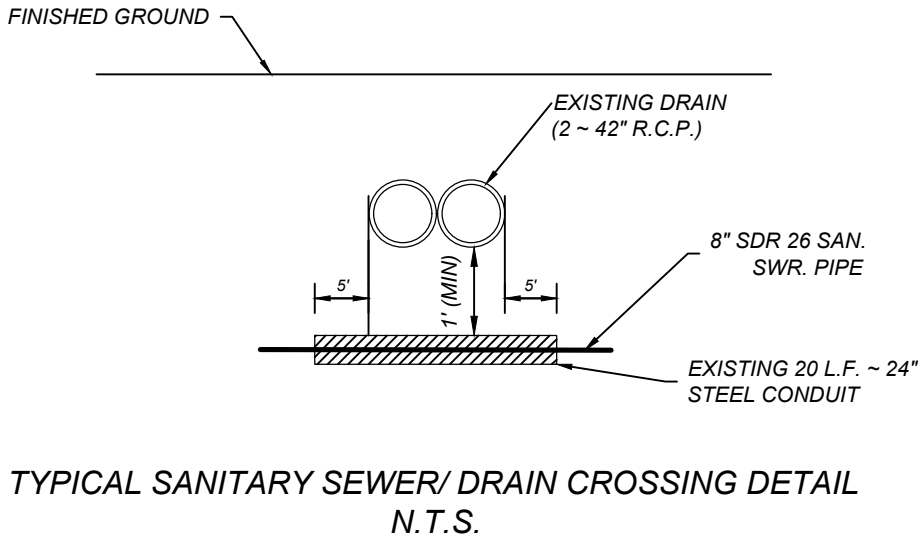
MANHOLE NOTE:
ALL MANHOLES MUST BE WATER TIGHT, WITH WATER TIGHT RINGS AND COVERS. THESE MANHOLES MUST BE VENTED PER SAWS DETAIL DD852-02.

NOTE:

- 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.
- 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). PIPE TYPE DESIGNATIONS ARE SDR 26.
- SEE THIS SHEET FOR BENCHMARK INFORMATION.
- SEE THIS SHEET FOR TYPICAL SANITARY SEWER / WATER CROSSING DETAIL.
- ALL MANHOLES SHALL HAVE CONCRETE RING ENCASEMENT AND A WATER TIGHT RING AND COVER.



DEVELOPER'S NAME: KB HOME LONESTAR INC.
DEVELOPER'S ADDRESS: 2800 FREDERICKSBURG ROAD
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229
PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC.
SAWS BLOCK MAP#: 126530, 126532, 126530, 126532 TOTAL EDU'S: 78
TOTAL LINEAR FOOTAGE OF PIPE: 2,651 L.F. ~ 8" SDR 26 PLAT NO.: 23-11800289
NUMBER OF LOTS: 78 SAWS JOB#: 23-1605



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

REV	DATE	DRAWN BY	DESCRIPTION
1	1/27/25	JA	REVISED LOT LAYOUT FOR BLK 11, LOTS 434 & 49 & BLK 12 LOTS 537 & 576 & REMOVED LOTS.

STATE OF TEXAS
CLAYTON J. LINNEY
111543
LICENSED PROFESSIONAL ENGINEER

Clayton J. Linney
4/25/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBPE Firm#: F-14909 TBPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS

Colliers 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	01/22/25	JA	CG

PROJECT NUMBER:	DRAWING NAME:
418-14-07	SS4181407

SHEET TITLE:
LINE "C" PLAN & PROFILE

SHEET NUMBER:
6.5

\\NAS\SERVERS\SS4181407.dwg(6.5) BY: ACDORNA

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

The map illustrates the proposed site location within Bexar County, C.O.S.A. The site is situated on the east side of Watson Rd., north of Verano Pkwy. The site is divided into Unit 1 and Unit 2. The map also shows the location of the Bexar County C.O.S.A. building and the Bexar County Courthouse. A north arrow is located in the top right corner.

OWNER INFORMATION:
KB HOMES
4800 FREDERICKSBURG RD.
SAN ANTONIO, TX 78229
PHONE: (210) 301 - 5485

SHEET TITLE	SHEET NUMBER
WATER DISTRIBUTION COVER SHEET	7.0
WATER DISTRIBUTION PLAN	7.1

DEVELOPER'S NAME: KB HOME LONESTAR INC.

DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78229

PHONE#: (210) 301-5485 FAX#: TOTAL ACREAGE: 11.68 AC

SAWS BLOCK MAP#: 126530, 126532, 126530, 126532 TOTAL EDU#: 78

TOTAL LINEAR FOOTAGE OF PIPE: 1,780 L.F. - 8" DR-11 H.D.P.E. PLAT NO.: 23-11600289
277 L.F. - 2" H.D.P.E.

NUMBER OF LOTS: 78
SAWS JOB#: 23-1132



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 DEPARTMENT'S COORDINATION STAFF. DIVISION VALVES SHALL BE OPERATED BY THE DISTRIBUTION STAFF AT 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 WITHOUT THE WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE 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 INDIRECT, THAT MAY BE INCURRED OR ARISE FROM THE VIOLATION OF THE DIVISION 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 ID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY AND THE MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

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.

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.

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.

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.

PRESSURE REDUCING VALVE (PRV) NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 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 PRVS REQUIRED ARE DESIGNATED BY AN ASTERISK (*).

*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV)

COMPACTION NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING 98% COMPACTION ON ALL TRENCH BACKFILL AND PAVING 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 LINEAL 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.

WATER PLAN NOTES:

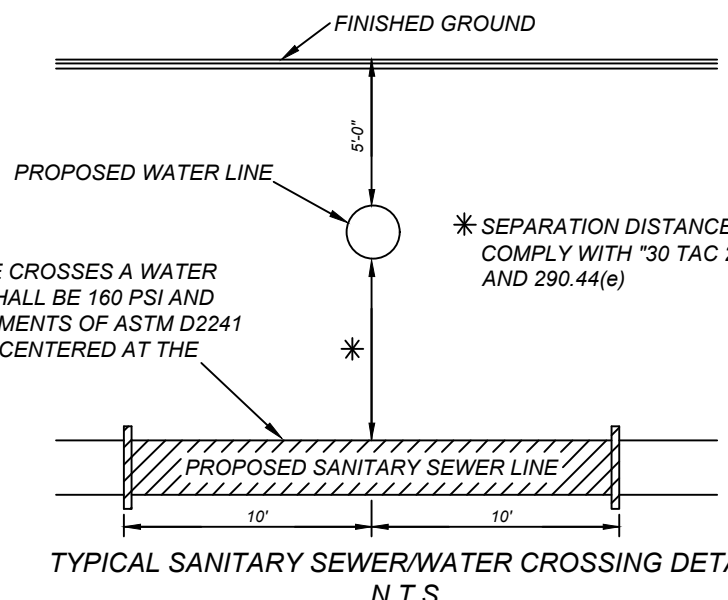
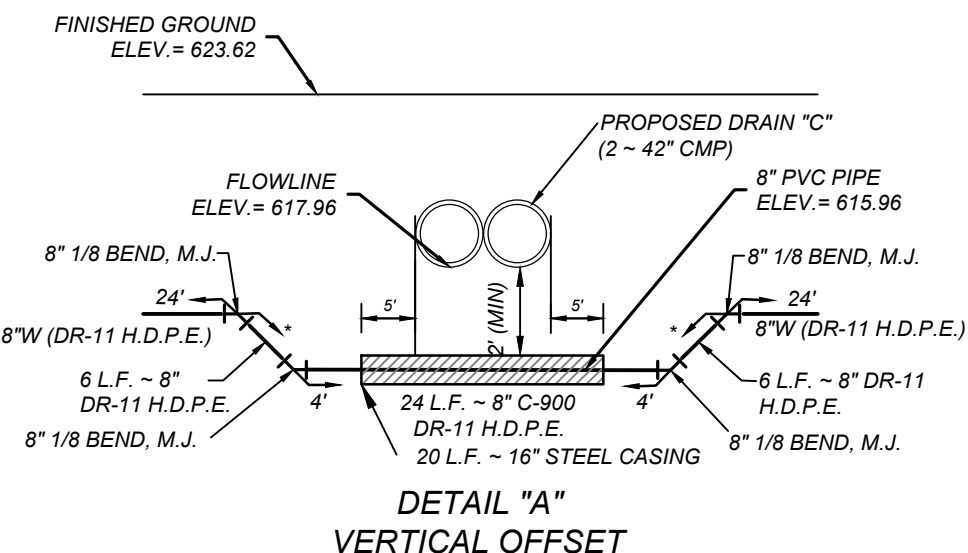
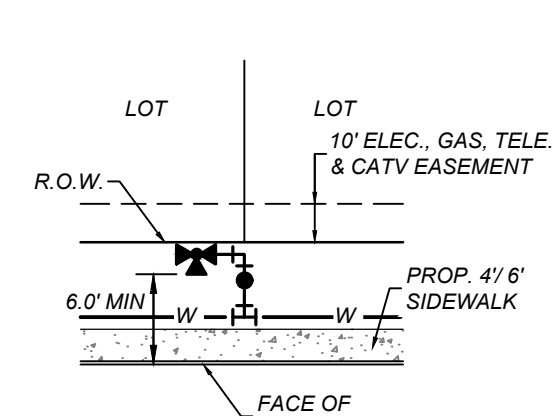
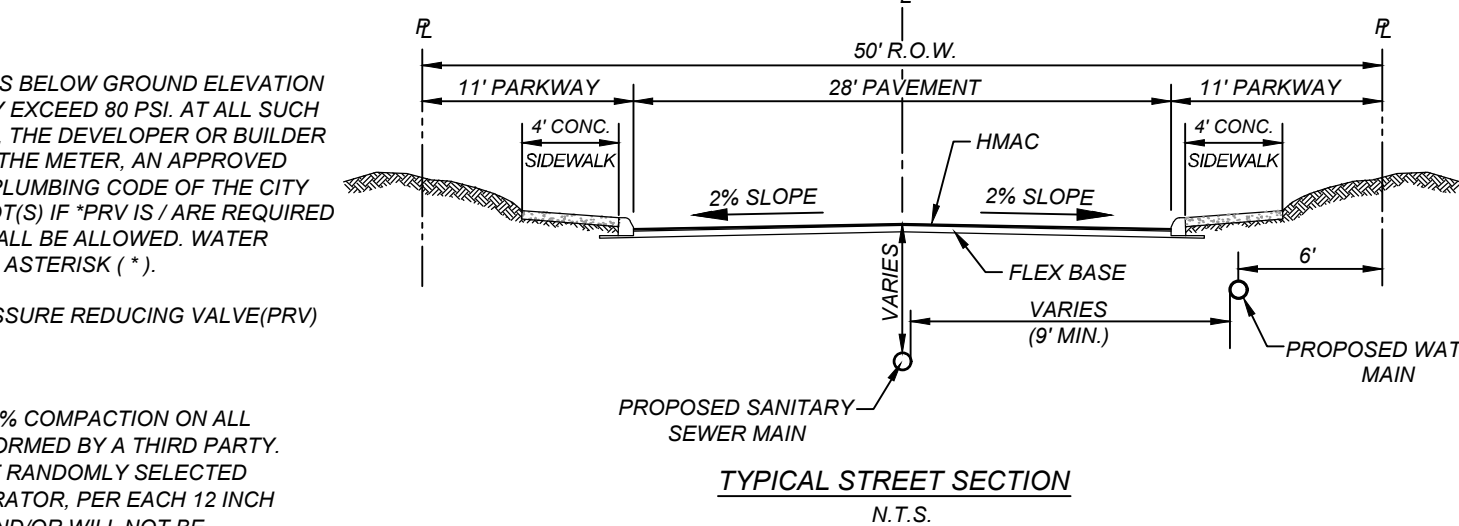
1. ALL VALVES SHALL READ "OPEN RIGHT"

2. ALL PIPE TO BE DR-11 HDPE UNLESS OTHERWISE NOTED

SAWS NOTE:

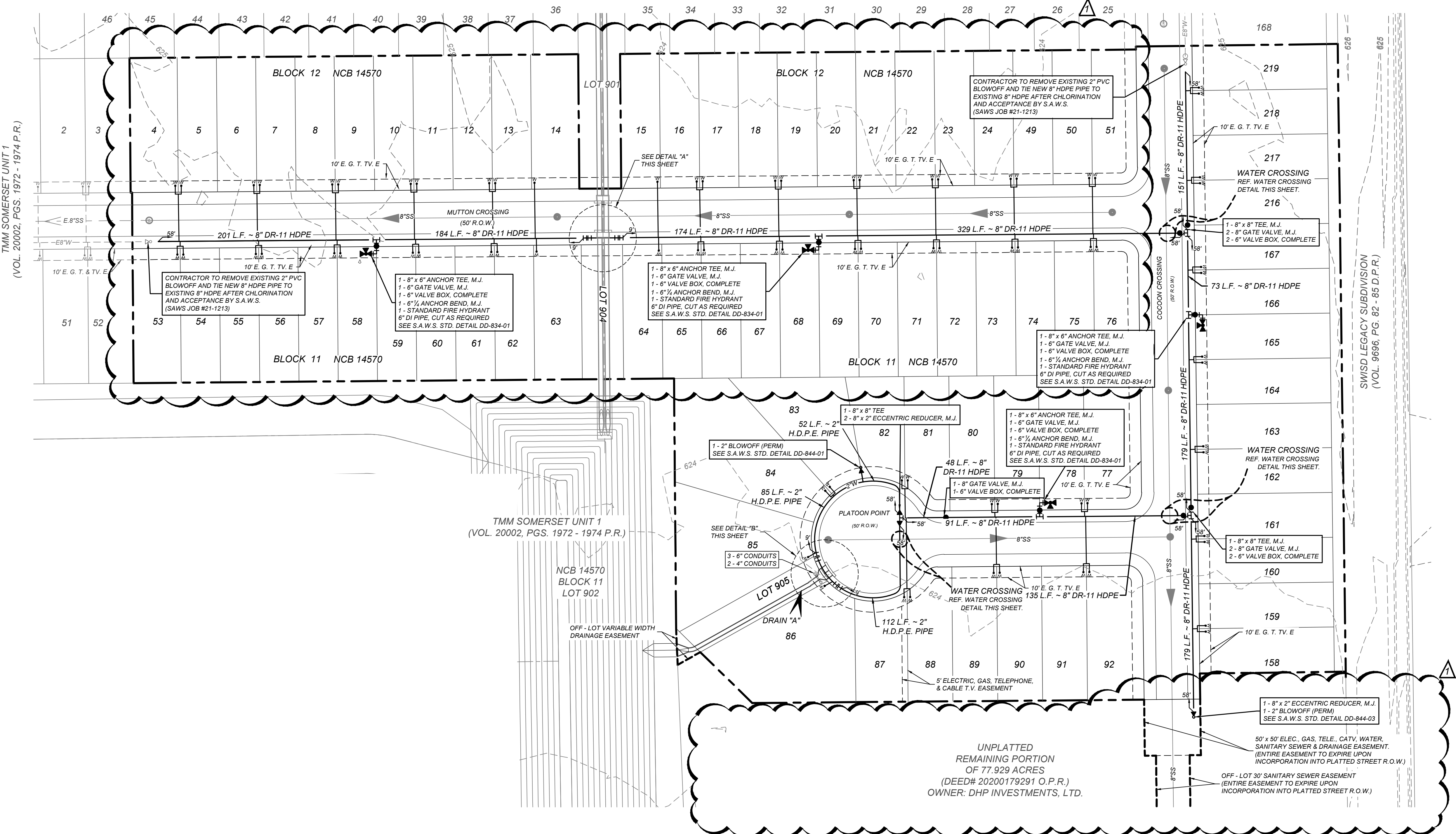
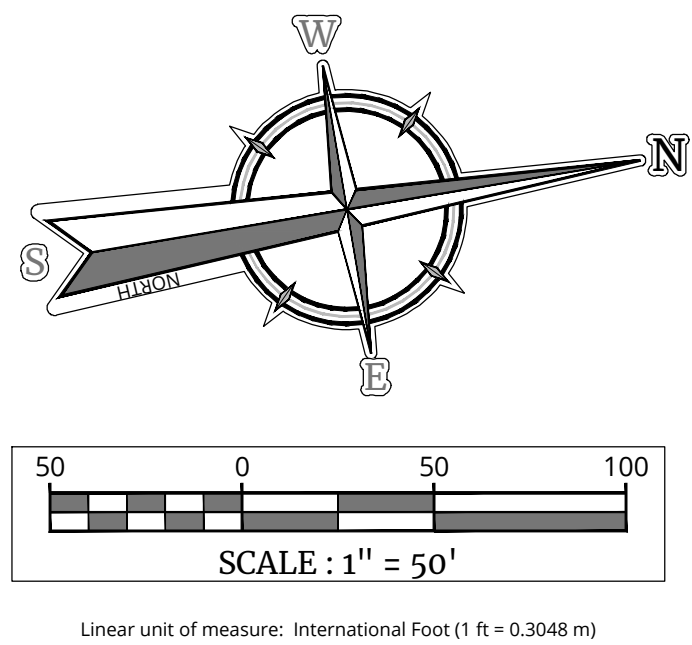
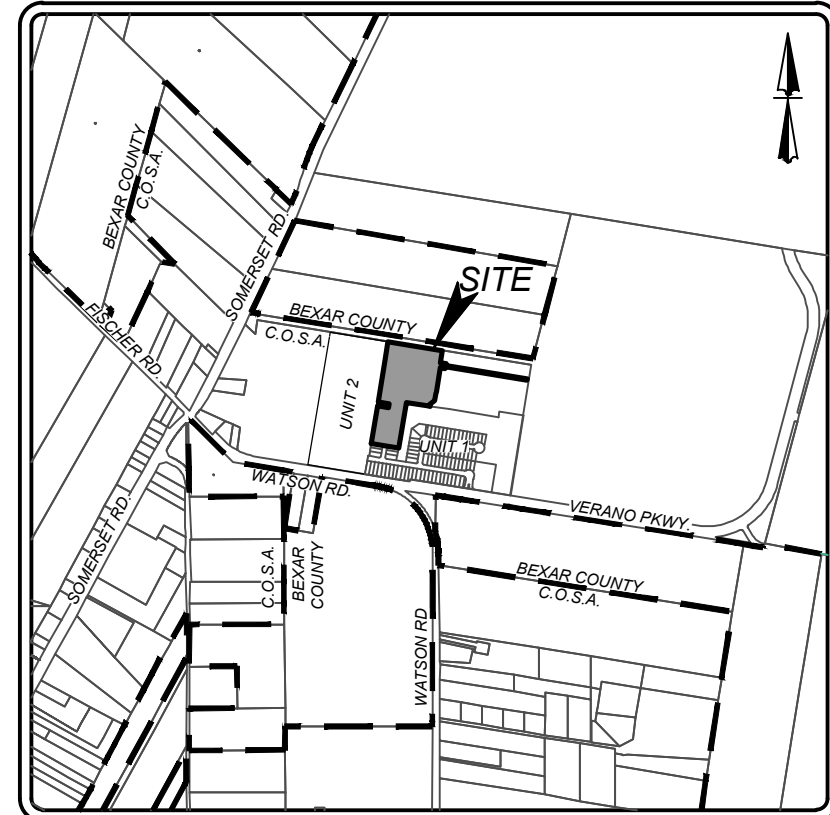
1. "SAWS REQUIRES GCPs AND COUNTER PERMIT TO USE LEAD FREE (<0.25% LEAD) FIRE HYDRANTS."

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.



LEGEND

- PROPOSED WATER MAIN
- PROPOSED WATER SERVICE & METER BOX
- PROPOSED 3/4" SINGLE WATER SERVICE & 5/8" METER W/ METER BOX W/ PRV
- PROPOSED WATER 3/4" IRRIGATION SERVICE & METER BOX
- PROPOSED FIRE HYDRANT
- PROPOSED WATER VALVE
- PROPOSED SANITARY SEWER MAIN
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED ELECTRIC, GAS, TELE. & CABLE TV EASEMENT
- EXISTING WATER MAIN
- EXISTING FIRE HYDRANT
- EXISTING WATER VALVE
- EXISTING SANITARY SEWER MAIN
- EXISTING SANITARY SEWER MANHOLE
- EXISTING OVERHEAD ELECTRIC W/ POWER POLE
- EXISTING GUY WIRE/OVERHEAD ELECTRIC



SERVICE AREA: 790			
DEVELOPER'S NAME: KB HOME LONESTAR INC.			
DEVELOPER'S ADDRESS: 4800 FREDERICKSBURG RD.			
CITY: SAN ANTONIO		STATE: TEXAS	
PHONE#: (210) 301-5485		FAX#: 210.979.8444	
SAWS BLOCK MAP#: 126530, 126532, 126530, 126532		TOTAL ACREAGE: 11.68 AC	
TOTAL LINEAR FOOTAGE OF PIPE: 1,780 L.F. - 8" DR-11 H.D.P.E.		TOTAL EDU'S: 78	
NUMBER OF LOTS: 78		SAWS JOB#: 23-1132	

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REV.	DATE	DRAWN BY	DESCRIPTION
1	12/2/25	JA	REVISED LOT LAYOUT FOR BLK 11 LOTS 43-44 & 45-46 & BLK 12 LOTS 43-76 & REMOVED LOTS.

STATE OF TEXAS

CLAYTON J. LINNEY

111543

CLAYTON J. LINNEY

5/19/2025

TEXAS LICENSED PROFESSIONAL ENGINEER

CLAYTON J. LINNEY

CLAYTON J. LINNEY

CLAYTON J. LINNEY

TMM SOMERSET, UNIT 3A

PLAT# 23-11800289

FOR

KB HOME

CITY OF SAN ANTONIO

BEXAR COUNTY

TEXAS

Colliers

Engineering & Design

SAN ANTONIO (KFW)

3421 Paesanos

Parkway

San Antonio, TX 78231

Phone: 210.979.8444

CLAYTON J. LINNEY

CLAYTON J. LINNEY

CLAYTON J. LINNEY

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/22/25	JA	CG

PROJECT NUMBER:	DRAWING NUMBER:
418-14-07	0W4181407

SHEET TITLE:
WATER DISTRIBUTION PLAN

SHEET NUMBER:
7.1

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 ARE 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.

COORDINATION NOTE:

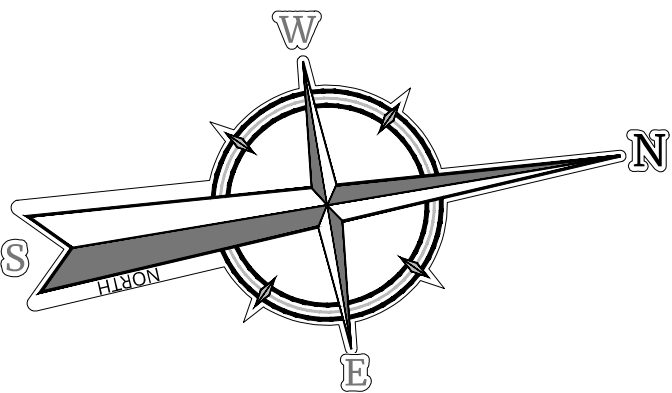
1. CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
2. CONDUIT FOR ELECTRICAL SERVICE, CONFIRM REQUIREMENTS AND COORDINATE WITH GPS FOR INSPECTION. (210) 353-2246.
3. CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
4. CONTRACTOR TO COORDINATE WITH GPS PRIOR TO CONSTRUCTION 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-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.

SW3P MODIFICATIONS

DATE	SIGNATURE	DESCRIPTION



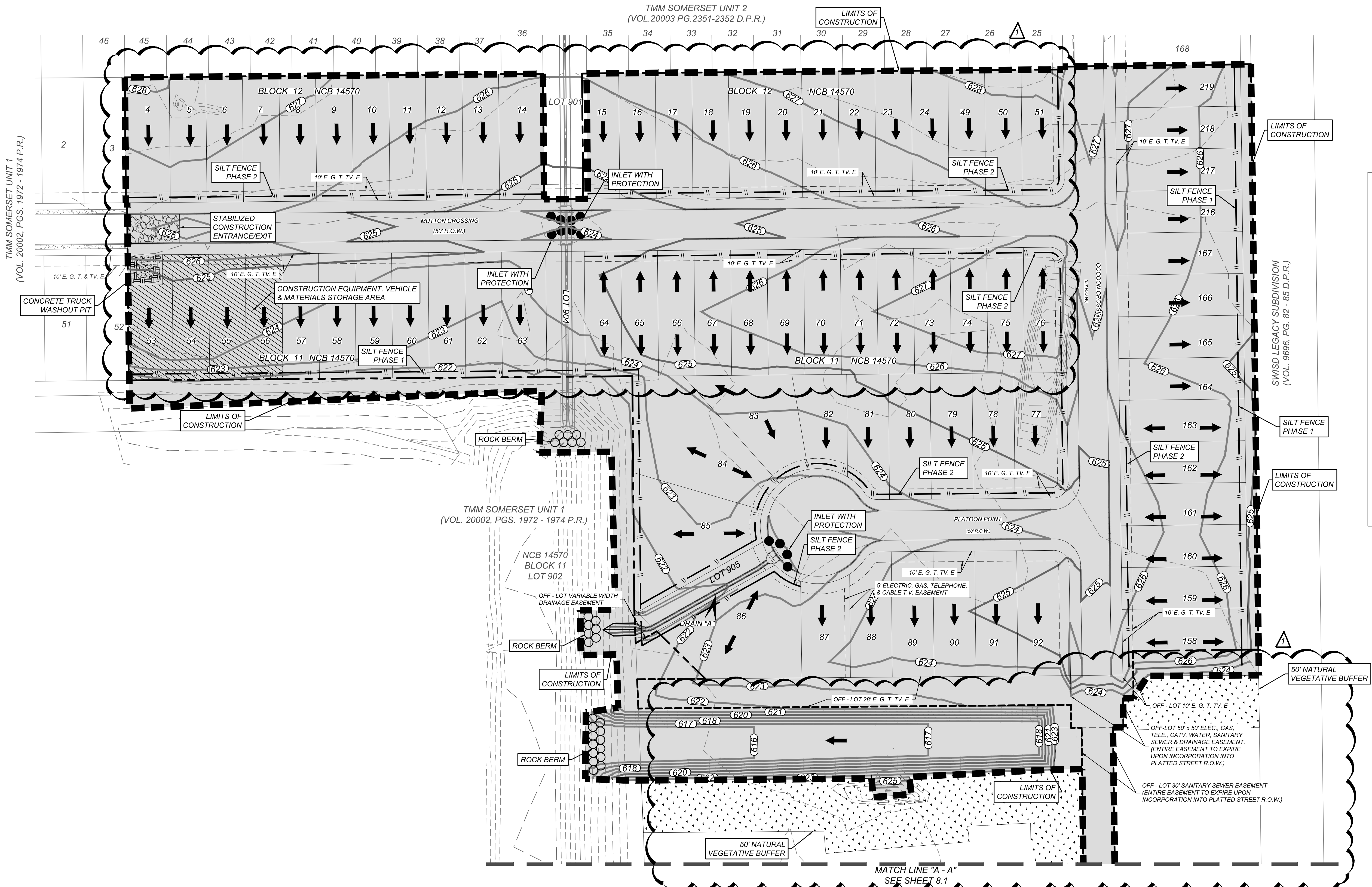
LOCATION MAP
NOT-TO-SCALE



50 0 50 100
SCALE : 1" = 50'
Linear unit of measure: International Foot (1 ft = 0.3048 m)

LEGEND

- LIMITS OF CONSTRUCTION
- - - EXISTING CONTOURS
- - - 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)



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Formerly known as

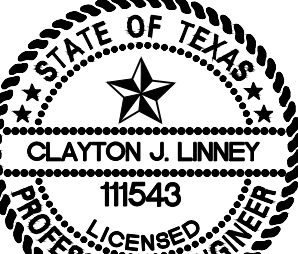
KFW



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REV	DATE	DESCRIPTION
1	12/2/25	REVISED LOT LAYOUT FOR BLK 11 LOTS 434 & 45-48 & BLK 12 LOTS 527 & 528 REMOVED LOTS.



Clayton J. Linney
8/18/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TBP# Firm#: E-14909 - TBP#S Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS



Engineering
& Design

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

SCALE:	DATE:	DRAWN BY:	CHECKED BY:
AS SHOWN	01/22/25	JA	CG

PROJECT NUMBER: 418-14-07
DRAWING NAME: SW3P4181407

SHEET TITLE:
STORM WATER
POLLUTION PREVENTION
PLAN (SHT 1 OF 2)

SHEET NUMBER:

8.0

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

INSTALLATION:

- 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.
- CONTRACTOR TO ENSURE THAT STRUCTURAL BMP'S ARE INSTALLED WITHIN THE LIMITS OF THE SITE BOUNDARY.
- 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.
- 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:

- 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.
- 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.
- 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:

- ALL DISTURBED AREAS ARE 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).
- 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.
- CONTRACTOR TO ENSURE THEY HAVE MET ALL REQUIREMENTS OF THE SWPPP BEFORE FILING A NOTICE OF TERMINATION (NOT).

GENERAL:

- 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.
- 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.
- ALL OWNERS/OPERATORS ARE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE STORMWATER POLLUTION PREVENTION PLAN AND COMPLYING WITH THE REGULATIONS CONTAINED WITHIN IT.

COORDINATION NOTE:

- CONTACT TIME WARNER TO COORDINATE CABLE TV SERVICE. (210) 244-0500
- CONDUIT FOR ELECTRICAL SERVICE, CONFIRM REQUIREMENTS AND COORDINATE WITH CPS FOR INSPECTION. (210) 353-2246.
- CONTACT AT&T TO COORDINATE TELEPHONE SERVICE. 1-800-449-7928.
- CONTRACTOR TO COORDINATE WITH CPS PRIOR TO CONSTRUCTION TO PLAN ELECTRIC SERVICE.
- CONTRACTOR TO COORDINATE WITH SAWS TO PLAN WATER AND SANITARY SEWER SERVICES (210) 704-7297
- CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION.



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REV. DATE DRAWN BY DESCRIPTION
1 12/2/25 JA REISED LOT LAYOUT FOR BLK 11, LOTS 4-34 & 45-50 & BLK 12, LOTS 53-75 & REMOVED LOTS.



Clayton J. Linney
3/18/2025

CLAYTON J. LINNEY
TEXAS LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 111543
COLLIERS ENGINEERING & DESIGN, INC.
TPE Firm#: E-14909 TPLS Firm#: 10194550

TMM SOMERSET, UNIT 3A
PLAT# 23-11800289

FOR
KB HOME

CITY OF SAN ANTONIO
BEXAR COUNTY
TEXAS

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Engineering
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Phone: 210.979.8444
COLLIERS ENGINEERING & DESIGN, INC.
TPE Firm#: E-14909 TPLS Firm#: 10194550

SCALE: AS SHOWN DATE: 01/22/25 DRAWN BY: JA CHECKED BY: CG
PROJECT NUMBER: 418-14-07 DRAWING NAME: SW3PD04181407

SHEET TITLE:
STORM WATER POLLUTION
PREVENTION PLAN DETAILS

SHEET NUMBER:

8.2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

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.

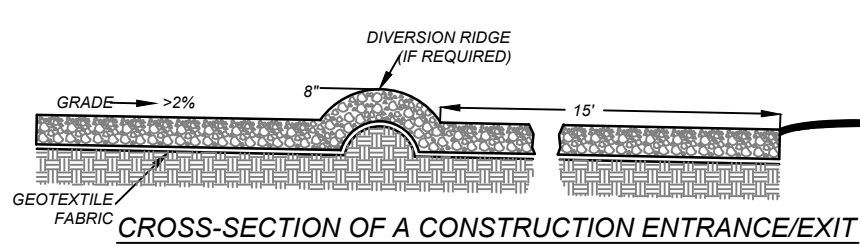
Installation: (North Carolina, 1993)

- (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.

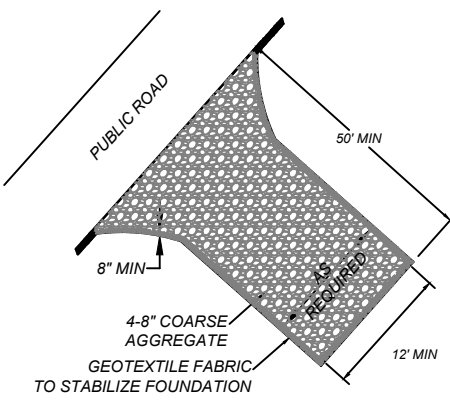
Inspection and Maintenance Guidelines:

- (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 and/or cleanout of any measures used to trap sediment.
- (2) All sediment silled, cropped, 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.

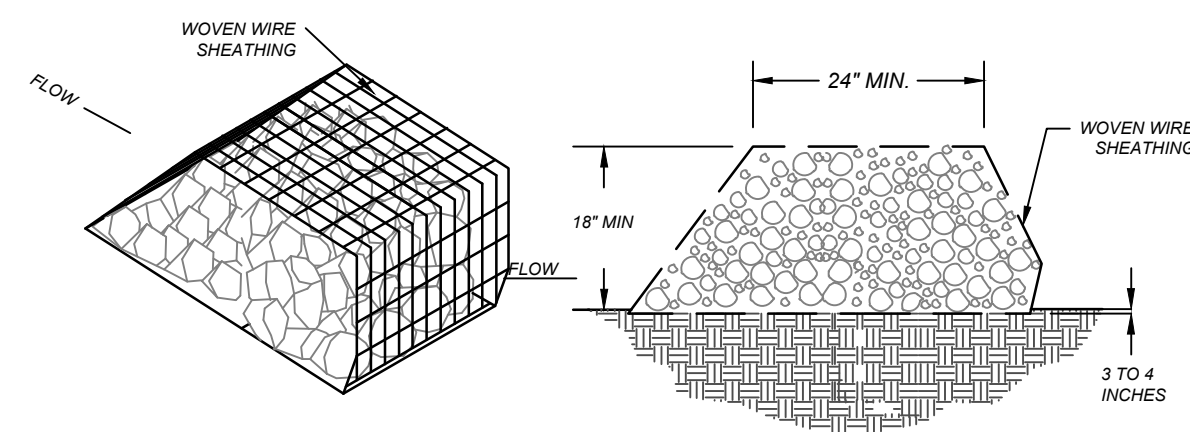
STABILIZED CONSTRUCTION ENTRANCE / EXIT



CROSS-SECTION OF A CONSTRUCTION ENTRANCE/EXIT



TEMPORARY
CONSTRUCTION ENTRANCE/EXIT



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, and the berm retains its shape when walked upon.
- (5) Berm should be built along the contour at zero percent grade or as near as possible.
- (6) The ends of the berm should be tied into existing upslope grade and the berm should be buried in a trench approximately 3 to 4 inches deep to prevent failure of the control.

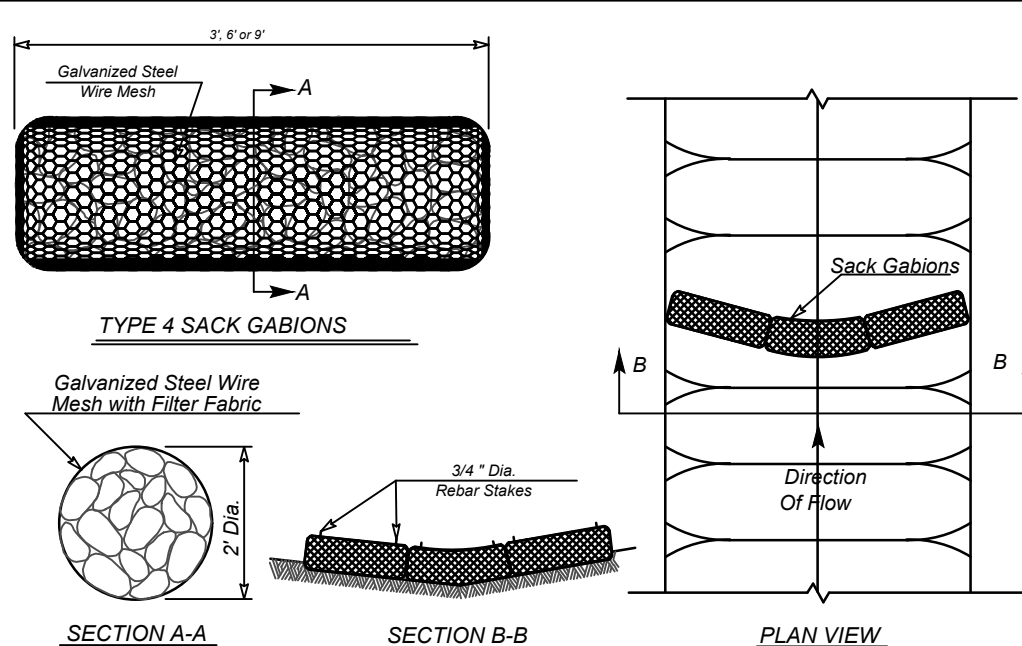
Inspection and Maintenance Guidelines:

- (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

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 NONWOVEN GEOTEXTILE WITH MINIMUM WEIGHT OF 3.5 OUNCES PER SQUARE YARD, MINIMUM MULLEN BURST STRENGTH OF 300 POUNDS PER SQUARE INCH AND A FLOW THRU RATE OF 100 GALLONS PER MINUTE PER SQUARE FOOT OF FRONTAL AREA.
- STONE SIZE: 1/4" - 3/4" OPEN GRADED CRUSHED LIMESTONE.
- INSPECT WEEKLY OR AFTER EACH RAINFALL EVENT AND REPAIR OR REPLACE AS NEEDED.
- WHEN SILT REACHES A DEPTH OF 8 INCHES OR MORE ABOVE NATURAL GROUND, SILT SHALL BE REMOVED AND DISPOSED IN AN APPROVED MANNER THAT WILL NOT CONTRIBUTE TO RESTITUTION. CONTAMINATED SEDIMENT MUST BE REMOVED AND DISPOSED OF OFF-SITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.



TYPE 4 SACK GABIONS

SECTION A-A

SECTION B-B

PLAN VIEW

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:

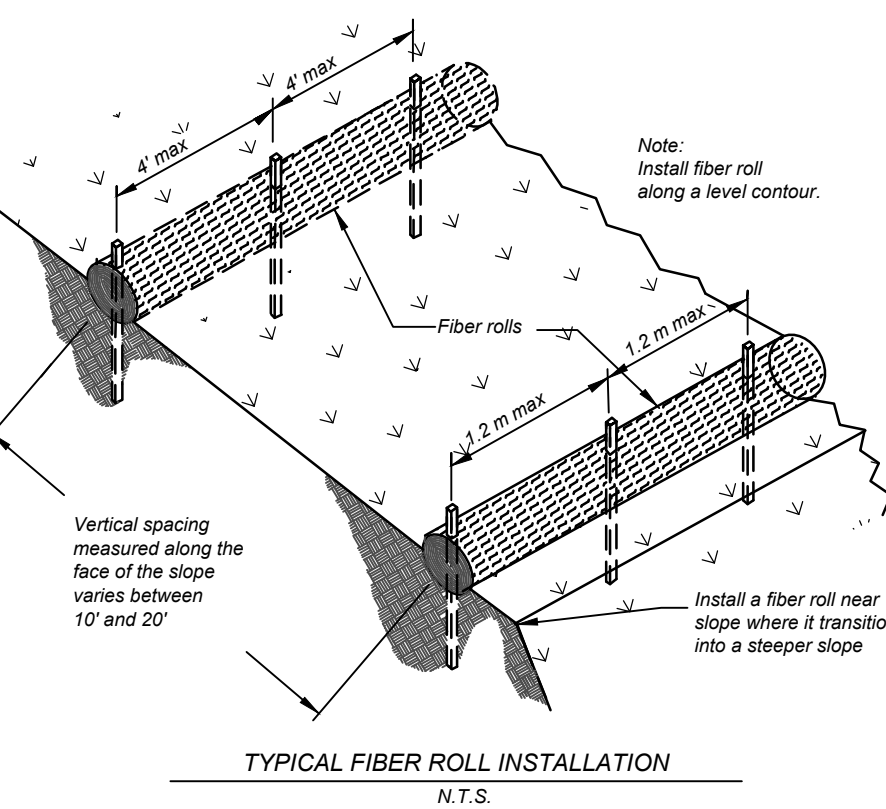
- (1) Core material: Core material should be biodegradable or recyclable. Material may be compost, mulch, aspen wood fibers, chipped site vegetation, agricultural rice or wheat straw, coconut fiber, 100% recyclable fibers, or similar materials.
- (2) Containment Mesh: Containment mesh should be 100% 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.

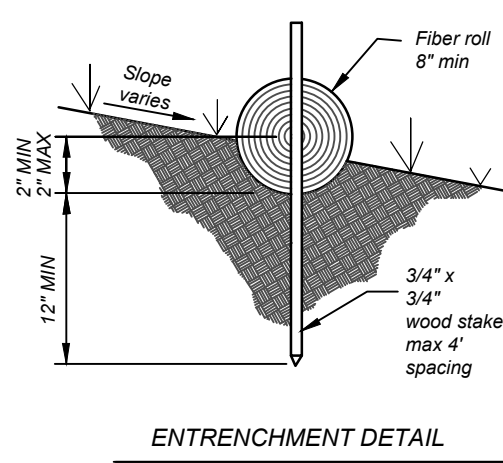
Inspection and Maintenance Guidelines:

- (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.



TYPICAL FIBER ROLL INSTALLATION

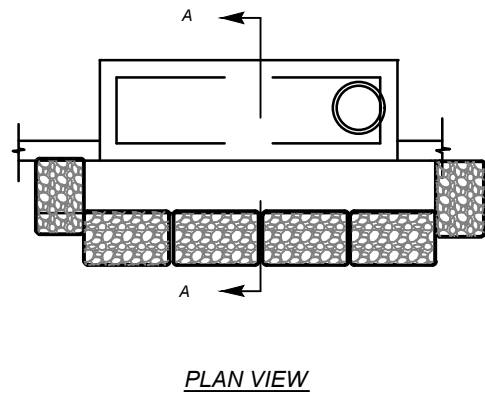
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ENTRENCHMENT DETAIL

N.T.S.

FIBER ROLL



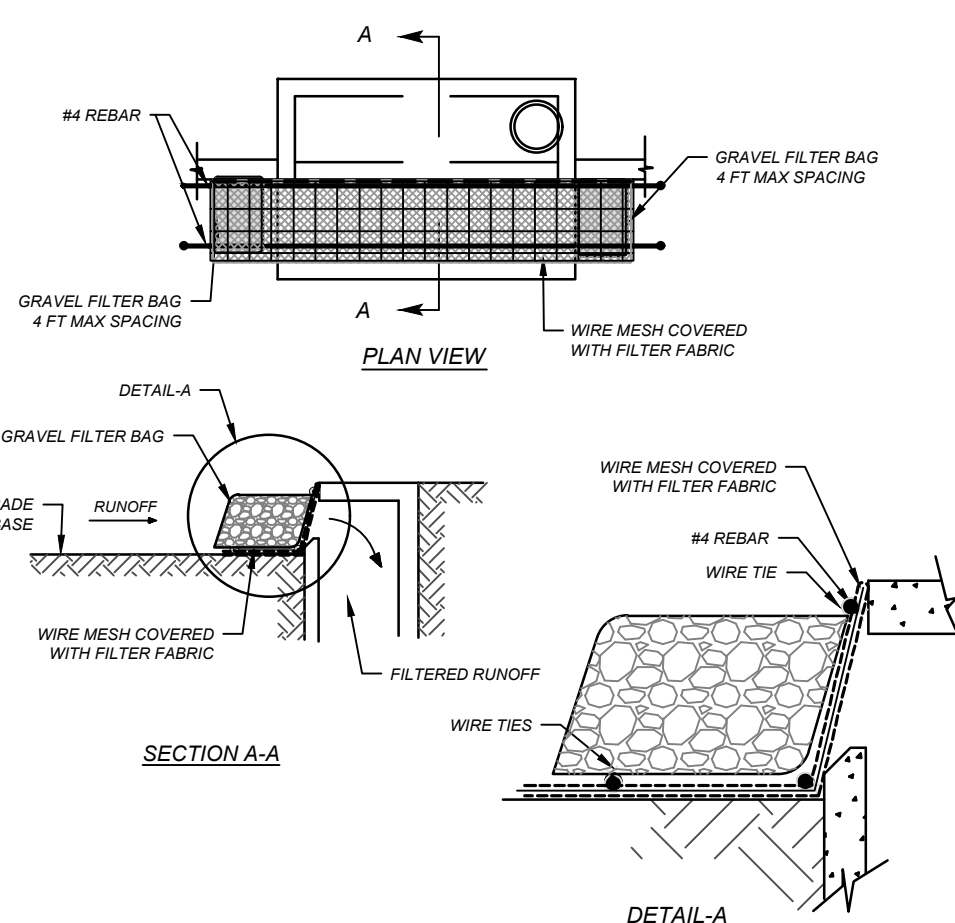
PLAN VIEW

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



CURB INLET PROTECTION (ALTERNATE)

SECTION A-A

DETAIL-A

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/yd², 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/ft², and Brinell hardness exceeding 140.
- (3) Woven wire backing to support the fabric should be galvanized 2" x 4" welded wire, 12 gauge minimum.

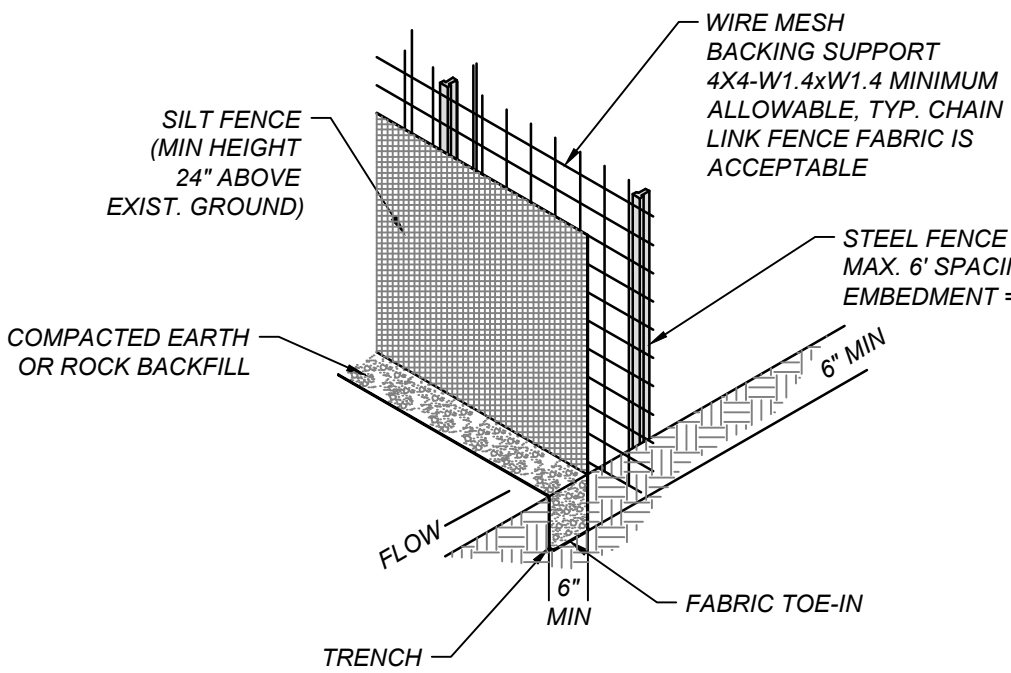
Installation:

- (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 1/4 acre/100 feet of fence.
- (3) The toe of the silt fence should be trenched in with a spade or mechanical trencher, so that the down-slope face of the trench is flat and perpendicular to the line of flow. Where fence cannot be trenched in (e.g., pavement or rock outcrop), weight fabric flap with 3 inches of pea gravel on uphill side to prevent flow from seeping under fence.
- (4) The trench must be a minimum of 6 inches deep and 6 inches wide to allow for the silt fence fabric to be laid in the ground and backfilled with compacted material.
- (5) Silt fence should be securely fastened to each steel support post or to woven wire, which is in turn attached to the steel fence post. There should be a 3-foot overlap, securely fastened where ends of fabric meet.
- (6) Silt fence should be removed when the site is completely stabilized so as not to block or impede stone flow or drainage.

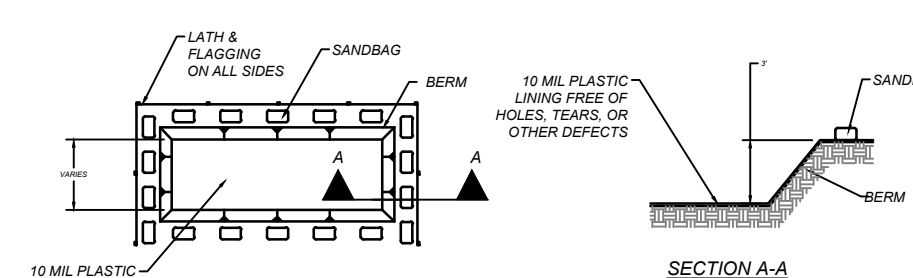
Inspection and Maintenance Guidelines:

- (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.

SILT FENCE

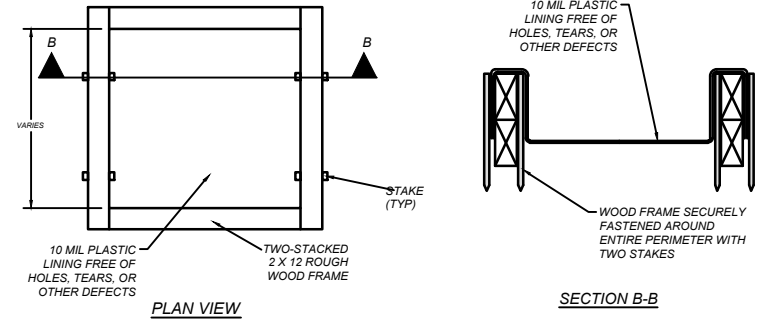


ISOMETRIC PLAN VIEW



PLAN VIEW

TYPE 1 BELOW
GRADE



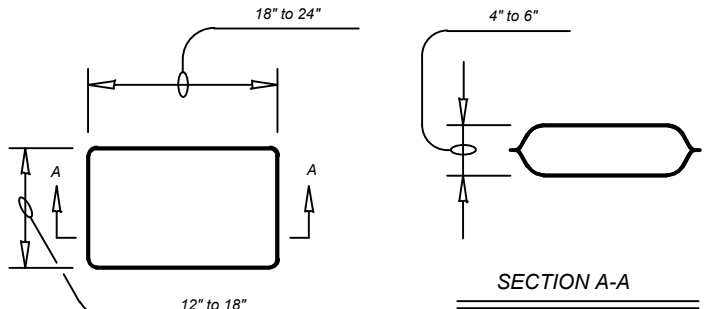
PLAN VIEW

TYPE 2 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



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/YD², 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